

MUMBAI HOUSING AND AREA DEVELOPMENT BOARD

A REGIONAL UNIT OF

(MAHARASHTRA HOUSING AND AREA DEVELOPMENT AUTHORITY)Tel no.- 022-66405220, E-mail eelect.mhada@gmail.com

Ref. No.- EE/Elect/M.B./Quotation/

/2025

Date-

Notice to Agency for rates only

Executive Engineer / Electrical Division / Mumbai Housing and Area Development Board, Room no.368, 2nd Floor, Grih Nirman Bhavan, Kalanagar, Bandra (East), Mumbai-400051 is inviting the quotation **for obtaining Rate of Item only** from contractor / agencies having experience in carrying out similar type of work of Projection Mapping Laser Light Show and Sound Show at Andheri (W). Contractor / agency required to submit the Quotation rates with & without GST and duly signed with seal. Sealed quotation will be received in the same office on or before **25/11/2025** up to 3:00 PM. and opened on the same date if possible for the work mentioned below—

	Name of work and Description of Item	Qty	Unit	Rate without GST for one item	GST Rate	Total Rate
A	Audio Equipments and System Backbone					
1.	SITC of Ultra Compact High SPL Dual 8" Two-way Speakers Two-way coherent point source, Double 8" coaxial system for installations. Components: LF: 8" woofer minimum with minimum 2" voice coil, M/HF: 8"/1,75" coaxial driver. Frequency response: 60 Hz – 20 kHz (-6 dB) Power handling (AES/peak): 450 W / 1800 W. Nominal impedance: 8 Ω. Max. SPL peak: 133 dB or better Dispersion: 100° conical or better IP rating (IEC 60529): Standard IP55 (MG-1) Marine Grade Enclosure material: Birch Multiplex Finish: Polyurea black coating Suspension: M6 threaded points. There should be option to choose Speaker Color as per RAL requirements directly from parent OEM	1	No			
2.	SITC of Pole Mounting arrangements for the above main FOH speaker.	1	No			
3.	Main Floor Mounted Subwoofer:- SITC of High Output Single 18" Multipurpose Subwoofer. Components: 18" Nd ultra low distortion woofer. Frequency response: 28 Hz – 120 Hz (-6 dB) Power handling AES / peak (passive): 1250 W / 5000 W or better Nominal impedance: 8 Ω or better Max. SPL peak: 139 d or better IP rating (IEC 60529): Standard IP55 (MG-1) Marine Grade Enclosure material: Birch plywood. Finish: Polyurea coating. Suspension: M20 threaded points There should be option to choose Speaker Color as per RAL requirements directly from parent OEM Approved	1	No			
4.	SITC of 4 Channel DSP Amplifier with Loudspeaker Management and DANTE Output stage: Class D-IC / Class D / Class TD Input sources: Analog & AES/EBU & DANTE Analogue input impedance (balanced): 12 kΩ. RMS output power: 1800 W @ 8 Ω, 3500 W @ 4 Ω, 4400 W @ 2.7 Ω, 4500 W @ 2 Ω. Peak output power: 3600 W pk @ 8 Ω, 7000 W pk @ 4 Ω, 6500 W pk @ 2.7 Ω, 5200 W pk @ 2 Ω. Damping factor: 2500. Power output connections: 2x Neutrik NL4 speakON, 1x Neutrik NL8 speakON. Internal samplerate / bit-depth: 96 kHz / 24 bit. Signal-to-noise ratio (22 Hz - 20 kHz, 4 Ω - digital input): > 116 dB (unweighted), > 119 dB (A-weighted). Frequency response(8 Ω load, with CLEAR preset): 20 Hz–20 kHz = (+0.0 dB / -1.0 dB). THD+N & IMD(4 Ω load @ 1/2 output power): 20 Hz–20 kHz = < 0.005%. Latency (input to loudspeaker output): min. 2.70 ms AES/EBU input, min. 2.00 ms Analog input.	1	No			

	Protection circuits: Inrush current limiter, Thermal limiter, Output DC, SMPS, over-current, Output overload LED indicators: Mute status, Limit, Signal, Protection, Ethernet control active, Digital signal locked, Dante™ Power on Ethernet connection: 2x 100 Mbps RJ45 Control, 1x 100 Mbps RJ45 Dante™.				
5.	SITC of 4 Channel DSP Amplifier with Loudspeaker Management and DANTE Output stage: Class D-IC / Class D / Class TD Input sources: Analog & AES/EBU & DANTE Analogue input impedance (balanced): 12 kΩ. RMS output power: 500 W @ 8 Ω, 800 W @ 4 Ω, 1500 W @ 2 Ω Peak output power: 3200 W pk @ 8 Ω, 6000 W pk @ 4 Ω Damping factor: >2500. Power output connections: 2x Neutrik NL4 speakON, 1x Neutrik NL8 speakON. Internal samplerate / bit-depth: 96 kHz / 24 bit. Signal-to-noise ratio (22 Hz - 20 kHz, 4 Ω - digital input): > 107 dB (unweighted), > 110 dB (A-weighted). Frequency response(8 Ω load, with CLEAR preset): 20 Hz–20 kHz = (+0.0 dB / -1.0 dB). THD+N & IMD(4 Ω load @ 1/2 output power): 20 Hz–20 kHz = < 0.005%. Latency (input to loudspeaker output): min. 2.70 ms AES/EBU input, min. 2.00 ms Analog input. Protection circuits: Inrush current limiter, Thermal limiter, Output DC, SMPS over-current, Output overload. LED indicators: Mute status, Limit, Signal, Protection, Ethernet control active, Digital signal locked,Power on. Ethernet connection: 2x 100 Mbps RJ45 Control And DANTE	1	No		
6.	SITC of DSP Processor Mic / Line Input: min 12 No's Line Output: min 12 No's USB Audio Interface 16Bit, 48Khz GPIO Contacts: 5 No's Built in Digital Audio DANTE Network with 64 x 64 Channel Frequency Response: 20Hz to 20KHz Ethernet Port: Yes RS232 connector for interfacing with 3rd party control systems Crosstalk (inter-channel @ 1 kHz): < -75 dB Common mode rejection: Typically, -60 dB at 1 kHz Latency: <1.8ms Maximum output level: -31 dBu to +24 dBu THD+N : <0.005%, Dynamic range: > 105 dB complete with wall mounted control panel	1	No		
7.	SITC of 5" active monitor speaker. Speaker Type: 5" Bi-amp 2-way active Monitor speaker. Driver: 5" LF and 1" HF or better Power Handling: LF: 30W @ 4Ω, HF:30W @ 4Ω or better Frequency Range: 40 Hz - 36 kHz Maximum Sound Pressure: 107 dB Cross Over Frequency: 3 kHz Should have Balanced XLR input & 1 Unbalance RCA Input Baffle material: HIPS with Aluminum Plate	1	No		
8.	SITC of Virtual DANTE Card on Audio Workstation Makes: Audinet	1	No		
9.	SITC of 16 port PoE 1Gig Network Switch.	1	No		
10.	SITC of four Sq mm speaker cable featuring 99.999 % OFC conductor,0.006 Ω/m resistance , 73.480 pF/m capacitance and 2X4mm 2cross section for optimal sound quality and performance	1	RMT		
B. Projection Mapping and System Backbone					
11.	Supply, installation, testing, and commissioning of 3 Chip DLP 4K 25000-30000 lumens projector "Supply, Installation, Testing and Commissioning of Projector 3-chip DLP, should have 3 laser diodes for true color production(Red,green,blue), Min output resolution 3840 x 2160 (UHD 4K), brightness min. 25,000-30,000 lumens, RGB Laser digital projector , Contrast Ratio : min 6000 : 1, illumination minimum 50000 hours, Omni directional, Motorized horizontal and vertical lens offset , Inputs: 12G SDI,HDMI 2.0,DP,Analog Controls: RS232 in/out, RS422 in, Ethernet (10/100), Weight should not be more than 42kgs, Noise should not be more than 50dB, REC 2020 color space production, image processing minimum 1.2Gpx/s, typical power consumption should not be more than 1550 watts, should be complete with mounts and lens	1	No		
12.	SITC of Smart light weight outdoor projector enclosure on poles suitable for Marine environment made of Aluminum with Aluminum	1	No		

	welding. Complete with Build to meet IP65 standards, Anti-reflecting optiflex tempered glass window with 94% transparency provided for an uninterrupted projection, Hydrophobic filter for salt fog filtering, Powerful AC fan for efficient cooling with positive pressure for ultimate projector protection, Fan circulation to automatically start even during day time if inside temperature goes above 35 deg Cel, Sensor based Humidity and temperature control automation to provides complete climate control inside the enclosure automatically, Enclosure unit to be Insulated with non fibrous, non toxic Cross linked polyethylene sheets with min. 19mm thickness, Complete unit to be powder coated and insulated for heat protection. Enclosure Should have EMD feature for better performance of the projector and enclosure, Power distribution sockets 16/6 Amps and industrial plug 32A. The installation should be monkey proof, complete in all respect as per design with all relevant fittings, accessories etc... as required to go live.					
13.	Supply, installation testing and commissioning of Media Server 4U Intel i9 based PC, with 32 GB Ram, 2 TB SSD - M.2 NVMe hard drive compatible AMD/Nvidia graphics card , sound card, Intel® Q87 Express Chipset, window 8 or better with Processor ≥ 16 Core intel i9 Operating system: Windows 10 or better System memory ≥ 32 GB RAM Storage ≥ 2 TB or better Graphics Memory ≥ 4 GB NVIDIA/AMD	1	No			
14.	Supply, installation, testing, and commissioning of watch-out supporting software for interactive projection mapping.	1	No			
15.	Supply Installation Testing & Commissioning of interactive Server with 4 HD outputs as required with original OS license - Intel CPU i7 Latest Generation with rugged cooling system having 16GB RAM or more and 500 GB SSD and appropriate GPU, 2 X USB3 port and 1 X 1 GB/s Ethernet port and ASIO sound card along with required server rack	1	No			
16.	SITC optical fiber extenders (Transmitter and Receiver). These units transfer uncompressed HDMI 2.0 class 4K signals with embedded audio to up to 600m or a Full HD signal up to 2500m distance over one Single Mode / Multimode fiber cable. Audio Format: all embedded audio formats, Data rate: 18 Gbps (6 Gbps per color), EDID emulation: Transparent EDID pass-through, HDR Modes: HDR 10, HDR 12 and Dolby Vision, Compression: No video compression including extended warranty of 3 years	1	Set			
17.	Supplying, Installation, Testing, and commissioning of 24 inches Flat LCD Display Monitors with Optimal Resolution of 4K at 60 Hz having Brightness 250 cd/m ² (typical).	1	No			
18.	SITC of 24 x 10/100/1000BASE-T ports 4 x Gigabit RJ45/SFP Combo ports Advanced L2 switching and security features L2+ Static Routing Optional "standard mode" or "surveillance mode" management user interface	1	No			
19.	Supply, laying, termination, and commissioning of OFC (6/12-core Single Mode Armored) cables from all devices to the control room or networking rack, complete with all accessories and termination kits. All the Items will as per site requirement.	1	Mtr			
20	Providing and installing a 12-meter high mast metal truss for projector mounting, the work should include all materials, equipment, and supervision for complete execution as per approved drawings and IS standards. Structural designs for steel and foundations shall be prepared and approved by a licensed structural engineer. All steel shall be IS grade or equivalent, with hot-dip galvanizing or approved protective coating. Anchor bolts and base plates shall be installed within specified tolerances. Concrete tests, weld inspections, and coating thickness reports shall be provided before acceptance. Cable conduits (PVC/HDPE seprate item) shall be installed up to platform level, and proper earthing and lightning protection shall be completed as per design and IS codes. foundation work, painting, mounting brackets, and all necessary fittings.	1	No			
C Interactive Floor mapping content Development						
21.	Development, and implementation of an interactive large-scale outdoor floor projection experience covering approximately 60 meters in length and 20 meters in width (1,200 Sqmtr). Creation of immersive animated content on beach surface (sand) —such as ocean waves, marine life etc —that responds in real time to visitor movement through motion sensors. The scope includes creative concept development, script writing, visualization, and the creation of diverse interactive visual effects to enhance audience engagement and emotional impact. By combining storytelling, design, and responsive digital art, the installation will deliver a captivating and participatory outdoor experience. Projection Surface Uniformity will be : $< \pm 2$ cm variation post leveling and compaction .It will be Multi-projector edge-blended	1	Set			

	panoramic projection with Projection Resolution (Native): 4K UHD (3840 × 2160 pixels per projector) Final Composite Resolution should be ~ 8K pixels (depending on array configuration and overlap) Projection Ratio: 16:9 master content pipeline, adjusted to site geometry through warping and blending					
D	Lighting Equipment and System Backbone					
22.	SITC of LED Source Weather Proof IP66 Moving Head : Light source: LED 600W-700W, 6500K , Lumen output Minimum 25000 lumen and full CMYC colour mixing. Electronic dimming: 0 - 100%, four dimming curve options. The fixture must have a minimum LED lifetime of 20000 hrs(to >70% luminous output). The fixture must be capable of variable CCT from 6500K to 2700K.Beam Angle: Narrow Beam Min.6 deg to 40 deg ,Iris- 0-100%. High LED refresh rate : 3,600 Hz. Display On board control, Pan/Tilt rotation : 540°/270° (8-16bit). Rotating Gobo : 7 gobos plus open, wheel rotation, gobo rotation, indexing and shake. Gobo animation and flow effects included. Additional static gobo wheel with 8+open gobos with index rotation and shake. Colour mixing: CMY, independently variable 0-100%.Colour wheel: 7 colour filters with filter to increase CRI to 90.Rotatable framing module, +/-60°, with 4 individually controllable full framing blades with variable angle and position. Prism: 2 rotating/indexing prisms (4-facet circular prism and 6-facet linear) Frost: Soft frost effect and heavy frost effect included for wash effect , Focus: Motorized. RDM , DMX512 , IP66 and C5-M rated. 10 numbers	1	No			
23.	Supply, Installation, Testing and Commissioning of DMX Splitter & Booster, Input Voltage- DC 12-24V input, 100-240V, 24VDC plug-in power adaptor included Power Consumption 5W max. Housing is made of Polycarbonate, Surface mount or DIN-rail mountable, Operation Temperature -10°C ~ +35°C,Output Six 3pin terminal sockets , Connections Two piece compression screw terminals , Protection Rating IP20.supports bi-directional communications for discovery, addressing and DMX control of products. This unit takes the incoming DMX/RDM signal and splits the signal into six separate output channels allowing for expanding the number of devices controlled from 32 to 6 X 32.	1	No			
24.	Supply installation testing and commissioning of DMX Cable : RS-485, 1 Pair 24AWG (7x32) Tinned Copper, PE Insulation, Overall Beldfoil®+Tinned Copper Braid(90%) Shield, PVC Outer Jacket, CM with minimum specifications as specified	1	RMT			
E	Electrical and Networking System					
25.	Supply, installation testing and commissioning 120 KVA UPS, true on-line UPS 3 Ph double Conversion with all safeties and protection and suitable capacity, sealed maintenance free 12 V batterie with a 30 mins backup time on full load with M open MS Battery rack and cable	1	No			
26.	SITC of cubical panel fabricated out from CRCA sheet with required bracings and supports, gasketed with foam rubber to make the panel dust and vermin proof, together with degreasing and applying two coats of red oxide and two coats and stove enamel paint. The panel shall include all required hardwares, moulded insulators and separators including cutting and making space in compartmental formation. The thickness of steel sheets, shall be 16 SWG. Main show panel – IP 65. Distribution Boards complete with suitable Copper bus bars, inter connection with copper wires, glands and thimbles etc. complete In all respects approximate size of (5X4 = 20 Sq ft) with suitable locking arrangement. 250 A MCCB 35 KA 3 Pole – 1 No . Rotary operating mechanism – 1 No. Digital volt meter – 1No. VSS – 1 No. Digital Ammeter – 1 No. ASS- 1 No. CTS 100/5A – 3 No. LED indicator light – 3 Nos. Outgoing 100 A TPN 10KA –3 No. 40 A TPN 10 KA – 6 Nos. 6-32 A DP MCB Copper bus bars, inter connection with copper wires, glands and thimbles etc. complete In all respects.	1	No			
27.	SITC of cubical panel fabricated out from CRCA sheet with required bracings and supports, gasketed with foam rubber to make the panel dust and vermin proof, together with degreasing and applying two coats of red oxide and two coats and stove enamel paint. The panel shall include all required hardwares, moulded insulators and separators including cutting and making space in compartmental formation. The thickness of steel sheets, shall be 16 SWG. Main show panel – IP 65.	1	No			

	Distribution Boards complete with suitable Copper bus bars, inter connection with copper wires, glands and thimbles etc. complete In all respects approximate size of (5X4 = 20 Sq ft) with suitable locking arrangement. 100 A MCCB 35 KA 3 Pole – 1 No . Rotary operating mechanism – 1 No. Digital volt meter – 1 No.VSS – 1 No. Digital Ammeter – 1 No. ASS- 1 No. CTS 100/5A – 3 No. LED indicator light – 3 Nos. Outgoing – 8 Nos. 6-32 A DP MCB – 2 No. 6-32 Amp SPMCB - .Copper bus bars, inter connection with copper wires, glands and thimbles etc. complete In all respects.					
28.	Supply and fixing of field junction / Distribution Boxes –IP 66 HDPE duly painted with screw less clip-on terminals and double compression glands complete as required of approximate size(205 x 255x 112).	1	No			
29.	Supplying & erecting earth pit of minimum bore dia. 150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I. Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200-250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover.(approved make OEM has to submit test certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 W/ meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphur content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retain moisture for long time Necessary test report must be submitted. (b)For Electrical installation up to 11 KV in normal soil. Length of Pipe : 2.00 mtrs Back filling Compound :1 no. Bag of 25 Kg.	1	No			
30.	S & I of Main bus for isolated earth comprising of 200mm x 40mm x 6mm thick copper bar fixed on insulated support and having 10 nos of holes and nut bolts studs for clamping the earth leads, all contained in MS/PVC box of size 300mm x 200mm x 50mm deep and having transparent acrylic cover as approved by consultant.	1	Set			
31.	SITC of CAT-6 twisted unshielded pair cable	1	RMT			
32.	SITC of connectors : speakon ,XLR M/F , DB25, RCA	1	Set			
33.	Supplying, Installation, Testing, and commissioning of Air conditioned Portable/Fixed Pre-fabricated of size20'x10'x8' AV Control Room with Minimum Two operator Seating Capacity with air conditioning	1	No			
34.	Comprehensive Operation and Maintenance for 3 year	1	No			
	Note: Defect Liability Period (DLP) 1 Year (Included for all above mention items)					

For any queries contact below officers:

Mrs. Poonam Shinde, SE-Div-II /MB :- **9137480277/022-66405269**

Detailed requirement, advertisement, terms and conditions can be downloaded from our website www.mhada.gov.in--> **tenders**

Terms and Conditions:-

1. Interested agencies shall download detailed specification from above mentioned site and if required contact above mentioned office for any clarification.
2. Agency has to quote the rate without GST & with applicable percentage GST for this work.
3. Agency has to submit the duly filled quotation along with required documents in sealed envelope accompanied with a forwarding letter.
4. Executive Engineer / Electrical Division / Mumbai Housing & Area Development Board reserves the right to accept or reject any or all quotation without assigning any reason.
5. The quotations are invited for obtaining rates of item for estimation purpose.


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Mumbai Board