

BILL OF QUANTITY CUM PRICE SCHEDULE**Name of Project****: 400 KV Switchyard at Suratgarh****Name of Work****: Civil Work of Control Room Building**

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
1	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and disposal of excavated earth upto 100m and lift upto 3.5m, disposed earth to be levelled and neatly dressed.				
(a)	All kinds of soil.	1300	cum	146.50	190450.00
2	Earthwork in excavation by mechanical means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width as well as 10sqm on plan) including dewatering as necessary of rain water/subsoil seepage water and dressing of sides and ramming of bottoms, lift upto 3.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 100m.				
(a)	All kinds of soil.	100	cum	148.25	14825.00
3	Filling available excavated earth (including rock) in trenches, plinth, sides of foundations, etc., in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead upto 100m and lift upto 3.5m.	1050	cum	101.50	106575.00
4	Carriage & disposal of surplus excavated earth/rock beyond initial lead by mechanical means not necessarily all the times on pucca roads, including loading, unloading, dressing of excavated material, etc., complete as per specifications -.				
(a)	Lead upto 1 km.	250	cum	101.27	25317.50
(b)	Lead upto 3 km.	50	cum	128.06	6403.00
(c)	Lead upto 5 km.	30	cum	153.30	4599.00
(d)	Lead upto 8 km.	20	cum	186.57	3731.40
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.				
(a)	1:2:4 (1 cement : 2coarse sand : 4 graded stone aggregate 20mm nominal size)	10	cum	4921.7	49217.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
(b)	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size)	5	cum	4230.50	21152.50
(c)	1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size)	60	cum	3920.65	235239.00
6	Providing and laying cement concrete in screed at terrace for water proofing treatment upto floor five level excluding the cost of centring, shuttering and finishing:				
	1:2:4 (1 cement : 2 coarse sand : 4 downgraded stone aggregate 12.5mm nominal size)	50	cum	5822.15	291107.50
7	Extra for providing and mixing water proofing material 'Impermo' or equivalent in cement concrete work, plaster work, etc in the proportion recommended by the manufacturer.	800	kg	44.36	35488.00
8	Supplying and filling in plinth with Jamuna/local sand under floors including watering, ramming, consolidating and dressing complete.	50	cum	843.65	42182.50
9	Providing, laying and compacting boulder soiling of required thickness in foundations of equipment and under the floors as per direction of Engineer-in-Charge.	200	CUM	800.00	160000.00
10	Supplying chemical emulsion in sealed containers including delivery as specified.				
	Chloropyriphos emulsifiable concentrate of 20%	270	Litre	185.95	50206.50
11	Diluting & injecting chemical emulsion for PRE-CONSTRUCTIONAL ANTI-TERMITE treatment and creating a continuous chemical barrier under and all around the column pits, wall trenches, basement excavation, top surface of plinth filling, junction of wall & floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid , surroundings of pipes and conduits, etc complete as per specifications (Plinth area of the building at ground floor only shall be measured for payment).	1050	sqm	107.85	113242.50
12	Providing and laying damp proof course 50mm thick cement concrete M20 all complete as per direction of Engineer-in-charge.	50	sqm	283.80	14190.00
13	Applying a coat of residual petroleum bitumen of grade VG-10 of approved quality using 1.7 kg per sqm on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	50	sqm	108.75	5437.50

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
14	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC structural elements including roads excluding the cost of centering, shuttering, finishing and reinforcement including admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability. - M20 grade reinforced cement concrete, minimum cement per cum of concrete as per IS: 456.				
(a)	All works upto plinth level	70	cum	5552.25	388657.50
(b)	All works above plinth level upto floor V level	5	cum	6319.20	31596.00
15	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for RCC structural elements including roads excluding the cost of centering, shuttering, finishing and reinforcement including admixtures in recommended proportions (as per IS 9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability. - M25 grade reinforced cement concrete by using minimum 330kg of cement per cum of concrete.				
(a)	All works upto plinth level	200	cum	5704.45	1140890.00
(b)	All works above plinth level upto floor V level	550	cum	6353.00	3494150.00
16	Centering and shuttering including strutting, propping, etc., and removal of form for:				
(a)	Foundations, footings, bases of columns, etc., for mass concrete.	270	sqm	186.40	50328.00
(b)	RCC walls at all levels (any thickness).	260	sqm	334.50	86970.00
(c)	Suspended floors, roofs, landings, balconies, chajjas and access platforms at all levels.	2250	sqm	371.80	836550.00
(d)	Lintels, beams, plinth beams and cantilevers.	750	sqm	309.80	232350.00
(e)	Columns, Pillars, Piers, Posts and Struts .	890	sqm	423.00	376470.00
17	Extra for additional height in centring ,shuttering wherever required with adequate bracing ,propping etc. including cost of deshuttering and decentring at all levels over a height of 3.5 meter for every additional height of 1 meter or part thereof (Plan area to be measured).				
	Suspended floors, roofs, landing, beams and balconies .	3375	sqm	145.60	491400.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
18	Steel reinforcement -Cold twisted bars /TMT- Fe 500D (To be procured from SAIL,TISCO and RINL only)				
(a)	Excluding supply but including straightening, cutting,bending, binding, (i/c cost of binding wire), placing in position, etc., all labour & material, complete.(See Note 1)	69000	kg	15.00	1035000.00
(b)	Including supply, straightening, cutting, bending, binding, (i/c cost of binding wire), placing in position, etc., all labour & material, complete.	2000	kg	62.00	124000.00
19	Brickwork with F.P.S.bricks of class designation 75 in foundation and plinth in:				
	Cement mortar 1:6 (1 cement : 6 coarse sand)	25	cum	4646.50	116162.50
20	Brickwork with F.P.S.bricks of class designation 75 in superstructure above plinth level to floor V level in all shapes and sizes in:				
	Cement mortar 1:6 (1 cement : 6 coarse sand)	250	cum	5325.10	1331275.00
21	Half brick masonry with bricks of class designation 75 in foundation and plinth in:				
	Cement mortar 1:4 (1 cement : 4 coarse sand)	10.00	sqm	574.70	5747.00
22	Half brick masonry with bricks of class designation 75 in superstructure above plinth level to floor V level.				
	Cement mortar 1:4 (1 cement : 4 coarse sand)	50.00	sqm	647.90	32395.00
23	Extra for providing and placing in position 2 Nos 8mm dia bars at every third course of half brick masonry (with FPS bricks)	60.00	sqm	69.50	4170.00
24	Providing and fixing 18mm thick mirror polished, machine cut for column facia, kitchen platforms, vanity counters, flooring and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement: 4 coarse sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing etc. complete at all levels. (over 1sqm but upto 2sqm)				
	Rajnagar Marble	10.00	sqm	2322.25	23222.50
	Granite Black	10.00	sqm	3769.70	37697.00
25	Providing and fixing ISI marked flush door shutters decorative type, the outer sheets of 18 G rigidly connected with continuous vertical 20 G stiffeners at the rate of 150 mm center to center and inside voids filled with mineral wool making the shutter sound deadended all complete as per specification.				

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
	45 mm thick including ISI marked Stainless Steel butt hinges with nessary screws.	25.00	sqm	2323.55	58088.75
26	Providing and fixing aluminium sliding door bolts anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with nuts and screws etc., complete.				
	300 X 16mm	10	each	215.30	2153.00
	250 X 16mm	10	each	180.45	1804.50
27	Providing and fixing aluminium tower bolts anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc., complete.				
	300 X 10mm	10	each	108.10	1081.00
	250 X 10mm	10	each	90.65	906.50
28	Providing and fixing aluminium handles anodised (anodic coating not less than grade AC 10 as per IS: 1868) transparent or dyed to required colour or shade with necessary screws etc., complete.				
	125mm	15	each	66.95	1004.25
	100mm	15	each	52.80	792.00
29	Providing and fixing IS:3564 marked aluminium die cast body tubular type universal door closer of approved quality and make with accessories and screws complete.	20	each	737.35	14747.00
30	Supplying and fixing rolling shutters conforming to IS: 6248 of approved make, made of required size MS laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with mechanical arrangement for operation complete including the cost of providing and fixing necessary 27.5cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454- part 1 and M.S top cover of required thickness for rolling shutters.				
	80 X 1.20mm MS laths with 1.20mm thick top cover.	8	sqm	1831.20	14649.60
31	Providing and fixing ball bearing for rolling shutters.	4	each	436.45	1745.80

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
32	Providing and fixing pressed steel door frames conforming to IS:4351, manufactured from commercial mild steel sheet of 1.60mm thickness including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50X25mm, or base ties of 1.60mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with spit 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 steel primer after pre-treatment of the surface as directed by Engineer-in-Charge:				
	Profile C	100	RM	383.73	38373.00
33	Structural steelwork welded in built up sections like edge protection angles, pipes, insert plates with lugs & framed work including providing, cutting, hoisting, fixing in position/ embedding in concrete and applying a priming coat of approved steel primer all complete.	10000	kg	66.85	668500.00
34	Steelwork welded in built up sections/framed work including providing, cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc., as required.				
(a)	In covering of floors/trenches of control room building with chequered plates, stringers, treads, landings, etc., of staircases involving use of chequered plates, wherever required, all complete.	4900	kg	74.30	364070.00
(b)	In gratings, frames, ladders, stair railings, gates (including pipes), rails, ISMB, ISMC and similar works.	2000	kg	86.50	173000.00
35	Cement concrete flooring 1:2:4 (1cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps, etc., complete.				
	50mm thick with 20mm nominal size stone aggregate.	650	sqm	316.80	205920.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
36	50mm thick granolithic flooring (cement concrete flooring in 1:1:2) with metallic hardner topping under layer 38mm thick CC 1:1:2 and top layer 12 mm thick Hardcrete cement hardner consisting of mix 1:2 (1 cement hardner mix: 2 stone aggregate 6mm nominal size) by volume with which Hardcrete hardening compound of approved quality is mixed @ 2 liter Hardcrete per 50 Kg of cement including cement slurry, but excluding the cost of nosing of steps etc., complete.	180	sqm	480.10	86418.00
37	50mm thick granolithic flooring (cement concrete flooring in 1:1:2) without floor hardner topping under layer 38mm thick CC 1:1:2 and top layer 12 mm thick consisting of mix 1:2 (1 cement hardner mix: 2 stone aggregate 6mm nominal size) by volume including cement slurry, but excluding the cost of nosing of steps etc., complete.	750	sqm	480.10	360075.00
38	Cement plaster skirting (upto 30cm height) with cement mortar 1:3 (1cement: 3 coarse sand) finished with a floating coat of neat cement.				
	18mm thick	40	sqm	299.20	11968.00
39	Providing & fixing chemical resistant (Acid / Alkali) Tiles as per IS 4457 of minimum thickness 25mm thick in flooring jointed with acid/alkali resistant cement slurry. The tiles shall be abrasion resistant and durable. The bedding shall comprise of potassium silicate mortar conforming to IS: 4832 (Part-I) and resin based mortar like epoxy for jointing. Total thickness of flooring shall be 50mm, all complete as per as per specification.	90	sqm	1197.75	107797.50
40	Providing & fixing chemical resistant (Acid / Alkali) Tiles as per IS 4457 of minimum thickness 25mm thick in Dado set in potassium silicate mortar conforming to IS: 4832 (Part-I) and jointed with resin based mortar, all complete as per as per specification.	80	sqm	1259.85	100788.00
41	Providing & fixing ceramic unglazed vitreous tiles conforming to IS: 4457 with minimum thickness 20mm as chemical resistant (Acid / Alkali) Tiles in flooring jointed with acid/alkali resistant cement slurry. The tiles shall be abrasion resistant and durable. The bedding shall comprise of potassium silicate mortar conforming to IS: 4832 (Part-I) and resin based mortar like epoxy for jointing. Total thickness of flooring shall be 50mm, all complete as per as per specification.	5	sqm	1197.75	5988.75

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
42	Providing & fixing ceramic unglazed vitreous tiles conforming to IS: 4457 with minimum thickness 20mm as chemical resistant (Acid / Alkali) Tiles in Dado set in potassium silicate mortar conforming to IS: 4832 (Part-I) and jointed with resin based mortar, all complete as per as per specification.	5	sqm	1259.85	6299.25
43	Providing and fixing 1st quality ceramic vitrified glazed tiles conforming to IS:15622 of minimum thickness 5 mm of approved make and colours in skirting, risers of steps and dados over 12 mm thick bed of Cement mortar 1:3 (1 Cement:3 coarse sand) and jointing with grey cement slurry @3.3 kg/sqm including pointing in white cement mixed with pigment of matching shade complete.	1500	sqm	1411.45	2117175.00
44	Providing and laying of 9 mm minimum thick pre-polished vitrified tiles 600X600 mm of approved make and colours laid over 40 mm thick bed of Cement mortar 1:4 (1 Cement:4 coarse sand) including pointing in white cement mixed with pigment of matching shade complete as per direction of Engineer-in charge.	800	sqm	1402.55	1122040.00
45	Providing and fixing 1st quality ceramic glazed tiles conforming to IS:15622 of minimum thickness 7 mm of approved make and colours in skirting, risers of steps and dados over 12 mm thick bed of Cement mortar 1:3 (1 Cement:3 coarse sand) and jointing with grey cement slurry @3.3 kg/sqm including pointing in white cement mixed with pigment of matching shade complete.	110	sqm	793.60	87296.00
46	Providing and laying 1st quality heavy duty ceramic tiles 300X300 mm (thickness to be specified by manufacturer) conforming to IS:15622 of minimum thickness 7 mm of approved make and colours laid over 43 mm thick bed of cement mortar 1:4 (1 cement : 4 coarse sand) to make overall thickness of flooring 50mm including pointing in white cement mixed with pigment of matching shade complete.	40	sqm	822.10	32884.00
47	Providing and laying 1st quality ceramic vitrified glazed tiles 300X300 mm (thickness to be specified by manufacturer) conforming to IS:15622 of minimum thickness 7 mm of approved make and colours laid over 43 mm thick bed of cement mortar 1:4 (1 cement : 4 coarse sand) to make overall thickness of flooring 50mm including pointing in white cement mixed with pigment of matching shade complete.	10	sqm	987.80	9878.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
48	Providing and fixing approved quality pre polished vitrified tiles minimum thickness 9 mm of approved make and colours in skirting, risers of steps and dados over 12 mm thick bed of Cement mortar 1:3 (1 Cement:3 coarse sand) and jointing with grey cement slurry @3.3 kg/sqm including pointing in white cement mixed with pigment of matching shade complete.	10	sqm	1411.45	14114.50
49	Kota stone slab flooring over 20mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match shade of the slab, including rubbing and polishing complete with base of cement mortar 1: 4 (1 cement : 4 coarse sand):				
	25 mm thick	200	sqm	1071.70	214340.00
50	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shades of the slabs, including rubbing and polishing complete.	100	sqm	1100.85	110085.00
51	Making khurras 45X45cm with average minimum thickness of 5cm cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate of 20mm nominal size) over PVC sheet 1mX1mX400micron, finished with 12mm cement plaster 1:3 (1 cement: 3 coarse sand) and a coat of neat cement rounding the edges and making and finishing the outlet complete.	20	Each	167.45	3349.00
52	18mm cement plaster on uneven side of the internal walls in the mix:	800	sqm	164.75	131800.00
	1:6 (1cement :6 coarse sand)				
53	13mm cement plaster on even side of the walls in the mix:				
	1:6 (1cement :6 coarse sand)	1700	sqm	142.25	241825.00
54	2mm thick plaster of paris punning over the plastered surfaces on wall surfaces as directed by engineer-in-charge.	2500	sqm	100.95	252375.00
55	6mm cement plaster to ceiling of mix				
	1:4 (1 cement : 4 fine sand)	1500	sqm	120.35	180525.00
56	20mm cement plaster in two coats under layer 14mm thick cement plaster 1:6 (1 cement :6 coarse sand) finished with a top layer of 6mm thick 1:4 (1cement:4 fine sand)	900	sqm	215.40	193860.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
57	Applying priming coat				
(a)	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works.	500	sqm	24.95	12475.00
(b)	Applying one coat of cement primer of approved brand and manufacture on wall surface:	2000	sqm	31.55	63100.00
58	Distempering with oil bound washable distemper of approved brand and manufacture two or more coats over and including priming coat with cement primer.(Work to be carried as per relevant IS codes.)	50	sqm	79.65	3982.50
59	Distempering with 1st quality acrylic distemper of approved manufacturer, of required shade and colour complete, as per manufacturer's specification .	50	sqm	42.25	2112.50
60	Wall painting with acrylic emulsion paint as per IS: 5411 of approved brand and manufacture to give an even shade.				
	Two or more coats on new work.	2000	sqm	71.65	143300.00
61	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade as per customer specification:				
	Two or more coats on new work.	100	sqm	63.05	6305.00
62	Painting with acid proof paint of approved brand and manufacture to give an even shade:				
	Two or more coats on new work.	100	sqm	65.75	6575.00
63	Painting with chlorinated rubber based paint as per IS: 9862 of approved brand and manufacture to give an even shade:				
	Two or more coats on new work.	10	sqm	65.75	657.50
64	White washing with lime to give an even shade				
	Three or more coats on new work.	500	sqm	14.35	7175.00
65	Painting with water proof cement based paint as per IS: 5410 of approved brand and manufacture of required colour to give an even shade.				
	Two or more coats on new work.	900	sqm	54.40	48960.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
66	Forming groove of uniform size from 12X12mm and upto 25X15mm in plastered surface and joints of ceiling and wall as per approved pattern using wooden battens, nailed to the underlayer including removal of wooden battens, repairs to the edges of plaster panel and finishing the groove complete as per specifications and directions of the Engineer-in-charge.	100.00	RM	69.50	6950.00
67	Making plinth protection 100 mm thick of cement concrete M-20 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size) over 150mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including finishing the top smooth.	100.00	sqm	757.90	75790.00
68	Providing and fixing white vitreous china water closet squatting pan, 10 litre photo-voltaic control flushing arrangement with fittings & CI/MS brackets 40mm dia flush bend , overflow arrangement with specials of approved municipal design compete including painting of fittings and brackets, cutting and making good the walls and floors wherever required:				
	Orissa pattern W.C. pan of size 580x440 mm as per IS: 2556 (Part-3)	1	each	1359.80	1359.80
69	Providing and fixing white vitreous china pedestal type water closet (European type W.C. Pan) with seat and lid, C.P. Brass hinges and rubber buffers, 10 litre photo-voltaic control flushing arrangement with fittings & CI/MS brackets 40mm dia flush bend , overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design compete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :				
	W.C. pan with black solid plastic seat and lid with white vitreous china flushing cistern and CP flush bend as per IS: 2556 (par 2)	1	each	4613.05	4613.05

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
70	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430 x260x 350 mm and 340 x 410 x 265 mm sizes respectively with photo voltaic flushing cistern with C.I./ M.S brackets standard flush pipe and C.P. brass spreaders with brass unions and G.I. clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required:				
	One urinal basin with 5 litre P.V.C photo voltaic flushing cistern of approved make as per IS: 2556 (part-6, Sec.1)	2	each	3174.60	6349.20
71	Providing and fixing wash basin (oval shape) of approved colour and size with photo-voltaic control system, CI bracket , 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings etc. cutting and making good the walls wherever required:				
	Vitreous China wash basin size 630 x 450mm with a pair of 15mm C. P. brass pillars taps	2	each	2174.65	4349.30
72	Providing and fixing 100 mm sand cast iron grating for gully, floor or Nahani trap.	10	each	29.10	291.00
73	Providing and fixing wall to wall bathroom mirror (5.5 mm thick float glass) with bevelled edges (of approved quality) complete including all fittings, screws and washers complete as per specification.	2	each	762.55	1525.10
74	Providing and fixing 600 x 450 x5.5 mm bevelled edge mirror of float glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. Brass screws and washers complete.	2	each	762.55	1525.10
75	Providing and fixing 600 x 120 x 5 mm glass shelf with edges rounded off supported on anodised aluminium angle frame with C.P. Brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc. complete.	1	each	522.20	522.20
76	Providing and fixing SS towel rail complete with brackets fixed to wooden cleats with C.P. Brass screws with concealed fitting arrangement of approved quality and make.				
	600 mm long 20mm dia towel rail with total length of 645mm,width 78mm and effective height 88mm,weing not less than 190gms.	3	each	448.40	1345.20

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
77	Providing and fixing PTMT liquid soap container 109mm wide,125mm high and 112mm distance from wall of standard shape with bracket of same materials with snap fittings of approved quality ,colour and make ,weighing not less than 105 gm .	3	each	181.75	545.25
78	Providing and fixing SS liquid soap holder cum dispenser of standard shape with bracket of same materials with concealed fittings of approved quality ,colour and make	3	each	181.75	545.25
79	Providing and fixing toilet paper holder. CP brass.	3	each	339.85	1019.55
80	Providing and fixing soil, waste and vent pipes: 100 mm dia. Sand cast iron S & S pipe.	20	RM	854.85	17097.00
81	Providing and fixing M.S holder-bat clamps of approved design to Sand Cast iron/ cast iron (spun) pipe embedded in and including cement concrete blocks 10 x 10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including cost of cutting holes and making good the walls etc. For 100 mm dia pipe	6	each	140.65	843.90
82	Providing lead caulked joints to SCI pipes and fittings of diameter 100mm	6	each	270.85	1625.10
83	Providing and fixing SCI trap of self cleansing design with SCI screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:				
(a)	100mm inlet and 100mm outlet - sand cast iron S & S as per IS: 3989	2	each	938.05	1876.10
(b)	100mm inlet and 100mm outlet - sand cast iron S & S as per IS: 1729	2	each	752.20	1504.40
84	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass trap with necessary C.P. brass unions complete including painting of fittings and brackets, cutting and making good the wall wherever required : Size 600x450x200mm	2	each	2992.45	5984.90

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
85	Providing and fixing Stainless Steel AISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required:				
	Kitchen sink with drain board				
	510x1040 mm bowl depth 250mm.	1	each	6975.40	6975.40
86	Providing and fixing G.I. Pipes (medium grade) complete with G.I. Fitting and clamps, including cutting and making good the walls etc. (internal work).				
(a)	15 mm dia nominal bore.	10	RM	181.35	1813.50
(b)	20 mm dia nominal bore.	10	RM	221.50	2215.00
(c)	25 mm dia nominal bore.	10	RM	282.30	2823.00
87	Providing and fixing G.I. Pipes (medium grade) complete with G.I. Fitting and clamps, including trenching and refilling, etc. (external work).				
(a)	15 mm dia nominal bore.	5	RM	156.60	783.00
(b)	20 mm dia nominal bore.	5	RM	186.25	931.25
(c)	25 mm dia nominal bore.	10	RM	238.95	2389.50
(d)	40 mm dia nominal bore.	10	RM	327.15	3271.50
88	Making connection of GI distribution branch with GI main of following sizes by providing and fixing tee, including cutting and threading the pipe etc., complete.				
	25 to 40mm nominal bore.	1	each	338.90	338.90
89	Providing and fixing brass bib cock of approved quality				
	15mm nominal bore	4	each	259.85	1039.40
90	Providing and fixing brass stop cock of approved quality				
	15mm nominal bore	4	each	259.85	1039.40
91	Providing and fixing brass gate valve with CI wheel of approved quality (screwed end)				
(a)	25mm nominal bore	4	each	427.80	1711.20
(b)	32mm nominal bore	4	each	500.35	2001.40
92	Providing and fixing ball valve brass of approved quality complete.				
	High or low pressure with plastic floats				
(a)	15mm nominal bore	2	each	286.55	573.10
(b)	20mm nominal bore	2	each	407.40	814.80

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
93	Providing and placing on terrace (at all floor levels) polyethylene water storage tank of approved brand and manufacture with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank. The tank should be ISI marked .	1000	per litre	6.30	6300.00
94	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testiing of joints etc. complete.				
(a)	100 mm diameter.	10	RM	197.60	1976.00
(b)	150 mm diameter.	10	RM	301.90	3019.00
95	Providing and fixing square-mouth S.W. Gully trap grade 'A' complete with C.I. Grating brick masonry chamber with bricks of class designation 75 and water tight C.I. Cover with frame of 300 x 300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as standard design.:				
	100 x 100 mm size P type				
	With F.P.S bricks	2	each	1520.90	3041.80
96	Providing and fixing PTMT bottle trap for wash basin and sink				
(a)	Bottle trap 31 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the center of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms.	1	each	408.25	408.25
(b)	Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the center of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms.	1	each	440.75	440.75
97	Providing and fixing PTMT Waste Coupling for wash basin and sink of approved quality and colour				
(a)	Waste Coupling 38 mm dia of 83 mm length and 77 mm breadth weighing not less than 60gms.	1	each	99.30	99.30
(b)	Waste Coupling 31 mm dia of 79 mm length and 62 mm breadth weighing not less than 45gms.	1	each	114.40	114.40

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
98	Constructing brick masonry manhole with 75 class designation bricks in cement mortar 1:4 (1 cement: 4 coarse sand) RCC top slab with 1:2:4 mix(1 cement:2 coarse sand: 4 graded stone aggregate 20mm nominal size) foundation concrete 1:4:8 (1 cement: 4 coarse sand: 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 mix(1 cement:2 coarse sand: 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
	Inside size 90X80cm and 45cm deep including CI cover with frame (light duty) 455X610mm internal dimensions total weight of cover and frame to be not less than 38kg (weight of cover 23kg and weight of frame 15kg)				
	With FPS bricks	2	each	8062.70	16125.40
99	Extra for depth for manholes				
	Size 90X80cm				
	With FPS bricks	5	RM	5481.40	27407.00
100	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.				
	With F.P.S. bricks	1	each	16705.45	16705.45
101	Providing and fixing anodised aluminium work for doors, windows, ventilators and partitions with extruded builtup standard tubular and other sections of approved make conforming to IS: 733 and IS:1285, anodised transparent or dyed to required shade according to IS: 1868. (Minimum anodic coating of grade AC 15), fixed with rawl plugs and screws or with fixing clips or with expansion 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 jointed mechanically wherever required including cleat angle, aluminium snap beading for glazing/panelling, CP brass/stainless steel screws, all complete as per architectural drawings and direction of Engineer-in-charge. (Glazing and panelling to be paid for separately).				
(a)	For fixed portion	7500	kg	343.70	2577750.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
(b)	For shutters of doors, windows & ventilators including providing and fixing hinges/pivots and fittings wherever required including the cost of PVC/neoprene gasket required .	2500	kg	397.75	994375.00
102	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions, etc., with EPDM/neoprene gasket, etc., complete as per the architectural drawings and directions of Engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item).				
(a)	With float glass panes of 4.0 mm thickness	20	sqm	790.00	15800.00
(b)	With float glass panes of 5 mm thickness	150	sqm	1009.00	151350.00
(c)	With toughened glass of 6.0 mm thickness safety conforming to IS: 2553	300	sqm	1267.50	380250.00
103	Providing and fixing double action hydraulic floor spring of approved brand and manufacture (conforming to IS:6315) for aluminium door including cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece MS sheet outer box with slide plate etc., complete as per the directions of Engineer-in-charge.				
(a)	With SS cover plate minimum 1.25mm thickness	5	each	2020.05	10100.25
(b)	With brass cover plate minimum 1.25mm thickness	5	each	2194.30	10971.50
104	Providing and fixing factory made P.V.C. door frame of size 50x47 mm with a wall thickness of 5 mm, made out of extruded 5 mm rigid PVC foam sheet, mitred at corners and joined with 2 nos of 150 mm long bracket of 15x15 mm M.S. square tube, the vertical door frame profiles to be reinforced with 19x19 mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100 mm size, complete as per manufacturer's specification and direction of Engineer-in-charge.	15	meter	433.10	6496.50

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
105	Providing and fixing factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19 mm x 19 mm for styles and 15x15 mm for top & bottom rails. M. S. frame shall have a coat of steel primers of approved make and manufacture. M. S. frame covered with 5 mm thick heat moulded PVC 'C' channel of size 30 mm thickness, 70 mm width out of which 50 mm shall be flat and 20 mm shall be tapered in 45 degree angle on both side forming styles and 5 mm thick, 95 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided both side of the panel. 10 mm (5 mm x 2) thick, 20 mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail, panelling of 5 mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7 mm (5 mm + 2 mm) thick x 15 mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5 mm thick PVC strp of 20 mm width is to be stuck on the interior side of the 'C' channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge, manufacturer's specification & drawing.				
(a)	30 mm thick plain PVC door shutters	5	sqm	2675.15	13375.75
(b)	30 mm thick pre laminated PVC door shutters	2	sqm	3139.75	4709.63
106	Roof drainage and water proofing treatment using high solid content liquid applied elastomeric water proofing joint less membrane with separate wearing course as per ASTM C-898 and ASTM C-896 to form overall dry film thickness of minimum 1.5mm. Application rate includes preparation of surface, primer coat, finishing coats, sprinkling of sand, screed concrete 1:2:4 and wearing course of 25mm thk screed concrete grade M20 with galvanised chicken wire mesh of 0.56 mm dia, panelling and raking etc. and other allied activities as per customer Technical Specification Clause 7.1 & 7.2 of Volume - VI, Section :D-4.6, Part - F all complete. The scope covers all labour, materials, equipments, handling, scaffolding, transportation, testing etc. all complete .	1000	sqm	1200.00	1200000.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
107	Providing and fixing on wall/column face medium class mild steel pipes conforming to IS: 1239/ IS:3589 with welded joints for rain water pipe including providing suitable C.I grating at inlet points all complete as per customer Technical Specification Clause 7.3 of Volume - VI, Section :D-4.6, Part - F and as per direction of Engineer-in-charge.				
(a)	150mm dia	205	meter	1600.00	328000.00
108	Providing and fixing Anodised Aluminum grills of required pattern in frames of windows etc. with Aluminium flats,square or round bars etc. all complete as per requirement and direction of Engineer - in - charge. (Only weight of grills to be measured for payment).	250	kg	398.45	99612.50
109	Add for plaster drip course /groove in plastered surface or moulding to RCC projections in (1:3) cement mortar	180	meter	27.85	5013.00
110	Providing and fixing at all height false ceiling including providing and fixing of frame work made of special section power pressed from M.S sheet and galvanised in accordance with zinc coating of grade 350as per I.S: 277 and consisting of nagle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hanger being fixed with nut and bolts to G.I channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I channel with connecting clips made out of 2.64mm diax 230mm long G.I wire at every junction including fixing the gypsum board with ceiling section and perimeter channel 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drivw-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels				

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
	suitably fixed all complete as per drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with:				
	Aluminium false ceiling system shall comprise of of 84 mm wide 12.5 mm deep closed type plain panels of approved colour, roll formed out of 0.5 mm thick corrosion resistant alloy AA 5050 fixed on roll formed carriers, all complete as per specification.	560	sqm	891.40	499184.00
111	Providing and fixing thermal insulation of ceiling (under deck insulation) with 50 mm thick Resin Bonded mineral wool insulation conforming to IS : 8183, mat backed with 0.05 mm thick aluminium foil and 24G x 25 mm wire mesh netting, fixed to ceiling with metallic cleats (100x50x6 mm slotted mild steel plate welded to M. S. plate inserts embedded at soffit of the slab @ 60cm) and 14G wire drawn through slots and fixed to wire netting.	560	sqm	465.10	260456.00
112	Providing and laying non-pressure NP3 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.				
(a)	100mm dia. RCC pipe	2		862.55	1725.10
(b)	250mm dia. RCC pipe	2		1260.80	2521.60
(c)	300mm dia. RCC pipe	1		1367.10	1367.10
(d)	450mm dia. RCC pipe	1		1905.15	1905.15
113	Providing and placing in position suitable PVC water stops conforming to IS 12200 or equivalent for construction/expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete.				
	Serrated with central bulb (225mm wide,8-11mm thick)	10	meter	489.45	4894.50
114	Providing & fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partitions, etc, with 6mm thick toughened safety glass conforming to IS: 2553 on both sides having 12mm air gap including providing EPDM gasket, perforated aluminium spacers, dessicants, sealants (both primary & secondary sealant) etc. as per specifications, drawings & direction of Engineer in-charge complete.	50	sqm	3381.90	169095.00

S.No.	Description of Item	Quantity	Unit	Unit Rate (Rs)	Amount (Rs)
115	Providing and fixing fire proof door with panic devices as per IS:3614 (part-I & part-II) and manufacturer design with minimum fire rating of 2 hours and double cover plated type with mineral wool insulation all complete as per direction of Engineer-in-Charge.	20	sqm	14990.00	299800.00
116	Providing and fixing fire proof, automatically closing glazed aluminium door with panic devices as per IS and manufacturer design with minimum fire rating of 2 hours including cost of materials & labours all complete as per customer specification and direction of Engineer-in-Charge.	5	sqm	3090.00	15450.00
117	Providing and fixing PVC pipes 100 dia in trench entrance.	5	RM	500.00	2500.00
118	Providing & fixing of glass strip 40 mm wide & 4 mm thick in concrete flooring.	50	RM	33.80	1690.00
119	Providing & fixing chicken wire mesh in plaster as per specification and direction of Engineer - in - charge.	100	sqm	45.00	4500.00
120	Supply and erection of 0.5 HP pump of customer approved brand and model including all accessories as per direction of Engineer - in - charge.	1	each	3000.00	3000.00
				TOTAL	25746665

Note

- For Item No : 18(a) reinforcement steel shall be supplied by BHEL **free of cost** as per norms indicated in conditions of contract. The rate quoted against Item No: 18 (a) above shall be deemed to be inclusive of cost against all activities required including transportation of material from (SAIL,TISCO, IISCO, RINL or rerollers approved by main producers) stockyard.