



Issued to agency:  
**BHARAT HEAVY ELECTRICALS LIMITED**  
 RAMACHANDRA PURAM :: HYDERABAD - 32.  
 FACTORY CIVIL ENGINEERING DEPARTMENT

**SCHEDULE- A**

Tender Notice No:

**PRICE BID**

HY/FCD/OT-07/2008-09 , Dt: 08.08.08

**Item no: 3**

**Name of work: Modification of 51 Annexe - Civil, Electrical, Communication, IT Networking, Air Conditioning, Fire Alarm systems etc.**

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
	PART 'A' CIVIL WORKS				
1	Glass Partitions: Supply & fixing of aluminium full height/half height partitions with new anodised aluminium box section powder coated in required colour, design and size of box section 101.60 x 44.45 x 2 mm for verticals, top and bottom horizontals at spacing suiting to the site requirements as approved. Wherever doors are coming wooden runners are to be provided in the box section. The rate shall include grouting of frame to the floor properly fixed to at ends to walls, supply & fixing of 12 mm toughened glass in required sizes and colour. Supply & fixing of frosted film with specified design, size and Make of "Birla 3M" etc. complete. (The door opening shall be deducted for payment). The rate shall include labour, materials, nails, screws, clamps etc. complete.	150.00 Sq. m.	1 Sq. m.	4000.00	600000.00
2	Glass Doors: Supply & fixing of full height aluminium door with single shutter in required size made out of anodised aluminium box section powder coated in required colour, design and size of box section 101.60 x 44.45 x 2.00 mm for verticals, top and bottom horizontals inclusive of supply and fixing of all aluminium fixtures and fittings. Wherever members are joined wooden runners are to be inserted in the box section for fixing hinges, tower bolts, handles, hydraulic door closure and providing necessary rubber bedding for smooth closing of door shutter complete as directed by Engineer-in-charge. Providing & fixing of 12 mm toughned glass for door frame and door hardwares with Dorma/Ozone/Haffele make like floor spring, patch fittings, bottom locks, "D" handles, with specified design, size and make of "Birla 3M" frosted film on glass complete in all respects.	10.00 Sq. m.	1 Sq. m.	4000.00	40000.00

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
3	Supply & fixing of full height aluminium door with double leaf manual slide opening mechanism at main entrance in required size made out of anodised aluminum box section of size 44.50x47.50x2 mm for verticals, top and middle rails and 101.60x44.50x2 mm for bottom rail inclusive of supply & fixing of all aluminium fixtures and fittings suitable to the door sliding mechanism, handles, suitable locking arrangement etc. complete, wherever members are joined wooden runners are to be inserted in the box section. This includes grouting of rails/aluminum sliding sections to the floor properly etc. complete as directed by Engineer-in-charge. Providing & fixing of 12 mm toughened glass with rubber beading with screwless snap on clips etc. for top portion of the door frame of approximate size 3' x 2.5' on each door leaf and 12 mm thick "Novapan" particle board, exterior grade, laminated on both sides fixed to bottom portion of the door frame of approximate size 3' x 4.5' on each door leaf with rubber beading, screwless snap on clips etc. complete. (No. of door - 1, door leaf - 2 Nos. and the approximate size of the door is 7' x 6')	5.00 Sq. m.	One Sq. m.	4000.00	20000.00
4	Supply of vertical blinds 100 mm in required colour along with channels, fabric bottom weights etc complete. Material to be supplied in required nos. and sizes within specified quantity as directed.	75.00 Sq. m.	1 Sq. m.	650.00	48750.00
5	Supply and fixing of aluminum window grill along with aluminium frame consisting aluminium 'F' section of size 2.5" x 1.5" x 1.20 mm thick (62 x 38 mm x 1.2 mm thick) and supply and fixing of design of 2" aperture aluminium grill to the above frame work with necessary fixtures. It includes fixing of total frame to the existing brick work, finishing etc complete.	40.00 Sq. m.	1 Sq. m.	1540.00	61600.00
6	Supplying and fixing of 50mm (2") dia stainless steel tubular railings (pipe of A304 grade 1.2 mm thick) as per design and drawing of BHEL. The cost will include bending, welding/brazing, buffing, polishing, fixing to the plumb, wastage, etc., complete. The above pipe will be used for hand railing, vertical pipe, horizontal pipe as per requirement. (The vertical pipe will be embedded in concrete for a depth of 45 cm from finished floor level along with necessary hold fasts. The verticals will be at intervals of 1.2 to 1.5 M.). The payment will be made for finished quantity measured above finished floor level). The stainless steel grade/quality shall be A304.	175.00 R M	One R M	1435.00	251125.00
7	Supplying and fixing of false ceiling frame out of 25 x 25 x 1.3 mm Aluminium Tee sections and wall angles in a grid pattern of 0.60 x 0.60 m suspended with 6 mm dia MS round adjustable bolts etc including cost of supply and fixing of 20 mm thick thermocol boards to the above grid. The cost includes all materials, labour, transportation etc. complete as directed by Engineer-in-charge.	308.00 Sq. m.	One Sq. m.	350.00	107800.00
<b>PART 'A' TOTAL</b>		<b>Rs. 1129275.00</b>			

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
1	<p>PART 'B'</p> <p>ELECTRICAL WORKS</p> <p>Cable Raceways</p> <p>Supply, installation, testing &amp; Commissioning of separate floor Raceways with covers &amp; Cable Trays with suitable covers for all ratings of power supply points, both 230VAC and 415 V AC</p> <p>Supply &amp; Installation of 300x50x2.0mm GI ladder type Cable Tray with all accessories and supporting arrangement from ceiling or Wall complete in all respects.</p>	10.00 R M	One R M	575.00	5750.00
2	<p>Supply &amp; Installation of in-screed floor raceways (to be run separately for power, network and telephone cables) consisting following rectangular Aluminium sections including chasing and refilling the trench as per the route shown in the drawing and approved by Engineer in charge at site including clamping &amp; closing the open pipe ends temporarily by suitable end covers against entry of dust or any other foreign material complete in all respects.</p> <p>96 x 38 mm</p>	200.00 R M	One R M	375.00	75000.00
3	56 x 38 mm	100.00 R M	One R M	325.00	32500.00
4	<p>Supply &amp; Installation of floor junction boxes with top cover for above raceways, of size 300mm x 300mm x 50mm / 150x150x50 fabricated out of MS painted sheets with removable screwed cover plates on all four sides for blocking the entry complete in all respects.</p> <p>Make : Locally fabricated</p>	50.00 Nos.	Each	475.00	23750.00
5	<p>Supply, Installation and commissioning of MAIN LT PANEL, floor mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-draw out, cubicle type power dist. panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper busbars 'complete with all internal wiring, danger board, two earthing lugs, cable chamber etc. as required' housing below mentioned switchgears / meters. Complete in all respects. This panel should consist of following.</p> <p>Digital Energy meter with RS 485 port - 1 No.</p> <p>250A 50KA TPN MCCB unit as Incomer - 1 No.</p> <p>160A,50KA TPN MCCB as outgoing - 1 No.</p> <p>63A, TPN MCB as outgoing - 6 Nos.</p> <p>40A, TPN MCB as outgoing - 4 Nos.</p> <p>0-250A, Ammeter with CT &amp; inbuilt S/S - 1 No.</p> <p>0-415V, Voltmeter with inbuilt S/S - 1 No.</p> <p>TP&amp;N, Aluminum busbars of suitable size thick with PVC sleeving - 1 Set</p> <p>RYB, indicating lamps with resistors and fuses - 1 Set</p> <p>This includes termination of the cables, end terminators, material, labour, commissioning etc. complete.</p>	1.00 Set	One Set	65000.00	65000.00

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
6	Supply, Installation and commissioning of UPS OUTGOING PANEL, floor mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-drawout, cubicle type power dist. panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper busbars 'complete with all internal wiring, danger board, two earthing lugs, cable chamber etc. as required' housing below mentioned switchgears / meters complete in all respects. This should comprise of following. Digital Energy meter with RS 485 port - 1 No. 250A 4P MCCB as Incomer - 1 No. 63A, 4P, MCB as outgoing - 5 Nos. 0-250A, Ammeter with CT & inbuilt S/S - 1 No. 0-415V, Voltmeter with inbuilt S/S - 1 No. TP&N, Aluminum busbars of suitable size thick with PVC sleeving - 1 Set RYB, indicating lamps with LED type and fuses - 1 Set	1.00 Set	One Set	58165.00	58165.00
7	Supply and installation of 6 way, TPN, MCB type Lighting Distribution Board (LDB) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin' proof, and hinged door with all internals such as DIN rails, neutral-link, interconnected wiring complete with earthing lugs housing following switchgears: Complete in all respects. This should comprise the following. 40A, FP ELCB as incomer(100mA) - 1 No. 10A, SP, MCB outgoing(10KA) - 18 Nos. Make : Siemens/Legrand/Hager	1.00 Set	One Set	10725.00	10725.00
8	Supply, Installation and commissioning of 6 way, TPN, MCB type Power Distribution Board (PDB) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin' proof, and hinged door with all internals such as DIN rails, neutral-link, interconnected wiring complete with earthing lugs housing following switchgears: 63A, FP ELCB as incomer(100mA) - 1 No. 16/20A, SP, MCB outgoing(10KA) - 18 Nos. Make : Siemens/Legrand/Hager	1.00 Set	One Set	8125.00	8125.00
9	Supply, Installation and commissioning of 6 way, TPN, MCB type Computer Power Distribution Board (CPDB) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin' proof, and hinged door with all internals such as DIN rails, neutral-link, inter connected wiring complete with earthing lugs housing following switchgears, complete in all respects.: 40A, FP MCB Isolator as incomer(10KA) - 1 No. 16A, SP, MCB outgoing(10KA) - 18 Nos. Make : Siemens/Legrand/Hager	1.00 Set	One Set	9555.00	9555.00

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
10	Supply, Installation and commissioning of 6 way SPNDB similar to above but for emergency lighting distribution (ELDB) having below mentioned switchgears, complete in all respects. 32A, DP, MCB as incomer - 1 No. 6A, SP, MCB, outgoing (10KA) - 6 Nos. Supply, Installation and commissioning of 20A, SP, MCB, box with 20A, metal clad plug-socket for termination of cable for room A/C Make : Siemens/Legrand/Hager	1.00 Set	One Set	12025.00	12025.00
11	<b>CABLES / MAINS</b> Supply & Installation of 1100V grade FRLS armoured cable having sector / circular shaped copper conductor PVC insulated cores, laid up, PVC tape wrapped inner sheathed, GI strip / wire armoured and overall extruded PVC sheathed conforming to IS:1554 laid on wall/ceiling using GI clamps & spacers as per route shown at site and further as directed by Consultant at site in the following sizes, complete in all respects.: Supply & laying of 4C x 120 SQ.MM Copper armoured cable in suitable size of PVC Conduit.	50.00 R M	One R M	3000.00	150000.00
12	Supply & laying of 4C x 70 SQ.MM. copper flexible in suitable size of PVC Conduit.	10.00 R M	One R M	2000.00	20000.00
13	Supply & laying of 4C x 16 SQ.MM Copper flexible cable.	10.00 R M	One R M	900.00	9000.00
14	Supply & laying of 4C x 10 SQ.MM copper flexible cable.	50.00 R M	One R M	600.00	30000.00
15	Supply & laying of 4C x 6 SQ.MM copper flexible cable.	20.00 R M	One R M	450.00	9000.00
16	Supply and installation of end terminations for above mentioned cables, including compressed type brass glands, crimping type copper lugs, insulation tape etc. as required complete with earthing of glands in following sizes, complete in all respects. 4C x 120 SQ.MM copper armoured cable	2.00 Nos.	Each	1200.00	2400.00
17	4C x 70 SQ.MM. copper flexible cable	2.00 Nos.	Each	800.00	1600.00
18	4C x 16 SQ.MM Copper flexible cable	2.00 Nos.	Each	650.00	1300.00
19	4C x 10 SQ.MM copper flexible cable	10.00 Nos.	Each	650.00	6500.00
20	4C x 6 SQ.MM copper flexible cable	2.00 Nos.	Each	500.00	1000.00

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
21	<b>WIRING</b> Supply & Installation of surface/concealed point wiring FRLS using 600v grade 1.5 SQ.MM copper conductor PVC insulated wires (with proper R,Y,B color code ) pulled through 1.2mm thick PVC conduits laid concealed over false ceiling or in wall chases including 1.0 SQ.MM green color copper earth wire and provision of grid plate type switches as approved by architect, complete in all respects. Primary light points of 5A switch. (Switch shall be of ROMA Type).	30.00 Nos.	Each	945.00	28350.00
22	Supply & installation of above for Secondary light points looped from the above point.	40.00 Nos.	Each	335.00	13400.00
23	Supply and laying of 1100V grade PVC insulated, copper conductor cables in 1.5mm thick P.V.C. conduits, run above the false ceiling, concealed in the wall or partition, saddles at every 600mm c/c. A separate neutral shall be run for each circuit. The rate shall include all fixing accessories like collars, tees, elbows, providing fan hooks, ceiling roses, holders, wooden blocks, switches, sockets, switch mounting MS boxes, MS Junction Boxes etc., of approved make, complete in all respects, for sl.No. 24, 25 & 27 (Separate rate is not required to be quote for item No.23)				
24	Supply and laying of 2 runs of 2.5 SQ.MM. PVC insulated copper conductor FRLS cable along with 1run of 1.5Sq.mm PVC insulated copper conductor cable. Run in a 19mm dia. 1.2mm thick PVC conduit on surface of the ceiling or in wall.	1000.00 R M	One R M	125.00	125000.00
25	Supply & fixing of 6/16A Plug Point directly taken from DB for Pantry/geyser / zerox / fridge/ split AC units. Make: Roma of Anchor or North West	5.00 Nos.	Each	750.00	3750.00
26	Supply and laying of Raceways with PVC sleeves in the partition.	500.00 R M	One R M	25.00	12500.00
27	Supply and laying of 2 runs of 4.0 SQ.MM. PVC insulated copper conductor FRLS cable along with 1 runs of 1.5Sq.mm PVC insulated copper conductor cable. (1-PH AC'S) Run in a 25mm dia., 1.2mm thick PVC conduit, on surface of the ceiling or in wall, complete in all respects.	150.00 R M	One R M	150.00	22500.00
28	Supply and installation of 6A, 5 pin 4 nos. shuttered type sockets controlled by 1no. 16A switch with suitable size of front plate etc. (UPS POWER set); location of the points will be finalised in consultation with engineer in charge, complete in all respects. Make: Roma of Anchor	40.00 Nos.	Each	1350.00	54000.00

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
29	Supply and installation of one no 6A/16A 5pin shuttered type sockets controlled by 1no. 6A switch with suitable size of front plate etc. (RAW POWER set). Make: Roma of Anchor	40.00 Nos.	Each	800.00	32000.00
30	<b>EARTHING</b> Supply and installation of 2 nos. of separate earth pits each with material for power and network (including excavation) comprising of 600mm x 600mm x 3mm thick copper plate buried at a minimum depth of 2.5 meter including necessary materials like charcoal, salt etc as required conforming to BIS standards having brick masonry chamber with hinged cover and watering arrangement, complete in all respects.	2.00 Nos.	Each	21000.00	42000.00
31	Supply and installation of copper wire/strips in following sizes 14 SWG copper bare wire	50.00 R M	One R M	50.00	2500.00
32	Supply and installation of isolated earthing system for computer etc. using insulated green yellow copper earthing wire laid through 20mm PVC conduits from separately made earth pit to the equipment in following sizes Supply and installation of 16 sqmm, cu., in 20mm PVC flexible conduit.	50.00 R M	One R M	150.00	7500.00
33	Supply and installation of 6 sqmm, cu in 20mm PVC flexible conduit.	100.00 R M	One R M	75.00	7500.00
34	<b>LIGHTING FIXTURES</b> Supply & Installation of lighting fixtures with lamps as per the details below including necessary hardware such as clamps, nuts, bolts, nails, screws and suspension rods as required for fixing the fixtures in position as directed by architect / consultant, complete in all respects. Supply & fixing of energy efficient light fitting of Philips FBS 450/236 D6 HF wing -C- LX recess mounted direct, indirect light efficiency.	50.00 Nos.	Each	4500.00	225000.00
35	Supply & Installation of exhaust fans, 12" size, Heavy Duty Make: Philips/Crompton Greaves	5.00 Nos.	Each	1250.00	6250.00
36	Supply & Installation of Recess mounted down lighter luminaries with specular finish reflector 2 x 18 W CFL Cat No Philips make:FBH145/218.	5.00 Nos.	Each	2000.00	10000.00
37	Supply & Installation of Recess mounted down lighter luminaries with specular finish reflector 1 x 18 W CFL Cat No Philips make:FBH145/118.	17.00 Nos.	Each	1275.00	21675.00

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
38	Proper dressing of all the existing power cable and terminated properly by using suitable lugs, ferrules etc.	1.00	LS	10000.00	10000.00
39	Supply & Installation of Occupancy sensors with bypass facility for Cabins. This includes wiring from sensor to board and supply of required accessories. <b>Make : Philips/Wipro/Steinel</b>	3.00 Nos.	Each	5500.00	16500.00
<b>PART 'B' TOTAL</b>		<b>Rs. 1171820.00</b>			
1	<b>PART 'C'</b> <b>IT NETWORKING</b> Supply and installation of CAT 6 Gig speed information outlets with single face plates. Quantity of outlets are: 2nos. At each work stations, cubicles, rooms of PAs; 4 nos. in all cabins of GM, AGMs, conference rooms, ; location of the outlets to be finalised in consultation with engineer in charge. <b>Make: Tyco/D-Link/Molex</b>	80.00 Nos.	Each	377.00	30160.00
2	Supply, installation and termination of approved make telephone outlets RJ 11jack with dual face plate. Quantity of telephone jacks are: 2nos. At each work stations, cubicles, ; 4 nos. each in all cabins of GM, AGMs, conference rooms, rooms of PAs; location of the outlets to be finalised in consultation with engineer in charge.	50.00 Nos.	Each	377.00	18850.00
3	Supply, installation and dressing of Cat 6Gigaspeed Patch Panels for accommodating 24 port termination and shall facilitate cross-connection and inter-connection using modular patch cords and shall conform to EIA standard, 19-inch relay rack mounting requirements. Patch Panel shall come with preloaded information outlets. Panel shall have label holders and designation labels as part of the standard device. Shall also come with rear cable management metallic tray with Velcro ties complete as required.	6.00 Nos.	Each	10000.00	60000.00
4	Supply, installation and dressing of Cat 6Gigaspeed Mounting Cords 3'-0" length for the Patch Panel End Connectivity, Both end shall be RJ 45 with snag less boots complete as required. <b>Make :D-Link or TYCO for all items covered at 1 to 6</b>	50.00 Nos.	Each	200.00	10000.00
5	Documentation, testing certification included project management complete as required.	1.00	LS	10000.00	10000.00
6	End terminations for telephone cables into junction boxes.	2.00 Nos.	Each	1300.00	2600.00
7	Providing and fixing of Pigtails for Server.	4.00 Nos.	Each	2100.00	8400.00

Sl. No.	Description	Quantity	Unit	Rate Rs.	Amount Rs.
8	Providing and fixing of slicing of cores.	4.00 Nos.	Each	950.00	3800.00
9	Supply and fixing of fibre patch cards.	2.00 Nos.	Each	5000.00	10000.00
10	Supply and fixing of Powder coated metallic race ways for tables in cabins and conference halls.	20.00 Nos.	Each	500.00	10000.00
11	Supply and fixing of 1 KVA online UPS system with all accessories with one hour back up. Make: APC	1.00 No.	Each	44500.00	44500.00
<b>PART 'C' TOTAL</b>			<b>Rs. 208310.00</b>		
<b>PART (A+B+C) TOTAL</b>					<b>2509405.00</b>
Total in words: Rupees Twenty five lakhs nine thousand four hundred and five only.					

I / We have quoted .....% above [ ] / below [ ] (tick the relevant) for the rates given above.  
% in words:

Name of the Contractor :

Signature of the Contractor

Accounts Representative

Opening officer

**ISSUING OFFICER**