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**BHARAT HEAVY ELECTRICALS LIMITED**  
RAMACHANDRAPURAM :: HYDERABAD-32  
TOWNSHIP ADMINISTRATION

**TENDER DOCUMENTS ( PRICE BID )**

**Name of the work : Additional electrical points and maintenance activities to Non-Residential buildings in township.**

**Tender Notice : HY/TA/E/OT-02/2013-14, Dt. 13.08.2013; Item No. 02**

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

ADDRESS :

PHONE NO. : \_\_\_\_\_

E-mail : \_\_\_\_\_

SCHEDULE - 'A'

Additional electrical points and maintenance activities to Non-Residential buildings in township.

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
	<b>POINT WIRING</b>				
1	Supply & Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated multistranded copper conductor single core cable in surface / recessed medium class PVC conduit, with piano type switch, phenolic laminated sheet, suitable size M.S. box, required bends, junction boxes etc. and earthing the point with 1.5 sq.mm. FR PVC insulated multistranded copper conductor single core cable etc as required; complete all as directed by Engineer-in-charge.	Each	250	619.00	1,54,750.00
2	Supply & Wiring for <b>twin control</b> light point with 1.5 sq.mm FR PVC insulated multistranded copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way piano type switch, phenolic laminated sheet, suitable size MS box, required bends, junction boxes etc. and earthing the point with 1.5 sq.mm. FR PVC insulated multistranded copper conductor single core cable etc as required; complete all as directed by Engineer-in-charge.	Each	30	625.00	18,750.00
3	Supply and fixing 5A PVC batten holder / angle holder / 3-pin ceiling rose (ISI marked) including connection etc. as required; complete all as directed by Engineer-in-charge.	Each	450	34.00	15,300.00
	<b>PLUG POINTS</b>				-
4	Supply and wiring for light plugs ( <b>separate socket</b> ) 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 Engineer-in-charge.	Each	60	687.00	41,220.00
5	Supply and fixing of 6 Amps. piano type switch and 3 pin 6 Amps. socket outlet ( <b>common socket</b> ) on the existing switch box / cover including connections etc. as required; complete all as directed by Engineer-in-charge.	Each	75	65.00	4,875.00
6	Supply and fixing metal box of 180mm X 100mm X 60mm deep (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including providing and fixing 6 pin 6A/ <b>16A amps socket</b> outlet and 16 Amps piano type switch, connection, etc. as required; complete all as directed by Engineer-in-charge. ( <i>wiring separate with 2.5 sq.mm run of mains</i> )	Each	50	225.00	11,250.00

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
7	Supply and installation of 20A SP MCB and <b>20A metal clad socket</b> outlet in single phase MCB box on surface or in recess, with chained cover for the socket outlet and complete with connections, testing and commissioning etc. as required; complete all as directed by Engineer-in-charge. ( <i>wiring separate with 4.0 sq.mm run of mains</i> )	Each	15	693.00	10,395.00
8	Supply of 25mm dia 1.5 mm thick medium class PVC conduit pipe along with accessories in surface / recess including cutting the wall and making good the same with required massonary work etc. as required; complete all as directed by Engineer-in-charge.	Mtr.	20	64.50	1,290.00
	<b>MAINS WIRING</b>				-
9	Supply & wiring for circuit / submain wiring alongwith earth wire with the following sizes 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.				-
a)	<b>2 x 2.5 sq.mm</b> + 1 x 2.5 sq.mm earth wire	Rmt	400	131.00	52,400.00
b)	<b>2 x 4.0 sq.mm</b> + 1 x 4.0 sq.mm earth wire	Rmt	180	162.00	29,160.00
c)	<b>4 x 4.0 sq.mm</b> + 2 x 4.0 sq.mm earth wire	Rmt	120	268.00	32,160.00
d)	<b>2 x 6.0 sq.mm</b> + 1 x 6.0 sq.mm earth wire	Rmt	100	206.00	20,600.00
e)	<b>4 x 6.0 sq.mm</b> + 2 x 6.0 sq.mm earth wire	Rmt	50	358.00	17,900.00
	<b>ACEESSORIES</b>				-
10	Supply & fixing following <b>piano type</b> switch / socket on the existing switch box / cover including connections etc. as required; complete all as directed by Engineer-in-charge.				-
a)	240V, 6A Switch	Each	10	29.50	295.00
b)	250V, 6A 5-pin socket outlet	Each	10	35.50	355.00
c)	250V, 16A Switch	Each	10	61.50	615.00
d)	250V, 16A 6-pin socket outlet	Each	10	73.00	730.00
11	Supply and fixing following accessories with internal connections etc. as required; complete all as directed by Engineer-in-charge.				-
a)	230V, 16A, 3-pin plug top	Each	20	60.00	1,200.00
b)	Ding dong bell	Each	10	118.00	1,180.00
c)	Electronic Musical bell	Each	4	263.00	1,052.00
	<b>HYLAM SHEET, METAL BOXES &amp; T.W. BOARDS</b>				-
12	Supply, cutting and fixing of hylam sheet of 3mm thickness, preferably white on existing metal boxes as required; complete all as directed by Engineer-in-charge.	S.ft.	20	103.00	2,060.00
13	Supplying and fixing metal box of following sizes (nominal size) on surface / in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required; complete all as directed by Engineer-in-charge.				-
a)	8" x 10" ( i.e. 200mm x 250mm x 60mm deep )	Each	10	211.00	2,110.00
b)	10" x 12" ( i.e. 250mm x 300mm x 100mm deep )	Each	5	310.00	1,550.00
14	Supply & fixing of teak wood boards of following sizes :				-
a)	Teak wood round block	Each	50	15.00	750.00

SI. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
b)	10" x 12" teak wood board	Each	10	47.00	470.00
c)	12" x 15" teak wood board	Each	5	72.00	360.00
	<b>MAINSWITCHES, FUSES &amp; FUSE D.B.</b>				-
15	Supply & fixing of porcelain rewirable fuse unit of reputed make; complete all as directed by Engineer-in-charge.				-
a)	32A, 415V fuse unit	Each	10	141.00	1,410.00
b)	63A, 415V fuse unit	Each	20	220.00	4,400.00
16	Supply, fixing and connecting of following Main Switch; complete as directed by Engineer-in-charge.				-
a)	415V, 32A Double Pole Iron Clad Main Switch	Each	2	898.00	1,796.00
b)	415V, 32A Triple Pole Iron Clad Main Switch	Each	2	937.00	1,874.00
c)	415V, 63A Triple Pole Iron Clad Main Switch	Each	2	2,044.00	4,088.00
17	Supply, fixing and connecting of 250V, 16A, 1-phase 8-way porcelain fuses distribution board having metallic sheet steel enclosure; complete as directed by Engineer-in-charge.	Each	5	588.00	2,940.00
	<b>ISOLATORS, MCBs &amp; MCB D.B.</b>				-
18	Supplying and fixing of single pole 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.	Each	36	141.00	5,076.00
19	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				-
a)	40 amps	Each	2	245.00	490.00
b)	63 amps	Each	2	303.00	606.00
20	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				-
a)	40 amps	Each	5	554.00	2,770.00
b)	63 amps	Each	2	563.00	1,126.00
c)	100 amps	Each	1	709.00	709.00
21	Supply and fixing following way, single pole & neutral, sheet steel, MCB distribution board on surface / recess complete with tinned copper bus bar, neutral busbar, earth bar, din channel, interconnections, powder painted including earthing etc as required ; complete all as directed by Engineer-in-charge.				-
a)	240V, 2 + 4 way, single door including 63A double pole isolator and 5-32A MCBs complete.	Each	3	1,340.00	4,020.00
b)	240V, 2 + 6 way, single door including 63A double pole isolator and 5-32A MCBs complete.	Each	3	1,662.00	4,986.00
22	Supply and fixing following way, horizontal type three pole & neutral, sheet steel, MCB distribution board on surface / recess complete with tinned copper bus bar, neutral busbar, earth bar, din channel, interconnections, powder painted including earthing etc as required; complete all as directed by Engineer-in-charge.				-
a)	415V, 4 way (4 + 12), double door including 63A four pole isolator and 5-32A MCBs complete.	Each	1	3,909.00	3,909.00

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
b)	415V, 6 way (4 + 18), double door including 63A four pole isolator and 5-32A MCBs complete.	Each	1	5,148.00	5,148.00
c)	415V, 8 way (4 + 24), single door including 100A four pole isolator and 5-32A MCBs complete.	Each	3	5,674.00	17,022.00
23	Providing earthing conforming to IS:3043 with 40 mm dia G.I. earth pipe and all accessories including excavation of pit, filling with homogenous layers of coke/charcoal & salt and providing masonry enclosure with hinged cover plate having locking arrangement and watering pipe etc.; including cost and conveyance of all materials; complete as directed by Engineer-in-charge.	Set	8	3,385.00	27,080.00
24	Providing and fixing of 4.00 mm dia copper wire on surface / in recess as required; complete all as directed by Engineer-in-charge.	Mtr.	50	87.50	4,375.00
<b>M.S. ITEMS</b>					-
25	Supply & fixing of angular iron frame in wall with 1/1.6 mm MS sheet on top with hinges & all four sides with screws. Necessary red-oxide / grey painting as directed by engineer in charge.	Kg.	12	112.00	1,344.00
26	Supply, fabrication & fixing of MS sheet cupboards made of sheet 1.6mm thick with single/double shutter and mechanical locking arrangements. The cupboards shall be given 2 coats of red-oxide paint and finished with necessary general purpose quick drying oil paint of suitable shade, etc. complete as directed by engineer in charge.	Kg.	30	184.00	5,520.00
<b>SERVICE CONNECTIONS &amp; MAINS</b>					-
27	Supply & fixing of PVC insulated (WPTC) sheathed weather proof AL. Conductor cable of payal/gold model make 1100V grade together run with 7/18 SWG GI bearer wire outside building and concealed /surface in rigid PVC conduit inside the building including necessary clips insulation tape etc., for service tapping as directed by engineer in charge.				-
b)	one run of 2-core, 10.0 Sq.mm (twin core WPTC)	Mtr.	300	54.00	16,200.00
c)	two run of 2-core, 10.0 Sq.mm (twin core WPTC)	Mtr.	100	92.00	9,200.00
<b>SERVICE OF MAINS SUPPORTING MATERIALS</b>					-
28	Supply & fixing of guy insulator of 80x50mm. One guy insulators to be fixed at either ends of the GI wire supporting the service connection cable.	No.	20	44.00	880.00
29	Supply & grouting in wall 32mm dia GI pipe (class B) at the building end for entry of service tapping to building. One end of the pipe should have threaded for fixing bends.	Mtr.	10	226.00	2,260.00
30	Supply & fixing of GI bends 32mm dia for fixing of 25mm/32mm dia GI pipe for arresting entry of rain water into the pipe . Also suitable size of PVC/Rubber bushes should be provided at the entry of the point of pipe/bend.	Each	6	82.00	492.00
31	Supply of 32 mm dia 1.5 mm thick medium class PVC conduit pipe along with accessories in surface / recess including cutting the wall and making good the same with required massonary work etc. as required; complete all as directed by Engineer-in-charge.	Rmt.	12	80.50	966.00
32	Supply & fixing of Steel support wire 7/20 SWG with tape and new link clips to the existing weather proof wire only in case of breaking of GI wire.	Mtr.	20	11.00	220.00
33	Supply & fixing of bus bar insulators with necessary screw etc..	Each	20	22.00	440.00

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
34	Supply & fixing of 25mm x 5mm copper strip (1.12 kg/m) on surface or in recess for connections as required; complete all as directed by Engineer-in-charge.	Mtr.	5	766.00	3,830.00
	<b>METERS</b>				-
35	Supply, fixing and connecting of 3 phase 5Amp/100Amp – 415V C.T meter	Each	1	2,990.00	2,990.00
36	Supply, fixing and connecting of 3 phase 5Amp/100Amp-415V C.T.coil	Each	6	143.00	858.00
	<b>LIGHTING</b>				-
37	Supply and fixing of FMS 200/111 , 1xPL s 11 watts (mirror light), switch, starters complete with all accessories inclusive of PF correction capacitor, together with tube light for engg. Hostel philphs make	Each	8	624.00	4,992.00
38	supply and fixing recess mounted luminaire of model no. FBS 450/236 D6 AG HF Philphs make	Each	2	5,012.00	10,024.00
39	Supply fixing of CFL lamp PL-L 36W only bulbs Philphs make	Each	10	189.00	1,890.00
40	Supply and fixing of decoratvie CFL luminaire for wall mounting FL 800/320 with 20 W bulb philphs make.	Each	3	669.00	2,007.00
	<b>SPECIAL ITEMS FOR NON-RESIDENTIAL BUILDINGS</b>				-
41	supply & fixing of tubular type heating element suitable for 50 Ltrs / 90 Ltrs water heaters 3 hole /triangular disc type / non-threaded type as per samples given as directed by engineer in charge .	Each	15	440.00	6,600.00
42	Supply & fixing of thermostat 30 °C to 90 °C adjustable and suitable for 25Lts to 90Lts water heaters.	Each	10	230.00	2,300.00
43	Removal of MS rod from ceiling and fixing of 4'/5' tube light fitting to down rods with suitable MS clamps to provide ceiling rose on Teakwood round block ( The work includes dismantling of fittings removal of existing gutties, clamps, bolts & nuts.) as directed by engineer in charge	Each	25	182.00	4,550.00
44	Supply & fixing of 12way - 30Amps., 600 V Bakelite with brass terminal connectors as directed by engineer incharge	Each	6	154.00	924.00
45	Labour charges for installation & operation of decorative lights/series lights/PA system as required on various occasions at important buildings & surroundings etc. and also removing the items after completion of program and handing over to dept.; complete all as directed by Engr-in-charge. (Installation & removal both together will be accounted as <u>one operation</u> ) <b>( All materials will be in the scope of BHEL )</b>	Operation	15	3,618.00	54,270.00
	<b>CABLES LAYING</b>				-
46	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation (0.6 x 0.9m), sand cushioning, protective covering and refilling the trench etc as required; complete all as directed by Engineer-in-charge. ( cable will be supplied by BHEL )				-
a)	Upto 35 sq. mm	Mtr.	450	167.00	75,150.00
b)	Above 35 sq. mm and upto 95 sq. mm	Mtr.	150	173.00	25,950.00

SI. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)
47	Supplying and fixing following dia G.I. pipe (medium class) for cable entry including bending the pipe to the required shape complete as required; complete all as directed by Engineer-in-charge.				-
a)	50 mm dia G.I. pipe	Mtr.	20	330.00	6,600.00
b)	100 mm dia G.I. pipe	Mtr.	10	746.00	7,460.00
48	Providing and laying in position cement concrete of 1:4:8 grade (1 cement : 4 fine sand : 8 graded stone aggregate 40 mm nominal size) excluding the cost of centering and shuttering etc. complete all as directed by Engineer-in-charge.	Cu.M	3	3,331.25	9,993.75
49	Supply & fixing of crimping type copper lugs confirming to I.S. specifications for following sizes of cables including connections; complete all as directed by Engineer-in-charge.				-
a)	upto 16 sq.mm	Each	12	14.00	168.00
b)	25 sq.mm	Each	25	17.00	425.00
c)	35 sq.mm	Each	20	30.00	600.00
d)	50 sq.mm	Each	20	39.00	780.00
e)	70 sq.mm	Each	20	47.00	940.00
f)	95 sq.mm	Each	20	55.00	1,100.00
g)	120 sq.mm	Each	20	85.00	1,700.00
	<b>TOTAL ... ..</b>	<b>( Rs: seven lakhs eighty thousand two hundred twenty five &amp; paise seventy five only )</b>			<b>7,80,225.75</b>

SI. 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 )	1100 Volt Grade, Flame Retardant Low Smoke Type Only. FINOLEX / L&T / HAVELLS / ANCHOR. ( of suitable colour code as directed by Engineer-in-charge )
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 Board with Metal Clad Socket + Plug top ( for Air Conditioner )	Havells / Legrand / Indoasian / Standard
9	14.0 Sq.mm (twin core) PVC insulated, sheathed, 1100V grade Aluminium Conductor cable	Payal / Fincab / Gold / Havells
10	Stepped type electronic fan regulator	Anchor / GM / SSK / MK
11	<b>Generally all materials supplied by the Contractor</b>	<b>standard make and ISI certified as agreed by the Engineer-in-Charge.</b>

Sl. No.	Description	Unit	Qty	Rate	Amount
(1)	(2)	(3)	(4)	(5)	(6)

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

Tender ( % )	in figures	in words
Excess		
Less		
Estimate rate only		

**Conditions :**

1	A <b>penalty</b> 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 tender % age quoted by the contractor shall be inclusive of all taxes and duties other than service tax as applicable from time to time.
3	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.
4	<b>Service tax will be extra if applicable for this contract.</b> 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.