

Subject	Proposed Interiors for State Bank of India Branch Office & RACC at Patiala Road, Rajpura (Pb). Br. Code – 50016 & RACC - 63450.				
	<b>Boq - Electrical -1</b>				
	<b>ITEM DETAILS</b>	<b>QTY.</b>	<b>UNIT</b>	<b>RATE</b>	<b>AMOUNT</b>
	<b>PART- A :</b>				
	<b>PART- I : PANELS , KIT KATS &amp; CABLES</b>				
1	Providing and fixing of 03 no 500 Amps KITKAT with 1 no neutral link on suitable size of Bakelite sheet of thickness not less than 12 mm complete as required	1.00	job		
2	<b>MAIN PANEL :</b> Supply at site installation testing and commissioning of panel fabricated with 16 G MS sheet. The panel shall be free standing type totally enclosed dust and vermin proof construction with rubber gaskets. The floor mounting panel shall have ISMC mounting channels, GI earth busbar, busbar chamber ,cable alleys interconnection with solid bar/PVC insulated copper conductor as per requirement, and suitable supports of busbars. The panel shall be painted with two coats of enamel paint ( Grey shade) over primer and shall also be provided with designation of Incoming and outgoing feeder as details below:				
	<b>INCOMING</b>				
	1 no MCCB Breaking Capacity 25 KA 250 Amp 4P , L&T make				
	1 no 0 -500V digital Voltmeter in separate compartment and digital Amp meter and one set of CTs ( 3 Nos ) with CT Ratio 200/5 A with LED type phase Indication Lamps with protection fuses in a separate compartment				
	200 Amps capacity 4 strips Aluminium bus bars.				
	<b>OUTGOING</b>				
	1 nos MCCB Breaking Capacity 10 KA 200 Amp 3P and 5 nos MCCB Breaking Capacity 10 KA 100 Amp 3P with seprate neutral Link, L&T make.	1.00	set		
3	<b>EMERGENCY PANEL:</b> Supply at site installation testing and commissioning of panel fabricated with 16 G MS sheet. The panel shall be free standing type totally enclosed dust and vermin proof construction with rubber gaskets. The floor mounting panel shall have ISMC mounting channels, GI earth busbar, busbar chamber ,cable alleys interconnection with solid bar/PVC insulated copper conductor as per requirement, and suitable supports of busbars. The panel shall be painted with two coats of enamel paint ( Grey shade) over primer and shall also be provided with designation of Incoming and outgoing feeder as details below:				
	<b>INCOMING</b>				
	1 no MCCB Breaking Capacity 25 KA 200 Amp 4P , L&T make				
	1 no 0 -500V digital Voltmeter in separate compartment and digital Amp meter and one set of CTs ( 3 Nos ) with CT Ratio 200/5 A with LED type phase Indication Lamps with protection fuses in a separate compartment				
	200 Amps capacity 4 strips Aluminium bus bars.				

	<b>OUTGOING</b>				
	5 nos MCCB Breaking Capacity 10 KA 100 Amp 3P and 6 nos MCCB Breaking Capacity 10 KA 63 Amp 3P with seprate neutral Link, L&T make.	1	set		
4	Supply, Installation, testing & commissioning of PVC insulated PVC sheathed armoured cable of 1100 V ( IS ;1554 Part 1) and fixing of cable on wall with suitable size of clamps /saddles or laid in floor/recess wall including cutting of wall /floor and making good the damages etc complete as required of following sizes (ISI marked). <b>(Make: Havells/ RR Kable / KEI/Finolex/)</b>				
a)	3.5X95 sq. mm aluminum conductors armoured cable with two Nos. 8 SWG GI wire	70.00	mtr.		
b)	3.5X35 sq. mm aluminum conductors armoured cable with two Nos. 8 SWG GI wire	80.00	mtr.		
c)	3.5X25 sq. mm aluminum conductors armoured cable with two Nos. 8 SWG GI wire	250.00	mtr.		
d)	4.0 x 10 sq.mm. Aluminium conductor with 2 no. 8 S.W.G. GI wire. Panel to Motor.	150.00	mtr.		
e)	3X6 sq. mm <b>copper conductors armored cable</b> with one Nos. 8 SWG GI wire (For UPS Supply only)	150.00	mtr.		
f)	3X2.5 sq. mm <b>copper conductors armored cable</b> (For AC Supply - AC DB to metal clad box)	60.00	mtr.		
5	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium/Copper conductor cable of 1.1 kV grade as required.				
a)	3.5X95 sq.mm aluminum conductor	4.00	no.		
b)	3.5X35 sq.mm aluminum conductor	6.00	no.		
c)	3.5X 25 sq.mm aluminum conductor	14.00	no.		
d)	4.0 x 10 sq.mm. Aluminium conductor	8.00	each		
e)	3X6 sq. mm Copper cable gland.	10.00	no.		
f)	3X2.5 sq. mm Copper cable gland.	30.00	no.		
6	Supplying & fixing the <b>1 no.4 pole 200 Amps capacity change over switch</b> and complete connection with Electrical Panels as required. <b>Make: Havells/HPL/Standard/ Legrand/L&amp;T</b>	1.00	no.		
7	<b>UPS DISTRIBUTION BOARD</b>				
	supply, installation, testing and commissioning of factory fabricated distribution board rust inhibited, powder coated sheet fabricated comprising of incoming and outgoing isolator and MCB's neutral link or neutral bus, top and bottom detachable entry earthing bolts interconnection and grouting bolts etc complete as requd. <b>Make: Havells/HPL/Standard/ Legrand/L&amp;T.</b> as per details below :-				

a	4 way DB comprising of 2 no. 63 amp DPMCB ( <b>UPS out put</b> )	4.00	each		
b	4 way DB comprising of 1 no. 63 amp FPMCB ( <b>UPS in put</b> )	2.00	each		
8	Supply, installation, testing and commissioning of MCB change over DP with 4 way DB boxes with 63 amp DP change over, complete as required: (Make: Havells/HPL/Standard/Legrand/L&T).	4.00	each		
9	Supply, installation, testing and commissioning of following capacity 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by under noted capacity: (Make: Havells/HPL/Standard/Legrand/L&T)				
a)	32 Amp with 32 Amp. With DP MCB. (for ups panel)	6.00	no.		
b)	20 Amp with 20 Amp. with DP MCB. (for ups panel)	8.00	no.		
10	Providing and laying following sizes of PVC insulated copper conductor cable of 1100 V in flexible/ PVC conduit pipe with accessories such as glands bends etc ( as per requirement) including making necessary interconnection etc complete as required.- 2 X 6 Sq mm with 1 no suitable insulated 2.5 sq mm multi stranded copper wire in PVC flexible pipe. ( <b>Make: Havells/ RR Kable / KEI/Finolex</b> )	30.00	mtr.		
11	Cost of maintaning & working 24 X 7 from date of commensment of work to date of completion. The work includes temporary shifting of Branch with in the building / premises from front to rear part - area under vacated by RACC, including shifting of UPS's temporarily & after that permanentaly, required connections of UPS, networking & lighting complete.	1.00	Job		
12	The work includes removing & refixing as required of all conduits / wires / cables / all kind of electrical equipments temporarily / permanently as required from the exterior façade & from the inside of the building before dismantling & plastering. The work including all type of lead / lift, shuttering & scaffolding for all heights & disposable / removal of malba to an unobjectionable place from the site.	1.00	Job		
	<b><u>PART-II : COMPUTER POINTS &amp; DISTRIBUTION</u></b>				
13	Supply all material, storing, handling, fixing of computer points computer points in suitable size of GI / PVC box including providing 3 nos 5 amps 3 pin modular sockets to be provided under table top and controlled by 1 no 15 A moduler type switch and indicator ( <b>to be provided above the table top in partition</b> ) with moduler cover plate etc. & suitable gland with termination complete as required including 3X2.5 sq. mm copper armored cable. The work includes required floor MS / GI Boxss with 16 gauge powder coated cover plates of required sizes near DB's & Rack. Note: Maximum two computer points are to be provided on one circuit. ( <b>Switches : Make: Anchor/Crabtree/North-West/MK</b> )	62.00	each		
14	Supply, installation, testing and commissioning of factory fabricated distribution board rust inhibited powder coated sheet fabricated comprising of incoming and outgoing isolator & MCBs neutral link or neutral bus, top and bottom detachable entry earthing bolts interconnection and grouting bolts etc complete as required as per details below. <b>Make: Havells/HPL/Standard/ Legrand/L&amp;T</b>				

a)	12 way SPN MCBDB Double Door comprising of 1 No 63 Amp DP Isolator and 10 No SPMCB 10/16 Amp. (UPS output)	1.00	no.		
b)	8 way SPN MCBDB Double Door comprising of 1 No 63 Amp DP Isolator and 6 No SPMCB 10/16 Amp. <b>(UPS output)</b>	3.00	no.		
c)	6 way SPN MCBDB comprising of 1 No 63 Amp DP Isolator and 4 No SPMCB 10/16 Amp. <b>(UPS output)</b>	1.00	No		
d)	4 Way TP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A FP TPN and 6 Nos.32 A DPMCBS etc complete as required. <b>(for Air conditioning only).</b>	4.00	no.		
e)	4 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising with 30mA ELCB and 12 Nos. 6/10 Amp SPMCBS etc complete as required. <b>(for Light, Fan point only)</b>	3.00	no.		
f)	4 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A FP MCB and 12 Nos. 20/25 Amp SPMCBS etc complete as required. <b>(for Raw Power Only)</b>	2.00	no.		

15	RAW POWER: Supply all material, storing, handling, fixing of Raw power points in suitable size of GI/PVC box including providing 1 nos 15 amps 6 pin modular power sockets to be provided controlled by 1 no 15 A modular type switch and indicator with modular cover plate etc complete as required including 2X2.5 sq. mm FRLS copper wire + earth wire in dia 2 mm in thickness ISI Mark PVC pipe. Note: One RAW power points are to be provided on one circuit and directly to be connected on Power DB. <b>(Switches : Make: Anchor/Crabtree/North-West/MK)</b>	23.00	each		
16	Supply, installation, testing and commissioning of following capacity 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by under noted capacity: (Make: Havells/HPL/Standard/Legrand/L&T)				
a)	20 Amp with 20 Amp. C Curve SP MCB. (for 1.0Tr /1.5 Tr High wall split AC's and separate connection of record room/safe room/ chest room etc. as required )	15.00	no.		
b)	30 Amp with 32 Amp. DP MCB for Acs (for 2.0 TR Cassette AC's )	10.00	no.		
17	Providing and fixing of suitable size MS box fabricated with 16 G MS sheet either in recess wall or on surface to accommodate dedicated earth from earth electrode and further distribution of earth to computer points including providing of 5 mm bakelite on base connector strip and painting of box etc as required.	2.00	job		
18	<b>Basic electrical Wiring of light points, plug points</b>				
	Wiring for light point/ ceiling fan point/ exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit ISI Mark, with 6Amp modular switch, modular plate, suitable GI junction & switch boxes & clip and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required. <b>(Wires Make: Havells/ RR Kable / KEI/Finolex) (Switches : Make: Anchor/Crabtree/North-West/MK)</b>				
	(Rate includes 3 x 2.5 sq.mm FRLS copper conductor, single core cable in PVC conduit for circuit/sub main wiring along with earth wire )				
a)	single 6 Amp Switch controlling 1 light point for required T-5, Cove light, exhaust Fans, Ceiling fan and other separate room supply only.	40.00	no.		
b)	single 6 Amp Switch controlling 4 no. 15watt LED downlight, 2 no. 2'x 2' 36 watt recessed ceiling fittings / 2 no. 18 watt of required T5 LED fixtures light fittings.	60.00	no.		
c)	single 6 Amp socket controlling by 5 Amp Modular switch in switch boards complete as required.	20.00	no.		
d)	One socket controlled by one switch (independent for wall fan etc.)	20.00	no.		
	<b>Note: Lights/fans points to be calculated by numbers of lights and no extra cost shall be paid for dummy switch.)</b>				

19	<b>PART III - EARTHING</b>				
	a)Supply and fix <b>copper plate earth station</b> with 600X600X3mm copper plate including all accessories such as watering pipe and funnel and providing masonry enclosure at top with cover plate i.e excavation of pit, supplying and filling of salt charcoal, refilling of pit etc complete as required as per IS 3043-1987. The voltage between neutral and earth must be below 1 V. The work includes supply, fixing and termination of 5M Length 20X3 mm size copper strip with earth station below ground level etc as required.	2.00	Sets		
	b)Supply and fix <b>GI plate earth station</b> with 600X600X6mm GI plate including all accessories such as watering pipe and funnel and providing masonry enclosure at top with cover plate i.e excavation of pit, supplying and filling of salt charcoal, refilling of pit etc complete as required as per IS 3043-1987. the work includes supply, fixing and termination of 5M Length 20X3 mm size G.I strip with earth station below ground level etc as required.	2.00	Sets		
20	a)Providing and fixing of 8 SWG copper earth wire in the recess for loop earthing etc. as required.	20.00	Meter		
	b)Providing and fixing of 8 SWG GI earth wire in the recess for loop earthing etc. as required.	60.00	Meter		
21	Supply and laying following dia 2 mm in thickness ISI Mark PVC pipe under floor or in recessed walls from earth electrode to UPS room for computer dedicated earthing				
	25 mm diameter	60.00	Meter		
	<b>PART IV - TELEPHONE &amp; DATA CABLE</b>				
22	Wiring for telephone points with 0.6 mm dia 2 pair insulated annealed tinned electrolytic copper conductor in 2 mm thick 25 mm dia ISI marked PVC conduit complete with accessories such as bends, junction boxes etc. with suitable size of G.I./PVC box modular plate and cover in front on surface or in recess including providing and fixing modular type telephone socket outlet and making necessary connections etc. complete as reqd.( <b>Make: Dglink/KEI/Finolex</b> )	30.00	no.		
24	Supply, installation and testing & commissioning of Tag Block 20 pair for telephone connections <b>Make: krone</b>	2.00	no.		

24	Data cabling work for computer networking starting from mounting rack at system room with UTP CAT-6e LAN Data cable in 2mm thick 25 mm dia ISI mark PVC conduit with accessories such as bends, Tees, junction boxes including providing and fixing cat-6 I/O plates and SMB complete with all networking accessories etc complete as reqd. <b>(Make: D-Link/MOLEX/AMP/COMMSCOPE).</b> <b>Note: Only One Data Points to be provided in One Table/Counter. Extra poitns not to be paid if provided.</b> Maximum 6 no. data cable must be run in one pvc pipe. (Extra Data points not to be provided as per bank's guidlines)	48.00	no.		
25	Removal & refixing of existing 24 port switch including removing of Networking rack with all accessories etc.	2.00	no.		
26	supply, installation, testing and commissioning of 24-port Patch Panel	2.00	no.		
27	Supply and installation, testing and commissioning of mounted rack 15" hight made of powder coated MS sheet	2.00	no.		
28	supply, installation, testing and commissioning of factory manufactured CAT-6e patch chord complete with 2 no. connectors etc. complete as reqd.				
a)	1 mtr. long	48.00	no.		
b)	2 mtr. long	30.00	no.		
	<b>PART-V : AIR CONDITIONING REFRIGERATION/DRAIN WORKS</b>				
29	Supplying & Laying of following COPPER REFRIGERANT PIPING Thickness 22 SWG For Air Conditioners units complete with fittings Suction / Discharge line insulated with 12 mm SUPERLON / ARMAFLEX suction line. Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. <b>(Make: Total Line/Armacell)</b>				
a)	1/4" + 1/2" Refrigerant Copper piping - For Hiwall Split AC's (1.0Tr / 1.5Tr )	60.00	mtr.		
b)	5/8" + 3/8" Refrigerant Copper piping – For HWS/Cassette AC ( 2.0Tr / 3.0Tr)	170.00	mtr.		
30	Supplying & laying recessed in wall Rigid ISI Mark PVC drain pipe of size 20mm /25 mm / 32 mm dia complete with fittings, U traps etc. & as specified to the nearest toilet / drain point under floor or in recessed walls for AC drains including cutting of walls, bends & Tees. making good the damages etc. wherever required. <b>(Make: Diplast/Supreme)</b>	120.00	mtr		

31	Supplying and providing Eletrical flexible FRLS Copper cable of 3 x 2.5 sq.mm multi strand suitable for 1.0Tr / 1.5 Tr H.W Split units, Multi-runs between Indoor to Outdoor & for 1.0Tr / 1.5 Tr H.W Split / 2.00 Tr Cassette units and between Metal Clads to Indor / Out door for electrical supply etc complete as required <b>(Make: Havells/ RR Kable / KEI/Finolex)</b>	320.00	mtr		
32	Supplying and providing Eletrical flexible FRLS Copper cable of 4 x 2.5 sq.mm multi strand suitable for 2.00 Tr Cassette Multi-runs between Indoor & Outdoor units complete as required (Make: Havells / KEI/Finolex).	180.00	mtr		
33	<b>KDS, Three Phase, Monobloc Pumps - (Make:- M/s Kirloskar - Monobloc Pump, KDS-314+, 3 HP, Three Phase, 415 Volts, Size 80mm X 80mm).</b> SITC of Monoblock centrifugal pump set with 3 HP motor for suitable on 3phase, 415V, 50Hz AC supply with cast iron impeller to deliver 16.4 LPS to 20.0 LPS at the total head range of 5-14 mtr with suitable adoptor flanges, on suction and delivery side on foundation including making connections as required. The work includes following - The cost of labour, T & P and material required for completion of work. 3.0 HP, Pump, Brand : Kirloskar, Delivery Size: 80 mm, Head Range : 5-14 m, Motor Power : 3.0 HP, Power Rating : 2.20 kW, Suction Size : 80 mm, Discharge Range : 16.4 - 20 lps, Model : KDS-314+, Speed : 2840 rpm. The work includes all connections as required ot automatic sensor system & starters complete hardware, PVC pipe & plumbing work & electrical connection from main panel to starter, Moror / pump & sensor system well in pvc conduit & cable as per manufacturer specifications and all related work, making connection motor pump wires with panel board & testing, complete in all respect as per the satisfaction of engineer incharge.	2.00	Job		
34	<b>Automatic sensor system -</b> SITC Automatic sensor system for Three Phase, Monobloc Pumps - as per manufactures spacifications & compatible to pump with Automatic on off arragements including all hardware labour & material. the required wiring / connections from tank / sump to starter in 25 mm heavy duty PVC conduit under floor / under ground or in recessed walls for AC drains including cutting of walls, bends & Tees. making good the damages etc.	2.00	Job		
35	<b>DOL Starter / DCP Panel - Rating :</b> CGID60100LV, Relay range : 6-10 A, Pump : 3.0 HP - Supply of control pannel board consists of voltmeter Ammeter On / Off switch on / off switch starter three phase preventer cum water level guard under current proteciton all complete (Dry / wet running) suitable for 3.0 HP Dewatering Pump. The work includes all connections as required & all hardware labour & material. , complete as per engineer incharge. (Make - Crompton / Havlls / Siemens / L& T).	2.00	Nos		

36	<b>Highly Rigid PVC - SWR pipes for motor / Pump</b> Providing and fixing soil, waste and vent pipes with Joints (wars her & solution) & PVC - Heavy duty (6.0 Kgf) fittings like bends, sockets, Tee, union & required traps etc. cost includes to conect the motor to sump as per required level. & motor to outside the boundary wall at instructed height, all hardware, material & labour , plumbing etc. to complete the job, 80mm. dia.: Rigid PVC pipes	50.00	Rft		
	<b>PART- B :</b>				
	<b>PART-VI : LIGHTS &amp; FANS FIXTURES</b>				
37	SITC of 2"x2" Celing grid 33-36 watt LED panel fixtures with essential driver in false ceiling including making necessary arrangement for mounting the fixtures and connection with 2 x 1.5 sq.mm insulated copper cable from adjacent point in PVC flexible pipe etc Complete as reqd. Cat. No. BZRSQ L 43L LED GF of Bajaj or equivalent of Philips / Wipro. 120 Lumens per Watt. Color temperature 6000K.	46.00	no.		
38	SITC of 15 watt LED fixtures /dowlighters with essential driver in false ceiling including making necessary arrangement for mounting the fixtures and connection with 2 x 1.5 sq.mm insulated copper cable from adjacent point in PVC flexible pipe etc complete as reqd. <b>Make Phillips / Wipro / Bajaj.</b>	80.00	no.		

39	SITC of 18 watt of T5 LED fixtures directly on ceiling / wall including making necessary connections with 2x1.5 sq.mm insulated copper cable conductor wire etc. complete as reqd <b>Make; Phillips / Wipro / Bajaj.</b>	40.00	no.		
40	Supply of 400/450 mm sweep Metal Body and Metal Blades Polar(or equivalent) SDX BLCK GOLD wall fan etc. 1325 rpm High Flow Mode complete as required. (M/s equivalent of Bajaj / Havells / Usha Orient / Crompton greaves)	18.00	no.		
41	SITC of 1200 mm CEILING fans complete as reqd. with regulator to be provide in the switch board (M/s Crompton High Breeze or equivalent of USHA / Bajaj).	5.00	no.		
42	SITC of 200 mm exhaust fans complete with self opening louvers / shutters including necessary frame etc, complete as reqd. (M/s Crompton High Breeze or equivalent of USHA / Bajaj)	6.00	no.		
43	LED Strip light (4.5/5 watt ) of approved colour & shade - wharm white for cove (M/s Phillips /Wipro / Bajaj / Crompton / Havles / Osram Complete in all respects with suitable drivers.	200.00	MTR.		
44	SITC of 30 watt Street light /Flood light for lighting the front side of the branch(M/s Crompton Cat No. LSTS-30-CDL or equivalent of Philips/Wipro .	10.00	no.		
45	SITC of Automatic Programmable Time Switch 24 Hour for Glow sign board and ATM AC's (Make: L&T or equivelent to Legrand/Havells/Seimens)	2.00	no.		
	TOTAL OF PART : I +II+III+IV+V (A)				
	TOTAL OF PART : VI (B)				
	<b>TOTAL AMOUNT (A+B)</b>				
	Note: the vendor have to provide LAN diagram after completion of the work along with the bill, without it payment will not be made.				