

Issued to: _____

BHARAT HEAVY ELECTRICALS LIMITED

RAMACHANDRAPURAM :: HYDERABAD-32
TOWNSHIP ADMINISTRATION

TENDER DOCUMENTS (PRICE BID)

Name of work : Electrical works for renovation of classrooms, labs & toilets in BVBP School.

Tender Notice : HY/TA/E/OT-03/2015-16, Dt. 06.10.2015; Item No. 02

- - INDEX - -

1. Schedule - A : Schedule of rates and approximate quantities

ADDRESS :

PHONE NO. : _____

E-mail : _____

SCHEDULE - 'A'

ELECTRICAL WORKS FOR RENOVATION OF CLASSROOMS, LABS & TOILETS IN BVBP SCHOOL.

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
	ELECTRICAL POINTS				
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required; complete all as directed by Engr-in-charge.	Each	260	619.00	1,60,940.00
2	Supply and fixing 3-pin, 5 Amps. ceiling rose / PVC batten / angle holder (ISI marked) including connection etc. as required; complete all as directed by Engr-in-charge.	Each	260	34.00	8,840.00
3	Supplying and fixing stepped type electronic fan regulator on the existing switch box / cover including connections etc. as required; complete all as directed by Engr-in-charge.	Each	96	322.00	30,912.00
	SOCKETS				-
4	Supply and wiring for light plugs (separate socket) with 2 x 1.5 sq.mm + 1 x 1.5 sq.mm (earth wire) of FR PVC insulated multistranded copper conductor single core cable in surface / recessed medium class PVC conduit as required along with Supply and fixing metal box of 150mm X 75mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 3 pin 5/6 amps socket outlet and 5/6 amps piano type switch, connection etc. as required; complete all as directed by Engr-in-charge.	Each	50	687.00	34,350.00
5	Supply & fixing metal box of size 100mm x 100mm x 60mm deep on surface / in recess with suitable size of phenolic laminated sheet cover in front including painting etc. as required; complete all as directed by Engr-in-charge.		50	86.50	4,325.00
6	Supply and fixing of 6 Amps. piano type switch and 3 pin 6 Amps. socket outlet on the existing switch box / cover including connections etc. as required; complete all as directed by Engr-in-charge.	Each	120	65.00	7,800.00
	POWER SOCKET				-

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
7	Supply and fixing suitable size GI box in recess with modular plate and cover in front, including providing and fixing 6-pin 5/6 & 15/16 Amp. socket outlet and 15/16 Amp. modular switch including connections etc . as required; complete all as directed by Engineer-in-charge.	Each	24	366.00	8,784.00
	CIRCUIT				-
8	Supply & wiring for circuit / submain wiring alongwith earth wire with 2 x 2.5 sq.mm + 1 x 2.5 sq.mm earth wire, all of FR PVC insulated multistranded copper conductor, single core cable in surface/ recessed medium class PVC conduit as required; complete all as directed by Engineer-in-charge.	Metre	2200	131.00	2,88,200.00
9	Supply & wiring for circuit / submain wiring alongwith earth wire with 4 x 6.0 sq.mm + 2 x 6.0 sq.mm earth wire, all of FR PVC insulated multistranded copper conductor, single core cable in surface/ recessed medium class PVC conduit as required; complete all as directed by Engineer-in-charge.	Metre	150	358.00	53,700.00
	MCB & DB's				-
10	Supply and fixing 4-way (4+12), Double door, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 volts, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required; complete all as directed by Engineer-in-charge.	Each	6	1,654.00	9,924.00
11	Supplying and fixing 40A rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required; complete all as directed by Engineer-in-charge.	Each	6	554.00	3,324.00
12	Supply and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of single pole in the existing MCB DB complete with connections, testing and commissioning etc. as required; complete all as directed by Engineer-in-charge.	Each	72	141.00	10,152.00
13	Supply & fixing DP sheet steel enclosure on surface/recess along with 25/32 Amps 240 V "C" curve DP MCB complete with connections, testing and commissioning etc. as required; complete all as directed by Engineer-in-charge.	Each	22	572.00	12,584.00
	ELECTRICAL FITTINGS				-
14	Supply, installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of makes as mentioned below this schedule, complete with all accessories and lamp etc. directly on ceiling/ wall, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required; complete all as directed by Engineer-in-charge.	Each	124	869.50	1,07,818.00

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
15	Providing and fixing 16 mm MS fan clamps of standard shape and size in existing R.C.C. slab including cutting chase, anchoring clamp to reinforcement bar, including cleaning, refilling, making good the chase with matching concrete, plastering and painting exposed portion of the clamps etc.; complete all as directed by Engineer-in-charge.	Each	96	190.00	18,240.00
16	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required; complete all as directed by Engineer-in-charge. (ceiling fans will be supplied by BHEL)	Each	96	99.00	9,504.00
17	Installation, connecting to the point and commissioning of exhaust fan upto 450 mm sweep including cutting of wall in required shape and size manually / by mechanical means including making good the damage etc. complete as directed by Engr-in-charge. (exhaust fans will be supplied by BHEL)	Each	12	263.00	3,156.00
	EARTHING				-
18	Supply & installation of earthing comprising of 40 mm dia, 3 mm thick GI pipe buried upto a minimum depth of 4.5 mtrs including excavation of pit and filling the pit with homogenous layers of coke/charcoal, salt & sand etc. as required conforming to IS Standards (IS:3043). The earth pit to be provided with brick masonry chamber with hinged cover and watering arrangement; complete in all respects, as directed by Engineer-in-charge.	Each	6	3,385.00	20,310.00
19	Providing of Earthing (as per IS:3043) with copper earth plate 600mm x 600mm x 3mm thick including accessories, and providing masonry enclosure on top (RCC/brick chamber) with MS cover plate having locking arrangement and watering pipe of 2.7 metre long etc. including supply & filling with alternate layers of charcoal / coke and salt as required; complete in all respect.	Each	1	8,559.00	8,559.00
20	Providing and fixing 4.00 mm dia annealed copper wire on surface or in recess for loop earthing as required; complete all as directed by Engineer-in-charge.	Metre	250	87.50	21,875.00
21	Providing, laying and fixing hot dip G.I. strip 25 mm x 5 mm on surface or in recess for earthing connections etc. as required; complete all as directed by Engineer-in-charge.	Metre	50	120.00	6,000.00
	REMOVAL OF OLD WIRING				-
22	Dismantling and removal of old wirings and fittings such as switch boards / fans / tube lights / old wire accessories etc. Removed materials to be segregated and to be handed over at stores; as directed by Engineer- in-charge.	L.S.	1	5,000.00	5,000.00
	CABLE LAYING				-

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
23	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of size upto 95 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required. (Cable will be supplied by BHEL)	Metre	100	173.00	17,300.00
24	Supply & laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following sizes in existing cable trays/ trenches/ ducts/ direct in ground as required, complete all as directed by Engr.-in-charge.				-
a)	3½ core - 35 sq. mm AYPY Al. Cable	Metre	200	252.00	50,400.00
b)	3½ core - 25 sq. mm AYPY Al. Cable	Metre	150	220.00	33,000.00
c)	4 core - 16 sq. mm AYPY Al. Cable	Metre	60	170.00	10,200.00
d)	3 core - 1.5 sq. mm copper conductor flexible wire	Metre	200	105.00	21,000.00
25	Supplying and making end termination with brass compression gland and tin coated copper lugs for following sizes of cables as required; complete all as directed by Engineer-in-charge. (one set means termination of all cores for single side of a cable)				-
a)	3½ core - 95/120 sq. mm AYPY Al. Cable	Set	6	1,400.00	8,400.00
b)	upto 3½ or 4 core - 35 sq. mm AYPY Al. Cable	Set	20	385.00	7,700.00
	DISTRIBUTION PANEL(s)				-
26	Providing, fixing, testing & commissioning of indoor type Power Distribution Panel (main) with IP-55 protection and specifications as per attached annexure; complete in all respect, as directed by Engineer-in-charge.	Each	1	2,32,000.00	2,32,000.00
27	Rectification works in sub-distribution panels as below: a) Removing of all existing MCBs and fuse bases including its connections. B) Supply & fixing of 1 no. of 63A, FP MCCB for incoming and 12 nos 6-32A DP MCBs for outgoing. c) Replacing damaged wires with new wires, connecting with suitable lugs & dressing. All above complete as directed by Engr-in-charge.	Job	2	22,500.00	45,000.00
28	Shifting and installation of panels on angle frame of height 1 ft. from floor level including removing existing cable connections and re-fixing as required complete all as directed by Engr.-in-charge.	Job	1	5,500.00	5,500.00
	GRAND TOTAL			(Twelve lakhs sixty four thousand seven hundred & ninety seven only)	12,64,797.00

Note:- The tenderers are required to quote their tender value on %age basis at excess or less or on par with estimated value.

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
	Tender (%)	in figures	in words		
	Excess				
	Less				
	Estimate rate only				

Conditions :

1	A penalty of 0.5% of the gross value of work will be levied for every week's delay of work subject to a maximum penalty of 10% of the gross value of work.
2	The rate quoted by the contractor shall be inclusive of all taxes (except service tax) and duties levied by Central/State Govt. organizations as well as local authorities, as applicable from time to time.
3	Service tax will be extra if applicable for this contract. Service Tax if paid by the contractor with respect to this work will be reimbursed by BHEL on production of documentary evidence for having paid the service tax by the contractor.
4	The contractor if asked by the contract executing officer should produce proper documents (i.e., cash bills/invoices/delivery challans etc. in original) in support of purchase of materials, whichever is in the scope of the contractor as mentioned in the schedule of the contract.
5	Maintenance period : one (1) year from the date of completion

Sl. No.	Name of accessories	Recommended Make to be used
1	FR PVC insulated multistranded copper conductor single core cable (1.5 / 2.5 / 4.0 / 6.0 sq.mm) (of suitable colour code as directed by Engr-in-charge)	1100 Volt Grade, Flame Retardant Low Smoke Type Only. FINOLEX / L&T / HAVELLS / ANCHOR.
2	PVC Conduits	Sudhakar / Avonplast / Nandi
3	6A & 16A piano type / modular type switches & sockets, Bell push	Anchor / GM / SSK / MK
4	Lamp Holder, 3-pin ceiling rose	Anchor / GM / SSK / MK
5	Calling Bell	Anchor / GM / SSK / MK
6	63A, 240V rewirable porcelain fuse unit	Anchor / GM / SSK / MK
7	MCB Dist. Board, 5-32A SP MCBs, 63A DP isolators	Havells / Legrand / Indoasian / Standard
8	Metallic MCB Distribution Box with Metal Clad Socket + Plug top (for Air Conditioner)	Havells / Legrand / Indoasian / Standard

Sl. No.	Nature of work	Unit	Qty.	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
9	16.0 Sq.mm (twin core) PVC insulated, sheathed, 1.1 kV grade Al. Conductor cable	Payal / Fincab / Gold / Havells			
10	Stepped type electronic fan regulator	Anchor / GM / SSK / MK			
11	Generally all materials supplied by the Contractor	approved make and ISI certified as agreed by the Engr.-in-			
12	Tube light fittings: (any one of the following)				
	- Philips ADRENO V2 28W TWG207 HF with 1xTL5-28W Lamp				
	- Bajaj BTIP 128 N LHD with 1x28W T5 Lamp				
	- Havells E-LITE MAGLEV DLX with 1x28W T5 FTL				

Annexure for item no. 26 of schedule

POWER DISTRIBUTION PANEL (specifications)

Construction

14 Gauge CRCA sheet for main frame & doors, all partitions with 16 Gauge sheet and 3 mm thick gland plates all powder coated with siemens grey.

For incomer supply

250A, 36kA, FP MCCB with spererslinks & rotary handle mechanism 1 No.

For outgoing supply

100A, 25kA, FP MCCB with spererslinks & rotary handle mechanism 3 Nos.

63A, 25kA, FP MCCB with spererslinks & rotary handle mechanism 5 Nos.

Bus-bars

300A TPN Aluminium busbar

Instruments Unit

0-500V Voltmeter (digital) with selector switch 1 No.

0-250/5A Ammeter (digital) with selector switch 1 No.

200/5A, 5 VA CT (class-1) for metering 3 Nos.

R-Y-B phase indicating lamps (LED type) 1 set

6A SP MCBs for control wiring 5 Nos.

Energy Meter

HPL make 100/5A CT operated energy meter. 1 No.