



PRICE BID

E-TENDER NO. AO/BAM/2024-25/11

Dated 31.12.2024

**ADDITION, ALTERATION & CONSTRUCTION OF G+1 STORIED BUILDING FOR
RSETI RAYAGADA ODISHA.**

ELECTRICAL WORK

SI NO	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Wiring				
1	Recessed wiring to light point / wall bracket fan point / exhaust fan point point with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked with 20 mm dia non-metalic PVC flexible conduit with 5/10 Amp, 250 V modular type switch ISI marked having front bakelite cover and MS box of suitable size as required, with 1.5 sq.mm FR PVC insulated single core multistrand copper conductor as earth wire including all accesories and connection as per direction of Engineer in Charge. (Make of wire Finolex / Polycab / KEI)				
a	Primary light points.	169.0	NOS		
b	Secondary light points looped from the above point	41.0	NOS		
c	Ceiling fan point consisting of fan hook, modular switch & regulator and ceiling rose as per requirement.	64.0	NOS		
d	Wall bracket / Exhaust fan point consisting of 5/10A modular switch and 6A socket/ceiling rose near fan.	19.0	NOS		
e	Call bell point	1.0	NOS		
2	Supplying and fixing of 3 pin, 5 amp ceiling rose ISI marked	169.0	NOS		
3	Supplying and fixing of batten holder / BK angle holder ISI marked on the existing junction box / wooden block including connection etc. as required.	16.0	NOS		
4	Supply and fixing of 6Amp plug with 6amp switch on existing board (Modular type)	43.0	NOS		
5	Point wiring for 5 / 6 amp socket outlet with 2 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor of ISI marked in recess 20 mm dia non-metalic PVC flexible conduit with modular type switch, phenolic laminated sheet suitable size ISI marked MS box and earthing point with 1 x 1.5 sq.mm FR PVC insulated single core multistrand copper conductor for loop earthing etc. as required. (Make of wire Finolex / KEI / POLYCAB)	99.0	NOS		
6	Supply and fixing of multiporpose board Modular type of 6Amp 2nos. Switch and 2nos. Socket with all connection excuding wire. (Make- Anchor/ Legrand/ Havells)	36.0	NOS		

7	Supplying and fixing of metal box (nominal size) on surface or in recess with suitable size of modular base and cover plate in front including providing and fixing 5 pin 15 / 16 amps socket outlet and 15 / 16 amps modular type switch, connection, etc as required. (Make- Anchor/ Legrand/ Havells)	8.0	NOS		
8	Supply & fixing of Modular type 25 Amp one way switch and socket outlet for AC point with metal box and modular cover.	7.0	NOS		
9	Recessed/surface extra lead submain wiring alongwith earth wire with the following size of PVC insulated single core multistrand copper conductor of ISI marked conforming to IS 694/1990 in 20mm dia non metallic heavy duty flexible conduit 1.6mm in surface/recessed PVC conduit as required exceeding to Long point in 2x1.5sqmm + 1x1.5sqmm.	70.0	MTR		
TV/Telephone/Data Wiring:					
9	Supply, delivery, installation, testing and commissioning of modular type TV Antenna/Telephone Outlet/ Data Socket Boards containing a ISI marked Modular TV Antenna/Telephone Socket/ Data socket fixed on Modular Concealed Box including connections and making good the damages caused complete as required and as per Direction of Engineer-In-Charge.	42.0	NOS		
10	Supplying and drawing TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated shielded with fine tinned copper braid and protected with FR PVC sheath in existing surface / recessed steel / PVC conduit as required.	100.0	MTR		
11	Supplying and drawing 2 pair, 0.5 sq.mm FR PVC insulated copper conductor, unarmoured telephone cable in existing surface / recessed steel / PVC conduit as required.	10.0	MTR		
12	Supply & Laying of Cat6 UTP LSZH Cable through existing conduit. The cable should have outer diameter of Cable should be 5.8 ± 0.2 mm and Conductor Diameter 23 AWG, Electrical Parameters: Insertion loss (Attenuation), NEXT, PSNEXT, ELFEXT (ACRF), PSELFEXT (PSACRF), Return Loss, ACR and PS ACR, Insulation Material: Low smoke zero halogen (LSZH) with Insulation Diameter: 0.89 ± 0.01 mm, ETL verified and RoHS Compliant.	2600.0	MTR		
13	Supply and laying of following size rigid PVC conduit pipe (medium) through floor / wall / partition with GI spacer clamps or as directed. Rate to include for accessories - bends, sockets T's etc.				
a	19 mm dia	813.0	MTR		
b	25 mm dia	542.0	MTR		
c	32 mm dia	136.0	MTR		
Submains:					

14	Recessed/surface submain wiring alongwith earth wire with the following size of PVC insulated single core multistrand copper conductor ISI marked conforming to IS-694/1990 in required dia non metallic heavy duty flexible condute 1.6mm in surface/recessed PVC condute as required.				
a	2 x 2.5 sq.mm. + 1 x 1.5 sq.mm.	2430.0	MTR		
b	2 x 4.0 sq.mm. + 1 x 1.5 sq.mm.	460.0	MTR		
c	2 x 6.0 sq.mm. + 1 x 2.5 sq.mm.	80.0	MTR		
d	2 x 10.0 sq.mm. + 1 x 4.0 sq.mm.	10.0	MTR		
e	4 x 4.0 sq.mm. + 2 x 2.5 sq.mm.	240.0	MTR		
f	4 x 6.0 sq.mm. + 2 x 2.5 sq.mm.	160.0	MTR		
g	4 x 10.0 sq.mm. + 2 x 4.0 sq.mm.	20.0	MTR		
15	Supply, delivery, installtion, testing and commissioning of indoor floor mounted type distribution boards made out of high quality Polycarbonate (shock proof, rust free, corrosion free, acid and chemical resistant, fire retardant, having high impact, made of halogen and silica free recyclable material), UV resistant, having high grade gasket made of Polyurethane, should withstand glow wire test at 9600C, should be flame retardant, the cabinete should have test certificate in accordance with IEC 60 439-1 (IS8623), IEC 60 439-2, CPRI (ASTA) (Party should submit copy of all test certificates during offer submitting) The panel should have hinged door with provision for cable entry, earthing studs as per specification mentioned below duly factory wired conforming to the relevant ISS and as per special conditions of contract making good the damages caused complete including necessary civil / fabrication work as required as per the direction of Engineer-in-charge.				
	All MCCB shall confirm to IEC- 60947 and IS-13947. MCCB shall comply with the isolation function requirement of IEC-60947-2 section 7.1.2 to be marked as suitable for isolation / disconnection to facilitate safety of person in use. All MCCB have ics=100% icu and the overload setting should be from 0.7 to 1 times of Ir for thermal magenetic release and for microprocessor release the overload Settings: 0.4 to 1 times of Ir. Manually closing mechanism should be accommodated in a Moulded housing of robust and vermin-proof construction. MCCB shall be provided with double insulation (insulation between front cover and internal power circuits to avoid any accidental contact with live current carrying path with the front cover open) . The tripping devices shall be ambient temperature compensated type. The insulating case shall be made of high strength heat resistant and flame retardant thermosetting insulating material.				
a	Main Distribution Board	1.0	SET		
	Incoming :				
	1 No 100A 4P Thermal magnetic release MCCB (25kA) with ROM & spreader links				
	SPD: 1No 50kA 4P T1+T2				

	MCB 'C': 1 No 63A 10kA 4P				
	Changeover Switch : 1 No 100A 4P On Load (L&T)				
	Busbar : 1 SET, 4Nos 160 Amp Copper Strips. (CD=1.6A/sqmm)				
	Outgoing :				
	3 Nos 63A (25kA) 4P thermal magnetic(TM) MCCB with ROM & spreader links				
	2 Nos 40A (25kA) 4P thermal magnetic(TM) MCCB with ROM & spreader links.				
	2 Nos 40/63A (10kA) 4P MCB 'C'				
	4 Nos 40/63A (10kA) 2P MCB 'C'.				
	1 Set of LED type RYB phase indicating lamps with control fuses & 1no multi function meter with required CT's				
	Complete duly factory wired as per SLD				
b	Floor Distribution Board	2.0	SET		
	Incoming				
	1 No 63A (16kA) 4P thermal magnetic (TM) MCCB with ROM & spreader links.				
	Busbar : 1 SET, 4Nos 100 Amp, 500V Electrolytic Copper Strips. (CD=1.6A/sqmm)				
	Outgoing				
	4 nos 63A 10kA 4P MCB 'C' for 4 way TPN PDB & spare,				
	4 nos 32A 10kA 4P MCB 'C' for 4 way TPN LDB & spare,				
	4 nos 40A 10kA 2P MCB 'C' for Power Circuit & spare.				
	Instruments:				
	1 Set of LED type RYB phase indicating lamps with control fuses.				
16	Supply, delivery, installation, testing & commissioning of L.T. indoor floor/ wall mounted type distribution boards made out of reputed company having provision for cable/ conduit entry, earthing studs as per specification mentioned below duly factory wired conforming to the relevant ISS and as per special conditions of contract making good the damages caused complete as per the direction of Engineer- in-charge.				
a	Inverter BDB (4way SPN DB)	4.0	SET		
	incoming :				
	RCCB : 1 no 25A 30mA 2P				
	outgoing				
	MCB 'C' : 2nos 6-16Amp 10kA SP				
b	Inverter O/P DB (6way SPN DB)	2.0	SET		
	incoming :				
	MCB 'C' : 1 no 32A 10kA 2P				
	outgoing				
	MCB 'C' : 2nos 16Amp 10kA 2P				
c	Light/Computer BDB (12way SPN DB)	1.0	SET		
	incoming				
	1 no of 40A 100mA 2P RCBO				
	outgoing				
	10 nos of 6-32A SP MCB as per SLD				
d	Light/Computer BDB (4way TPN DB)	6.0	SET		

	incoming				
	1 no of 25A 100mA 4P RCBO				
	outgoing				
	12 nos of 6-32A SP MCB as per SLD				
e	Raw Power BDB (4way TPN DB)	4.0	SET		
	incoming				
	1 no of 63A 4P MCB				
	outgoing				
	12 nos of 6-32A SP MCB as per SLD				
	Cabling				
17	Supply, laying & testing of following size of PVC insulated, PVC sheathed, round armoured aluminium conductor power cable of 1100 volt grade laid on surface of wall / column / existing RCC / stone ware / masonry cable trench / cable tray / through G.I. pipe / hume pipe as the case may be, including cost of saddles / clamps / markers etc but excluding the cost of G. I. pipe / hume pipe complete with making good the damages caused and returning the balance unused cables to stores as required and as per direction of Engineer-in-charge.				
a	3 &1/2c x 25 Sq. mm Aluminum armoured cable.	60.0	RM		
b	3 &1/2c x 50 Sq. mm Aluminum armoured cable.	80.0	RM		
	Cable termination:				
18	Supplying and making end termination with brass compression gland and aluminum lugs for following size of PVC insulated and PVC sheathed / XLPE aluminum cable of 1.1 KV as required.				
a	3 &1/2c x 25 Sq. mm Aluminum armoured cable.	4.0	NOS		
b	3 &1/2c x 50 Sq. mm Aluminum armoured cable.	2.0	NOS		
	Earthing:				
19	Earthing with G.I earth pipe 4.5 meter long 40 mm dia ISI marked including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal and salt as required	2.0	SET		
20	Supply of materials and installation of chemical earthing size of chemical earth bar 2 mtr, size of earth pit 3' X 2' X 9' chemical compound to be used 50 kg. There is an arrangements for termination of copper strip of earth continuity conductor including cost of water pouring arrangements, brick masonry enclosure on top with removable cast iron cover complete with labour for excavation of pit in all kinds of soil & rock as required and as per direction of Engineer-in-charge. (For Lift earthing)	1.0	SET		
21	Supplying and laying 25 mm x 5 mm G.I earth strip ISI marked at 0.5 meter below grond level as strip earth electrode including soldering etc. as required	20.0	RM		
22	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	10.0	RM		
23	Supply of material & laying under ground/ floor/ wall including making end termination and testing of following size of Cu/G.I. wire for loop earthing of equipments, switch boards & panels as required complete as per direction of Engineer-in-charge.				

a	6 swg G.I wire	80.0	RM		
b	8SWG HDBC Wire in non mettalic conduit	50.0	RM		
Fittings & Fixtures					
24	Installation and testing of following types of fluorescent tube fixtures directly on wall / ceiling of building with all accessories such as electronics ballast, fluorescent tube lights, stove enamelled box, perpex sheet cover etc complete assembly including supply & fixing of teak wood round block and making connection from the suitable point outlet as per the direction of Engineer-in-charge.				
a	20 watt LED extruded aluminium batten for continuous operation and available in 4ft run length, suitable for surface, wall & conduit mounting (with accessories) similar to make 'Signify' Cat no.BN021C LED22S PSU CW GR complete.	150.0	NOS		
b	10 watt extruded aluminium batten available in 2ft run length with multiple lumen packages and suitable for surface, wall & conduit mounting (with accessories) similar to make Signify' Cat no. BN 021 LED12S 6500 PSU GR complete.	1.0	NOS		
c	12 watt LED slim profile surface mounted downlight similar to make 'Signify' Cat no. SM200C LED11S 6500 PSU OD WH complete.	36.0	NOS		
d	9 watt LED Bulb on existing holder of approved make (Make: Bajaj/ Philips/ Wipro)	16.0	NOS		
e	10 watt or above robust & reliable LED bulk head with IP65 protection & IK08 impact resistance suitable for surface and wall mounting applicationssimilar to make 'Signify' Cat no. WT140W LED7S CW PSU S1 PC complete.	3.0	NOS		
f	30 watt high performance low wattage street light with single die ceramic base high power LED light source, IP66 protection, PDC housing with finless design and high impact resistance (IK08) polycarbonate cover with integrated street light optics. Pole dia.: 32-40mm. similar to make Signify Cat no.BRP046 LED 30 complete.	2.0	NOS		
25	Supply, Installation, Testing and Commissioning of 1200 mm sweep, BEE 5 star rated, Ceiling Fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. Canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CMM/W) minimum 6.85, Air delivery minimum 215 CMM, 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required similar to make Crompton Cat no. Energion HS - 5 Star BEE complete.	64.0	NOS		

26	Supply, delivery, installation, testing & commissioning of wall mounting fan 400mm sweep (Crompton/ Usha/ Bajaj)	2.0	NOS		
27	Supply, delivery, installation, testing & commissioning of metal Exhaust fan 12" sweep (Crompton/ Usha/ Bajaj)	15.0	NOS		
28	Supply, delivery, installation, testing & commissioning of plastic Ventilation fan 150mm sweep (Crompton/ Usha/ Bajaj)	4.0	NOS		
29	Supply & Fixing of electronic call bell ding dong two modular on entrance door way and as per the direction of Engineer-in-charge or Consultant.	1.0	NOS		
30	Testing, commissioning and charging of entire wiring system.	1.0	JOB		
	SUB TOTAL				0.00
	DATA NETWORKING, INTERCOM & CCTV				
	Data Networking System				
31	Supply & fixing of Cat6 24 Port Loaded Solderless Patch Panel,90 Degree (Top Entry) Punch Down Design for Convenient Network Terminations, Removable Module Design , IDC Conductor : 0.5 mm Phosphor Bronze (Base Material), 100µ Tin Plating, Jack Wire: 30µgold plating over 40µ ~ 80µ nickel plating (Square Wire, 360°plated), Standard Verification: RoHS Directive 2002/95/EC/Compliant, ANSI/TIA-568-C.2, ISO/IEC 11801:2002/AMMD.2:2010, ISO/IEC 60603-7 Compliant, UL LISTED. Make:-Legrand/Tyco/Digisol	5.0	NOS		
32	Supply & fixing of Cat6 Factory crimped moulded patch cord, 1mtr with LSZH jacket to reduced toxic/corrosive gasses emitted during combustion,with the ANSI/TIA/EIA-568-C.2, ISO/IEC 11801, RoHS compliant Standard, Supports Data Networks Speeds Up to 10/100-Base-T and 1000-Base-T,ETL Verified 4-Connector Channel performance certificate. Make : Legrand/Tyco/Digisol	72.0	NOS		
33	Supply & fixing of Cat6 Factory crimped moulded patch cord, 2mtr, with LSZH jacket to reduced toxic/corrosive gasses emitted during combustion,with the ANSI/TIA/EIA-568-C.2, ISO/IEC 11801, RoHS compliant Standard, Supports Data Networks Speeds Up to 10/100-Base-T and 1000-Base-T,ETL Verified 4-Connector Channel performance certificate. Make: Legrand/Tyco/Digisol	42.0	NOS		
34	Supply and fixing of 24 Ports Giga Access Layer 2 Switch With 4 GIG SFP,Switching bandwidth of 56 Gbps,Forwarding Rate of 41.67 Mpps ,AC POWER input voltages between 100 and 240V AC , Maximum transmission unit (MTU) of 12K, Jumbo frames of 9216 bytes and MAC Address Table 16k. All hardware should supplied with necessary mounting brackets and IN power cord with 3 years of comprehensive onsite warranty. Make: Cisco/Grandstream/Digisol	3.0	NOS		

35	Supply and installation of 8x 10/100/1000 Ethernet L2 Web-Managed Switch with 4x1 G Combo uplinks Ports. Supports PoE up to 30W per port with 140W total power budget, IEEE 802.1Q VLAN, Access Control List (ACL). All hardware should supplied with necessary mounting brackets and IN power cord with 3 years of comprehensive onsite warranty. Make: Cisco/Grandstream/Digisol	3.0	NOS		
36	Supply and fixing of 9U/500D Wall Mount Rack with Accessories: The rack size should be 600W x 500D, Front frame integrated with top, bottom, front and two side panels for better rigidity and strength, Front Glass Door with Lock loaded, Compliance with standards shall be UL 2416., DIN 41494, IEC EN 60529, IEC EN 62262 , IEC EN 60068-2-11 , ISO 9001:2008 including Power Distribution Unit (06 Amp Indian-Standard - 04 Socket - Single Pole / Screw Mountable / 16 Amp MCB / Alternating Current - 16 Amp 3 Pin Plug with Power Cable 2.5 sq.mm 3 meter Lengt), 1 cooling Fan(230V AC - 90 CFM, dB 42), 1no 1U Metal Cable manager with Plastic cable loops and H/W screw. Make: Valrack/Rittal/ APW	2.0	NOS		
37	Supply and fixing of 6U/500D Wall Mount Rack with Accessories: The rack size should be 600W x 500D, Front frame integrated with top, bottom, front and two side panels for better rigidity and strength, Front Glass Door with Lock loaded, Compliance with standards shall be UL 2416., DIN 41494, IEC EN 60529, IEC EN 62262 , IEC EN 60068-2-11 , ISO 9001:2008 including Power Distribution Unit (06 Amp Indian-Standard - 04 Socket - Single Pole / Screw Mountable / 16 Amp MCB / Alternating Current - 16 Amp 3 Pin Plug with Power Cable 2.5 sq.mm 3 meter Lengt), 1 cooling Fan(230V AC - 90 CFM, dB 42), 1no 1U Metal Cable manager with Plastic cable loops and H/W screw. Make: Valrack/Rittal/ APW	2.0	NOS		
IP Intercom System					
38	Supply & fixing of IP PBX System support up to 500 users and minimum 50 concurrent calls, integrated 1 PSTN trunk FXO ports through External Gateway, 1 analog telephone FXS ports with lifeline capability and up to 50 SIP trunk accounts, Gigabit network ports with Integrates PoE, USB, SD card, Supports up to a 5-level IVR (Interactive Voice Response), Supports any SIP video endpoint that uses the H.264, H.263 or H.263+ codecs. Make: Grandstream/NEC/Mitel	1.0	NOS		
39	Supply & fixing of IP Based PoE Phone, 2 SIP accounts, 2 line keys, 3-way conferencing, 3 XML programmable context-sensitive soft keys, Dual-switched 10/100 mbps ports, integrated PoE, HD audio on speakerphone and handset. Make: Grandstream/NEC/Mitel	8.0	NOS		
IP CCTV Surveillance System					

40	Supply & fixing of 5MP Dome/Bullet IR Network Camera (1/3" CMOS sensor, Mini. Pixel of 2688*1520 or higher video quality, frame rate of Up to 25fps, Ultra 265, H.265, H.264 & MJPEG video compression, 2.8mm Fixed lens, physical ICR filter of both day and night, 30mtr IR Distance,120dB WDR ,3Streams Supported, WDR , 3D-DNR for noise reduction, BLC, ICR, EXIR, Audio In and Out, Alam in and Out. IPv4/IPv6 network supported, IP67, IK10 rated for weatherproofing, ONVIF ver 2.2 or higher, PoE IEEE 802. 3af (UL, FCC, CE, BIS certified.) with accessories as require. Make- Bosch/Hifocus/Milesight	19.0	NOS		
41	Supply & fixing of 32Ch Network Video Recorder, Support Ultra H.265/H.265/H.264 video formats Supports mainstream cameras of ONVIF conformance(Profile S, Profile G, Profile T and RTSP protocols. Support 2-ch HDMI, 1-ch VGA. HDMI1 and HDMI2 up to 4K (3840x2160) resolution Up to 12 Megapixels resolution recording. Support RAID 0, 1, 5, 6, 10, 8 SATA HDDs, Up to 10TB for each HDD. Support cloud upgrade. Make-Bosch/Hifocus/Milesight	1.0	NOS		
42	Supply & fixing of 8TB Surveillance Hardisk. Make: Segate/WD	8.0	NOS		
43	Supply & fixing of 55" UHD IPS Commercial Digital Display for Small Size Discussion & Chambers: Brightness (330 nits or higher), Dynamic Contrast Ratio (Dynamic MCI (Hz)):1000000:1, 1000000:1, Static (Panel) Contrast Ratio-1200:1, Response Time (G to G)-8 ms, Refresh Rate.-60 Hz, Life span (hrs)-30,000, Speaker (Sound Output):10W + 10W, Speaker System: 2.0 ch, DVB-T2/C Broadcasting System, Commercial Smart UX, webOS version (webOS 6.0), BIS Certification with 3 years onsite warrenty. Make: Samsung/ LG /SONY	1.0	NOS		
SUB TOTAL FOR IP					
GRAND TOTAL					