



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

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-17/2012-13, Dt: 31.08.2012

PRICE BID

Item no.: 1

Name of work: Re-location of new surface treatment plant from 08 to 03
(Civil works).

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
1	Dismantling reinforced cement concrete / plain cement concrete and disposing of debris upto a lead of 2 Km including loading, unloading and spreading as directed by Engineer-in-charge etc. complete.	97.25	Cu.M	582.68	56,665.63
2	Preparation of subgrade by excavation earth to an average of 22.5 cm, dressing to camber and consolidation with road roller including making good the undulations etc. and disposal of surplus earth lead upto 50 m etc. complete as directed by Engineer-in-charge.	160.00	Sq.m	33.90	5,424.00
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 etc. complete as directed by Engineer-in-charge.	420.60	Cu.m	103.40	43,490.04
b	----do---- up to First additional depth of 1.50 M to 3.00 M.	290.00	Cu.m	122.30	35,467.00
c	----do---- up to second additional depth of 3.01 M to 4.50 M.	105.00	Cu.m	141.20	14,826.00
d	----do---- up to third additional depth of 4.51 M to 6.00 M.	65.00	Cu.m	160.10	10,406.50
e	----do---- up to fourth additional depth of 6.01 M to 7.50 M.	45.00	Cu.m	179.00	8,055.00
4	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 leveled and neatly dressed for Hard Rock (Blasting prohibited) etc. complete as directed by Engineer-in-charge.	50.00	Cu.M	325.25	16,262.50
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 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate of 20 mm nominal size) etc. complete as directed by Engineer-in-charge.**	51.67	Cu.M	1,560.50	80,631.04

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
6	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) etc. complete as directed by Engineer-in-charge.**	234.55	Cu.M	1,641.30	3,84,966.92
7	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 form work, curing etc. complete as directed by Engineer-in-charge.**	110.00	Sq.M	244.50	26,895.00
8	Providing and laying in position specified grade, of cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - all work up to plinth level with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) etc. complete as directed by Engineer-in-charge.**	12.80	cu.m	1,585.00	20,288.00
9	Providing and laying in position specified grade, of Reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - all work up to plinth level with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) etc. complete as directed by Engineer-in-charge.**	48.00	cu.m	1,687.00	80,976.00
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 etc. complete as directed by Engineer-in-charge.**	19.52	M.T	4,003.00	78,138.56
11	Centering and shuttering including strutting, propping etc., and removal of form work, for columns, pillars, piers, abutments, machine foundations, posts and struts etc. complete as directed by Engineer-in-charge.	992.00	Sq.m	180.40	1,78,956.80
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 etc. complete as directed by Engineer-in-charge.	299.60	Cu.M	45.70	13,691.72
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.	558.00	Cu.M	56.41	31,476.78
14	Brick work with clay flyash FPS brick of class designation 75 in super structure above plinth level upto floor five level in cement mortar 1:6 (1 cement : 6 Coarse sand) etc. complete as directed by Engineer-in-charge.**	169.75	Cu.M	1,808.00	3,06,908.00
15	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 etc. complete as directed by Engineer-in-charge.**	1,475.00	Sq.m	65.80	97,055.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
16	Coursed rubble masonry in second sort with hard stone in foundation & plinth with cement mortar 1:6 (1 cement :6 coarse sand) etc. complete as directed by Engineer-in-charge.**	31.25	Cu.M	1,521.00	47,531.25
17	Grouting the Pockets with Fos rock which will be issued by BHEL on free of cost, including cost of all labour, conveyance charges etc. complete as directed by Engineer-in-charge.	0.06	Cu.m	803.20	48.19
18	Applying exterior emulsion paint 2 coats over one coat of primer to external new plastered surfaces including cost of all labour and other incidentals etc. complete as directed by Engineer-in-charge. (only exterior paint will be issued by BHEL on free of cost).	75.00	Sq.m	20.55	1,541.25
19	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufactures specifications including appropriate priming coat, preparation of surface, cost of all materials etc., complete on concrete work etc. complete as directed by Engineer-in-charge.	190.00	Sq.M	77.75	14,772.50
20	Supply and fixing of top fixed, side hung of NCL Secular Ajantha windows & Ventilators fabricated from Roll formed section made of pre painted steel (Base steel as per IS 513 of 0.6 mm thick, 'D' quality, galvanized as per IS 277 with zinc 120 GSM / Sq. Mtr). Section for shutter should be of 46 x 46 mm, external frame should be of 46 x 52 mm, section for glass beading should be of 18 x 25 mm & center mullion should be 46 x 70 mm. The sections to be cut to length, meter joined with corner bracket. Centre mullions are to be fixed using mullion cap. Handle made of high grade aluminium powder coated & with nylon receiver & glazed with 5 mm thick, Modi/Saint Gobain float glass. Gasket made of E.P.D.M. Corner brackets made of C.R.C.A with zinc phosphating. Million caps made of glass filled nylon. The above frames should be fixed to the concrete / masonry walls by means of self expanding screws. Approximate size of windows 1.30mx0.9m and 3.00mx2.10m -Double shutter without guard bars (grills)... Excise dutyhite paint - crisp finely granulated with micro perforations etc. complete as directed by Engine	12.60	Sq.m	4,046.00	50,979.60

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
21	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 etc. complete as directed by Engineer-in-charge. The raw structural steel sections, electrodes, gasses will be issued by BHEL on FREE of cost at BHEL stores.	16.10	MT	7,563.80	1,21,777.18
22	Erection of Steel work, including the charges for handling, leading and stacking at site at approved locations prior to erection including all site riveting, bolting, jointing and site welding where ever required etc. complete as directed by Engineer-in-charge.	16.10	MT	3,241.60	52,189.76
23	Painting at site of all structural steel work with 2 coats of aluminium paint / synthetic enamel paint of approved shade to trusses, columns, girders, bracings etc., with aluminium paint or synthetic enamel paint as required etc. complete as directed by Engineer-in-charge. The required paint only will be issued free of cost by B.H.E.L at their stores.	14.50	MT	596.50	8,649.25
24	Providing and fixing in true horizontal level 600 mm x 600mm false ceiling system manufactured by M/s. Armstrong World Industries using DUNE SUPREME RH 99 MICROLOOK EDGE WITH SILHOUETTE GRID, using hot dipped galvanized steel section, rotary stitched main tee of size 15mm x 42 mm web height, having 0.36 mm gauge at every 600 mm center to center maximum and rotary stitched cross tee of size 15 mm x 42 mm, having 0.33 mm gauge at every 600 mm. c/c. and wall angle of size 19 x 19 mm., having 0.35 mm gauge fixed to the periphery of the wall. The above grid is suspended at every 600mm c/c. in both directions using 2.0 mm. thick pre-straightened GI wire, and laying Dune Supreme Microlook Edge ceiling tiles manufactured by M/s. Armstrong World Industries, of size 600mmx600mmx15mm having NRC 0.50, Light reflectance of >85% (WT), thermal conductivity k = 0.052-0.057 W/m0K, Humidity Resistance of 99% (having LIFETIME GUARANTEE against SAG), having Fire Performance CLASS 0 / CLASS 1 (BS 476), surface having 3 coats of white paint - crisp finely granulated with micro perforations etc. complete as directed by Engineer-in-charge.	28.00	Sq.m	1,130.00	31,640.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
25	Supplying and fixing of various sizes of MS bolts,nuts and washers confirming to IS 1367-1961 including cost of all materials, labour etc. complete as directed by Engineer-in-charge. (MR)	0.09	One MT	49,833.00	4,484.97
26	Supply and Fixing door, frame made out of 100 X 75 mm teak wood scantlings including supply and fixing in position single leaf flush shutters of 30 mm thick commercial ply of approved make, supply and fixing anodised aluminium fixtures and fittings, 3 Nos of MS hinges 4" long , 6 Nos of MS hold fasts of 150 X 150 mm made out of 200 X 50 X 6 mm fixed to the frame with suitable screws and painting the sides of the frame coming into contact with, masonry with on coat of bitumen paint etc., complete. (The fixtures and fittings shall consist of 16 mm dia 30 cm long aldrop 1 No. 1 No. of 12mm dia 230 mm long tower bolt and 150 mm long plate handles 2 No.s door stoppers - 1 No.) Bottom 300 mm height is to be fixed with decolam on both sides of the shutters as kick plate etc. complete as directed by Engineer-in-charge.	12.20	Sq.m	3,180.00	38,796.00
27	Supply and Fixing of colour coated aluminium zinc alloy coated metallic hirib profile sheet of nominal 1015-1020mm effective cover width and 28-30 mm deep ribs with subtle square fluting in the five pan at nominal 202-205mm center-to-center. The end rib shall be designed for anti-capillary action, to avoid any seepage of water through the lateral overlap. The feen material is manufactured out of nominal 0.45mm base metal thickness (BMT) or 0.5 mm TCT, Hi-Strength steel with minimum 550 MPa yield strength metallic hot dip coated with aluminium -Zinc alloy (55 % Aluminium ,45 % Zinc)as per AS 1397-Zincalume AZ150 (Min 150 Grams / Sq.Mt) Total on both sides) with colour bond steel quality paint coat as per AS/NZS 2728 type 3-4.The paint shall have a total coating thickness of nominal 35 µm, Comprising of nominal 20µm exterior coat on top surface and nominal 5 µm reverse coat on back surface over nominal 5µm primer coat on both surfaces of approved colour shade by concern authority. The steel manufactures test certificate for the certificate for the chemical and mechanical properties of steel must be submitted for approval by the engineer-in-charge.	190.00	Sq.m	672.40	1,27,756.00
28	Supply & Installation of 0.5 mm thick colour galvalume sheet flashings hood / ridges/ triangular portion closers to require shape with self threaded screws etc. complete as directed by Engineer-in-charge.	5.20	Sq.M	900.00	4,680.00
29	Providing and fixing barge boards in required girth (200 mm horizontal, 200 mm vertical) with 0.50 mm color galvalume sheets upto a length of 2.50 M, fixed to steel members with self drilling / self stitching fasteners at maximum 500 mm c/c along the length of capping, flashing etc., complete as directed by Engineer-in-charge including the cost of galvalume sheets, fixtures, fittings etc. complete as directed by Engineer-in-charge.	18.40	One Sq.m	800.40	14,727.36

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
30	Supply and fixing of Electrically operated rolling shutters conforming to as per IS 6248 , Shutter curtain made out of Aluminum Double Wall with 60 mm, OD " C " class Pipe, side Guide 150x2.5 mm thick Top Bracket 6 mm thick, MS Plate and Aluminum Bottom Rail 3.0 mm thick and Angle support 40x40x5 mm thick Angle End to End, Hood Cover 1.00 mm thick, Electrical Gear Operated System with 1 No of Reduxion Gear Box, 1 No Crompton Induction Motor 3 Phase(capacity of the Motor shall be suitable to the size of the doors as mentioned below) with Limit Switch and Reversible Switch make of Bharat Cutter with necessary electrical cabling required for operation of shutter. One coat of Red Oxide paint except shutter curtain. The rolling shutter shall be provided with proper locking arrangement and shall be as per IS 6248. The rate quoted shall include cost of all materials, labour and scaffolding etc. complete as directed by Engineer. The measurement will be made on finished item of the work for payment. (The shutter curtain is made out of Aluminium and all the other items) etc. complete as directed by Engineer-in-charge.	12.00	sq.m	8,100.60	97,207.20
31	Providing and fixing 10mm thick acid and/or alkali resistant tiles of approved make and colour using acid and/or alkali resisting mortar bedding and joints filled with acid and/or alkali resisting cement as per IS: 4457 complete as per the direction of Engineer -in -charge.in flooring no a bed of 10 mm thick mortar 1:4 etc. complete as directed by Engineer-in-charge.	34.00	Sq.M	873.00	29,682.00
32	Providing and fixing 10mm thick acid and/or alkali resistant tiles of approved make and colour using acid and/or alkali resisting mortar bedding and joints filled with acid and/or alkali resisting cement as per IS: 4457 complete as per the direction of Engineer -in -charge. In dado/ skirting on 12 mm thick mortar 1:4 etc. complete as directed by Engineer-in-charge.	1,375.00	Sq.M	909.15	12,50,081.25
33	Providing and fixing 3mm/5mm thick flexible PVC lining for acid/alkali handling area and neutralising area etc. complete as directed by Engineer-in-charge.	1,384.00	sq.m	1,500.00	20,76,000.00
34a	Supply & fixing Nominal Bore GI pipe, Class B medium Grade properties and weight as per IS 1239 ISI mark with GI fittings including the cost of GI pipe & its fittings, chasing brick work/concrete and making good the same, cost of labour, all materials etc. complete as directed by Engineer-in-charge. Make: Tata / Jindal / Zenith				-
b	.. Do... 20mm dia (3/4")	10.00	R M	146.00	1,460.00
c	.. Do... 25mm dia (1")	160.00	R M	191.00	30,560.00
35	Supply & fixing of GM peet valves, heavy quality, ISI marked Leader/Zoloto make of nominal bore for 25 mm (1') dia etc. complete as directed by Engineer-in-charge.	6.00	Each	482.00	2,892.00
36	Supply & fixing "Marc" make oyster series brass stop cocks. (Cat: MOY 1040) with all accessories etc. complete as directed by Engineer-in-charge.	8.00	Each	698.00	5,584.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
37	Supply & fixing "Marc" make oyster series brass bib cocks. With all accessories / Cat: MOY 1030 etc. complete as directed by Engineer-in-charge.	8.00	Each	506.00	4,048.00
38	Providing and placing on terrace (at all floor levels) of polyethylene water storage tank of 1000 ltrs capacity with double layer of make sintex/Aqua tech as per ISI 12701/96 with cover and suitable locking arrangement and making necessary holes for inlet and outlet and overflow pipes with fittings (ballcock, inlet and outlet nipples) without base support for tank. (Brick work will be paid separately) etc. complete as directed by Engineer-in-charge.	2.00	Each	6,000.00	12,000.00
39	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade etc. complete as directed by Engineer-in-charge.	1,226.88	Sq.m	32.40	39,750.91
Total				₹	55,59,419.15
Add increase in Vat 1% over the material cost (70% of contractor scope)				₹	38,915.93
Total value of work				₹	55,98,335.09
Total : ₹ Fifty five lakhs ninety eight thousand three hundred thirty five and nine paise only					

Note: **Cement, structural steel, MS reinforcement steel will be issue by BHEL on free of cost at BHEL stores.

1	A penalty of 0.5% of the gross value of work will be levied for every week's delay of work or part there of subject to a maximum penalty of 10% of the gross value of work executed after the schedule period of completion.
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		

Name of the Contractor :

Signature of the Contractor