STATE BANK OF INDIA
LOCAL HEAD OFFICE, GUWAHATI
PREMISES & ESTATE DEPARTMENT
GUWAHATI, ASSAM

BOQ ELECTRICAL WORKS FOR SBI HLC, GUWAHATI

S. No.	Technical Description	Unit	Qty.	Rate (excl. GST)	Amount (Excl. GST)
1	**POINTS WIRING**				
	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 (whereever 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 flling 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.	18		
ii	Two light points controlled by one 6 amp. Modular switch	Nos.	40		
iii	Three light points controlled by one 6 amp. Modular switch	Nos.	36		
iv	Four light points controlled by one 6 amp. Modular switch	Nos.	33		
v	Five light points controlled by one 6 amp. Modular switch	Nos.	26		
vi	One wall fan/ exhaust fan point controlled by one 6 amp. Modular switch. The switch should be at switchboard level	Nos.	68		
vii	One 5 pin socket controlled by one 6 amp. Modular switch complete assembly includes plate box etc.				
a	Dependent	Nos.	10		
viii	*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		
b	Secondary	Nos.	74		
2	**POWER POINTS**				
1	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 1st socket and 1st to 2nd, 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). Maximum 2 points				

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a)	Primary point	Nos.	17		
b)	Secondary point	Nos.	27		
3	**AC POWER POINTS**				
1	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.	8		
2	Same as serial no.1, but wiring for A/C socket by using 4*6 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*6.0 sq.mm. PVC insulated 1100 V grade copper conductor wire and weather proof type 4 way SPN DB complete in all respects controlled by with 32 Amp TPN (10 KA) MCB to be provided near outdoor unit. The point starts from DB to the point near the outdoor unit (includes wires for terminal connection of outdoor unit from TPN) including wiring to the terminals of the outdoor unit from weather proof box. Item to also include termination lid between MCB and outdoor unit.	Nos.	16		
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 swtich & 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).				
i	Primary	Nos.	21		
ii	Secondary	Nos.	93		
5	**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	10 SWG Wire	RM	650		
ii	8 SWG Wire	RM	275		
iii	3CX 4 sq.mm. + 1 X 4 sq.mm.	RM	50		
iv	3CX 6 sq.mm. + 1 X 6 sq.mm.	RM	90		

S. No.	Technical Description	Unit	Qty.	Rate (excl. GST)	Amount (Excl. GST)
v	Supplying, laying, testing & commissioning of 4 C X 10 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 acessories, Clamps etc. as required as per specification **(FOR LIGHT & POWER DB,).**	RM	460		
vi	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 acessories, Clamps etc. as required as per specification.**(FOR OUTDOOR UNIT & POWER DB)**	RM	160		
vii	Supplying, laying, testing & commissioning of 3.5 C X 35 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 acessories, Clamps etc. as required as per specification **(FOR UPS).**	RM	60		
viii	Supplying, laying, testing & commissioning of 3.5C X 185 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 acessories, Clamps etc. as required as per specification **(for Main Connection)**	RM	120		
ix	Supplying, laying, testing & commissioning of 3.5C X 240 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 acessories, Clamps etc. as required as per specification **(for Main Connection & DG)**	RM	50		
6	**CABLE TRAY & RACEWAY**				
1	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	450x75 mm, 2mm thick Cable tray	RM	60		
ii	300x75 mm, 2mm thick Cable tray	RM	80		
iii	150x75 mm, 2mm thick Cable tray	RM	30		
2	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	30		
ii	100 mm (wide) x 50 mm (height)	RM	100		

S. No.	Technical Description	Unit	Qty.	Rate (excl. GST)	Amount (Excl. GST)
7	**DISTRIBUTION BOARD**				
	Supplying, installing, testing & commissiong 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	**8-way TPN DB (POWER DB)**	No.	2		
	Incomer:-				
	1 No. 40 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	**6-way TPN DB (LIGHT DB & POWER DB)**	No.	4		
	Incomer:-				
	1 No. 40 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	**6-way TPN DB (AC POWER DB)**	No.	3		
	Incomer:-				
	1 No. 63 Amp TPN (16 kA) MCB with 63 A DP RCCB (100 mA) each phase				
	Outgoing:-				
	18 Nos.10/16/25 Amp (10 kA) SP MCB				

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d	**6-way TPN DB (UPS DB)**	No.	1		
	Incomer:-				
	1 No. 63 Amp TPN (10 kA) MCB with 63 A DP RCCB (100 mA) each phase				
	Outgoing:-				
	18 Nos.10 Amp (10 kA) SP MCB				
e	**6-way TPN DB (UPS DB)**	No.	1		
	Incomer:-				
	1 No. 40 Amp TPN (10 kA) MCB with 40 A DP RCCB (100 mA) each phase				
	Outgoing:-				
	18 Nos.10 Amp (10 kA) SP MCB				
f	**12-way SPN DB (For UPS OUTPUT)**	No.	1		
	Incomer:-				
	1 No. 63 Amp FP (10 kA) MCCB				
	Outgoing:-				
	6 Nos. 40 Amp (10 kA) DP MCB				
	2 Nos. 32 Amp (10 kA) SP MCB				
g	**12-way SPN DB (UPS DB)**	No.	1		
	Incomer:-				
	1 No. 40 Amp DP (10 kA) MCB with 40 A DP RCCB (100 mA)				
	Outgoing:-				
	8 Nos. 10/16/25 Amp (10 kA) SP MCB				
h	**8-way SPN DB (LIGHT & POWER)**	No.	1		
	Incomer:-				
	1 No. 32 Amp DP (10 kA) MCB with 25 A DP RCCB (100 mA)				
	Outgoing:-				
	6 Nos. 10/16/25 Amp (10 kA) SP MCB				
8	**(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 40 W 6500K (3400 lm) Slim panel , as specified in tender document or approved by SBI/ Architect.	Nos	60		
ii	Supplying, fixing, testing and commissioning of 30W Linear Suspended LED light Fixture of make As specified in tender document or approved by SBI/ Architect.	Nos	27		
iii	Supplying, fixing, testing and commissioning of 20 W Linear Batten light 1200mm length (TubeLight) make As specified in tender document or approved by SBI/ Architect.	Nos	56		
iv	Supplying, fixing, testing and commissioning of 18 W LED commercial type down lighter of make As specified in tender document or approved by SBI/ Architect.	Nos	127		
v	Supplying, fixing, testing and commissioning of 9 W Linear Batten 600mm length(Mirror Light) make As specified in tender document or approved by SBI/ Architect.	Nos	7		
vi	Supplying, fixing, testing and commissioning of surface mounted 18 W COB Spot light of make As specified in tender document or approved by SBI/ Architect.	Nos	165		
vii	LED Strip (NEON) for cove lighting 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. Note : to be fixed with clips / clamps with the base surface for strainght & permanent alignment.	Mtr.	280		

S. No.	Technical Description	Unit	Qty.	Rate (excl. GST)	Amount (Excl. GST)
viii	Wall mounted fans 300 mm dia. make As specified in tender document or approved by SBI/ Architect. **(METAL BODY). Make: Orient Tornado wall-II or higher**	Nos.	47		
ix	Supply & fixing of 250 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: Crompton Brisk Air Neo or higher**	Nos.	21		
9	**EARTHING SYSTEM**				
1	Supply, Installation, Testing and Commissioning of Maintenace 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	8		
2	Providing and fixing of Copper/ GI strips in surface or in recess for loop earthing etc. as required. G.I. Earthing Strip/Wire: Supply & installation, testing and commissioning of following sizes of GI strip/wire clamped to walls, cable trays, cables, in recess (including cost of digging & backfilling) or on surface etc for equipment earthing complete as required including inter connection between length at joints, all fixing accessories saddles, clamps etc. and other fixing hardware material as required for proper installation.				
a	50 x 6 mm strip	RM	35		
b	25 x 6 mm strip	RM	50		
3	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.	5		
10	**MAIN PANEL AND METER BOARD (HLC)**				
1	supply, installation, testing and commissionings of cubicle type floor/wall mounted L.T. Metal D.B of reputeded make with extendeble rotary handle and extended connecting links				
i	**1 No. 400 Amps,TPN MCCB (36 KA) with standard enclosure as per manufacturer specification or as approved by the architect/Bank's Engineer**	Nos.	1.00		

S. No.	Technical Description	Unit	Qty.	Rate (excl. GST)	Amount (Excl. GST)
2	Designing, fabrication, supply, installation, testing and commissionings of front operated cubicle type compartmentalised, front access, free standing on 75MM "[" MS channel, dust and vermin proof (IP 42 degree protection) panel suitable for use at 415V, 3 phase, 4-wire 50Hz system suitable for fault level of required value symmetrical at 415V fabricated from 2 mm thick CRCA MS sheets with hinged, gaskettted (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, 2 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 fnish 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/Amptech/Neptune. or as pproved by SBI/Architect)				
	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. Pad locking 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 Ics breaking capacity				
	GA drawings shall be got approved by **Architect / SBI**				
A.	**Floor panel shall consists of : -**				
	INCOMER				
i.	**Incoming (Grid Supply)**				
	400 A 4 pole ,MCCB 35ka having microprocessor based releases with earth fault shunt trip/under voltage release.				
	3 Nos. of LED type phase indicating lamps, Digital Ammeter, Voltmeter & MFM with Comm. port .				
	400/5 ratio CT for APFC Relay				
ii.	**Incoming (DG Supply)-140 KVA**				
	320 A 4 pole ,MCCB 35ka having microprocessor based releases with earth fault shunt trip/under voltage release.				
	3 Nos. of LED type phase indicating lamps, Digital Ammeter, Voltmeter & MFM with Comm. port .				
iii.	**Incoming ATS.**				
	1no. 400 Amp 4P On Load Changeover switch with 1 (35KA)				
B	**BUSBARS-1**				
	500 amps TPN busbar chamber of suitable length with copper busbars. One set of TPN BUS BAR for Main Raw Power DB and other TPN Bus bar for interconnection of below outgoing supply interlinked with DG set. All busbars and interconnections shall be of suitable size copper strips.				

S. No.	Technical Description	Unit	Qty.	Rate (excl. GST)	Amount (Excl. GST)
	INDICATING PANEL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A, PF etc. with 3 Nos. current transformers of 315/5A ratio, 10 VA Class-1.0 metering. - 1 sets				
	Red/Blue/Yellow ON/ OFF/ TRIP indicating lamps with 2A SP MCB backup protection				
	OUTGOINGS:-				
	4 Nos 63 A 4 pole MCCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
C	**BUSBARS-2**				
	400 amps TPN busbar chamber of suitable length with copper busbars. One set of TPN BUS BAR for Main Raw Power DB and other TPN Bus bar for interconnection of below outgoing supply interlinked with DG set. 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 400/5A ratio, 10 VA Class-1.0 metering. - 1 sets				
	Red/Blue/Yellow ON/ OFF/ TRIP indicating lamps with 2A SP MCB backup protection				
	OUTGOINGS:-				
	1 Nos 100 A 4 pole MCCB (25 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
	1 Nos 63 A 4 pole MCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
	8 Nos 40 A 4 pole MCB (16 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
	1 Nos 32 A TPN MCB (10 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
i	The **Electric Panel** as decribed above and specifications complete.	Set	1.00		
11	**CAPACITOR BANK**				
1	Supply, installation, testing and commissioning of 45 KVAR APFC capacitor as following-				
i	Incoming- 125A 4pole MCCB, Outgoing- 7 stage power factor relay with 3 nos. 125/5 current transformer for current sensing capacitor 1 KVR- 1 nos, 2 KVR- 2nos., 5 KVR- 2 nos.,10 KVR- 1 nos, 20 KVR-1 nos Contractors and TP MCB on each complete with phase indication and stage indication with auto / manual function. MS cubical having ventilation with wiremesh, copper conductors and copper busbars etc complete as per direction of Architect /Bank.	Set	1.00		
	TOTAL AMOUNT (EXCL. GST)(1 TO 11)				