

MAHARASHTRA METRO RAIL CORPORATION LTD
(PUNE METRO RAIL PROJECT)

Date: 18-Apr-2024

Corrigendum-II

Name of work : Design, Supply, Installation, Testing & Commissioning of Telecom System at Metro Bhavan, Pune.
Tender no : P1-IT-04/2024 dt. 12-Mar-2024

1. Corrigendum-II (Part-A): Response to Pre-Bid queries
2. Corrigendum-II (Part-B): Revised Tender Conditions
3. Annexures to Corrigendum-II (Part-B):

Annexure-A	ITB 4.9 (Additional Para) to Section-2 Annexure-2A: Bid Data Sheet (BDS) reg. Land Border Sharing & Make in India along with relevant circulars
Annexure-B	Typical Design & Drawings
Annexure-C	Revised Section 8 (List of Documents to be submitted)
Annexure-D	Revised Section-9 (Financial Bid)
Annexure-E	Revised Annexure-5 under Annexure-5B (Specifications) with change in functional location from Dining Area to Conference Room (3 rd floor)
Annexure-F	Revised Annexure-7 - All Cabins (3 rd & 4 th Floor) under Annexure-5B (Specifications)
Annexure-G	Revised Annexure-10 - Cafeteria under Annexure-5B (Specifications)
Annexure-H	Revised Annexure-12 - Access Gate under Annexure-5B (Specifications) along with specifications for Face Biometric with Built in Card Reader



Corrigendum-II (Part-A): Response to Pre-Bid Queries

Name of work: Design, Supply, Installation, Testing & Commissioning of Telecom System at Metro Bhavan, Pune.

Tender No.: P1-IT-04/2024 dt. 12-Mar-24

SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
1	Annexure-5B (Specifications)	Annexure-1 - Auditorium (Page no. 143)	Cables, Connectors & Junction Box: LibertyAV Or Equivalent	Suggested to go ahead with reputed OEM like EXTRON/Kramer. As Speaker OEM like BOSE requires good OEM Cables to drive and get desired Audio Output.	Bidder may consider supply make of any reputed OEM equivalent to OEM mentioned in the tender, complying to Bidder's proposed design.
2	Annexure-5B (Specifications)	Sl. No. 40 of Annexure-1 - Auditorium (Page no. 144)	LED wall processor: SITC of Video wall Processor, 8 Input Video wall processor of same make as LED wall	It should be not same make as LED wall. As in market, Lots of Good OEM Video wall Processor are there. Should be removed.	Same make of processor as that of video wall is preferable, however, Bidder can consider supply make of any reputed OEM equivalent to OEM mentioned in the tender, complying to Bidder's proposed design.
3	Annexure-5B (Specifications)	Sl. No. 46 of Annexure-1 - Auditorium (Page no. 144)	HDMI Distribution amplifier: SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	a) Deep Color up to 12-bit: Deep Color Support, b) Color bit depth 8, 10, or 12 bits — subject to the max data rate: Color Depth Support to MX Data rate c) HDCP 2.3 : HDCP Support d) EDID Minder®: One OEM Support word, Instead EDID Support e) HDR10, HDR10+ : HDR Support	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender. Further, Bidder to refer Sl. No. 13 of Corrigendum - II (Part-B).
4	Annexure-5B (Specifications)	Sl. No. 68 of Annexure-1 - Auditorium (Page no. 146)	SWITCHING SYSTEM, AUTOMATION & ACCESSORIES: Wall plate Transmitter & Receiver: SITC of 4k HDMI Transmitter kit in wall plate version, 4K HDMI 2.0 Transmitter to transmit high resolution 4k Signals upto - 70 m & 1080p Signals upto 100 mtrs on single Sheilded CAT6 cable with bidirectional serial commands or IR commands , to be supplied with standard Power cord, Maximum data rate: 10.2 Gbps (3.4 Gbps per color), Maximum pixel clock 300 MHz, Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit Supports deep color, x.v.Color™, lip sync, HDMI uncompressed audio channels, Dolby TrueHD, DTS–HD, 2K, 4K, and 3D as specified in HDMI 2.0	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
5	Annexure-5B (Specifications)	Sl. No. 6 of Annexure-10 - Cafeteria (Page no. 165)	Wireless presentation device: SITC of Wireless Display Receiver for presentation and conferencing with, 1 x HDMI Input, 1 x HDMI Output, 2 x USB 2.0 Host Type-A, 1 x USB 3.0 Host Type-A, Operating systems Windows 10, 11, macOS 10.15,11,12, Mobile apps and features, Software ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems ,Android 9 and later, Apple® iOS 13 and later, Maximum data rate 6.75 Gbps (2.25 Gbps per color), Maximum pixel clock 225 MHz, Frame rates 24, 25, 30, 50, or 60 fps, Chroma sampling 4:4:4, 4:2:2, or 4:2:0, Color bit depth 8, 10, 12 or 16 bits per color, Resolution range 1920 x 1200 @ 60 Hz or 1080p @ 60 Hz	a) Software ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems ,Android 9 and later, Apple® iOS 13 and later: One OEM supported Word. It should be software Supported Pro for iOS, Operating systems, Android 9 and later, Apple® iOS 13 and later b) Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+: One OEM Support, Should be removed. Instead it should support 4K Resolution. c) Resolution range 1920 x 1200 @ 60 Hz or 1080p @ 60 Hz: Suggestion : it should support 4K Resolution	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design. Further, Bidder to refer Sl. No. 29 of Corrigendum - II (Part-B).



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
6	Annexure-5B (Specifications)	Sl. No. 7 of Annexure-10 - Cafeteria (Page no. 165)	HDMI Distribution amplifier: SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	HDCP 2.3 compliant: One OEM supported Word. Only HDCP Compliant	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design. Further, Bidder to refer Sl. No. 29 of Corrigendum - II (Part-B).
7	Annexure-5B (Specifications)	Sl. No. 70 of Annexure-1 - Auditorium (Page no. 146)	HDMI Transmitter: SITC of 4k HDMI Transmitter kit in Box version, 4K HDMI 2.0 Transmitter to transmit high resolution 4k Signals upto - 70 m & 1080p Signals upto 100 mtrs on single Shielded CAT6 cable with bidirectional serial commands or IR commands , to be supplied with standard Power cord. Maximum data rate: 10.2 Gbps (3.4 Gbps per color), Maximum pixel clock 300 MHz, Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	Color bit depth 8 , 10, or 12 bits — subject to the maximum data rate limit: This is Supporting one OEM. Instead it should be deep color, x.v.Color™, lip sync, HDMI uncompressed audio channels, Dolby TrueHD, DTS–HD, 2K, 4K, and 3D as specified in HDMI 2.0	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
8	Annexure-5B (Specifications)	Sl. No. 71 of Annexure-1 - Auditorium (Page no. 146)	HDMI receiver: SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with abobe wall plate or Box type Trasmitters, 300 MHz, Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	Color bit depth 8 , 10, or 12 bits — subject to the maximum data rate limit: This is Supporting one OEM. Instead it should be deep color, x.v.Color™, lip sync, HDMI uncompressed audio channels, Dolby TrueHD, DTS–HD, 2K, 4K, and 3D as specified in HDMI 2.0	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
9	Annexure-5B (Specifications)	Sl. No. 72 of Annexure-1 - Auditorium (Page no. 146)	HDMI Switcher: SITC of HDMI 4k@60 Matrix Switcher, 4 x 4 4K HDMI 2.0 Switcher with Down Scaling to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz, , 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz	a) Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing): Should be removed. b) Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz: As this is one OEM, only Audio de-embedding support is required for all 4 Ports., The specification seems to one OEM.	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
10	Annexure-5B (Specifications)	Sl. No. 73 of Annexure-1 - Auditorium (Page no. 146)	Processor: SITC of autoation processor, with 3 x Serial ports, 4 x IR or one way serial port, 2 x I/O, 2 x Relay ports, 1 x Ethernet & 1 x Proprietary control port, with min. Memory SDRAM 512 MB, Flash 4.5 GB, Ethernet Data rate : 10/100/1000Base-T, half/full duplex with autodetect, 1x bidirectional RS-232, RS-422, RS-485 (port 1), 2x bidirectional RS-232, 2 x programmable: unidirectional RS-232 (±5 V), or TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz, to be quoted with Touch panel configuration software & license.	Memory SDRAM 512 MB, Flash 4.5 GB: It should be Memory SDRAM 512 MB, Flash 4GB and Above	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
11	Annexure-5B (Specifications)	Sl. No. 74 of Annexure-1 - Auditorium (Page no. 146)	Touch panel: SITC of User interface, 10" Capacitive / Resistive touch panel with PoE adapter, Screen type TFT Active matrix Color LCD display, Size : 10.1" (25.7 cm), measured diagonally, Resolution 1280x800, WXGA, Dot/pixel pitch :149 PPI, Aspect ratio 16:10, Color depth 24 bit, 16.7 million colors, Transparency 8 bit, , Brightness 420 nits (cd/m2), Contrast 800:1, Backlight LED, Viewing angle $\pm 85^\circ$ horizontal, $\pm 85^\circ$ vertical, Touch screen Capacitive, RAM 2 GB, Storage 8 GB, Control/communications port 1 female RJ-45 connector, Data rate: 10/100/1000Base-T, half/full duplex with autodetect, Protocol DHCP, DNS, HTTP, HTTPS, ICMP, IEEE 802.1x, SFTP, SSH, TCP/IP, UDP/IP, to be supplied with PoE injector & table top stand	a) 10" Capacitive/Resistive touch panel with PoE adapter: It should Be 10" IPS touch panel with PoE adapter. b) Aspect ratio 16:10: Aspect ratio 16:9 and Above c) Brightness 420 nits: Brightness 350 nits and Above d) Viewing angle $\pm 85^\circ$ horizontal, $\pm 85^\circ$ vertical: Viewing angle $\pm 80^\circ$ horizontal, $\pm 80^\circ$ vertical and Above	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
12	Annexure-5B (Specifications)	Sl. No. 83 Annexure-1 - Auditorium (Page no. 147)	Patch cable: Kramer or Equivalent	Suggest to go ahead with reputed OEM like EXTRON/ Kramer. As Speaker OEM like BOSE, requires good OEM Cables to drive and get desired Audio Output.	Bidder may consider supply make of any reputed OEM equivalent to OEM mentioned in the tender, complying to Bidder's proposed design.
13	Annexure-5B (Specifications)	Sl. No. 84 to 85 of Annexure-1 - Auditorium (Page no. 147)	Patch cable: LibertyAV or Equivalent	Suggest to go ahead with reputed OEM like EXTRON/ Kramer. As Speaker OEM like BOSE, requires good OEM Cables to drive and get desired Audio Output.	Bidder may consider supply make of any reputed OEM equivalent to OEM mentioned in the tender, complying to Bidder's proposed design.
14	Annexure-5B (Specifications)	Sl. No. 86 of Annexure-1 - Auditorium (Page no. 147)	Bulk cable: LibertyAV or Equivalent	Suggest to go ahead with reputed OEM like EXTRON/ Kramer. As Speaker OEM like BOSE, requires good OEM Cables to drive and get desired Audio Output.	Bidder may consider supply make of any reputed OEM equivalent to OEM mentioned in the tender, complying to Bidder's proposed design.
15	Annexure-5B (Specifications)	Sl. No. 10 of Annexure-2 - Board Room (Page no. 149)	wireless conf. device: SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate: 24, 25, 30, 50, or 60 fps, Chroma sampling 4:4:4, 4:2:2, or 4:2:0, Color bit depth : 8, 10, or 12 bits per color, Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLinkTM Pro for Windows®, ShareLinkTM Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software : ShareLink Pro for AndroidTM, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later	a) Software ShareLink Pro for AndroidTM, ShareLink Pro for iOS, Operating systems, Android 9 and later, Apple® iOS 13 and later: One OEM supported Word. It should be software Supported Pro for iOS, Operating systems, Android 9 and later, Apple® iOS 13 and later b) Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+: One OEM Support, Should be removed. Instead it should support 4K Resolution c) Resolution range 1920 x 1200 @ 60 Hz or 1080p @ 60 Hz: Suggestion : it should support 4K Resolution d) HDCP 2.3 compliant: One OEM supported Word. Only HDCP Compliant	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design.
16	Annexure-5B (Specifications)	Sl. No. 12 of Annexure-2 - Board Room (Page no. 149)	HDMI Switcher: SITC of 4k HDMI Switcher with 8 inputs x 4 Output hdmi matrix switcher with RS232/lp control, built in stereo audio output, HDMI 2.0 Switcher with Down Scaling to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz, , 4096x2160 @ 30Hz, 480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ± 0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤ -80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz	a) built in stereo audio output: built in stereo audio output/Separate De-embedder b) Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing): Support Digital Sampling, Color Depth Support to MX Data rate c) Audio De-embedding: LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ± 0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤ -80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz: Support De Embedding	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
17	Annexure-5B (Specifications)	Sl. No. 11 of Annexure-3 - Meeting Room-1 (Page no. 152)	USB Switcher: SITC of 4x4 USB switcher with third party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control,	a) 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors: It should be Combination of Type C and Type B b) full speed (12 Mbps): It should be Upto 10 GBPS or More, Standards Compliance: USB 3.2 GEN 2, 2.0 and 1.1	a) Tender condition prevails. However, combination of Type A, Type B and Type C connectors are also acceptable. b) Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design.
18	Annexure-5B (Specifications)	Sl. No. 19 of Annexure-2 - Board Room (Page no. 150)	Automation processor: SITC of Automation processor with 2 x serial ports, 1 x Ethernet, 1 x IR/1-way serial port, 1 x Relay, 2 x I/O ports, with min. Memory SDRAM 512 MB, Flash 4.5 GB, Ethernet Data rate : 10/100/1000Base-T, half/full duplex with autodetect, 1x bidirectional RS-232, RS-422, RS-485 (port 1), 1x bidirectional RS-232, 1 x programmable: unidirectional RS-232 (±5 V), or TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz, to be quoted with Touch panel configuration software & license.	Memory SDRAM 512 MB, Flash 4.5 GB: It should be Memory SDRAM 512 MB, Flash 4GB and above.	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design.
19	Annexure-5B (Specifications)	Sl. No. 20 of Annexure-2 - Board Room (Page no. 150)	User Interface: SITC of wired touch panel to work with above processor, TFT Active matrix Color LCD display, Size : 7" measured diagonally, Resolution 1024x600, Dot/pixel pitch :170 PPI, Aspect ratio 17:10, Color depth 24 bit, 16.7 million colors, Transparency 8 bit, , Brightness 420 nits (cd/m2), Contrast 800:1, Backlight LED, Viewing angle ±85° horizontal, ±85° vertical, Touch screen Capacitive, RAM 2 GB, Storage 8 GB, Control/communications port 1 female RJ-45 connector, Data rate: 10/100/1000Base-T, half/full duplex with autodetect, Protocol DHCP, DNS, HTTP, HTTPS, ICMP, IEEE 802.1x, SFTP, SSH, TCP/IP, UDP/IP, to be supplied with PoE injector & table top stand	a) Resolution 1024x600: Should Support Minimum 1280x720 resolution b) Aspect ratio 17:10: Should be minimum 16:10 diagonal c) Brightness 420 nits (cd/m2): Brightness 350 nits and Above	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
20	Annexure-5B (Specifications)	Sl. No. 7 of Annexure-3 - Meeting Room-1 (Page no. 151)	Camera: SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, , Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, , Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes	a) Specs is of one OEM only. b) PTZ camera with USB3.0 & HDMI connection: PTZ camera with USB3 Or HDMI or Both connection c) Sensor 1/2.8" 2.41MP CMOS: Sensor: 1/2.7inch or MORE CMOS d) Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0: One OEM ONLY, Suggested Video System: 1080P, 720P, 540P, 480P, 360P, 240P etc. e) Horizontal / Vertical Viewing Angle: 72° / 43°: Horizontal / Vertical Viewing Angle: 72° / 43° and Above, Also Support H & V Flip: Support	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
21	Annexure-5B (Specifications)	Sl. No. 9 of Annexure-3 - Meeting Room-1 (Page no. 152)	Cable cubby: SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop charging + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.	Cable Pass-Through Bracket supports up to eight AV cables: Cable Pass-Through Bracket supports up to 6 and above AV cables, as only Pass through have asked.	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design.
22	Annexure-5B (Specifications)	Sl. No. 11 of Annexure-3 - Meeting Room-1 (Page no. 152)	USB Switcher: SITC of 4x4 USB switcher with third party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control,	a) 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors: It should be Combination of Type C and Type B b) full speed (12 Mbps): It should be Upto 10 GBPS or More, Standards Compliance: USB 3.2 GEN 2, 2.0 and 1.1	a) Tender condition prevails. However, combination of Type A, Type B and Type C connectors are also acceptable. b) Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
23	Annexure-5B (Specifications)	Sl. No. 16 of Annexure-9 - Meeting Room (4th Floor) (Page no. 164)	Button panel: SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color	Memory SDRAM 512 MB, Flash 512 MB: Only one OEM. It should be sufficient to control all AV devices.	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
24	Annexure-5B (Specifications)	Sl. No. 1 of Annexure-10 - Cafeteria (Page no. 165)	Stand alone Speaker: SITC of 4-inch Inceiling premium loudspeaker	No Watt Information, It should be 4-Inch, 2-Way Closed-Back Ceiling Speakers UL Listed, Power Handling — 30W RMS, Transformer Taps — 70V: 30W/15W/7.5W/3.7W/Off (Lo-Z); 100V: 30W/15W/7.5W/Off (Lo-Z). UL 1480 & 2043 Listed	Audio requirements of the location/area to be complied. Bidder to propose design & specifications to comply the same. Further, please refer Sl. No. 29 of Corrigendum - II (Part-B).
25	Annexure-5B (Specifications)	Sl. No. 2 of Annexure-10 - Cafeteria (Page no. 165)	Amplifier: SITC of 2 x 90 watts per channel amplifier	It should be Class D.	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender. Further, please refer Sl. No. 29 of Corrigendum - II (Part-B).
26	Annexure-5B (Specifications)	Sl. No. 6 of Annexure-10 - Cafeteria (Page no. 165)	Wireless presentation device: SITC of Wireless Display Receiver for presentation and conferencing with, 1 x HDMI Input, 1 x HDMI Output, 2 x USB 2.0 Host Type-A, 1 x USB 3.0 Host Type-A, Operating systems Windows 10, 11, macOS 10.15,11,12, Mobile apps and features, Software ShareLink Pro for AndroidTM, ShareLink Pro for iOS, Operating systems ,Android 9 and later, Apple® iOS 13 and later, Maximum data rate 6.75 Gbps (2.25 Gbps per color), Maximum pixel clock 225 MHz, Frame rates 24, 25, 30, 50, or 60 fps, Chroma sampling 4:4:4, 4:2:2, or 4:2:0, Color bit depth 8, 10, 12 or 16 bits per color, Resolution range 1920 x 1200 @ 60 Hz or 1080p @ 60 Hz	a) Software ShareLink Pro for AndroidTM, ShareLink Pro for iOS, Operating systems ,Android 9 and later, Apple® iOS 13 and later: One OEM supported Word. It should be software Supported Pro for iOS, Operating systems, Android 9 and later, Apple® iOS 13 and later. b) Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+: One OEM Support, Should be removed. Instead it should support 4K Resolution. c) Resolution range 1920 x 1200 @ 60 Hz or 1080p @ 60 Hz: Suggestion : it should support 4K Resolution	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender. Further, please refer Sl. No. 29 of Corrigendum - II (Part-B).
27	Annexure-5B (Specifications)	Sl. No. 7 of Annexure-10 - Cafeteria (Page no. 165)	HDMI Distribution amplifier: SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	a) HDCP 2.3 compliant: One OEM supported Word. Only HDCP Compliant b) Deep Color up to 12-bit: Deep Color Support c) Color bit depth 8, 10, or 12 bits — subject to the max data rate: Color Depth Support to MX Data rate d) HDCP 2.3: HDCP Support e) EDID Minder®: One OEM Support word, Instead EDID Support f) HDR10, HDR10+: HDR Support	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender. Further, please refer Sl. No. 29 of Corrigendum - II (Part-B).
28	Section 9- Financial Bid	Item no. A.25 of Schedule-1: Audio system (A) - Page no. 125	DSP Processor	Please change the model and qty as per design requirement. TOTAL 9 DSP required DSP Processor with DANTE interface Qty - 05 Nos.	Please refer Sl. No. 11 of Corrigendum - II (Part-B)
29	Section 9- Financial Bid	Schedule-1: Audio system (A) - Page no. 125		DANTE wall plate Qty 04 Nos.: Need to add DANTE wall plate for emergency audio input and BGM input. LAN for DANTE to be provided by client.	a) Additional DANTE wall plate is not required, as functionality visualized to be taken care by BOQ under Schedule-3: Switching system (Sw). b) SITC of LAN cabling for the equipment under the scope of this tender shall be in the Bidder's scope. The external connectivity to the Maha-Metro's LAN shall be under the scope of Maha-Metro. c) Please refer Sl. No. 11 of Corrigendum - II (Part-B)
30	Section 9- Financial Bid	Item no. V.19 of Schedule-2: Video System (V) - Page no. 126	SITC of 30x optical Zoom Conference Room - Qty. 1 no.	Qty 02 Nos.: 01 will be required at BR and 01 will be required at Auditorium (to enlarge the image of speaker in large wall also to send the stage video to other floors as per design requirement.	Please refer Sl. No. 11 of Corrigendum-II (Part-B).



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
31	Section 9- Financial Bid	Item no. Sw.2 of Schedule-3: Switching system (Sw) - Page no. 127	Wall plate HDMI Long distance transmitter 4k, 4:4:4	Floor box HDMI Long distance transmitter and Reciever 4k, 4:4:4 along with Floor BOX: As it will be install in floor box in auditorium so kindly change the same to Floor Box. Also added floor box for same.	Floor box for HDMI is not required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
32	Section 9- Financial Bid	Item no. Sw.3 of Schedule-3: Switching system (Sw) - Page No. 127	HDMI Long distance transmitter 4k, 4:4:4 - Qty. 4 nos.	Qty 8 Nos.: Qty changed as per design	Bidder to quote as per tender quantity. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
33	Section 9- Financial Bid	Item no. Sw.4 of Schedule-3: Switching system (Sw): Page No. 127	HDMI Long distance Receiver 4k, 4:4:4	Qty 8 Nos.: Qty changed as per design	Bidder to quote as per tender quantity. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
34	Section 9- Financial Bid	Item no. Sw.9 of Schedule-3: Switching system (Sw) - Page No. 127	4x1 HDMI 4k Switcher with Serial / IP control - Qty. 3 nos.	4x2 USB-C and HDMI 4k Matrix Switcher with Serial / IP control - Qty - 07 Nos. : Please replace this by USB-C and HDMI switcher. Because Latest Laptops has USB-C for BYOD and presentation function. Also increase the qty as per design requirement	Specifications mentioned in the tender are preferrable. Bidder to quote as per specifications mentioned in tender. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
35	Section 9- Financial Bid	Item no. Sw.12 of Schedule-3: Switching system (Sw) - Page No. 127	HDMI to USB capture card, 4k compatible, USB3.0 compatible - Qty. 1 no.	Qty - 02 Nos. : Please increase the qty as per design requirement	Bidder to quote as per tender quantity. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
36	Section 9- Financial Bid	Schedule-3: Switching system (Sw) - Page No. 127	-	AV over IP Encoder for town hall functionality - Qty 2 Nos. : Please add this for town hall functionality or to send audio video to All floors display	No new item is required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
37	Section 9- Financial Bid	Schedule-3: Switching system (Sw) - Page No. 127	-	AV over IP Decoder for town hall functionality - Qty - 12 Nos.: Please add this for town hall functionality or to send audio video to All floors display	No new item is required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
38	Section 9- Financial Bid	Item no. Al.6 of Schedule-4: Automation & Lighting control System (AL) - Page No. 128	6 Button Control. Interface with volume. control knob with built in processor	10 Button Control. Interface with volume. control knob with built in processor: please change the model as per design requirement	Tender condition prevails. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
39	Section 9- Financial Bid	Schedule-4: Automation & Lighting control System (AL) - Page No. 128	-	Occupancy sensor with 24V - Qty - 5 Nos. : Please add Occupancy sensor for automatic system on and off based on person's presence in room. So no need of touch the buttons every time in BR, CR, and MR	Occupancy sensor is not required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
40	Section 9- Financial Bid	Item no. Ms.1 of Schedule-9: Miscellaneous Items (MS) - Page No. 133	SITC of Network Switch, 24 port Ethernet managed switch (Auditorium) - Qty. 1 no.	SITC of Network Switch, 20 port 1G PoE Ethernet managed switch for AV over IP with 10 G SFP ports - Qty - 04 Nos. : please change the model as per design requirement for AV over IP for video share to all floors	Tender condition prevails. Further, Bidder to consider associated cost of SFP, if required as per Bidder's proposed design, while quoting against Ethernet switch. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
41	Annexure-5B (Spécifications)	Item no. 14 of Annexure-1 - Auditorium Page No. 142	Supply, installation , testing and commissioning of Digital Sound Processor with DATNTE support & 12 Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % ; Channel Separation (Crosstalk) : < 105 dB ; Frequency Response 20 Hz - 20 kHz ; Signal-to-Noise Ratio 80 dB ;Dynamic Range : > 115 dB; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; inbuilt DSP features like Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Feedback suppressors, Source selectors etc, with USB 2x2	It shoud support priority function on input audio. : Please add It shoud support priority function on input audio. For emergency audio priority.	Tender condition prevails. Priority function on input audio feature can be made available by programming digital input output points of DSP.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
42	Annexure-5B (Specifications)	Item no. 46 of Annexure-1 - Auditorium - Page No. 144	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, ResoluΘon range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Manager automatically manages EDID communication between connected devices (EDID selector switch) , Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, and DolbyVision, Regulatory compliance CE: Please change the specifications	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender. Further, Bidder to refer Sl. No. 13 of Corrigendum - II (Part-B).
43	Annexure-5B (Specifications)	Item no. 47 of Annexure-1 - Auditorium - Page No. 144	SITC of Digital podium with 1 Nos. 19" monitor [Non-Interactive moinitor], place to mount the Podium mics, & extra space to keep the Laptop for presentation, Podium should be supplied with Light, & Separate HDMI female face plate.	SITC of Digital podium with space for 1 Nos. 24" Interactive monitor, place to mount the Podium mics, & extra space to keep the Laptop for presentation, Podium should be supplied with Light, and passthrough : Please change the same as per design requirement. In this tender 02 nos. Interactive monitor already mentioned for audi.	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
44	Annexure-5B (Specifications)	Item no. 68 of Annexure-1 - Auditorium - Page No. 146	wall plate Transmitter & Receiver	Floor box transmitter and Reciever with floor box: As it will be install in floor box in auditorium so kindly change the same to Floor Box. Also added floor box for same	Floor box for HDMI is not required.
45	Annexure-5B (Specifications)	Item no. 70 of Annexure-1 - Auditorium - Page No. 146	SITC of 4k HDMI Transmitter kit in wall plate version, 4K HDMI 2.0 Tranmitter to transmit high resolution 4k Signals upto - 70 m & 1080p Signals upto 100 mtrs on single Sheilded CAT6 cable with bidirectional serial commands or IR commands , to be supplied with standard Power cord, Maximum data rate: 10.2 Gbps (3.4 Gbps per color), Maximum pixel clock 300 MHz, ResoluΘon range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	SITC of 4k Floor Box Transmitter. To be supplied with compatible receiver and Floor BOX. Supports HDMI 3D signal formats (frame packing, side-by-side and top-bottom). 1920x1080@120Hz/4:4:4, 4096x2160@30Hz/4:4:4 or 60Hz/4:2:0 maximum resolutions (300MHz). HDMI 1.4, HDCP 1.4 and DVI 1.0 compliant. HDCP enable/disable function on input. Uncompressed video up to 9 Gbps datarate (300 MHz pixel clock). Audio embedding (or replace original audio). Supports all embedded audio formats (including PCM, Dolby Digital and DTS high bitrate audio) Extension distance up to 150 meters (with CAT7 S/FTP AWG23 cable, 1920x1080p60). HDBaseT compatible. Ethernet extension (100 Mbps) EDID Management. Command injection on RS-232 and IR ports. Device control via Ethernet (TCP/IP) and RS-232. Multiple TCP/IP connections. Intuitive control software for device configuration. Supports HDMI 4K signal formats (4K UHD @30Hz RGB 4:4:4 or @60Hz YUV 4:2:0, up to 9 Gbps). No video compression. Can be remote powered through CATx cable (PoE PD). Bi-directional RS-232 and IR extension (pass-through) Extends HDMI or DP + Audio + Ethernet + RS-232 + IR over one CAT5/6/7 cable. Bi-directional RS-232 and IR extension (pass-through and control) Supports several embedded audio formats (including PCM, Dolby Digital and DTS). Compatible with Mac laptop and desktop computers with Thunderbolt port: Floor box transmitter and reciever spec suggested	Floor box for HDMI is not required. Further, specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
46	Annexure-5B (Specifications)	Item no. 71 of Annexure-1 - Auditorium - Page No. 146	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with abobe wall plate or Box type Trasmitters, 300 MHz, Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with above wall plate or Box type Trasmitters, 600 MHz , Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — 4K UHD @60Hz RGB 4:4:4, up to 18 Gbps subject to the maximum data rate limit, Bi-directional RS-232 extension (pass-through) HDCP 2.3 compliant (transparent pass-through) HDMI 2.0 end-to-end extension HDR and Low Latency Dolby Vision support Bi-directional PoC remote powering Extends HDMI 2.0, audio, Ethernet, RS-232 up to 100m over one CATx cable Ethernet extension (1 Gbps) Command injection through IR Please change the specifications	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
47	Annexure-5B (Specifications)	Item no. 71 of Annexure-1 - Auditorium - Page No. 146	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with abobe wall plate or Box type Trasmitters, 300 MHz, Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with above wall plate or Box type Trasmitters, 600 MHz , Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit, Bi-directional RS-232 extension (pass-through) HDCP 2.3 compliant (transparent pass-through) HDMI 2.0 end-to-end extension HDR and Low Latency Dolby Vision support Bi-directional PoC remote powering Extends HDMI 2.0, audio, Ethernet, RS-232 up to 100m over one CATx cable Ethernet extension (1 Gbps) Command injection through IR Please change the specifications	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
48	Annexure-5B (Specifications)	Item no. 72 of Annexure-1 - Auditorium - Page No. 146	SITC of HDMI 4k@60 Matrix Switcher, 4 x 4 4K HDMI 2.0 Switcher with Down Scaling to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz, 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz	SITC of HDMI 4k@60 Matrix Switcher, 4 x 4 4K HDMI 2.0 Switcher to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, HDCP 2.2 Resolution range :640x480 to 4096x2160 @ 60 Hz, 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz Video delay: 0 frame Control Ports:RS-232 serial port, RJ45 female Ethernet Port Please change the specifications	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
49	Annexure-5B (Specifications)	Annexure-1 - Auditorium	-	<p>SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock).</p> <p>Please add the same as per design requirement for USB-C Connectivity required for USB-C connectivity in auditorium with interactivity</p>	<p>Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher specified under Item no. 72 of Annexure-1 - Auditorium under Annexure-5B (Specifications).</p> <p>No new item is required.</p>
50	Annexure-5B (Specifications)	Annexure-1 - Auditorium	-	<p>Supply, Installation, Testing and Commissioning of Optical AV Over IP Encoder. AV Over IP Scaling Multimedia Extender with USB K+M, RS-232 and IR. USB 1.1 K+M (HID) extension USB 2.0 MSC (Mass Storage Class) extension Compact and silent design Audio embedding (or replace original audio) Command injection on RS-232 ports 1920x1080@120Hz/4:4:4, 4096x2160@30Hz/4:4:4 or 60Hz/4:2:0 maximum resolutions (300MHz) Advanced EDID Management Intuitive control software for device configuration Device control via Ethernet (TCP/IP) Built-in website for device configuration Bi-directional RS-232 extension (pass-through) HDMI 1.4, HDCP 1.4 and DVI 1.0 compliant Firmware upgrade through Ethernet HDCP 2.2 and HDCP 1.4 compliant Local monitor output on transmitter Status LED for video signal detection Supports several embedded audio formats (including PCM, Dolby Digital and DTS) External universal power adaptor Can be remote powered through CATx cable (PoE PD) Mounting options for rack, furniture or truss.</p> <p>Please add this for town hall functionality or to send audio video to All floors display - required for video streaming at all floors.</p>	<p>No new item is required.</p>



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
51	Annexure-5B (Specifications)	Annexure-1 - Auditorium		Supply, Installation, Testing and Commissioning of Optical AV Over IP Decoder. Scaling of video signals to match the properties of the target display/sink USB 1.1 K+M (HID) extension USB 2.0 MSC (Mass Storage Class) extension Compact and silent design Audio de-embedding Command injection on RS-232 ports 1920x1080@120Hz/4:4:4, 4096x2160@30Hz/4:4:4 or 60Hz/4:2:0 maximum resolutions (300MHz) Advanced EDID Management Intuitive control software for device configuration Device control via Ethernet (TCP/IP) Built-in website for device configuration Bi-directional RS-232 extension (pass-through) HDMI 1.4, HDCP 1.4 and DVI 1.0 compliant Firmware upgrade through Ethernet HDCP 2.2 and HDCP 1.4 compliant Status LED for video signal detection Supports several embedded audio formats (including PCM, Dolby Digital and DTS) External universal power adaptor Can be remote powered through CATx cable (PoE PD) Mounting options for rack, furniture or truss Please add this for town hall functionality or to send audio video to All floors display - required for video streaming at all floors	No new item is required.
52	Annexure-5B (Specifications)	Item no. 6 of Annexure-2 - Board Room - Page No. 147	Supply , installation , testing and comissioning of Digital Sound Processor with DANTE with 12 Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % ; Channel Separation (Crosstalk) : < 105 dB ; Frequency Response 20 Hz - 20 kHz ; Signal-to-Noise Ratio 80 dB ;Dynamic Range : > 115 dB; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; inbuilt DSP features like Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Feedback suppressors, Source selectors etc, with USB 2x2	Please add It shoud support priority function on input audio. For emergency audio priority.	Tender condition prevails. Priority function on input audio feature can be made available by programming digital input output points of DSP.
53	Annexure-5B (Specifications)	Item no. 12 of Annexure-2 - Board Room - Page No. 149	SITC of 4k HDMI Switcher with 8 inputs x 4 Output hdmi matrix switcher with RS232/lp control, built in stereo audio output, HDMI 2.0 Switcher with Down Scaling to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz, , 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separaθon >80 dB @ 1 kHz	SITC of 4k HDMI Switcher with 8 inputs x 4 Output hdmi matrix switcher with RS232/lp control, built in stereo audio output, HDMI 2.0 Switcher to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4 RGB, YCbCr, HDCP 2.2 Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz, , 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separaθon >80 dB @ 1 kHz Video delay: 0 frame Please change the specifications.	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
54	Annexure-5B (Specifications)	Annexure-2 - Board Room	-	SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C required for USB-C coonectivity in Board Room	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher, specified under Item no. 12 of Annexure-2 - Board Room. No new item is required.
55	Annexure-5B (Specifications)	Item no. 10 of Annexure-3 - Meeting Room-1 at Page no. 152	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embeded	SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher. No new item is required.
56	Annexure-5B (Specifications)	Item no. 17 of Annexure-3 - Meeting Room-1 - Page No. 152	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color	SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color Please change the specifications as per design requirement	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
57	Annexure-5B (Specifications)	Item no. 9 of Annexure-4 - Meeting Room-2 - Page No. 154	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embedded	SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher.
58	Annexure-5B (Specifications)	Item no. 16 of Annexure-4 - Meeting Room-2 - Page No. 154	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color	SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color Please change the specifications as per design requirement	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
59	Annexure-5B (Specifications)	Item no. 11 of Annexure-8 - Conference Room (4th Floor) - Page No. 160	SITC of 4k HDMI Switcher with 8 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embedded	SITC of 4k HDMI Switcher with 8 inputs x 4 Output hdmi matrix switcher with RS232/Ip control, built in stereo audio output, HDMI 2.0 Switcher to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4 RGB, YCbCr, HDCP 2.2 Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz , 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separaθon >80 dB @ 1 kHz Video delay: 0 frame Please change the specifications.	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
60	Annexure-5B (Specifications)	Item no. 12 of Annexure-8 - Conference Room (4th Floor) - Page No. 160	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Manager automatically manages EDID communication between connected devices (EDID selector switch), Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, and DolbyVision, Regulatory compliance CE Please change the specifications.	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design. Further, please refer Sl. No. 24 of Corrigendum-II (Part-B).
61	Annexure-5B (Specifications)	Annexure-8 - Conference Room (4th Floor)		SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in 4k HDMI Switcher, specified under Item no. 11 of Annexure-8 - Conference Room (4th Floor) under Annexure-5B (Specifications). No new item is required.
62	Annexure-5B (Specifications)	Item no. 19 of Annexure-8 - Conference Room (4th Floor) - Page No. 161	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color	SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color Please change the specifications as per design requirement	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
63	Annexure-5B (Specifications)	Item no. 4 of Annexure-8 - Conference Room (4th Floor) - Page No. 162	Supply , installation , testing and commissioning of Digital Sound Processor with 12 Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % ; Channel Separation (Crosstalk) : < 105 dB ; Frequency Response 20 Hz - 20 kHz ; Signal-to-Noise Ratio 80 dB ;Dynamic Range : > 115 dB; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; inbuilt DSP features like Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Feedback suppressors, Source selectors etc, with USB 2x2	It should support priority function on input audio. Please add It should support priority function on input audio. For emergency audio priority	Tender condition prevails. Priority function on input audio feature can be made available by programming digital input output points of DSP.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
64	Annexure-5B (Specifications)	Item no. 9 of Annexure-9 - Meeting Room (4th Floor) - Page No. 163	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embedded	SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher.
65	Annexure-5B (Specifications)	Item no. 16 of Annexure-9 - Meeting Room (4th Floor) - Page No. 164	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color	SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color Please change the specifications as per design requirement	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
66	Annexure-5B (Specifications)	Item no. 7 of Annexure-10 - Cafeteria - Page No. 165	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolu0on range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Manager automatically manages EDID communication between connected devices (EDID selector switch), Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, and DolbyVision, Regulatory compliance CE Please change the specifications	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design. Further, Bidder to refer Sl. No. 29 of Corrigendum - II (Part-B).
67	General	-	-	LAN cabling (Passive work) is not in vendors scope. It will be provided by client. Please consider and arrange the same	SITC of LAN cabling for the equipment under the scope of this tender shall be in the Bidder's scope. The external connectivity to the Maha-Metro's LAN shall be under the scope of Maha-Metro.
68	Section 9- Financial Bid	Item no. A.25 of Schedule-1: Audio system (A) - Page no. 125	DSP Processor	Please change the model and qty as per design requirement. TOTAL 9 DSP required DSP Processor with DANTE interface Qty - 05 Nos.	Please refer Sl. No. 11 of Corrigendum - II (Part-B)
69	Section 9- Financial Bid	Schedule-1: Audio system (A) - Page no. 125	-	DANTE wall plate Qty 04 Nos.: Need to add DANTE wall plate for emergency audio input and BGM input.	Additional DANTE wall plate is not required, as functionality visualized to be taken care by BOQ under Schedule-3: Switching system (Sw). Further, please refer Sl. No. 11 of Corrigendum-II (Part-B)
70	Section 9- Financial Bid	Item no. V.19 of Schedule-2: Video System (V) - Page no. 126	SITC of 30x optical Zoom Conference Room - Qty. 1 no.	Qty 02 Nos.: 01 will be required at BR and 01 will be required at Auditorium (to enlarge the image of speaker in large wall also to send the stage video to other floors as per design requirement.	Please refer Sl. No. 11 of Corrigendum-II (Part-B).



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
71	Section 9- Financial Bid	Item no. Sw.2 of Schedule-3: Switching system (Sw) - Page no. 127	Wall plate HDMI Long distance transmitter 4k, 4:4:4	Floor box HDMI Long distance transmitter and Reciever 4k, 4:4:4 along with Floor BOX: As it will be install in floor box in auditorium so kindly change the same to Floor Box. Also added floor box for same.	Floor box for HDMI is not required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
72	Section 9- Financial Bid	Item no. Sw.3 of Schedule-3: Switching system (Sw) - Page No. 127	HDMI Long distance transmitter 4k, 4:4:4 - Qty. 4 nos.	Qty 8 Nos.: Qty changed as per design	Bidder to quote as per tender quantity. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
73	Section 9- Financial Bid	Item no. Sw.4 of Schedule-3: Switching system (Sw): Page No. 127	HDMI Long distance Receiver 4k, 4:4:4	Qty 8 Nos.: Qty changed as per design	Bidder to quote as per tender quantity. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
74	Section 9- Financial Bid	Item no. Sw.9 of Schedule-3: Switching system (Sw) - Page No. 127	4x1 HDMI 4k Switcher with Serial / IP control - Qty. 3 nos.	4x2 USB-C and HDMI 4k Matrix Switcher with Serial / IP control - Qty - 07 Nos. : Please replace this by USB-C and HDMI switcher. Because Latest Laptops has USB-C for BYOD and presentation function. Also increase the qty as per design requirement	Specifications mentioned in the tender are preferrable. Bidder to quote as per specifications mentioned in tender.
75	Section 9- Financial Bid	Item no. Sw.12 of Schedule-3: Switching system (Sw) - Page No. 127	HDMI to USB capture card, 4k compatible, USB3.0 compatible - Qty. 1 no.	Qty - 02 Nos. : Please increase the qty as per design requirement	Bidder to quote as per tender quantity. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
76	Section 9- Financial Bid	Schedule-3: Switching system (Sw) - Page No. 127	-	AV over IP Encoder for town hall functionality - Qty 2 Nos. : Please add this for town hall functionality or to send audio video to All floors display	No new item is required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
77	Section 9- Financial Bid	Schedule-3: Switching system (Sw) - Page No. 127	-	AV over IP Decoder for town hall functionality - Qty - 12 Nos.: Please add this for town hall functionality or to send audio video to All floors display	No new item is required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
78	Section 9- Financial Bid	Item no. Al.6 of Schedule-4: Automation & Lighting control System (AL) - Page No. 128	6 Button Control. Interface with volume. control knob with built in processor	10 Button Control. Interface with volume. control knob with built in processor: please change the model as per design requirement	Tender condition prevails. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
79	Section 9- Financial Bid	Schedule-4: Automation & Lighting control System (AL) - Page No. 128	-	Occupancy sensor with 24V - Qty - 5 Nos. : Please add Occupancy sensor for automatic system on and off based on person's presence in room. So no need of touch the buttons every time in BR, CR, and MR	Occupancy sensor is not required. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
80	Section 9- Financial Bid	Item no. Ms.1 of Schedule-9: Miscellaneous Items (MS) - Page No. 133	SITC of Network Switch, 24 port Ethernet managed switch (Auditorium) - Qty. 1 no.	SITC of Network Switch, 20 port 1G PoE Ethernet managed switch for AV over IP with 10 G SFP ports - Qty - 04 Nos. : please change the model as per design requirement for AV over IP for video share to all floors	Tender condition prevails. Further, Bidder to consider associated cost of SFP, if required as per Bidder's proposed design, while quoting against Ethernet switch. Further, please refer Sl. No. 11 of Corrigendum - II (Part-B).
81	Annexure-5B (Specifications)	Item no. 14 of Annexure-1 - Auditorium Page No. 142	Supply, installation , testing and commissioning of Digital Sound Processor with DATNTE support & 12 Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % ; Channel Separation (Crosstalk) : < 105 dB ; Frequency Response 20 Hz - 20 kHz ; Signal-to-Noise Ratio 80 dB ;Dynamic Range : > 115 dB; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; inbuilt DSP features like Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Feedback suppressors, Source selectors etc, with USB 2x2	It shoud support priority function on input audio. : Please add It shoud support priority function on input audio. For emergency audio priority.	Tender condition prevails. Priority function on input audio feature can be made available by programming digital input output points of DSP.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
82	Annexure-5B (Specifications)	Item no. 46 of Annexure-1 - Auditorium - Page No. 144	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resoluθon range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Manager automatically manages EDID communication between connected devices (EDID selector switch) , Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, and DolbyVision, Regulatory compliance CE: Please change the specifications	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender. Further, Bidder to refer Sl. No. 13 of Corrigendum - II (Part-B).
83	Annexure-5B (Specifications)	Item no. 47 of Annexure-1 - Auditorium - Page No. 144	SITC of Digital podium with 1 Nos. 19" monitor [Non-Interactive moinitor], place to mount the Podium mics, & extra space to keep the Laptop for presentation, Podium should be supplied with Light, & Separate HDMI female face plate.	SITC of Digital podium with space for 1 Nos. 24" Interactive monitor, place to mount the Podium mics, & extra space to keep the Laptop for presentation, Podium should be supplied with Light, and passthrough : Please change the same as per design requirement. In this tender 02 nos. Interactive monitor already mentioned for audi.	Specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.
84	Annexure-5B (Specifications)	Item no. 68 of Annexure-1 - Auditorium - Page No. 146	wall plate Transmitter & Receiver	Floor box transmitter and Receiver with floor box: As it will be install in floor box in auditorium so kindly change the same to Floor Box. Also added floor box for same	Floor box for HDMI is not required.
85	Annexure-5B (Specifications)	Item no. 70 of Annexure-1 - Auditorium - Page No. 146	SITC of 4k HDMI Transmitter kit in wall plate version, 4K HDMI 2.0 Tranmitter to transmit high resolution 4k Signals upto - 70 m & 1080p Signals upto 100 mtrs on single Sheilded CAT6 cable with bidirectional serial commands or IR commands , to be supplied with standard Power cord, Maximum data rate: 10.2 Gbps (3.4 Gbps per color), Maximum pixel clock 300 MHz, Resoluθon range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	SITC of 4k Floor Box Transmitter. To be supplied with compatible receiver and Floor BOX. Supports HDMI 3D signal formats (frame packing, side-by-side and top-bottom). 1920x1080@120Hz/4:4:4, 4096x2160@30Hz/4:4:4 or 60Hz/4:2:0 maximum resolutions (300MHz). HDMI 1.4, HDCP 1.4 and DVI 1.0 compliant. HDCP enable/disable function on input. Uncompressed video up to 9 Gbps datarate (300 MHz pixel clock). Audio embedding (or replace original audio). Supports all embedded audio formats (including PCM, Dolby Digital and DTS high bitrate audio) Extension distance up to 150 meters (with CAT7 S/FTP AWG23 cable, 1920x1080p60). HDBaseT compatible. Ethernet extension (100 Mbps) EDID Management. Command injection on RS-232 and IR ports. Device control via Ethernet (TCP/IP) and RS-232. Multiple TCP/IP connections. Intuitive control software for device configuration. Supports HDMI 4K signal formats (4K UHD @30Hz RGB 4:4:4 or @60Hz YUV 4:2:0, up to 9 Gbps). No video compression. Can be remote powered through CATx cable (PoE PD). Bi-directional RS-232 and IR extension (pass-through) Extends HDMI or DP + Audio + Ethernet + RS-232 + IR over one CAT5/6/7 cable. Bi-directional RS-232 and IR extension (pass-through and control) Supports several embedded audio formats (including PCM, Dolby Digital and DTS). Compatible with Mac laptop and desktop computers with Thunderbolt port: Floor box transmitter and reciever spec suggested	Floor box for HDMI is not required. Further, specifications mentioned in the tender are preferable. Bidder to quote as per specifications mentioned in tender.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
86	Annexure-5B (Specifications)	Item no. 71 of Annexure-1 - Auditorium - Page No. 146	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with abobe wall plate or Box type Trasmitters, 300 MHz, Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with above wall plate or Box type Trasmitters, 600 MHz , Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — 4K UHD @60Hz RGB 4:4:4, up to 18 Gbps subject to the maximum data rate limit, Bi-directional RS-232 extension (pass-through) HDCP 2.3 compliant (transparent pass-through) HDMI 2.0 end-to-end extension HDR and Low Latency Dolby Vision support Bi-directional PoC remote powering Extends HDMI 2.0, audio, Ethernet, RS-232 up to 100m over one CATx cable Ethernet extension (1 Gbps) Command injection through IR Please change the specifications	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
87	Annexure-5B (Specifications)	Item no. 71 of Annexure-1 - Auditorium - Page No. 146	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with abobe wall plate or Box type Trasmitters, 300 MHz, Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit,	SITC of 4k HDMI Receiver kit in Box version, 4K HDMI 2.0 Receiver to work with above wall plate or Box type Trasmitters, 600 MHz , Resolution range Up to 2560x1600* @ 60 Hz or 4K (4096x2160) @ 30 Hz, UHD (3840x2160) @ 30 Hz, 4K/UHD @ 60 Hz with 4:2:0 chroma subsampling, Color bit depth 8, 10, or 12 bits — subject to the maximum data rate limit, Bi-directional RS-232 extension (pass-through) HDCP 2.3 compliant (transparent pass-through) HDMI 2.0 end-to-end extension HDR and Low Latency Dolby Vision support Bi-directional PoC remote powering Extends HDMI 2.0, audio, Ethernet, RS-232 up to 100m over one CATx cable Ethernet extension (1 Gbps) Command injection through IR Please change the specifications	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
88	Annexure-5B (Specifications)	Item no. 72 of Annexure-1 - Auditorium - Page No. 146	SITC of HDMI 4k@60 Matrix Switcher, 4 x 4 4K HDMI 2.0 Switcher with Down Scaling to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz, 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz	SITC of HDMI 4k@60 Matrix Switcher, 4 x 4 4K HDMI 2.0 Switcher to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, HDCP 2.2 Resolution range :640x480 to 4096x2160 @ 60 Hz, 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separation >80 dB @ 1 kHz Video delay: 0 frame Control Ports:RS-232 serial port, RJ45 female Ethernet Port Please change the specifications	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
89	Annexure-5B (Specifications)	Annexure-1 - Auditorium	-	<p>SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock).</p> <p>Please add the same as per design requirement for USB-C Connectivity required for USB-C connectivity in auditorium with interactivity</p>	<p>Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher specified under Item no. 72 of Annexure-1 - Auditorium under Annexure-5B (Specifications). No new item is required.</p>
90	Annexure-5B (Specifications)	Annexure-1 - Auditorium	-	<p>Supply, Installation, Testing and Commissioning of Optical AV Over IP Encoder. AV Over IP Scaling Multimedia Extender with USB K+M, RS-232 and IR. USB 1.1 K+M (HID) extension USB 2.0 MSC (Mass Storage Class) extension Compact and silent design Audio embedding (or replace original audio) Command injection on RS-232 ports 1920x1080@120Hz/4:4:4, 4096x2160@30Hz/4:4:4 or 60Hz/4:2:0 maximum resolutions (300MHz) Advanced EDID Management Intuitive control software for device configuration Device control via Ethernet (TCP/IP) Built-in website for device configuration Bi-directional RS-232 extension (pass-through) HDMI 1.4, HDCP 1.4 and DVI 1.0 compliant Firmware upgrade through Ethernet HDCP 2.2 and HDCP 1.4 compliant Local monitor output on transmitter Status LED for video signal detection Supports several embedded audio formats (including PCM, Dolby Digital and DTS) External universal power adaptor Can be remote powered through CATx cable (PoE PD) Mounting options for rack, furniture or truss.</p> <p>Please add this for town hall functionality or to send audio video to All floors display - required for video streaming at all floors.</p>	<p>No new item is required.</p>



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
91	Annexure-5B (Specifications)	Annexure-1 - Auditorium		Supply, Installation, Testing and Commissioning of Optical AV Over IP Decoder. Scaling of video signals to match the properties of the target display/sink USB 1.1 K+M (HID) extension USB 2.0 MSC (Mass Storage Class) extension Compact and silent design Audio de-embedding Command injection on RS-232 ports 1920x1080@120Hz/4:4:4, 4096x2160@30Hz/4:4:4 or 60Hz/4:2:0 maximum resolutions (300MHz) Advanced EDID Management Intuitive control software for device configuration Device control via Ethernet (TCP/IP) Built-in website for device configuration Bi-directional RS-232 extension (pass-through) HDMI 1.4, HDCP 1.4 and DVI 1.0 compliant Firmware upgrade through Ethernet HDCP 2.2 and HDCP 1.4 compliant Status LED for video signal detection Supports several embedded audio formats (including PCM, Dolby Digital and DTS) External universal power adaptor Can be remote powered through CATx cable (PoE PD) Mounting options for rack, furniture or truss Please add this for town hall functionality or to send audio video to All floors display - required for video streaming at all floors	No new item is required.
92	Annexure-5B (Specifications)	Item no. 6 of Annexure-2 - Board Room - Page No. 147	Supply , installation , testing and comissioning of Digital Sound Processor with DANTE with 12 Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % ; Channel Separation (Crosstalk) : < 105 dB ; Frequency Response 20 Hz - 20 kHz ; Signal-to-Noise Ratio 80 dB ;Dynamic Range : > 115 dB; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; inbuilt DSP features like Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Feedback suppressors, Source selectors etc, with USB 2x2	Please add It shoud support priority function on input audio. For emergency audio priority.	Tender condition prevails. Priority function on input audio feature can be made available by programming digital input output points of DSP.
93	Annexure-5B (Specifications)	Item no. 12 of Annexure-2 - Board Room - Page No. 149	SITC of 4k HDMI Switcher with 8 inputs x 4 Output hdmi matrix switcher with RS232/lp control, built in stereo audio output, HDMI 2.0 Switcher with Down Scaling to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz , , 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separaΘon >80 dB @ 1 kHz	SITC of 4k HDMI Switcher with 8 inputs x 4 Output hdmi matrix switcher with RS232/lp control, built in stereo audio output, HDMI 2.0 Switcher to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4 RGB, YCbCr, HDCP 2.2 Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz , , 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separaΘon >80 dB @ 1 kHz Video delay: 0 frame Please change the specifications.	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
94	Annexure-5B (Specifications)	Annexure-2 - Board Room		<p>SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock).</p> <p>Please add the same as per design requirement of USB-C required for USB-C connectivity in Board Room</p>	<p>Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher, specified under Item no. 12 of Annexure-2 - Board Room.</p> <p>No new item is required.</p>
95	Annexure-5B (Specifications)	Item no. 10 of Annexure-3 - Meeting Room-1 at Page no. 152	<p>SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/lp control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMi embedded</p>	<p>SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock).</p> <p>Please add the same as per design requirement of USB-C</p>	<p>Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher.</p> <p>No new item is required.</p>
96	Annexure-5B (Specifications)	Item no. 17 of Annexure-3 - Meeting Room-1 - Page No. 152	<p>SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color</p>	<p>SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color</p> <p>Please change the specifications as per design requirement</p>	<p>Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.</p>



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
97	Annexure-5B (Specifications)	Item no. 9 of Annexure-4 - Meeting Room-2 - Page No. 154	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMi embedded	SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher.
98	Annexure-5B (Specifications)	Item no. 16 of Annexure-4 - Meeting Room-2 - Page No. 154	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color	SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color Please change the specifications as per design requirement	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
99	Annexure-5B (Specifications)	Item no. 11 of Annexure-8 - Conference Room (4th Floor) - Page No. 160	SITC of 4k HDMI Switcher with 8 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMi embedded	SITC of 4k HDMI Switcher with 8 inputs x 4 Output hdmi matrix switcher with RS232/Ip control, built in stereo audio output, HDMI 2.0 Switcher to be supplied with standard power cord & other required accessories, Should Support computer/video resolutions up to 4K/60 @ 4:4:4 RGB, YCbCr, HDCP 2.2 Supported HDMI 2.0, data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, Maximum pixel clock:600 MHz, Resolution range :640x480 to 4096x2160 @ 60 Hz, , 4096x2160 @ 30Hz ,480i, 576i, 480p, 576p, 720p, 1080i, 1080p, and 2K, Video procesing Digital sampling : 8, 10, or 12 bits per color, @ Colors 1 billion (10-bit processing), Audio De-embedding :LPCM up to 2.0/24-bit/96 kHz, Audio-pass throu all HDMI with all standard formats, Audio Gain : Unbalanced output: -6 dB, balanced output 0 dB, Audio Frequency response : 20 Hz to 20 kHz, ±0.5 dB, THD + Noise : <0.01% @ 20-20 kHz at nominal level, S/N >90 dB at maximum balanced output (unweighted), Crosstalk ≤-80 dB @ 1 kHz, fully loaded, Stereo channel separaΘon >80 dB @ 1 kHz Video delay: 0 frame Please change the specifications.	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
100	Annexure-5B (Specifications)	Item no. 12 of Annexure-8 - Conference Room (4th Floor) - Page No. 160	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder* automatically manages EDID communication between connected devices, Resolu0on range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Manager automatically manages EDID communication between connected devices (EDID selector switch), Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, and DolbyVision, Regulatory compliance CE Please change the specifications.	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design. Further, please refer Sl. No. 24 of Corrigendum-II (Part-B).
101	Annexure-5B (Specifications)	Annexure-8 - Conference Room (4th Floor)		SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in 4k HDMI Switcher, specified under Item no. 11 of Annexure-8 - Conference Room (4th Floor) under Annexure-5B (Specifications). No new item is required.
102	Annexure-5B (Specifications)	Item no. 19 of Annexure-8 - Conference Room (4th Floor) - Page No. 161	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black colo	SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color Please change the specifications as per design requirement	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
103	Annexure-5B (Specifications)	Item no. 4 of Annexure-8 - Conference Room (4th Floor) - Page No. 162	Supply , installation , testing and commissioning of Digital Sound Processor with 12 Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % ; Channel Separation (Crosstalk) : < 105 dB ; Frequency Response 20 Hz - 20 kHz ; Signal-to-Noise Ratio 80 dB ;Dynamic Range : > 115 dB; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; inbuilt DSP features like Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Feedback suppressors, Source selectors etc, with USB 2x2	It shoud support priority function on input audio. Please add It shoud support priority function on input audio. For emergency audio preority	Tender condition prevails. Priority function on input audio feature can be made available by programming digital input output points of DSP.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
104	Annexure-5B (Specifications)	Item no. 9 of Annexure-9 - Meeting Room (4th Floor) - Page No. 163	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMi embeded	SITC of 4x2 USB-C and HDMI 4k Matrix Switcher. 4x2 matrix with 02 USB-C, 02 HDMI 2.0 and USB 3.1 ports supporting 4K signal formats (4K UHD @ 60Hz RGB 4:4:4, up to 18 Gbps), secure control Ethernet interface and 02 HDMI Output. USB-C input connectivity for 4K Video, Audio, Data, and Power (Video, Audio, Data and Power over a single USB-C connection). Multiple USB 3.1 Gen 1 connectivity for any type of USB devices (Camera, speakerphone, touch monitor, USB-HID devices etc...). USB 3.1 Gen 1, USB 2.0, USB 1.1 compliant. Separate USB 3.1 Host switching layer for multiple USB hosts and USB devices. Charging via USB-C up to 100w (120w total). Dedicated secure corporate and room utility Ethernet connectivity. Multiple Ethernet network configurations fitting various corporate network topologies and IT security standards (e.g. 802.1x compliance). SSH, SSL, HTTPS for IT security. Smart & noiseless cooling system. Occupancy sensor connection (with 24V power supply). Splash screen for custom corporate logo and on-screen display warning messages. CEC at the HDMI outputs (from Firmware V1.4). Audio de-embedding. GPIO control ports. Device control via Ethernet (TCP/IP). Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). Uncompressed video up to 18 Gbps datarate (600 MHz pixel clock). Please add the same as per design requirement of USB-C	Latest design having Type-C connectivity is visualized, along with backward compatibility. The same is to be implemented in HDMI 4k Matrix Switcher.
105	Annexure-5B (Specifications)	Item no. 16 of Annexure-9 - Meeting Room (4th Floor) - Page No. 164	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color	SITC of button panel controller with volume control knob, with RS-232 ports, Two IO ports to controlling room functions, IR, Network Interface : 1 xRJ45, to be supplied with Cover face plate & back box, Black color Please change the specifications as per design requirement	Specifications mentioned in the tender are preferable and Bids shall be evaluated considering tender specifications only. However, Bidder can consider similar specifications complying to Bidder's proposed design.
106	Annexure-5B (Specifications)	Item no. 7 of Annexure-10 - Cafeteria - Page No. 165	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resoluθon range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Manager automatically manages EDID communication between connected devices (EDID selector switch), Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, and DolbyVision, Regulatory compliance CE Please change the specifications	Specifications mentioned in the tender are preferable, however, Bidder can consider similar specifications complying to Bidder's proposed design. Further, Bidder to refer Sl. No. 29 of Corrigendum - II (Part-B).
107	General	-	-	LAN cabling (Passive work) is not in vendors scope. It will be provided by client. Please consider and arrange the same	SITC of LAN cabling for the equipment under the scope of this tender shall be in the Bidder's scope. The external connectivity to the Maha-Metro's LAN shall be under the scope of Maha-Metro.
108	SECTION – 3 (ELIGIBILITY CRITERIA)	Clause 3.10 at Page no. 53	-	Request to give some relaxation in PQ criteria. On the Order Value of the Executed Projects so that we can easily arrange the document for the same.	Tender condition prevails.



SN	Section	Clause No. / Page no.	Bid Condition	Bidder's Queries	Maha-Metro's Response
109	General	-	-	Preference for Make in India Products: In accordance with the Make in India vide Ministry of Commerce and Industry Development of industrial policy and Promotion (PPS) Vide order No. P- 45021/2/2017-PP BE-II dated 28.05.2018 and Govt. of India MeitY (Ministry of Electronics and IT) vide Order No. 19-113/2020 Dated 16-03-2021 guidelines, We kindly request that preference be given to products manufactured in India. This aligns with our commitment to support local manufacturing and economic growth. Additionally, in line with the Central Government guidelines promoting the "Make in India" initiative, we kindly request that preference be given to products manufactured in India. This aligns with the government's Initiative of fostering domestic production and supporting indigenous industries. It's essential to adhere to these guidelines to contribute to the nation's economic growth and self-reliance.	Please refer Sl. No. 2 of Corrigendum-II (Part-B).
110	General	-	-	To cancel this Published Tender and Issue a New One: It has come to our attention that the current tender supports specific brands that are not listed on the Government e-Marketplace (GeM). To adhere to central government guidelines and ensure fairness and transparency, we kindly request that the published tender needs be cancelled to adhere the Govt. of India guidelines, and We make gentle Request a new / fresh Tender be issued. The new tender should specify the preference for 'Make in India' products.	a) The subject tender necessitates reputed OEMs or equivalent OEMs, meeting the desired tender specifications or similar specifications. b) The subject tender is not a direct purchase from GeM and it is an open tender where bidders are free to quote, allowing competitive bidding. c) Please refer Sl. No. 2 of Corrigendum-II (Part-B) for preference for 'Make in India' products.
111	General	-	-	Submission of Land Border Sharing Certificate: In accordance with DPIIT regulations, we hereby request you to kindly seek the 'Land Border Sharing Certificate' from each Original Equipment Manufacturer (OEM) as part of the tender documentation.	Please refer Sl. No. 2 of Corrigendum-II (Part-B).
112	General	-	-	Requirement of Office in Pune for Service Support & SLA: It is essential that all OEMs have a presence in Maharashtra for efficient service support. Please ensure that this requirement is included in the tender documentation along with details of a toll-free number and escalation matrix for support purposes.	Service support is required 24x7 on call. Further, having Bidder's own office in Pune shall be an added advantage.
113	General	-	-	Inclusion of Class II 20% / Class I 50% :- Local Components: We hereby request you to insist the Bidders/ OEMs to add the clause asking- "the inclusion of Class II 20% or Class I 50% local components in each product, which will promote the local manufacturing and adhere to the Govt. of India's 'Make in India' initiative.	Please refer Sl. No. 2 of Corrigendum-II (Part-B).
114	General	-	-	Indian Brand's Model's may not 100% comply with line-by-line specifications of the Foreign brands; there will be slight deviations occur. In such case, the Buyer may reject / disqualify the Indian Brands/ OEMs products. This might not be fair playfield, in terms of MII Initiative by the Central Govt. Hence, We request to consider the Indian Makes/ OEMs.	In general, functionalities visualized in the tender specifications shall be ascertained and line-by-line compliance to detailed specifications is not required.

(Executive Director),
Procurement & Contracts, Maha-Metro.



Corrigendum - II (Part-B) : Revised Tender Conditions

Name of Work	Design, Supply, Installation, Testing & Commissioning of Telecom System at Metro Bhavan, Pune.
Tender No.	P1-IT-04/2024 dt. 12-Mar-24

Sl. No.	Section	Clause No. / Page no.	Existing Description	Revised Description																																																												
1	Section-2 Annexure-2A: Bid Data Sheet (BDS)	ITB 4.16 (Additional Para) at Page no. 32	ITB 4.16 (Additional Para): Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a Bid will be an offence under laws of India. Such action will result in the rejection of the Bid, in addition to other punitive measures.	ITB 4.8 (Additional Para): Canvassing or offer of an advantage or any other inducement by any person with a view to influencing acceptance of a Bid will be an offence under laws of India. Such action will result in the rejection of the Bid, in addition to other punitive measures.																																																												
2	Section-2 Annexure-2A: Bid Data Sheet (BDS)	Page no. 32		ITB 4.9 (Additional Para) is added herewith: Please refer Annexure-A to Corrigendum-II (Part-B).																																																												
3	Section 3 (Eligibility Criteria)	3.11 at Page no. 53	Average Annual Turnover: The bidders will be qualified only if their average annual turnover over for Last 03 (three) audited financial years (FY 2022-23, FY 2021-22, FY 2020-21,) is not less than INR 14.98 Crore (Summary of annual turnover of each year Certified by CA with UDIN, shall be enclosed by the Bidder.	Average Annual Turnover: The bidders will be qualified only if their average annual turnover over for Last 03 (three) audited financial years (FY 2022-23, FY 2021-22, FY 2020-21,) is not less than INR 14.98 Crore (Summary of annual turnover of each year Certified by CA with UDIN, shall be enclosed by the Bidder. For the purpose of evaluation of the JV/Consortium each member, contribution towards the turnover shall be considered in the same ratio of their equity participation in the JV/Consortium. Illustration: Say If 'A' and 'B' are two members of JV/Consortium. 'A' is having 65% equity holding in JV/Consortium and 'B' is having 35% equity holding in JV/Consortium. In such a condition, 65% of A's turnover plus 35% of B's turnover will be taken for the calculation of eligibility of the JV/Consortium.																																																												
4	Section 5 (Scope of Work)	3 at Page no. 59	q) Before supply of items under the scope of works, the bidder shall submit design, details of make and model of all items to the Employer/Engineer for approval.	q) Typical Design & Drawings are enclosed as Annexure-B to Corrigendum - II (Part-B). Before supply of items under the scope of works, the bidder shall submit detailed design, details of make and model of all items to the Employer/Engineer for approval.																																																												
5	Section 5 (Scope of Work)	3 at Page no. 59	-	3 (r) New Sub-Clause added: Storage: The Contractor shall develop its own space / warehouse for storing of materials of all kinds intended for use in carrying out the Scope of Works.																																																												
6	Section 5 (Scope of Work)	3 at Page no. 59	-	3 (s) New Sub-Clause added: The Contractor to conduct the acoustic treatment study for Walls, ceiling, Floor of respective area to have optimal Audio results in all AV facilities. The information on Acoustics Treatments shall be shared with on-board civil contractor for execution.																																																												
7	Sec. 5 – Annexure-5B (Technical Specifications)	5 at Page no. 62	5. Please refer enclosed Annexure-5B indicating detailed Technical Specifications in the following heads: <table border="1" data-bbox="747 1360 1596 1791"> <thead> <tr> <th>Annexure No.</th> <th>Sub-Area</th> </tr> </thead> <tbody> <tr><td>1</td><td>Auditorium</td></tr> <tr><td>2</td><td>Board Room</td></tr> <tr><td>3</td><td>Meeting Room-1</td></tr> <tr><td>4</td><td>Meeting Room-2</td></tr> <tr><td>5</td><td>Dining Area</td></tr> <tr><td>6</td><td>MD's Cabin</td></tr> <tr><td>7</td><td>All Cabins (3rd Floor & 4th floor)</td></tr> <tr><td>8</td><td>Conference Room (4th Floor)</td></tr> <tr><td>9</td><td>Meeting Room (4th Floor)</td></tr> <tr><td>10</td><td>Cafeteria</td></tr> <tr><td>11</td><td>Breakout Area & Corporate Lobby (4th Floor)</td></tr> <tr><td>12</td><td>Access Gate at Ground Floor of Metro Bhavan</td></tr> <tr><td>13</td><td>Wi-Fi at Ground, 3rd, 4th & 5th Floor</td></tr> <tr><td>14</td><td>Karaoke System</td></tr> </tbody> </table>	Annexure No.	Sub-Area	1	Auditorium	2	Board Room	3	Meeting Room-1	4	Meeting Room-2	5	Dining Area	6	MD's Cabin	7	All Cabins (3 rd Floor & 4 th floor)	8	Conference Room (4 th Floor)	9	Meeting Room (4 th Floor)	10	Cafeteria	11	Breakout Area & Corporate Lobby (4 th Floor)	12	Access Gate at Ground Floor of Metro Bhavan	13	Wi-Fi at Ground, 3 rd , 4 th & 5 th Floor	14	Karaoke System	5. Please refer enclosed Annexure-5B indicating detailed Technical Specifications in the following heads: <table border="1" data-bbox="1816 1346 2665 1780"> <thead> <tr> <th>Annexure No.</th> <th>Sub-Area</th> </tr> </thead> <tbody> <tr><td>1</td><td>Auditorium (3rd Floor)</td></tr> <tr><td>2</td><td>Board Room (3rd Floor)</td></tr> <tr><td>3</td><td>Meeting Room-1 (3rd Floor)</td></tr> <tr><td>4</td><td>Meeting Room-2 (3rd Floor)</td></tr> <tr><td>5</td><td>Conference Room (3rd Floor)</td></tr> <tr><td>6</td><td>MD's Cabin (3rd Floor)</td></tr> <tr><td>7</td><td>All Cabins (3rd Floor & 4th floor)</td></tr> <tr><td>8</td><td>Conference Room (4th Floor)</td></tr> <tr><td>9</td><td>Meeting Room (4th Floor)</td></tr> <tr><td>10</td><td>Cafeteria (4th Floor)</td></tr> <tr><td>11</td><td>Breakout Area & Corporate Lobby (4th Floor)</td></tr> <tr><td>12</td><td>Access Gate at Ground Floor of Metro Bhavan</td></tr> <tr><td>13</td><td>Wi-Fi at Ground, 3rd, 4th & 5th Floor</td></tr> <tr><td>14</td><td>Karaoke System</td></tr> </tbody> </table>	Annexure No.	Sub-Area	1	Auditorium (3 rd Floor)	2	Board Room (3 rd Floor)	3	Meeting Room-1 (3 rd Floor)	4	Meeting Room-2 (3 rd Floor)	5	Conference Room (3 rd Floor)	6	MD's Cabin (3 rd Floor)	7	All Cabins (3 rd Floor & 4 th floor)	8	Conference Room (4 th Floor)	9	Meeting Room (4 th Floor)	10	Cafeteria (4 th Floor)	11	Breakout Area & Corporate Lobby (4 th Floor)	12	Access Gate at Ground Floor of Metro Bhavan	13	Wi-Fi at Ground, 3 rd , 4 th & 5 th Floor	14	Karaoke System
Annexure No.	Sub-Area																																																															
1	Auditorium																																																															
2	Board Room																																																															
3	Meeting Room-1																																																															
4	Meeting Room-2																																																															
5	Dining Area																																																															
6	MD's Cabin																																																															
7	All Cabins (3 rd Floor & 4 th floor)																																																															
8	Conference Room (4 th Floor)																																																															
9	Meeting Room (4 th Floor)																																																															
10	Cafeteria																																																															
11	Breakout Area & Corporate Lobby (4 th Floor)																																																															
12	Access Gate at Ground Floor of Metro Bhavan																																																															
13	Wi-Fi at Ground, 3 rd , 4 th & 5 th Floor																																																															
14	Karaoke System																																																															
Annexure No.	Sub-Area																																																															
1	Auditorium (3 rd Floor)																																																															
2	Board Room (3 rd Floor)																																																															
3	Meeting Room-1 (3 rd Floor)																																																															
4	Meeting Room-2 (3 rd Floor)																																																															
5	Conference Room (3 rd Floor)																																																															
6	MD's Cabin (3 rd Floor)																																																															
7	All Cabins (3 rd Floor & 4 th floor)																																																															
8	Conference Room (4 th Floor)																																																															
9	Meeting Room (4 th Floor)																																																															
10	Cafeteria (4 th Floor)																																																															
11	Breakout Area & Corporate Lobby (4 th Floor)																																																															
12	Access Gate at Ground Floor of Metro Bhavan																																																															
13	Wi-Fi at Ground, 3 rd , 4 th & 5 th Floor																																																															
14	Karaoke System																																																															



Sl. No.	Section	Clause No. / Page no.	Existing Description	Revised Description																
8	Section 6 (Conditions of Contract)	6.1.1. Duration of Contract at Page no. 64	The contract shall continue for a period of 1.5 years (18 months) from the date of issuance of LOA. However, the period of the contract may be further extended after completion of contract period, as per discretion of Maha-Metro with following provisions: a) The maximum limit of extension of contract period shall be for 24 (Twenty-Four) months with mutual understanding of Maha-Metro and Contractor. b) The Contractor has to provide his services at the accepted contractual terms & conditions; however, the financial terms & conditions may be negotiated & agreed upon by both Parties.	The contract shall continue for a period of 1.5 years (18 months) from the date of issuance of LOA. Duration of Defect Liability Period (DLP) is 2 (Two) years from the date of system commissioning and duration of Annual Maintenance Contract (AMC) Period is 5 (Five) years from the date of completion of DLP. However, the period of the contract may be further extended after completion of contract period, as per discretion of Maha-Metro with following provisions: a) The maximum limit of extension of contract period shall be for 24 (Twenty-Four) months with mutual understanding of Maha-Metro and Contractor. b) The Contractor has to provide his services at the accepted contractual terms & conditions; however, the financial terms & conditions may be negotiated & agreed upon by both Parties.																
9	Section 6 (Conditions of Contract)	6.1.8 Variation and New Items at Page no. 66-69		6.1.8 C & D - New Sub-Clauses are added herewith: C. Modification to contract to be in writing: In the event of any of the provisions of the contract requiring to be modified after the contract documents have been signed, the modifications shall be made in writing and signed by Maha-Metro and the Contractor and no work shall proceed under such modifications until this has been done. Any verbal or written arrangement abandoning, modifying, extending, reducing or supplementing the Contract or any of the terms thereof shall be deemed conditional and shall not be binding on Maha-Metro unless and until the same is incorporated in a formal instrument and signed by Maha-Metro and the Contractor, and till then Maha-Metro shall have the right to repudiate such arrangements. D. Powers of modifications to contract: Engineer on behalf of Maha-Metro shall be entitled by order in writing to enlarge or extend, diminish or reduce the works or make any alterations in their design, character position, site, quantities, dimensions or in the method of their execution or in the combination and use of materials for the execution thereof or to order any additional work to be done or any works not to be done and the Contractor will not be entitled, to any compensation for any increase/reduction in the quantities of work but will be paid only for the actual amount of work done and for approved materials supplied against a specific order.																
10	Section 8 (List of Documents To be Submitted)	Section 8 (List of Documents To be Submitted) at Page no. 119	Section 8 (List of Documents To be Submitted)	Please refer revised Section 8 (List of Documents To be Submitted) enclosed as Annexure-C to Corrigendum - II (Part-B).																
11	Section-9 (Financial Bid)	Section-9 (Financial Bid) at Page no. 121	Section-9 (Financial Bid)	Please refer revised Section-9 (Financial Bid) enclosed as Annexure-D to Corrigendum - II (Part-B).																
12	Annexure-5B (Specifications)	Annexure-1 - Auditorium (Page no. 144)	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>44</td> <td>Tripod stand</td> <td>Manfrotto or Equivalent</td> <td>SITC of Lightweight Fluid Tripod Video Head with Flat Base (MVH500AH), Aluminium 3-Section Tripod with Horizontal Column (Black)</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	44	Tripod stand	Manfrotto or Equivalent	SITC of Lightweight Fluid Tripod Video Head with Flat Base (MVH500AH), Aluminium 3-Section Tripod with Horizontal Column (Black)	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>44</td> <td>Tripod stand</td> <td>Manfrotto or Equivalent</td> <td>SITC of Lightweight Fluid Tripod Video Head with Flat Base, Aluminium 3-Section Tripod with Horizontal Column (Black)</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	44	Tripod stand	Manfrotto or Equivalent	SITC of Lightweight Fluid Tripod Video Head with Flat Base, Aluminium 3-Section Tripod with Horizontal Column (Black)
S. No.	Item	Suggested Make	Specifications																	
44	Tripod stand	Manfrotto or Equivalent	SITC of Lightweight Fluid Tripod Video Head with Flat Base (MVH500AH), Aluminium 3-Section Tripod with Horizontal Column (Black)																	
S. No.	Item	Suggested Make	Specifications																	
44	Tripod stand	Manfrotto or Equivalent	SITC of Lightweight Fluid Tripod Video Head with Flat Base, Aluminium 3-Section Tripod with Horizontal Column (Black)																	
13	Annexure-5B (Specifications)	Annexure-1 - Auditorium (Page no. 144)	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>46</td> <td>HDMI Distribution amplifier</td> <td>Extron or Equivalent</td> <td>SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID-Monitor* automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	46	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID-Monitor* automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>46</td> <td>HDMI Distribution amplifier</td> <td>Extron or Equivalent</td> <td>SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	46	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE
S. No.	Item	Suggested Make	Specifications																	
46	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID-Monitor* automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE																	
S. No.	Item	Suggested Make	Specifications																	
46	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE																	



Sl. No.	Section	Clause No. / Page no.	Existing Description	Revised Description																
14	Annexure-5B (Specifications)	Annexure-1 - Auditorium (Page no. 147)		Sl. No. 89 & 90 added as below: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>89</td> <td>Recording and Streaming Hardware (4 Channel)</td> <td>Lumens / Mediapointe / Mediasite / Vbrick</td> <td>SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.</td> </tr> <tr> <td>90</td> <td>USB-C adapter</td> <td>Reputed make</td> <td>SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	89	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.	90	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.				
S. No.	Item	Suggested Make	Specifications																	
89	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.																	
90	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																	
15	Annexure-5B (Specifications)	Annexure-2 - Board Room (Page no. 150)		Sl. No. 18A & 18B added as below: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>18A</td> <td>Recording and Streaming Hardware (4 Channel)</td> <td>Lumens / Mediapointe / Mediasite / Vbrick</td> <td>SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.</td> </tr> <tr> <td>18B</td> <td>USB-C adapter</td> <td>Reputed make</td> <td>SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	18A	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.	18B	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.				
S. No.	Item	Suggested Make	Specifications																	
18A	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.																	
18B	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																	
16	Annexure-5B (Specifications)	Annexure-3 - Meeting Room-1 at Page no. 152		Sl. No. 16A & 16B added as below: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>16A</td> <td>Recording and Streaming Hardware (4 Channel)</td> <td>Lumens / Mediapointe / Mediasite / Vbrick</td> <td>SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.</td> </tr> <tr> <td>16B</td> <td>USB-C adapter</td> <td>Reputed make</td> <td>SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	16A	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.	16B	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.				
S. No.	Item	Suggested Make	Specifications																	
16A	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.																	
16B	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																	
17	Annexure-5B (Specifications)	Annexure-4 - Meeting Room-2 at Page no. 153	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Display</td> <td>LG</td> <td>SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	5	Display	LG	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Display</td> <td>LG or Equivalent</td> <td>SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	5	Display	LG or Equivalent	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs
S. No.	Item	Suggested Make	Specifications																	
5	Display	LG	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																	
S. No.	Item	Suggested Make	Specifications																	
5	Display	LG or Equivalent	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																	
18	Annexure-5B (Specifications)	Annexure-4 - Meeting Room-2 at Page no. 153	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>Camera</td> <td>Lumens</td> <td>SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle +/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum Illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 in and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	7	Camera	Lumens	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle +/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum Illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 in and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>Camera</td> <td>Lumens or Equivalent</td> <td>SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle +/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum Illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 in and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	7	Camera	Lumens or Equivalent	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle +/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum Illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 in and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes
S. No.	Item	Suggested Make	Specifications																	
7	Camera	Lumens	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle +/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum Illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 in and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes																	
S. No.	Item	Suggested Make	Specifications																	
7	Camera	Lumens or Equivalent	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle +/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum Illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 in and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes																	



Sl. No.	Section	Clause No. / Page no.	Existing Description	Revised Description																																
19	Annexure-5B (Specifications)	Annexure-4 - Meeting Room-2 at Page no. 154		Sl. No. 15A added as below: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>15A</td> <td>USB-C adapter</td> <td>Reputed make</td> <td>SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	15A	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																								
S. No.	Item	Suggested Make	Specifications																																	
15A	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																																	
20	Annexure-5B (Specifications)	Annexure-5 - Dining Area at Page no. 155	Annexure-5 - Dining Area	Revised Annexure-5 with change in functional location from Dining Area to Conference Room (3rd floor) is enclosed as Annexure-E to Corrigendum - II (Part-B).																																
21	Annexure-5B (Specifications)	Annexure-6 - MD's Cabin at Page no. 157		Sl. No. 13 added as below: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>USB-C adapter</td> <td>Reputed make</td> <td>SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	13	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																								
S. No.	Item	Suggested Make	Specifications																																	
13	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																																	
22	Annexure-5B (Specifications)	Annexure-7 - All Cabins (3rd & 4th Floor) at Page no. 158	Annexure-7 - All Cabins (3rd & 4th Floor)	Revised Annexure-7 - All Cabins (3rd & 4th Floor) is enclosed as Annexure-F to Corrigendum - II (Part-B).																																
23	Annexure-5B (Specifications)	Annexure-8 - Conference Room (4th Floor) at Page no. 159-160	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>75" Smart TV</td> <td>LG</td> <td>SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1input with HDMI2.0), 1x analog Audio outputs</td> </tr> <tr> <td>8</td> <td>Camera</td> <td>Lumens</td> <td>SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps; 720p 60/50 fps, USB: 1080p 30/25 fps; 720p 30/25 fps, Video Output (HD) Interface: HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72 / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100 /Sec, Tilting Angle: +/-30°, Tilting Speed 100 /Sec, Aperture F1.6" 2.8, Focal Length f = 3.92" 47.32 mm, Shutter Speed 1/1" 1/10,000 sec, Minimum Object Distance 500(Wide)" 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control: Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip: Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes</td> </tr> <tr> <td>9</td> <td>wireless conf. device</td> <td>Extron</td> <td>SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate 1:24, 25, 30, 50, or 60 fps, Chroma sampling 14:4:4, 4:2:2, or 4:2:0, Color bit depth: 8, 10, or 12 bits per color, Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLink™ Pro for Windows®, ShareLink™ Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software: ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	7	75" Smart TV	LG	SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1input with HDMI2.0), 1x analog Audio outputs	8	Camera	Lumens	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps; 720p 60/50 fps, USB: 1080p 30/25 fps; 720p 30/25 fps, Video Output (HD) Interface: HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72 / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100 /Sec, Tilting Angle: +/-30°, Tilting Speed 100 /Sec, Aperture F1.6" 2.8, Focal Length f = 3.92" 47.32 mm, Shutter Speed 1/1" 1/10,000 sec, Minimum Object Distance 500(Wide)" 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control: Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip: Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes	9	wireless conf. device	Extron	SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate 1:24, 25, 30, 50, or 60 fps, Chroma sampling 14:4:4, 4:2:2, or 4:2:0, Color bit depth: 8, 10, or 12 bits per color, Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLink™ Pro for Windows®, ShareLink™ Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software: ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>75" Smart TV</td> <td>LG or Equivalent</td> <td>SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1input with HDMI2.0), 1x analog Audio outputs</td> </tr> <tr> <td>8</td> <td>Camera</td> <td>Lumens or Equivalent</td> <td>SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps; 720p 60/50 fps, USB: 1080p 30/25 fps; 720p 30/25 fps, Video Output (HD) Interface: HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72 / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100 /Sec, Tilting Angle: +/-30°, Tilting Speed 100 /Sec, Aperture F1.6" 2.8, Focal Length f = 3.92" 47.32 mm, Shutter Speed 1/1" 1/10,000 sec, Minimum Object Distance 500(Wide)" 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control: Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip: Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes</td> </tr> <tr> <td>9</td> <td>wireless conf. device</td> <td>Extron or Equivalent</td> <td>SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate 1:24, 25, 30, 50, or 60 fps, Chroma sampling 14:4:4, 4:2:2, or 4:2:0, Color bit depth: 8, 10, or 12 bits per color, Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLink™ Pro for Windows®, ShareLink™ Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software: ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	7	75" Smart TV	LG or Equivalent	SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1input with HDMI2.0), 1x analog Audio outputs	8	Camera	Lumens or Equivalent	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps; 720p 60/50 fps, USB: 1080p 30/25 fps; 720p 30/25 fps, Video Output (HD) Interface: HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72 / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100 /Sec, Tilting Angle: +/-30°, Tilting Speed 100 /Sec, Aperture F1.6" 2.8, Focal Length f = 3.92" 47.32 mm, Shutter Speed 1/1" 1/10,000 sec, Minimum Object Distance 500(Wide)" 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control: Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip: Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes	9	wireless conf. device	Extron or Equivalent	SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate 1:24, 25, 30, 50, or 60 fps, Chroma sampling 14:4:4, 4:2:2, or 4:2:0, Color bit depth: 8, 10, or 12 bits per color, Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLink™ Pro for Windows®, ShareLink™ Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software: ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later
S. No.	Item	Suggested Make	Specifications																																	
7	75" Smart TV	LG	SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1input with HDMI2.0), 1x analog Audio outputs																																	
8	Camera	Lumens	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps; 720p 60/50 fps, USB: 1080p 30/25 fps; 720p 30/25 fps, Video Output (HD) Interface: HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72 / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100 /Sec, Tilting Angle: +/-30°, Tilting Speed 100 /Sec, Aperture F1.6" 2.8, Focal Length f = 3.92" 47.32 mm, Shutter Speed 1/1" 1/10,000 sec, Minimum Object Distance 500(Wide)" 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control: Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip: Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes																																	
9	wireless conf. device	Extron	SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate 1:24, 25, 30, 50, or 60 fps, Chroma sampling 14:4:4, 4:2:2, or 4:2:0, Color bit depth: 8, 10, or 12 bits per color, Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLink™ Pro for Windows®, ShareLink™ Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software: ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later																																	
S. No.	Item	Suggested Make	Specifications																																	
7	75" Smart TV	LG or Equivalent	SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min. typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1input with HDMI2.0), 1x analog Audio outputs																																	
8	Camera	Lumens or Equivalent	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps; 720p 60/50 fps, USB: 1080p 30/25 fps; 720p 30/25 fps, Video Output (HD) Interface: HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72 / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100 /Sec, Tilting Angle: +/-30°, Tilting Speed 100 /Sec, Aperture F1.6" 2.8, Focal Length f = 3.92" 47.32 mm, Shutter Speed 1/1" 1/10,000 sec, Minimum Object Distance 500(Wide)" 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control: Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip: Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes																																	
9	wireless conf. device	Extron or Equivalent	SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate 1:24, 25, 30, 50, or 60 fps, Chroma sampling 14:4:4, 4:2:2, or 4:2:0, Color bit depth: 8, 10, or 12 bits per color, Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLink™ Pro for Windows®, ShareLink™ Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software: ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later																																	
24	Annexure-5B (Specifications)	Annexure-8 - Conference Room (4th Floor) at Page no. 160	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>HDMI Distribution amplifier</td> <td>Extron or Equivalent</td> <td>SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	12	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>HDMI Distribution amplifier</td> <td>Extron or Equivalent</td> <td>SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	12	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE																
S. No.	Item	Suggested Make	Specifications																																	
12	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID Minder® automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE																																	
S. No.	Item	Suggested Make	Specifications																																	
12	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE																																	



Sl. No.	Section	Clause No. / Page no.	Existing Description	Revised Description																																
25	Annexure-5B (Specifications)	Annexure-8 - Conference Room (4th Floor) at Page no. 161		Sl. No. 18A & 18B added as below: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>18A</td> <td>Recording and Streaming Hardware (4 Channel)</td> <td>Lumens / Mediapointe / Mediasite / Vbrick</td> <td>SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.</td> </tr> <tr> <td>18B</td> <td>USB-C adapter</td> <td>Reputed make</td> <td>SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	18A	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.	18B	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																				
S. No.	Item	Suggested Make	Specifications																																	
18A	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.																																	
18B	USB-C adapter	Reputed make	SITC of USB-C to HDMI, USB-A (3.0 support), USB-C (Charging port) adapter. Adapter should be compatible with USB-C port of Latest sources with USB-C output. Adapter should also compatible with Thunderbolt (3) communication. The USB-A port should be compatible with all types of Audio & Video peripheral devices such as DSPs, Speakerphones, USB2.0/USB3.0 Cameras etc. The USB-C (output side port) should be to connect the Laptop charger.																																	
26	Annexure-5B (Specifications)	Annexure-9 - Meeting Room (4th Floor) at Page no. 162	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Display</td> <td>LG</td> <td>SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	5	Display	LG	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>Display</td> <td>LG or Equivalent</td> <td>SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	5	Display	LG or Equivalent	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																
S. No.	Item	Suggested Make	Specifications																																	
5	Display	LG	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																																	
S. No.	Item	Suggested Make	Specifications																																	
5	Display	LG or Equivalent	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																																	
27	Annexure-5B (Specifications)	Annexure-9 - Meeting Room (4th Floor) at Page no. 163	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>Camera</td> <td>Lumens</td> <td>SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec. Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	7	Camera	Lumens	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec. Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>Camera</td> <td>Lumens or Equivalent</td> <td>SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec. Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	7	Camera	Lumens or Equivalent	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec. Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes																
S. No.	Item	Suggested Make	Specifications																																	
7	Camera	Lumens	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec. Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes																																	
S. No.	Item	Suggested Make	Specifications																																	
7	Camera	Lumens or Equivalent	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec. Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes																																	
28	Annexure-5B (Specifications)	Annexure-9 - Meeting Room (4th Floor) at Page no. 163	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>Cable cubby</td> <td>Extron or Equivalent</td> <td>SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop chargin + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.</td> </tr> <tr> <td>9</td> <td>HDMI Switcher</td> <td>Extron or Equivalent</td> <td>SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color, 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embeded</td> </tr> <tr> <td>10</td> <td>USB Switcher</td> <td>Extron or Equivalent</td> <td>SITC of 4x4 USB switcher with thrid party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	8	Cable cubby	Extron or Equivalent	SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop chargin + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.	9	HDMI Switcher	Extron or Equivalent	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color, 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embeded	10	USB Switcher	Extron or Equivalent	SITC of 4x4 USB switcher with thrid party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control.	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>Cable cubby</td> <td>Extron or Equivalent</td> <td>SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop chargin + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.</td> </tr> <tr> <td>9</td> <td>HDMI Switcher</td> <td>Extron or Equivalent</td> <td>SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color, 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embeded</td> </tr> <tr> <td>10</td> <td>USB Switcher</td> <td>Extron or Equivalent</td> <td>SITC of 4x4 USB switcher with thrid party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control.</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	8	Cable cubby	Extron or Equivalent	SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop chargin + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.	9	HDMI Switcher	Extron or Equivalent	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color, 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embeded	10	USB Switcher	Extron or Equivalent	SITC of 4x4 USB switcher with thrid party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control.
S. No.	Item	Suggested Make	Specifications																																	
8	Cable cubby	Extron or Equivalent	SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop chargin + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.																																	
9	HDMI Switcher	Extron or Equivalent	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color, 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embeded																																	
10	USB Switcher	Extron or Equivalent	SITC of 4x4 USB switcher with thrid party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control.																																	
S. No.	Item	Suggested Make	Specifications																																	
8	Cable cubby	Extron or Equivalent	SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop chargin + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.																																	
9	HDMI Switcher	Extron or Equivalent	SITC of 4k HDMI Switcher with 4 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color, 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embeded																																	
10	USB Switcher	Extron or Equivalent	SITC of 4x4 USB switcher with thrid party control, USB 2.0 compatible, 4 x USB Host Type-B Connectors, 4 x USB Device Type-A connectors, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), Peripheral emulation enabled: 1, Available USB power: 500 mA shared on four ports, RS232 for 3rd party control.																																	
29	Annexure-5B (Specifications)	Annexure-10 - Cafeteria at Page no. 165	Annexure-10 - Cafeteria	Revised Annexure-10 - Cafeteria is enclosed as Annexure-G to Corrigendum - II (Part-B).																																
30	Annexure-5B (Specifications)	Annexure-11 - Breakout Area & Corporate Lobby (4th Floor) at Page no. 166	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Display</td> <td>LG</td> <td>SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	2	Display	LG	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs	<table border="1"> <thead> <tr> <th>S. No.</th> <th>Item</th> <th>Suggested Make</th> <th>Specifications</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>Display</td> <td>LG or Equivalent</td> <td>SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs</td> </tr> </tbody> </table>	S. No.	Item	Suggested Make	Specifications	2	Display	LG or Equivalent	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																
S. No.	Item	Suggested Make	Specifications																																	
2	Display	LG	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																																	
S. No.	Item	Suggested Make	Specifications																																	
2	Display	LG or Equivalent	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC, WebOS version 6.0, Built-in Bluetooth with Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs																																	



Sl. No.	Section	Clause No. / Page no.	Existing Description	Revised Description
31	Annexure-5B (Specifications)	Annexure-12 - Access Gate at Ground Floor of Metro Bhavan (Page no. 167)	Annexure-12 - Access Gate at Ground Floor of Metro Bhavan	Revised Annexure-12 along with specifications for Face Biometric with Built in Card Reader is enclosed as Annexure-H to Corrigendum - II (Part-B).


(Executive Director),

Procurement & Contracts, Maha-Metro.



Annexure-A to Corrigendum-II (Part-B)

ITB 4.9 (Additional Para) under Section-2 Annexure-2A: Bid Data Sheet (BDS)

I. Land Border Sharing:

1. Any Bidder from a country which shares a land border with India will be eligible to bid in this tender, only if the bidder is registered with the Competent Authority. *[where applicable, evident of valid registration by the Competent Authority shall be attached]*
2. "Bidder" (including the term 'tenderer', 'consultant', 'vendor' or 'service provided' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
3. "Bidders from a country which shares a land border with India" for the purpose of this tender means-
 - a) An entity incorporated, established or registered in such a country; or
 - b) A subsidiary of an entity incorporated, established or registered in such a country; or
 - c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d) An entity whose 'beneficial owner' is situated in such a country; or
 - e) An Indian (or other) agent of such an entity; or
 - f) A natural person who is citizen of such a country; or
 - g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
4. The 'beneficial owner' for the purpose above will be under:
 - a) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person (s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means

Explanation –

- i) "Controlling ownership interest" means ownership of or entitlement to more than 25 (twenty-five) per cent of shares or capital or profits of the company."
 - ii) "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders' agreements or voting agreements."
- b) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than 15 (fifteen) percent of capital or profits of the partnership.
 - c) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical



person, has ownership of or entitlement to more than 15 (fifteen) percent of the property or capital or profits of such association or body of individuals.

- d) Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
 - e) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
5. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
 6. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.
 7. Bidder is required to submit the undertaking regarding restrictions on procurement from a bidder of a country which shares land border with India in the Form-B15 and B16 (enclosed herewith) along with the Bid.

II. Make in India & Local Content:

1. This bid is essentially an NCB (National Competitive Bid) and only Indian bidder may participate.
2. Pursuant to the policy of the Government of India for 'Make in India' and promoting manufacturing and production of goods and services in India, Department for Promotion of Industrial and Internal Trade, Ministry of Commerce and Industry has issued Public Procurement (Preference to Make in India) orders/notifications mentioned at para III below, which shall be applicable in this tender.
3. Further, the Bidder shall be required to provide a certificate from the Statutory Auditor or Cost Auditor or practicing Cost Accountant or practicing Chartered Accountant giving the percentage only of minimum local content and the same shall be attached with the bid uploaded in technical section of e-tender portal.

The Bidder can also provide a certificate from the Statutory Auditor or Cost Auditor of the company (in case of companies) or from a practicing Cost Accountant or practicing Chartered Accountant (in respect of suppliers other than companies) giving the percentage of local content & details as specified in above referred notification/order after the Last Date stipulated for Bid Submission, but within 15 days from the Last Date stipulated for Bid Submission (For example, if the Last Date stipulated for Bid Submission is 15.12.2024, the certificate has to be submitted on or before 30.12.2024 during office hours).

In case the certificate is not received within the stipulated time and duly signed by the person as above, the offer will be considered non-responsive and rejected; and the financial bid of such bidders shall not be opened.

This local content should be greater than or equal to the minimum local content specified in the relevant Circulars mentioned at Para III below, for the bid submission to be a valid offer.



Only percentage values & details as per above notification/order shall be mentioned in these certificates and no financial values shall be mentioned.

This Certificate shall be submitted physically in hard copy in the office of ED (Procurement & Contracts)/Pune duly marked "Not to be Opened by Anyone except ED (Procurement & Contracts)" at the following address:

Executive Director (Procurement & Contracts)
Maharashtra Metro Rail Corporation Limited (Pune Metro Rail Project)
A2 Block, Civil Court Interchange Metro Station,
Nyayamurti Ranade Path, Shivaji Nagar,
Pune-411005 India

4. For sake of clarity, 'Local Content' means the amount of value added in India which shall be the total value of items procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including custom duties) as a proportion of the total value, in percent. The item being procured against this tender is not divisible in nature.
5. The technical offers of the Bidders who do not comply / submit the documents on as per above Para (2) and (3) shall be rejected and considered non-responsive and their financial offers shall not be opened. The minimum local content will further be certified for compliance of indigenous content by successful Bidder and reviewed during the design finalization stage as well as during execution from time to time.

III. The below mentioned Circulars/Orders/Guidelines (enclosed herewith) are to be complied:

a) Land Border Sharing:

1. Order no. F. No. K-14011/10/2020-UT-V dated 14th September 2020 issued by Ministry of Housing and Urban Affairs (Urban Transport Division)

Office Memorandum no. P-45021/112/2020-PP(BE-II)(E-43780) dated 04th September 2020, 28th August 2020 & 24th August 2020 issued by Ministry of Commerce and Industry.

2. Order no. F. No. K-14011/10/2020-UT-V dated 14th August 2020 issued by Ministry of Housing and Urban Affairs (Urban Transport Division)

Order F.No.6/18/2019-PPD dated 23rd July 2020 issued by Ministry of Finance, Department of Expenditure (Public Procurement Division).

b) Make in India & Local Content:

3. Order No. 19-113/2020 dated 16th March 2021 issued by Govt. of India (Ministry of Communications)

4. Order no. K-14011/08/2017-MRTS-Coord dated 12th February 2021 issued by Ministry of Housing and Urban Affairs

Order no. K-14011/08/2017-MRTS-Coord dated 14th October 2020 issued by Ministry of Housing and Urban Affairs



5. Order no. F. No. K-14011/10/2020-UT-V dated 8th March 2021 issued by Ministry of Housing and Urban Affairs (Urban Transport Division)

Order No. P-45021/102/2019-BE-II-Part(1) (E-50310) dated 04th March 2021 issued by Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.

6. Order No. P-45021/2/2017-PP (BE-II) dated 16th September 2020 issued by Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry.



**UNDERTAKING REGARDING RESTRICTIONS ON PROCUREMENT FROM A BIDDER OF A COUNTRY
WHICH SHARES LAND BORDER WITH INDIA**

Certificate for Tenders

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. *[where applicable, evidence of valid registration by the Competent Authority shall be attached]*



Signature of Authorized Signatory

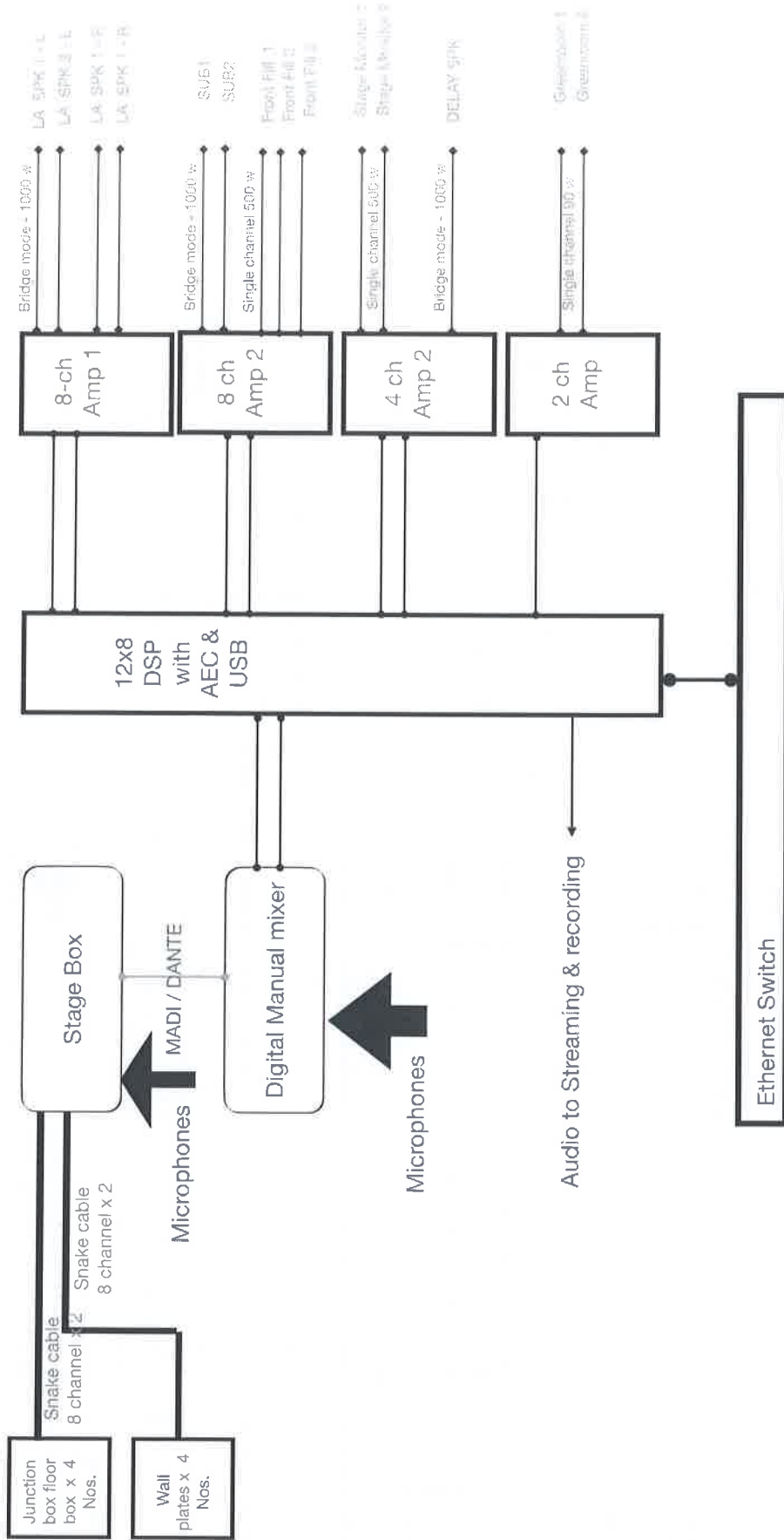
Certificate for Tenders for Works involving possibility of sub-contracting

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. *[where applicable, evidence of valid registration by the Competent Authority shall be attached]*

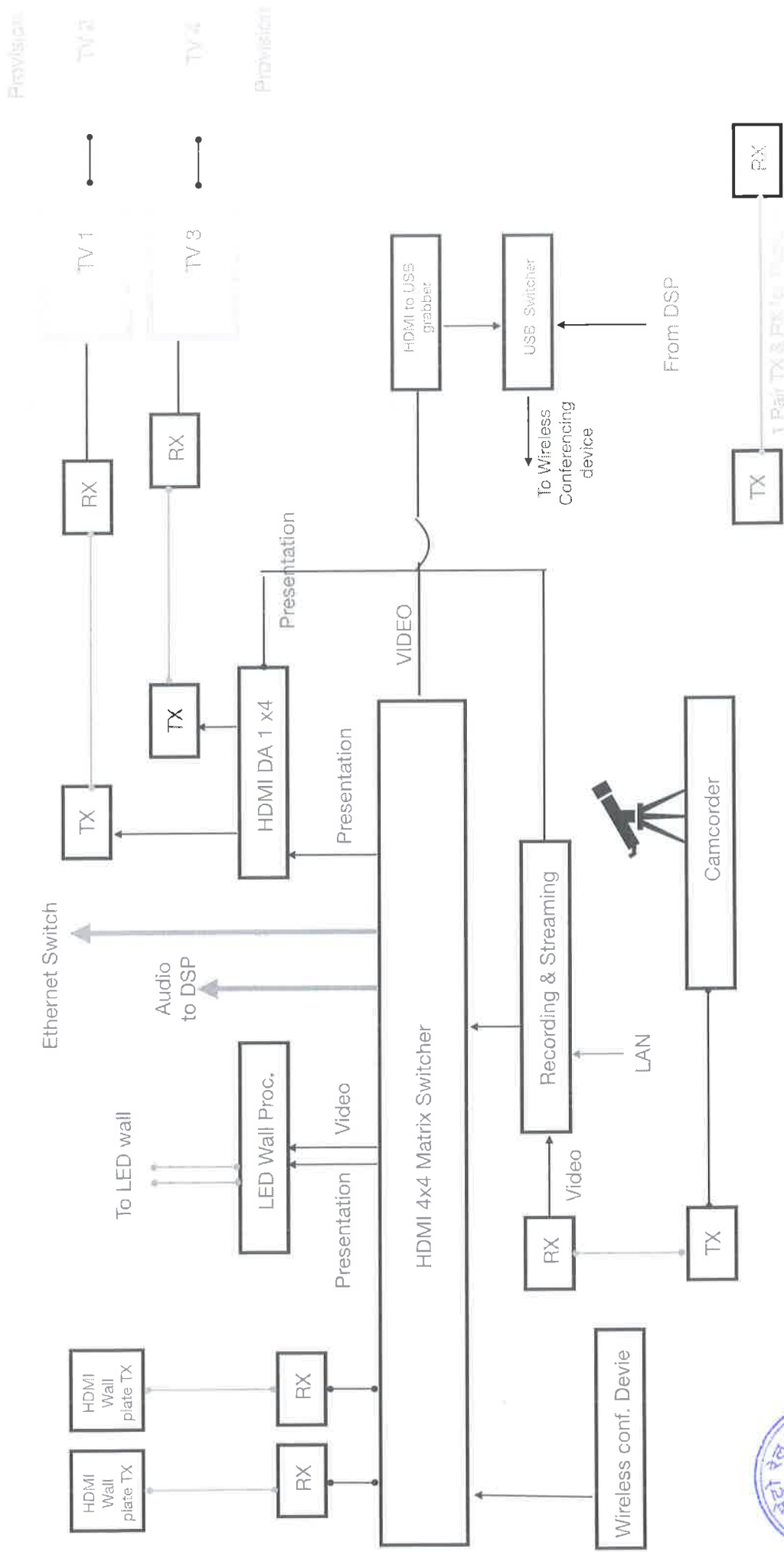
Signature of Authorized Signatory



Auditorium Audio SLD

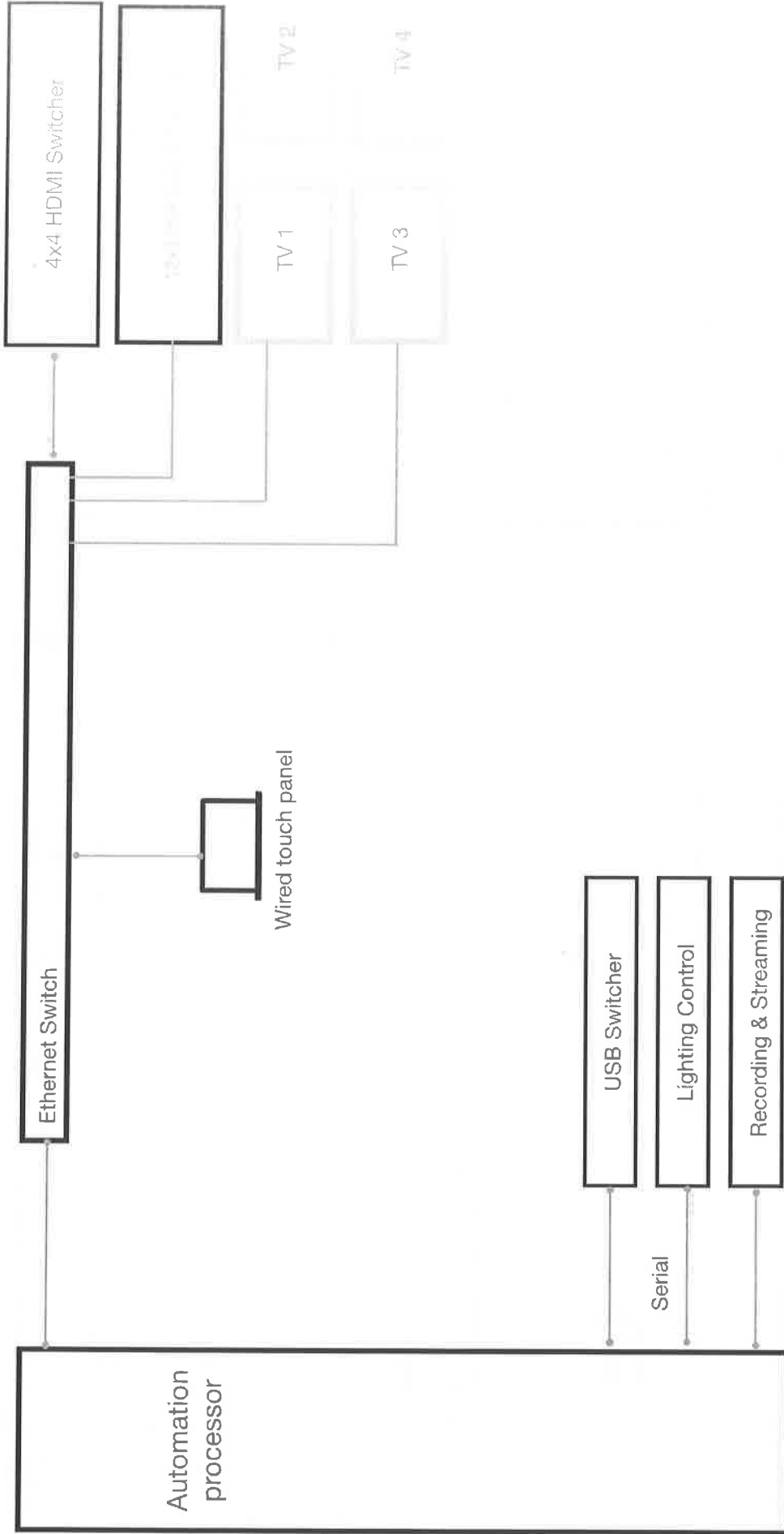


Auditorium Video SLD

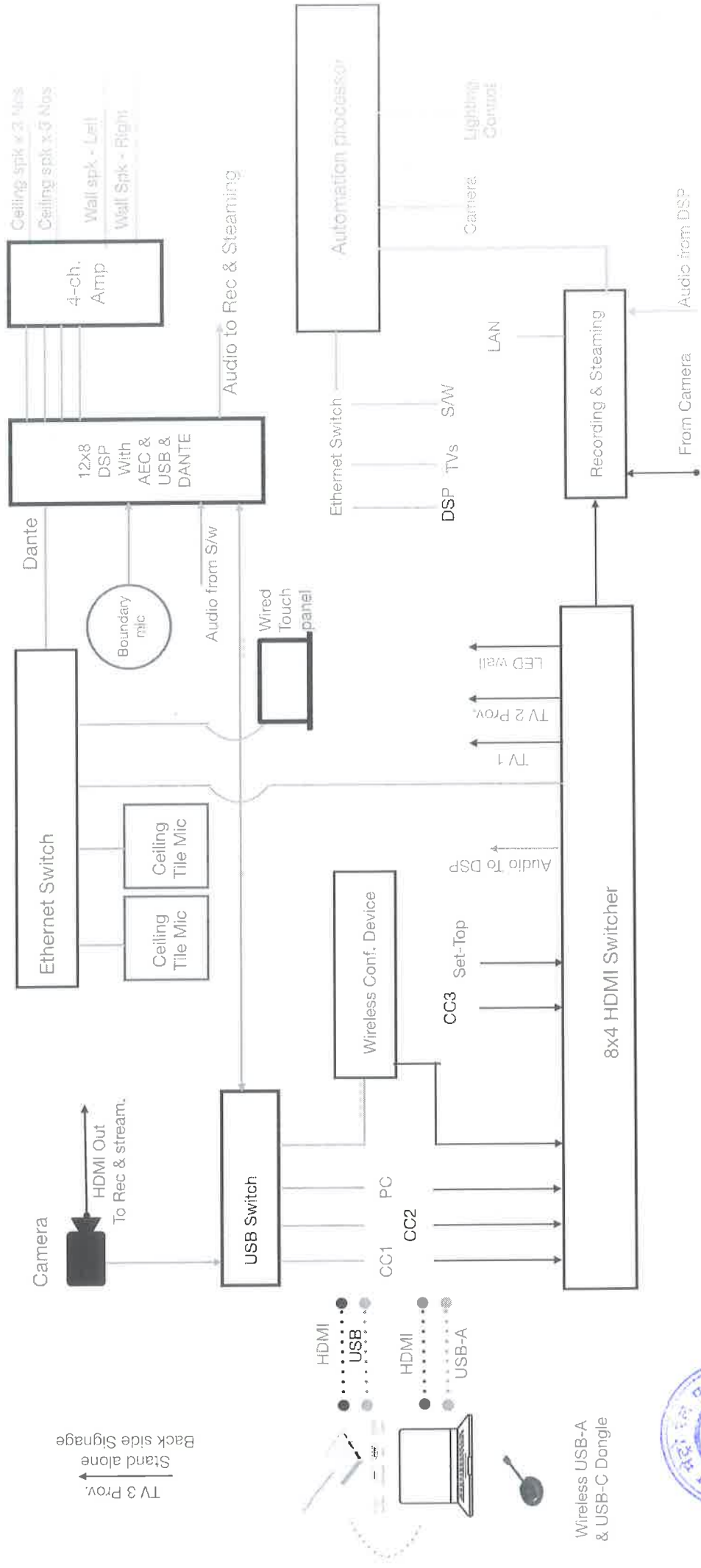


Auditorium Control SLD

Annexure-B



Boardroom AV & Automation SLD

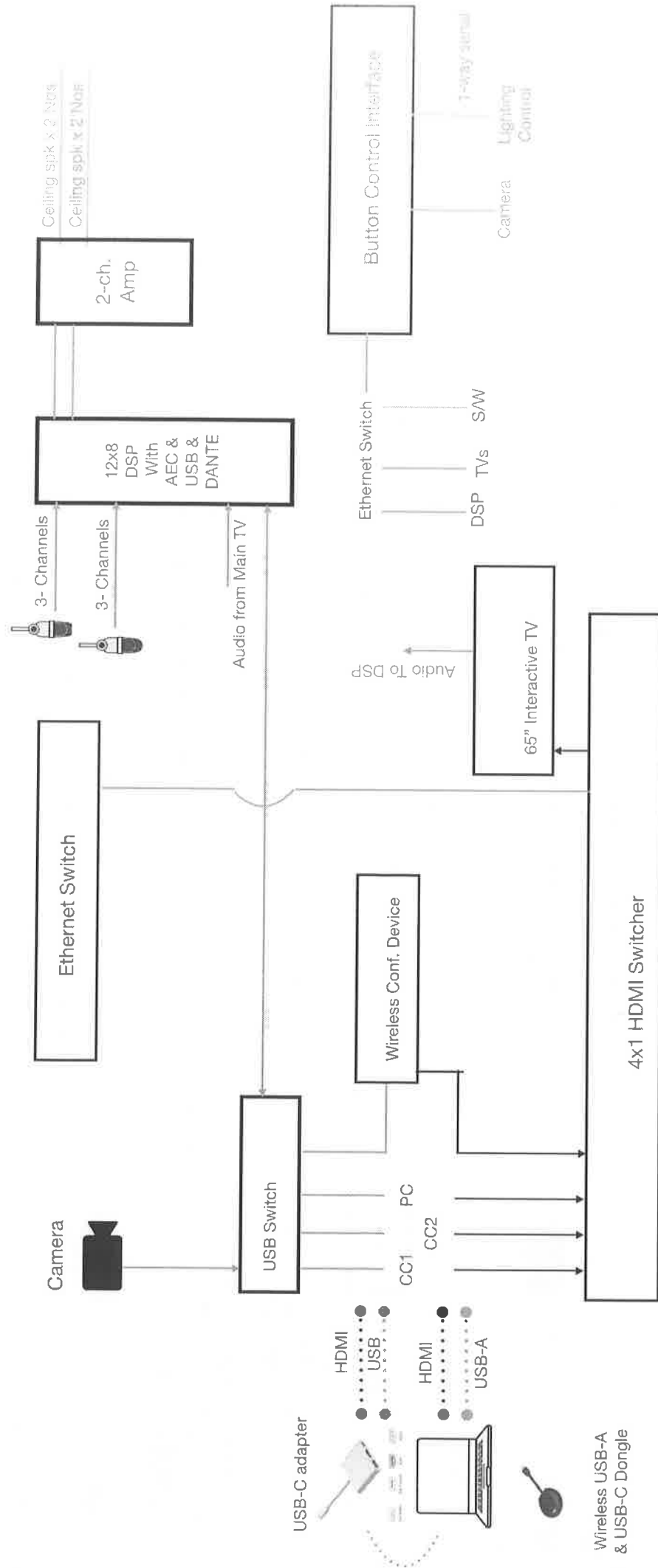


TV 3 Prov. Stand alone Back side Signage

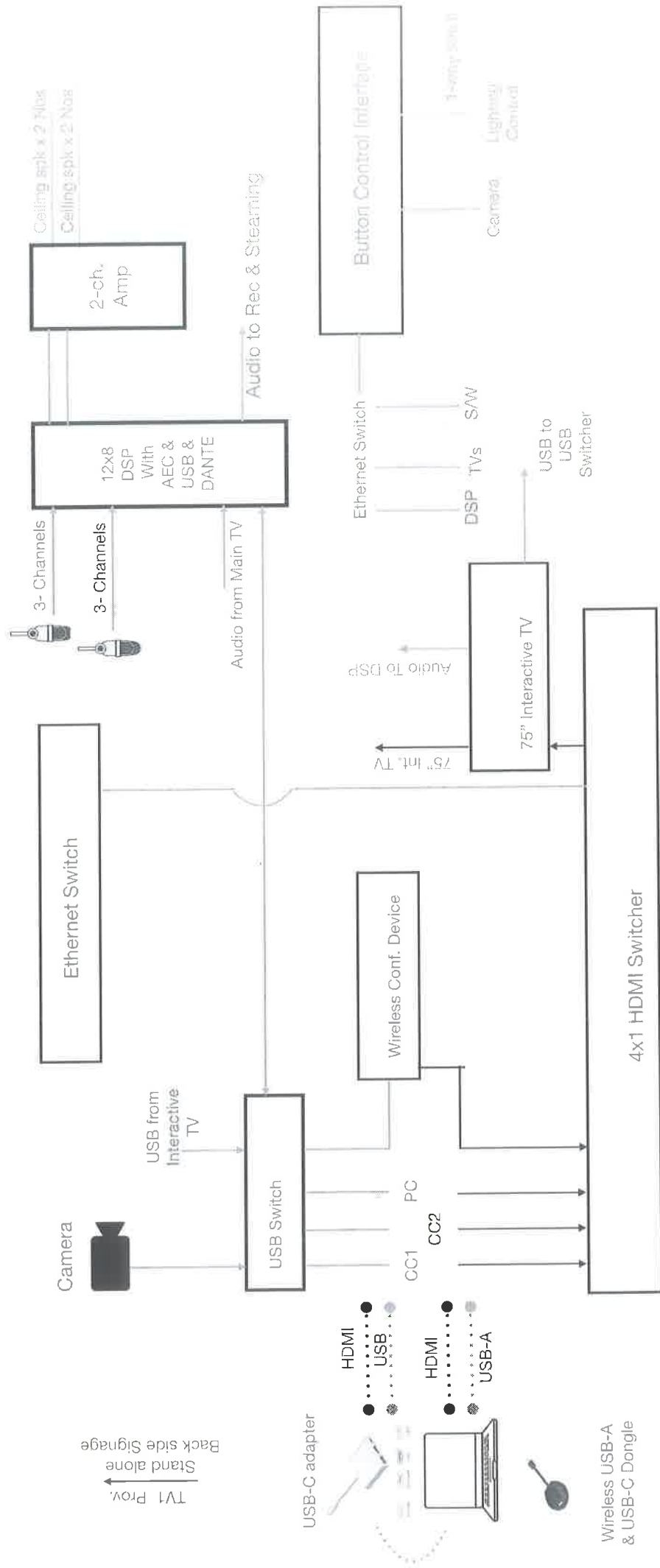
Wireless USB-A & USB-C Dongle



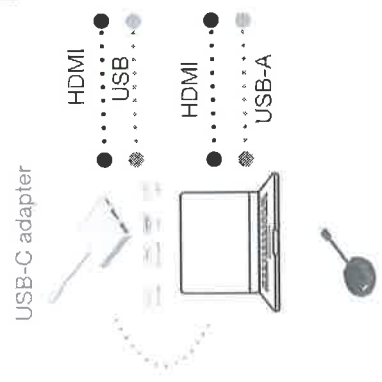
Meeting Room AV & Automation SLD



Meeting Room AV & Automation SLD [INT. TV]



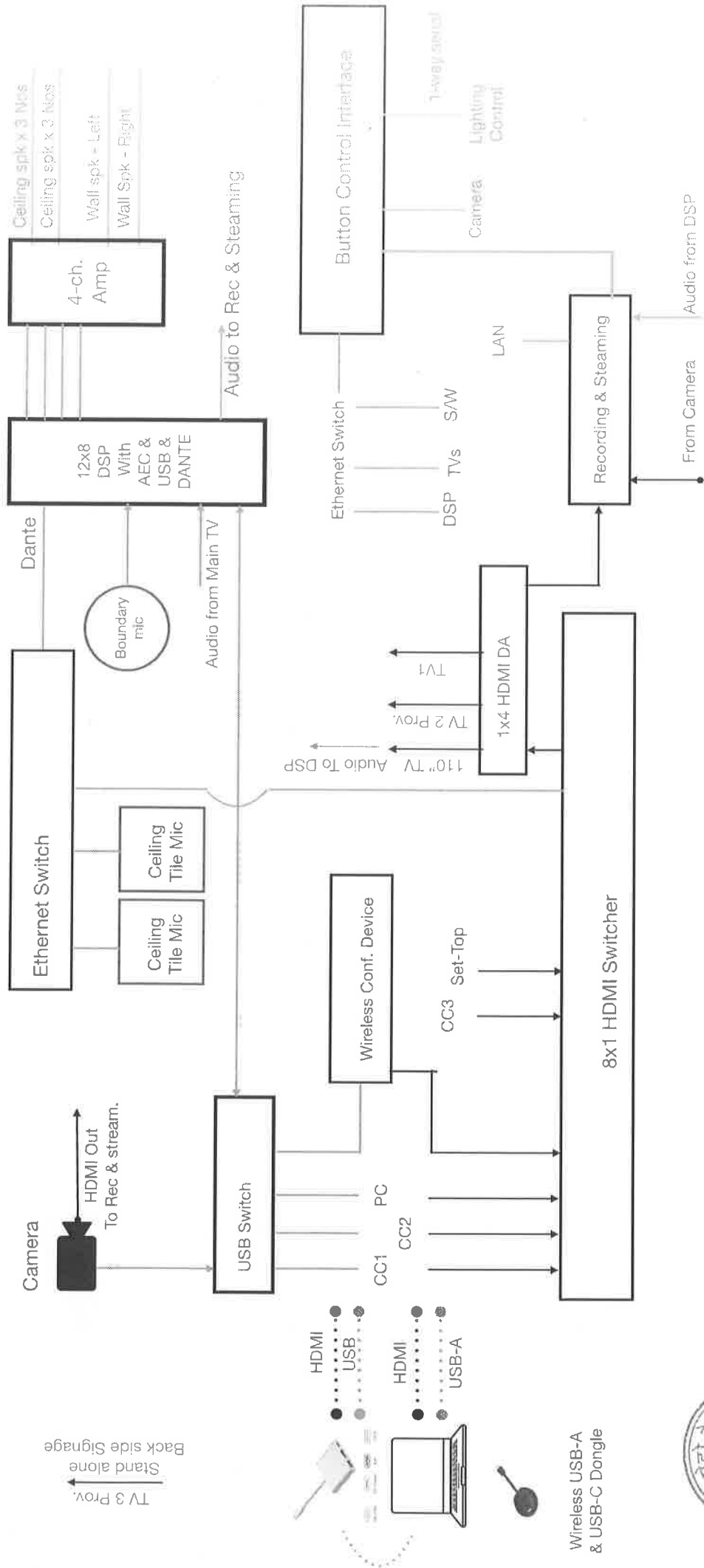
TV1 Prov.
Stand alone
Back side Signage



Wireless USB-A
& USB-C Dongle



Conf. Room AV & Automation SLD



Wireless USB-A & USB-C Dongle

TV 3 Prov.
Stand alone
Back side Signage

Maharashtra Metro Rail Corporation Limited

(Pune Metro Rail Project)

BID DOCUMENTS

FOR

**Design, Supply, Installation, Testing & Commissioning of Telecom System at
Metro Bhavan, Pune.**

TENDER NO. P1-IT-04/2024

**Section 8 (Revised)
List of Documents To be Submitted**



Maharashtra Metro Rail Corporation Limited
(A joint venture of Govt. of India & Govt. of Maharashtra)
A2, A3 Block, Civil Court Interchange Metro Station,
Nyaymurti Ranade Path,
Shivaji Nagar, Pune - 411005

Email: tenders.pmrp@mahametro.org

Website: www.punemetrorail.org



SECTION – 8

LIST OF DOCUMENTS TO BE ENCLOSED

The tendering firm/company is required to enclose attested and legible scanned copies of the following documents (in the same sequence) in the Technical Bid section, failing which their bids shall be summarily/out rightly rejected and will not be considered any further:

SN	Description
1.	Certificate of Incorporation / Statutory Registration /Shop Act License certificate (As the case may be)
2.	PAN/GIR No.
3.	GST Registration No.
4.	E.P.F. Registration Certificate
5.	E.S.I.C. Registration Certificate
6.	Audited Balance Sheets, Profit & Loss Statements along with relevant notes certified by Chartered Accountant with UDIN for the last 3 (three) Audited Financial Years (i.e., FY 2022-23, FY 2021-22, FY 2020-21). <i>(Complete Annual Reports need not to be attached unless specifically demanded in the bid document).</i>
7.	Clause-by-clause commentary on all the clauses of the Works Requirements, Annexure-5B (Technical Specifications)
8.	<p>Section-7 Bidding Forms:</p> <ul style="list-style-type: none"> • Form-B1: Letter of Bid • Form-B2: Bidder's Information • Form-B3: Average annual turnover • Form-B4: Summary of Experience (supported with experience certificates) • Form-B5: Format for Bid Security / EMD • Form-B6: Format for Bid Securing Declaration • Form-B7: Affidavit for ban/blacklist/debarment • Form-B8: Affidavit for Child labour • Form-B9: Declaration for corrupt & fraudulent practices • Form-B10: Declaration for Tender & True information • Form-B11: Declaration for Proprietorship instead of Power of Attorney • Form-B12: Power of Attorney & Board Resolution • Form-B13: Form of Joint Bidding Agreement/JV/Consortium Agreement • Form-B14: Statement of Deviations from the Technical Specifications as per Annexure-5B • Form-B15: Undertaking regarding Restrictions on Procurement from a Bidder of a Country which shares Land Border with India • Form-B16 (Certificate for Tenders for Works involving possibility of sub-contracting)
9.	Undertaking in case of audited Balance Sheets of Financial Year 2022-23 are not Available. In that case, Bidder shall submit Provisional Balance Sheets duly certified by Statutory Auditor/ Chartered Accountant with UDIN
10.	Documents in support of Eligibility Criteria in Section-3
11.	Copy of Labor Licenses (if applicable)



Maharashtra Metro Rail Corporation Limited
(Pune Metro Rail Project)

BID DOCUMENTS
FOR

**Design, Supply, Installation, Testing & Commissioning of Telecom System at
Metro Bhavan, Pune.**

TENDER NO. P1-IT-04/2024

Section 9 (Revised)
Financial Bid



Maharashtra Metro Rail Corporation Limited
(A joint venture of Govt. of India & Govt. of Maharashtra)
A2, A3 Block, Civil Court Interchange Metro Station,
Nyaymurti Ranade Path,
Shivaji Nagar, Pune - 411005

Email: tenders.pmrp@mahametro.org
Website: www.punemetrorail.org



Preamble to Financial Bid:

1	The Bill of quantities consists of 10 Schedules and a Summary of Schedules.
2	Bidders shall quote their amounts only in the Financial Section of E-Tender Portal, and nowhere else in the Technical Package.
3	The Summary of Financial bid shall be filled online by bidders in Financial section of E-tender portal. The detailed price breakup of Financial bid linked to above-mentioned Summary shall be filled by bidder in physical form, signed, stamped and uploaded in financial Section of E-tender portal.
4	Bidder is required to quote against every items in financial section of E-tender portal. No cell should be left blank.
5	Errors will be corrected by the Employer for any arithmetical errors in computation or summation. In case of mismatch of amount in the Summary of Financial bid and in detailed price breakup, the unit rate quoted in the detailed price breakup shall be considered for financial bid evaluation.
6	Warranty Period of 3 (Three) years for all the items, shall commence from the date of supply, cost of which shall be included in the quoted cost.
7	Price for 1 st year of CAMC shall be included in quoted cost and Price for 2 nd year onwards shall be quoted separately.
8	CAMC period of 5 years shall start from date of completion of DLP.
9	Bidder to refer enclosed Annexure-5B (Technical Specifications) for detailed specifications for arriving rates.
10	The Bill of Quantities shall be read in conjunction with the Notice Inviting Tender, Instructions to Bidders (ITB), Bid Data Sheet (BDS), Scope of Work, Conditions of Contract, Annexures and Addendums.
11	The whole cost of complying with the provisions of the Contract/ scope of work shall be deemed to have been included in the quoted rates. The rates quotes shall also include all administrative expenses and costs including the cost towards Project leader, profits, overheads and expenditure towards other provisions like insurance, as applicable.
12	The Bidder's offer shall be inclusive of all taxes, duties and charges payable by them. Income Tax and any other statutory taxes to be deducted at source, if any, will be deducted by the Employer in accordance with the Income Tax Act and any other acts in force and in accordance with instructions issued by the Authorities in this regard from time to time.
13	Rate quoted by bidder shall be inclusive of GST as per prevailing rate at the base date (i.e. 28 days prior to the final date of submission of bid). Any changes in rate of GST or any other taxes during the execution of the work shall be adjusted both ways.
14	No price variation / Price Adjustment shall be paid under this contract
15	The quantities given in the " Bill of Quantities" are estimated and provisional and are given to provide a common basis for Bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer in charge and valued at the rates in the accepted priced "Bill of Quantities", wherever applicable.
16	Employer reserves the right to omit /off load/ partially execute any items in any of the Schedules/Annexures during Contract Period without any liability to either party.



FINANCIAL BID (Tender No- P1-IT-04/2024)

(To be filled by bidder in physical form, signed, stamped and uploaded in financial Section of E-tender portal)

1. Schedule-1: Audio system (A):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
A.1	FOH Line array speakers-left & Right	Bose or equivalent		4	Nos.		
A.2	Coupling bracket for Line arrays	Bose or equivalent		2	Nos.		
A.3	Suspension bracket for Line arrays	Bose or equivalent		2	Nos.		
A.4	1x18" passive subwoofer	Bose or equivalent		2	Nos.		
A.5	Suspension bracket for Subwoofer	Custom		2	Nos.		
A.6	Front Fill speaker	Bose or equivalent		3	Nos.		
A.7	Delay speaker	Bose or equivalent		1	Nos.		
A.8	Stage Monitor speakers	Bose or equivalent		2	Nos.		
A.9	Green room & Operator Room speaker	Bose or equivalent		2	Nos.		
A.10	Ceiling speakers- 2.25"	Bose or equivalent		48	Nos.		
A.11	FOH surface mount speaker	Bose or equivalent		6	Nos.		
A.12	8 channel x 500 watts Amplifier	Bose or equivalent		2	Nos.		
A.13	4 channel x 500 watts amplifier	Bose or equivalent		1	Nos.		
A.14	2 channel x 120 watts IZA series amplifier	Bose or equivalent		1	Nos.		
A.15	4 channel x 150 watts power share amplifier	Bose or equivalent		3	Nos.		
A.16	1 channel x 90 watts IZA series amplifier	Bose or equivalent		7	Nos.		
A.17	Ceiling 28 mic array microphone tile	Sennheiser or Equivalent		7	Nos.		
A.18	Hanging Microphone for Conferences	Audio Technica or Equivalent		8	Nos.		
A.19	Conference Video Bar	Bose or equivalent		2	Nos.		
A.20	Karaoke system with 2 mics	Sony or Equivalent		1	Nos.		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
A.21	Bluetooth Standalone speaker	Bose or equivalent		1	Nos.		
A.22	48 channel digital manual mixer	Allen & Heath or Equivalent		1	Nos.		
A.23	48x16 Stage box compatible with above mixer	Allen & Heath or Equivalent		1	Nos.		
A.24	DSP Processor with DANTE interface	Bose or equivalent		5	Nos.		
A.25	DSP Processor	Bose or equivalent		4	Nos.		
A.26	Shotgun mic	Sennheiser or Equivalent		2	Nos.		
A.27	Wired Handheld microphones	Sennheiser or Equivalent		4	Nos.		
A.28	Wired Instrument Microphones	Sennheiser or Equivalent		4	Nos.		
A.29	Wireless Handheld microphone set to work with specified antenna system	Sennheiser or Equivalent		2	Nos.		
A.30	Wireless Head worn Microphone set to work with specified antenna system	Sennheiser or Equivalent		2	Nos.		
A.31	Wired Gooseneck microphone	Sennheiser or Equivalent		1	Nos.		
A.32	Microphone stand	Custom		4	Nos.		
A.33	Antenna	Sennheiser or Equivalent		2	Nos.		
A.34	Antenna splitter	Sennheiser or Equivalent		1	Nos.		
A.35	Antenna cable	LMR or equivalent		50	Mtr		
A.36	Wireless headphones for operator	Sennheiser or Equivalent		2	Nos.		
A.37	Boundary Mic with button	Sennheiser or Equivalent		1	Nos.		
A.38	Manual mixer	Behringer or Equivalent		2	Nos.		
A.39	Wireless Handheld microphone set with dual transmitter & single receiver	Sennheiser or Equivalent		1	Nos.		
Total for Schedule-1 (Audio system)							



2. Schedule-2: Video System (V):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
V.1	9mtr x 3.7 mtr LED wall with 1.9 PP	LG or Equivalent		1	Nos.		
V.2	8 input Video wall processor for above LED wall (processor & LED wall should be of same make)	LG or Equivalent		1	Nos.		
V.3	136" all in one LED wall with 1.5 pp	LG or Equivalent		1	Nos.		
V.4	55" Commercial series smart TV	LG or Equivalent		4	Nos.		
V.5	65" Commercial series smart TV	LG or Equivalent		22	Nos.		
V.6	75" Commercial series smart TV	LG or Equivalent		12	Nos.		
V.7	Laptop	HP or Equivalent		1	Nos.		
V.8	Professional Camcorder	Sony or Equivalent		1	Nos.		
V.9	Tripod stand for Professional camcorder	Manfratto or Equivalent		1	Nos.		
V.10	CPU only with wireless keyboard & mouse with Windows pro. License	HP or Equivalent		4	Nos.		
V.11	CPU only with wireless keyboard & mouse [windows license not included]	HP or Equivalent		3	Nos.		
V.12	110" Commercial series smart TV	LG or Equivalent		2	Nos.		
V.13	24" Touch panel on table movable	Viewsonic or Equivalent		3	Nos.		
V.14	Touch table with 55" multitouch monitor	Custom + LG or Equivalent		1	Nos.		
V.15	75" Touch Interactive Display	LG or Equivalent		2	Nos.		
V.16	Wireless presentation Device with 2 USB dongles	Extron or Equivalent		2	Nos.		
V.17	Wireless Collaboration (Conferencing) Device with 2 USB dongles	Extron or Equivalent		3	Nos.		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
V.18	Digital podium	AHA Digi. Podium or Equivalent		2	Nos.		
V.19	SITC of 30x optical Zoom Conference Room Camera	Lumens or Equivalent		1	Nos.		
V.20	SITC of 12x Optical Zoom conference Room Camera	Lumens or Equivalent		5	Nos.		
Total for Schedule-2 (Video system)							

3. Schedule-3: Switching system (Sw):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
Sw.1	1x4 HDMI Distribution amplifier, 4k, 4:4:4	Extron or Equivalent		4	Nos.		
Sw.2	Wall plate HDMI Long distance transmitter 4k, 4:4:4	Extron or Equivalent		2	Nos.		
Sw.3	HDMI Long distance transmitter 4k, 4:4:4	Extron or Equivalent		4	Nos.		
Sw.4	HDMI Long distance Receiver 4k, 4:4:4	Extron or Equivalent		6	Nos.		
Sw.5	4X4 HDMI matrix switcher, 4k, 4:4:4	Extron or Equivalent		1	Nos.		
Sw.6	Cable cubby with 2 Universal power & 2 USB Powers & 6 cable pass through	Extron or Equivalent		15	Nos.		
Sw.7	8X4 HDMI matrix switcher, 4k, 4:4:4	Extron or Equivalent		1	Nos.		
Sw.8	USB 3.0 Pro series 4x4 USB HUB with serial/ Ethernet control	Extron or Equivalent		3	Nos.		
Sw.9	4x1 HDMI 4k Switcher with Serial / IP control	Extron or Equivalent		3	Nos.		
Sw.10	8X1 HDMI matrix switcher, 4k, 4:4:4	Extron or Equivalent		2	Nos.		
Sw.11	USB2.0, 4x4 USB Hub with serial / Ip Control	Extron or Equivalent		3	Nos.		
Sw.12	HDMI to USB capture card, 4k compatible, USB 3.0 compatible	Cypress or Equivalent		1	Nos.		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
Sw.13	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick or Equivalent		4	Nos.		
Total for Schedule-3 (Switching system)							

4. Schedule-4: Automation & Lighting control System (AL):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
AL.1	Automation processor with 3 serial ports	Extron or Equivalent		1	Nos.		
AL.2	Automation processor with 2 Serial ports	Extron or Equivalent		1	Nos.		
AL.3	10" Touch panel with Power injector & wall mount	Extron or Equivalent		1	Nos.		
AL.4	7" Touch panel with Power injector & Tabletop	Extron or Equivalent		1	Nos.		
AL.5	10 Button control interface with Volume control Knob with built in processor	Extron or Equivalent		2	Nos.		
AL.6	6 Button Control Interface with volume control knob with built in processor	Extron or Equivalent		3	Nos.		
AL.7	3-channel DALI dimmer	Philips Dynalite or Equivalent		1	Nos.		
AL.8	4-channel relay ON / Off dimmer	Philips Dynalite or Equivalent		1	Nos.		
AL.9	5-Channel multi-protocol with 0-10 dimmer	Philips Dynalite or Equivalent		3	Nos.		
AL.10	6-button panel with face plate & communication module	Philips Dynalite or Equivalent		6	Nos.		
AL.11	Network Integration Module	Philips Dynalite or Equivalent		2	Nos.		
AL.12	IR Emitter	Extron or Equivalent		2	Nos.		
Total for Schedule-4 (Automation & Lighting control System)							



5. Schedule-5: Patch cables, Bulk cable & Accessories (PB):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
PB.1	12 AWG 2 Core Speaker Cable complete with all standard accessories	LibertyAV Or Equivalent		300	Mtr		
PB.2	14 AWG 2 Core Speaker Cable complete with all standard accessories	LibertyAV Or Equivalent		600	Mtr		
PB.3	24 AWG 2-Pair Shielded Microphone Cable complete with all standard accessories	LibertyAV Or Equivalent		600	Mtr		
PB.4	23 AWG 4-Pair Shielded CAT6 Cable complete with all standard accessories	LibertyAV Or Equivalent		600	Mtr		
PB.5	42U x 1000 x 1000 Rack, with required blank shelves	Valrack or Equivalent		1	Nos		
PB.6	Power Conditioner, 8-channel power sequencer	Furman or Equivalent		1	Nos		
PB.7	UL Listed Connector complete with all standard accessories	Custom		1	Lot		
PB.8	4 Point XLR Junction Box complete with all standard accessories	Custom		6	Nos		
PB.9	4 Point XLR wall plates with connectors & back box	Custom		4	Nos		
PB.10	Plate mount, cable mount, male, female 3-pin XLR connectors	Custom		114	Nos		
PB.11	SITC of 8-channel Snake cable	Custom		100	Mtrs		
PB.12	2 Meter HDMI Cable with 18.0 Gbps Bandwidth to support 4K60 4:4:4	Kramer or Equivalent		10	Nos.		
PB.13	USB 3.0 A to A (Male) Molded Cable – 6 ft	LibertyAV or Equivalent		5	Nos.		
PB.14	USB 3.0 A to B (Male) Molded Cable – 6 ft	LibertyAV or Equivalent		7	Nos.		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
PB.15	23 AWG -4 Pair Shield CAT 6A (F/UTP) Cable	LibertyAV or Equivalent		300	Mtrs		
PB.16	SITC of RJ45 Shielded Plugs	Reputed make		1	set		
PB.17	SITC of Miscellaneous connectors and accessories etc. (installation material)	Reputed make		1	Lot		
PB.18	2.5 sq.mm / 14 AWG speaker cable	Belden or Equivalent		1100	mtr		
PB.19	23/24 AWG, 2 core + shield audio / mic / control cable	Belden or Equivalent		1150	mtr		
PB.20	CAT6 cable, UTP /STP cable	Belden or Equivalent		350	mtr		
PB.21	22U x 1000 x 1000 AV rack with all necessary hardware	Valkrack or Equivalent		1	Nos		
PB.22	18U x 800 x 800 AV rack will all necessary hardware	Valkrack or Equivalent		2	Nos		
PB.23	15U x 800 x 800 AV rack will all necessary hardware	Valkrack or Equivalent		3	Nos		
PB.24	12U x 800 x 800 AV rack will all necessary hardware	Valkrack or Equivalent		1	Nos		
PB.25	SITC of 20 mtr. long HDMI male to make extension cable, 4k signal cable	Kramer or Equivalent		11	Nos		
PB.26	SITC of 20 mtr. long USB3.0 A/B extender cable	Kramer or Equivalent		4	Nos		
PB.27	SITC of 6 ft male to male, flexible HDMI cable, 4k signal cable	Kramer or Equivalent		15	Nos		
PB.28	SITC of 6 ft Flexible USB A cable	Kramer or Equivalent		12	Nos		
PB.29	SITC of 15 mtr long HDMI male to make extension cable, 4k signal cable	Kramer or Equivalent		25	Nos		
PB.30	SITC of 15 mtr long USB3.0 A/B extender cable	Kramer or Equivalent		16	Nos		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
PB.31	Adapters of USB-C to HDMI / USB-A / USB-C charging	Reputed make		8	Nos		
Total for Schedule-5 (Patch cables, Bulk cable & Accessories)							

6. Schedule-6: Stage Lighting & Accessories (SL):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
SL.1	SITC of 100W LED Par Light fixture RGBW	Leksa or Equivalent		4	Nos		
SL.2	SITC of 200W LED Profile Spotlight fixture	Leksa or Equivalent		2	Nos		
SL.3	SITC of 400W LED Blinder fixture	Leksa or Equivalent		2	Nos		
SL.4	SITC of 54x3W LED Par Light fixture RGBW	Leksa or Equivalent		4	Nos		
SL.5	SITC of Light fixture mounting clamp Customized for suspending on fixed bars	Leksa or Equivalent		22	Nos		
SL.6	SITC of Light Fixture dual safety Chain, made of GI wire rope Bundled with accessories	Leksa or Equivalent		22	Nos		
SL.7	SITC of Suspender cum clamps, made of MS material	Leksa or Equivalent		12	Nos		
SL.8	SITC of Power Distribution Electrical panel having an Individual MCB control for 18 outgoing circuits	Leksa or Equivalent		1	Nos		
SL.9	SITC of High-quality power junction box 4-way made of MS Sheet metal fabricated housing.	Leksa or Equivalent		12	Nos		
SL.10	SITC of High-quality Dimming In junction box 2-way, made of MS Sheet metal fabricated housing	Leksa or Equivalent		1	Nos		
SL.11	SITC of High-quality Dimming In junction box 1-way, made of MS	Leksa or Equivalent		1	Nos		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
	Sheet metal fabricated housing.						
SL.12	SITC of DmX Loop Junction Box having 1 No. of DmX 5 Pin XLR Female Socket & 1 No. DmX XLR Male Socket	Leksa or Equivalent		1	Nos		
SL.13	SITC of Internal Earthing System with copper bar conductor	Leksa or Equivalent		1	Nos		
SL.14	SITC of Black Powder coated cable trays	Custom		70	Nos		
SL.15	SITC of 5-pin DMX connectors male/female	Netriks or Equivalent		16	Nos		
SL.16	SITC of DmX Controller 12 Faders to control at least 12 channels	Avolite or Equivalent		1	Nos		
SL.17	SITC of Opto isolated RDM enabled DmX splitter unit provided with 4 Isolated outputs	Leksa or Equivalent		1	Nos		
SL.18	SITC of FRLS Copper unarmored Flexible cable IS-694 having 3-Core each of 1.5 Sq mm size	Polycab / RR kabel or Equivalent		300	mtrs		
SL.19	SITC of 5 Core DmX Cable with Sheathed housing on the cable	Belden or Equivalent		100	mtr		
SL.20	Providing & Fixing of Light bars in 40 mm G.I. Pipe	Custom		1	Set		
Total for Schedule-6 (Stage Lighting & Accessories)							

7. Schedule-7: Access Gate at Ground Floor of Metro Bhavan (AG):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
AG.1	Supply, installation, testing and commissioning of Retractable gate barrier	Reputed brand		4	No		
AG.2	Supply, installation, testing and	Reputed brand		4	No		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
	commissioning of Fixed Barrier						
AG.3	Supply, installation, testing and commissioning of P- Gate with entry and exit reader	Reputed brand		2	No		
Total for Schedule-7 (Access Gate at Ground Floor of Metro Bhavan)							

8. Schedule-8: Wi-Fi System (WF):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
WF.1	Access Points Wi-Fi v6	Reputed brand		20	No		
WF.2	Access Point Controller	Reputed brand		2	No		
Total for Schedule-8 (Wi-Fi System)							

9. Schedule-9: Miscellaneous Items (MS):

Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
MS.1	SITC of Network Switch, 24 port Ethernet managed switch for Auditorium	Netgear or Equivalent		1	Nos.		
MS.2	SITC of 8 channel relay strip with serial control port	Custom		6	Nos.		
MS.3	SITC of Ethernet Switcher with 4 ports POE & 4 Non-POE switch	Netgear or Equivalent		6	Nos.		
MS.4	SITC of miscellaneous Accessories for Auditorium	Custom		1	LOT		
MS.5	SITC of accessories for Boardroom	Custom		1	LOT		
MS.6	SITC of Accessories for meeting rooms	Custom		3	LOT		
MS.7	SITC of Accessories for Dining area	Custom		0	LOT		
MS.8	SITC of accessories for MD cabin area	Custom		1	LOT		
MS.9	SITC of Accessories of all cabins	Custom		4	LOT		



Sr. No.	Product	Suggested Make	Make & Model quoted by Bidder	Qty.	Unit	Unit Rate (Including GST)	Amount (Including GST)
MS.10	SITC of Accessories for Conference room	Custom		2	LOT		
MS.11	SITC of Accessories for Cafeteria	Custom		1	LOT		
MS.12	SITC of RJ45 Shielded Plugs	Custom		1	LOT		
Total for Schedule-9 (Miscellaneous Items)							

10. Schedule-10: Comprehensive Annual Maintenance Charges (CAMC)

Sl. No.	Particulars	Amount in INR (Incl. GST)
1	Comprehensive Annual Maintenance Charges for 2 nd Year	
2	Comprehensive Annual Maintenance Charges for 3 rd Year	
3	Comprehensive Annual Maintenance Charges for 4 th Year	
4	Comprehensive Annual Maintenance Charges for 5 th Year	
Total for Schedule-10 (CAMC)		

11. Summary of Financial bid:

SN	Schedule No.	Details of Work	Amount in INR (Incl. GST)
1	Schedule-1	Total for Audio system	
2	Schedule-2	Total for Video system	
3	Schedule-3	Total for Switching system	
4	Schedule-4	Total for Automation & Lighting control System	
5	Schedule-5	Total for Patch cables, Bulk cable & Accessories	
6	Schedule-6	Total for Stage Lighting & Accessories	
7	Schedule-7	Total for Access Gate at Ground Floor of Metro Bhavan	
8	Schedule-8	Total for Wi-Fi System	
9	Schedule-9	Total for Miscellaneous Items	
10	Schedule-10	Total for CAMC (2 nd to 5 th Year)	
Total Amount Quoted (Including GST & Including CAMC)			



Annexure-5 - Conference Room (3rd Floor)			
S. No.	Item	Suggested Make	Specifications
Audio System			
1	Ceiling speakers	Bose or Equivalent	SITC of min. 2.25-inch Inceiling premium Full range or 2-way loudspeaker, Frequency Response (-3 dB) (1) 95 – 16,000 Hz, Frequency Range (-10 dB) (1) 83 – 19,000 Hz, Nominal Coverage Angle (1 – 4 kHz) 150° Nominal Coverage (1 – 10 kHz) 145°, Power Handling, Long-term Continuous 20 W @ 16 ohms, Power Handling, Peak 80 W, with transformer tapping @ 70v/100v or 16 ohms, tapping Of min.16 watts @ 70v/100v
2	FOH surface mount speakers	Bose or Equivalent	SITC of Surface mount speaker, with driver of 1x1-inch tweeter, 1 x 5.25" Woofer, Long term power handling @ 60 watts @ 8 ohms,, 89db SPL@ 1m/1w, Max. SPL 107 dB, Frequency response (-3dB) 75 Hz ! 17KHz, Freq. range (-10dB) : 65Hz to 20KHz, 8 Ohms with 70v/100v multiple tapping with Max. tapping of min,.50 watts, Coverage 120 deg. conical,
3	Amplifier	Bose or Equivalent	SITC of 4- channel amplifier, Amplifier Power 4 x 150 W (THD+N < 0.04%, 1 kHz, 4–8 Ω, 70/100V), I-Share Mode Power 2 x 300 W (2–4 Ω, 70/100V) (each channel pair can be I-Shared), Frequency Response 4–8 Ω: 20 Hz – 20 kHz (±1 dB @ 1 W), 70/100V: 20 Hz – 20 kHz (±1 dB @ 1 W) with 50 Hz high-pass filter, Channel Separation (Crosstalk) > 80 dB @ 1 kHz, > 65 dB @ 20 kHz, A/D and D/A Converters 24-bit / 48 kHz, Processing Functions Matrix mixer, loudspeaker EQ, VPeak/VRMS limiters, real-time PEQ,, ControlCenter configuration, mute/output polarity inversion, Audio Latency < 1 ms (any analog or AmpLink input to loudspeaker output),
4	Ceiling Mics	Sennheiser or Equivalent	SITC of Ceiling microphone tile based, with min. 24 microphone array elements with DANTE interface, 28 Electret condenser capsules, Perfect speech intelligibility, Dante or Analog Output PoE, Certified for: MS Teams, Zoom, DingTalk and Tencent, Exclusion Zones, Priority Zone, Camera Control via talker position data, Audio Output 1 x 3-pin terminal (fits Phoenix contact MCVW 1.5-3-ST-3.81), Latency:Max. 4 ms, , Max Sound Pressure Level Min 104 dB SPL, Sensitivity : 0 dBV/Pa (988 mV/Pa), Signal_to_Noise_Ratio 83 dB (A), Transducer principle Pre-polarized condenser microphone
5	DSP processor	Bose or Equivalent	Supply , installation , testing and comissioning of Digital Sound Processor with 12 Mic/Line inputs & 8 analog outputs, 24 Bit A-D and D-A Convertors; Sampling Rate : 48 kHz; THD : < 0.002 % ; Channel Separation (Crosstalk) : < 105 dB ; Frequency Response 20 Hz - 20 kHz ; Signal-to-Noise Ratio 80 dB ;Dynamic Range : > 115 dB; 5 Control Inputs and Outputs; RS-232 and Ethernet Port for third party Control and Monitoring; inbuilt DSP features like Input Equalizers, Router, Band Pass filter, Output Equalizer, Delay, Limiters, gates, Feedback suppressors, Source selectors etc, with USB 2x2
Video System			
6	110" Direct LED display	LG or euivalent	SITC of min. 110" Professional Display, Screen Size :279.4 cm (110), Direct LED backlight, , Aspect Ratio :16 : 9, Native Resolution: Min. 3840 x 2160 (UHD), Refresh Rate@ 120 Hz, Brightness: Min. 500nit (Typ.), Contrast Ratio 1,200:1, Viewing Angle(H x V) 178 Deg H/V, Color Depth 1.07Billion colors(8bit + FRC, Response Time: 8ms, Surface, Standard Life time 50,000Hrs (Typ.), Connectivity : Input HDMI (3), RJ45(LAN), Built-in IR, USB2.0 Type A (2), Output Audio Out, Internal Memory 16GB, Wi-Fi / Bluetooth (Built-in), Power Indicator, Local Key Operation, Android 9.0, HDMI-CEC. TO BE SUPPLIED WITH FLOOR STANDING TROLLEY TO MOUNT THE TV.



S. No.	Item	Suggested Make	Specifications
7	Camera	Lumens	SITC of 1080p, 12x optical zoom, PTZ camera with USB3.0 & HDMI connection, Sensor 1/2.8" 2.41MP CMOS, Video Format HDMI: 1080p 60/50 fps ; 720p 60/50 fps, USB: 1080p 30/25 fps ; 720p 30/25 fps, Video Output (HD) Interface :HDMI, USB 3.0, Optical Zoom 12x Digital Zoom 12x (HDMI Only) Horizontal / Vertical Viewing Angle: 72° / 43° Diagonal Viewing Angle: 80°, Panning Angle +/-100°, Panning Speed 100°/Sec, Tilting Angle :+/-30°, , Tilting Speed 100°/Sec, Aperture F1.6 ~ 2.8, Focal Length f = 3.92 ~ 47.32 mm, Shutter Speed 1/1 ~ 1/10,000 sec, Minimum Object Distance 500(Wide) ~ 1500(Tele) mm, Video S/N Ratio > 50dB, Minimum illumination 1.6lux (F1.8, 50IRE, 60fps), Focus System: Auto / Manual, Gain Control : Auto / Manual, White Balance Auto / one-push / manual, Exposure Control Auto / manual, WDR: Yes, Image Flip :Yes, , Preset Positions 128, Camera Control Interface RS-232 In and Out / USB, Camera Control Protocol VISCA / UVC, Video Stream YUV422 / MJPEG, IR pass-through, Yes
8	wireless conf. device	Extron	SITC of wireless conferencing unit with USB dongle (2 Nos.), Frame rate: 24, 25, 30, 50, or 60 fps, Chroma sampling 4:4:4, 4:2:2, or 4:2:0, Color bit depth : 8, 10, or 12 bits per color , Signal Type HDMI 2.0b, HDCP 2.3, Max. video data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Software ShareLink™ Pro for Windows®, ShareLink™ Pro for macOS®, Operating systems Windows 10, 11, macOS 10.15, 11, 12, Software : ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems Android 9 and later, Apple® iOS 13 and later
9	Touch Panel	ViewSonic/Samsung	24 Inch Touch Display Tablet with Active Stylus, Advanced Ergonomics and USB C for Digital Writing, Graphics Drawing, Remote Teaching, Distance Learning.
SWITCHING SYSTEM & ACCESSORIES			
10	Cable cubby	Extron or Equivalent	SITC of customised cable cubby, with 2 x Universal power Socket for PC / Laptop charging + 2x USB power for charging Handphones or other smart devices, Cable Pass-Through Bracket supports up to eight AV cables, Black color, black anodized or brushed aluminum finish.
11	HDMI Switcher	Extron or Equivalent	SITC of 4k HDMI Switcher with 8 inputs x 1 Output with RS232/Ip control, Supports computer and video resolutions up to 4K/60 @ 4:4:4 Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats, Maximum data rate 18 Gbps (6 Gbps per color), Maximum pixel clock 600 MHz, Resolution Up to 1920 x 1200 or 1080p @ 60 Hz, 12 bit color , 4K (4096 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color (Max for HDMI) UHD (3840 x 2160) @ 60 Hz with 4:4:4 color space, 8 bit color, Audio output : HDMI embedded
12	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE
13	USB Switcher	Extron or Equivalent	SITC of 4x4 USB switcher with third party control, USB 10 Gbps and USB 5 Gbps compatible Four port output hub with USB-C and Type A connections, Hot Key, Auto, and manual switching capability, Supports selectable Host and Peripheral emulation, Front panel selection buttons and status indicators, RS-232 and Ethernet control, USB specification xHCI (USB 3.2 Gen 1/2, USB 3.1 Gen 1/2, USB 3.0), EHCI (USB 2.0), OHCI/UHCI (USB1.1) compatible, USB data rates Low speed (1.5 Mbps), full speed (12 Mbps), high speed (480 Mbps), SuperSpeed (5 Gbps), SuperSpeed+ (10Gbps), HOST USB connector : 2x female USB type C, 2x female USB 3.2 type B, Device Peripheral USB connectors : 1x female USB type C, 1x female USB 3.2 type A, 2x female USB 2.0 type A,
14	HDMI cable	Kramer or Equivalent	SITC of 15 mtr long HDMI male to male extension cable, 4k signal cable
15	USB cables	Kramer or Equivalent	SITC of 15 mtr long USB3.0 A/B extender cable



S. No.	Item	Suggested Make	Specifications
16	Patch cable	Kramer or Equivalent	SITC of 6 ft male to male, flexible HDMI cable, 4k signal cable
17	Patch cable	Kramer or Equivalent	SITC of 6 ft Flexible USB A cable
18	PC	HP or Equivalent	SITC of PC (CPU only), 12th Generation Intel® Core™ i5 processor - Intel® Core™ i5-12500 (up to 4.6 GHz with Intel® Turbo Boost Technology, 18 MB L3 cache, 6 cores, 12 threads), Windows 11 Pro, Intel® UHD Graphics 770, 8 GB DDR4, 512 GB SSD Solid State Drive, Video output :1 HDMI, 1 VGA, 1 DisplayPort™, Ports 1 headphone/microphone combo; 2 SuperSpeed USB Type-A 10Gbps signaling rate; 4 SuperSpeed USB Type-A 5Gbps signaling rate, 1 HDMI; 1 line in; 1 line out; 1 power connector; 1 RJ-45; 1 VGA; 2 USB 2.0; 1 serial, Expansion Slots 1 full-height PCI; 2 M.2; 1 PCIe 3 x1; 1 PCIe 4 x16, [To be supplied with wireless keyboard & mouse]
19	Recording and Streaming Hardware (4 Channel)	Lumens / Mediapointe / Mediasite / Vbrick	SITC of Recording, Streaming & Webcasting Hardware simultaneously, Built-in 4x HDMI & IP Inputs with 4x Line Inputs, 2x HDMI Outputs. The system should be capable to record upto any four inputs simultaneously in a single frame and as well as individual sources simultaneously. Should have minimum 1TB in-built storage and can be connected to local NAS storage. The system should be able to support minimum 3 unicast streams. The recorded files should have the option of time and date stamp. OEM should be CE, FCC & RoHS Certified.

Light controller

20	Button panel	Extron Or Equivalent	SITC of button panel controller with volume control knob, with Two bidirectional RS-232 ports, Two relays for controlling room functions, One IR port for connecting up to two emitters, Memory SDRAM 512 MB, Flash 512 MB, Network Interface : 1 xRJ45, Data rate 10/100/1000Base-T, half/full duplex with autodetect, to be supplied with Cover face plate & back box, Black color
21	Lighting Controller	philips-dynalite or Equivalent	SITC of multi-protocol controller 5 channel, compatible with 0-10 Dimmable Balasts, ON/OFF, or DALI Dimmable
22	button panel	philips-dynalite or Equivalent	SITC antumbra 6-push button keypad with communication module, face plate & accessories
23	Relay	Custom	SITC of 8 channel relay strip with serial control port
24	Ethernet switch	Netgear / Belden	SITC of Ethernet Switcher with 4 ports POE & 4 Non-POE switch

Cables & Accessories

25	Speaker cable	Belden or Equivalent	SITC of 2.5 sqm mm / 14 AWG speaker cable
26	Audio cable	Belden or Equivalent	SITC of 23/24 AWG, 2 core + shield audio / mic / control cable
27	cat6	Belden or Equivalent	SITC of CAT6 cable, UTP /STP cable
28	AV rack	custom	SITC of 18x1000x1000 AV rack with all necessary hardware
29	Accessories	Various	SITC of various installation material & connectors, patch cables etc.



Annexure-7 - All Cabins (3rd & 4th Floor)			
S. No.	Item	Suggested Make	Specifications
VIDEO SYSTEM			
1	75" Smart TV	LG or Equivalent	SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC , WebOS version 6.0, Built-in Bluetooth wth Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs
2	Cloud conferencing video bar	BOSE or Equivalent	SITC of smart UC conference video-bar combination of Camera, Microphones & speaker, 6 beam steering microphones to pick-up the audio from participants of small and medium-sized room up to 6 x 6m (20 x 20 ft) with an all-in-one USB solution, 4K ultra-HD camera, Auto-framing e=PTZ camera, deliver room-filling sound from a USB-connected laptop or wireless Bluetooth® device, supporting multimedia presentations with premium audi
3	Display	LG or Equivalent	SITC of 65" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC , WebOS version 6.0, Built-in Bluetooth wth Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x ananlog Audio outputs
Cables & Accessories			
4	Accessories	Various	SITC of various installation material & connectors, patch cables etc.



Annexure-10 - Cafeteria

S. No.	Item	Suggested Make	Specifications
AUDIO SYSTEM			
1	Stand alone Speaker	Bose or Equivalent	SITC of 4-inch Inceiling premium loudspeaker
2	Amplifier	Bose or Equivalent	SITC of 2 x 90 watts per channel amplifier
3	Mixer Amplifier	Behringer or Equivalent	SITC of mixer, with 4 Mic inputs with phantom power, 4 stereo inputs, USB port to connect laptop, 2 main L/R out
4	Wireless Mic set	Sennheiser or Equivalent	SITC of wireless microphone set dual, comes with 2 wireless HH mics with built in
VIDEO SYSTEM			
5	75" Smart TV	LG or Equivalent	SITC of 75" smart Signage TV with Miracast option, Min. Brightness 330 nits, Min, typ. Contrast ratio of 2500:1, 4K Ultra HD (3,840 x 2,160), HDR10, various picture modes, HDMI ARC , WebOS version 6.0, Built-in Bluetooth wth Bluetooth Audio playback, RS232 in/out, Ethernet control & monitoring, built-in wifi, min. 2x HDMI (min. 1 input with HDMI2.0), 1 x analog Audio outputs
6	Wirless presentation device	Extron or Equivalent	SITC of Wireless Display Receiver for presentation and conferencing with, 1 x HDMI Input, 1 x HDMI Output, 2 x USB 2.0 Host Type-A, 1 x USB 3.0 Host Type-A, Operating systems Windows 10, 11, macOS 10.15,11,12, Mobile apps and features, Software ShareLink Pro for Android™, ShareLink Pro for iOS, Operating systems ,Android 9 and later, Apple® iOS 13 and later, Maximum data rate 6.75 Gbps (2.25 Gbps per color), Maximum pixel clock 225 MHz, Frame rates 24, 25, 30, 50, or 60 fps, Chroma sampling 4:4:4, 4:2:2, or 4:2:0, Color bit depth 8, 10, 12 or 16 bits per color, Resolution range 1920 x 1200 @ 60 Hz or 1080p @ 60 Hz
7	HDMI Distribution amplifier	Extron or Equivalent	SITC of 4 output HDMI Distribution amplifier, Supports computer and video resolutions up to 4K/60 @ 4:4:4, Supported HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, HD lossless audio formats, and CEC control, HDCP 2.3 compliant, Automatic input cable equalization, EDID support automatically manages EDID communication between connected devices, Resolution range Up to 4K (4096x2160) @ 60 Hz, UHD (3840x2160) @ 60 Hz,, 1920x1200 or 1080p @ 60 Hz Color bit depth 8, 10, or 12 bits — subject to the max data rate, HDR10, HDR10+, and Dolby Vision, Regulatory compliance CE, c-UL, UL, C-Tick, FCC Class A, ICES, VCCI, AS/NZS, RoHS, WEEE
Cables & Accessories			
8	HDMI cable	Kramer or Equivalent	SITC of 20 mtr HDMI male to male extender cable
9	Speaker cable	Belden or Equivalent	SITC of 2.5 sqr mm / 14 AWG sepaker cable
10	AV rack	custom	SITC of 12ux1000x1000 AV rack with all necessary hardware
11	Accessories	Various	SITC of various installation material & connectors, patch cables etc.



Revised Annexure-12 - Access Gate at Ground Floor of Metro Bhavan			
S No.	Item	Suggested Make	Specifications
1	Supply, installation, testing and commissioning of Retractable gate barrier	Reputed brand	<ol style="list-style-type: none"> 1. Retractable gate barrier (IP 54), 520mm aisle width in stainless steel cabinet (SS 304) of minimum thickness around 1.2mm with magnetic high torque motor. Normally closed mode of operation with lane indicator for passenger signalling. Offering a throughput of 30 passages per minute. 2. Flap Material - 10mm Acrylic 3. Input - 230V AC 4. Frequency - 50Hz 5. Life cycle - 10 million cycles 6. Customization - Face reader to be mounted with SS 304 support material with proper aesthetic look.
2	Supply, installation, testing and commissioning of Fixed Barrier	Reputed brand	<ol style="list-style-type: none"> 1. The diameter of pipe at curvature should remain uniform as rest of the pipe (50 mm). The frame shall have thick clear toughened glass (fixed in between) securely with rubber / fiber lining. 2. The circumference of the base shall be sealed with the floor finish after installation so as to prevent the ingress of water. 3. Barrier frame shall be stainless steel, smooth finished (Grade SS304 satin finish) surface with chamfered edges / corners without any protruding parts. 4. The barriers shall be firmly mounted on mounting plates on the flooring.
3	Supply, installation, testing and commissioning of P- Gate with entry and exit reader	Reputed brand	1 lane motorised P Gate with 850mm pass width with pedestals for mounting card reader (entry + exit)

Face Biometric with Built in Card Reader of Reputed make		
1	Display	5" touchscreen Display
2	Device OS	Linux/Android/Windows
3	Algorithm	NIST FRVT evolved Alogorithm and benchmarking for performance with Mask
4	Sensor	Infrared Camera, Visible Image Camera and stereoscopic sensors
5	Key Pad	Touch keypad
6	Input Keys	Configurable Input keys on Device
7	Network/Communication:	Ethernet, RS485, RS422, USB
8	Other Communication	Built in speaker
9	Display Customisation	Corporate video Playback, wallpapers, custom Greetings.
10	Embedded Players	Audio & Video player
11	Time & Attendance	Touchscreen Time Clock, featuring programmable function keys
12	Verification Technology	Template on Card and Template on device

13	Face Template Capacity	10,000 users and expandable upto 50K (1:N) Mode when required
14	1:N and 1:1 In Device	Templates - One face template per person and identification time with 10,000<=1 sec
15	Template on Card 1:1	Template shall be possible to encode in Mifare, Desfire and iCLASS card
17	Lighting conditions support	0 to 25,000 lux
18	Log Capacity	1 Million transaction logs (10,00,000 logs)
19	Card reader	Contact less Mifare (13.56 MHz), Desfire, HID Prox & HID Iclass
20	Multi Factors	Contactless smartcard, PIN and BioPIN
21	Matching Method	1:1, 1:N, Auto
22	Authentication Type	Face Only, Card + Face, Card + PIN + Face, QR code, NFC, HID BLE
23	Inputs/Outputs:	Wiegand In & Out (customizable up to 512 bits) and Door Relay, 3 General Purpose Inputs (including Door monitoring), 3 General Purpose Outputs
24	Secured communication	Server to Device: TLS & SSL
25	Internal Relay	Deadbolt, EM lock, door strike, automatic door
26	Tamper Evident	Anti-tamper switch
27	Operating Temperature	-10°C to 50°C
28	Humidity	10% to 80% (non-condensing)
29	Certification	CE, UL294, FCC
30	Ingress protection:	IP65
32	Anti-fraud features	Liveness detection, timed anti-pass back, Banned/authorized user lists and Anti-proofing shall be tested by some authorised agency.
33	Smart Card support	Mifare/Desfire, iCLASS(PACS number & template on card), Seos
35	Safety and quality certifications	EMC/Safety standards: CE, CB, FCC, RoHS, REACH and WEEE compliant , UL 294
36	Suggested Make	IDEMIA/Invixium/Anviz

