

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : Construction of New Flow Model Lab near R in Factory****ESTIMATE REF NO : CF/CA/04**

CPWD 2007 REF	SLNO	DESCRIPTION	QTY	UNIT	RS RATE P	RS AMOUNT P
2.1.1	01	Earth work in SURFACE EXCAVATION not exceeding 30 cm. in depth but exceeding 1.5 m in width as well as 10 sqm. on plan including disposal of excavated earth upto 50 M and lift upto 1.5 m, disposed soil to be levelled and neatly dressed IN ALL KINDS OF SOIL	1000	SQ.M	20.74	20740.00
2.8.1	02	Earth work in EXCAVATION by mechanical means (Hydraulic excavator) / manual means in foundations, trenches or drains ( not exceeding 1.5 m in width or 10 sqm on - plan) including dressing of sides & ramming of bottoms, lift upto 1.5m,including getting out the excavated soil and disposal of surplus excavated soil as directed,with in a lead of 50 m IN ALL KINDS OF SOIL.	510	CU.M	103.40	52734.00
12.50	02					
2.25	03	FILLING AVAILABLE EXCAVATED EARTH (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth; consolidating each deposited layer by ramming and watering, lead upto 50 M and lift upto 1.5 M.	480	CU.M	45.70	21936.00
2.27	04	Supplying and FILLING IN PLINTH WITH RIVER SAND under floors including watering, ramming, consolidating and dressing complete.	106	CU.M	301.50	31959.00
2.32	05	CLEARING GRASS AND REMOVAL OF THE RUBBISH upto a distance of 50 M outside periphery of the area cleared.	940	SQ.M	13.56	12746.40
2.35.2	06	Diluting and injecting chemical emulsion for post-constructional ANTI-TERMITE TREATMENT:- Along external wall below concrete or masonry apron using chemical emulsion @ 2.25 litre per linear metre including drilling and plugging holes etc., with:				

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2.35.2.1	06A	Chlorpyriphos / Lindane E.C 20% with 1% concentration.	620	SQ.M	10.45	6479.00
2.35.3	07	Diluting and injecting chemical emulsion for post-constructional ANTI-TERMITE TREATMENT:- of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12mm dia. holes and plugging with cement mortar 1:2 (1 cement: 2 coarse sand) to match the existing floor with:				
2.35.3.1	07A	Chlorpyriphos / Lindane E.C 20% with 1% concentration.	800	SQ.M	48.70	38960.00
2.35.4	08	2.35.4: Diluting and injecting chemical emulsion for post-constructional ANTI-TERMITE TREATMENT: of existing masonry using chemical emulsion @ one litre per hole at 300mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2 (1 cement: 2 coarse sand) to the full depth of the hole with:				.00
2.35.4.1	08A	Chlorpyriphos / Lindane E.C 20% with 1% concentration.	192	SQ.M	7.60	1459.20
4.10	09	4.10: Providing and laying DAMP PROOF COURSE 50MM thick with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	112	SQ.M	76.81	8602.72
4.1	10	4.1: Providing and laying in position CEMENT CONCRETE of specified grade excluding the cost of centring and shuttering for ALL WORKS UPTO PLINTH LEVEL, with:				
4.1.9	10A	CC 1:4:8 (1 cement: 4 fine sand: 8 graded stone aggregate 40 mm nominal size)	200	CU.M	1415.55	283110.00
5.12	11	Providing and fixing upto floor five level recast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases etc. including hoisting and setting in position with				

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					RS	P	RS	P
		cement mortar 1:3 (1 cement: 3 coarse sane), cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement: 3 fine sand) on exposed surfaces complete.						
5.12	11A	1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size).	.05	CU.M	2913.85		145.69	
5.1	12	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of cemtring, shuttering, finishing and reinforcement - All works up to plinth level:						
5.1.2	12A	1:1.5:3 (1 cement: 1.5 Coarse sand: 3 graded stone aggregate 20mm nominal size)	50	CU.M	1660.00		83000.00	
5.2	13	REINFORCED CEMENT CONCRETE WORK IN WALLS (ANY THICKNESS), INCLUDING ATTACHED PILASTERS, BUTTRESSES, PLINTH AND STRING COURSES, FILLETS, COLUMNS, PILLARS, PIERS, ABUTMENTS, POSTS AND STRUTS, ETC., excluding cost of centring, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size), at levels: . (NOTE: Floor one level corresponds to plinth level) .						
5.2.2	13A	Up to floor V level	61	CU.M	2020.35		123241.35	
5.3	14	Reinforced caement concrete work in beams, suspended floors, roofs having slope up to 15 degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size).	25	CU.M	2016.25		50406.25	
5.9	15	Centring and shuttering including strutting, propping etc. and removal of form for:						
5.9.1	15A	Foundations, footings, bases of columns, etc. for mass concrete.	57	SQ.M	119.25		6797.25	
5.9.6	15B	Columns, pillers, piers, abutments, posts and struts.	562	SQ.M	238.40		133980.80	

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5.9.15	15C	small lintels not exceeding 1.50m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	73	SQ.M	119.25	8705.25
5.9.19	15D	Whether shade, Chajjas, corbels etc., including edges.	48	SQ.M	258.60	12412.80
5.22	16	Reinforcement steel for RCC work including straightening, cutting, bending, placing in position and binding all complete at all levels, with:				
5.22.3	16A	Cold twisted bars/HYSD bars etc.	15000	KG.	6.19	92850.00
6.5	17	Extra for brick work in superstructure above floor V level for each four floors or part thereof by mechanical means by lifting material using mobile crane.	340	CU.M	190.00	64600.00
6.1	18	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth:				
6.1.1	18A	Cement mortar 1:4 (1 cement : 4 coarse sand).	5	CU.M	1801.30	9006.50
6.1.2	18B	Cement mortar 1:6 (1 cement : 6 coarse sand).	344	CU.M	1798.00	618512.00
6.13.2	19	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level upto floor V level. in Cement Mortar 1:4 (1 cement: 4 coarse sand).	10	SQ.M	247.68	2476.85
7.1.1	20	Randum Rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20mm nominal size) at plinth level with cement mortar 1:6 (1 cement: 6 coarse sand).	180	CU.M	1411.55	254079.00
9.1	21	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with.				
9.1.1	21A	Second class teak wood	.5	CU.M	52090.00	26045.00
9.1.3	21B	Kiln seasoned and chemically treated Hollock wood	.45	CU.M	31399.40	14129.73
9.9	22	Providing and fixing GLAZED SHUTTERS FOR DOORS, WINDOWS AND CLERESTORY WINDOWS using 10 kg/sqm (4 mm thick) glass panes including necessary cleats and black enamelled ISI marked M.S butt hinges (@ 4				

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					RS	P	RS	P
		Nos. 100 x 58 x 1.9mm per shutter) with necessary screws etc. of thickness and wood kind:						
9.9.1	22A	35 mm thick, Second class teak wood .	20	SQ.M	1718.30		34366.00	
9.12	23	Extra for providing frosted glass panes of 10 Kg/Sq.m. (4mm thick) in doors, windows & clerestory window shutters (Area of opening for glass panes excluding portion inside rebate shall be measured).	10	SQ.M	10.45		104.50	
9.53	24	Providing 40 x 5 mm flat IRON HOLD FAST 40 cm. long including fixing to frame with 10 mm dia. bolts, nuts and wooden plugs and embedding in cement concrete block 30 x 10 x 15 cms. 1:3:6 mix (1 Cement: 3 coarse sand:6 graded stone aggregate 20mm nominal size)	148	EACH	55.80		8258.70	
9.76	25	Providing and fixing bright finished BRASS 100 mm MORTICE LATCH and LOCK with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	2	EACH	332.65		665.30	
21.1	26	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/appropriate Z sections and other sections of approved make conforming to IS:733 and IS:1285, fixed with rawl plugs and screws or with fixing clips or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and inclu						
21.1.1.2	26A	for fixed portion with powder coated aluminium (minimum thickness of powder coating 50 microns).	10	KGS	306.30		3063.00	
21.1.2.2	26B	For shutters of doors, windows and ventilators including providing & fixing pivots/ hinges (4 Nos.100x 75x4mm per door shut. 3 Nos.75x 63x 3.2mm per wind/vent shut.) & making provision for fixing of fittings wher- ever required including the	10	KGS.	326.60		3266.00	

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		cost of PVC/neoprene gasket required (fittings shall be paid for seperately). with powder coated aluminium (minimum thickness of powder coating 50 microns).				
21.3.1	27	Providing and fixing GLAZING IN ALUMINIUM DOOR, WINDOW, VENTILATOR SHUTTERS AND PARTITIONS ETC. with PVC/neoprene gasket etc complete as per drawings and the directions of Engineer-in-charge.(Cost of aluminium snap beading shall be paid in basic item), Glass panes of 4.0 mm thickness ( weight not less than 10.0 kg / sqm )	5	SQ.M	554.95	2774.75
9.20	28	Providing & fixing ISI mark FLUSH DOOR SHUTTERS DECORATIVE TYPE, core of block board construction with frame of 1st class hard wood & well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters including ISI marked necessary cleats and Stainless Steel butt hinges with necessary C.P. brass screws etc., of 35 mm thickness:	18	SQ.M	1473.50	26523.00
9.40.1.1	29	Providing & fixing wooden moulded beading to door and window frame with iron screws, plugs & priming coat on unexposed surfaces etc. complete, with 50x12mm second class teak wood beading.	200	RMT	53.85	10770.00
9.48.2	30	9.48.2: Providing and fixing M.S GRILLS OF REQUIRED PATTERN IN FRAMES OF WINDOWS etc. with M.S flats, square or round bars etc. including applying a priming coat of approved (zinc chromate) steel primer etc., all complete and Fixed to openings / wooden frames with rawl plugs screws etc.	460	KG.	64.40	29624.00
9.62 TO 9.66	31	Providing & fixing ISI marked OXIDISED MILD STEEL FITTINGS with necessary nuts & screws etc. as required complete, of type and size:				

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9.62.1	31A	SLIDING DOOR BOLTS: 300 x 16 mm .	37	EACH	79.60	2945.20
9.63.1	31B	TOWER BOLTS black finish (barrel type) 250x10 mm	74	EACH	33.90	2508.60
9.63.3	31C	TOWER BOLTS black finish (barrel type) 150 x 10 mm	10	EACH	23.40	234.00
9.66.1	31D	HANDLES (conforming to IS:4992): 125 mm .	37	EACH	10.20	377.40
9.66.2	31E	HANDLES (conforming to IS:4992): 100 mm .	10	EACH	7.75	77.50
9.83	32	Providing & fixing IS:3564 marked UNIVERSAL HYDRAULIC DOOR CLOSER with necessary accessories and screws etc. complete of:				
9.83	32A	Aluminium die cast body tubular type.	2	EACH	610.60	1221.20
9.96 TO 100	33	Providing & fixing ISI marked ALUMINIUM FITTINGS anodised (anodic coating not less than grade AC 10 as per IS:1868) transparent or dyed to required colour or shade with nuts and C.P. brass screws as required etc. complete, of type and size:				
9.96.1	33A	SLIDING DOOR BOLTS: 300 x 16 mm .	37	EACH	158.50	5864.50
9.97.2	33B	TOWER BOLTS black finish (barrel type) 250x10 mm	74	EACH	62.20	4602.80
9.97.4	33C	TOWER BOLTS black finish (barrel type) 150 x 10 mm	10	EACH	42.75	427.50
9.100.1	33D	HANDLES (conforming to IS:4992): 125 mm .	37	EACH	35.30	1306.10
9.100.2	33E	HANDLES (conforming to IS:4992): 100 mm .	10	EACH	35.30	353.00
9.101.1	34	HANGING FLOOR DOOR STOPPER: Single rubber stopper, (150 mm long)	37	EACH	19.05	704.85
10.2	35	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work including cutting, hoisting, fixing in position & applying a priming coat of approved steel primer all complete.	16500	KG.	10.70	176550.00

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					RS	P	RS	P
10.11	36	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side/top/centre hung beedings and all members such as K11B and K12b etc. complete of standard rolled steel sections, joints mitred and flush butt welded and sash bars tenoned and riveted with 15 x 3 mm lugs 10 cm. long embedded in cement concrete blocks 15 x 10 x 10 cms. of 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including fixing of glass panes with glazing clips and special metal-sash putty of approved make, and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design.	60	KG	178.90		10734.00	
10.6	37	Supplying and fixing ROLLING SHUTTERS of approved make, made of required size M.S. Laths inter- locked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides (25x65mm made from 3.15mm thick M.S. sheet) and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 & M.S top cover of required thickness for rolling shutters, with:						
10.6.2	37A	80x1.20 mm M.S laths with 1.20 mm thk top cover	15	SQ.M	965.35		14480.25	
10.14	38	Providing and fixing pressed steel door frames conforming to IS 4351 manufactured from commercial mild steel sheet of 1.25 mm thick including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by	26	R.M	271.65		7062.90	

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					RS	P	RS	P
		mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike plate and shock absorbers as specified and applying a coat of approved primer after pre treatment of the surface as directed by the Engineer in charge: Profile C						
11.4	39	52mm thick CEMENT CONCRETE FLOORING WITH "HARDCRETE" CONCRETE HARDENER TOPPING, under layer 40mm thick cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) laid after applying slurry (@ 2 kg cement/sqm) and top layer 12mm thick "HARDCRETE" concrete hardener consisting of mix 1:2 (1 cement hardener mix: 2 stone aggregate 6mm nominal size) by volume with which HARDCRETE hardening compound of Snowcem India Ltd. or equivalent is mixed @ 2 litre HARDCRETE per 50 Kg. of cement including finishing with cement slurry mixed with steel floats, rounding of edges and including providing 40 x 4mm glass strips etc. but excluding the cost of nosing of steps etc. complete.	1100	SQ.M	150.32		165347.60	
11.36	40	Providing and fixing 1st quality ceramic tiles conforming to IS:13753 of minimum thickness 5mm of approved make like NITCO, ORIENT, SOMANY KAJARIA, or equivalent make in all colours, shades except begundy, 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 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	68	SQ.M	492.26		33473.98	
11.37	41	Providing and laying ceramic glazed FLOOR tiles 300x300mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY KAJARIA, or equivalent make in colours such as white, ivory, grey, fume	38	SQ.M	534.31		20303.95	

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		red-brown, laid on 20mm thick cement mortar 1:4 (1 cement: 4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete.						
11.6	42	CEMENT PLASTER SKIRTING (upto 30 cm. height) with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement slurry (@ 2 kg cement/ sqm) including rounding of junction with floor wherever required etc., for 18mm thick.	30	SQ.M	95.98		2879.40	
12.50	43	Supply & Installation of pre coated galvanized iron profile sheets (size, shap and pitch of corrugation as approved by Engineer-in-charge) 0.50mm +/- 5% total coated thickness (TCT) thick Zinc coating 120 gsm as per IS:277 in 240 mpa steel grade, 5-7 microns epoxy primer both side of the sheet and polyster top coat 15-18 microns. Sheets should have protective guardfilm of 25 microns minimum to avoid scratches while transporatation should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling / self tapping screws of size (5.5 x 55mm) with EPDM seal or with polimer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead complete up to any pitch in horizontal/vertical or curved surfaces excluding cost of purlins, rafters and trusses including cutting tosize and shape wherever required.	1220	SQ.M	440.65		537593.00	
12.51	44	Providing and fixing pre-coated galvanized steel sheet roofing accessories 0.50mm +/- 5% total coated thickness (TCT) thick Zinc coating 120 gsm as per IS 277 in 240 mpa steel grade, 5-7 microns epoxy primer on both sides of the sheet and polyester top coat 15-18 microns using self drilling/self tapping screws or with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I.						

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		plain and bitumen washers complete:				
12.51.1	44A	Ridges plain (500 - 600 mm).	30	METR	458.15	13744.50
12.51.2	44B	Flashings/Aprons (up to 600mm)	30	METR	448.15	13444.50
12.51.4	44C	Barge board (upto 300mm)	20	METR	416.90	8338.00
12.37	45	Providing and fixing M.S HOLDER BAT CLAMPS of approved design to CI/ SCI/ PVC rain water pipes embedded in and including cement concrete blocks 10x10x 10 cm. of 1:2:4 (1 cement: 2 coarse sand:4 graded stone aggregate 20 mm nominal size) and cost of cutting holes and making good the walls etc., for 100mm diameter pipes	5	EACH	65.35	326.75
12.40	46	Providing and fixing on wall face RIGID UNPLASTICISED PVC RAIN WATER PIPES (working pressure 4 kg / sqcm) conforming to IS:13592 including jointing with 'T'shaped seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion. Single socketed pipes, of OUTER DIA.:				
12.40.2	46A	110mm diameter	12	R.M.	163.40	1960.80
12.42	47	Providing and fixing on wall face RIGID UNPLASTICISED P.V.C. MOULDED FITTINGS / ACCESSORIES ( working preasure 4 kg / sqcm. and wall thickness same as of main pipe) for unplasticised PVC RAIN WATER PIPES conforming to IS:13592 including jointing with seal ring conforming to IS:5382 leaving 10 mm gap for termal expansion, of type and dia: (NOTE:i)concealed pipe joints to be jointed with rubber ring and solvent cement (ii) exposed pipe joints to be jointed with rubber ring and rubber lubricant) .				
12.42.1.2	47A	Coupler for 110mm dia	1	EACH	101.65	101.65
12.42.5.2	47B	Bend 87.5 degree for 110 mm dia	4	EACH	134.20	536.80
12.42.6.2	47C	Plain shoe	4	EACH	263.10	1052.40

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13.37.1	48	Providing WHITE WASHING with LIME to given an even shade on new work (three or more coats) .	1000	SQ.M	6.75	6750.00
13.41.1	49	Providing DISTEMPERING with OIL BOUND WASHABLE DISTEMPER of approved brand and manufacture to give an even shade on new work (two or more coats) over and including priming coat with cement primer .	100	SQ.M	41.55	4155.00
13.62.1	50	Providing and Painting with SYNTHETIC ENAMEL PAINT of approved brand and manufacture to give an even shade two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	200	SQ.M	51.30	10260.00
13.69.1	51	POLISHING ON WOOD WORK with ready made wax polish of approved brand and manufacture on new work.	46	SQ.M	35.80	1646.80
13.1.2	52	Providing 12mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required), of mix: 1:6	200	SQ.M	49.00	9800.40
13.2	53	Providing 15mm thick CEMENT PLASTER (including providing necessary plaster grooves wherever required and for all exterior height) on rough side of single or half brick wall, of mix:				
13.2.1	53A	1:4 (1 cement : 4 fine sand)	10	SQ.M	56.47	564.73
13.2.2	53B	1:6 (1 cement : 6 fine sand)	850	SQ.M	56.28	47834.60
13.3.1	54	Providing 20mm thick CEMENT PLASTER finished with a floating coat of neat cement in cement mortar 1:4 (1 cement: 4 fine sand)	50	SQ.M	66.37	3318.41
13.33.1	55	POINTING on STONE WORK with cement mortar 1:3 (1 cement: 3 fine sand), type ruled pointing:	48	SQ.M	56.44	2709.09

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CPWD 2007 REF	SLNO	DESCRIPTION	QTY	UNIT	RATE RS P	AMOUNT RS P
13.46.1	56	Finishing wall with Acrylic Smooth exterior paint of required shade on NEW WORK (two or more coats applied @ 1.67 ltr/10 sqm) over and including base coat of water proofing cement applied @ 2.2 kg/10 sqm.	700	SQ.M	50.40	35280.00
17.31	57	Providing and fixing, 600 x 450 mm, BEVELLED EDGE MIRROR of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with CP brass screws & washers complete. (NOTE: Mirror centre ht.from fl.lvl: 145-150 cm in gen)	4	EACH	493.65	1974.60
17.33	58	Providing & fixing 600x 120x 5 mm GLASS SHELF with edges rounded off supported on anodised aluminium angle frame with CP brass brackets and guard rail fixed with 40 mm long screws, rawl plugs etc. complete .	4	EACH	218.80	875.20
17.60	59	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors with Sand cast iron S&S as per IS:3989.	7	EACH	544.30	3810.10
17.1	60	Providing & fixing WATER CLOSET SQUATTING PAN (INDIAN TYPE W.C PAN) with 100mm SCI or UPVC (as required) P or S trap, 10 litre low level white PVC flushing cistern with manually controlled device (handle lever) conforming to IS 7231, Parryware / Hindware / Seabird / Orietn (Coral) with all fittings and fixtures complete including cutting and making good the walls and floors wherever required, of type: (NOTE: Ht bet pan top & cistrn underside to be 60-65cm) White Vitreous China Orissa pattern W.C pan of size 580 x 440 mm with integral type foot rests.	2	EACH	2278.75	4557.50

CONTRACTOR/ TENDERER

ACCEPTING OFFICER

**BHARAT HEAVY ELECTRICALS LIMITED**

BOILER AUXILIARIES PLANT

RANIPET - 632406

**ESTIMATE****NAME OF WORK : Construction of New Flow Model Lab near R in Factory**

CPWD 2007 REF	SLNO	DESCRIPTION	QTY	UNIT	RATE		AMOUNT	
					RS	P	RS	P
17.4.1	61	Providing and fixing WHITE VITREOUS CHINA FLAT BACK OR WALL CORNER TYPE LIPPED FRONT URINAL BASIN of 430 x 260 x 350 mm and 340 x 410 x 265 mm sizes, respectively with automatic flushing cistern (of approved make and conforming to IS:7231) with standard flush pipe and C.P. brass spreaders with brass unions & G.I. clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required, with: (NOTE: Ht. of urinal dip top from standing level-65cm) One urinal basin with 5 litre PVC automatic flushing cistern Parryware/Hindware/ Seabird/ Orient (Coral)	6	EACH	2005.75		12034.50	
17.7.2	62	Providing & fixing WASH BASIN with C.I./M.S brackets, 15mm C.P brass pillar taps, Kingston/ Gem/ Techno/ Parko, 32mm C.P brass waste of standard pattern including painting of fittings and brackets, cutting and making good the walls, wherever required, of type: (NOTE: Ht. of basin rim from floor level to be 75-80cm) White Vitreous China wash basin size 630x 450 mm with a SINGLE 15 mm C.P brass pillar taps.	4	EACH	1188.75		4755.00	
17.28.2.1	63	Providing & fixing PVC WASTE PIPE (Min.length 70 cm.) for SINK OR WASH BASIN including PVC waste fittings complete, of type Flexible pipe of 32 mm dia:	2	EACH	46.80		93.60	
18.10	64	Providing and fixing GI PIPES complete with GI fittings and clamps, including cutting and making good the walls etc; pipe of nominal bore of: (INTERNAL WORK) (Note: Allowed Variation applicable to indicated wt.)		EACH				
18.10.1	64A	15 mm dia. Nominal bore	2	RMT	105.85		211.70	
18.10.2	64B	20 mm nominal bore	2	RMT	133.85		267.70	
18.15.1	65	Providing and fixing Brass bib cock of approved quality of nominal bore of 15 mm	6	EACH	191.70		1150.20	

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CPWD 2007 REF	SLNO	DESCRIPTION	QTY	UNIT	RATE RS P	AMOUNT RS P
		dia (min. wt. 400 gms.) Note: Out lete to be around 150mm from wall face.				
18.16.1	66	Providing and fixing Brass stop cock of approve quality of nominal bore of 15 mm dia (min. wt. 400 gms.)	5	EACH	191.70	958.50
18.17.1	67	Providing & fixing BRASS GATE VALVE OR FULL WAY VALVE with CI wheel of approved quality (screwed end); of nominal bore of: 25 mm dia (Wt. 1077 gms +/- 5%).	2	EACH	285.50	571.00
18.64	68	Providing and fixing PTMT SWIVELLING SHOWER ROSE with 15 nominal bore weight not less than 40 gms.	2	EACH	101.95	203.90
19.1	69	Providing, laying & jointing GLAZED STONEWARE PIPES of GRADE "A" with stiff mixture of cement mortar in the proportion of 1:1 (1 cement: 1 fine sand) including testing of joints etc. complete, of: .				
19.1.2	69A	150 mm dia. (with Gradient 1:100 in general)	50	RMT	134.92	6745.93
19.4	70	Providing and fixing SQUARE MOUTH S.W GULLY TRAP GRADE "A" COMPLETE WITH CI GRATING brick masonry chamber with bricks of specified class designation in cement mortar 1:4 (1 cement: 4 coarse sand) embedded in CC 1:5:10 plastering 12mm thk with cement mortar 1:3 (1 cement: 3 coase sand) finished with floating coat of neat cement etc and water tight CI cover with frame of 300 x 300mm size (inside), the weight of cover to be not less than 4.5 kg. and frame to be not less than 2.70 kg as per standard design; with FPS bricks and of size and type :				
19.4.2.1	70A	150 x 100 mm size, P type with FPS bricks of class designation 75	3	EACH	827.27	2481.81
19.30	71	Constructing BRICK MASONRY CHAMBER FOR UNDERGROUND CI INSPECTION CHAMBER AND BENDS with 75 class designation bricks in cement mortar 1:5 (1 cement: 5 fine sand)				

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CPWD 2007 REF	SLNO	DESCRIPTION	QTY	UNIT	RATE RS P	AMOUNT RS P
		CI cover with frame (light duty) 455 x 610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) RCC top slab with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate of 20 mm nominal size) foundation concrete 1:5:10 ( 1 cement:5 fine sand:10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc.complete as per standard design, of:				
19.30.2.2.1	71A	Inside dimension 500 x 700 mm & 45 cm. deep for pipe line with one or two inlets: with FPS bricks.	2	EACH	3062.59	6125.18
1.1.1/2/4	72	Carriage of materials by mechanical transport including loading, unloading, spreading, levelling etc. up to a distance of 2 K.M.	120	CU.M	56.00	6720.00

TOTAL ESTIMATED VALUE 33,03,428.22

CONTRACTOR TENDER PERCENTAGE @ ABOVE / BELOW / AT PAR \_\_\_\_\_%

(Percentage in words )

TOTAL VALUE OF WORK

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CONTRACTOR/ TENDERER

ACCEPTING OFFICER