



BHARAT HEAVY ELECTRICALS LIMITED
RAMACHANDRAPURAM::HYDERABAD::32
FACTORY CIVIL ENGINEERING DEPARTMENT

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-17/2013-14, Dt: 08.02.2014

PRICE BID

Item no.: 1

Name of work: Civil & fabrication works for Relocation of Factory Civil stores.

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
	Part A - Civil Works.				
1	Earth work in excavation in all soils by mechanical means (Hydraulic Excavators) / manual means in foundations trenches or drains (not exceeding 1.5m in width or 10 Sq.m on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50M.	168.00	Cu.m	103.40	17,371.20
2	Filling with available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidation each deposited layer by ramming and watering, lead upto 50.00 m and lift upto 1.50 m.	84.00	Cu.M	45.70	3,838.80
3	Conveyance of excavated spoil up to a lead of 2 Kms, including loading, unloading and spreading etc. complete as directed by Engineer- in- charge.	84.00	Cu.M	56.41	4,738.44
4	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering including consolidation by vibrations for all works up to plinth level with 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 20 mm nominal size) . The cement will be issued free of cost by BHEL at BHEL stores.	41.00	Cu.M	1,560.50	63,980.50
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering including consolidation by vibrations for all works up to plinth level with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) . The cement will be issued free of cost by BHEL at BHEL stores.	19.00	Cu.M	1,585.00	30,115.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
6a	Fabrication of structural steel work including all materials going into the process of fabrication and forming an integral part of steel work together with all shop and site rivets and electrodes for site welding as necessary and all site connections comprising sag rods, floor beams, girders, bracings, trusses and frame work for fixed false ceiling and for movable false ceiling, purlins with channel / angles, MS flat supports including all connections as per detailed drawings connected steel works etc., cleats, gusset plates, all bolts, nuts, washers, base plates, anchor bolts as per detailed drawings, cutting, welding and painting 2 coats of red-oxide primer before erection etc., complete. The rate shall include painting 2 coat of Red-oxide as per IS specifications and all charges for handling, leading and loading at the fabrication yard. The raw structural steel sections, electrodes, gasses will be issued by BHEL on FREE of cost at BHEL stores.	10.00	MT	6,414.10	64,141.00
b	Erection of Steel work out lined in item above including the charges for handling, leading and stacking at site at approved locations prior to erection including all site rivetting, bolting, jointing and site welding where ever required.	10.00	MT	2,748.87	27,488.70
c	Painting at site of all structural steel work with 2 coats of aluminium paint / synthetic enamel paint over a coat of reoxide of approved shade to trusses, columns, girders, bracings etc., with aluminium paint or synthetic enamel paint over a coat of redoxide as required etc., complete. The required paint only will be issued free of cost by B.H.E.L at BHEL stores.	10.00	MT	505.83	5,058.30
7	Brick work with Ground moulded clay FPS brick in super structure above plinth level upto floor five level in cement mortar 1:6 (1 cement : 6 Coarse sand). -The cement will be issued free of cost by BHEL at BHEL Stores.	100.00	Cu.M	2,104.00	210,400.00
8	Coursed rubble masonry in second sort with hard stone in foundation & plinth with cement mortar 1:6 (1 cement :6 coarse sand) - The cement will be issued free of cost by BHEL at BHEL Stores.	42.00	Cu.M	1,521.00	63,882.00
9	Plastering in CM 1:6, 20 mm thick to internal and external surfaces of walls including the cost of all materials, labour, curing etc, complete -Upto 10.00 M level. - The cement will be issued free of cost by BHEL at BHEL Stores.	856.00	Sq.m	65.80	56,324.80
10	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement, including consolidation by vibrations for all works up to plinth level with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate of 20 mm nominal size). The cement and steel will be issued free of cost by BHEL at BHEL stores.	76.50	Cu.M	1,641.30	125,559.45

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
11	Supply and fixing in position medium teak wood door frame along with single leaf shutters solid core non - decorative type 30 mm thick of approved quality and brand including 3 No.s MS hinges 10 cm long and 1 no. mortise lock (Godrej make) , using scantling of size 100 mm X 75 mm (including with MS holdfasts of size 230 X 50 X 4 mm - 6 No.s and painting with coal tar to the faces coming in contact with masonry / concrete . including cost of all materials , labour etc. complete as directed by Engineer - in - charge.	23.00	Sq.M	3,116.40	71,677.20
12	Supply and fixing glazed steel windows and ventilators of approved make including supply and fixing 4 mm thick plain glass with best quality putty. MS handles and peg stays including painting with two coats of synthetic enamel paint over one coat of red oxide paint including supplying and fixing weldmesh 50 x 50 mm (8G x 8 g). The window section and fabrication shall confirm to I.S. 1038.	25.00	Sq.m	1,024.88	25,622.00
13	Applying two coats of oil bound distemper of given shade over a coat of primer including through cleaning of the surfaces, cost of all labour and other incidentals. (Only OBD will be supplied by BHEL at BHEL stores).	446.00	Sq.m	28.42	12,675.32
14	Applying exterior emulsion paint 2 coats over one coat of primer to external new plastered surfaces including cost of all labour and other incidentals. (only exterior paint will be issued by BHEL on free of cost).	428.00	Sq.m	18.51	7,922.28
15	Cement Plaster to ceiling /walls with 15mm thick cement plaster finished with a floating coat of neat cement of mix 1:3 (1 cement : 3 fine sand) - The cement will be issued free of cost by BHEL at BHEL Stores .	18.00	Sq.m	103.30	1,859.40
16	Fixing of Non - colour Coated aluminium zinc alloy coated metallic hirib profile sheet of nominal 1015-1020mm effective cover width and 28-30 mm with factory cut and fixing to the roof shall be crest fixed to roof purlins with number 12-14 x 55 mm long polymer coated galvanised hex head self drilling screws with integral washers and EPDM seals (4 fastners for support) for sheet etc., complete as directed (Excluding cost of galvalume sheets which will be issued free of cost by BHEL at their stores) - For roofing, side cladding and louvers with necessary fixtures.	458.00	Sq.m	67.78	31,043.24
17	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50m outside the periphery of the area cleared.	570.00	Sq.m	2.64	1,504.23
18	Felling trees of the girth (measured at a height of 1 m above ground level) including cutting of trunks and branches removing the roots and stacking serviceable material and disposal of unserviceable material - Beyond 30 cm girth upto and including 60 cm girth.	10.00	No.s	81.70	817.00
19	Centering and shuttering including strutting, propping etc; and removal of form work, for walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc. upto plinth level .	200.00	Sq.M	180.40	36,080.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
20	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding grills with binding wire all complete by cold twisted bars. - The steel will be issued free of cost by BHEL at BHEL Stores.	6.12	M.T	4,003.00	24,498.36
	Total of Part A			₹	886,597.22
	Part B - Water Supply and sanitary Fittings.				
1	Fixing of new urinary pans, which will be issued free of cost at BHEL stores including necessary repairs. The rate quoted shall include cost of fixing of necessary accessories like PVC/Alkathyne/lead pipe of suitable sizes, brackets etc.	2.00	Each	128.00	256.00
2	Fixing of new wash hand basin below counter, which will be issued free of cost at BHEL stores including necessary repairs. The rate quoted shall include with all accessories like brackets, screws, PVC connections etc., complete .	2.00	Each	234.93	469.86
3	Fixing of new European water closet, which will be issued free of cost by BHEL at their stores. The rate quoted shall include cost of fixing all accessories like Parryware flush kit suitable to the above flush tank, brackets, screws, connecting pipe from flush tank to EWC, PVC Connections etc. complete.	1.00	Each	217.77	217.77
4	Fixing of new Indian Water Closet, which will be issued free of cost by BHEL at their stores. the rate quoted shall include cost of fixing of all accessories like Parryware flush kit suitable for the above flush tank with all required accessories etc., complete.	1.00	Each	273.20	273.20
5	Fixing of urinal flushing valves for urinal pots which will be issued free of cost by BHEL at BHEL stores.	2.00	Each	26.00	52.00
6	Fixing of brass bib cocks, which will be issued free of cost by BHEL at BHEL stores.	3.00	Each	26.00	78.00
7	Fixing of Pressmatic pillar cock for wash basins, which will be issued free of cost by BHEL at their stores.	2.00	Each	26.00	52.00
8	Fixing brass stop cocks, which will be issued free of cost by BHEL at their stores.	4.00	Each	26.00	104.00
9	Providing and laying ceramic glazed floor tiles 300 X 300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 15622 of approved make in colours such as white, Ivory , grey , fume red brown, alid on 20mm thick cement mortar 1:4 (1 cement :4 coarse sand) including pointing thwe joints with white cement and matching pigment etc. complete all as directed by Engineer-in-charge.	18.00	Sq.m	598.65	10,775.70
10	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacture) of approved make in all colours, shades except burgundy, bottle green , black of any size as approved by engineer-in-charge in skirting , risers of steps and dados over 12mm thick bed of cement mortar 1:3 (1cement : 3 coarse sand) and fixing tiles with grey cement slurry @ 3.3 Kg per Sq.m including poniting in white cement mixed with pigment of matching shade complete.	30.00	Sq.m	556.80	16,704.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
11a	Supply & fixing in position PVC Pipes of 3" dia of best quality for drainage lines / urinal / hand wash areas including chasing the brick wall, concrete etc and making good the same after fixing the same etc. complete.	30.00	R M	242.00	7,260.00
b	Supply & fixing in position PVC Pipes of 110 mm dia of 6 Kg/Sq. cm of approved quality and conforming to IS:4985/2000 with specials, accessories and approved sealing / jointing compound on the exterior of the inserted portion and jointing to MS gutters, including cost of all materials, sealing compound, labour etc., for all heights complete.	30.00	R M	379.00	11,370.00
12	Supplying and fixing CI Nahany traps 1st quality ISI marked conforming to IS: 1729 - 1979 with C.P Grating fixing with white cement as per site requirements with standard practice - 100mm inlet - 75 mm dia (3") outlet pipe - 4 Kgs.	4.00	Each	307.00	1,228.00
13a	Fixing of 15 mm dia Nominal Bore GI pipe, Class B medium Grade properties and weight as per IS 1239 ISI mark which will be issued free of cost by BHEL at their stores . The arte quoted shall include fixing with all necessary GI fittings , chasing brick work/concrete and making good the same ,cost of labour , all materials etc. complete.Thickness- 2.6 mm.	10.00	R M	37.00	370.00
b	.. Do... 20mm dia (3/4") Thickness - 2.6 mm.	20.00	R M	37.00	740.00
c	.. Do... 25mm dia (1") Thickness - 2.6 mm.	60.00	R M	37.00	2,220.00
14a	Fixing of GM peet valves, heavy quality, ISI marked Leader/Zoloto make of nominal bore for 15 mm (1/2") dia which will be issued free of cost by BHEL at their stores.	2.00	Each	40.00	80.00
b	.. Do .. 20mm dia (3/4")	1.00	Each	40.00	40.00
c	.. .do ...25mm dia (1")	2.00	Each	40.00	80.00
15	Construction of brick masonry chamber of size 23 x 30 Cm (9" x 12") in brick work in CM 1:6 and plastering in CM 1:4, 20 mm for gully trap 150 mmx100mm including cost of excavation, PCC 1:4:8, 75 mm thick, all materials, labour etc., complete.	1.00	Each	314.58	314.58
16	Construction of brick masonry chamber of dimension 0.914 x 0.457 x 0.914 m (3' x 1'6" x 3') with brick in CM 1:6 including plastering over both sides with CM 1:4, 20 mm thick and fitted with light weight CI frame and cover of size 0.914 x 0.457 m in CM 1:4 including bed concrete of CC 1:4:8 as required, supplying and fixing one CI steps in brick masonry if necessary if necessary including earth work excavation in all soils, refilling around the chamber removing the surplus earth etc. complete as directed.CI frame and cover of 40 kgs.	1.00	Each	2,742.00	2,742.00
17	Supplying, laying, jointing and testing 152.4 mm (6") SWG pipes of ISI make conforming to ISI 651 & 4127 with airtight cement joints in Cement mortar 1:5:1 prop. including excavation of trenches and socket pits in anysoil (except rock requiring blasting) up to 1524 mm (5'.0") depth and refilling with watering and tamping.	30.00	RM	526.00	15,780.00
18	Supply & fixing 12.7 mm PVC connection with brass union nut CP coated.	2.00	Each	67.00	134.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
19	Supply & fixing P Trap 1st quality ISI marked conforming to IS:1729 - 1979 with CP grating fixing with white cement as per site requirements with standard practice - 100 mm dia (4") .	4.00	Each	501.76	2,007.04
20	Fixing of PTMT waste coupling for wash basin and sink, of approved quality and colour. - waste Coupling 31 mm of 79 mm length and 62 mm breadth weighing not less than 45 gms.	2.00	Each	26.00	52.00
21	Providing and fixing shutters along with frames for toilets that are 30 mm thick factory made PVC rigid foam paneled, door and shutters manufactured by M/s. Rajashri made from M.S. tube, 19 gauge thick, size 19x19mm for styles and 15x15mm for top and bottom rails, covered with heat moulded PVC "C" channel of 5mm thick sheet and 30x50mm wide for styles and 5mm thick and 75mm wide PVC sheets for top rail and bottom rail either side and 5 mm thick, 20mm wide cross PVC sheet as gap insert for top rail and bottom rail, paneling of 5mm thick PVC sheet fitted with M.S. frame welded / sealed to the styles and rails with 5x30mm PVC sheet beading on either side and joined together with solvent cement adhesive etc. complete in all respects as per direction of engineer in-charge fixed to frames. This includes providing brass hinges, brass aldrops, brass tower bolts, brass handles and brass door stoppers (For W.C. and bathroom doors). Make : M/s. Rajashri / M/s. shakthi.	4.00	Sq.m	1,793.40	7,173.60
22	Supply of JCB for turning and tilting the soil at various locations in factory area, as directed by Engineer-in-charge. It should work minimum 8 machine hours per a day. Rate includes all charges like fuel, hire charges etc; complete.	4.00	One M/c Hour	800.00	3,200.00
	Total of Part B			₹	83,773.75
	Part C - Electrical Estimate				
1	Supply and Installation of MCB DB with MCB 415V, 4 way consisting of 10 to 20A -- 4nos MCBs on each phase , sheet enclosed, dust & vermin proof. Type KSTIL of STANDARD/ KOPP MAKE along with controlling 63A ICTPN in sheet enclosure with HRC fuses, PVC marking ferrules etc. It is to be fixed on a neatly fabricated steel frame and mounted on to walls or as required for lighting distribution. The job includes painting of steel frames, labelling / writing the connection chart inside the door with WHITE duco paint as required, double earthing, testing & commissioning.	1.00	No.	9,772.00	9,772.00
2	Supply and Erection of Earth pits for Equipment body earthing with 65mm dia GI pipe Medium (class-B), 3000mm long with holes of 12mm dia at 150mm apart at random & 50x6x260mm MS Earthing plate welded to pipe as per drawing. The work including supply of material for alternate layers of charcoal, salt and making RCC/brick chambers with MS/cast iron cover.	1.00	No.	6,893.00	6,893.00
3	Earthing of Equipment from nearest Earth riser with 50x6mm/ 25x3mm GI flat. Work includes supply and apply Aluminium paint at welding points.	30.00	Mts.	22.08	662.40
4	Lighting				

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
a	Supply and fixing of 250 V. 20/16 Amps power socket cum switch Roma type code 21124 and 21066 of Anchor make or North West. Fixed on suitable modular type concealed box top cover. Testing & commissioning.	2.00	No.	487.60	975.20
b	Supply and installation of concealed / surface MS Pipe wiring with 2.5 sq. mm PVC insulated copper wire multi-strand of make Finolex / Rediant / Finecab / Havells / L&T. The wiring point for 20/16 A. power socket including 14 G./1.5sq.mm green colour copper wire for earth continuity. Independent circuit for each socket from power MCB distribution board (As per IS for wiring point) Testing and commissioning. The wiring should not be mixed with lighting pipe wiring and it should be run separately in the room / shed at a height of 2 feet from ground level or as per the site engineers instruction.	2.00	Pts.	1,581.00	3,162.00
c	Supply and fixing of 10 Amps 250 V. SP switches for control of light fitting and fans with Roma Type code : 21011 of Anchor or North West make. Fixed on a suitable modular type concealed box with suitable top cover. Testing & commissioning.	36.00	No.	259.40	9,338.40
d	Supply and fixing of 3pin, 250 V. 10 Amps power socket cum switch with indication Roma type code 21113 and 21033 of Anchor make or North West. Fixed on suitable modular type concealed box top cover. Testing & commissioning.	13.00	No.	400.20	5,202.60
e	Supply and execute the concealed / surface MS Pipe wiring with 1.5 sq. mm 660 / 1100. V. Grad PVC insulated copper wire multi strand of make Finolex / Rediant / fincab/ Havells/ L&T. In PVC pipe of suitable dia (As per IS for wiring points) with 14 G/1.5sq.mm green colour copper wire for earth continuity. Each light / fan point should be connected to three plate ceiling rose code 30090 of Roma modular type of Anchor or North West make / connector suspended duly with conduit / PVC pipe etc. Each circuit should not have more than 7 points 700 watts.	49.00	Each	1,069.00	52,381.00
f	Supply, Shifting, Assembly, Erection, Testing & Commissioning of complete units of 2x36W Phillips make of Tube light fittings. The light fitting shall be fixed with suitable down rod, ball & socket etc and the supply of the material is in the contractor's scope .The job includes supply of 1.5sq.mm copper wire for connection between ceiling rose and TL.	29.00	Each	2,949.00	85,521.00
g	Supply & Installation of ceiling fans 56" (1400mm) sweep, 220/240V, complete unit with regulator, 300mm down rod, canopy, blades etc. Make: Usha/GEC/Orient/Crompton Greaves. New deluxe with double ball bearing (white) confirming to IS: 374/79 class-I. Testing and Commissioning. The job involves with supply of concealed ceiling fan hook of 16 G sheet steel round/square as required 2 1/2" deep & 10mm dia fan hook having 1" pipe conduit entry holes on all four sides.	6.00	Each	1,988.00	11,928.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
h	Supply, Erection and Testing of 230V ,12" dia(305mm), 50W, 900rpm, 1200cu.M/hr Exhaust Fans.Make: USHA/GEC/Khaitan , complete unit, wall mounting.(The job involves making suitable holes in the wall inclusive of masonry work or by making suitable MS frame above +20 ft. approximately from ground level).	1.00	Each	2,847.00	2,847.00
5	Cable Laying				
a	Shifting and laying of LT power PVC armoured aluminium cable including Dressing.				
	i) 31/2C X 35sq.mm	100.00	Mts.	11.96	1,196.00
6	Cable Terminations				
	Power cable termination including supply of cable glands & lugs (Aluminium).				
	i) 31/2C X 35sq.mm	2.00	No.	263.10	526.20
	Total of Part C			₹	190,404.80
	Grand Total part A+ part B + part C			₹	1,160,775.77
	Add increase in Vat 1% over the material cost (70% of Above value)			₹	8125.43
	Total value of work			₹	1,168,901.20
Total : ₹ Eleven lakhs sixty eight thousand nine hundred one and twenty paise only					

Note:

1	A penalty of 0.50 % of the gross value of work will be levied for every week's or part thereof delay in execution of work by the agency, subject to a maximum penalty of 10 % of gross value of the total work executed.
2	The rates are inclusive of all taxes and duties except Service tax, which is extra as per service tax norms will be paid by BHEL to the agency after submission of necessary documents.

Note : The bidders are required to quote the tender value on percentage (%) basis at excess or less or on par with estimate value in figures and words.

Tender %	In figure	In words
Excess		
Less		
Estimated value		