

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

STATE BANK OF INDIA

ELECTRICAL BOQ FOR SBI RBO, ALIGARH (BLOCK-1, 2 & 3)

Date: 11-11-2025

Rev R2

S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
A. 1	Wiring for light point/ fan point/ wall fan point/ exhaust fan/ light sockets etc. with 1.5 sq.mm. PVC insulated 1100 V Grade copper conductor (FRLS) wires & 1.5 sq.mm. copper earth wire in concealed/ surface using 16 SWG MS conduits, accessories such as bends, tees, saddles, draw boxes, mounting boxes, inner plates, cover plates, ceiling rose etc (wherever required) and chromium plates brass screws/ rowel plug etc. The circuit wiring starting from DB to point control box/ switch box using 2 X 2.5 sq.mm PVC insulated 1100 V grade multi- stranded copper conductor wire & 2.5 sq.mm. PVC insulated earth wire (color code to be used). (Flexible conduit/ elbow not allowed). The conduit to be laid in ceiling with proper clamps/ wall/ floor and filling the chase with cement mortar and finishing the same in original form/ wooden partition/ above false ceiling with proper clamps etc. all complete.				
	(Wherever required as per standard specifications).				
	i) Each circuit shall have independent earth wire.				
	ii) Each point shall be earthed.				
	iii) Circuit wiring is to be included in point wiring rates.				
i	One light points controlled by one 6 amp. Modular switch	Nos.	31.00		
ii	Two light points controlled by one 6 amp. Modular switch	Nos.	33.00		
iii	Three light points controlled by one 6 amp. Modular switch	Nos.	17.00		
iv	Four light points controlled by one 6 amp. Modular switch	Nos.	16.00		
v	Five light points controlled by one 6 amp. Modular switch	Nos.	5.00		
vi	One call bell point with ceiling rose/ 6amp. 3 pin socket controlled by one 6 amp. Push Modular switch. With call bell	Nos.	4.00		
vii	One wall fan/ exhaust fan point controlled by one 6 amp. Modular switch. The switch should be at switchboard level	Nos.	45.00		
viii	One 5 pin socket controlled by one 6 amp. Modular switch complete assembly includes plate box etc.				
a	Dependent	Nos.	14.00		
ix	Main specification as above for wiring / conduits, but using 2*2.5 + 1*2.5 Sqmm Copper Conductor FRLS wires from DB to first 6A, 5 Pin modular socket controlled by one 6A switch and looped to the nearest second point with same 2*2.5 + 1*2.5 Sqmm copper conductor wires FRLS insulated 1100V grade (max 3 points per circuit).				
a	Primary	Nos.	26.00		
b	Secondary	Nos.	50.00		

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

x	Same as serial no 1 but using 2*2.5 + 1*2.5 Sqmm Copper Conductor FRLS wires from DB to first 16 Amp MCB two Nos. for Glow sign Board.				
	Primary	Nos.	6.00		
2	POWER POINTS				
i	Same as serial no.1, but wiring for 16 Amp, 6-pin sockets by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire with independent 1* 4.0 sq.mm earth wire from D.B. to first point 1 st socket and 1 st to 2 nd , socket with 2*2.5 sq.mm. and 1*2.5 earth wire including providing and fixing of 16 Amp, 6 –pin socket with 16 Amp. Switch. (Modular type switch/ socket/ plate etc. complete assembly).				
a)	Primary point	Nos.	16.00		
b)	Secondary point	Nos.	18.00		
3(a)	Same as serial no.1, but wiring for A/C socket by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*4.0 sq.mm. PVC insulated 1100 V grade copper conductor wire with modular type AC box(tiny trip type) with socket complete in all respects controlled by 25/32 A SP MCB to be provided near indoor unit. The point starts from DB to stabilizer to the point near the indoor unit including top.	Nos.	6.00		
(b)	Same as serial no.1, but wiring for A/C socket by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*4.0 sq.mm. PVC insulated 1100 V grade copper conductor wire of weather proof type 2 way SPN DB complete in all respects controlled by with 32 Amp (10 KA) MCB to be provided near outdoor unit. The point starts from DB to the point near the outdoor unit. Item to also include termination lid between MCB and outdoor unit.	Nos.	9.00		
4	COMPUTER POINTS				
a	Wiring with 2x2.5 sq.mm. + 1x2.5 sq.mm. PVC insulated 1100 V grade multi stranded copper conductor wires in 2 mm thick PVC conduit from UPS DB to computer point. Each point to have 3 nos. 6 amps. 5 pin modular type sockets, one 6 amps modular switch & one LED indicator with all accessories, inner/ outer plates, metal box etc. and to be fixed on wooden partitions/ by grouting on wall etc. as per requirement at site. The switch with indicator should be fixed above the top of counter with indicator and sockets under the counter with indicator, looped from the above 1st point to 2nd point and 2nd point to 3rd point (maximum 3 points in circuit).				
	Primary	Nos.	21.00		

BLOCK-1

	Secondary	Nos.	39.00		
b	Wiring with 2x2.5 sq.mm + 1x2.5 sq.mm PVC insulated 1100 V grade multi stranded copper conductor wires in 2 mm thick PVC conduit from UPS DB to computer point. Each point to have 1 nos. 16 amps 5 pin modular type sockets, 1 No's 16 amps modular switch with all accessories, inner/ outer plates, metal box etc and to be fixed on wooden partitions/ by grouting on wall etc as per requirement at site. The switch should be fixed above the top of counter and sockets under the counter. or as directed by the engineer incharge for the E-lobby, Fire, Token Vending.				
	Primary	Nos.	3.00		
	Secondary	Nos.	4.00		
c	Supply, installation, testing and Commissioning of simply elegant modular table top connectivity solution for conference tables with luxuriously finished metal surfaces and one-touch, fully-retracting lid with Multi-connectors for data and power connection. Connectors 1x HDMI, 1x VGA with audio, 1xLAN, 1x Universal Power, 1x USB and 1x 3.5mm Audio jack with retractable cable management solution complete with standard accessories as required.	Nos.	6.00		
d	Supply , installation , testing and comissioning of HDMI Cable with High-Quality Connectors — 24K gold-plated connectors resist corrosion, and offer the best possible connectivity and provides 4K@60Hz (4:4:4) resolution complete with standard accessories as required	Mtr	50.00		
e	Supplying,installation,testing and commissioning of Passive Infrared(PIR) technology based occupancy sensor having high preformance, non regulating programmable type, suitable for connected load upto 10Amp , for mounting height up to 2.8 mtr and for 5 m diameter coverage area along with necessary fixing arrangements i/c programming at site etc. complete as required..	Nos.	2.00		
B.	CONDUITING FOR TELEPHONE, COMPUTER & CONDUITING, WIRING FOR T.V. SYSTEM.				
1	TELEPHONE SYSTEM				
1.1	Wiring for VOICE from Jack Panel in data rack to computer workstation with Cat-6 voice cable in PVC conduits of size 20/ 25 mm including providing ferrules at both ends and termination at both ends including providing & fixing frame for telephone socket with shutter, RJ 47 outlet, faceplate and mounting box complete of modular type. This work includes supply and laying of high speed CAT-6 cable in PVC conduits/raceway throughout the lenght, from the I/O hub to the point.	Nos.	46.00		
1.2	Supplying, laying, effecting terminations, testing and commissioning of 0.51 mm dia Cu. Conductor, twisted, colour coded with polythene capor barrier, telephone cables in the existing tray or in conduit including providing &fixing conduit pipe or cable tray as required from building tag block to the floor as required				

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

a)	Supplying & fixing 10 pair krone tag block with enclosure.	Nos.	1.00		
b)	Supplying & fixing 50 pair krone tag block with enclosure.	Nos.	1.00		
c)	P/L 10 Pair of PVC insulated PVC sheathed multi core jelly filled armored telephone.	Mtrs.	50.00		
c)	P/L 30 Pair of PVC insulated PVC sheathed multi core jelly filled armored telephone.	Mtrs.	70.00		
2	COMPUTER NETWORKING				
	Wiring for computer networking from Jack Panel in data rack to computer workstation with Cat-6a computer cable in PVC conduits of size 20/ 25 mm including providing ferrules at both ends and termination at both ends including providing & fixing frame for Cat-6a with shutter, RJ 45 outlet, faceplate and mounting box complete of modular type, This work includes supply and laying of high speed CAT-6a cable in PVC conduits/raceway throughout the lenght, from the I/O hub to the point.	Nos.	66.00		
a	Supplying and fixing 6 U (Rack with glass door, opening in the front power panel 1 (horizontal), cable manager 1 lock & key).	Nos.	1.00		
b	Supplying and fixing 12 U (Rack with glass door, opening in the front power panel 1 (horizontal), cable manager 1 lock & key).	Nos.	2.00		
c	Supply, Installation, Testing & Commissioning of 12 port Jack Panel.	Nos.	1.00		
d	Supply, Installation, Testing & Commissioning of 24 port Jack Panel.	Nos.	6.00		
e	Supplying and fixing Patch Cord-2 Meter- (DBPS Mounting Cord)	Nos.	48.00		
f	Supplying and fixing Patch Cord-1 Meter-	Nos.	110.00		
C.	CABLES, MAINS & SUBMAINS				
1	Supplying all materials and laying/ pulling 1100 volts grade PVC insulated copper conductor wires (FRLS) in MS conduit with all fixing accessories after cutting the floor, wall and the like etc. and replastering the floor level to original. Conduit must be 30 mm below the floor finish level.				
i	3CX 6 sq.mm. + 1 X 6 sq.mm.	RM	30.00		
ii	Supplying, laying, testing & commissioning of 3 C X 6 sq.mm. at 1100 volts grade PVC insulated copper conductor armoured cable with 10 SWG GI earthing wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (UPS & P)	RM	50.00		
iii	Supplying, laying, testing & commissioning of 4 C X 16 sq.mm. at 1100 volts grade PVC insulated aluminium conductor armoured cable with 10 SWG GI earthing wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification. (FOR Light , Power & UPS)	RM	40.00		

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**

Date : 2025-05-03
Stage : R0

BLOCK-1

iv	Supplying, laying, testing & commissioning of 4 C X 25 sq.mm. at 1100 volts grade PVC insulated aluminium conductor armoured cable with 10 SWG GI earthing wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (FOR AC DB)	RM	40.00		
v	Supplying, laying, testing & commissioning of 4 C X 35 sq.mm. at 1100 volts grade PVC insulated aluminium conductor armoured cable with 10 SWG GI earthing wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (Main Supply to VTPN)	RM	50.00		
vi	Supplying, laying, testing & commissioning of 4 C X 50 sq.mm. at 1100 volts grade PVC insulated aluminium conductor armoured cable with 8 SWG GI earthing wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (FOR DC)	RM	40.00		
vii	Supplying, laying, testing & commissioning of 4 C X 95 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 8 SWG GI earthing wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (for Main Connection)	RM	100.00		
D	CABLE TRAY & RACEWAY				
a	Supplying and fixing of following size of Perforated hot dipped GI cable tray with perforation not more than 17.5% in convenient section, joined with connector, suspended from the ceiling with M.S. suspenders including bolts, nuts & washer, painting suspenders etc as required. Rates shall be included tee, elbows & reducers etc				
i	300x75 mm, 2mm thick Cable tray	RM	10.00		
b	Fabricating, supplying to site & installation in the floor including chase cutting of floor, leveling, refilling and making good the same 1.6 mm thick G.I raceways of height 40 mm and 2.0 mm thick openable cover, totally enclosed, The two lengths of channels and junction box shall be nut bolted together to make it dust and water proof. complete with all fixing accessories as required				
i	150 mm (wide) x 50 mm (height)	RM	10.00		
E	DISTRIBUTION BOARD				

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

	Supplying, installing, testing & commissioning of surface/ recessed mountings, Double door 415 volts TPN MCB distribution board of steel steel, 1.6mm thick dust phosphatized and painted, inclusive of 100 amps, tinned copper busbars, earthbar, common neutral link, din bar for mounting of MCB's detachable gland/ knock out plate & with built in loose wire boxl, and superior make terminal connectors for all incoming and outgoing circuits duly prewired with adequate size of PVC insulated copper wires between the bus bars and the MCB's as well as the incomer and upto the terminal connectors/ neutral link and ready for installation of following ways as required.				
	Use 'B' curve MCB's for lighting & small power circuits, 'C' curve for motor duty i.e. for pumps, AC motors, window and split AC's etc. & 'D' curve for UPS DB's i.e. for computers/ PC's circuit. Main incomer & outgoing circuit MCB's shall be selected accordingly i.e. type B,C & D. Contractor to select the MCB's accordingly as per the nature of the circuit/ load.				
	Each DB shall have separate neutral links of rating not less than 100A for each phase. The main incoming neutral link shall be in addition to three outgoing neutral links and shall be of 125 A.				
	UPS DB's shall have a dedicated Earthing link fixed on insulated supports, which will be in addition to body earth link.				
	All internal inter connecting wiring with in the DB's shall be PVC insulated flexible copper conductor wires of adequate capacity as per the current rating.				
	Inside each DB, a DB chart is to be fixed.				
a	6-way TPN DB (LIGHT & POWER DB)	No.	2.00		
	Incomer:-				
	1 No. 63 Amp TPN (10 kA) MCB with 40 A DP RCCB (100 mA) each phase				
	Outgoing:-				
	12 Nos.10/16/25 Amp (10 kA) SP MCB				
b	8-way TPN DB (Light & 6A Raw)	No.	2.00		
	Incomer:-				
	1 No. 63 Amp TPN (10 kA) MCB with 40 A DP RCCB (100 mA) each phase				
	Outgoing:-				
	18 Nos.10/16/25 Amp (10 kA) SP MCB				
c	4-way TPN DB (Power DB& AC)	No.	3.00		
	Incomer:-				
	1 No. 63 Amp TPN (10 kA) MCB with 40 A DP RCCB (100 mA) each phase				
	Outgoing:-				
	6 Nos.16/25 Amp (10 kA) SP MCB				
d	8-way SPN DB (UPS INPUT)	No.	1.00		
	Incomer:-				

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

	1 No. 63 Amp TPN				
	Outgoing:-				
	2 Nos.40 Amp DP MCB				
e	2-way SPN DB with 40 A DP MCB (For UPS Input / output)	No.	2.00		
f	12-way SPN DB (For UPS DB)	No.	1.00		
	Incomer:-				
	1 No. 40 Amp DP (10 kA) MCB with 40 A DP RCCB (100 mA)				
	Outgoing:-				
	8 Nos. 10/16 Amp (10 kA) SP MCB				
g	16-way SPN DB (UPS OUTPUT)	No.	1.00		
	Incomer:-				
	1 No. 40 Amp DP (10 KA) MCB with 40 A DP RCCB (100 MA)				
	Outgoing:-				
	12 Nos.6/10/16 Amp (10 KA) SP MCB				
h	4-way V-TPN DB (for distribution)	No.	2.00		
	Incomer:-				
	1 No. 63 Amp TPN (16kA) MCCB				
	Outgoing:-				
	9 Nos. 25/32 Amp (10 kA) TP MCB				
i	4-way V-TPN DB (for distribution)	No.	2.00		
	Incomer:-				
	1 No. 100 Amp TPN 4 Pole (16kA) MCCB				
	Outgoing:-				
	4 Nos. 63 Amp (10 kA) TP MCB				
F.	(LIGHT FITTINGS & ACCESSORIES)				
	Supplying, installation with hanging support, testing and commissioning of following light fixtures with electronic Ballasts, Tubes, lamps, all fixing materials including connecting wires etc. all complete as per the directions of Engineer-in-charge (All LED Light Fixures should be covered with minimum 1 Years onsite replacement warranty).				
i	2 X 2 Panel LED 31 W 5700K (3400 lm) Slim panel , as specified in tender document or approved by SBI/ Architect. Make: Wipro Garnet (code D414065- 31 W / 6500K).	Nos.	12.00		
ii	Supplying, fixing, testing and commissioning of 32 W LED down lighter (4') of make As specified in tender document or approved by SBI/ Architect. Make: Wipro - LM31 Helios (LD90-231-xxx-65-xx***) or of higher	Nos.	39.00		
iii	Supplying, fixing, testing and commissioning of 18 W LED down lighter of make As specified in tender document or approved by SBI/ Architect. Make: Wipro - LD90 Helios (LD90-231-xxx-65-xx***) or of higher	Nos.	75.00		

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03

Stage : R0

iv	Supplying, fixing, testing and commissioning of 3W LED mini Stop Lights, 2700K make As specified in tender document or approved by SBI/ Architect.	Nos.	10.00		
v	Supplying, fixing, testing and commissioning of 12 W COB Light, make As specified in tender document or approved by SBI/ Architect. Make: Wipro - DC11640 (4000K) or of higher	Nos.	64.00		
vi	Supplying, fixing, testing and commissioning of LED batten light of 9W 600mm fixture length, surface mounted make As specified in tender document or approved by SBI/ Architect.	Nos	6.00		
vii	LED Strip (NEON) for cove lighting 6.5 W per mtr. with driver, jointer and necessary installation supporting fittings of Led strip light (50 mtr.) make as specified in tender document or approved by SBI/ Architect. Code : DF82827- wipro / 120 led (2700K) / meter type or higher as per SBI's approval. Note : to be fixed with clips / clamps with the base surface for strainght & permanent alignment.	Nos.	3.00		
viii	Wall mounted fans 400/450 mm dia. make As specified in tender document or approved by SBI/ Architect. (METAL BODY). Make: Orient Tornado wall-II or higher	Nos.	29.00		
ix	Supply & fixing of 150 mm exhaust fan with louvers and plastic body with all accessories etc. complete of make As specified in tender document or approved by SBI/ Architect. Make: Orient (Smart Air), white body colour, with fins or higher	Nos.	15.00		
G.	PUBLIC ADDRESS SYSTEM				
1	Point wiring : Supply and laying Wiring of 1.5 sq mm twin core shelded type of speaker cable with Providing and fixing in position the following FRLS PVC conduits including all accessories concealed/exposed in F.Ceiling/Wall complete as required including 1.6/2.0 mm thick PVC junction or pull boxes with 3mm thick perspex sheet cover plate complete with 1.6 mm dia G.I. pull wires in the length of conduit. including all accessories.	Nos.	14.00		
2	Supply, installation, testing and commissioning of following Philips (BOSCH) make Music Accessories / Equipments.				
a.	Ceiling Speaker Unit 6 Watts	Nos.	14.00		
b	Power Amplifier, min 50 Watts with output transformer etc. complete. Plena Range/ Ahuja or as approved by the Bank capable of taking Inputs from USB Also.	Nos.	2.00		
H.	EARTHING SYSTEM				

BLOCK-1

1	Supply, Installation, Testing and Commissioning of Maintenance Free Earthing system made up of copper-bonded rod of 10 feet length, 23 mm dia. (Minimum copper bonding shall be 0.25mm) along with Rod-to-Conductor connectors, Earth enhancement material, Pit Cover and other accessories as required and as per specification and other applicable codes (include chamber for earthing, Earthing certificate to be submitted along with the bill).	Nos	4.00		
2	Supply, Installation, Testing and Commissioning of Maintenance Free Earthing system made up of copper-bonded rod of 10 feet length, 17.2 mm dia. (Minimum copper bonding shall be 0.25 mm) along with Rod-to-Conductor connectors, Earth enhancement material, Pit Cover and other accessories as required and as per specification and other applicable codes (include chamber for earthing, Earthing certificate to be submitted along with the bill).	Nos	2.00		
3	Providing and fixing of Copper/ GI strips in surface or in recess for loop earthing etc. as required.				
i	Providing and fixing 2 X 8 SWG dia. Cu earth wire in PVC conduit on surface or in recess for loop earthing along with the existing surface/ recess cable as required with using of copper lug at end termination	RM	100.00		
ii	25 x 6 mm strip	RM	40.00		
4	Providing and fixing G.I. earth link with insulator and 10 nos of nut, bolt, washer, and spring washer for earth wire connecting in UPS room.	Nos.	4.00		
I.	MAIN PANEL AND METER BOARD				
1	supply, installation, testing and commissionings of cubicle type floor/wall mounted L.T. Metal D.B of reputed make with extendible rotary handle and extended connecting links				
	1 No. 160 Amps, TPN MCCB (25 KA) with standard enclosure as per manufacturer specification or as approved by the architect/Bank's Engineer	Nos.	1.00		

BLOCK-1

2	Designing, fabrication, supply, installation, testing and commissionings of front operated cubicle type compartmentalised, front access, free standing on 75MM "I" MS channel, dust and vermin proof (IP 42 degree protection) panel suitable for use at 415V, 3 phase, 4-wire/XLPE Cable 50Hz system suitable for fault level of required value symmetrical at 415V fabricated from 2 mm thick CRCA MS sheets with hinged, gasketted (Metal based neoprene) locable doors having structural reinforcement including 3 mm thick gland plates on top and bottom, lifting hooks, GI earth strip of required size with 2 nos earth terminals, 1 nos 230V AC operated 250 mm X 250 mm size axial fans for exhaust of heat with On-Off toggle switches including 2 coated primer and 2 power coated paint finish of approved shade over metal surface cleaned and treated with seven tank process complete with interconnections etc as per specifications as required. main panel board of approved make (Supertech Power Control/Zeniya/Ampotech/Shwtech) or make as approved by architect/SBI.				
	Type of Approval as instructed by the SBI/ Architect). All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The busbars insulation shall be with heat shrinkable sleeves SMC/ DMC shrouds and busbar supports shall be used. Padlocking facility shall be provided on all outgoing feeders doors and switch handles shall be locable in OFF position.				
	Suitable arrangement shall be made for termination of multiple incoming cables.				
	All kA values indicated shall be lcs breaking capacity				
	GA drawings shall be got approved by Architect / SBI				
a.	Floor panel shall consists of : -				
	INCOMER FROM MAIN LINE				
i.	1 No. 160 Amps, TPN MCCB (25 KA) with extendable rotary handle each thermal over current, instantaneous, Short circuit release, Earth fault.				
	BUSBARS				
	200 amps TPN pole busbar chamber of suitable length with copper busbars. All busbars and interconnections shall be of suitable size copper strips.				
	INDICATING PANEL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A, PF etc. with 3 Nos. current transformers of 160/5A ratio, 10 VA Class-1.0 metering. - 1 sets				

BLOCK-1

	Red/Blue/Yellow three phase indicating lamps with SP MCB backup protection.				
	Restricted Earth fault relay with 3 Nos. current transformers of 160/5 ratio, 10 VA Class 5P 10 (Numeric Relay not required)				
	OUTGOINGS:-				
	4 Nos 63A TPN MCCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. For capacitor Bank AND AC VTPN,				
	INCOMER FROM MAIN PANEL BUS BAR				
	1no. 160 Amp 4P On Load Change over switch with 1 No. 125 Amps,TPN MCCB (25 KA) with extendable rotary handle each thermal over current, instantaneous, Short circuit release,Earth fault.				
	BUSBARS				
	125 amps TPN pole busbar chamber of suitable length with copper busbars. All busbars and interconnections shall be of suitable size copper strips.				
	INDICATING PANEL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A, PF etc. with 3 Nos. current transformers of 100/5A ratio, 10 VA Class-1.0 metering. - 1 sets				
	Red/Blue/Yellow three phase indicating lamps with SP MCB backup protection.				
	OUTGOINGS:-				
	4 Nos 63A TPN MCCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For Block distribution, UPS & SPARE)				
	The electrical panel as described above and specifications complete.				
	3 Nos 63A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For PDB, & SPARE)				
	2 Nos 40A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For LDB)				
	2 Nos 40A DP MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars. (For SIGNAGE)				
	The electrical panel as described above and specifications complete.	Set	1.00		
3	Capacitor Panel				
	Supplying, installation, testing & commissioning of 35 KVAR, APFC Panel auto operation and power factor should be nearing unity complete as required including all contactors, relays, indicating units etc. as required at site". Capacitor make: L&T/ ABB/ Siemens/ Havells or equivalent.	Set	1.00		

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

A	TOTAL FOR Electrical works BLOCK - 1,2, 3				
	(microphone ssysytem for Conference room)				
S.No.	DESCRIPTION OF WORKS	UNIT	QTY	RATE	AMOUNT
1	Supply of 6.5" TWO-WAY PASSIVE COAXIAL CEILING SPEAKER, Program Power: 60 W (direct) Frequency Response (-10dB): 60 Hz – 20 kHz Maximum SPL (1m): 109 dB (musical program) Ceiling Speaker / Amate Audio or equivalent	nos	8.00		
2	Supply of four multi-channel professional Class-D amplifier, with output power@ 8Ω /Ch 200W×4, Output power@ 4Ω /Ch 350W×4, Bridge@8Ω 650W×2, Bridge@4Ω (not recommended), Frequency Response 20Hz – 20kHz (±0.5dB), THD+N <0.05% @ 8Ω 1kHz, S/N Ratio >98dB (Aweighted), Damping Factor >500 (1kHz @ 8Ω), Input Sensitivity 0.775V / 1.44V, Input Impedance Amplifier / Louis Martin D4200 or equivalent	nos	1.00		
3	Supply of Chairman Unit, Robust aluminum alloy die-cast body, Integrated Shotgun microphone with high-sensitivity cardioid pick-up pattern, LED ring status indication: Red when mute and Green when active, High-quality tactile speak button with LED light status and override button to mute all other delegate units. Chairman Microphone Unit / Erthpot NCS-5C or equivalent	nos	1.00		
4	Supply of Delegate Unit, Robust aluminum alloy die-cast body, Integrated Shotgun microphone with high-sensitivity cardioid pick-up pattern, LED ring status indication: Red when mute and Green when active, High-quality tactile speak button with LED light status. Delegate Microphone Unit / Erthpot NCS-5D or equivalent	nos	14.00		
5	Supply of Control Unit Conference Systems, 1 Wired loop In-Out connectivity to microphone units on standard Cat5e Network Cables, Multiple speech modes – FIFO, Automatic (with time limit), Request, Sound Activated, Supports Camera connection and tracking of the speaker through RS232 & RS422 communication ports, System Expandability of up to 110 units using external power supply for discussion units, Automatic Gain processing technology to prevent feedback and improve voice clarity. Control Unit / Erthpot NCS 110CU or equivalent	nos	1.00		

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

6	Supply of Digital Signal Processor with 4 Analog Input Channel , 4 Analog Output Channel, Number of GPIOs 8, 232 Number of serial ports 1, 485 Number of serial ports 1, ETHERNET 1, USB 1 x USB Bidirectional interface, D/A dynamic range 120dB , Channel isolation >100dB , Frequency response 20 to 20kHz (±0.2dB) , Output impedance 100 Ω balance, 50 unbalance, POWER: 220V AC power input connector and power switch. Digital Signal Processor / Erthpot Keyer 44 or equivalent	nos	1.00		
7	SITC of Cat5 TypeB 3 Meter Network cable. Cat5 Cable / Erthpot NC3M or equivalent	nos	14.00		
8	Supply of Cat5 TypeB 10 Meter Network cable. Cat5 Cable / Erthpot NC10M or equivalent	nos	2.00		
9	SITC of Speaker Cable professional audio cable are multicore PVC has oxygen free copper 1.5sqm mm 100mtr. Roll Speaker Cable / Krystals or equivalent	roll	1.00		
10	Supply of 9U Equipment rack Audio Rack with locking wheel, cooling fan, cable tray manager , power socket, etc, Equipment Rack / Data Rack	nos	1.00		
11	Installation & Commisioning & Programing & Testing with connectors Installation / job	job	1.00		
B	Total for microphone sysytem for Conference room				

PROPOSED RESTORATION & ALLIED CIVIL WORKS OF RBO MAIN BRANCH ALIGARH

S. No	Description	Unit	Quantity	DSR Rate	Amount
1	<u>Keyword: Excavation Work</u> Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) (<i>includng paver removal, PCC removal, stone paving removal or similar work if required</i>) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.	cum	37.01		

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

2	<u>Keyword: Backfilling</u> Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 50 and for all lift.	cum	5.61		
3	<u>Keyword: brickbat</u> Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-charge.	sqm	74.00		
4	<u>Keyword : Sandfilling</u> Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.	cum	7.44		
5	<u>Keyword : PCC</u> Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering- All work up to plinth level (Grade M15) 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources: 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	7.44		
6	<u>Keyword : PCC above G.L</u> Providing and laying cement concrete in walls, flooring (any thickness) including coping, bed blocks, floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing: 1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)	cum	7.44		
7	<u>Keyword : RCC u NP PIPE</u> Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete 300 mm dia. R.C.C. pipe	rmt	186.00		

Estimate - Electrical Works :
Proposed Interior renovation works at **RBO Aligarh**
BLOCK-1

Date : 2025-05-03
Stage : R0

8	<p><u>Keyword : IC Chamber</u></p> <p>Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:</p> <p>inside dimensions 455x610 mm and 45 cm deep for single pipe line :</p> <p>With common burnt clay F.P.S. (non modular) bricks of class designation 7.5</p>	each	14.00		
9	<p>Making hole in brick masonry wall for pipe fixing, size 300x300mm, including</p> <ul style="list-style-type: none"> -Cutting and removing bricks to form hole. - Preparing and fixing hole with mortar - Finishing with neat cement - The hole shall be cut carefully to avoid damaging surrounding bricks. - The mortar used for filling the hole shall be of same mix proportion as used for original construction. - The neat cement finish shall be smooth and even. 	each	14.00		
C	Total for Civil works Block 1 2 & 3				
	Summary				
A	TOTAL FOR Electrical works BLOCK - 1,2, 3				
B	Total for microphone sysytem for Conference room				
C	Total for Civil works Block 1 2 & 3				
	Total (A+B+C) for deciding L1				
<p>The rates quoted includes all other taxes , duties , loading, unloading , transportation, other expenses etc to site. only GST will be paid Extra</p>					