



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

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-14/2014-15, Dt: 05.07.2014

PRICE BID

Item no.:1

Name of work: Misc. masonry works and concrete flooring, tiles, other civil works at F&P area in factory.

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
	Part-A - Misc. Masonry works in Factory & Administrative building area.				
1	Demolishing brick work manually / by mechanically means including stacking of serviceable material and disposing off unserviceable materials upto a lead of 2.00 KM as per directions of Engineer-in-charge. - in cement mortar	110.00	Cu.M	355.88	39,146.80
2	Demolishing stone rubble masonry manually / by means including stacking of serviceable material and disposing of unserviceable materials upto a lead of 2.00 KM as per directions of Engineer-in-charge. - in cement mortar	6.00	Cu.M	415.88	2,495.28
3	Dismantling doors, windows and clerestory windows (steel & wood) shutters including chowkhats , architrave , holdfasts etc. complete and stacking within 50 meters lead.	28.00	Sq.M	75.35	2,109.80
4	Demolishing R.C.C. work manually / by mechanically means including stacking of steel bars and disposal of unserviceable materials upto a lead 2.00 KM as per direction of Engineer - in - charge .	100.00	Cu.M	582.68	58,268.00
5a	Earth work in excavation 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.	200.00	Cu.m	103.40	20,680.00
5b	-----do----- up to First additional depth of 1.50 M to 3.00 M.	20.00	Cu.M	122.30	2,446.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
6	Earth work in excavation by mechanical means (Hydraulic Excavators) / manual means over areas (exceeding 30 cm in depth , 1.5 m in width as well as 10 Sq.m on plan) including disposal of excavated earth , lead upto 50 m and lift upto 1.5 m, disposing earth to be levelled and neatly dressed for Hard Rock (Blasting prohibited).	6.00	Cu.M	325.25	1,951.50
7	Filling available excavated earth (excluding rock) intrenches , plinth , sides of foundations etc. in layers not exceeding 20 cm in depth , consolidation each deposited layer by ramming and watering , lead upto 50 m lift upto 1.5 m .	50.00	Cu.M	45.70	2,285.00
8	Conveyance of excavated soil up to a lead of 2 Kms, including loading , unloading and spreading etc. complete as directed by Engineer- in- charge.	180.00	Cu.M	56.41	10,153.80
9	Providing and laying in position plain cement concrete of specified grade, consolidation excluding the cost of centering and shuttering - all work up to plinth level with 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 20 mm nominal size).**	193.00	Cu.M	1,560.50	3,01,176.50
10 a	Providing and laying in position plain cement concrete of specified grade, consolidation by vibration excluding the cost of centering and shuttering - all work up to plinth level with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size).**	85.00	Cu.M	1,585.00	1,34,725.00
10 b	Plain cement concrete work in walls (any thickness) including attached pilasters , buttersses , plinth and string courses , fillets , columns , lintels , beams, pillars, piers,abutments. Posts and struts etc. up to floor five level excluding cost of centering , shuttering , finishing and reinforcement : with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). **	17.00	Cu.M	1,906.50	32,410.50
11 .a	Reinforced cement concrete work in walls (any thickness) including attached pilasters , buttersses , plinth and string courses , fillets , columns , lintels , beams, pillars, piers, abutments. Posts and struts etc. up to floor five level excluding cost of centering , shuttering , finishing and reinforcement : with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). **	6.00	One Cu.M	1,916.00	11,496.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
11.b	Providing and laying in position reinforced cement concrete excluding cost of centering , shuttering , finishing and reinforcement all works upto plinth level : with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). **	1.70	One Cu.M	1,687.00	2,867.90
11.c	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).	50.00	One Cu.M	1,641.00	82,050.00
12	Coursed rubble masonry (second sort) with hard stone in foundations & plinth with cement mortar 1:6 (1 Cement : 6 Coarse sand). **	50.00	Cu.M	1,521.00	76,050.00
13	Brick work with FPS bricks of Ground moulded in superstructure above plinth level up to floor V level in all shapes and sizes in cement mortar 1:6. **	150.00	Cu.M	2,104.00	3,15,600.00
14	Half brick masnory with FPS bricks of Ground moulded in superstructure above plinth level upto floor V level in cement mortar 1:4 (1cement : 4 Coarse sand) including plastering with cement mortar 1:6 20 mm (1 cement : 6 coarse sand) on both sides. **	22.00	Sq.m	313.00	6,886.00
b	...do.. With reinforcement of 6 mm dia MS rounds at every 4th layer, but excluding cost of steel and its fabrication. **	6.00	Sq.m	313.00	1,878.00
15	Plastering in CM 1:6 , 12 mm thick to internal and external surfaces of walls including the cost of all materials , labour , curing etc., complete. **	150.00	Sq.m	54.00	8,100.00
16a	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 height **	700.00	Sq.m	65.80	46,060.00
b	-----do-----for height 10.01 m to 13.00 m height. **	50.00	Sq.m	82.60	4,130.00
c	-----do-----for height 13.01 m to 16.00 m height. **	30.00	Sq.m	99.40	2,982.00
d	-----do-----for height 16.01 m to 19.00 m height. **	30.00	Sq.m	116.20	3,486.00
17	Plastering to the ceiling in CM 1:3 , 6mm (1 cement : fine sand). **	17.00	Sq.m	43.00	731.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
18	Finishing the top of the concrete flooring in CM 1:3, 15mm thick including neat finishing, curing etc;complete. **	132.00	Sq.m	66.20	8,738.40
19	Flooring in 25 mm thick using 1:3 (1cement : 3 parts of granite stone chips of 3 to 10 mm gauge (no sand) ellies pattern first sort including neat finishing, curing, cost of materials etc.; complete. **	550.00	Sq.m	125.42	68,981.00
20	Flooring in 25 mm thick using 1:1 granolithic flooring in 25 mm thick (1 cement : 1 parts of granite stone chips of 3 to 10 mm gauge (no sand) ellies pattern first sort including neat finishing, curing, cost of materials etc.; complete. **	330.00	Sq.m	32.13	10,602.90
21	Fixing Chowkhat in existing opening in brick / RCC wall with dash fastners of appropriate size / chemical fastener (3No.s on each vertical member of door chowkhat and 2 No.s on each verticle member of window 1.20m height as per CPWD specifications including cost of dash fasteners / chemical fastners .	11.00	Each	81.05	891.55
22	Providing and fixing 16mm MS Fan Clamps of standard shape and size in existing RCC slab including cutting chase and making good and painting exposed portion of the calmps complete.	8.00	Each	113.85	910.80
23	Reinforcement for R.C.C. work including straightening , cutting , bending , placing in position and binding all complete by cold twisted bars (BHEL will issue Tor Steel at their stores on free of cost).	1.10	M.T	4,003.00	4,403.30
24	Dismantling the broken RCC covers and casting and fixing with new cable trench covers with reinforced cement concrete 1:1.5:3 using 20 mm and down graded metal including the cost of cutting, welding of angle iron frame, sprinkiling of ironite at 2 Kgs/sq.m. and neat finishing excluding the cost of angle iron and M.S. reinforcement (Angle iron will be supplied by BHEL at their stores and M.S. rounds on cost recovery basis under separate item by BHEL at their stores). Thickness of covers will be varying from 75 mm to 100 mm.	44.00	Sq.m	181.88	8,002.72
25	Granolithic topping of 25 mm thick using 1 cement 1 granite chips of 10mm down graded laid over base concrete when it is green conditions and ironite finishing 12mm thick using a mix of 50Kg of ironite , 200 Kg of cement and 0.30 Cu.m of granite metal 6mm down graded including cost of from work , curing etc. complete. **	8.50	Sq.m	226.05	1,921.43

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
26	Plastering over roof slab in CM 1:4, 20mm thick mixed with water proofing compound, Make: "Sika" @ 3% by weight of cement as per manufacturer's specification, curing as directed. Rate quoted shall include finishing, cost of all materials and labour etc., complete. (Cement =7.69 kgs/sq.m x3% WP@ Rs 20.00 per kg=Rs 4.61) upto 10 m height.	550.00	Sq.m	62.19	34,204.50
27 a	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 jointing with grey cement slurry @ 3.3 Kg per Sq.m including painting in white cement mixed with pigment of matching shade complete.	165.00	Sq.m	502.00	82,830.00
b	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 , laid on 20mm thick cement mortar 1:4 (1cement : 4 Coarse sand) including pointing the joints with white cement and matching pigments etc.; complete.	110.00	Sq.m	533.76	58,713.60
28 a	Supplying and laying of vitrified tiles of brighter shades and marble design of Premium Quality (1st quality) in required texture, design and colour, for flooring /skirting /cladding using vitrified tiles of size 600 x 600mmx10 mm thick with water absorption less than 0.08 % and confirming to IS:15622 of approved make in all colours and shades. Cost of tile should be around Rs.65/Sq.ft. It includes cost of cutting, chamfering of tiles to required size, with base of Conmax C - 500 tile adhesive for fixing tiles on existing mosaic/cement flooring, jointing the tiles with colour tint etc. complete as directed by Engineer-in-charge. The rate quoted shall include cost of all materials, labour, adhesives, colour tint material, leads and lifts etc. complete. Amount will be paid on the basis of measurement of the area of finished work only. It also includes surface preparation of existing ceramic floor giving necessary slopes, cleaning joints and grouting joints with pigmented additives to match shade of the tile, making pockets for electrical, communication, network cables etc. complete as directed by Engineer-in-charge. Amount will be paid on the basis of measurement for finished work only.	55.00	Sq.m	1,022.60	56,243.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
b	Vitrified flooring : Supply and laying of vitrified tiles of brighter shades and required design of premium quality (1st quality), in required texture and colour for floors/skirting/cladding using vitrified tiles of size 600 X 600 mm($\pm$ 5 mm), inclusive of cost of cutting , champering of tiles to required size, laid on 20mm thick or more as per site requirement to get proper slope cement mortar 1:4 (1 cement : 4 coarse sand) . The cost of the tile shall be Rs.65/- per Sft. (inclusive of all taxes and duties) and tiles of required make will be selected by department within the above specified cost. The rate quoted shall include cost of all materials, labour, colour tint material, leads and lifts etc. complete. Amount will be paid on the basis of measurement of the area of finished work only. It also includes surface preparation of floor giving necessary slopes, cleaning joints and grouting joints with pigmented additives to match shade of the tile. This includes making pockets for electrical, communication, network cables, junction boxes etc. complete in all respects. (The cement will be issued free of cost by BHFI at BHFI stores).	55.00	Sqm	967.00	53,185.00
29	Providing and fixing 10mm thick acid and alkali resisitant tiles of approved make and colour using acid and or aikali reisiting mortar bedding anf joints filled with acid and or alkali resisting cement as per Is:4457 complete as per the directions of Engineer-in-charge in flooring on a bed of 10 mm thick mortar 1:4 (1acid proof cement : 4 coarse sand) with acid and alkali resistant tile.	220.00	Sq.m	840.26	1,84,857.20
30	Supply & fixing of 18 mm thick best quality Jet Black colour machine cut mirror polished granite slabs in required sizes for counter wash basins, floorings, vanity counter, claddings, facias etc. including cutting, champering, rounding and mirror polishing etc. complete as directed. Cost of granite slabs shall be Rs. 1600/- per Sq. m and granite slabs of required design and colour will be selected by department.	110.00	Sq.m	2,527.44	2,78,018.40
31	Supply of JCB for levelling the surplus earth debris heaps located at various locations in factory area, as directed by Engineer-in-charge. The JCB should work minimum 8 machine hours per day. Rate includes all charges like fuel, hire charges etc.; complete.	300.00	One M/c Hour	675.00	2,02,500.00
	Sub Total			₹	22,25,168.88

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
	Part-B Concrete Flooring, Tiles and Green carpet under 5-S project in F & P area.				
1	Supply & fixing of heavy duty factory made hydraulically pressed and mechanically compacted pre-cast concrete designed pavers , zig-zag /any other required design pavers in required colour, with 80 mm thickness, M40 Grade, inter lock concrete Paver blocks, including spreading of stone dust properly for fixing the pavers into one level in required design etc. complete. Rate shall include cost of material, transportation, labour, tools, tackles etc. complete. Rate for stone dust will be paid separately.	290.00	Sq. m	390.18	1,13,152.20
2	Supply & stacking of Stone dust including transportation and spreading as directed by Engineer-in-charge.	28.50	Cu. m	528.29	15,056.27
3	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.	125.00	Cu.m	103.40	12,925.00
4	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.	23.00	Cu.M	2,104.00	48,392.00
5	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.	230.00	Sq.m	65.80	15,134.00
6	White washing with lime to give an even shade - New work.	230.00	Sq.m	4.10	943.00
7	Providing and laying non-pressure NP2 class (Light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete - 450 mm dia RCC pipe.	9.00	RM	499.55	4,495.95

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
8	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 and channeling with 1:2:4 of 15cm thick as required, 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, including channeling.	1.00	Each	5,485.40	5,485.40
9	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 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size). The cement and steel will be issued free of cost by BHEL at BHEL stores.	18.00	Cu.M	1,687.00	30,366.00
10	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.	1.30	M.T	4,003.00	5,203.90
11	Centering and shuttering including strutting, propping etc.; and removal of form work, for walls (any thickness) including attached pilasters,butteresses, plinth and string courses etc. upto plinth level.	8.00	Sq.M	180.40	1,443.20
12	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.	7.50	Cu.M	45.70	342.75
13	Conveyance of excavated spoil up to a lead of 2 Kms, including loading, unloading and spreading etc. complete as directed by Engineer- in- charge.	93.50	Cu.M	56.41	5,274.34
14	Intercarting of earth for making lawns including excavation of red earth within the factory premises i.e. transportation upto 3 Km lead including loading and unloading etc. complete as directed by Engineer-in-charge.	245.00	Cu.m	51.78	12,686.10
15	Filling mixture of red earth, manure and sand in desired proportion, flooding with water and levelling (Cost of supplying earth, manure, sand and mixing excluded) etc.; complete as directed by Engineer-in-charge.	122.00	Cu.m	3.02	368.44

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
16	Spreading of good earth (or) manure (or) sand in required thickness excluding the cost of earth, manure and sand etc.; complete as directed by Engineer-in-charge.	366.00	Cu.m	8.87	3,246.42
17	Supply and Grassing with Korean carpet grass in dibbling method at 2.50 cm apart including watering and maintenance of the lawn for 30 days (or) more till the grass forms to a thick lawn free from weeds and fit for mowing including ramming and rolling etc. complete as directed by Engineer-in-charge.	812.00	Sq.m	122.37	99,364.44
18a	Engaging tractor with trailer with driver for material handling, for removal of garbage, conveying of surplus earth, heaps made out of sanitation work, construction waste etc. including hire charges of tractor with trailer & driver. The Vehicle shall be in full fitness condition and it should work minimum 8 machine hours per a day. Rate includes all charges like fuel, hire charges etc.; complete. all as directed by Engineer-in-charge.	2.00	Day	1,000.00	2,000.00
b	Engaging 4 Un skilled services for assisting the above job in item no.18a.	8.00	One Operation	508.60	4,068.80

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
19	Fabrication and fixing inserts in concrete wall with lugs of required dia welded to the insert plates. (Structural Steel, electrodes and gas required for work will be issued on free of cost by BHEL at BHEL stores).	0.30	MT	2,863.00	858.90
	Total			₹	3,80,807.10
	Add increase in Vat 1% over the material cost (70% of Above value)			₹	2,665.65
	Sub Total			₹	3,83,472.75
	Grand Total (Part A+Part B)			₹	26,08,641.62
Total : ₹ Twenty six lakhs eight thousand six hundred forty one and sixty two paise					

Note: ** For Cement consuming items other than RMC , BHEL will issue cement on free of cost at BHEL stores.

1	After opening the bid Part-A and Part -B independent work orders will be issued as the period of completion is different.
2	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.
3	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		