

Amendment Notice : Revised Electrical Specifications & Additional Scope Items | Tender No. P-48/2026 | Renovation, Interior Fit-Out, Furniture & Fixtures and Allied Works for PRAL New Head Office Building on Turnkey Basis

*This document shall be read in conjunction with the already uploaded Tender Documents, including the approved requirements/BOQ and the final proposal. The procurement shall be executed on a **turnkey basis**, and the bidder shall be responsible for incorporating and completing all requirements, specifications, scope of work, and other details contained in the Tender Documents, BOQ, and final proposal, along with the amendments/additions contained in this document.*

- The following amendments primarily relate to the Electrical section of the tender document. A few additional works items have also been incorporated into the overall scope of work, as detailed below. All other requirements remain unchanged.
- Two dedicated rooms shall be created on the 3rd Floor: Power Room and Media Room. Room No. 12 shall be utilized and suitably partitioned to accommodate these two dedicated rooms.
- Two dedicated rooms shall be created in the Basement: CCTV Monitoring Room and Drivers' Room. The existing room (approximately 12 ft × 40 ft) with two doors and a varying ceiling height of approximately 10 ft at the front side and 6 ft at the rear side shall be partitioned and converted into the required facilities on a complete turnkey basis.
- A centralized PA system shall be provided for all floors and the Basement, with centralized/manageable operation.
- 11 × 65-inch interactive touch displays with network connectivity and video conferencing for all meeting rooms .
- A PTCL/NTC DB is to be provided on each floor, supplementing the previously scoped IP PBX cabling, with required cabling to designated rooms.
- CCTV monitoring has been centralized: 5 floor-based CCTV desktops and 10 LCD screens are replaced by 1 high-end monitoring workstation and 4 × 55-inch displays in a dedicated Basement CCTV Monitoring Room.
- Access Control has been centralized: 5 floor-based desktops are replaced by 1 virtual machine in the 3rd Floor Media Room server.
- Wi-Fi active equipment is excluded because it is being tendered separately; however, Cat6 cabling remains in the BOQ for approximately 6 Wi-Fi points per floor plus 1 Basement point, with final locations to follow heat-map results.
- Network switches are excluded from the contractor scope. Existing/newly procured switches will be used, with additional switches procured separately where required.
- 48-port CCTV patch panels have been revised to 24-port patch panels per floor, in line with the 24-port switch configuration, thereby aligning the passive infrastructure with the revised CCTV architecture.
- Additional infrastructure includes TV distribution, hall display screens, Fan provisions, surge protection, floor-level network rack spaces, access control for the three new critical rooms, and complete testing/commissioning.
- Provision of TV distribution infrastructure, including RG6 cabling, TV outlets, splitters, amplifiers, connectors, terminations, testing, and adequate spare capacity for future TV points.
- Installation of 3–4 LCD/display screens in the halls on each floor and at the reception. Most of these screens will be relocated from the old office.

- Provision of surge protection, including a main SPD at the Main UPS DB and SPDs for all floor-level Normal DBs.
- Provision of secure floor-level network rack spaces/cabinets near service ducts, including patch panels, cable management, tagging, labeling, testing, and certification. The specifications of rack are changed from 42U to 32U.
- Addition of access control devices for the Power Room, Media Room, and Basement CCTV Monitoring Room.
- LED TVs: Procurement of new 65-inch LED Smart TVs has been excluded from the scope, as the existing 25 LED screens/TVs will be utilized. Any required fixing, mounting, power, HDMI, or other connectivity accessories for the existing screens shall be provided as necessary.
- The following revisions have been incorporated in the tender BOQ to optimize network cabling and the network infrastructure as per forecasted requirements:
 - Item 11(a): One (1) Data for Telephone (A-Type) Technology Box has been omitted from the tender scope, along with all associated/allied components and requirements, wherever applicable.
 - Item 11(b): One (1) Duplex Data Outlet has been omitted and one (1) Simplex Data Outlet has been added, along with the corresponding associated/allied components and requirements, wherever applicable.
 - 48-Port Cat-6 Patch Panel: The specification has been revised and quantity added as per actual site requirements. The revised specification includes a 48-port patch panel equipped with 48 × Cat-6 unshielded RJ45 information outlets, including labeling and all associated components, complete in all respects.
 - The overall cable lengths mentioned in meters have been changed to “As per Actual.” Due to the removal of telephone ports and duplex outlets, cable quantities/lengths may vary. The bidder shall calculate and quote the required cable length as per actual site requirements.
- Additional Building-Wide Miscellaneous Items: Activated carbon or similar air purification solution, Fans provisioning, exhaust fans, wall-mounted hangers, wall clocks, whiteboards/glass boards, network-connected conference room booking tablets, mobile air-quality monitors, first-aid boxes, CCTV and emergency/evacuation signage.
- Provision of floor-standing and wall-mounted AC units as per site requirements. Most of these will be relocated from the old office.
- A site survey is scheduled for **Monday, 31st August 2026**. All participants are requested to visit the SAARC Office at 11:00 AM sharp.
- Bidders are requested to schedule a briefing session to present and discuss their submitted bids. The date and time will be communicated separately.
- PRAL retains the right to increase or decrease BOQ quantities by up to 20% at the time of award of contract.

Basement : Driver Room & CCTV Monitoring Room (Turnkey):

The existing basement room, measuring approximately 12 ft × 40 ft, with two entry/exit doors and a varying ceiling height of approximately 10 ft at the front tapering to approximately 6 ft at the rear, shall be partitioned into two functional spaces: a Driver Room and a CCTV Monitoring Room, executed on a complete turnkey basis. The partition shall be constructed using gypsum board/drywall (or equivalent, subject to approval) finished with paint, and shall include a dedicated door, door frame, and lock set for each room.

Scope of works for this area shall include, but not be limited to:

- CCTV & Surveillance Infrastructure: Supply, installation, testing and commissioning of 12 CCTV cameras (specification to match the approved standard used on the above floors), a 24-port PoE network switch, a Network Video Recorder (NVR) with adequate storage capacity for the required retention period, and structured Cat6 cabling for all camera and network connections.

- Wayfinding & Signage: Parking direction and directional signage, floor markings, and lane/bay demarcation as applicable.
- Life Safety: Emergency lighting (self-contained battery backup units), fire detection/suppression provisions (smoke detectors, fire extinguishers, and any other fire & life-safety measures required per applicable code), and emergency exit signage.
- Electrical & Power Infrastructure: Complete electrical wiring, distribution boards, power outlets and lighting circuits for both rooms; UPS backup infrastructure sized to support CCTV, network, and monitoring equipment during power interruption.
- Network Connectivity: Structured cabling and connectivity linking the basement CCTV/monitoring setup to the building's main network/server room.
- Civil Works: All partitioning, flooring finishes/repairs, false ceiling (where ceiling height permits), and finishing works required to bring both rooms to an operational, handover-ready condition.
- Testing & Commissioning: Complete system testing, integration with the central monitoring system (if applicable), and commissioning sign-off prior to handover.

CCTV equipment (cameras, NVR, switch, cabling) shall strictly follow the same approved make, model and technical specifications already approved for CCTV installations on the above floors, to ensure system-wide compatibility and centralized monitoring.

3rd Floor – Power Room & Media Room

Room No. 12 on the 3rd floor shall be suitably partitioned and reconfigured to accommodate a Power Room and a Media Room. Scope shall include all associated civil works (partitioning, flooring, finishing), electrical works (power distribution, dedicated circuits, lighting), and allied works (ventilation, cable management/trays, and any equipment mounting infrastructure) necessary to make both spaces fully functional for their intended use.

Site Verification, Final BOQ & Pricing Basis

Prior to finalization of the Bill of Quantities (BOQ), the bidder/vendor shall conduct a mandatory site visit to physically verify:

- Actual room and space dimensions
- Existing electrical, network, and civil infrastructure
- Cable routing paths and accessibility
- Equipment placement/mounting locations
- General site conditions affecting execution

Quantities for this scope have not been fixed and shall be finalized strictly as per actual site requirements at the time of execution. The bidder/vendor shall accordingly quote unit rates/prices on an as-per-actual basis; final payment shall be computed on the basis of quantities actually executed and verified at site, and not on any indicative quantity mentioned herein. Any discrepancy between this description and actual site conditions shall be brought to the procuring agency's attention prior to bid submission.

Additional Miscellaneous Items (Building-Wide)

The following items are also added to the overall scope of work:

- Activated carbon beads or similar air purification solution (Standalone air-quality treatment, as applicable)
- Exhaust fans
- Ceiling/floor standing Fans provisioning.
- Provision of floor-standing and wall-mounted AC units as per site requirements.
- Wall-mounted hangers
- Wall clocks
- Whiteboards / glass boards
- Conference room booking-schedule tablets (remotely controlled/network-connected)
- Mobile air-quality tester/monitor
- Medical / first-aid boxes
- CCTV monitoring/notice signage.
- Emergency / evacuation signage (building-wide, as required by applicable safety code)

Quantities for the above miscellaneous items are indicative only and have not been fixed. The bidder/vendor shall quote unit rates/prices on an as-per-actual basis, and the final quantity of each item shall be determined and supplied strictly as per actual site/operational requirement at the time of execution. Payment shall be made only for quantities actually supplied/installed and verified, and not on the basis of any indicative quantity or count mentioned herein.

The following Electrical section has been amended with revised specifications, and a Revised BOQ column has been added accordingly.

1ST FLOOR ELECTRICAL WORKS							
S.N o.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)		

	NOTE: ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT / CONSULTANT PRIOR TO THE EXECUTION OF WORKS. BIDDER IS ADVISED TO CONFIRM THE RUNNING LENGTHS, QUANTITIES, MISSING ITEMS IN BOQ, TERMINATIONS AS PER SITE CONDITIONS, REQUIREMENTS OF CLIENT BEFORE COMMENCEMENT OF WORK, BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL SPECIFICATIONS, PROPOSED SYSTEM SCHEMATICS, SUPPLY AND EXECUTION TIMELINES FOR THE SYSTEM OFFERED. ENTIRE SYSTEM TESTING AND COMMISSIONING OF THE ALL ITEMS TERMINATIONS, TESTING AND COMMISSIONING AT BOTH ENDS, INCLUDING SUBMISSION OF SHOP DRAWINGS, ASBUILT DRAWINGS, DETAILED TEST REPORTS FROM THE PRINCIPALS AND AS PER SITE PERFORM TEST REPORTS ARE REQUIRED. CLIENT SHALL HAVE RIGHTS TO ADD OR DELETE ANY ITEMS FROM THE VENDOR SCOPE AFTER AWARD OF WORK. ALL ACTIVE EQUIPMENT SHALL BE SAME MAKE OF APPROVED BRAND AND SHALL BE BASED ON LATEST AVAILABLE MODEL AND SERIES. CLIENT HAVE RIGHTS TO ASK AND DELIVER THE SAME MAKE OF EQUIPMENT TO PROVIDE AND INSTALL.						
	NOTE: 1) ALL FIXTURES/MATERIALS/EQUIPMENT MAKE AND MODELS SUBJECT TO APPROVAL OF ARCHITECT/CONSULTANT. 2) QUANTITIES MAYBE +/- VARY ACCORDING TO SITE CONDITIONS AND REQUIREMENTS. 3) THE BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL LITERATURES OF ALL MATERIALS ALONGWITH TENDER DOCUMENTS. 4) CONTRACTOR SHALL BE BOUND TO PROCURE MATERIALS FROM LIST OF APPROVED MANUFACTURERS & ONLY FROM AUTHORIZED DISTRIBUTOR 5) THE DIAMETER/SIZES ARE INDICATIVE ONLY. DEPENDING ON THE ACTUAL REQUIREMENTS AND MIGHT BE REQUIRED BASED ON EQUIPMENT SUPPLIER RECOMMENDATIONS. 6) CONTRACTOR SHALL BE RESPONSIBLE TO TAKE THE PRIOR WRITTEN APPROVAL FROM CLIENT; RELATED TO ANY ADDITIONAL COST, ADDITIONAL QUANTITIES & VARIATIONS. 7) ALL STATUTORY/GOVERNMENT/MOCKUP/SAMPLES APPROVALS SHALL BE OBTAINED BY THE CONTRACTOR AT NO EXTRA COST.						
1	WIRING / WIRING ACCESSORIES	Revised Specs	QTY	Revised QTY	UNIT	RATE (RS)	AMOUNT (RS)
	Providing, installation, testing, tagging's & commissioning of following items including all material, tools, labor & accessories required for completion of work as per specifications, details & drawings. Complete in all respects. Megger Test Report of all wiring shall be submitted by contractor to consultant.						
2	SMALL WIRING FOR LIGHTS						

	Circuit wiring from respective distribution board to switch board using following size of Stranded/Flexible, PVC Insulated wire in appropriate size of pvc conduit / channel/cable tray including all accessories as shown in the drawings.						
a.	3 x 2.5 Sqmm PVC, Cu		40		Nos.		
b.	Wiring for light point from switch board to first light point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mmof pvc conduit / channel / cable tray including complete with all accessories as shown in the drawings.		80		Nos.		
c.	Wiring for light point to point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mm size of pvc conduit / channel / cable tray complete with all accessories as shown in the drawings.		350		Nos.		
3	SMALL WIRING FOR UTILITY POWER SOCKETS & UPS						
	Circuit wiring from respective distribution board to 13A Multi Pin / 15A,3Pin Switch Socket unit (first outlet) using following Stranded/flexible Copper Conductor, color coded wire in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Item include floor/wall cutting if required as per site conditions. Megger Test Report of all wiring shall be submitted by contractor to consultant.						
a.	3 x 2.5 Sqmm PVC/Cu (Workstations)		125		Nos.		

	Wiring for 13A Multi Pin / 15A 3-Pin Switch Socket units from outlet to outlet using following Stranded/Flexible Copper Conductor, color coded wires in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Wiring on same workstation shall be counted as one. Item include floor/wall cutting if required as per site conditions.						
a.	3 x 4.0 Sqmm PVC/Cu (Others)		20		Nos.		
4	WIRING FOR HAND DRYER						
a.	Wiring for Hand Dryer from distribution board to hand dryer using 3C, 2.5 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		4		Nos.		
5	WIRING FOR ELECTRIC GEYSER						
a.	Wiring for Electric Heater from distribution board to Electric Heater using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		2		Nos.		
6.	WIRING FOR COMMUNICATION RACK						
a.	Wiring for Communication Rack from distribution board to rack using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		1		Nos.		
9	WIRING DEVICES / RECEPTACLES						
	Providing, installation, tagging, and commissioning of following wiring devices / light control switches / power receptacles as per BS Standards including 16 SWG MS Powder Coated back boxes with brass earth terminal, flush with wall as shown in drawings and details. (Clipsal Vivace Series White Color)						

	LIGHT CONTROLLED SWITCHES						
a.	One Gang one way 10A Switch		12		Nos.		
b.	Two Gang one way 10A Switch		10		Nos.		
c.	Three Gang one way 10A Switch		0		Nos.		
d.	Four Gang one way 10A Switch		20		Nos.		
e.	Five Gang one way 10A Switch		20		Nos.		
10	UTILITY POWER RECEPTACLES / SOCKET OUTLETS						
a.	13A, Simplex multi-pin switch Socket Unit		250		Nos.		
b.	13A, Duplex flat-pin switch Socket Unit		120		Nos.		
c.	13A, Simplex flat-pin switch Socket Unit		1		Nos.		
d.	15A, Round 3Pin Switch Socket Unit		2		Nos.		
e.	20A, DP Isolator for Electric Heater		12		Nos.		
f.	HDMI Outlet with Connectors (Male/Female as required)		12		Nos.		
g.	100A, 4P Isolator Switch Unit For AC		2		Nos.		
h.	63A 4Pole Industrial Socket & Plugs (for Rack UPS)		2		Nos.		
11	TECHNOLOGY BOX						

a.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet & 1 No Data for Telephone (A-TYPE). Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(a) 1 No Data for Telephone (A-TYPE). Technology Box has been omitted from the tender scope, along with all associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet. Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	10		Nos.		
b.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(b): One (1) Duplex Data Outlet has been omitted and one (1) Simplex Data Outlet has been added to the tender scope, along with the corresponding associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Simplex Data Outlet Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	110		Nos.		
12	FLOOR BOX						

a.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 2 No Duplex Data Outlet , 1 Simplex Data and 1 NO HDMI(A-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		8		Nos.		
b.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B_TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		8		Nos.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
13	LIGHTING FIXTURES						
	Supply, installation, connecting, testing & commissioning of LED light fixtures complete with all supports, fixing arrangements and accessories, including supply and installation of 1x3Cx1.5mm ² flexible cables 300/500V grade copper cables according to BS 6500 and connectors for connections etc., complete in all respects as per Consultant/Architect instructions and approvals (False-ceiling mounted fixtures shall be compatible with and fit exactly into the false-ceiling, mounting frame to be included in cost). Each Light Data Sheet and Dialux Reports are required for entire project.						

a.	DOWN LIGHTS Down Light with 20W , as approved by architect, As approved by architect.		200		Nos.		
b.	MAGNETIC DOWN LIGHTS Magnetic Light with 20W LED Light, with Magnetic track. As approved by architect.		15		Nos.		
c.	PENDENT LIGHT Pendent Light With 20W LED Light As approved by architect.		4		Nos.		
d.	TRACK LIGHT WITH 1 METER TRACK + 03 LIGHTS ON EACH TRACK Track Light Fixture with 30W light As approved by architect.		60		Nos.		
e.	LINEAR LED LIGHT Linear Led Light with 40W LED LIGHT As approved by architect.		1		Nos.		
f.	MIRROR LIGHT Mirror Light with 10W LED Light. As approved by architect.		1		Nos.		
g.	LED STRIP LIGHT LED Strip Light With 10W/Mtr As approved by architect.		300		Rm.		
h.	EMERGENCY LIGHTS Butterfly (Round) type Recessed/surface type emergency light 02 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		10		Nos.		
i.	EXIT LIGHT Recessed/surface type Exit Sign light Upto 04 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		4		Nos.		

j.	WALL LIGHT/PICTURE LIGHT (DECORATIVE TYPE) Light with 12W LED Light. As approved by architect.		24		Nos.		
k.	Recessed/Surface/Hanging Type Continuous Linear LED Light (30 Watts Per Meter) in different sizes and shapes 3000K/4000K with Extruded Aluminum Profile (Anodized), High Impact Acrylic Frosted PMMA Diffuser with Integrated Electronic Driver, Hanging & Fixing Accessories suitable		20		Rft.		
l.	Indoor type Ceiling Recessed/Surface/Wall/Ceiling Mounted (Stand Alone) I.R Motion Sensor for Lights/Fans having following specifications: 360°, IP41, CARDBOARD Technology, 1 circuit, Automatic on/off, Manual adjustment of light level threshold and time delay via potentiometer, Range Ø8 m, Recommended fixing height: 2.5 m, 3-wire with neutral, Light level threshold: 10 to 1275 lux, Adjustable time delay: 10 s to 10 min, Standby consumption: 0.75 W, Optimum distance between 2 sensors: 6 m, Fixes directly to a false ceiling with mounting claws (included) or installed in a Batibox box, depth 50 mm		12		Nos.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
14	DISTRIBUTION BOARDS & CABLES						
	Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc.	Provision of surge protection devices (SPDs) at the Main UPS DB and all floor-level Normal DBs. Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated					

	Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY	Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY					
15	Supply, Installation, testing, tagging's, load balancing, FAT, SAT and commissioning of following distribution panels in accordance with the attached single line diagrams and layout plans. The panels shall be made according to the technical specifications attached. Load Flow, ETAB Calculations & Selection Report are required.						
a.	SMDB-1st-F		1		No.		
b.	DB-1st-1		1		No.		
c.	DB-1st-2		1		No.		
d.	DB-C (UPS Power) Only for IT Rack & IT Room Equipment		1		No.		
e.	Breakers for SMDB 1st-F in LT Panel (320~400A 4Pole, Adjustable 36kA)		1		No.		

f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
16	CABLE RACEWAYS / CONTAINMENTS						
	Providing and laying of following PVC conduits / Cable Tray & ladder for main / sub main cables of following sizes of MS Powder Coated Perforated 16 SWG Cable Tray / Cable Ladder with 16 SWG Cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer, along with supporting hangers, brackets, elbows, tee & mounting accessories etc. complete in all respect. Note: - Color Printed Tags to be provided at every 3 Meter Length. - Threaded Rods & C-Channel base is required for hanging from Ceiling. - Wall Hanger Supports to be provided wherever required. - U-shaped Fischer plates to be used for joints. - 6 Sqmm braided copper terminals for bonding to be done with every joint (imported) Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	GI PREFORATED CABLE TRAY WITH COVER						
a.	8" x 4" G.I Perforated cable tray, (4"x4" For Power & 4"x4" For Communication) made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories		300		Rft.		
b.	6" x 4" G.I Perforated cable tray, made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories (Inside Electrical Room)		100		Rft.		

	GI PREFORATED CABLE LADDER WITH PROTECTIVE COVER						
c.	12" x 4" G.I Perforated Cable Ladder, as shown in the design drawings. Item includes all mounting accessories.		100		Rft.		
	Supply and installation of following sizes of PVC conduits / pipes including all installation accessories like bends, sockets, flexible conduits, partially above false ceiling and partially embedded in ground etc. , the works also complete with excavation and back filling of 1'-6" deep for laying of main / sub-main cables . Compete in all respects as shown in the drawing.						
d.	20 mm dia PVC conduit		400		Rft.		
e.	25 mm dia PVC conduit		300		Rft.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
17	COMMUNICATION SYSTEMS						
	Supply, installation, testing, tagging and commissioning of following items for voice & data communication cabling system including all material , labor , tools , accessories etc. Complete in all respects. Item includes termination of all cables at respective outlets as shown in the drawings and instructed by client. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	HORIZONTAL VOICE & DATA CABLING						

a	Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	7700	As per actual	Mtr		
	INFORMATION OUTLETS		.				
b.	Information Duplex outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simple outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	120		Nos.		

c.	Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	30		Nos.		
	PATCH PANELS & CABLE MANANGEMENT						
d.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. 48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 48 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect. PRAL shall provide network switches and patch cords for	9	As per actual	Nos.		

		connecting switch ports to patch-panel ports. The contractor shall be responsible for complete end-to-end connectivity from end-user outlets to the core patch panels, including termination, labeling, testing and certification. All installed network cabling shall be tested using a Fluke Cable Analyzer, and test reports shall be submitted to PRAL.					
e.	Front & Rear Cable Management for above patch panels.		9	As per actual	Nos.		
	COMMUNICATION RACKS						
f.	42 U communication rack, Imported, Front door with glass cover, lock & key, and front blank panels for covering empty spaces, air flow ducts for effective cooling management inside the rack for switches. Item includes supply and installation of 2nos. 10Way, 32PDU as approved by client.	32U Communication Rack, Imported, 19-inch floor-standing type, with front door with glass cover, lock & key, removable side/rear panels, front blank panels for covering empty spaces, adequate airflow/ventilation provisions for effective cooling of installed equipment, cable entry and management provisions, complete with earthing/bonding accessories. Item shall include supply and installation of 2 Nos. 10-way, 32A rack-mounted PDU/power distribution units as approved by Client, complete in all respects. Provision of rack Space in each floor is responsibility of bidder	1	1	Nos.		
	PATCH CORDS Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						

g.	1 meter long patch cords for data		As per Actual		Nos.		
h.	3 meter long drop cord for data		As per actual		Nos.		
	Wi-Fi ROUTERS						
j.	Wi-Fi-7 (Access Pont) Blazing Speeds 3.6Gbps wireless + 5Gbps wired aggregate throughput, Wi-Fi 7 Technology 2x2:2 MIMO with MLO, 4KQAM, MRU and Preamble Puncturing, Wide Coverage Up to 175 meters, High Capacity Supports 256 concurrent Wi-Fi client devices, Robust Security Secure boot, digital signature protection and unique per-device credentials, Smart Power Adaptation Auto-detection of PoE+, Flexible Management Embedded controller for managing up to 50 local GWN Aps, GDMS Networking for unlimited cloud-based management, GWN Manager for on premise control. (Reference Make: Grand Steam, Model GWN7670 Dual-Band Wi-Fi 7 Access Point or upper side models)	Wi-Fi Routers Excluded from the tender scope to align with the proposed centralized ICT/network architecture and avoid duplication with the Wireless Access Point (WAP) solution. However Cat6 cabling provisions for Wi-Fi access points shall remain in this BOQ: approximately 5 Wi-Fi points per floor and 1 Wi-Fi point in the Basement.	5	0	Nos.		
	IP PABX						
k.	IP PABX with 20in line and 200 out point . Complete with all terminations and installations, complete in all respects	An NTC Distribution Box (NTC DB) shall be provided on each floor. Each floor-level NTC DB shall provide connectivity using U/UTP Cat-3, 2-pair cable, including cabling, terminations, labeling, testing, and installation. Designated rooms: • CEO Rooms • Chief Domain • Domain Officers' Rooms • HR Room • Chief Rooms • Finance Room • Audit Room • Accounts Room	1		No.		

		- Admin Room - Reception					
	NETWORK SWITCH						
l.	NETWORK Switch 48 port for Networking (Make : CISCO)	Network Switch Excluded from the tender scope as the required switching infrastructure is addressed under the centralized network architecture.	9	0	Nos.		
	HDMI CABLE						
m.	HDMI Cable for TV & Projector		150		RMtr.		
n.	HDMI Outlet with Back Boxes & Connectors at both ends		15		Nos		
	TESTING & COMMISSIONING						
o.	Comprehensive Fluke Testing, Tagging and commissioning Report of complete structured cabling system including written warranties from the Principal Manufacturer. Integration with this existing system complete in all respects, fully functional and as per the specification and Consultant's Approval.		1		Job		
p.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
19	CCTV SECURITY SURVEILLANCE SYSTEM						
	Providing, installation, testing, tagging and commissioning of following items for CCTV and music systems including all wiring accessories, junction boxes etc. Complete in all respects.						

a.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from NVR to each camera as shown in the layout plans including MS powder coated junction boxes as shown in the drawings. Complete in all respects. Fluke Test Reports Required.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from the PoE switch to each CCTV camera as shown in the layout plans, including MS powder-coated junction boxes as shown in the drawings. Complete in all respects. Fluke test reports required.	12		Nos.		
b.	6 MP Fixed IP Network Bullet / Dome Camera- Support Human and Vehicle Detection- Smart Hybrid Light: advanced technology with long range- Efficient H.265+ compression technology- Max. Resolution 3200 × 1800- Lens Type Fixed focal lens, 2.8 and 4 mm optional- Supplement Light Range: Up to 30 m- IR Wavelength 850 nm- Image Enhancement BLC,HLC,3D DNR- Day,Night,Auto,Schedule- Support on-board storage up to 512 GB (SD card slot) (Optional)- Built-in microphone for real-time audio security- Water and dust resistant (IP67) and vandal resistant (IK08)- Motion detection (support alarm triggering by specified target types (human and vehicle)),video tampering alarm, exception, complete in all respect		12		Nos.		
c.	Network Video Recorder with 10TB SSD- H.265+/H.265/H.264+/H.264 video formats- Up to 12-ch@8 MP or 12-ch@1080p decoding capacity- Up to 16 face picture libraries, with up to 20,000 face pictures in total (each picture ≤ 4 MB, total capacity ≤ 1 GB)- Video Output Mode: HDMI/VGA independent output- Two-Way Audio: 1-ch, RCA (Linear, 1 KΩ)- NVR should have minimum 30 days storage capacity on 15 frame per second with suitable HDD to cater 100% cameras,- USB Interface: Front panel: 1 × USB 2.0; Rear panel: 1 × USB 2.0- EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017, Complete in all respect		1		No.		

d.	Supply of 24-Port PoE Smart Switch (For Camera End) with the following: Gigabit Smart POE Switch 375W PoE Powered 10/100/1000 BaseT with 2 x RG-45 Ports with transceivers with stack module and 2 meter stack cable SFP port versions Universal Network Profiles (UNP): Policy based access, complete in all respects	24-port managed Gigabit PoE+ switch, or higher capacity where floor camera count requires it. 24 × 10/100/1000 Mbps RJ45 ports. Minimum PoE budget 370 W or higher. With sufficient capacity to support all connected cameras at maximum rated power. Minimum 2 × 1G SFP/SFP+ uplink ports Support VLANs. Suitable for continuous 24×7 operation and compatible with the proposed centralized CCTV architecture Bidder must provide Two Meter stack cable along with all allied.	1		No.		
e.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	24-Port Patch Panel for data communication, straight, flush-mount type, equipped with 24 × Cat-6 unshielded RJ45 ports, including port identification/labeling, complete in all respects.	1		Nos.		
f.	Front & Rear Cable Management for above patch panels.		1		Nos.		
g.	Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
h.	1 meter long patch cords for data		As per Actual		Nos.		
i.	3 meter long drop cord for data		As per actual		Nos.		

j.	LED TV 43" LED Smart TV For Monitoring of CCTV System including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	LED TV : Excluded from the tender scope as CCTV monitoring will be facilitated through the centralized CCTV monitoring system and designated display infrastructure.	2	0	No.		
k.	LED TV supply 65" LED Smart TV including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	65-INCH INTERACTIVE TOUCH SCREEN DISPLAY Display • Screen size: 65 inches. • Display: Commercial-grade LED/DLED LCD panel. • Resolution: UHD 4K, 3840 × 2160 @ 60 Hz minimum. • Aspect ratio: 16:9; brightness minimum 400 cd/m²; contrast ratio minimum 4000:1. • Viewing angle: minimum 178° horizontal/vertical; response time ≤6 ms. • Anti-glare tempered safety glass with minimum 7H surface hardness. • Minimum 50,000-hour display lifespan. 2. Interactive Touch • Infrared (IR) or equivalent professional touch technology. • Minimum 40-point simultaneous multi-touch; 50-point preferred. • Touch response ≤5 ms and accuracy ±1 mm or better. • Support finger/stylus writing, annotation and multi-user interaction. 3. Built-in System	5	2			

		• Built-in Android OS 13 or higher. • Minimum 8 GB RAM and 128 GB internal storage. • Processor/GPU suitable for smooth 4K display and interactive applications. • Support wireless screen mirroring and common presentation/collaboration applications. • EDLA certification or equivalent Android certification preferred. 4. Camera, Microphone & Audio • Integrated camera: minimum 8 MP video capability; 4K video preferred. • Integrated microphone array with echo cancellation and noise reduction; minimum 8 m voice pickup. • Built-in stereo speakers with minimum 40 W total output. • Camera and microphone shall support standard video-conferencing applications under Android and Windows/OPS. 5. Connectivity • Minimum 2 × HDMI inputs supporting 4K @ 60 Hz. • Minimum 1 × HDMI output. • Minimum 1 × DisplayPort or				
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		equivalent digital video input. • Minimum 3 × USB 3.0 and 1 × USB 2.0; minimum 1 × full-function USB Type-C. • Dedicated USB touch interface(s) for external computers. • Minimum 1 × Gigabit Ethernet (RJ45); Wi-Fi 6 and Bluetooth 5.0 or higher. • RS-232 or equivalent control interface. 6. Windows / OPS Compatibility • Support OPS or equivalent modular PC with Windows 10/11 or current supported version. • Touch functionality shall operate with external/OPS Windows systems using standard HID or equivalent drivers. • Suitable for presentation, collaboration and video-conferencing applications. 7. Mounting & Power • VESA-compatible mounting; 600 × 400 mm preferred or equivalent. • Power input: 100–240 VAC, 50/60 Hz. • Operating temperature: 0–40°C minimum; humidity 10–90% RH, non-condensing.					
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		- Commercial-grade construction suitable for institutional use. 8. Accessories & Warranty - Wall-mounting bracket, minimum two stylus/pens, remote control, power cable and required HDMI/USB touch cables. - All software/licenses required for normal operation shall be included. - Minimum 3-year warranty, with local technical support and availability of spare parts. Brand Equivalency / Tender Note - Hikvision or equivalent/superior product from other established manufacturers shall be acceptable, subject to compliance with the above minimum requirements. Any referenced make/model is for performance benchmarking only and shall not restrict competition.					
	PROGRAMMING, TESTING & COMMISSIONING						
k.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		

1.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station Excluded from the tender scope as the CCTV monitoring workstation and associated VMS requirements are addressed through the centralized CCTV monitoring infrastructure.	1	0	No.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
22	ACCESS CONTROL SYSTEM						
a.	Access control Device with RFID,Multi Biometric & Face Recognition- Time & Attendance & Access Control- Walk-through method face detection- Face Recognition at a distance upto 3m- Anti-spoofing attacks against photos, videos & 3D masks- Fake Finger Detection- Liveness Detection- Capacity: upto 20,000 (1 Face / 1 User), upto 500,000 (1 Finger / 1 User), Fingerprint 1:200,000 Templates <1 Sec, Face 1:20,000 Templates <1 Sec, Event Logs: 10,000,000, Photo Logs: 20,000, complete in all respects		4		Nos.		
b.	Power Supply Unit for push button		4		Nos.		
c.	RFID Card standard size and thickness		120		Nos.		
d.	Drop Bolt/Magnetic Lock (Double Door) with holder and fixing accessories.		3		Nos.		
e.	Drop Bolt/Magnetic Lock (Sliding Door) with holder and fixing accessories.		1		Nos.		
f.	Infra Sensor Based Exit Switch		4		Nos.		

g.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
h.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station – Excluded from the tender scope as the access control system will be managed through the centralized access control/HRMS platform, and a dedicated workstation is not required as part of this tender scope.	1	0	No.		
i.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
23	TESTING REPORTS & AS BUILT DRAWINGS						
a.	Final Testings of Entire Project, including air measurements, electrical data of equipment, all required reports shall be witnessed by Client Representative, complete in all respects for successful handing and taking over of the Project alongwith Load Flow, ETAB Calculations & Selection Report are required.		1		Job		
b.	Coordinated Shop Drawings, Layout Marking on Site, Entire Projects Testing & Commissioning Reports, As-Built Drawings 03 Sets of Hard Copies & Electronic Editable Copies in USB. (Final Bill NOT Entertained without the As built Drawings, Documents & Testing Reports)		1		Job.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned		1		-		

	separately and to be attached with the BOQ. (Details are required), complete in all respects.						
d.	Personal Protective Equipment (PPE): Mandatory PPE are safety helmet, safety gloves, safety goggles, safety shoes, dust mask where there is dust, ear plugs during high noise activities like grinding etc.						
24	A centralized PA system is added for all floors and the Basement, with centralized/manageable operation. Centralized Public Address (PA) System – Specification: Centralized Public Address (PA) System comprising network/digital PA controller, amplifiers, paging microphone(s), configurable independent zones for all floors and Basement, ceiling/wall-mounted loudspeakers, audio source inputs, centralized monitoring and management, individual/multiple/all-call paging, background audio, volume control and priority/emergency paging override, with required cabling, containment, racks/enclosures, power supplies and all accessories. System shall be expandable and complete with installation, testing and commissioning.	A centralized PA system is added for all floors and the Basement, with centralized/manageable operation.To be installed in Media room.All floors shall be connected from here. Centralized Public Address (PA) System – Specification: Centralized Public Address (PA) System comprising network/digital PA controller, amplifiers, paging microphone(s), configurable independent zones for all floors and Basement, ceiling/wall-mounted loudspeakers, audio source inputs, centralized monitoring and management, individual/multiple/all-call paging, background audio, volume control and priority/emergency paging override, with required cabling, containment, racks/enclosures, power supplies and all accessories. System shall be expandable and complete with installation, testing and commissioning.	1				

	Provision shall be made for 3 LCD/display screens in the halls on each floor.	Provision shall be made for 3 LCD/display screens in the halls on each floor.	3				
TOTAL COST OF ELECTRICAL WORKS					-		

2ND FLOOR ELECTRICAL WORKS							
S.N o.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)		
	NOTE: ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT / CONSULTANT PRIOR TO THE EXECUTION OF WORKS. BIDDER IS ADVISED TO CONFIRM THE RUNNING LENGTHS, QUANTITIES, MISSING ITEMS IN BOQ, TERMINATIONS AS PER SITE CONDITIONS, REQUIREMENTS OF CLIENT BEFORE COMMENCEMENT OF WORK, BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL SPECIFICATIONS, PROPOSED SYSTEM SCHEMATICS, SUPPLY AND EXECUTION TIMELINES FOR THE SYSTEM OFFERED. ENTIRE SYSTEM TESTING AND COMMISSIONING OF THE ALL ITEMS TERMINATIONS, TESTING AND COMMISSIONING AT BOTH ENDS, INCLUDING SUBMISSION OF SHOP DRAWINGS, ASBUILT DRAWINGS, DETAILED TEST REPORTS FROM THE PRINCIPALS AND AS PER SITE PERFORM TEST REPORTS ARE REQUIRED. CLIENT SHALL HAVE RIGHTS TO ADD OR DELETE ANY ITEMS FROM THE VENDOR SCOPE AFTER AWARD OF WORK. ALL ACTIVE EQUIPMENT SHALL BE SAME MAKE OF APPROVED BRAND AND SHALL BE BASED ON LATEST AVAILABLE MODEL AND SERIES. CLIENT HAVE RIGHTS TO ASK AND DELIVER THE SAME MAKE OF EQUIPMENT TO PROVIDE AND INSTALL.						
	NOTE: 1) ALL FIXTURES/MATERIALS/EQUIPMENT MAKE AND MODELS SUBJECT TO APPROVAL OF ARCHITECT/CONSULTANT. 2) QUANTITIES MAYBE +/- VARY ACCORDING TO SITE CONDITIONS AND REQUIREMENTS. 3) THE BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL LITERATURES OF ALL MATERIALS ALONGWITH TENDER DOCUMENTS. 4) CONTRACTOR SHALL BE BOUND TO PROCURE MATERIALS FROM LIST OF APPROVED MANUFACTURERS & ONLY FROM AUTHORIZED DISTRIBUTOR 5) THE DIAMETER/SIZES ARE INDICATIVE ONLY. DEPENDING ON THE ACTUAL REQUIREMENTS AND MIGHT BE REQUIRED BASED ON EQUIPMENT SUPPLIER RECOMMENDATIONS. 6) CONTRACTOR SHALL BE RESPONSIBLE TO TAKE THE PRIOR WRITTEN APPROVAL FROM CLIENT; RELATED TO ANY ADDITIONAL COST, ADDITIONAL QUANTITIES & VARIATIONS. 7) ALL STATUTORY/GOVERNMENT/MOCKUP/SAMPLES APPROVALS SHALL BE OBTAINED BY THE CONTRACTOR AT NO EXTRA COST.						
1	WIRING / WIRING ACCESSORIES	Revised Specs	QTY	Revised QTY	UNIT	RATE (RS)	AMOUNT (RS)

	Providing, installation, testing, tagging's & commissioning of following items including all material, tools, labor & accessories required for completion of work as per specifications, details & drawings. Complete in all respects. Megger Test Report of all wiring shall be submitted by contractor to consultant.						
2	SMALL WIRING FOR LIGHTS						
	Circuit wiring from respective distribution board to switch board using following size of Stranded/Flexible, PVC Insulated wire in appropriate size of pvc conduit / channel/cable tray including all accessories as shown in the drawings.						
a.	3 x 2.5 Sqmm PVC, Cu		75		Nos.		
b.	Wiring for light point from switch board to first light point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mmof pvc conduit / channel / cable tray including complete with all accessories as shown in the drawings.		80		Nos.		
c.	Wiring for light point to point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mm size of pvc conduit / channel / cable tray complete with all accessories as shown in the drawings.		200		Nos.		

3	SMALL WIRING FOR UTILITY POWER SOCKETS & UPS						
	Circuit wiring from respective distribution board to 13A Multi Pin / 15A,3Pin Switch Socket unit (first outlet) using following Stranded/flexible Copper Conductor, color coded wire in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Item include floor/wall cutting if required as per site conditions. Megger Test Report of all wiring shall be submitted by contractor to consultant.						
a.	3 x 2.5 Sqmm PVC/Cu (Workstations)		70		Nos.		
	Wiring for 13A Multi Pin / 15A 3-Pin Switch Socket units from outlet to outlet using following Stranded/Flexible Copper Conductor, color coded wires in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Wiring on same workstation shall be counted as one. Item include floor/wall cutting if required as per site conditions.						
a.	3 x 4.0 Sqmm PVC/Cu (Others)		30		Nos.		
4	WIRING FOR HAND DRYER						
a.	Wiring for Hand Dryer from distribution board to hand dryer using 3C, 2.5 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		4		Nos.		
5	WIRING FOR ELECTRIC GEYSER						
a.	Wiring for Electric Heater from distribution board to Electric Heater using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		2		Nos.		
6.	WIRING FOR COMMUNICATION RACK						

a.	Wiring for Communication Rack from distribution board to rack using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		1		Nos.		
9	WIRING DEVICES / RECEPTACLES						
	Providing, installation, tagging, and commissioning of following wiring devices / light control switches / power receptacles as per BS Standards including 16 SWG MS Powder Coated back boxes with brass earth terminal, flush with wall as shown in drawings and details. (Clipsal Vivace Series White Color)						
	LIGHT CONTROLLED SWITCHES						
a.	One Gang one way 10A Switch		12		Nos.		
b.	Two Gang one way 10A Switch		10		Nos.		
c.	Three Gang one way 10A Switch		0		Nos.		
d.	Four Gang one way 10A Switch		25		Nos.		
e.	Five Gang one way 10A Switch		20		Nos.		
10	UTILITY POWER RECEPTACLES / SOCKET OUTLETS						
a.	13A, Simplex multi-pin switch Socket Unit		150		Nos.		
b.	13A, Duplex flat-pin switch Socket Unit		120		Nos.		
c.	13A, Simplex flat-pin switch Socket Unit		1		Nos.		
d.	15A, Round 3Pin Switch Socket Unit		2		Nos.		
e.	20A, DP Isolator for Electric Heater		20		Nos.		

f.	HDMI Outlet with Connectors (Male/Female as required)		20		Nos.		
g.	100A, 4P Isolator Switch Unit For AC		2		Nos.		
h.	63A 4Pole Industrial Socket & Plugs (for Rack UPS)		2		Nos.		
11	TECHNOLOGY BOX						
a.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet & 1 No Data for Telephone (A-TYPE). Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(a) 1 No Data for Telephone (A-TYPE).Technology Box has been omitted from the tender scope, along with all associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet.Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	10		Nos.		
b.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(b): One (1) Duplex Data Outlet has been omitted and one (1) Simplex Data Outlet has been added to the tender scope, along with the corresponding associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No.	60		Nos.		

		13A Flatpin Duplex switch sockets, & 1 No Simplex Data Outlet Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)					
12	FLOOR BOX						
a.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 2 No Duplex Data Outlet , 1 Simplex Data and 1 NO HDMI(A-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		8		Nos.		
b.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		8		Nos.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		

13	LIGHTING FIXTURES						
	Supply, installation, connecting, testing & commissioning of LED light fixtures complete with all supports, fixing arrangements and accessories, including supply and installation of 1x3Cx1.5mm ² flexible cables 300/500V grade copper cables according to BS 6500 and connectors for connections etc., complete in all respects as per Consultant/Architect instructions and approvals (False-ceiling mounted fixtures shall be compatible with and fit exactly into the false-ceiling, mounting frame to be included in cost). Each Light Data Sheet and Dialux Reports are required for entire project.						
a.	DOWN LIGHTS Down Light with 20W , as approved by architect, As approved by architect.		200		Nos.		
b.	MAGNETIC DOWN LIGHTS Magnetic Light with 20W LED Light, with Magnetic track. As approved by architect.		15		Nos.		
c.	PENDENT LIGHT Pendent Light With 20W LED Light As approved by architect.		4		Nos.		
d.	TRACK LIGHT WITH 1 METER TRACK + 03 LIGHTS ON EACH TRACK Track Light Fixture with 30W light As approved by architect.		40		Nos.		
e.	LINEAR LED LIGHT Linear Led Light with 40W LED LIGHT As approved by architect.		1		Nos.		
f.	MIRROR LIGHT Mirror Light with 10W LED Light. As approved by architect.		1		Nos.		

g.	LED STRIP LIGHT LED Strip Light With 10W/Mtr As approved by architect.		400		Rm.		
h.	EMERGENCY LIGHTS Butterfly (Round) type Recessed/surface type emergency light 02 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		10		Nos.		
i.	EXIT LIGHT Recessed/surface type Exit Sign light Upto 04 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		4		Nos.		
j.	WALL LIGHT/PICTURE LIGHT (DECORATIVE TYPE) Light with 12W LED Light. As approved by architect.		10		Nos.		
k.	Recessed/Surface/Hanging Type Continuous Linear LED Light (30 Watts Per Meter) in different sizes and shapes 3000K/4000K with Extruded Aluminum Profile (Anodized), High Impact Acrylic Frosted PMMA Diffuser with Integrated Electronic Driver, Hanging & Fixing Accessories suitable		20		Rft.		
l.	Indoor type Ceiling Recessed/Surface/Wall/Ceiling Mounted (Stand Alone) I.R Motion Sensor for Lights/Fans having following specifications: 360°, IP41, CARDBOARD Technology, 1 circuit, Automatic on/off, Manual adjustment of light level threshold and time delay via potentiometer, Range Ø8 m, Recommended fixing height: 2.5 m, 3-wire with neutral, Light level threshold: 10 to 1275 lux, Adjustable time delay: 10 s to 10 min, Standby consumption: 0.75 W, Optimum distance between 2 sensors: 6 m, Fixes directly to a false ceiling with mounting claws (included) or installed in a Batibox box, depth 50 mm		20		Nos.		

m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
14	DISTRIBUTION BOARDS & CABLES						
	Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY	Provision of surge protection devices (SPDs) at the Main UPS DB and all floor-level Normal DBs. Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY					
15	Supply, Installation, testing, tagging's, load balancing, FAT, SAT and commissioning of following distribution panels in accordance with the attached single line diagrams and layout plans. The panels shall be made according to the technical specifications attached. Load Flow, ETAB Calculations & Selection Report are required.						

a.	SMDB-1st-F		1		No.		
b.	DB-1st-1		1		No.		
c.	DB-1st-2		1		No.		
d.	DB-C (UPS Power) Only for IT Rack & IT Room Equipment		1		No.		
e.	Breakers for SMDB 1st-F in LT Panel (320~400A 4Pole, Adjustable 36kA)		1		No.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
16	CABLE RACEWAYS / CONTAINMENTS						
	Providing and laying of following PVC conduits / Cable Tray & ladder for main / sub main cables of following sizes of MS Powder Coated Perforated 16 SWG Cable Tray / Cable Ladder with 16 SWG Cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer, along with supporting hangers, brackets, elbows, tee & mounting accessories etc. complete in all respect. Note: - Color Printed Tags to be provided at every 3 Meter Length. - Threaded Rods & C-Channel base is required for hanging from Ceiling. - Wall Hanger Supports to be provided wherever required. - U-shaped Fischer plates to be used for joints. - 6 Sqmm braided copper terminals for bonding to be done with every joint (imported) Note : The quantities shown in the boq are						

	estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	GI PREFORATED CABLE TRAY WITH COVER						
a.	8" x 4" G.I Perforated cable tray, (4"x4" For Power & 4"x4" For Communication) made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories		300		Rft.		
b.	6" x 4" G.I Perforated cable tray, made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories (Inside Electrical Room)		100		Rft.		
	GI PREFORATED CABLE LADDER WITH PROTECTIVE COVER						
c.	12" x 4" G.I Perforated Cable Ladder, as shown in the design drawings. Item includes all mounting accessories.		100		Rft.		
	Supply and installation of following sizes of PVC conduits / pipes including all installation accessories like bends, sockets, flexible conduits, partially above false ceiling and partially embedded in ground etc. , the works also complete with excavation and back filling of 1'-6" deep for laying of main / sub-main cables . Compete in all respects as shown in the drawing.						
d.	20 mm dia PVC conduit		200		Rft.		
e.	25 mm dia PVC conduit		150		Rft.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
17	COMMUNICATION SYSTEMS						

	Supply, installation, testing, tagging and commissioning of following items for voice & data communication cabling system including all material , labor , tools , accessories etc. Complete in all respects. Item includes termination of all cables at respective outlets as shown in the drawings and instructed by client. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	HORIZONTAL VOICE & DATA CABLING						
a	Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	4400	As per actual	Mtr		
	INFORMATION OUTLETS		.				
b.	Information Duplex outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and	65		Nos.		

		implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simple outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.					
c.	Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	15		Nos.		
	PATCH PANELS & CABLE MANANGEMENT						
d.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements	5	As per actual	Nos.		

		of Items 11(a) and 11(b), as amended herein. 48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 48 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect. PRAL shall provide network switches and patch cords for connecting switch ports to patch-panel ports. The contractor shall be responsible for complete end-to-end connectivity from end-user outlets to the core patch panels, including termination, labeling, testing and certification. All installed network cabling shall be tested using a Fluke Cable Analyzer, and test reports shall be submitted to PRAL.					
e.	Front & Rear Cable Management for above patch panels.		5	As per actual	Nos.		
	COMMUNICATION RACKS						
f.	42 U communication rack, Imported, Front door with glass cover, lock & key, and front blank panels for covering empty spaces, air flow ducts for effective cooling management inside the rack for switches. Item includes supply and installation of 2nos. 10Way, 32PDU as approved by client.	32U Communication Rack, Imported, 19-inch floor-standing type, with front door with glass cover, lock & key, removable side/rear panels, front blank panels for covering empty spaces, adequate airflow/ventilation provisions for effective cooling of installed equipment, cable entry and management provisions, complete with earthing/bonding accessories.	1	1	Nos.		

		Item shall include supply and installation of 2 Nos. 10-way, 32A rack-mounted PDU/power distribution units as approved by Client, complete in all respects. Provision of rack Space in each floor is responsibility of bidder					
	PATCH CORDS Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
g.	1 meter long patch cords for data		As per Actual		Nos.		
h.	3 meter long drop cord for data		As per actual		Nos.		
	Wi-Fi ROUTERS						
j.	Wi-Fi-7 (Access Pont) Blazing Speeds 3.6Gbps wireless + 5Gbps wired aggregate throughput, Wi-Fi 7 Technology 2x2:2 MIMO with MLO, 4KQAM, MRU and Preamble Puncturing, Wide Coverage Up to 175 meters, High Capacity Supports 256 concurrent Wi-Fi client devices, Robust Security Secure boot, digital signature protection and unique per-device credentials, Smart Power Adaptation Auto-detection of PoE+, Flexible Management Embedded controller for managing up to 50 local GWN Aps, GDMS Networking for unlimited cloud-based management, GWN Manager for on premise control. (Reference Make: Grand Steam, Model GWN7670 Dual-Band Wi-Fi 7 Access Point or upper side models)	Wi-Fi Routers Excluded from the tender scope to align with the proposed centralized ICT/network architecture and avoid duplication with the Wireless Access Point (WAP) solution. However Cat6 cabling provisions for Wi-Fi access points shall remain in this BOQ: approximately 5 Wi-Fi points per floor and 1 Wi-Fi point in the Basement.	5	0	Nos.		
	IP PABX						
k.	IP PABX with 20in line and 200 out point . Complete with all terminations and installations, complete in all respects	An NTC Distribution Box (NTC DB) shall be provided on each floor. Each floor-level NTC DB shall provide connectivity using U/UTP Cat-3, 2-pair cable, including cabling,	1		No.		

		terminations, labeling, testing, and installation. Designated rooms: • CEO Rooms • Chief Domain • Domain Officers' Rooms • HR Room • Chief Rooms • Finance Room • Audit Room • Accounts Room • Admin Room • Reception					
	NETWORK SWITCH						
1.	NETWORK Switch 48 port for Networking (Make : CISCO)	Network Switch Excluded from the tender scope as the required switching infrastructure is addressed under the centralized network architecture.	9	0	Nos.		
	HDMI CABLE						
m.	HDMI Cable for TV & Projector		150		RMtr.		
n.	HDMI Outlet with Back Boxes & Connectors at both ends		15		Nos		
	TESTING & COMMISSIONING						
o.	Comprehensive Fluke Testing, Tagging and commissioning Report of complete structured cabling system including written warranties from the Principal Manufacturer. Integration with this existing system complete in all respects, fully functional and as per the specification and Consultant's Approval.		1		Job		

p.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
19	CCTV SECURITY SURVEILLANCE SYSTEM						
	Providing, installation, testing, tagging and commissioning of following items for CCTV and music systems including all wiring accessories, junction boxes etc. Complete in all respects.						
a.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from NVR to each camera as shown in the layout plans including MS powder coated junction boxes as shown in the drawings. Complete in all respects. Fluke Test Reports Required.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from the PoE switch to each CCTV camera as shown in the layout plans, including MS powder-coated junction boxes as shown in the drawings. Complete in all respects. Fluke test reports required.	15		Nos.		
b.	6 MP Fixed IP Network Bullet / Dome Camera- Support Human and Vehicle Detection- Smart Hybrid Light: advanced technology with long range- Efficient H.265+ compression technology- Max. Resolution 3200 × 1800- Lens Type Fixed focal lens, 2.8 and 4 mm optional- Supplement Light Range: Up to 30 m- IR Wavelength 850 nm- Image Enhancement BLC,HLC,3D DNR- Day,Night,Auto,Schedule- Support on-board storage up to 512 GB (SD card slot) (Optional)- Built-in microphone for real-time audio security- Water and dust resistant (IP67) and vandal resistant (IK08)- Motion detection (support alarm triggering by specified target types (human and vehicle)),video tampering alarm, exception, complete in all respect		15		Nos.		

c.	Network Video Recorder with 10TB SSD-H.265+/H.265/H.264+/H.264 video formats- Up to 12-ch@8 MP or 12-ch@1080p decoding capacity- Up to 16 face picture libraries, with up to 20,000 face pictures in total (each picture ≤ 4 MB, total capacity ≤ 1 GB)- Video Output Mode: HDMI/VGA independent output- Two-Way Audio: 1-ch, RCA (Linear, 1 KΩ)- NVR should have minimum 30 days storage capacity on 15 frame per second with suitable HDD to cater 100% cameras,- USB Interface: Front panel: 1 × USB 2.0; Rear panel: 1 × USB 2.0- EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017, Complete in all respect		1		No.		
d.	Supply of 24-Port PoE Smart Switch (For Camera End) with the following: Gigabit Smart POE Switch 375W PoE Powered 10/100/1000 BaseT with 2 x RG-45 Ports with transceivers with stack module and 2 meter stack cable SFP port versions Universal Network Profiles (UNP): Policy based access, complete in all respects	24-port managed Gigabit PoE+ switch, or higher capacity where floor camera count requires it. 24 × 10/100/1000 Mbps RJ45 ports. Minimum PoE budget 370 W or higher. With sufficient capacity to support all connected cameras at maximum rated power. Minimum 2 × 1G SFP/SFP+ uplink ports Support VLANs. Suitable for continuous 24×7 operation and compatible with the proposed centralized CCTV architecture Bidder must provide Two Meter stack cable along with all allied.	1		No.		
e.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	24-Port Patch Panel for data communication, straight, flush-mount type, equipped with 24 × Cat-6 unshielded RJ45 ports, including port identification/labeling, complete in all respects.	1		Nos.		

f.	Front & Rear Cable Management for above patch panels.		1		Nos.		
g.	Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
h.	1 meter long patch cords for data		As per Actual		Nos.		
i.	3 meter long drop cord for data		As per actual		Nos.		
j.	LED TV 43" LED Smart TV For Monitoring of CCTV System including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	LED TV : Excluded from the tender scope as CCTV monitoring will be facilitated through the centralized CCTV monitoring system and designated display infrastructure.	2	0	No.		
k.	LED TV supply 65" LED Smart TV including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	65-INCH INTERACTIVE TOUCH SCREEN DISPLAY Display - Screen size: 65 inches. - Display: Commercial-grade LED/DLED LCD panel. - Resolution: UHD 4K, 3840 × 2160 @ 60 Hz minimum. - Aspect ratio: 16:9; brightness minimum 400 cd/m²; contrast ratio minimum 4000:1. - Viewing angle: minimum 178° horizontal/vertical; response time ≤6 ms. - Anti-glare tempered safety glass with minimum 7H surface hardness. - Minimum 50,000-hour display lifespan. 2. Interactive Touch - Infrared (IR) or equivalent professional touch technology.	5	2			

		• Minimum 40-point simultaneous multi-touch; 50-point preferred. • Touch response ≤ 5 ms and accuracy ± 1 mm or better. • Support finger/stylus writing, annotation and multi-user interaction. 3. Built-in System • Built-in Android OS 13 or higher. • Minimum 8 GB RAM and 128 GB internal storage. • Processor/GPU suitable for smooth 4K display and interactive applications. • Support wireless screen mirroring and common presentation/collaboration applications. • EDLA certification or equivalent Android certification preferred. 4. Camera, Microphone & Audio • Integrated camera: minimum 8 MP video capability; 4K video preferred. • Integrated microphone array with echo cancellation and noise reduction; minimum 8 m voice pickup. • Built-in stereo speakers with minimum 40 W total output. • Camera and microphone shall support standard video-conferencing					
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		applications under Android and Windows/OPS. 5. Connectivity • Minimum 2 × HDMI inputs supporting 4K @ 60 Hz. • Minimum 1 × HDMI output. • Minimum 1 × DisplayPort or equivalent digital video input. • Minimum 3 × USB 3.0 and 1 × USB 2.0; minimum 1 × full-function USB Type-C. • Dedicated USB touch interface(s) for external computers. • Minimum 1 × Gigabit Ethernet (RJ45); Wi-Fi 6 and Bluetooth 5.0 or higher. • RS-232 or equivalent control interface. 6. Windows / OPS Compatibility • Support OPS or equivalent modular PC with Windows 10/11 or current supported version. • Touch functionality shall operate with external/OPS Windows systems using standard HID or equivalent drivers. • Suitable for presentation, collaboration and video-conferencing applications. 7. Mounting & Power					
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		• VESA-compatible mounting; 600 × 400 mm preferred or equivalent. • Power input: 100–240 VAC, 50/60 Hz. • Operating temperature: 0–40°C minimum; humidity 10–90% RH, non-condensing. • Commercial-grade construction suitable for institutional use. 8. Accessories & Warranty • Wall-mounting bracket, minimum two stylus/pens, remote control, power cable and required HDMI/USB touch cables. • All software/licenses required for normal operation shall be included. • Minimum 3-year warranty, with local technical support and availability of spare parts. Brand Equivalency / Tender Note • Hikvision or equivalent/superior product from other established manufacturers shall be acceptable, subject to compliance with the above minimum requirements. Any referenced make/model is for performance benchmarking only					
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		and shall not restrict competition.					
	PROGRAMMING, TESTING & COMMISSIONING						
k.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
1.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station Excluded from the tender scope as the CCTV monitoring workstation and associated VMS requirements are addressed through the centralized CCTV monitoring infrastructure.	1	0	No.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
22	ACCESS CONTROL SYSTEM						
a.	Access control Device with RFID,Multi Biometric & Face Recognition- Time & Attendance & Access Control- Walk-through method face detection- Face Recognition at a distance upto 3m- Anti-spoofing attacks against photos, videos & 3D masks- Fake Finger Detection- Liveness Detection- Capacity: upto 20,000 (1 Face / 1 User), upto 500,000 (1 Finger / 1 User), Fingerprint 1:200,000 Templates <1 Sec, Face 1:20,000 Templates <1 Sec, Event Logs: 10,000,000, Photo Logs: 20,000, complete in all respects		3		Nos.		

b.	Power Supply Unit for push button		3		Nos.		
c.	RFID Card standard size and thickness		80		Nos.		
d.	Drop Bolt/Magnetic Lock (Double Door) with holder and fixing accessories.		3		Nos.		
e.	Drop Bolt/Magnetic Lock (Sliding Door) with holder and fixing accessories.		1		Nos.		
f.	Infra Sensor Based Exit Switch		3		Nos.		
g.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
h.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station – Excluded from the tender scope as the access control system will be managed through the centralized access control/HRMS platform, and a dedicated workstation is not required as part of this tender scope.	1	0	No.		
i.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
23	TESTING REPORTS & AS BUILT DRAWINGS						
a.	Final Testings of Entire Project, including air measurements, electrical data of equipment, all required reports shall be witnessed by Client Representative, complete in all respects for successful handing and taking over of the Project alongwith Load Flow, ETAB Calculations & Selection Report are required.		1		Job		

b.	Coordinated Shop Drawings, Layout Marking on Site, Entire Projects Testing & Commissioning Reports, As-Built Drawings 03 Sets of Hard Copies & Electronic Editable Copies in USB. (Final Bill NOT Entertained without the As built Drawings, Documents & Testing Reports)		1		Job.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		-		
d.	Personal Protective Equipment (PPE): Mandatory PPE are safety helmet, safety gloves, safety goggles, safety shoes, dust mask where there is dust, ear plugs during high noise activities like grinding etc.						
24	Connectivity of all speakers and associated equipment with the centralized PA system.	Connectivity of all speakers and associated equipment with the centralized PA system.	1				
25	Provision shall be made for 3 LCD/display screens in the halls on each floor.	Provision shall be made for 3 LCD/display screens in the halls on each floor.	3				
TOTAL COST OF ELECTRICAL WORKS					-		

3RD FLOOR ELECTRICAL WORKS							
S.N o.	DESCRIPTION	QTY	UNIT	RATE (RS)	AM OU NT (RS)		
	NOTE: ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT / CONSULTANT PRIOR TO THE EXECUTION OF WORKS. BIDDER IS ADVISED TO CONFIRM THE RUNNING LENGTHS, QUANTITIES, MISSING ITEMS IN BOQ, TERMINATIONS AS PER SITE CONDITIONS, REQUIREMENTS OF CLIENT BEFORE COMMENCEMENT OF WORK, BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL SPECIFICATIONS, PROPOSED SYSTEM SCHEMATICS, SUPPLY AND EXECUTION TIMELINES FOR THE SYSTEM OFFERED. ENTIRE SYSTEM TESTING AND COMMISSIONING OF THE ALL ITEMS TERMINATIONS, TESTING AND COMMISSIONING AT BOTH ENDS, INCLUDING SUBMISSION OF SHOP DRAWINGS, ASBUILT DRAWINGS, DETAILED TEST REPORTS FROM THE PRINCIPALS AND AS PER SITE PERFORM TEST REPORTS ARE REQUIRED. CLIENT SHALL HAVE RIGHTS TO ADD OR DELETE ANY ITEMS FROM THE VENDOR SCOPE AFTER AWARD OF WORK. ALL ACTIVE EQUIPMENT SHALL BE SAME MAKE OF APPROVED BRAND AND SHALL BE BASED ON LATEST AVAILABLE MODEL AND SERIES. CLIENT HAVE RIGHTS TO ASK AND DELIVER THE SAME MAKE OF EQUIPMENT TO PROVIDE AND INSTALL.						
	NOTE: 1) ALL FIXTURES/MATERIALS/EQUIPMENT MAKE AND MODELS SUBJECT TO APPROVAL OF ARCHITECT/CONSULTANT. 2) QUANTITIES MAYBE +/- VARY ACCORDING TO SITE CONDITIONS AND REQUIREMENTS. 3) THE BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL LITERATURES OF ALL MATERIALS ALONGWITH TENDER DOCUMENTS. 4) CONTRACTOR SHALL BE BOUND TO PROCURE MATERIALS FROM LIST OF APPROVED MANUFACTURERS & ONLY FROM AUTHORIZED DISTRIBUTOR 5) THE DIAMETER/SIZES ARE INDICATIVE ONLY. DEPENDING ON THE ACTUAL REQUIREMENTS AND MIGHT BE REQUIRED BASED ON EQUIPMENT SUPPLIER RECOMMENDATIONS. 6) CONTRACTOR SHALL BE RESPONSIBLE TO TAKE THE PRIOR WRITTEN APPROVAL FROM CLIENT; RELATED TO ANY ADDITIONAL COST, ADDITIONAL QUANTITIES & VARIATIONS. 7) ALL STATUTORY/GOVERNMENT/MOCKUP/SAMPLES APPROVALS SHALL BE OBTAINED BY THE CONTRACTOR AT NO EXTRA COST.						
1	WIRING / WIRING ACCESSORIES	Revised Specs	QTY	Revised QTY	UNIT	RATE (RS)	AMOUNT (RS)
	Providing, installation, testing, tagging's & commissioning of following items including all material, tools, labor & accessories required for completion of work as per specifications, details & drawings. Complete in all respects. Megger Test Report of all wiring shall be submitted by contractor to consultant.						

2	SMALL WIRING FOR LIGHTS						
	Circuit wiring from respective distribution board to switch board using following size of Stranded/Flexible, PVC Insulated wire in appropriate size of pvc conduit / channel/cable tray including all accessories as shown in the drawings.						
a.	3 x 2.5 Sqmm PVC, Cu		40		Nos.		
b.	Wiring for light point from switch board to first light point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mmof pvc conduit / channel / cable tray including complete with all accessories as shown in the drawings.		80		Nos.		
c.	Wiring for light point to point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mm size of pvc conduit / channel / cable tray complete with all accessories as shown in the drawings.		350		Nos.		
3	SMALL WIRING FOR UTILITY POWER SOCKETS & UPS						
	Circuit wiring from respective distribution board to 13A Multi Pin / 15A,3Pin Switch Socket unit (first outlet) using following Stranded/flexible Copper Conductor, color coded wire in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Item include floor/wall cutting if required as per site conditions. Megger Test Report of all wiring shall be submitted by contractor to consultant.						

a.	3 x 2.5 Sqmm PVC/Cu (Workstations)		125		Nos.		
	Wiring for 13A Multi Pin / 15A 3-Pin Switch Socket units from outlet to outlet using following Stranded/Flexible Copper Conductor, color coded wires in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Wiring on same workstation shall be counted as one. Item include floor/wall cutting if required as per site conditions.						
a.	3 x 4.0 Sqmm PVC/Cu (Others)		20		Nos.		
4	WIRING FOR HAND DRYER						
a.	Wiring for Hand Dryer from distribution board to hand dryer using 3C, 2.5 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		4		Nos.		
5	WIRING FOR ELECTRIC GEYSER						
a.	Wiring for Electric Heater from distribution board to Electric Heater using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		2		Nos.		
6.	WIRING FOR COMMUNICATION RACK						
a.	Wiring for Communication Rack from distribution board to rack using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		1		Nos.		
9	WIRING DEVICES / RECEPTACLES						

	Providing, installation, tagging, and commissioning of following wiring devices / light control switches / power receptacles as per BS Standards including 16 SWG MS Powder Coated back boxes with brass earth terminal, flush with wall as shown in drawings and details. (Clipsal Vivace Series White Color)					
	LIGHT CONTROLLED SWITCHES					
a.	One Gang one way 10A Switch		12		Nos.	
b.	Two Gang one way 10A Switch		10		Nos.	
c.	Three Gang one way 10A Switch		0		Nos.	
d.	Four Gang one way 10A Switch		20		Nos.	
e.	Five Gang one way 10A Switch		20		Nos.	
10	UTILITY POWER RECEPTACLES / SOCKET OUTLETS					
a.	13A, Simplex multi-pin switch Socket Unit		150		Nos.	
b.	13A, Duplex flat-pin switch Socket Unit		120		Nos.	
c.	13A, Simplex flat-pin switch Socket Unit		1		Nos.	
d.	15A, Round 3Pin Switch Socket Unit		2		Nos.	
e.	20A, DP Isolator for Electric Heater		20		Nos.	
f.	HDMI Outlet with Connectors (Male/Female as required)		20		Nos.	
g.	100A, 4P Isolator Switch Unit For AC		2		Nos.	

h.	63A 4Pole Industrial Socket & Plugs (for Rack UPS)		2		Nos.		
11	TECHNOLOGY BOX						
a.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet & 1 No Data for Telephone (A-TYPE). Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(a) 1 No Data for Telephone (A-TYPE).Technology Box has been omitted from the tender scope, along with all associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet.Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	10		Nos.		
b.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B_TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(b): One (1) Duplex Data Outlet has been omitted and one (1) Simplex Data Outlet has been added to the tender scope, along with the corresponding associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Simplex Data Outlet Separators are required between the power and voice/data and should have brass earth terminal	60		Nos.		

		(Outlet Included on Switches/Socket Section)					
12	FLOOR BOX						
a.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 2 No Duplex Data Outlet , 1 Simplex Data and 1 NO HDMI(A-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		12		Nos.		
b.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B_TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		12		Nos.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
13	LIGHTING FIXTURES						

	Supply, installation, connecting, testing & commissioning of LED light fixtures complete with all supports, fixing arrangements and accessories, including supply and installation of 1x3Cx1.5mm ² flexible cables 300/500V grade copper cables according to BS 6500 and connectors for connections etc., complete in all respects as per Consultant/Architect instructions and approvals (False-ceiling mounted fixtures shall be compatible with and fit exactly into the false-ceiling, mounting frame to be included in cost). Each Light Data Sheet and Dialux Reports are required for entire project.					
a.	DOWN LIGHTS Down Light with 20W , as approved by architect, As approved by architect.		220		Nos.	
b.	MAGNETIC DOWN LIGHTS Magnetic Light with 20W LED Light, with Magnetic track. As approved by architect.		15		Nos.	
c.	PENDENT LIGHT Pendent Light With 20W LED Light As approved by architect.		12		Nos.	
d.	TRACK LIGHT WITH 1 METER TRACK + 03 LIGHTS ON EACH TRACK Track Light Fixture with 30W light As approved by architect.		55		Nos.	
e.	LINEAR LED LIGHT Linear Led Light with 40W LED LIGHT As approved by architect.		1		Nos.	
f.	MIRROR LIGHT Mirror Light with 10W LED Light. As approved by architect.		1		Nos.	
g.	LED STRIP LIGHT LED Strip Light With 10W/Mtr As approved by architect.		400		Rm.	

h.	EMERGENCY LIGHTS Butterfly (Round) type Recessed/surface type emergency light 02 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		10		Nos.		
i.	EXIT LIGHT Recessed/surface type Exit Sign light Upto 04 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		4		Nos.		
j.	WALL LIGHT/PICTURE LIGHT (DECORATIVE TYPE) Light with 12W LED Light. As approved by architect.		15		Nos.		
k.	Recessed/Surface/Hanging Type Continuous Linear LED Light (30 Watts Per Meter) in different sizes and shapes 3000K/4000K with Extruded Aluminum Profile (Anodized), High Impact Acrylic Frosted PMMA Diffuser with Integrated Electronic Driver, Hanging & Fixing Accessories suitable		20		Rft.		
l.	Indoor type Ceiling Recessed/Surface/Wall/Ceiling Mounted (Stand Alone) I.R Motion Sensor for Lights/Fans having following specifications: 360°, IP41, CARDBOARD Technology, 1 circuit, Automatic on/off, Manual adjustment of light level threshold and time delay via potentiometer, Range Ø8 m, Recommended fixing height: 2.5 m, 3-wire with neutral, Light level threshold: 10 to 1275 lux, Adjustable time delay: 10 s to 10 min, Standby consumption: 0.75 W, Optimum distance between 2 sensors: 6 m, Fixes directly to a false ceiling with mounting claws (included) or installed in a Batibox box, depth 50 mm		20		Nos.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		

14	DISTRIBUTION BOARDS & CABLES						
	Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY	Provision of surge protection devices (SPDs) at the Main UPS DB and all floor-level Normal DBs. Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY					
15	Supply, Installation, testing, tagging's, load balancing, FAT, SAT and commissioning of following distribution panels in accordance with the attached single line diagrams and layout plans. The panels shall be made according to the technical specifications attached. Load Flow, ETAB Calculations & Selection Report are required.						
a.	SMDB-1st-F		1		No.		
b.	DB-1st-1		1		No.		
c.	DB-1st-2		1		No.		

d.	DB-C (UPS Power) Only for IT Rack & IT Room Equipment		1		No.		
e.	Breakers for SMDB 1st-F in LT Panel (320~400A 4Pole, Adjustable 36kA)		1		No.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
16	CABLE RACEWAYS / CONTAINMENTS						
	Providing and laying of following PVC conduits / Cable Tray & ladder for main / sub main cables of following sizes of MS Powder Coated Perforated 16 SWG Cable Tray / Cable Ladder with 16 SWG Cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer, along with supporting hangers, brackets, elbows, tee & mounting accessories etc. complete in all respect. Note: - Color Printed Tags to be provided at every 3 Meter Length. - Threaded Rods & C-Channel base is required for hanging from Ceiling. - Wall Hanger Supports to be provided wherever required. - U-shaped Fischer plates to be used for joints. - 6 Sqmm braided copper terminals for bonding to be done with every joint (imported) Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	GI PREFORATED CABLE TRAY WITH COVER						

a.	8" x 4" G.I Perforated cable tray, (4"x4" For Power & 4"x4" For Communication) made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories		300		Rft.		
b.	6" x 4" G.I Perforated cable tray, made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories (Inside Electrical Room)		100		Rft.		
	GI PREFORATED CABLE LADDER WITH PROTECTIVE COVER						
c.	12" x 4" G.I Perforated Cable Ladder, as shown in the design drawings. Item includes all mounting accessories.		100		Rft.		
	Supply and installation of following sizes of PVC conduits / pipes including all installation accessories like bends, sockets, flexible conduits, partially above false ceiling and partially embedded in ground etc. , the works also complete with excavation and back filling of 1'-6" deep for laying of main / sub-main cables . Compete in all respects as shown in the drawing.						
d.	20 mm dia PVC conduit		200		Rft.		
e.	25 mm dia PVC conduit		150		Rft.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
17	COMMUNICATION SYSTEMS						

	Supply, installation, testing, tagging and commissioning of following items for voice & data communication cabling system including all material , labor , tools , accessories etc. Complete in all respects. Item includes termination of all cables at respective outlets as shown in the drawings and instructed by client. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	HORIZONTAL VOICE & DATA CABLING						
a	Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	4400	As per actual	Mtr		
	INFORMATION OUTLETS		.				
b.	Information Duplex outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and	65		Nos.		

		implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simple outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.					
c.	Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	15		Nos.		
	PATCH PANELS & CABLE MANANGEMENT						
d.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements	5	As per actual	Nos.		

		of Items 11(a) and 11(b), as amended herein. 48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 48 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect. PRAL shall provide network switches and patch cords for connecting switch ports to patch-panel ports. The contractor shall be responsible for complete end-to-end connectivity from end-user outlets to the core patch panels, including termination, labeling, testing and certification. All installed network cabling shall be tested using a Fluke Cable Analyzer, and test reports shall be submitted to PRAL.					
e.	Front & Rear Cable Management for above patch panels.		5	As per actual	Nos.		
	COMMUNICATION RACKS						
f.	42 U communication rack, Imported, Front door with glass cover, lock & key, and front blank panels for covering empty spaces, air flow ducts for effective cooling management inside the rack for switches. Item includes supply and installation of 2nos. 10Way, 32PDU as approved by client.	32U Communication Rack, Imported, 19-inch floor-standing type, with front door with glass cover, lock & key, removable side/rear panels, front blank panels for covering empty spaces, adequate airflow/ventilation provisions for effective cooling of installed equipment, cable entry and management provisions, complete with earthing/bonding accessories.	1	1	Nos.		

		Item shall include supply and installation of 2 Nos. 10-way, 32A rack-mounted PDU/power distribution units as approved by Client, complete in all respects. Provision of rack Space in each floor is responsibility of bidder					
	PATCH CORDS Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
g.	1 meter long patch cords for data		As per Actual		Nos.		
h.	3 meter long drop cord for data		As per actual		Nos.		
	Wi-Fi ROUTERS						
j.	Wi-Fi-7 (Access Pont) Blazing Speeds 3.6Gbps wireless + 5Gbps wired aggregate throughput, Wi-Fi 7 Technology 2x2:2 MIMO with MLO, 4KQAM, MRU and Preamble Puncturing, Wide Coverage Up to 175 meters, High Capacity Supports 256 concurrent Wi-Fi client devices, Robust Security Secure boot, digital signature protection and unique per-device credentials, Smart Power Adaptation Auto-detection of PoE+, Flexible Management Embedded controller for managing up to 50 local GWN Aps, GDMS Networking for unlimited cloud-based management, GWN Manager for on premise control. (Reference Make: Grand Steam, Model GWN7670 Dual-Band Wi-Fi 7 Access Point or upper side models)	Wi-Fi Routers Excluded from the tender scope to align with the proposed centralized ICT/network architecture and avoid duplication with the Wireless Access Point (WAP) solution. However Cat6 cabling provisions for Wi-Fi access points shall remain in this BOQ: approximately 5 Wi-Fi points per floor and 1 Wi-Fi point in the Basement.	5	0	Nos.		
	IP PABX						
k.	IP PABX with 20in line and 200 out point . Complete with all terminations and installations, complete in all respects	An NTC Distribution Box (NTC DB) shall be provided on each floor. Each floor-level NTC DB shall provide connectivity using U/UTP Cat-3, 2-pair cable, including cabling,	1		No.		

		terminations, labeling, testing, and installation. Designated rooms: • CEO Rooms • Chief Domain • Domain Officers' Rooms • HR Room • Chief Rooms • Finance Room • Audit Room • Accounts Room • Admin Room • Reception					
	NETWORK SWITCH						
1.	NETWORK Switch 48 port for Networking (Make : CISCO)	Network Switch Excluded from the tender scope as the required switching infrastructure is addressed under the centralized network architecture.	9	0	Nos.		
	HDMI CABLE						
m.	HDMI Cable for TV & Projector		150		RMtr.		
n.	HDMI Outlet with Back Boxes & Connectors at both ends		15		Nos		
	TESTING & COMMISSIONING						
o.	Comprehensive Fluke Testing, Tagging and commissioning Report of complete structured cabling system including written warranties from the Principal Manufacturer. Integration with this existing system complete in all respects, fully functional and as per the specification and Consultant's Approval.		1		Job		

p.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
19	CCTV SECURITY SURVEILLANCE SYSTEM						
	Providing, installation, testing, tagging and commissioning of following items for CCTV and music systems including all wiring accessories, junction boxes etc. Complete in all respects.						
a.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from NVR to each camera as shown in the layout plans including MS powder coated junction boxes as shown in the drawings. Complete in all respects. Fluke Test Reports Required.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from the PoE switch to each CCTV camera as shown in the layout plans, including MS powder-coated junction boxes as shown in the drawings. Complete in all respects. Fluke test reports required.	15		Nos.		
b.	6 MP Fixed IP Network Bullet / Dome Camera- Support Human and Vehicle Detection- Smart Hybrid Light: advanced technology with long range- Efficient H.265+ compression technology- Max. Resolution 3200 × 1800- Lens Type Fixed focal lens, 2.8 and 4 mm optional- Supplement Light Range: Up to 30 m- IR Wavelength 850 nm- Image Enhancement BLC,HLC,3D DNR- Day,Night,Auto,Schedule- Support on-board storage up to 512 GB (SD card slot) (Optional)- Built-in microphone for real-time audio security- Water and dust resistant (IP67) and vandal resistant (IK08)- Motion detection (support alarm triggering by specified target types (human and vehicle)),video tampering alarm, exception, complete in all respect		15		Nos.		

c.	Network Video Recorder with 10TB SSD-H.265+/H.265/H.264+/H.264 video formats- Up to 12-ch@8 MP or 12-ch@1080p decoding capacity- Up to 16 face picture libraries, with up to 20,000 face pictures in total (each picture ≤ 4 MB, total capacity ≤ 1 GB)- Video Output Mode: HDMI/VGA independent output- Two-Way Audio: 1-ch, RCA (Linear, 1 KΩ)- NVR should have minimum 30 days storage capacity on 15 frame per second with suitable HDD to cater 100% cameras,- USB Interface: Front panel: 1 × USB 2.0; Rear panel: 1 × USB 2.0- EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017, Complete in all respect		1		No.		
d.	Supply of 24-Port PoE Smart Switch (For Camera End) with the following: Gigabit Smart POE Switch 375W PoE Powered 10/100/1000 BaseT with 2 x RG-45 Ports with transceivers with stack module and 2 meter stack cable SFP port versions Universal Network Profiles (UNP): Policy based access, complete in all respects	24-port managed Gigabit PoE+ switch, or higher capacity where floor camera count requires it. 24 × 10/100/1000 Mbps RJ45 ports. Minimum PoE budget 370 W or higher. With sufficient capacity to support all connected cameras at maximum rated power. Minimum 2 × 1G SFP/SFP+ uplink ports Support VLANs. Suitable for continuous 24×7 operation and compatible with the proposed centralized CCTV architecture Bidder must provide Two Meter stack cable along with all allied.	1		No.		
e.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	24-Port Patch Panel for data communication, straight, flush-mount type, equipped with 24 × Cat-6 unshielded RJ45 ports, including port identification/labeling, complete in all respects.	1		Nos.		

f.	Front & Rear Cable Management for above patch panels.		1		Nos.		
g.	Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
h.	1 meter long patch cords for data		As per Actual		Nos.		
i.	3 meter long drop cord for data		As per actual		Nos.		
j.	LED TV 43" LED Smart TV For Monitoring of CCTV System including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	LED TV : Excluded from the tender scope as CCTV monitoring will be facilitated through the centralized CCTV monitoring system and designated display infrastructure.	2	0	No.		
k.	LED TV supply 65" LED Smart TV including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	65-INCH INTERACTIVE TOUCH SCREEN DISPLAY Display • Screen size: 65 inches. • Display: Commercial-grade LED/DLED LCD panel. • Resolution: UHD 4K, 3840 × 2160 @ 60 Hz minimum. • Aspect ratio: 16:9; brightness minimum 400 cd/m²; contrast ratio minimum 4000:1. • Viewing angle: minimum 178° horizontal/vertical; response time ≤6 ms. • Anti-glare tempered safety glass with minimum 7H surface hardness. • Minimum 50,000-hour display lifespan. 2. Interactive Touch • Infrared (IR) or equivalent professional touch technology.	6	2			

		• Minimum 40-point simultaneous multi-touch; 50-point preferred. • Touch response ≤ 5 ms and accuracy ± 1 mm or better. • Support finger/stylus writing, annotation and multi-user interaction. 3. Built-in System • Built-in Android OS 13 or higher. • Minimum 8 GB RAM and 128 GB internal storage. • Processor/GPU suitable for smooth 4K display and interactive applications. • Support wireless screen mirroring and common presentation/collaboration applications. • EDLA certification or equivalent Android certification preferred. 4. Camera, Microphone & Audio • Integrated camera: minimum 8 MP video capability; 4K video preferred. • Integrated microphone array with echo cancellation and noise reduction; minimum 8 m voice pickup. • Built-in stereo speakers with minimum 40 W total output. • Camera and microphone shall support standard video-conferencing					
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		applications under Android and Windows/OPS. 5. Connectivity • Minimum 2 × HDMI inputs supporting 4K @ 60 Hz. • Minimum 1 × HDMI output. • Minimum 1 × DisplayPort or equivalent digital video input. • Minimum 3 × USB 3.0 and 1 × USB 2.0; minimum 1 × full-function USB Type-C. • Dedicated USB touch interface(s) for external computers. • Minimum 1 × Gigabit Ethernet (RJ45); Wi-Fi 6 and Bluetooth 5.0 or higher. • RS-232 or equivalent control interface. 6. Windows / OPS Compatibility • Support OPS or equivalent modular PC with Windows 10/11 or current supported version. • Touch functionality shall operate with external/OPS Windows systems using standard HID or equivalent drivers. • Suitable for presentation, collaboration and video-conferencing applications. 7. Mounting & Power					
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		• VESA-compatible mounting; 600 × 400 mm preferred or equivalent. • Power input: 100–240 VAC, 50/60 Hz. • Operating temperature: 0–40°C minimum; humidity 10–90% RH, non-condensing. • Commercial-grade construction suitable for institutional use. 8. Accessories & Warranty • Wall-mounting bracket, minimum two stylus/pens, remote control, power cable and required HDMI/USB touch cables. • All software/licenses required for normal operation shall be included. • Minimum 3-year warranty, with local technical support and availability of spare parts. Brand Equivalency / Tender Note • Hikvision or equivalent/superior product from other established manufacturers shall be acceptable, subject to compliance with the above minimum requirements. Any referenced make/model is for performance benchmarking only					
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		and shall not restrict competition.					
	PROGRAMMING, TESTING & COMMISSIONING						
k.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
1.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station Excluded from the tender scope as the CCTV monitoring workstation and associated VMS requirements are addressed through the centralized CCTV monitoring infrastructure.	1	0	No.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
22	ACCESS CONTROL SYSTEM						
a.	Access control Device with RFID,Multi Biometric & Face Recognition- Time & Attendance & Access Control- Walk-through method face detection- Face Recognition at a distance upto 3m- Anti-spoofing attacks against photos, videos & 3D masks- Fake Finger Detection- Liveness Detection- Capacity: upto 20,000 (1 Face / 1 User), upto 500,000 (1 Finger / 1 User), Fingerprint 1:200,000 Templates <1 Sec, Face 1:20,000 Templates <1 Sec, Event Logs: 10,000,000, Photo Logs: 20,000, complete in all respects	Three devices added for. 3rd Floor: - Media room - Power room	3	5	Nos.		

b.	Power Supply Unit for push button		3	5	Nos.		
c.	RFID Card standard size and thickness		80	90	Nos.		
d.	Drop Bolt/Magnetic Lock (Double Door) with holder and fixing accessories.		3	5	Nos.		
e.	Drop Bolt/Magnetic Lock (Sliding Door) with holder and fixing accessories.		1	2	Nos.		
f.	Infra Sensor Based Exit Switch		3	5	Nos.		
g.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
h.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station – Excluded from the tender scope as the access control system will be managed through the centralized access control/HRMS platform, and a dedicated workstation is not required as part of this tender scope.	1	0	No.		
i.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
23	TESTING REPORTS & AS BUILT DRAWINGS						
a.	Final Testings of Entire Project, including air measurements, electrical data of equipment, all required reports shall be witnessed by Client Representative, complete in all respects for successful handing and taking over of the Project alongwith Load Flow, ETAB Calculations & Selection Report are required.		1		Job		

b.	Coordinated Shop Drawings, Layout Marking on Site, Entire Projects Testing & Commissioning Reports, As-Built Drawings 03 Sets of Hard Copies & Electronic Editable Copies in USB. (Final Bill NOT Entertained without the As built Drawings, Documents & Testing Reports)		1		Job.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		-		
d.	Personal Protective Equipment (PPE): Mandatory PPE are safety helmet, safety gloves, safety goggles, safety shoes, dust mask where there is dust, ear plugs during high noise activities like grinding etc.						
24	Connectivity of all speakers and associated equipment with the centralized PA system.	Connectivity of all speakers and associated equipment with the centralized PA system.	1				
25	Provision shall be made for 3 LCD/display screens in the halls on each floor.	Provision shall be made for 3 LCD/display screens in the halls on each floor.	3				
TOTAL COST OF ELECTRICAL WORKS					-		

4th FLOOR ELECTRICAL WORKS							
S.N o.	DESCRIPTION	QTY	UNIT	RATE (RS)	AM OU NT (RS)		
	NOTE: ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT / CONSULTANT PRIOR TO THE EXECUTION OF WORKS. BIDDER IS ADVISED TO CONFIRM THE RUNNING LENGTHS, QUANTITIES, MISSING ITEMS IN BOQ, TERMINATIONS AS PER SITE CONDITIONS, REQUIREMENTS OF CLIENT BEFORE COMMENCEMENT OF WORK, BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL SPECIFICATIONS, PROPOSED SYSTEM SCHEMATICS, SUPPLY AND EXECUTION TIMELINES FOR THE SYSTEM OFFERED. ENTIRE SYSTEM TESTING AND COMMISSIONING OF THE ALL ITEMS TERMINATIONS, TESTING AND COMMISSIONING AT BOTH ENDS, INCLUDING SUBMISSION OF SHOP DRAWINGS, ASBUILT DRAWINGS, DETAILED TEST REPORTS FROM THE PRINCIPALS AND AS PER SITE PERFORM TEST REPORTS ARE REQUIRED. CLIENT SHALL HAVE RIGHTS TO ADD OR DELETE ANY ITEMS FROM THE VENDOR SCOPE AFTER AWARD OF WORK. ALL ACTIVE EQUIPMENT SHALL BE SAME MAKE OF APPROVED BRAND AND SHALL BE BASED ON LATEST AVAILABLE MODEL AND SERIES. CLIENT HAVE RIGHTS TO ASK AND DELIVER THE SAME MAKE OF EQUIPMENT TO PROVIDE AND INSTALL.						
	NOTE: 1) ALL FIXTURES/MATERIALS/EQUIPMENT MAKE AND MODELS SUBJECT TO APPROVAL OF ARCHITECT/CONSULTANT. 2) QUANTITIES MAYBE +/- VARY ACCORDING TO SITE CONDITIONS AND REQUIREMENTS. 3) THE BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL LITERATURES OF ALL MATERIALS ALONGWITH TENDER DOCUMENTS. 4) CONTRACTOR SHALL BE BOUND TO PROCURE MATERIALS FROM LIST OF APPROVED MANUFACTURERS & ONLY FROM AUTHORIZED DISTRIBUTOR 5) THE DIAMETER/SIZES ARE INDICATIVE ONLY. DEPENDING ON THE ACTUAL REQUIREMENTS AND MIGHT BE REQUIRED BASED ON EQUIPMENT SUPPLIER RECOMMENDATIONS. 6) CONTRACTOR SHALL BE RESPONSIBLE TO TAKE THE PRIOR WRITTEN APPROVAL FROM CLIENT; RELATED TO ANY ADDITIONAL COST, ADDITIONAL QUANTITIES & VARIATIONS. 7) ALL STATUTORY/GOVERNMENT/MOCKUP/SAMPLES APPROVALS SHALL BE OBTAINED BY THE CONTRACTOR AT NO EXTRA COST.						
1	WIRING / WIRING ACCESSORIES	Revised Specs	QTY	Revised QTY	UNIT	RATE (RS)	AMOUNT (RS)

	Providing, installation, testing, tagging's & commissioning of following items including all material, tools, labor & accessories required for completion of work as per specifications, details & drawings. Complete in all respects. Megger Test Report of all wiring shall be submitted by contractor to consultant.						
2	SMALL WIRING FOR LIGHTS						
	Circuit wiring from respective distribution board to switch board using following size of Stranded/Flexible, PVC Insulated wire in appropriate size of pvc conduit / channel/cable tray including all accessories as shown in the drawings.						
a.	3 x 2.5 Sqmm PVC, Cu		40		Nos.		
b.	Wiring for light point from switch board to first light point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mmof pvc conduit / channel / cable tray including complete with all accessories as shown in the drawings.		80		Nos.		
c.	Wiring for light point to point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mm size of pvc conduit / channel / cable tray complete with all accessories as shown in the drawings.		150		Nos.		
3	SMALL WIRING FOR UTILITY POWER SOCKETS & UPS						

	Circuit wiring from respective distribution board to 13A Multi Pin / 15A,3Pin Switch Socket unit (first outlet) using following Stranded/flexible Copper Conductor, color coded wire in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Item include floor/wall cutting if required as per site conditions. Megger Test Report of all wiring shall be submitted by contractor to consultant.					
a.	3 x 2.5 Sqmm PVC/Cu (Workstations)		125		Nos.	
	Wiring for 13A Multi Pin / 15A 3-Pin Switch Socket units from outlet to outlet using following Stranded/Flexible Copper Conductor, color coded wires in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Wiring on same workstation shall be counted as one. Item include floor/wall cutting if required as per site conditions.					
a.	3 x 4.0 Sqmm PVC/Cu (Others)		20		Nos.	
4	WIRING FOR HAND DRYER					
a.	Wiring for Hand Dryer from distribution board to hand dryer using 3C, 2.5 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		4		Nos.	
5	WIRING FOR ELECTRIC GEYSER					
a.	Wiring for Electric Heater from distribution board to Electric Heater using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		2		Nos.	
6.	WIRING FOR COMMUNICATION RACK					

a.	Wiring for Communication Rack from distribution board to rack using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		1		Nos.		
9	WIRING DEVICES / RECEPTACLES						
	Providing, installation, tagging, and commissioning of following wiring devices / light control switches / power receptacles as per BS Standards including 16 SWG MS Powder Coated back boxes with brass earth terminal, flush with wall as shown in drawings and details. (Clipsal Vivace Series White Color)						
	LIGHT CONTROLLED SWITCHES						
a.	One Gang one way 10A Switch		12		Nos.		
b.	Two Gang one way 10A Switch		10		Nos.		
c.	Three Gang one way 10A Switch		0		Nos.		
d.	Four Gang one way 10A Switch		20		Nos.		
e.	Five Gang one way 10A Switch		20		Nos.		
10	UTILITY POWER RECEPTACLES / SOCKET OUTLETS						
a.	13A, Simplex multi-pin switch Socket Unit		150		Nos.		
b.	13A, Duplex flat-pin switch Socket Unit		120		Nos.		
c.	13A, Simplex flat-pin switch Socket Unit		1		Nos.		
d.	15A, Round 3Pin Switch Socket Unit		2		Nos.		
e.	20A, DP Isolator for Electric Heater		20		Nos.		

f.	HDMI Outlet with Connectors (Male/Female as required)		20		Nos.		
g.	100A, 4P Isolator Switch Unit For AC		2		Nos.		
h.	63A 4Pole Industrial Socket & Plugs (for Rack UPS)		2		Nos.		
11	TECHNOLOGY BOX						
a.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet & 1 No Data for Telephone (A-TYPE). Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(a) 1 No Data for Telephone (A-TYPE).Technology Box has been omitted from the tender scope, along with all associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet.Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	20		Nos.		
b.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(b): One (1) Duplex Data Outlet has been omitted and one (1) Simplex Data Outlet has been added to the tender scope, along with the corresponding associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No.	100		Nos.		

		13A Flatpin Duplex switch sockets, & 1 No Simplex Data Outlet Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)					
12	FLOOR BOX						
a.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 2 No Duplex Data Outlet , 1 Simplex Data and 1 NO HDMI(A-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		20		Nos.		
b.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		20		Nos.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		

13	LIGHTING FIXTURES						
	Supply, installation, connecting, testing & commissioning of LED light fixtures complete with all supports, fixing arrangements and accessories, including supply and installation of 1x3Cx1.5mm ² flexible cables 300/500V grade copper cables according to BS 6500 and connectors for connections etc., complete in all respects as per Consultant/Architect instructions and approvals (False-ceiling mounted fixtures shall be compatible with and fit exactly into the false-ceiling, mounting frame to be included in cost). Each Light Data Sheet and Dialux Reports are required for entire project.						
a.	DOWN LIGHTS Down Light with 20W , as approved by architect, As approved by architect.		200		Nos.		
b.	MAGNETIC DOWN LIGHTS Magnetic Light with 20W LED Light, with Magnetic track. As approved by architect.		15		Nos.		
c.	PENDENT LIGHT Pendent Light With 20W LED Light As approved by architect.		10		Nos.		
d.	TRACK LIGHT WITH 1 METER TRACK + 03 LIGHTS ON EACH TRACK Track Light Fixture with 30W light As approved by architect.		40		Nos.		
e.	LINEAR LED LIGHT Linear Led Light with 40W LED LIGHT As approved by architect.		1		Nos.		
f.	MIRROR LIGHT Mirror Light with 10W LED Light. As approved by architect.		1		Nos.		

g.	LED STRIP LIGHT LED Strip Light With 10W/Mtr As approved by architect.		350		Rm.		
h.	EMERGENCY LIGHTS Butterfly (Round) type Recessed/surface type emergency light 02 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		10		Nos.		
i.	EXIT LIGHT Recessed/surface type Exit Sign light Upto 04 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		4		Nos.		
j.	WALL LIGHT/PICTURE LIGHT (DECORATIVE TYPE) Light with 12W LED Light. As approved by architect.		20		Nos.		
k.	Recessed/Surface/Hanging Type Continuous Linear LED Light (30 Watts Per Meter) in different sizes and shapes 3000K/4000K with Extruded Aluminum Profile (Anodized), High Impact Acrylic Frosted PMMA Diffuser with Integrated Electronic Driver, Hanging & Fixing Accessories suitable		20		Rft.		
l.	Indoor type Ceiling Recessed/Surface/Wall/Ceiling Mounted (Stand Alone) I.R Motion Sensor for Lights/Fans having following specifications: 360°, IP41, CARDBOARD Technology, 1 circuit, Automatic on/off, Manual adjustment of light level threshold and time delay via potentiometer, Range Ø8 m, Recommended fixing height: 2.5 m, 3-wire with neutral, Light level threshold: 10 to 1275 lux, Adjustable time delay: 10 s to 10 min, Standby consumption: 0.75 W, Optimum distance between 2 sensors: 6 m, Fixes directly to a false ceiling with mounting claws (included) or installed in a Batibox box, depth 50 mm		20		Nos.		

m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
14	DISTRIBUTION BOARDS & CABLES						
	Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY	Provision of surge protection devices (SPDs) at the Main UPS DB and all floor-level Normal DBs. Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY					
15	Supply, Installation, testing, tagging's, load balancing, FAT, SAT and commissioning of following distribution panels in accordance with the attached single line diagrams and layout plans. The panels shall be made according to the technical specifications attached. Load Flow, ETAB Calculations & Selection Report are required.						

a.	SMDB-1st-F		1		No.		
b.	DB-1st-1		1		No.		
c.	DB-1st-2		1		No.		
d.	DB-C (UPS Power) Only for IT Rack & IT Room Equipment		1		No.		
e.	Breakers for SMDB 1st-F in LT Panel (320~400A 4Pole, Adjustable 36kA)		1		No.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
16	CABLE RACEWAYS / CONTAINMENTS						
	Providing and laying of following PVC conduits / Cable Tray & ladder for main / sub main cables of following sizes of MS Powder Coated Perforated 16 SWG Cable Tray / Cable Ladder with 16 SWG Cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer, along with supporting hangers, brackets, elbows, tee & mounting accessories etc. complete in all respect. Note: - Color Printed Tags to be provided at every 3 Meter Length. - Threaded Rods & C-Channel base is required for hanging from Ceiling. - Wall Hanger Supports to be provided wherever required. - U-shaped Fischer plates to be used for joints. - 6 Sqmm braided copper terminals for bonding to be done with every joint (imported) Note : The quantities shown in the boq are						

	estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	GI PREFORATED CABLE TRAY WITH COVER						
a.	8" x 4" G.I Perforated cable tray, (4"x4" For Power & 4"x4" For Communication) made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories		300		Rft.		
b.	6" x 4" G.I Perforated cable tray, made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories (Inside Electrical Room)		100		Rft.		
	GI PREFORATED CABLE LADDER WITH PROTECTIVE COVER						
c.	12" x 4" G.I Perforated Cable Ladder, as shown in the design drawings. Item includes all mounting accessories.		100		Rft.		
	Supply and installation of following sizes of PVC conduits / pipes including all installation accessories like bends, sockets, flexible conduits, partially above false ceiling and partially embedded in ground etc. , the works also complete with excavation and back filling of 1'-6" deep for laying of main / sub-main cables . Compete in all respects as shown in the drawing.						
d.	20 mm dia PVC conduit		200		Rft.		
e.	25 mm dia PVC conduit		150		Rft.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
17	COMMUNICATION SYSTEMS						

	Supply, installation, testing, tagging and commissioning of following items for voice & data communication cabling system including all material , labor , tools , accessories etc. Complete in all respects. Item includes termination of all cables at respective outlets as shown in the drawings and instructed by client. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	HORIZONTAL VOICE & DATA CABLING						
a	Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	8500	As per actual	Mtr		
	INFORMATION OUTLETS		.				
b.	Information Duplex outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and	100		Nos.		

		implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simple outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.					
c.	Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	20		Nos.		
	PATCH PANELS & CABLE MANANGEMENT						
d.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements	5	As per actual	Nos.		

		of Items 11(a) and 11(b), as amended herein. 48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 48 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect. PRAL shall provide network switches and patch cords for connecting switch ports to patch-panel ports. The contractor shall be responsible for complete end-to-end connectivity from end-user outlets to the core patch panels, including termination, labeling, testing and certification. All installed network cabling shall be tested using a Fluke Cable Analyzer, and test reports shall be submitted to PRAL.					
e.	Front & Rear Cable Management for above patch panels.		5	As per actual	Nos.		
	COMMUNICATION RACKS						
f.	42 U communication rack, Imported, Front door with glass cover, lock & key, and front blank panels for covering empty spaces, air flow ducts for effective cooling management inside the rack for switches. Item includes supply and installation of 2nos. 10Way, 32PDU as approved by client.	32U Communication Rack, Imported, 19-inch floor-standing type, with front door with glass cover, lock & key, removable side/rear panels, front blank panels for covering empty spaces, adequate airflow/ventilation provisions for effective cooling of installed equipment, cable entry and management provisions, complete with earthing/bonding accessories.	1	1	Nos.		

		Item shall include supply and installation of 2 Nos. 10-way, 32A rack-mounted PDU/power distribution units as approved by Client, complete in all respects. Provision of rack Space in each floor is responsibility of bidder					
	PATCH CORDS Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
g.	1 meter long patch cords for data		As per Actual		Nos.		
h.	3 meter long drop cord for data		As per actual		Nos.		
	Wi-Fi ROUTERS						
j.	Wi-Fi-7 (Access Pont) Blazing Speeds 3.6Gbps wireless + 5Gbps wired aggregate throughput, Wi-Fi 7 Technology 2x2:2 MIMO with MLO, 4KQAM, MRU and Preamble Puncturing, Wide Coverage Up to 175 meters, High Capacity Supports 256 concurrent Wi-Fi client devices, Robust Security Secure boot, digital signature protection and unique per-device credentials, Smart Power Adaptation Auto-detection of PoE+, Flexible Management Embedded controller for managing up to 50 local GWN Aps, GDMS Networking for unlimited cloud-based management, GWN Manager for on premise control. (Reference Make: Grand Steam, Model GWN7670 Dual-Band Wi-Fi 7 Access Point or upper side models)	Wi-Fi Routers Excluded from the tender scope to align with the proposed centralized ICT/network architecture and avoid duplication with the Wireless Access Point (WAP) solution. However Cat6 cabling provisions for Wi-Fi access points shall remain in this BOQ: approximately 5 Wi-Fi points per floor and 1 Wi-Fi point in the Basement.	5	0	Nos.		
	IP PABX						
k.	IP PABX with 20in line and 200 out point . Complete with all terminations and installations, complete in all respects	An NTC Distribution Box (NTC DB) shall be provided on each floor. Each floor-level NTC DB shall provide connectivity using U/UTP Cat-3, 2-pair cable, including cabling,	1		No.		

		terminations, labeling, testing, and installation. Designated rooms: • CEO Rooms • Chief Domain • Domain Officers' Rooms • HR Room • Chief Rooms • Finance Room • Audit Room • Accounts Room • Admin Room • Reception					
	NETWORK SWITCH						
1.	NETWORK Switch 48 port for Networking (Make : CISCO)	Network Switch Excluded from the tender scope as the required switching infrastructure is addressed under the centralized network architecture.	9	0	Nos.		
	HDMI CABLE						
m.	HDMI Cable for TV & Projector		150		RMtr.		
n.	HDMI Outlet with Back Boxes & Connectors at both ends		15		Nos		
	TESTING & COMMISSIONING						
o.	Comprehensive Fluke Testing, Tagging and commissioning Report of complete structured cabling system including written warranties from the Principal Manufacturer. Integration with this existing system complete in all respects, fully functional and as per the specification and Consultant's Approval.		1		Job		

p.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
19	CCTV SECURITY SURVEILLANCE SYSTEM						
	Providing, installation, testing, tagging and commissioning of following items for CCTV and music systems including all wiring accessories, junction boxes etc. Complete in all respects.						
a.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from NVR to each camera as shown in the layout plans including MS powder coated junction boxes as shown in the drawings. Complete in all respects. Fluke Test Reports Required.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from the PoE switch to each CCTV camera as shown in the layout plans, including MS powder-coated junction boxes as shown in the drawings. Complete in all respects. Fluke test reports required.	15		Nos.		
b.	6 MP Fixed IP Network Bullet / Dome Camera - Support Human and Vehicle Detection- Smart Hybrid Light: advanced technology with long range- Efficient H.265+ compression technology- Max. Resolution 3200 × 1800- Lens Type Fixed focal lens, 2.8 and 4 mm optional- Supplement Light Range: Up to 30 m- IR Wavelength 850 nm- Image Enhancement BLC,HLC,3D DNR- Day,Night,Auto,Schedule- Support on-board storage up to 512 GB (SD card slot) (Optional)- Built-in microphone for real-time audio security- Water and dust resistant (IP67) and vandal resistant (IK08)- Motion detection (support alarm triggering by specified target types (human and vehicle)),video tampering alarm, exception, complete in all respect		15		Nos.		

c.	Network Video Recorder with 10TB SSD-H.265+/H.265/H.264+/H.264 video formats- Up to 12-ch@8 MP or 12-ch@1080p decoding capacity- Up to 16 face picture libraries, with up to 20,000 face pictures in total (each picture ≤ 4 MB, total capacity ≤ 1 GB)- Video Output Mode: HDMI/VGA independent output- Two-Way Audio: 1-ch, RCA (Linear, 1 KΩ)- NVR should have minimum 30 days storage capacity on 15 frame per second with suitable HDD to cater 100% cameras,- USB Interface: Front panel: 1 × USB 2.0; Rear panel: 1 × USB 2.0- EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017, Complete in all respect		1		No.		
d.	Supply of 24-Port PoE Smart Switch (For Camera End) with the following: Gigabit Smart POE Switch 375W PoE Powered 10/100/1000 BaseT with 2 x RG-45 Ports with transceivers with stack module and 2 meter stack cable SFP port versions Universal Network Profiles (UNP): Policy based access, complete in all respects	24-port managed Gigabit PoE+ switch, or higher capacity where floor camera count requires it. 24 × 10/100/1000 Mbps RJ45 ports. Minimum PoE budget 370 W or higher. With sufficient capacity to support all connected cameras at maximum rated power. Minimum 2 × 1G SFP/SFP+ uplink ports Support VLANs. Suitable for continuous 24×7 operation and compatible with the proposed centralized CCTV architecture Bidder must provide Two Meter stack cable along with all allied.	1		No.		
e.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	24-Port Patch Panel for data communication, straight, flush-mount type, equipped with 24 × Cat-6 unshielded RJ45 ports, including port identification/labeling, complete in all respects.	1		Nos.		

f.	Front & Rear Cable Management for above patch panels.		1		Nos.		
g.	Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
h.	1 meter long patch cords for data		As per Actual		Nos.		
i.	3 meter long drop cord for data		As per actual		Nos.		
j.	LED TV 43" LED Smart TV For Monitoring of CCTV System including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	LED TV : Excluded from the tender scope as CCTV monitoring will be facilitated through the centralized CCTV monitoring system and designated display infrastructure.	2	0	No.		
k.	LED TV supply 65" LED Smart TV including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	65-INCH INTERACTIVE TOUCH SCREEN DISPLAY Display • Screen size: 65 inches. • Display: Commercial-grade LED/DLED LCD panel. • Resolution: UHD 4K, 3840 × 2160 @ 60 Hz minimum. • Aspect ratio: 16:9; brightness minimum 400 cd/m²; contrast ratio minimum 4000:1. • Viewing angle: minimum 178° horizontal/vertical; response time ≤6 ms. • Anti-glare tempered safety glass with minimum 7H surface hardness. • Minimum 50,000-hour display lifespan. 2. Interactive Touch • Infrared (IR) or equivalent professional touch technology.	6	3			

		• Minimum 40-point simultaneous multi-touch; 50-point preferred. • Touch response ≤ 5 ms and accuracy ± 1 mm or better. • Support finger/stylus writing, annotation and multi-user interaction. 3. Built-in System • Built-in Android OS 13 or higher. • Minimum 8 GB RAM and 128 GB internal storage. • Processor/GPU suitable for smooth 4K display and interactive applications. • Support wireless screen mirroring and common presentation/collaboration applications. • EDLA certification or equivalent Android certification preferred. 4. Camera, Microphone & Audio • Integrated camera: minimum 8 MP video capability; 4K video preferred. • Integrated microphone array with echo cancellation and noise reduction; minimum 8 m voice pickup. • Built-in stereo speakers with minimum 40 W total output. • Camera and microphone shall support standard video-conferencing					
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		applications under Android and Windows/OPS. 5. Connectivity • Minimum 2 × HDMI inputs supporting 4K @ 60 Hz. • Minimum 1 × HDMI output. • Minimum 1 × DisplayPort or equivalent digital video input. • Minimum 3 × USB 3.0 and 1 × USB 2.0; minimum 1 × full-function USB Type-C. • Dedicated USB touch interface(s) for external computers. • Minimum 1 × Gigabit Ethernet (RJ45); Wi-Fi 6 and Bluetooth 5.0 or higher. • RS-232 or equivalent control interface. 6. Windows / OPS Compatibility • Support OPS or equivalent modular PC with Windows 10/11 or current supported version. • Touch functionality shall operate with external/OPS Windows systems using standard HID or equivalent drivers. • Suitable for presentation, collaboration and video-conferencing applications. 7. Mounting & Power				
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		• VESA-compatible mounting; 600 × 400 mm preferred or equivalent. • Power input: 100–240 VAC, 50/60 Hz. • Operating temperature: 0–40°C minimum; humidity 10–90% RH, non-condensing. • Commercial-grade construction suitable for institutional use. 8. Accessories & Warranty • Wall-mounting bracket, minimum two stylus/pens, remote control, power cable and required HDMI/USB touch cables. • All software/licenses required for normal operation shall be included. • Minimum 3-year warranty, with local technical support and availability of spare parts. Brand Equivalency / Tender Note • Hikvision or equivalent/superior product from other established manufacturers shall be acceptable, subject to compliance with the above minimum requirements. Any referenced make/model is for performance benchmarking only					
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		and shall not restrict competition.					
	PROGRAMMING, TESTING & COMMISSIONING						
k.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
1.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station Excluded from the tender scope as the CCTV monitoring workstation and associated VMS requirements are addressed through the centralized CCTV monitoring infrastructure.	1	0	No.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
22	ACCESS CONTROL SYSTEM						
a.	Access control Device with RFID,Multi Biometric & Face Recognition- Time & Attendance & Access Control- Walk-through method face detection- Face Recognition at a distance upto 3m- Anti-spoofing attacks against photos, videos & 3D masks- Fake Finger Detection- Liveness Detection- Capacity: upto 20,000 (1 Face / 1 User), upto 500,000 (1 Finger / 1 User), Fingerprint 1:200,000 Templates <1 Sec, Face 1:20,000 Templates <1 Sec, Event Logs: 10,000,000, Photo Logs: 20,000, complete in all respects		3		Nos.		

b.	Power Supply Unit for push button		3		Nos.		
c.	RFID Card standard size and thickness		120		Nos.		
d.	Drop Bolt/Magnetic Lock (Double Door) with holder and fixing accessories.		3		Nos.		
e.	Drop Bolt/Magnetic Lock (Sliding Door) with holder and fixing accessories.		1		Nos.		
f.	Infra Sensor Based Exit Switch		3		Nos.		
g.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
h.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station – Excluded from the tender scope as the access control system will be managed through the centralized access control/HRMS platform, and a dedicated workstation is not required as part of this tender scope.	1		No.		
i.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
23	TESTING REPORTS & AS BUILT DRAWINGS						
a.	Final Testings of Entire Project, including air measurements, electrical data of equipment, all required reports shall be witnessed by Client Representative, complete in all respects for successful handing and taking over of the Project alongwith Load Flow, ETAB Calculations & Selection Report are required.		1		Job		

b.	Coordinated Shop Drawings, Layout Marking on Site, Entire Projects Testing & Commissioning Reports, As-Built Drawings 03 Sets of Hard Copies & Electronic Editable Copies in USB. (Final Bill NOT Entertained without the As built Drawings, Documents & Testing Reports)		1		Job.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		-		
d.	Personal Protective Equipment (PPE): Mandatory PPE are safety helmet, safety gloves, safety goggles, safety shoes, dust mask where there is dust, ear plugs during high noise activities like grinding etc.						
24	Connectivity of all speakers and associated equipment with the centralized PA system.	Connectivity of all speakers and associated equipment with the centralized PA system.	1				
25	Provision shall be made for 3 LCD/display screens in the halls on each floor.	Provision shall be made for 3 LCD/display screens in the halls on each floor.	3				
TOTAL COST OF ELECTRICAL WORKS					-		

5th FLOOR ELECTRICAL WORKS							
S.N o.	DESCRIPTION	QTY	UNIT	RATE (RS)	AMOUNT (RS)		

	NOTE: ALL SAMPLES/TECHNICAL SPECIFICATIONS ARE TO BE APPROVED BY THE ARCHITECT / CONSULTANT PRIOR TO THE EXECUTION OF WORKS. BIDDER IS ADVISED TO CONFIRM THE RUNNING LENGTHS, QUANTITIES, MISSING ITEMS IN BOQ, TERMINATIONS AS PER SITE CONDITIONS, REQUIREMENTS OF CLIENT BEFORE COMMENCEMENT OF WORK, BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL SPECIFICATIONS, PROPOSED SYSTEM SCHEMATICS, SUPPLY AND EXECUTION TIMELINES FOR THE SYSTEM OFFERED. ENTIRE SYSTEM TESTING AND COMMISSIONING OF THE ALL ITEMS TERMINATIONS, TESTING AND COMMISSIONING AT BOTH ENDS, INCLUDING SUBMISSION OF SHOP DRAWINGS, ASBUILT DRAWINGS, DETAILED TEST REPORTS FROM THE PRINCIPALS AND AS PER SITE PERFORM TEST REPORTS ARE REQUIRED. CLIENT SHALL HAVE RIGHTS TO ADD OR DELETE ANY ITEMS FROM THE VENDOR SCOPE AFTER AWARD OF WORK. ALL ACTIVE EQUIPMENT SHALL BE SAME MAKE OF APPROVED BRAND AND SHALL BE BASED ON LATEST AVAILABLE MODEL AND SERIES. CLIENT HAVE RIGHTS TO ASK AND DELIVER THE SAME MAKE OF EQUIPMENT TO PROVIDE AND INSTALL.						
	NOTE: 1) ALL FIXTURES/MATERIALS/EQUIPMENT MAKE AND MODELS SUBJECT TO APPROVAL OF ARCHITECT/CONSULTANT. 2) QUANTITIES MAYBE +/- VARY ACCORDING TO SITE CONDITIONS AND REQUIREMENTS. 3) THE BIDDER SHALL PROVIDE THE COMPLETE TECHNICAL LITERATURES OF ALL MATERIALS ALONGWITH TENDER DOCUMENTS. 4) CONTRACTOR SHALL BE BOUND TO PROCURE MATERIALS FROM LIST OF APPROVED MANUFACTURERS & ONLY FROM AUTHORIZED DISTRIBUTOR 5) THE DIAMETER/SIZES ARE INDICATIVE ONLY. DEPENDING ON THE ACTUAL REQUIREMENTS AND MIGHT BE REQUIRED BASED ON EQUIPMENT SUPPLIER RECOMMENDATIONS. 6) CONTRACTOR SHALL BE RESPONSIBLE TO TAKE THE PRIOR WRITTEN APPROVAL FROM CLIENT; RELATED TO ANY ADDITIONAL COST, ADDITIONAL QUANTITIES & VARIATIONS. 7) ALL STATUTORY/GOVERNMENT/MOCKUP/SAMPLES APPROVALS SHALL BE OBTAINED BY THE CONTRACTOR AT NO EXTRA COST.						
1	WIRING / WIRING ACCESSORIES	Revised Specs	QTY	Revised QTY	UNIT	RATE (RS)	AMOUNT (RS)
	Providing, installation, testing, tagging's & commissioning of following items including all material, tools, labor & accessories required for completion of work as per specifications, details & drawings. Complete in all respects. Megger Test Report of all wiring shall be submitted by contractor to consultant.						
2	SMALL WIRING FOR LIGHTS						

	Circuit wiring from respective distribution board to switch board using following size of Stranded/Flexible, PVC Insulated wire in appropriate size of pvc conduit / channel/cable tray including all accessories as shown in the drawings.					
a.	3 x 2.5 Sqmm PVC, Cu		40		Nos.	
b.	Wiring for light point from switch board to first light point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mmof pvc conduit / channel / cable tray including complete with all accessories as shown in the drawings.		80		Nos.	
c.	Wiring for light point to point using single core PVC insulated, Stranded Copper Conductor, color coded wires of 1.5 Sq.mm for phase, 2.5 Sqmm for common neutral and 1.5 Sqmm for common earth in 25mm size of pvc conduit / channel / cable tray complete with all accessories as shown in the drawings.		150		Nos.	
3	SMALL WIRING FOR UTILITY POWER SOCKETS & UPS					
	Circuit wiring from respective distribution board to 13A Multi Pin / 15A,3Pin Switch Socket unit (first outlet) using following Stranded/flexible Copper Conductor, color coded wire in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Item include floor/wall cutting if required as per site conditions. Megger Test Report of all wiring shall be submitted by contractor to consultant.					
a.	3 x 2.5 Sqmm PVC/Cu (Workstations)		125		Nos.	

	Wiring for 13A Multi Pin / 15A 3-Pin Switch Socket units from outlet to outlet using following Stranded/Flexible Copper Conductor, color coded wires in 25 mm dia pvc conduit under floor. Complete with all accessories as shown in the drawings. Wiring on same workstation shall be counted as one. Item include floor/wall cutting if required as per site conditions.					
a.	3 x 4.0 Sqmm PVC/Cu (Others)		20		Nos.	
4	WIRING FOR HAND DRYER					
a.	Wiring for Hand Dryer from distribution board to hand dryer using 3C, 2.5 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		4		Nos.	
5	WIRING FOR ELECTRIC GEYSER					
a.	Wiring for Electric Heater from distribution board to Electric Heater using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		2		Nos.	
6.	WIRING FOR COMMUNICATION RACK					
a.	Wiring for Communication Rack from distribution board to rack using 3C, 4.0 Sqmm Cable in 25mm size of pvc conduit as shown in the design drawings. Complete with all accessories. Megger Test Report of all wiring shall be submitted by contractor to consultant.		1		Nos.	
9	WIRING DEVICES / RECEPTACLES					
	Providing, installation, tagging, and commissioning of following wiring devices / light control switches / power receptacles as per BS Standards including 16 SWG MS Powder Coated back boxes with brass earth terminal, flush with wall as shown in drawings and details. (Clipsal Vivace Series White Color)					

	LIGHT CONTROLLED SWITCHES						
a.	One Gang one way 10A Switch		12		Nos.		
b.	Two Gang one way 10A Switch		10		Nos.		
c.	Three Gang one way 10A Switch		0		Nos.		
d.	Four Gang one way 10A Switch		20		Nos.		
e.	Five Gang one way 10A Switch		20		Nos.		
10	UTILITY POWER RECEPTACLES / SOCKET OUTLETS						
a.	13A, Simplex multi-pin switch Socket Unit		150		Nos.		
b.	13A, Duplex flat-pin switch Socket Unit		120		Nos.		
c.	13A, Simplex flat-pin switch Socket Unit		1		Nos.		
d.	15A, Round 3Pin Switch Socket Unit		2		Nos.		
e.	20A, DP Isolator for Electric Heater		20		Nos.		
f.	HDMI Outlet with Connectors (Male/Female as required)		20		Nos.		
g.	100A, 4P Isolator Switch Unit For AC		2		Nos.		
h.	63A 4Pole Industrial Socket & Plugs (for Rack UPS)		2		Nos.		
11	TECHNOLOGY BOX						

a.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet & 1 No Data for Telephone (A-TYPE). Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(a) 1 No Data for Telephone (A-TYPE). Technology Box has been omitted from the tender scope, along with all associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet. Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	25		Nos.		
b.	Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	Item 11(b): One (1) Duplex Data Outlet has been omitted and one (1) Simplex Data Outlet has been added to the tender scope, along with the corresponding associated/allied components, references and requirements, wherever applicable in the BOQ. Revised: Technology box made of 18swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Simplex Data Outlet Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)	110		Nos.		
12	FLOOR BOX						

a.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 2 No Duplex Data Outlet , 1 Simplex Data and 1 NO HDMI(A-TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		20		Nos.		
b.	Floor box made of 16swg powder coated MS Sheet for installation of 2 No. 13A multipin switch sockets, 1 No. 13A Flatpin Duplex switch sockets, & 1 No Duplex Data Outlet (B_TYPE) Separators are required between the power and voice/data and should have brass earth terminal (Outlet Included on Switches/Socket Section)		20		Nos.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
13	LIGHTING FIXTURES						
	Supply, installation, connecting, testing & commissioning of LED light fixtures complete with all supports, fixing arrangements and accessories, including supply and installation of 1x3Cx1.5mm ² flexible cables 300/500V grade copper cables according to BS 6500 and connectors for connections etc., complete in all respects as per Consultant/Architect instructions and approvals (False-ceiling mounted fixtures shall be compatible with and fit exactly into the false-ceiling, mounting frame to be included in cost). Each Light Data Sheet and Dialux Reports are required for entire project.						
a.	DOWN LIGHTS Down Light with 20W , as approved by architect, As approved by architect.		220		Nos.		

b.	MAGNETIC DOWN LIGHTS Magnetic Light with 20W LED Light, with Magnetic track. As approved by architect.		15		Nos.		
c.	PENDENT LIGHT Pendent Light With 20W LED Light As approved by architect.		5		Nos.		
d.	TRACK LIGHT WITH 1 METER TRACK + 03 LIGHTS ON EACH TRACK Track Light Fixture with 30W light As approved by architect.		40		Nos.		
e.	LINEAR LED LIGHT Linear Led Light with 40W LED LIGHT As approved by architect.		1		Nos.		
f.	MIRROR LIGHT Mirror Light with 10W LED Light. As approved by architect.		1		Nos.		
g.	LED STRIP LIGHT LED Strip Light With 10W/Mtr As approved by architect.		350		Rm.		
h.	EMERGENCY LIGHTS Butterfly (Round) type Recessed/surface type emergency light 02 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		10		Nos.		
i.	EXIT LIGHT Recessed/surface type Exit Sign light Upto 04 Watts 6500K with minimum 03 hours built-in battery backup including all fixing and hanging accessories (UL/TUV/LPCB Certified) As approved by architect.		4		Nos.		
j.	WALL LIGHT/PICTURE LIGHT (DECORATIVE TYPE) Light with 12W LED Light. As approved by architect.		20		Nos.		

k.	Recessed/Surface/Hanging Type Continuous Linear LED Light (30 Watts Per Meter) in different sizes and shapes 3000K/4000K with Extruded Aluminum Profile (Anodized), High Impact Acrylic Frosted PMMA Diffuser with Integrated Electronic Driver, Hanging & Fixing Accessories suitable		50		Rft.		
l.	Indoor type Ceiling Recessed/Surface/Wall/Ceiling Mounted (Stand Alone) I.R Motion Sensor for Lights/Fans having following specifications: 360°, IP41, CARDBOARD Technology, 1 circuit, Automatic on/off, Manual adjustment of light level threshold and time delay via potentiometer, Range Ø8 m, Recommended fixing height: 2.5 m, 3-wire with neutral, Light level threshold: 10 to 1275 lux, Adjustable time delay: 10 s to 10 min, Standby consumption: 0.75 W, Optimum distance between 2 sensors: 6 m, Fixes directly to a false ceiling with mounting claws (included) or installed in a Batibox box, depth 50 mm		20		Nos.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
14	DISTRIBUTION BOARDS & CABLES						
	Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY	Provision of surge protection devices (SPDs) at the Main UPS DB and all floor-level Normal DBs. Providing, Laying, Testing, Termination, Tagging and Commissioning of following multi-core PVC insulated Copper / Aluminum Conductor Cables for main/sub-main power distribution system as shown in the layout plans in appropriate size of conduits. Work also includes necessary					

		termination accessories like compression lugs, color coded sleeves, identification tags etc. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material. MAIN CABLES ALREADY LAID, THESE ARE FROM FLOOR DB TO EQUIPMENT ONLY					
15	Supply, Installation, testing, tagging's, load balancing, FAT, SAT and commissioning of following distribution panels in accordance with the attached single line diagrams and layout plans. The panels shall be made according to the technical specifications attached. Load Flow, ETAB Calculations & Selection Report are required.						
a.	SMDB-1st-F		1		No.		
b.	DB-1st-1		1		No.		
c.	DB-1st-2		1		No.		
d.	DB-C (UPS Power) Only for IT Rack & IT Room Equipment		1		No.		
e.	Breakers for SMDB 1st-F in LT Panel (320~400A 4Pole, Adjustable 36kA)		1		No.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		

16	CABLE RACEWAYS / CONTAINMENTS						
	Providing and laying of following PVC conduits / Cable Tray & ladder for main / sub main cables of following sizes of MS Powder Coated Perforated 16 SWG Cable Tray / Cable Ladder with 16 SWG Cover (4 feet covers) duly Painted after degreasing, derusting, phosphating and antirust primer, along with supporting hangers, brackets, elbows, tee & mounting accessories etc. complete in all respect. Note: - Color Printed Tags to be provided at every 3 Meter Length. - Threaded Rods & C-Channel base is required for hanging from Ceiling. - Wall Hanger Supports to be provided wherever required. - U-shaped Fischer plates to be used for joints. - 6 Sqmm braided copper terminals for bonding to be done with every joint (imported) Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	GI PREFORATED CABLE TRAY WITH COVER						
a.	8" x 4" G.I Perforated cable tray, (4"x4" For Power & 4"x4" For Communication) made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories		300		Rft.		
b.	6" x 4" G.I Perforated cable tray, made with 16SWG MS Sheet as shown in the design drawings. Item includes all mounting accessories (Inside Electrical Room)		100		Rft.		
	GI PREFORATED CABLE LADDER WITH PROTECTIVE COVER						
c.	12" x 4" G.I Perforated Cable Ladder, as shown in the design drawings. Item includes all mounting accessories.		100		Rft.		

	Supply and installation of following sizes of PVC conduits / pipes including all installation accessories like bends, sockets, flexible conduits, partially above false ceiling and partially embedded in ground etc. , the works also complete with excavation and back filling of 1'-6" deep for laying of main / sub-main cables . Compete in all respects as shown in the drawing.						
d.	20 mm dia PVC conduit		200		Rft.		
e.	25 mm dia PVC conduit		150		Rft.		
f.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
17	COMMUNICATION SYSTEMS						
	Supply, installation, testing, tagging and commissioning of following items for voice & data communication cabling system including all material , labor , tools , accessories etc. Complete in all respects. Item includes termination of all cables at respective outlets as shown in the drawings and instructed by client. Note : The quantities shown in the boq are estimated based on design drawings. Contractor has to take accurate measurements at site prior to procurement of material.						
	HORIZONTAL VOICE & DATA CABLING						

a	Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Category 6 , UTP Cables, for data communication system at local workstations in 25mm dia PVC conduits under floor as shown in the layout plan and schematic diagrams. Work includes all terminations, management and tagging at both ends. Fluke test reports required.	8500	As per actual	Mtr		
	INFORMATION OUTLETS		.				
b.	Information Duplex outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simple outlet Face plate with 2No. CAT-6 RJ-45 socket for Data communication system / Voice including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	125		Nos.		

c.	Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. Information Simplex outlet Face plate with 1No. CAT-6 RJ-45 socket for Data communication system i.e. Wi-Fi / Printer including shuttered click-ins, labels, jacks etc. Complete in all respects with cable identification tags. Fluke test reports required.	20		Nos.		
	PATCH PANELS & CABLE MANANGEMENT						
d.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	Note: The quantities and specifications of all associated communication/network cabling, outlets, terminations and related items elsewhere in the BOQ shall be read and implemented in accordance with the revised requirements of Items 11(a) and 11(b), as amended herein. 48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 48 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect. PRAL shall provide network switches and patch cords for	5	As per actual	Nos.		

		connecting switch ports to patch-panel ports. The contractor shall be responsible for complete end-to-end connectivity from end-user outlets to the core patch panels, including termination, labeling, testing and certification. All installed network cabling shall be tested using a Fluke Cable Analyzer, and test reports shall be submitted to PRAL.					
e.	Front & Rear Cable Management for above patch panels.		5	As per actual	Nos.		
	COMMUNICATION RACKS						
f.	42 U communication rack, Imported, Front door with glass cover, lock & key, and front blank panels for covering empty spaces, air flow ducts for effective cooling management inside the rack for switches. Item includes supply and installation of 2nos. 10Way, 32PDU as approved by client.	32U Communication Rack, Imported, 19-inch floor-standing type, with front door with glass cover, lock & key, removable side/rear panels, front blank panels for covering empty spaces, adequate airflow/ventilation provisions for effective cooling of installed equipment, cable entry and management provisions, complete with earthing/bonding accessories. Item shall include supply and installation of 2 Nos. 10-way, 32A rack-mounted PDU/power distribution units as approved by Client, complete in all respects. Provision of rack Space in each floor is responsibility of bidder	1	1	Nos.		
	PATCH CORDS Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						

g.	1 meter long patch cords for data		As per Actual		Nos.		
h.	3 meter long drop cord for data		As per actual		Nos.		
	Wi-Fi ROUTERS						
j.	Wi-Fi-7 (Access Pont) Blazing Speeds 3.6Gbps wireless + 5Gbps wired aggregate throughput, Wi-Fi 7 Technology 2x2:2 MIMO with MLO, 4KQAM, MRU and Preamble Puncturing, Wide Coverage Up to 175 meters, High Capacity Supports 256 concurrent Wi-Fi client devices, Robust Security Secure boot, digital signature protection and unique per-device credentials, Smart Power Adaptation Auto-detection of PoE+, Flexible Management Embedded controller for managing up to 50 local GWN Aps, GDMS Networking for unlimited cloud-based management, GWN Manager for on premise control. (Reference Make: Grand Steam, Model GWN7670 Dual-Band Wi-Fi 7 Access Point or upper side models)	Wi-Fi Routers Excluded from the tender scope to align with the proposed centralized ICT/network architecture and avoid duplication with the Wireless Access Point (WAP) solution. However Cat6 cabling provisions for Wi-Fi access points shall remain in this BOQ: approximately 5 Wi-Fi points per floor and 1 Wi-Fi point in the Basement.	5	0	Nos.		
	IP PABX						
k.	IP PABX with 20in line and 200 out point . Complete with all terminations and installations, complete in all respects	An NTC Distribution Box (NTC DB) shall be provided on each floor. Each floor-level NTC DB shall provide connectivity using U/UTP Cat-3, 2-pair cable, including cabling, terminations, labeling, testing, and installation. Designated rooms: • CEO Rooms • Chief Domain • Domain Officers' Rooms • HR Room • Chief Rooms • Finance Room • Audit Room • Accounts Room	1		No.		

		• Admin Room • Reception					
	NETWORK SWITCH						
l.	NETWORK Switch 48 port for Networking (Make : CISCO)	Network Switch Excluded from the tender scope as the required switching infrastructure is addressed under the centralized network architecture.	9	0	Nos.		
	HDMI CABLE						
m.	HDMI Cable for TV & Projector		200		RMt r.		
n.	HDMI Outlet with Back Boxes & Connectors at both ends		18		Nos		
	TESTING & COMMISSIONING						
o.	Comprehensive Fluke Testing, Tagging and commissioning Report of complete structured cabling system including written warranties from the Principal Manufacturer. Integration with this existing system complete in all respects, fully functional and as per the specification and Consultant's Approval.		1		Job		

p.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
19	CCTV SECURITY SURVEILLANCE SYSTEM						
	Providing, installation, testing, tagging and commissioning of following items for CCTV and music systems including all wiring accessories, junction boxes etc. Complete in all respects.						
a.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from NVR to each camera as shown in the layout plans including MS powder coated junction boxes as shown in the drawings. Complete in all respects. Fluke Test Reports Required.	Wiring for CCTV Camera using Cat-6 UTP cables in appropriate size of PVC conduits from the PoE switch to each CCTV camera as shown in the layout plans, including MS powder-coated junction boxes as shown in the drawings. Complete in all respects. Fluke test reports required.	15		Nos.		
b.	6 MP Fixed IP Network Bullet / Dome Camera - Support Human and Vehicle Detection- Smart Hybrid Light: advanced technology with long range- Efficient H.265+ compression technology- Max. Resolution 3200 × 1800- Lens Type Fixed focal lens, 2.8 and 4 mm optional- Supplement Light Range: Up to 30 m- IR Wavelength 850 nm- Image Enhancement BLC,HLC,3D DNR- Day,Night,Auto,Schedule- Support on-board storage up to 512 GB (SD card slot) (Optional)- Built-in microphone for real-time audio security- Water and dust resistant (IP67) and vandal resistant (IK08)- Motion detection (support alarm triggering by specified target types (human and vehicle)),video tampering alarm, exception, complete in all respect		15		Nos.		

c.	Network Video Recorder with 10TB SSD-H.265+/H.265/H.264+/H.264 video formats- Up to 12-ch@8 MP or 12-ch@1080p decoding capacity- Up to 16 face picture libraries, with up to 20,000 face pictures in total (each picture ≤ 4 MB, total capacity ≤ 1 GB)- Video Output Mode: HDMI/VGA independent output- Two-Way Audio: 1-ch, RCA (Linear, 1 KΩ)- NVR should have minimum 30 days storage capacity on 15 frame per second with suitable HDD to cater 100% cameras,- USB Interface: Front panel: 1 × USB 2.0; Rear panel: 1 × USB 2.0- EN 55032: 2015, EN 61000-3-2, EN 61000-3-3, EN 50130-4, EN 55035: 2017, Complete in all respect		1		No.		
d.	Supply of 24-Port PoE Smart Switch (For Camera End) with the following: Gigabit Smart POE Switch 375W PoE Powered 10/100/1000 BaseT with 2 x RG-45 Ports with transceivers with stack module and 2 meter stack cable SFP port versions Universal Network Profiles (UNP): Policy based access, complete in all respects	24-port managed Gigabit PoE+ switch, or higher capacity where floor camera count requires it. 24 × 10/100/1000 Mbps RJ45 ports. Minimum PoE budget 370 W or higher. With sufficient capacity to support all connected cameras at maximum rated power. Minimum 2 × 1G SFP/SFP+ uplink ports Support VLANs. Suitable for continuous 24×7 operation and compatible with the proposed centralized CCTV architecture Bidder must provide Two Meter stack cable along with all allied.	1		No.		
e.	48 Port , Patch Panel for data communication, Straight, Flush Mount, equipped with 24 x Cat-6 Unshielded RJ45 information outlet including labeling complete in all respect.	24-Port Patch Panel for data communication, straight, flush-mount type, equipped with 24 × Cat-6 unshielded RJ45 ports, including port identification/labeling, complete in all respects.	1		Nos.		

f.	Front & Rear Cable Management for above patch panels.		1		Nos.		
g.	Category-6 Factory Certified tangle free RJ-45 to RJ-45 type patch / drop cords in required colors having following lengths for interconnection of switches and patch panels						
h.	1 meter long patch cords for data		As per Actual		Nos.		
i.	3 meter long drop cord for data		As per actual		Nos.		
j.	LED TV 43" LED Smart TV For Monitoring of CCTV System including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	LED TV : Excluded from the tender scope as CCTV monitoring will be facilitated through the centralized CCTV monitoring system and designated display infrastructure.	2	0	No.		
k.	LED TV supply 65" LED Smart TV including all fixing/hanging accessories with required power, hdmi and other cables, complete in all respect.	65-INCH INTERACTIVE TOUCH SCREEN DISPLAY Display • Screen size: 65 inches. • Display: Commercial-grade LED/DLED LCD panel. • Resolution: UHD 4K, 3840 × 2160 @ 60 Hz minimum. • Aspect ratio: 16:9; brightness minimum 400 cd/m²; contrast ratio minimum 4000:1. • Viewing angle: minimum 178° horizontal/vertical; response time ≤6 ms. • Anti-glare tempered safety glass with minimum 7H surface hardness. • Minimum 50,000-hour display lifespan. 2. Interactive Touch • Infrared (IR) or equivalent professional touch technology.	8	3			

		• Minimum 40-point simultaneous multi-touch; 50-point preferred. • Touch response ≤ 5 ms and accuracy ± 1 mm or better. • Support finger/stylus writing, annotation and multi-user interaction. 3. Built-in System • Built-in Android OS 13 or higher. • Minimum 8 GB RAM and 128 GB internal storage. • Processor/GPU suitable for smooth 4K display and interactive applications. • Support wireless screen mirroring and common presentation/collaboration applications. • EDLA certification or equivalent Android certification preferred. 4. Camera, Microphone & Audio • Integrated camera: minimum 8 MP video capability; 4K video preferred. • Integrated microphone array with echo cancellation and noise reduction; minimum 8 m voice pickup. • Built-in stereo speakers with minimum 40 W total output. • Camera and microphone shall support standard video-conferencing					
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		applications under Android and Windows/OPS. 5. Connectivity • Minimum 2 × HDMI inputs supporting 4K @ 60 Hz. • Minimum 1 × HDMI output. • Minimum 1 × DisplayPort or equivalent digital video input. • Minimum 3 × USB 3.0 and 1 × USB 2.0; minimum 1 × full-function USB Type-C. • Dedicated USB touch interface(s) for external computers. • Minimum 1 × Gigabit Ethernet (RJ45); Wi-Fi 6 and Bluetooth 5.0 or higher. • RS-232 or equivalent control interface. 6. Windows / OPS Compatibility • Support OPS or equivalent modular PC with Windows 10/11 or current supported version. • Touch functionality shall operate with external/OPS Windows systems using standard HID or equivalent drivers. • Suitable for presentation, collaboration and video-conferencing applications. 7. Mounting & Power					
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		• VESA-compatible mounting; 600 × 400 mm preferred or equivalent. • Power input: 100–240 VAC, 50/60 Hz. • Operating temperature: 0–40°C minimum; humidity 10–90% RH, non-condensing. • Commercial-grade construction suitable for institutional use. 8. Accessories & Warranty • Wall-mounting bracket, minimum two stylus/pens, remote control, power cable and required HDMI/USB touch cables. • All software/licenses required for normal operation shall be included. • Minimum 3-year warranty, with local technical support and availability of spare parts. Brand Equivalency / Tender Note • Hikvision or equivalent/superior product from other established manufacturers shall be acceptable, subject to compliance with the above minimum requirements. Any referenced make/model is for performance benchmarking only					
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		and shall not restrict competition.					
	PROGRAMMING, TESTING & COMMISSIONING						
k.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
1.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station Excluded from the tender scope as the CCTV monitoring workstation and associated VMS requirements are addressed through the centralized CCTV monitoring infrastructure.	1	0	No.		
m.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
22	ACCESS CONTROL SYSTEM						
a.	Access control Device with RFID,Multi Biometric & Face Recognition- Time & Attendance & Access Control- Walk-through method face detection- Face Recognition at a distance upto 3m- Anti-spoofing attacks against photos, videos & 3D masks- Fake Finger Detection- Liveness Detection- Capacity: upto 20,000 (1 Face / 1 User), upto 500,000 (1 Finger / 1 User), Fingerprint 1:200,000 Templates <1 Sec, Face 1:20,000 Templates <1 Sec, Event Logs: 10,000,000, Photo Logs: 20,000, complete in all respects		5		Nos.		

b.	Power Supply Unit for push button		5		Nos.		
c.	RFID Card standard size and thickness		100		Nos.		
d.	Drop Bolt/Magnetic Lock (Double Door) with holder and fixing accessories.		3		Nos.		
e.	Drop Bolt/Magnetic Lock (Sliding Door) with holder and fixing accessories.		2		Nos.		
f.	Infra Sensor Based Exit Switch		5		Nos.		
g.	Programming, testing and commissioning of whole system as per the client requirement including training of client's representatives. Complete set of all manual shall be provide at the time of commissioning.		1		Job.		
h.	Work Station (Core i7 12600k 10th generation, Desktop PC with Genuine Windows 11, RAM 16GB, DDR4 3600MTK Hard Drive 500GB NVME SSD, CPU GTX 1660 Super with 650W PSU and DVD Writer including Video Management System license (Branded), Keyboard & mouse.	Work Station – Excluded from the tender scope as the access control system will be managed through the centralized access control/HRMS platform, and a dedicated workstation is not required as part of this tender scope.	1		No.		
i.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		Job.		
23	TESTING REPORTS & AS BUILT DRAWINGS						
a.	Final Testings of Entire Project, including air measurements, electrical data of equipment, all required reports shall be witnessed by Client Representative, complete in all respects for successful handing and taking over of the Project alongwith Load Flow, ETAB Calculations & Selection Report are required.		1		Job		

b.	Coordinated Shop Drawings, Layout Marking on Site, Entire Projects Testing & Commissioning Reports, As-Built Drawings 03 Sets of Hard Copies & Electronic Editable Copies in USB. (Final Bill NOT Entertained without the As built Drawings, Documents & Testing Reports)		1		Job.		
c.	Allow for any other item or labor required for completion of system not covered in BOQ or specifications / drawings in accordance with the same standards and brands shown and approved by consultant. All such items shall be covered in this item but complete description, item rates, quantity required and brands shall be mentioned separately and to be attached with the BOQ. (Details are required), complete in all respects.		1		-		
d.	Personal Protective Equipment (PPE): Mandatory PPE are safety helmet, safety gloves, safety goggles, safety shoes, dust mask where there is dust, ear plugs during high noise activities like grinding etc.						
24	Connectivity of all speakers and associated equipment with the centralized PA system.	Connectivity of all speakers and associated equipment with the centralized PA system.	1				
25	Provision shall be made for 3 LCD/display screens in the halls on each floor.	Provision shall be made for 3 LCD/display screens in the halls on each floor.	3				
TOTAL COST OF ELECTRICAL WORKS					-		

NOTE:

Phased Completion of the Project

The project shall be executed and completed in clearly defined phases, in accordance with the approved project plan, scope of work, and mutually agreed timelines. The bidder shall ensure timely completion of each phase without adversely affecting PRAL's ongoing operations.

Dismantling, Removal and Shifting of Furniture and Fixtures

The scope of work shall include the dismantling, removal, transportation, shifting, and placement, where required, of furniture, fixtures, and other relevant items from the existing KSL and Galaxy Buildings to the designated location(s). The bidder shall be responsible for carrying out these activities safely and without causing damage to PRAL's assets or premises.

Past Performance / Vendor Eligibility

Vendors whose performance under previous PRAL contracts or tenders has been documented and assessed as unsatisfactory or below the required performance standards may be considered ineligible for participation in this tender, subject to the availability of documented performance records and in accordance with the applicable procurement rules, regulations, and procedures.