



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

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-35/15-16, Dt: 05.01.2016

PRICE BID

Item no.: 1

Name of work:- Civil works in the surface treatment shop at CD bay of SG shop and Providing wash room for O2 & N2 gas filling station.

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
	Part-A- Modification - Civil works at New surface treatment plant at CD bay of SG Shop.				
1	Dismantling brick masonry walls for all heights, removing and clearing the debries and carting away upto to lead of 2 KM including loading, unloading and spreading segregating useful materials as directed by Engineer-in-charge including the cost of all labour scaffolding etc., complete.	10.00	Cu.m	641.75	6,417.50
2	Dismantling CC/RCC work by mechanical means and stockpiling at designated locations and disposal of dismantled materials upto a lead of 2.00 KM, stacking serviceable and unserviceable material separately including cutting reinforcement bars - jalley blocks of 300 x 200 x 200 mm size and handing over to stores.	7.00	Cu.m	1,151.05	8,057.35
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.	30.00	Cu.m	130.80	3,924.00
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.	36.00	Cu.M	3,513.00	1,26,468.00
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.	240.00	Sq.m	124.00	29,760.00

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) - The cement and steel will be issued free of cost by BHEL at BHEL stores.	2.20	Cu.M	2,772.00	6,098.40
7	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.	0.20	M.T	7,369.00	1,473.80
8	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.	3.50	Cu.M	2,606.00	9,121.00
9	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.	12.00	Cu.M	2,765.50	33,186.00
10	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.	18.00	Cu.M	83.80	1,508.40
11	Centering and shuttering including strutting, propping etc.; and removal of form work, for walls (any thickness) including attached pilasters, butresses, plinth and string courses etc. upto plinth level.	21.00	Sq.M	285.15	5,988.15
12	Dismantling steel work in built up sections in angles tees, flats and channels including all gusset plates, bolts, cutting rivets, welding etc., including dismembering and stacking within 50 metres lead.	1.00	MT	1,616.80	1,616.80

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
13a	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.	5.00	MT	8,871.00	44,355.00
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.	5.00	MT	3,802.00	19,010.00
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.	5.00	MT	696.07	3,480.35
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).	240.00	Sq.m	37.10	8,904.00
15	Supplying and fixing of Tracdek Hi-rib single skin galvalume / Zinalume sheets of 0.5 mm thick. One Meter width and length upto 12 M 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 galvanized hex-head self drilling screws with integral washers and EPDM seals (4 fasteners per support) for sheet etc., complete as directed. (Including cost of galvalume sheets). - for roofing bare galvalume.	450.00	Sq.m	529.00	2,38,050.00
16	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 (MR)	0.02	One MT	86,550.00	1,731.00
	Total of Part A			₹	5,49,149.75

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
	Part-B- Providing of wash room for 02 block.				
	Part-I - 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.	110.00	Cu.m	130.80	14,388.00
2	Providing and laying in position specified grade, of Plain 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)- (Cement only will be issued on free of cost by BHEL)	3.00	cu.m	2,656.00	7,968.00
3	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).	6.00	Cu.M	2,772.00	16,632.00
4	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 floor five level with 1:1½ :3 (1 cement : 1½ coarse sand : 3 graded stone aggregate of 20 mm nominal size).	5.37	Cu.m	3,413.00	18,327.81
5	Centering and shuttering including strutting, propping etc.; and removal of form work, for columns, pillars, piers, abutments, foundations, posts and struts.	73.00	Sq.m	166.90	12,183.70
6	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.	1.00	M.T	7,369.00	7,369.00
7	Providing and fixing white vitreous china flat back half stall urinal of size 80x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required - Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.	2.00	Each	8,445.00	16,890.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
8	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required with White Vitreous China Wash basin size 550x400 mm and pedestral size 705 mm height with centre tap hole and a pair of 15 mm C.P. brass pillar taps.	2.00	Each	2,574.65	5,149.30
9	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required with White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests.	1.00	Each	2,964.10	2,964.10
10	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C.flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required with W.C. pan with ISI marked white solid plastic seat and lid	1.00	Each	2,885.10	2,885.10
11	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	1.00	Each	674.05	674.05
12	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 any soil(except rock requiring blasting) up to 1524 mm(5'.0") depth and refilling with watering and tamping.	90.00	RM	526.00	47,340.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
13	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance $\pm 1\text{mm}$), with wall thickness 2.0 mm ($\pm 0.2\text{ mm}$), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1mm ($\pm 0.1\text{ mm}$) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineer-in-charge - 30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm ($\pm 0.2\text{ mm}$), with inbuilt decorative moulding edging on one side. The styles and rails mitred and joint at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm ($\pm 0.1\text{ mm}$) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 mm and 2 mm ($\pm 0.2\text{ mm}$) wall thickness fixed to the shutter styles by means of plastic/galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ($\pm 0.1\text{ mm}$) wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.	3.40	Sq.m	2,587.25	8,796.65
14	Supply and fixing of toilet doors along with teak wood door frame of required size consist teak scantlings of 100 mm x 75 mm and flush door shutter and laminating both door frame and shutter with premium quality teak vineer in required colour and design and malamine polish. Flush door shutter shall be chemically treated and water/insect/borer proof and 30 mm thick. This includes providing brass hinges, brass aldrops, brass tower bolts, brass handles and brass door stoppers.	2.10	Sq.m	3,339.00	7,011.90
15	Supply & fixing "Jaquar" make Pressmatic urinal flush valve for urinal pots (Cat. No. 51027) with all accessories.	2.00	Each □	1,386.00	2,772.00
16	Providing and Fixing C.P Brass bib cock of approved quality conforming to IS: 8931- for 15 mm nominal bore with all accessories etc. complete all as directed by Engineer-in-charge.	2.00	Each	397.50	795.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
17	Supply & fixing "Jaquar" make Pressmatic pillar cock for wash basins, with all accessories. (Cat: 031)	2.00	One Each	544.95	1,089.90
18	Providing and Fixing CP brass stop cock (Concealed) of standard design and of approved make conforming to IS:8931 with all accessories etc. complete all as directed by Engineer-in-charge.	2.00	One Each	322.00	644.00
19	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. The Cement will be issued free of cost by BHEL at BHEL stores.	60.00	Sq.m	664.00	39,840.00
20	Supply & fixing of 18 mm thick best quality approved colour and design 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.	16.00	Sq.m	3,055.00	48,880.00
21	Supply & fixing in position PVC Pipes of 3" dia(as per IS 6kg/sq.m) 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.	3.00	RM	144.00	432.00
22	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.	1.00	Each	307.00	307.00
23	Supply & fixing 15 mm dia Nominal Bore GI pipe 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. Make: TATA/JINDAL/ZENITH	10.00	RM	193.00	1,930.00
24	.. Do... 20mm dia (3/4")	12.00	RM	216.00	2,592.00
25	.. Do... 25mm dia (1")	35.00	RM	272.00	9,520.00
26	Supply & fixing of GM peet valves, heavy quality, ISI marked Leader/Zoloto make of nominal bore for 15 mm (1/2") dia	1.00	Each	390.00	390.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
27	.. Do .. 20mm dia (3/4")	1.00	Each	514.00	514.00
28	.. .do ...25mm dia (1")	2.00	Each	738.00	1,476.00
29	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.	4.00	Each	556.00	2,224.00
30	Construction of brick circular Manhole of 1.22 M at bottom and 0.56 m dia in cement mortar 1:4 (1 cement: 4 coarse sand), inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement: 4 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 finished with a floating coat of neat cement all complete as per standard design, complete. 1.68 m deep with SFRC cover and frame, 560 mm internal diameter conforming to IS 12592, total weight of cover and frame to be not less than 182 kg fixed in cement concrete 1:2:4 including centring shuttering all complete. With FPS brick class designation 75.	5.00	Each	11,723.00	58,615.00
31	Extra depth for manholes, size 1.22 mm internal dia (at bottom) beyond 1.68 mm to 2.29m with FPS bricks class designation 75.	5.00	Each	2,256.00	11,280.00
32	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand: 4 graded stone aggregate 40mm nominal size) cement plastered on both side with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement and making necessary channel for the drain etc. complete. for pipes 250mm to 300 mm diameter.	1.00	each	333.15	333.15
33	Providing and placing on terrace (at all floor levels) of polyethylene water storage tank of 1000 ltrs capacity with double layer approved brand and manufacture as per ISI 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).	1.00	Each	6,000.00	6,000.00
34	Applying two or more coats of distemper with oil bound washable distemper of approved brand and manufacture to given an even shade including preparation of the surface, cost of all labour, material and other incidentals including priming coat with cement primer. (OBD only will be issued free of cost by BHEL).	85.00	Sq.m	60.60	5,151.00

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
35	Applying exterior emulsion paint 2 coats over one coat of primer to external new wood work including cost of all labour and other incidentals.(only exterior paint will be issued by BHEL on free of cost).	30.00	Sq.m	37.10	1,113.00
36	Brick work with FPS bricks of class designation 75 in superstructure above plinth level up to ground floor in all shapes and sizes in cement mortar 1:6.	15.00	Cu.M	3,513.00	52,695.00
37	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.	115.00	Sq.m	124.00	14,260.00
38	Cement Plaster to ceiling /walls with 12mm thick cement plaster finished with a floating coat of neat cement of mix 1:3 (1 cement : 3 fine sand) .	15.00	Sq.m	110.30	1,654.50
39	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.	15.00	Sq.m	142.00	2,130.00
40	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.	95.00	Cu.M	83.80	7,961.00
41	Supplying and fixing plain PVC pipe of 110 mm dia of approved quality with specials, accessories and approved sealing / jointing compound on the exterior of the inserted portion of the fitting and fixing in position and jointing to MS gutters, including cost of all materials, sealing compound, labour etc., for all heights complete.	10.00	R M	276.00	2,760.00
42	Supply & fixing PVC Ventilating cowl of 110 mm dia.	1.00	Each	19.00	19.00
43	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") .	2.00	Each	238.00	476.00
	Total of part -I			₹	4,46,433.16

S. No.	Description of the item	Qty	Unit	Rate (₹)	Amount (₹)
	Part -II - Electrical works				
1	Supply & Installation of lighting/fans wiring with 1.5 sq. mm copper conductor single core multi-strand PVC insulated cable run through rigid PVC pipe of suitable size (Sudhakar make) from switch board/FBD to individual points laid on wall/roof including earth continuity for all points with copper wire of 14 SWG with 5 A ceiling rose on teakwood round block.	7.00	Point	313.96	2,197.72
2	Supply and fixing of 10 Amps, 250 V SPT switches for control of light fittings with ROMA, Code: 21 011 of Anchor make or equivalent type of North-West make fixed on a suitable Modular type concealed box with suitable top cover for item 1(a).	5.00	Set	211.00	1,055.00
3	Supply and installation of Energy efficient light fitting, T5 type 2 x 28 W industrial luminaire with 28W T5 Fluorescent lamps. This includes supply & fixing of downrods, round blocks, connecting the copper twin twisted wire from ceiling rose to fitting and other accessories. Make: Philips/Asian Electronics	5.00	Set	1,519.20	7,596.00
4	Supply and installation of 300 mm (12") sweep exhaust fans, which includes assembling and testing of all fans. The fans are to be rigidly fixed to wall with suitable arrangement. Black colour, double ball bearing, low noise, white epoxy powder coated paint finish with bird guard. Make: Orient/Usha/Crompton.	2.00	Set	1,350.40	2,700.80
	Total of Part -II			₹	13,549.52
	Total Value of work			₹	10,09,132.43

Note:

1	A penalty of 0.5% of the gross value of work shall be levied for every weeks or part there of non-execution/delay in the execution of work subjected to maximum penalty of 10% of the gross value of total part 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		