

CONSTRUCTION OF FACULTY RESIDENCES 4 BLOCKS (PHASE-II) AT N.I.T. ROURKELA

ABSTRACT OF COST

	DESCRIPTION	D.S.R AMOUNT	NON-DSR AMOUNT
1	CIVIL WORKS	158138135.24	55079572.49
2	PLUMBING WORKS	12635286.55	13855750.00
3	ELECTRICAL WORKS	11585513.00	15655755.00
4	SOLAR WATER HEATER	-	3000000.00
5	FIRE FIGHTING WORKS	132371.60	3972865.00
6	SOLAR ENERGY		17009476.00
7	FDA		1519250.00
	TOTAL	182491306.39	110092668.49
	G.TOTAL	292583974.89	

CONSTRUCTION OF FACULTY RESIDENCES 4 BLOCKS (PHASE-II) AT N.I.T. ROURKELA

CIVIL WORKS

SUMMARY OF COST

S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012 Items	Non Scheduled Items
I	EARTH WORK	1258170.53	
II	CONCRETE WORK	4531604.49	
III	REINFORCED CEMENT CONCRETE	83468745.30	
IV	BRICK WORK	8088869.07	
V	MARBLE WORK	4527256.90	
VI	WOOD WORK	4036986.25	
VII	STEEL WORK	4670586.07	
VIII	FLOORING	15173121.22	
IX	ROOFING	3976808.05	
X	FINISHING	23043743.27	
XI	ROAD WORK	44569.54	
X	ALUMINIUM WORKS	2264869.47	
XI	WATER PROOFING	3052805.08	
XII	NON SCHEDULE ITEMS	-	55079572.49
	TOTAL	158138135.24	55079572.49

BILL OF QUANTITIES

CIVIL WORKS

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
I EARTH WORK 2.0						
1	2.6	Earth work In excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sq.m on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	Cu.M	2478.32	129.35	320570.69
2	2.7	Earth work n excavation over areas (exceeding 30cm in depth, 1.5 m in width as well as 10 Sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed:				
	2.7.1	Ordinary rock	Cu.M	247.84	197.75	49010.36
3	2.8	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 Sq.M on plan) including dressing of sides and ramming ob bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 m.				
	2.8.1	All kinds of soil	Cu.M	1280.92	130.80	167544.34
4	2.9	Excavation work by mechanical means (Hydraulic excavatory)/manual means in foundation trenches or drains not exceeding 1.5m in width or 10 Sq.M on plan including dressing of sides and ramming or bottoms lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.				
	2.9.1	Ordinary rock	Cu.M	128.08	212.00	27152.96
5	2.24	Extra rates for quantities of works, executed :				
	2.24.2	In or under foul position, including pumping out water as required	meter depth	1921.36	32.34	62136.78
6	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering , lead up to 50 m and lift up to 1.5 m				
	2.26	Extra for every additional lift of 1.5 m or part thereof in:				
i)	2.26.1	All kinds of soil	Cu.M	3759.20	34.60	130068.32
ii)	2.26.2	Ordinary or hard rock	Cu.M	375.20	62.00	23262.40

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
7	2.27	Supplying and filling in plinth with Jamuna river sand under floors including, watering, raming, consolidating and dressing complete.	Cu.M	291.12	479.30	139533.82
8	2.28	Surface dressing of the ground including removing vegetation and in equalities not exceeding 15cm dep and disposal of rubbish, lead upto 50m and lift upto 1.5m.				
	2.28.1	All kinds of soil.	100sqm	61.84	935.25	57835.86
9	2.32	Clearing grass and removal of the rubbish upto a distance of 50 outside the periphery of the area cleared.	100sqm	38.88	247.00	9603.36
10	2.36	Deduct for disposed soil levelled and neatly dressed.	Cu.M	48.00	-25.35	-1216.80
				TOTAL [I]		1258170.53
II CONCRETE WORK 4.0						
11	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level.				
12	4.1.8	1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cu.M	569.44	3593.30	2046168.75
	4.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks.				
(i)	4.2.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cu.M	12.92	5272.40	68119.41
(ii)	4.2.5	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	Cu.M	33.76	4782.35	161452.14
13	4.10	Providing and laying damp proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size)	Sq.M	229.21	207.55	47572.76
14	4.12	Extra for providing and mixing proofing material in cement concrete work @ 1 Kg per 50kg of cement	per 50 kg cement	60.00	35.35	2121.00
15	4.13	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil	Sq.M	229.20	96.65	22152.18

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
16	4.17	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement :3 coarse sand : 6 graded stone aggregate 20mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including fini.	Sq.M	446.20	338.75	151150.25
17	4.18	Extra for addition of synthetic polyester triangular fibre of length 12mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement concrete/RCC /Flooring / Water retaining structures by using 125gms of synthetic polyester trianacula	Per Bag of 50 kg of Cement	38356.00	53.00	2032868.00
					TOTAL [II]	4531604.49

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
III REINFORCED CEMENT CONCRETE 5-0						
18	5.2	Reinforced cement concrete work in wall (any thickness) including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutment, posts and struts etc. up to floor five level excluding cost of centering. shuttering finishing and reinforcement.				
	5.2.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	Cum	260.00	5735.75	1491295.00
19	5.9	Centring and shuttering including strutting, propping etc. and removal of form for:				
i	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sq.M	777.96	166.90	129841.52
ii	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sq.M	131.40	180.40	23704.56
iii	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sq.M	14236.28	311.20	4430330.34
iv	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sq.M	12144.80	265.25	3221408.20
v	5.9.6	Columns, pillars, piers, abutments, posts and struts	Sq.M	6685.44	365.60	2444196.86
vi	5.9.7	Stairs, (excluding landings) except spiral staircases	Sq.M	319.60	326.30	104285.48
vii	5.9.9	Arches, domes, vaults exceeding 6m span	Sq.M	232.40	866.70	201421.08
vix	5.9.14	Extra for shuttering in circular work (20% of respective centring and shuttering items)				
	(a)	For Circular Slabs [Rate 20% of 187.35=37.47]				
ix	5.9.15	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	Sq.M	154.56	33.38	5159.21
x	5.9.16	Edges of slabs and breaks in floors and walls,				
	5.9.16.1	Under 20 cm wide	R.M.	7170.96	99.45	713151.97
xi	5.9.17	Cornices and mouldings	Sq.M	78.80	495.50	39045.40
xii	5.9.19	Weather shade, Chajjas, corbels etc. including edges	Sq.M	165.88	411.10	68193.27
xiii	5.9.20	Suspended floors, roofs, landings, balconies and access platform. With water proof ply 12mm thick.	Sq.M	223.08	488.05	108874.19
20	5.11	Extra for additional height in centring, shuttering where ever required with adequate bracing, propping etc. including cost of de shuttering and decentring at all levels, over a height of 3.5 m for every additional height of 1 metre or part thereof. (Plan area to be measured).				
21	5.11.1	Suspended floors, roofs, landing, beams and balconies (plan area to be measured).	Sq.M	892.32	121.65	108550.73

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
22	5.13	Providing, hoisting and fixing upto floor five level precast reinforced cement concrete in small lintels not exceeding 1.5 m clear span upto floor five level including the cost of required centering, shuttering but excluding the cost of reinforcement ,with 1:2:4 (1 cement:2coarse sand :4 graded stone aggregate 20-mm nominal size).	Cu.M	32.28	8720.30	281491.28
23	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
	5.22.6	Thermo Mechanically Treated bars	Kg	147540.04	62.25	9184367.49
21	5.22A	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Above Plinth Level				
	5.22A.6	Thermo Mechanically Treated bars.	Kg	498565.08	62.25	31035676.23
25	5.30	Add for plaster drip course/ groove in plastered surface or mouldig to R.C.C. projections.	R.M.	52.32	22.25	1164.12
26	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but 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 as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.33.1	All works upto plinth level.	Cu.M	137.40	5242.15	720271.41
	5.33.2	All works above plinth level upto floor V level.	Cu.M	364.16	5781.50	2105391.04
27	5.34	Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable /recoverable separately.				
	5.34.1	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg / Cum	Cu.M	600.00	63.20	37920
28	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	Qtl	340.00	589.80	200532.00

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)		
29	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete,improve workability without impairing strength and durability as per direction of the Engineer - in - charge						
			5.37.1	All works upto plinth level.	Cu.M	137.40	5590.60	768148.44
			5.37.2	All works above plinth level upto floor V level.	Cu.M	364.16	6130.00	2232300.80
30	5.40	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per directions of the Engineer-in-						
	5.40.1	All works upto Plinth level	Cu.M	1099.20	5519.40	6066924.48		
	5.40.2	All works above plinth & upto Floor V Level	Cu.M	2913.36	6059.20	17652630.91		
				TOTAL [III]		83468745.30		
		IV 6.0 BRICK WORK						
31	6.1	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:						
	6.1.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	402.00	3316.55	1333253.10		
32	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in:						
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	Cum	1031.04	3316.55	3419495.71		
33	6.13	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level						

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	5880.92	476.85	2804316.70
34	6.15	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry (with F.P.S. bricks)	Sqm	8401.32	63.30	531803.56
				TOTAL [IV]		8088869.07

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
V	8.0 MARBLE WORK					
35	8.2	Providing and fixing 18mm thick gang saw cut mirror polished pre moulded and pre polished machine cut for kitchen platforms, vanity counters, windows sills, facias 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, moulding and polishing to edge to give high gloss finish etc. complete at all levels				
	8.2.2	Granite of any colour and shade				
	8.2.2.2	Area of slab over 0.50 sqm	Sq.M	1418.60	3083.40	4374111.24
36	8.4	Extra for fixing marble / granite stone over and above corresponding basic item, in facia and drops of width up 150 mm with epoxy resin based adhesive including cleaning etc. complete				
37	8.5	Extra for providing opening of required size & shape for wash basins / kitchen sink in kitchen platform, vanity counters and similar location in marble / Granite / stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete.	R.M.	570.08	185.80	105920.86
			Nos	168.00	281.10	47224.80
					TOTAL [V]	4527256.90
VI	WOOD WORK 9.0					
38	9.15	Deduct if fixed shutters (without hinges) are provided instead of openable shutters for doors, windows or clerestory windows with:				
	9.15.1	Stainless steel butt hinges with stainless steel screws:				
	9.15.1.1	For 2nd class teak wood and other inferior class of wood shutters.				
39	9.31	Providing and fixing wire gauge laminated veneer lumber shutters conforming to IS : 14616, and as per TADS 15 : 2001 (Part B) using galvanised wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm as per IS : 1568, for doors, windows and clerestory windows, including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws, as per directions of Engineer-in-charge:				
	9.31.1	35 mm thick shutters	Sq.M	418.08	142.05	59388.26
40	9.40	Providing and fixing wooden moulded beading to door and windows frames with iron screws, plugs and priming coat on unexposed surface etc. complete				
	9.40.1	Second class teak wood				
	9.40.1.2	50X12 mm	R.M.	6828.08	135.70	926570.46

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
41	9.47	Providing and fixing nickel plated M.S. pipel curtain rods with nickel plated brackets:				
	9.47.1	20 mm dia (heavy type)	R.M.	444.08	107.10	47560.97
42	9.48	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.				
43	9.48.1	Fixed to steel windows by welding.	Kg	8066.24	90.75	732043.54
43	9.51	Providing and fixing fly proof galvanised M.S. wire gauze to windows and clerestory windows using galvanised M.S. wire gage with average width of aperture 1.4 mm in both directions with wire of dia. 0.63 mm.				
	9.51.2	With 12mm mild steel U beading.	Sq.M	578.52	484.75	280437.57
44	9.90	Providing and fixing special quality chromium plated brass cupboard locks with six levers including necessary screws etc. complete (Best make of approved quality) of:				
	9.90.2	Size 50 mm	Each	504.00	147.05	74113.20
45	9.119	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door				
	9.120	Providing and fixing to existing door frames.				
46	9.120	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, paneling 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 strip 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				
	9.120.2	30 mm thick pre laminated PVC door shutters	Sq.M	231.88	2958.00	685901.04

42

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
VII STEEL WORK 10.0				TOTAL [VI]		4036986.25
48	10.14	Providing and fixing pressed steel door frames confirming to IS:4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5 mm 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-charges:				
i	10.14.1	Profile B	R.M.	1746.08	346.75	605453.24
i	10.14.2	Profile C	R.M.	3778.20	370.00	1397934.00
49	10.16	Steel work in built up tubular trusses including cutting , hoisting ,fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.				
	10.16.3	Electric Resistance or induction butt welded tubes.	Kg	14896.00	105.85	1576741.60
50	10.25	Steel work welded in built up sections/ framed work including cutting hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
	10.25.2	In gratings, frames, guard bard ladder, railings, brackets, gates and similar works	Kg	5228.12	77.90	407270.55
51	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.				
	10.26.1	M.S. tube.	Kg	7902.68	86.45	683186.69
				TOTAL [VII]		4670586.07

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
VIII FLOORING						
52	11.6	Cement plaster skirting up to 30 cm height, with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement.				
	11.6.1	18 mm thick	Sq.M	485.44	258.20	125340.61
53	11.23	Marble stone flooring with 18 mm thick marble stone (sample of marble shall be approved by Engineer-in charge) over 20 mm (average) thick base of cement mortar 1:4 (1 cement:4 coarse sand) laid and jointed with grey cement slurry including rubbing and polishing complete with:				
(i)	11.23.2	Raj nagar plain.	Sq.M	3509.56	1265.35	4440821.75
(ii)	11.23.5	Udaipur green marble.	Sq.M	3748.36	1418.95	5318735.42
	11.24	Extra if pre finished nosing to treads of steps of marble stone.	R.M.	899.04	197.75	177785.16
54	11.25	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 metre.	Sq.M	364.32	230.55	83993.98
55	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of 1:4 (1 cement :4 coarse sand):				
	11.26.1	25 mm thick	Sq.M	1816.04	945.70	1717429.03
56	11.27	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 shade of the slabs, including rubbing and polishing complete.				
57	11.31	Extra for pre finished nosing in treads of steps of kota stone / sand stone slab	Sq.M	54.48	954.10	51979.37
58	11.32	Extra for kota / stone sand stone in treads of steps and risers using single length up to 1.05 metre.	R.M.	87.04	52.45	4565.25
59	11.36	Providing and fixing quality ceramic glazed wall tiles conforming to IS:15622 (thickness to specified by the manufacture) of approved make in all colours, shades excepted burgundy, bottle green, black of any size as approved by Engineer -in-charge in skirting, risers of steps and dado over 12 mm thick bed of cement mortar 1:3 (1 cement :3 coarse sand) and jointing with gry cement slurry @ 3.3.kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	Sq.M	32.64	12.10	394.94
			Sq.M	3398.52	724.25	2461378.11

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
60	11.37	Providing and laying ceramic glazed floor tiles 300x300mm (thickness to be specified by the manufacture) of Ist quality conforming to IS:15622 of approved make in colour such as white ,Ivory ,Grey,Fume Red Brown,ained on 20mm thick cement Mortar 1:4 (1cement:4 coarse sand) including pointing the joints with white cement and matching pigment etc. complete.	Sq.M	1034.20	764.55	790697.61
				TOTAL [VIII]		15173121.22
IX ROOFING 12.0						
61	12.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement :2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design:				
	12.21.1	In 75x75mm deep chase	R.M.	885.00	109.05	96509.25
62	12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement: 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	Each	96.00	148.55	14260.80
63	12.55	Providing and fixing Heat Resistant Terrace Tiles (300mm x 300mm x 20mm) with SRI (Solar refractive index) > 78, solar reflection >0.70 and initial emittance >0.75 on waterproof and sloped surface of terrace, laid on 20mm thick cement sand mortar in the ratio of 1:4 (1 cement :4 coarse sand) and grouting the joints with mix of White cement & marble powder in ration of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150mm height along the parapet walls in the same manner	Sq.M	3740.00	1033.70	3866038.00
				TOTAL [IX]		3976808.05

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
X	FINISHING 13.0					
64	13.2	15 mm cement plaster on the rough side of single or half brick wall of mix:				
i	13.2.1	1:4 (1 cement: 4 fine sand)	Sq.M	704.72	143.55	101162.56
ii	13.2.2	1:6 (1 cement: 6 fine sand)	Sq.M	31282.00	130.20	4072916.40
65	13.4	12 mm cement plaster of mix:				
	13.4.1	1:4 (1 cement: 4 coarse sand)	Sq.M	11698.64	132.10	1545390.34
66	13.9	Cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.				
67	13.9.1	12mm cement plaster	Sq.M	119.04	173.10	20605.82
	13.16	6 mm cement plaster of mix:				
	13.16.1	1:3 (1 cement: 3 fine sand)	Sq.M	11950.72	101.00	1207022.72
68	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	43232.68	83.80	3622898.58
69	13.22	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.				
	[a]	Height exceeding 10m but not exceeding 13m	Sq.M	2489.08	28.85	71809.96
	[b]	Height exceeding 13m but not exceeding 16m	Sq.M	912.64	57.70	52659.33
70	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	43232.68	83.80	3622898.58
71	13.37	White washing with lime to give an even shade:				
	13.37.1	New work (three or more coats)	Sq.M	5639.36	11.75	66262.48
72	13.42	Distemping with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.				
	13.42.1	Two or more coats on new work	Sq.M	10944.96	37.35	408794.26
73	13.46	Finishing walls with Acrylic Smooth exterior paint of required shade :				
	13.46.1	New work (Two or more coats applied @ 1.67Litres/10 Sq.M over and including base coat of water proofing cement paint applied @ 2.20 Kg/10	Sq.M	8047.04	67.50	543175.20
74	13.50	Applying priming coat :				
	13.50.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood.	Sq.M	1890.28	24.70	46689.92
	13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	Sq.M	8854.56	20.70	183289.39
75	13.68	French sprit polishing:				
	13.68.1	Two or more coats on new works including a coat of wood filler	Sq.M	423.36	137.45	58190.83
76	13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :				

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
84	16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction and of approved size and design/ shape laid in required colour and pattern over and including.	Sq.M	11.32	536.65	6074.88
85	11.45	Providing and laying 500 x500 x40mm thick Turf paver (Turfpave XD) on 150 mm thick sub grade of compacted bed of 20 mm thick nominal size stone aggregate and based course and filling with 150mm thick jamuna sand, including spreading ,well ramming ,consolidating and finishing smooth etc. all complete as per direction of Engineer-in-Charge.	Sq.M	16.97	1651.20	28020.86
				TOTAL [XI]		44569.54
X	ALUMINIUM WORK 21.0					
86	21.3	Providing and fixing glazing in aluminium door ,window,ventilator shutters and partitions etc. with EPDM rubber/neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge.(Cost of aluminium saap beading shall be paid in basic item): With float glass panes of 8 mm thickness.	Sq.M	716.28	1227.80	879448.58
87	21.3.3 21.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.				
	21.4.1	With stainless steel cover plate minimum 1.25 mm thickness	Nos	8.0	1953.10	249996.80
88	21.10	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6mm thick clear float glass both side, having 12mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.	Sq.M	298.88	3328.40	994792.19
89	21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top & bottom pivot & spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).	Sq.M	31.64	4444.75	140631.89

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
					TOTALX	2264869.47
90	XI WATER PROOFING 22.0 22.7	<p>Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sq. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement: 5 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge to required slope and treating similarly height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS: 2645 and approve by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement : 4 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge including laying glass fibre cloth approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period to two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge.</p>				
	22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sq.M	3880.52	786.70	3052805.08
				TOTAL [XI]		3052805.08

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
XII NON SCHEDULE ITEMS						
1	N.S-1	Diluting and injecting chemical emulsion for PRE-CONSTRUCTIONAL Anti-termite treatment and creating continuous chemical barrier, wall trenches, top surface of plinth filling, along the external perimeter of building, over the top surface of consolidated earth of which apron is to be laid, surroundings of pipes and conduits etc. complete as per specification. (Plinth area of the building at ground floor only shall be measured for payment). Chlorpyrifos Emulsifiable concentrate of 20% with 1% Concentration.	Sq.M	3782.92	405.00	1532082.60
2	N.S-2	Providing and Fixing ISI marked 35mm thick flush Prelaminated door shutter, (with 1mm thick lamination on both sides) core of block board construction with frame of 1st class hardwood and well matched Commercial 3 ply veneering and as approved by Engineer	Sq.M	945.12	3214.00	3037615.68
3	N.S-3	Brick work flyash cement brick class designation 75 above plinth level cement mortar	Cum	441.88	1101.75	486841.29
4	N.S-4	Cement mortar 1:6 (1 cement: 6 coarse sand) Half brick work flash cement brick of class designation 75 cement mortar 1:4 (1 cement : coarse sand) including scaffolding and curing etc, complete as per specification superstructure above plinth level upto floor level cement mortar 1:4 (1cement :4 saand)	Cum	441.88	1101.75	486841.29
5	N.S-5	Cement mortar 1:4 (1 cement : 4 coarse sand) Supplying and Fixing Drapery rods 30mm dia of M.S Pipe of thickness 1.6mm with powder coating (wooden finish) including metal brackets, rings and ends all as specified. Fixed to brick walls/RCC lintels with dash fastners.	Sq.M	1260.20	461.82	581985.56
6	N.S-6	Providing and laying in position cement concrete 1:5:10 (1 cement: 5 course sand: 10 Brick aggregate 40mm nominal Size) in foundations/ sunken floors of toilets excluding the cost of centering and shuttering.	R.M	1231.00	170.00	209270.00
7	N.S-7	Providing applying cementations Krystalline based water proofing for concrete rafts, walls, water tanks, slabs, concrete floors etc with krystol T1 system/ Dr fixet/hydrocuret . The application to be done from +ve(positive) side on wet open pore concrete surface with brush @ 1Kg/Sq.M as per manufacturer specification.	CUM	348.24	3847.00	1339679.28
			Sq.M	5666.04	498.00	2821687.92

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
8	N.S-8	Supply & fixing of structural glazing at Façade of ground plus three buildings using glazing section on direct stick mullion & transom system of which mullion shall be of 80x50x1.8 mm with notch & transom to be of 50x50x1.8 mm with notch , Aluminium Glazing sections shall be powder coated with heat treatment on three surfaces in Ivory/Black colour using 6mm thick TOUGHENED SGG EVO Star ET 425 AURA GREEN HEAT REFLECTIVE GLASS VLT-24%, Solar Factor- 0.25 and U-value- 3.72 W Sqm K of Saint-Gobain make of approved colour of to be pasted with 12mm x 6 mm both side adhesive Spacer foam tape & structural silicon of Dow Corning 995 grade or it's equivalent. The Weather /water sealing of glass joints shall be done with 10 mm wide Dow Corning make weather sealant of grade 789 or its equivalent. The Mullion of Aluminium structure is to be fastened with R.C.C. Slab/beam with help of Powder coated/ Galvanized MS Brackets of 75 mm length with help of M10 x 100 mm Mechanical tempered Dash Fasteners. The job Includes all necessary hardware, cleat, Screws, nut washers etc. Complete job with all material and labour as per direction of Engineer-in-charge.	Sq.M	170.40	6398.00	1090219.20
9	N.S-9 (a)	Providing, supplying & fixing of glazed 2 Track -2 Panel Sliding Windows with mesh and top fixed of 450 mm made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with Galvanized Iron profiles through out the window. The outer frame having a overall size of 60 x 45 mm with reinforcement of 1 mm thickness and sash with overall size of 39 x 58 mm with reinforcement of 1.5 mm thickness. Glazing bead for fixing of glass shall be of size 20 x 18mm and coextruded with gasket. The flymesh adaptor for mesh shall be of overall size 25 x 34mm and screen sash of overall size 18.5 x 42.5 mm.Fiber Glass mesh shall be provided in mesh shutter. The outer frame for the fixed part shall have a overall size of 60 x 55 mm with reinforcement of 1 mm thickness and Glazing bead for fixing of glass shall be of size 34 x 20mm and coextruded with gasket. Windows shall be provided with 5mm thick SOLAR glass and standard hardware.Each sliding shutter shall be provided with 2nos of flat nylon rollers and 1 no powder coated die cast aluminium touch lock. Wall thickness of frame & sash shall be 2 - 2.2 mm. (Approved as per Architects & Client)	Sq.M	957.32	6300.00	6031116.00

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
9(b)	N.S (9b)	Providing, supplying & fixing of glazed 3Track - 2 Panel Sliding Window With Mesh of height 1500 mm made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with GI throughout the window. The sliding outer frame having a overall size of 108 x 45 mm with reinforcement of 1 mm thickness, sash with overall size of 39 x 58 mm with reinforcement of 1.5 mm thickness, mesh sash of overall size 30 x 48.5 mm reinforced with 1.5 mm of GI. Glazing bead for fixing of glass shall be of size 20 x 18mm and coextruded with gasket. Fiber Glass mesh shall be provided in standard hardware .Each shutter shall be provided with 2nos of flat nylon rollers and 1 no powder coated die cast aluminium touch lock. Wall thickness of frame & sash shall be 2 - 2.2 mm.(Approved as per Architects &Client)	Sq.M	277.20	7219.00	2001106.80
9(C.)	N.S (9C)	Providing, supplying & fixing of Fixed Louvered Ventilator made out of multi chambered uPVC sections with TPV gaskets having isolated drainage and reinforced with Galvanized Iron profiles through out the window. The outer frame having a overall size of 60 x 55 mm with reinforcement of 1 mm thickness and Mullion with overall size of 74 x 60 mm with reinforcement of 1 mm thickness. Ventilator shall be provided with 4.5 mm Pin Head glass, standard hardware. Wall thickness of frame & Mullion shall be 2 - 2.2 mm (Approved as per Architects &Client)	Sq.M	113.40	6005.00	680967.00
10	N.S-10	Supply and Fixing of KALZIP 65/400 "Self Supported" Secret Fix Standing Roofing System in 0.9mm Thick AA 3004 Aluminium Alloy. The general roof-construction shall comprise from bottom to top:	Sq.M	301.44	3967.00	1195812.48
11	N.S-11	Providing and Fixing Glass Mosaic Tiles (20x20)x4mm thick Repeated Pattern on walls with glass Mosaic Adhesive over 12mm thick screed in cement mortar 1:4 (1Cement 4 coarse sand) tile joints pointed in neat white cement slurry mixed with pigment to match	Sq.M	2590.44	1563.00	4048857.72
12	N.S-12	VETRIFIED DOUBLE CHARGED Providing & fixing Vitrified Tiles 605x605mm (R Series) Double Charged Matt Finish (Premium Quality) of approved colour & shade laid over 20mm thick Cement mortar 1:4 (1Cement :4 Coarse Sand) jointed and pointed in white cement mixed with colour to match the colour & shade of the tiles.	Sq.M	174.28	2098.00	365639.44

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
13	N.S-13	Providing & Fixing of Danpalon 16mm thick (with minimum 1040mm wide) multicell polycarbonate sheet with standing seam on both sides & double tooth snap on locking system to ensure maximum uplift capability. The panels will be UV protected and anti-glare/softlight. The cross section of one cell should not be more than 4mm x 4mm & weight of single panel shall not be less than 3250 per square metre. The system will be fitted on purlins with spacing as specified by manufacturer.	Sq.M	93.32	5321.00	496555.72
14	N.S-14	Providing and fixing Ceramic Tiles 395x395mm (edge cut) Rustic Premium Quality of approved colour & shade laid over 20mm thick cement mortar 1:4 (1 cement : 4 Coarse sand) jointed & pointed in white cement mixed with pigment to match the shade of the tile.	Sq.M	2167.20	1132.00	2453270.40
15	N.S-15	Extra for providing and laying Ceramic Glazed Tiles 400x400mm tiles in lieu of 300x300mm Tiles	Sq.M	1034.20	226.00	233729.20
16	N.S-16	Providing and fixing factory made shutters with M.S. box tubular section 75x30x1.25mm thick in windows and ventilators Side/Top/Centre Hung joints mitred and flash butt welded to pressed steel frames of windows. Item should include handles, stays, tower bolts and Glass beading & wire gauge to be measured separately.	kg	6854.40	102.00	699148.80
17	N.S-17	Supplying and applying 2mm thick surface texture in lineal finish of approved shade Over a base course of primer over plastered surface all as specified .	Sq.M	11698.64	475.00	5556854.00
18	N.S-18	Providing and fixing 18-19mm thick commercial Ply Mr Grade UF Bounded Ply Wood fixed to frame work.	Sq.M	3905.88	1525.00	5956467.00
19	N.S-19	Prelaminated MDF Board Shutters one side laminated and other side balancing	Sq.M	1701.60	1643.00	2795728.80
20	N.S-20	Providing & fixing 25mm thick Prelaminated Flush Shutter out side Lamination other side balancing lamination with necessary screws.	Sq.M	824.16	2185.00	1800789.60
21	N.S-21	Marble in Designer Slup	R.M	48000.00	28.66	1375680.00
22	N.S-22	STAINLESS STEEL FITTINGS				
	a	Providing and fixing S.S.Sliding door bolt size 16mmx300mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebco/Ozone/Dorma)	Nos	8.00	538.00	4304.00
	b	Providing and fixing S.S.Sliding door bolt size 16mmx250mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebco/Ozone/Dorma)	Nos	852.00	457.00	389364.00
	c	Providing & fixing S.S. tower bolt Size 250x12mm finish SS matt with necessary screws etc., complete.(Makes : Ebco/ Ozone/Dorma)	Nos	2128.00	269.00	572432.00
	d	Providing & fixing S.S. tower bolt Size 150X12mm" finish SS matt with necessary screws etc., complete.(Makes : Ebco/Ozone/ Dorma)	Nos	1008.00	150.00	151200.00
	e	Providing & fixing S.S. tower bolt Size 100x10mm finish SS matt with necessary screws etc., complete (Makes : Ebco/Ozone/Dorma)	Nos	1792.00	135.00	241920.00

S No	Ref DSR 2012 item	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	f	Providing & fixing S.S. handle size 25x150mm with necessary screws etc., complete. (Makes : Ebco/Ozone/Dorma)	Nos	3712.00	900.00	3340800.00
	g	Providing & fixing S.S. handle size 15x100mm with necessary screws etc., complete. (Makes : Ebco/Ozone/Dorma)	Nos	2576.00	646.00	1664096.00
	h	Providing & fixing S.S. handle size 10x75mm with necessary screws etc., complete. (Makes : Ebco/Ozone/Dorma)	Nos	896.00	450.00	403200.00
	i	Providing & fixing S.S.Door Stopper size 65x2.5MM finish SS Matt with necessary Screws etc., complete.(Makes : Ebco/Ozone/Dorma)	Nos	1240.00	97.00	120280.00
	j	Providing & fixing alu. Diecast body tubluor type universal hydraulic door closer with necessary crews etc. complete. (Makes : Ebco/Ozone/Dorma)	Nos	1240.00	991.00	1228840.00
	k	Providing and fixing slide on 2333 Hinges O cracking with necessary screws in kitchen cabinets. (Makes : Ebco/Ozone/ Dorma)	Nos	3584.00	32.00	114688.00
	l	Providing and fixing Handle C Shape SS 4" with necessary screws. (Makes : Ebco/Ozone/Dorma)	Nos	1792.00	32.00	57344.00
				TOTAL [XVI]		55079572.49

PLUMBING WORKS			
SUMMARY OF COST			
S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012	NON SCHEDULE
i	SANITARY INSTALLATIONS & C.P FITTINGS	2248892.80	2898880.00
ii	CI PIPES & FITTINGS	3528082.40	189440.00
iii	RAIN WATER PIPES & FITTINGS	1327689.00	74880.00
iv	WATER SUPPLY WORKS	2391703.35	10636550.00
v	EXTERNAL SEWRAGE	1608909.00	-
vi	EXTERNAL DRAINAGE	1530010.00	56000.00
	G.TOTAL	12635286.55	13855750.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
15	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
	18.51.1	a) 15 mm nominal bore	Each	192.00	430.60	82675.20
		Total Cf/ to Summary		Total DSR ITEMS [i]		2248892.80
		NON SCHEDULE ITEMS				
1	NS	Providing and Fixing C.P. brass Ablution health faucet assembly with 1.2 m long braided PVC hose with mounting bracket fixed on wall complete including diverter and two way angle valve[FOR EWC]	Each	128.00	500.00	64000.00
2	NS	Providing & fixing 4 mm thick SS hinged grating with rim of approved design including setting in floor with cement mortar.				
	a)	125 mm dia	Each	512.00	240.00	122880.00
3	NS	Providing & Fixing CP brass liquid soap container fixed to the wall with PVC rubber plug with C.P brass screw complete Each	Each	256.00	900.00	230400.00
4	NS	Supplying and fixing Towel rail of size 600x20mm complete with bracket fixed to wooden cleats with CP brass screws.	Each	192.00	925.00	177600.00
5	NS	Providing and fixing CP brass Single lever wall mixer with spout of approved quality for Hot & cold bathing including cutting and making good the wall etc. complete.	Each	192.00	3500.00	672000.00
6	NS	Providing and fixing CP brass basin mixer of approved quality for Hot & cold water including cutting and making good the wall etc. complete.	Each	256.00	3000.00	768000.00
7		Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid 10 litre low level white vitreous china dual flushing cistern & C.P. flush bend with fittings & C.I Brackets, 40 mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required.				
		W.C. pan with ISI marked white solid plastic seat and lid.	Each	128.00	5000.00	640000.00
8	NS	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast iron P or S trap, white vitreous china dual 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.				
		White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rest.	Each	64.00	3500.00	224000.00
		Total Cf/ to Summary		Total NS ITEMS [j]		2898880.00
		CI PIPES & FITTINGS				
		DSR 2012 ITEMS				
1	17.35	Providing and fixing soil, waste and vent pipes :				
	17.35.1	100 mm dia.				
	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989	RM	2400.00	857.30	2057520.00
2	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter:				
	17.58.1	100 mm	Each	1500.00	207.85	311775.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
3	17.37	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 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc.				
	17.37.1	For 100 mm dia. pipe	Each	1900.00	112.50	213750.00
4	17.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
	17.38.1	100 mm				
	17.38.1.2	Sand cast iron S&S as per IS-3989	Each	48.00	353.25	16956.00
5	17.39	Providing and fixing plain bend of required degree.				
	17.39.1	100 mm				
	17.39.1.2	Sand cast iron S&S as per IS-3989	Each	168.00	296.35	49786.80
6	17.4	Providing and fixing heel rest sanitary bend				
	17.40.1	100 mm dia				
	17.40.1.2	Sand cast iron S&S as per IS-3989	Each	16.00	342.80	5484.80
7	17.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
	17.43.1	100x100x100mm				
	17.43.1.2	Sand cast iron S&S as per IS-3989	Each	60.00	579.75	34785.00
8	17.44	Providing and fixing single equal plain junction of required degree.				
	17.44.1	100x100x100mm				
	19.44.1.2	Sand cast iron S&S as per IS-3989	Each	60.00	442.00	26520.00
9	17.56	Providing and fixing terminal guard:				
	17.56.1	100 mm				
	17.56.1.2	Sand cast iron S&S as per IS-3989	Each	12.00	244.10	2929.20
10	17.60	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 :				
	17.60.1	100 mm inlet and 100 mm outlet				
	17.60.1.1	Sand cast iron S&S as per IS-3989	Each	168.00	801.70	134685.60
11	18.10 & 18.11	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. (internal work) Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall (for Waste Conn.from WB/Urinals/Sinks)				
i	(18.10.4+18.40.4+18.78)	32 mm dia nomina bore	RM	280.00	367.90	103012.00
ii	(18.10.5+18.40.5+18.78)	40 mm dia nominal bore	RM	280.00	436.60	122248.00
iii	(18.10.6+18.40.6+18.78)	50 mm dia nomina bore	RM	850.00	527.80	448630.00
		Total C/f to Summary		Total DSR ITEMS [ii]		3528082.40
		NON SCHEDULE ITEMS				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1	NS	Providing and fixing G.I Inlet fitting with maximum 3 inlets 32, 40 or 50 mm size fabricated from 100 mm dia G.I pipes(approx. length=150mm to 300mm) and welded G.I sockets, fixed to CI trap with lead caulked joint and set in cement concrete as per standard drawing including cost of Bitumastic paint complete.	Each	256.00	500.00	128000.00
2	NS	Providing & fixing 100X50 mm. dia. G.I elbow (drain point) in the toilet floor including 100 mm dia. C.P. waste jali complete as required.	Each	256.00	240.00	61440.00
		Total C/f to Summary		Total NS Items [ii]		189440.00
[iii]		FOR RAIN WATER:				
1	17.35	Providing and fixing soil, waste and vent pipes:				
	17.35.1	100mm dia				
	17.35.1.1	Sand cast iron S&S as per IS-1729	RM	1400.00	734.30	1028020.00
2	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes & fittings of diameters.				
	17.58.1	100 mm	Each	1000.00	207.85	207850.00
3	17.37	Providing & fixing M. S. holder - bat clamps of approved design to sand Cast iron/cast iron (spun) pipe embedded in & including cement concrete blocks 10*10*10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size). Including cost of cutting holes&making good the walls etc.				
	17.37.1	For 100 mm dia pipe	Each	600.00	112.50	67500.00
4	17.57	Providing & fixing collar				
	17.57.1	100 mm dia				
	17.57.1.1	Sand Cast iron S&S as per IS:1729	Each	100.00	177.85	17785.00
5	12.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement: 3 coarse sand) and a coat of neat cement rounding the edge end making and finishing the outlet complete.	Each	36.00	148.75	5355.00
6	12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams	Each	36.00	32.75	1179.00
		Total C/f to Summary				1327689.00
		(NON-DSR)				
1	NS	Providing and fixing cast brass clean out plug with suitable insert keys for opening in brass cap, male threaded joint/reducer with G.I. socket caulked to Pipe/fittings of CI pipe /Floor trap including cost of lead joints etc. complete in all respect.				
	i	100 mm dia.	Each	128.00	585.00	74880.00
		Total C/f to Summary		Total DSR Items [iii]		74880.00
[iv]		WATER SUPPLY WORKS				
		DSR 2012 ITEMS				
		COLD WATER SUPPLY:				
		C.P.V.C PIPES				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1	18.8	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge.				
		Concealed work, including cutting chases and making good the walls etc,				
	18.8.1	15 mm nominal outer dia pipes	RM	840.00	218.65	183666.00
	18.8.2	20 mm nominal outer dia pipes	RM	560.00	243.05	136108.00
	18.8.3	25 mm nominal outer dia pipes	RM	336.00	297.95	100111.20
	18.8.4	32 mm nominal outer dia pipes	RM	132.00	358.90	47374.80
		Internal work - Exposed on wall				
2	18.7	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in charge.				
	18.7.2	20mm dia. nominal bore	RM	65.00	157.15	10214.75
	18.7.3	25mm dia. nominal bore	RM	192.00	197.90	37996.80
	18.7.4	32mm dia. nominal bore	RM	160.00	252.65	40424.00
	18.7.5	40mm dia. nominal bore	RM	232.00	348.25	80794.00
	18.7.6	50mm dia. nominal bore	RM	185.00	514.35	95154.75
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
	18.17.2	32 mm nominal bore.	Each	248.00	450.90	111823.20
	18.17.3	40 mm nominal bore	Each	32.00	546.05	17473.60
	18.17.4	50 mm nominal bore	Each	8.00	780.60	6244.80
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
	18.18.2	20 mm nominal bore.	Each	224.00	360.20	80684.80
	18.18.3	25 mm nominal bore	Each	234.00	421.65	98666.10
		External work				
5	18.9	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, This includes jointing of pipes & fittings with one step CPVC solvent cement , trenching , refilling and testing of joints complete as per direction of Engineer in charge.				
	18.9.7	62.5 mm dia. nominal inner dia pipes	RM	100.00	1326.35	132635.00
6	18.12	Providing and fixing G.I. pipe complete with G.I fittings including trenching and refilling etc.				
	18.12.7	65 mm dia nominal bore	RM	40.00	1326.35	53054.00
	18.12.8	80 mm dia nominal bore	RM	25.00	1326.35	33158.75

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
7	18.32	Constructing masonry Chamber 30X30X50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 Cement : 4 Coarse sand) for stop cock, with C.I. surface box 100*100*75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 Cement : 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design:				
i	18.32.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	4.00	908.95	3635.80
		Total C/f to Summary		Total DSR Items [iv]		1269220.35
		NON SCHEDULE ITEMS				
		Internal work - Exposed on wall				
7		Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in charge.				
i		100mm dia. nominal bore	RM	65.00	850.00	55250.00
ii		150mm dia. nominal bore	RM	20.00	1000.00	20000.00
8		Providing and fixing PN 16 Butterfly valve of the following dia				
i		150mm dia. nominal bore	RM	1.00	2500.00	2500.00
9	NS	Providing and fixing Puddle flanges fabricated out of 600mm long GI/MS pipe welded with 6mm thick M S plates along with flanges of suitable size and properly fixed in walls and top slabs of OHT / UGT complete.				
i		50mm dia	Each	20.00	325.00	6500.00
ii		80mm dia	Each	16.00	700.00	11200.00
10	NS	Providing & fixing of hand lever operated forged brass body full way ball valve type isolating valve having forged brass hard chrome plated mirror finish ball, steel handle with PVC grip, teflon seat, screwed ends tested to a pressure of 15 kg/sqcm complete.				
i		65 mm nominal bore	Each	1.00	1500.00	1500.00
11	NS	Providing and fixing 600 mm long MS Heavy Class puddle flanges fabricated out of 6 mm thick M.S. plates of suitable size properly fixed in walls & top slab of tanks of following diameters				
i		25 mm dia	Each	400.00	1500.00	600000.00
ii		32 mm dia	Each	400.00	2000.00	800000.00
iii		50 mm dia	Each	400.00	2500.00	1000000.00
iv		80 mm dia	Each	400.00	3000.00	1200000.00
v		100 mm dia	Each	400.00	3500.00	1400000.00
vi		150 mm dia	Each	40.00	4000.00	160000.00
		Total C/f to Summary		Total NS Items [iv]		5256950.00
		HOT WATER SUPPLY:				
		C.P.V.C PIPES				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1	18.8	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge.				
		Concealed work, including cutting chases and making good the walls etc,				
i	18.8.1	15 mm nominal outer dia pipes	RM	840.00	218.65	183666.00
ii	18.8.2	20 mm nominal outer dia pipes	RM	616.00	243.05	149718.80
iii	18.8.3	25 mm nominal outer dia pipes	RM	115.00	297.95	34264.25
		Internal work - Exposed on wall				
2	18.7	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in charge.				
i	18.7.2	20mm dia. nominal bore	RM	128.00	157.15	20115.20
ii	18.7.3	25mm dia. nominal bore	RM	240.00	197.90	47496.00
iii	18.7.4	32mm dia. nominal bore	RM	200.00	252.65	50530.00
iv	18.7.5	40mm dia. nominal bore	RM	170.00	348.25	59202.50
v	18.7.6	50mm dia. nominal bore	RM	185.00	514.35	95154.75
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
i	18.17.2	32 mm nominal bore.	Each	16.00	450.90	7214.40
ii	18.17.3	40 mm nominal bore	Each	10.00	546.05	5460.50
iii	18.17.4	50 mm nominal bore	Each	108.00	780.60	84304.80
iv	18.17.5	65 mm nominal bore	Each	90.00	780.60	1073.25
v	18.17.6	80 mm nominal bore	Each	80.00	780.60	1832.95
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic				
i	18.18.2	20 mm nominal bore.	Each	112.00	360.20	40342.40
ii	18.18.3	25 mm nominal bore	Each	62.00	421.65	26142.30
		Total C/f to Summary		Total	DSR Items [iv]	806518.10
		NON SCHEDULE ITEMS				
		Internal work - Exposed on wall				
5		Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in charge.				
i		65mm dia. nominal bore	RM	120.00	625.00	75000.00
ii		80mm dia. nominal bore	RM	45.00	700.00	31500.00
iii		100mm dia. nominal bore	RM	100.00	850.00	85000.00
iv		150mm dia. nominal bore	RM	20.00	1000.00	20000.00
6		Providing and fixing PN 16 Butterfly valve of the following dia				
i		150mm dia. nominal bore	RM	1.00	2500.00	2500.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
7		Providing and fixing Puddle flanges fabricated out of 600mm long GI/MS pipe welded with 6mm thick M S plates along with flanges of suitable size and properly fixed in walls and top slabs of OHT / UGT complete.				
i		65mm dia	Each	4.00	325.00	1300.00
ii		150mm dia	Each	4.00	700.00	2800.00
8		Providing & fixing of hand lever operated forged brass body full way ball valve type isolating valve having forged brass hard chrome plated mirror finish ball, steel handle with PVC grip, teflon seat, screwed ends tested to a pressure of 15 kg/sqcm complete.				
i		65 mm nominal bore	Each	1.00	1500.00	1500.00
9		Providing and fixing 600 mm long MS Heavy Class puddle flanges fabricated out of 6 mm thick M.S. plates of suitable size properly fixed in walls & top slab of tanks of following diameters				
i		25 mm dia	Each	400.00	1500.00	600000.00
ii		32 mm dia	Each	400.00	2000.00	800000.00
iii		50 mm dia	Each	400.00	2500.00	1000000.00
iv		80 mm dia	Each	400.00	3000.00	1200000.00
v		100 mm dia	Each	400.00	3500.00	1400000.00
vi		150 mm dia	Each	40.00	4000.00	160000.00
		Total C/f to Summary		Total NS Items [iv]		5379600.00
		FLUSHING WATER SUPPLY:				
		C.P.V.C PIPES				
1	18.8	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in charge.				
i	18.8.1	Concealed work, including cutting chases and making good the walls etc., 15 mm nominal outer dia pipes	RM	180.00	218.65	39357.00
ii	18.8.2	20 mm nominal outer dia pipes	RM	340.00	243.05	82637.00
		Internal work - Exposed on wall				
2	18.7	Providing & fixing Chlorinated polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in charge.				
i	18.7.1	15mm dia. nominal bore	RM	65.00	133.95	8706.75
ii	18.7.2	20mm dia. nominal bore	RM	200.00	157.15	31430.00
iii	18.7.3	25mm dia. nominal bore	RM	220.00	197.90	43538.00
iv	18.7.4	32mm dia. nominal bore	RM	115.00	252.65	29054.75
v	18.7.5	40mm dia. nominal bore	RM	100.00	348.25	34825.00
3	18.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality(screwed end)				
i	18.17.2	32 mm nominal bore.				
4	18.18	Providing and fixing ball (brass) valve of approved quality. High or low pressure, with plastic	Each	8.00	450.90	3607.20

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
i	18.18.1	15 mm nominal bore.	Each	56.00	258.05	14450.80
ii	18.18.2	20 mm nominal bore.	Each	60.00	360.20	21612.00
iii	18.18.3	25 mm nominal bore	Each	16.00	421.65	6746.40
		Total Cf/ to Summary		Total DSR Items [iv]		315964.90
IV EXTERNAL SEWERAGE						
1.0	2.10	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering etc. and disposing of surplus excavated soil as directed, with in a lead of 50 m:				
		All kinds of soil.				
i	2.10.1.2	Pipes, cable etc. exceeding 80 mm dia but not exceeding 300 mm dia.	RM	1240.00	165.60	205344.00
2.0	19.1	Providing, laying and jointing glazed stone ware pipes 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.				
	19.1.2	150 mm diameter	RM	280.00	219.05	61334.00
i	19.1.3	200 mm diameter	RM	440.00	323.05	142142.00
	19.1.4	250 mm diameter	RM	520.00	446.15	231998.00
3.0	19.3	Providing and laying cement concrete 1 : 5 : 10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. Pipes including bed concrete as per standard design.				
i	19.3.2	150 mm diameter	RM	280.00	382.75	107170.00
	19.3.3	200 mm diameter	RM	440.00	449.90	197956.00
	19.3.4	250 mm diameter	RM	520.00	523.75	272350.00
4.0	19.4.2.1	Providing and fixing square mouth S. W. Gully trap grade 'A' complete with C.I. grating brick masonry chamber with F.P.S bricks and water tight CI 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 per standard design				
		150 x 100 mm. size P type	Each	40.00	1278.30	51132.00
5.0	19.7	Constructing brick masonry manhole in cement mortar 1 : 4 (1 cement : 4 coarse sand) RCC top slab with 1 : 2 : 4 mix (1 cement : 2 coarse sand : 4 grade stone aggregate 20mm nominal size); foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size) inside plastering 12 mm thick with cement mortar 1:3 (1 cement 3 coarse sand) finished with a floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
	19.7.1	Inside size 90 x 80 cm & 45 cm deep including CI cover with frame (light duty) 455 x 610mm internal dimension total wt. of cover & frame to be not less than 38 kg (wt. of cover 23 kg and wt. of frame 15 kg)				
6.0	19.7.1.1 19.16	With F.P.S. bricks with class designation 75 Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	44.00	7132.00	313808.00
		Total Carried to DSR Items				
V		EXTERNAL DRAINAGE				1608909.00
1.0	2.10	Excavating trenches in all kind of soil of required width for pipes. including excavation for sockets and dressing of sides, ramming of bottoms, including getting out the excavated soil & then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating Each deposited layer by ramming, watering, etc & disposing of surplus excavated soil as directed within a lead of 50m.				
		up to 1.50 m depth				
i	2.10.1.2	Pipes 80 mm to 300 mm diameter	RM	480.00	165.60	79488.00
2.0	19.3	Providing and laying cement concrete 1 : 5 : 10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of RCC Pipes including bed concrete as per standard design.				
i	19.3.2	150 mm diameter	RM	120.00	382.75	45930.00
ii	19.3.4	250 mm diameter	RM	360.00	523.75	188550.00
3.0	19.6	Providing and laying non-pressure NP2 Class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement :2 fine sand) including testing of joints etc complete.				
i	19.6.2	150 mm diameter R.C.C pipes	RM	120.00	254.50	30540.00
ii	19.6.3	250 mm diameter R.C.C pipes	RM	360.00	342.45	123282.00
iii	19.6.4	300 mm diameter R.C.C pipes	RM	240.00	422.90	101496.00
iv	19.6.6	500 mm diameter R.C.C pipes	RM	195.00	722.20	140829.00
v	19.6.7	600 mm diameter R.C.C pipes	RM	120.00	1084.25	130110.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
4.0	19.9.1.1	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1 : 4 (1 cement : 4 coarse sand), inside plastering 12 mm thick with cement mortar 1:3 (1cement 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) <i>and making necessary channels in cement concrete 1:2:4 (1cement : 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) finishd with a floating coat of neat cement complete as per standard design</i>	Each	60.00	7007.40	420444.00
5.0	19.10.1	0.91 m deep with SFRC cover and frame (heavy duty, HD-20 grade designation) 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 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) with F.P.S.bricks class designation 75	Each			
		Extra for depth for circular manhole 0.91m internal dia at bottom with beyond 0.91m to 1.67m.				
		With FPS Bricks class designated 75	RM	20.00	3498.25	69965.00
6.0	19.27.1	Constructing brick masonry road gully chamber 50 x 45 x 60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500 x 450mm precast RCC horizontal grating with frame complete as per standard design	Each	56.00	3193.50	178836.00
		With FPS bricks				
6.0	19.16	Providing and fixing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12 mm dia. steel bar conforming to IS: 1786 having minimum cross section as 23 mm x 25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 30 x 20 x 15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	80.00	256.75	20540.00
Total Carried to DSR Items						1530010.00
NON DSR						

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1		Constructing grease trap 80 x 40 x 46cm (inside) with one brick thick brick masonry wall with inlet and outlet drain with bricks of class designation 75 in cement mortar 1:4 (1 cement: 4 fine sand) plastered 12mm thick with 1:4 (1 cement: 4 coarse sand) finished with a floating coat of neat cement on inside and exposed surfaces having two stone baffled walls 34.5 cm deep and third one 19cm deep, each 40mm thick and 45 cm long embedded 2.5 cm on either side in brick masonry, 40mm thick 100 x 60 cm stone cover and 7.5 cm thick bed concrete 1:5:10 (1 cement : 5 fine sand: 10 graded stone aggregate 40mm nominal size) with 40mm flooring in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) with a floating coat of neat cement including all earth excavation, refilling and disposal of surplus earth complete as per standard design	Each	16.00	3500.00	56000.00
Total Carried to NON DSR Items						56000.00

ELECTRICAL WORKS

SUMMARY OF COST

S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012	NON SCHEDULE
i	INTERNAL ELECTRICAL WORKS	11585513.00	15655755.00
	Total C/F To Summary	11585513.00	15655755.00

Signature of N.I.T.

1 / 1
Electrical Summary

Signature of Contractor

BILL OF QUANTITIES

SECTION-C : INTERNAL ELECTRICAL WORKS

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
DSR ITEMS						
1.0		Point wiring in PVC conduit, with modular type switch :- Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.	Point	3586.00	544.00	1950784.00
2.0	1.10.2	Group B Wiring for twin control light point with 1.5 sqmm FR PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with 2 Way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sqmm FR PVC insulated copper conductor single core cable etc. as required.	Point	20.00	710.00	14200.00
3.0		Sub main wiring in PVC conduit :- Wiring for Submain/ Circuit wiring alongwith earth wire with the following sizes of PVC insulated, copper conductor single core cable in surface/ recessed PVC conduit as required.				
i	1.14.2	2 x 2.5 sq.mm. + 1 x 2.5 sq.mm. Earth wire	RM	12500.00	131.00	1637500.00
ii	1.14.3	2 x 4 sq.mm. + 1 x 4 sq.mm. Earth wire	RM	3500.00	162.00	567000.00
iii	1.14.4	2 x 6 sq.mm. + 1 x 6 sq.mm. Earth wire	RM	1680.00	206.00	346080.00
iv	1.14.11	4 x 10 sq.mm. + 2 x 10 sq.mm. Earth wire	RM	2000.00	562.00	1124000.00
v	1.14.12	4 x 16 sq.mm. + 2 x 16 sq.mm. Earth wire	RM	2000.00	789.00	1578000.00
4.0		S/F Modular type electronic fan regulator :- Supply and fixing of stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	384.00	322.00	123648.00
5.0		S/F Modular type blanking plate :- Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	10.00	22.00	220.00
6.0		S/F MODULAR BOXES, BASE & COVER PLATE :- Supplying and fixing following size / modules, GI box along with modular base & cover plate for modular switches in recess etc as required				
i	1.27.1	1 or 2 Module (75 mm x 75 mm)	Each	128.00	142.00	18176.00
ii	1.27.2	4 Module (125 mm x 75 mm)	Each	128.00	154.00	19712.00
7.0		S/F MODULAR TYPE SWITCH / SOCKET :- Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required				
i	1.24.1	5/6 amps switch	Nos	1000.00	75.00	75000.00
ii	1.24.4	3 pin 5/6 amp. Socket outlet	Nos	1000.00	96.00	96000.00
iii	1.24.6	Telephone Socket outlet	Each	128.00	89.00	11392.00
iv	1.24.7	TV Antenna Socket outlet	Each	128.00	93.00	11904.00
v	1.24.8	Bell Push	Each	64.00	98.50	6304.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
8.0		Supply and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required :				
	i	20 mm.	RM	3500.00	56.50	197750.00
	ii	25 mm.	RM	10000.00	64.50	645000.00
	iii	32 mm	RM	2500.00	80.50	201250.00
	iv	40 mm	RM	1000.00	106.00	106000.00
	v	50 mm	RM	200.00	135.00	27000.00
9.0		Supply and drawing telephone wire of following pair, 0.5 sq.mm. FR PVC insulated copper conductor, unArmoured telephone cable in the existing surface / recessed conduit as required.				
	1.18.2	2 Pair	RM	4480.00	15.50	69440.00
		S/F power plug point with all accessories :-				
10.0	1.31	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 1 nos. 3 pin 5/6 amps modular socket outlet and one no. 5/6 amps modular switch, connection, painting etc. as required.	Each	2112.00	288.00	608256.00
		S/F power plug point with all accessories :-				
11.0	1.32	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 15/16 & 5/6 amps modular socket outlet and 15/16 amps modular switch, connection, painting etc. as required.	Each	528.00	366.00	193248.00
12.0		Supplying and fixing 5 amps. to 32 amps. rating, 240 volts 'C' series, miniature circuit breaker (MCB)suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.10.1	Single pole	Each	1622.00	141.00	228702.00
13.0		Supplying and fixing following rating, double pole, (single phase and neutral) 240 volts, residual current circuit breaker (RCCB), having a sensitivity current Poin upto 300 miliampere in the existing MCB DB complete with connections,testing and commissioning etc. as required :				
	2.14.1	25 amps	Each	64.00	1318.00	84352.00
14.0		Supplying and fixing following way, prewired SP & N MCB distribution board of sheet steel for 240 volts,on surface /recess, complete with loose wire box,terminal blocks,duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar,neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB /Isolators)				
	2.7.4	2 + 4 way Double Door	Each	64.00	2152.00	137728.00
15.0	2.18	Supplying and fixing 20 amps, 240 volts, SPN, industrial type socket outlet, with 2 poles and earth metal enclosed plug top along with 20 amps. "C" series, SP MCB in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet, and complete with connections, testing and commissioning etc. as required.	Each	192.00	693.00	133056.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
16.0		Supplying and fixing following way, prewired TP & N MCB distribution board of sheet steel for 415 volts, on surface /recess, complete with loose wire box, terminal blocks, duly prewired with suitable size FR PVC insulated copper conductor upto terminal din bar, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required (But without MCB / RCCB / Isolators)				
i	2.8.5	4 way (4 + 12), Double door, horizontal type	Each	2.00	6345.00	12690.00
ii	2.8.6	6 way (4 + 18), Double door, horizontal type	Each	1.00	8197.00	8197.00
iii	2.8.7	8 way (4 + 24), Double door, horizontal type	Each	64.00	8984.00	574976.00
17.0		Supplying & fixing following rating, four pole (three phase & neutral), 415 volts residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
i	2.15.1	25 Amp.	Each	1.00	1679.00	1679.00
ii	2.15.2	40 Amp.	Each	66.00	1703.00	112398.00
18.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 meter long etc, with coke and salt) as required.	Set	8.00	3996.00	31968.00
19.0	5.9	Supplying and laying 25 mm x 5 mm. G.I. strip at 0.50 M. below ground as strip earth electrode, including connection/ terminating with GI nut, bolt, spring, washer etc. as required. (Joining shall be done by overlapping and with 2 sets of GI nut bolts & spring washer spaced at 50 mm)	RM	64.00	97.50	6240.00
20.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	200.00	120.00	24000.00
21.0	2.21	Providing and fixing M.V. danger notice plate of 200mmx150mm made of mild steel, atleast 2mm thick and vitreous enamelled white on both sides and with inscription single red colour on front side as required.	Each	8.00	121.00	968.00
22.0	1.35	Erection of wall bracket / ceiling fittings of all sizes and shapes containing upto two GLS lamps per fitting, complete with all accessories including connections etc. as required.	Each	676.00	39.00	26364.00
23.0	1.41	Installation, testing and commissioning of prewired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tubes etc. directly on ceiling / wall, including connection with 1.5 sq. mm. PVC insulated, copper conductor, single core cable etc. as required.	Each	2014.00	69.50	139973.00
24.0	1.45	Installation, testing and commissioning of ceiling fan including wiring the down rod of standard length (upto 30 cm.) with 1.5 sq. mm. FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.	Each	384.00	99.00	38016.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
25.0	1.50.1	Installation of exhaust fan upto 450 mm sweep in the existing opening, including making the hole to suit the size of the above fan, making good the damage, connections, testing, commissioning etc. as required.	Each	256.00	163.00	41728.00
26.0	1.51	Extra for fixing the louvers / shutters complete with frame for exhaust fans of all sizes.	Each	256.00	68.50	17536.00
27.0		Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	405.00	40500.00
ii	4.1.2	150 mm width X 50 mm depth X 1.6 mm thickness	RM	100.00	464.00	46400.00
iii	4.1.3	300 mm width X 50 mm depth X 1.6 mm thickness	RM	80.00	677.00	54160.00
28.0		Supplying & making indoor end terminations with brass compression gland and aluminium lugs for following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
	9.1.30	3.5 X 300 sq. mm (70mm)	Each	10.00	867.00	8670.00
	9.1.29	3.5 X 240 sq. mm (62mm)	Each	8.00	771.00	6168.00
	9.1.33	4 x 16 sq. mm (28mm)	Each	20.00	188.00	3760.00
	9.1.32	4 x 10 sqmm (25 mm)	Each	2.00	146.00	292.00
29.0	7.5	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.				
	7.5.4	Above 185 sq. mm and upto 400 sq. mm	RM	900.00	44.00	39600.00
30.0	7.8	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
	7.8.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	RM	650.00	16.50	10725.00
	7.8.4	Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)	RM	100.00	72.50	7250.00
31.0	8.5	Laying of one number XLPE power cable of 33 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.				
	8.5.2	Above 120 sq. mm. and upto 400 sq. mm.	Metre	250.00	231.00	57750.00
32.0		Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	3.00	14225.00	42675.00
33.0		Supplying and making outdoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required.				
	10.7.3	240 sq. mm.	Set	1.00	19128.00	19128.00
Total carried to DSR items						11585513.00
NON SCHEDULED ITEMS						
S/F power plug point with all accessories :-						

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
1.0		Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing Two nos. 3 pin 5/6 amps modular socket outlet and One no. 5/6 amps modular switch, connection, painting etc. as required.	Each	392.00	300.00	117600.00
2.0		Supply and installation of plug-in-type telephone socket outlet with 1.2mm thick outlet box and cover plate complete as required in 3 module plate (1 socket with 2 blank plate).				
		RJ - 11	Each	256.00	120.00	30720.00
3.0		Supply, installation, testing and commissioning of Cat - 6 flush mounted information outlets wired according to T568B standard with a faceplate. The plastic shall be high impact, flame retardant & UL-rated thermoplastic with minimum insulation.				
		Single surface mount/recessed box with jacks (RJ-45) I/O	Each	256.00	125.00	32000.00
4.0		Supply, laying, testing and commissioning of 4 pair Cat - 6 non plenum cable of 24 AWG solid copper conductors in existing conduits.	Rm	3360.00	30.00	100800.00
5.0		Supplying, fixing, connecting & testing of Telephone Tag Block krone type in a suitable size 1.6 mm thick dust and verMin proof Sheet steel enclosure duly painted by synthetic enamel over anti corrosive primer, lockable and hinged cover with provision for cable through glands complete in all respects.				
i		40 pair krone	Each	4.00	600.00	2400.00
6.0		Supplying and Earthing with Cu earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc, with coke and salt) as required.	Set	8.00	6000.00	48000.00
7.0		Providing & fixing 50mm x 6mm G.I. strip on surface or in recess for connections etc. as required.	Rm	100.00	150.00	15000.00
8.0		Providing & fixing 50mm x 6mm Cu. strip on surface or in recess for connections etc. as required.	Rm	100.00	1000.00	100000.00
9.0		S/F of hexagonal fan box with hexagonal side of approx. 80 mm.in length fabricated from 14 SWG M.S. sheet incorporating with 10 mm. dia. M.S. round bar duly bent for supporting fan hanger painted with red oxide and screwing arrangement with wiring conduit laid in the R.C.C. roof before concreting along with supply of all materials, labour, T&P etc. for proper completion of work.	Each	384.00	250.00	96000.00
10.0		Supply, laying, jointing, testing and commissioning of ISI marked (IS : 14930, part 2) H.D.P.E. (DWC) Double wall Corrugated pipe for cable laying having corrugation on outer wall and plain smooth surface at inner side including transportation uPointo the site, jointing, providing and fixing all fittings i.e. sockets, couplers, reducers, end caps etc to complete the works in all respects.				
i		300 mm. ID	RM	600.00	800.00	480000.00
11.0		Supply of wall mounted mirror light fixtures complete as per standard item with copper wiring and GLS / CFL lamps as required as per the standard catalogue item approved by engineer-in-charge.				
i		1 x 11 W	Each	192.00	700.00	134400.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
12.0		Supply of wall / ceiling surface mounted T5 fluorescent tube light luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required each fluorescent tube etc complete as required as per the standard catalogue item as approved by engineer-in-charge . power factor shall not be less than 0.95 and THD shall be less than 10%				
i		1 x 18 watt (BBS170 1xDLED -5000 PSU WH) 15 W LED Downlighter	Each	1632.00	2100.00	3427200.00
ii		1 x 28 W T5 (CRCA Body)(TMS122 M 1xTL5-28W EBT)	Each	834.00	1170.00	975780.00
iii		Bulk Head Light	Each	64.00	700.00	44800.00
13.0		Supplying of 240V, 1 phase Ceiling Fans complete with suitable length down rod as required. The fan should be five star rating as per BEE.				
i		1200mm sweep	Each	384.00	1300.00	499200.00
14.0		Supplying of 240V, 1 phase Exhaust fans with 1.5 Sqmm insulated copper conductor wires for connections complete as required. The exhaust fan should be five star rating as per BEE.				
		450mm sweep	Each	256.00	1150.00	294400.00
15.0		Supplying testing & commissioning for following size of XLPE aluminium conductor armoured cable of 1.1 KV grade as required.				
i		3.5 Core 300 sq. mm. Armoured Aluminium cable.	RM	200.00	1407.00	281400.00
ii		3.5 Core 240 sq. mm. Armoured Aluminium cable.	RM	800.00	1155.00	924000.00
iii		4 x 16 sq.mm. Armoured Aluminium cable.	RM	500.00	151.90	75950.00
iv		4 x 10 sqmm Armoured Aluminium cable.	RM	150.00	140.70	21105.00
16.0		Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Following Panels, fabricated out of 14/16 Gauge CRCA sheet steel in cubicle compartmentised modular construction complete with supporting rigid structure, interconnections, aluminium bus bar strip with heat shrinkable colour coded current density of bus bar 0.8 A per sqmm Identification on all breakers & MCCB to indicate the area they serve. Degree of protection IP 42, earthing hinged doors with 2.5 sqmm tinned braided copper wire, free standing floor mounted with removable Gland Plates on top & bottom of the panel, all mounting plates shall be GI sheets. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. Galvanised hardwares with zinc passivation shall be used in fabrication of panels 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for				
		All Panel's outgoing's have to be equipped with KWH energy meter.				
i		Main LT Panel				
		Incoming: (Transformer)				
		One (1) Nos.1250A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-1250A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		1600A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Two (2) Each. 630A TPN MCCB				
		Four (4) Each. 250A TPN MCCB				
		One (1) Each. 200A TPN MCCB				
		One (1) Each. 100A TPN MCCB				
		Two (2) Each. 63A TPN MCCB				
		Two (2) Each. 40A TPN MCB	Set	1.00	350000.00	350000.00
ii		Capacitor Panel (250 KVAR) Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Automatic control panel with capacitors, fabricated out of 2 mm thick CRCA sheet steel in cubicle compartmentised modular construction, free standing floor mounted. Cable gland plates shall be provided on top the panels. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system. Galvanised hardwares with zinc passivation shall be used in fabrication of panels.				
		Incoming				
		630 Amps FP electrically operated fully drawout type air circuit breaker as per specification and with following accessories:				
		96 x 96 sqmm 0-630 A digital Ammeter with selector switch, CTs				
		Phase indicating light shall be protected by 2 Amps SP MCBs – 3 sets				
		Power factor compensating relay (including power factor meter) in 7 steps for automatic cut off or add on capacitor units to keep the power factor at 0.97 with variation of loads. All associated auxiliary contactors / relays / timer / auto manual selector switches to be				
		Bus Bars				
		800 Amps TPN aluminium bus bars with coloured heat shrinkable insulated sleeves – 1 set				
		Outgoing				
		Outgoing feeders consisting of following accessories :				
		3 Sets – 160 Amps TP MCCB, capacitor duty contactors & 50 KVAR heavy duty capacitors.				
		4 Sets – 63 A TP MCCBs, capacitor duty contactors & 25 KVAR heavy duty capacitors.				
		Auto Manual Selector switch push button and indicating lamps. – 7 Sets	Set	1.00	300000.00	300000.00
iii		External Feeder panel				
		Incoming:-				
		(1) No. 63A FP MCCB (35 KA).				
		Metering:				
		One (1) No. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) No. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Four (4) Each. 32A TPN MCB	Set	1.00	150000.00	150000.00
iv		Meter Board Panel				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		Incoming:				
		One (1) Nos.250A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-250A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		315A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Seventeen (17) Nos.40A TPN MCB				
		The Distribution board shall also be with and suitable housing 17 Nos. 3 phase electronic type KWHR meters and One number 40A TPN MCB after individual meter. All meters to be provided at one half of Metering Panel with transparent & locable acrylic cover. The respective MCB's shall be in another half of Metering Panel. The work should be complete including connecting Meter & MCB's by MS flexible conduits for connecting wires.	Set	4.00	500000.00	2000000.00
v		Basement Panel				
		Incoming:				
		One (1) Nos.63A TPN MCCB (35KA)				
		Metering:				
		One (1) Nos. (0-500V) 96 x 96 Sq.mm voltmeter with control MCB & selector switch.				
		One (1) Nos. (0-63A) 96 x 96 Sq.mm CT operated Ammeter with selector switch.				
		One (1) Set of Phase Indication Lamp with 2A SP MCB.				
		Bus Bar:				
		100A, TPN aluminium bus bar of suitable length with colour coded sleeves.				
		Outgoing:				
		Three (3) Nos.40A TPN MCB				
		Three (3) Nos.25A DP MCB	Set	4.00	45000.00	180000.00
17.0		Supply, Installation, testing, Commissioning of LPI Stormaster ESE type advance lightning protection complete with the lightning air terminal - Configured as a Spheroid which is comprised of separate electrically isolated 4 panels surrounding an Earthed Central Finial. The Insulation material used to electrically isolate the panels shall be comprised of a base polymer which provides high Ozone & UV resistance with di-electric strenght of 24-38 KV/mm tested as per NFC 17-102 & IEC 60-1:1989. The ESE terminal shall not contain any electronic circuits or any moving parts for its operation. The ESE terminal shall be tested & certified by CPRI (Central Power Research Institute, Govt of India) for the Impulse current of 45 KA (8/20 micro sec) with 5 positive & 5 negative impulse. The ESE terminal shall be approved by DGMS (Director General of Mines Safety), Govt of India.				
i		Model: Stormaster 60	Each	1.00	175000.00	175000.00
ii		LPI Upper Termination Kit	Each	1.00	30000.00	30000.00
iii		LPI Lower Termination Kit	Each	1.00	4500.00	4500.00
iv		FRP Mast (2mtr) with Inline Coupling Unit	Each	1.00	20000.00	20000.00
v		GI Mast (3 mtr) with guy wire kit	Each	1.00	10500.00	10500.00

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
18.0		Supply, Installation, testing, Commissioning of J K Maintenance Free Chemical Gel Earthing - Dual Pipe (GI) Technology of "JK CHENSODE" 3mtr long 80mm dia permanently sealed at both the ends with the lead terminal at the top along with 50 kgs of duly filled with metallic conducting compound permanently sealed at both the ends with the lead terminal at the top along with 50 kgs of "RESLOW" grounding minerals duly tested & certified by CPRI. The earth pit chamber shall be of heavyduty Polyplastic earth pit cover.	Each	2.00	20000.00	40000.00
19.0		Supply, Installation, testing, Commissioning of specially designed lightning current LPI High Voltage Shielded Cable (HVSC) 7 layer cable consisting of Inner Core, Concentric Conductor (copper), Inner binding tape, insulation material, Metallic screen, Outer binding tape, Outer sheath with the nominal cross sectional area of 50 sq.mm & overall diameter of 37mm with the insulation resistance of 1830 M Ohm-km, tested for 200 KV as per IEC 600601 connected to the Stormmaster terminal with the factory upper termination & connected to the earth pit with the lower terminal kit to safely route the lightning current.	Rm	80.00	4000.00	320000.00
20.0		H.V. PANEL (11 KV - VCB PANEL) Supply, installation, testing & commissioning of indoor type floor mounted metal clad, IP 52, 33 KV VCB panel with 3 nos VCB (1 incomer and 2 out goings), totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS : 13118, as ammended upto date and additional specifications, having capacities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker suitable for use on 33 KV, 3 Phase, 50 Hz A. C. supply with short circuit fault level of 1000 MVA, complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated Aluminium alloy bus bars of suitable fault level, G.I. earth bar, earth bar, breaker featured with mechanical ON / OFF indicator with hand trip device, spring release coil, shunt trip coil, control voltage of 24 Volt DC, TNC, LED type indicating lamps for phases and trip conditions and auxiliary switch of 6 NO + 6 NC and equipped with following switchgears and accessories.				
		The panel should be suitable for connections for up to 3 x 300 sq.mm XLPE 33 KV cable (cable entry from bottom), end termination with heat shrinkable jointing material etc. as required. (The Cost of end termination not included in this item)				
		power pack (1 working & 1 standby) with 220 Volt AC input & 24 Volt DC continuous output suitable for indicating lights & closing / tripping / indication of 3 Nos. HT panel boards with 2 Nos. 12 Volts each maintenance free batteries of suitable AH each, charging unit, capacitor bank for emergency delivering for trip system complete with suitable capacity of Ammeter & Voltmeter i/c connections with 2.5 sq.mm FRLS insulated copper conductor cable etc. including DC DB consisting of 8 nos 32 Amp DP MCB's for DC supply distribution to panels as required.				
		Incoming - 1 No. 630 Amp. VCB with followings - (a) 1 set (3 nos) 33 KV / v3 / 110 / v3 Volts drawout type PT Class 0.5 accuracy and 100 VA burden with 1 No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering.				
		(b) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-0.5 for metering and class 5P10 for protection.				
		(c) 1 No. - (0-200A) Ammeter, analog type with selector switches.				

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		(d) Master trip relay				
		(e) Trip circuit supervision relay				
		(f) Microprocessor based numerical relay with IDMT setting for O/L, E/F and S/C protection.				
		(g) Restricted earth fault relay				
		(h) Over and Under voltage relay.				
		(i) Timer and TNC switch				
		Outgoing - 2 Nos. - 630 A VCB with followings in each breaker -				
		(a) 3 nos. dual core dual ratio CTs of ratio 200/100/5/5A of 15 VA burden and accuracy class-1 for metering and class 5P10 for protection.				
		(b) (0-200A) Ammeters, dual scale analog type & selector switches for ammeters.				
		(c) Microprocessor based numerical relay with IDMT & instantaneous element for O/L, E/F and S/C protection.				
		(d) Master trip relay				
		(e) Trip circuit supervision relay	Sets	1.00	1500000.00	1500000.00
21.0		Supply of 3 core stranded aluminium conductor 33 KV grade XLPE (E) (Cross linked Polyethylene) insulated PVC bedded, Galvanised flat steel strip armoured cable conforming to IS : 7098 (part II with latest amendments)				
		240 sq. mm 3 core	RM	250.00	6500.00	1625000.00
22.0		Design, manufacture, testing at works supply, installation, testing and commissioning at site 33 KV/440V, 3 phase, 50 Hz, delta/star connected, outdoor type following sizes of transformers, oil immersed ONAN cooled, complete with all fittings such as oil conservator, silica gel breather, thermometer, explosion vent, Local ON LOAD tap changer with RTCC for +5% & 15% tappings in step of 1.25 bidirectional roller, diagram & rating plate, oil temperature indicator, winding temperature indicator and buccholtz relay with wiring upto marshalling box, lifting lugs, first filling of oil, weather proof HT cable box, LT bus duct disconnecting chamber minimum 8 mm thick non magnetic gland plate etc. complete as per specification including 10% extra oil in non returnable drum for topping up as required. (The transformer shall be subject to all tests specified in the specifications and test certificates shall be produced).				
		750 KVA	No.	1.00	1250000.00	1250000.00
		TOTAL FOR NON DSR ITEMS				15655755.00

BILL OF QUANTITIES
SECTION-D: SOLAR SYSTEM WORKS

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I)	NS	SOLAR WATER HEATER				
1		Providing, fixing, installation, testing and commissioning of Solar Hot Water indirect Heating system using approved type of heating liquid medium comprising of flat plate solar panels, including all interconnecting insulated GI piping, primary and secondary recirculation pumps, pressure type insulated hot water tank, sacrificial magnesium anode with steel core including valves on inlet, outlet, Y stainer and a water meter on the inlet, air release valve all mounted on galvanized MS sections complete as required with connection with existing piping. (connect the system to hot water mixing tank via 50 mm dia pipe)				
a)		Ten Sets of Minimum 1 Nos. x 500 LPD flat plate solar collector panels of 2 x 1m size approx. the panels enclosed in insulated collected boxes with single piece toughened glass 4mm thick and fixed with heat resistant gasket. The system will deliver a minimum of 5,000 Kcal per day.	Each	16.00	100000.00	1600000.00
2.00		Integrated heat exchanger with drain down vessel and control panel designed so as to have insulated M.S. Horizontal tank (Capacity 100 litres of fluid). All the valve & accessories shall be suitable for an operating pressure of 4.0 Kg/Sq.m PHE. The tank to hold atleast 100 litres of fluid and be suitable as a down vessel with provision for expansion tank and venting.	Set	4.00	150000.00	600000.00
3.00		Primary circulation pump two nos. (one working+ one standby) for circulation of fluid from Solar panels to heat exchanger.	Set	4.00	40000.00	160000.00
4.00		Secondary circulation pump two nos. (one working+ one standby) for circulation of fluid from heat exchanger to hot water mixing tanks.	Each	4.00	50000.00	200000.00
5.00		Inter-connected insulated GI piping insulated with 9mm thick nitrile rubber heat resistant insulation sections (Vidoflex or equivalent) and valves with outer mechanical protection of aluminium sheet cladding.	Lot	4.00	50000.00	200000.00
6.00		Supply, Installation, Testing & Commissioning of Electrical Panels : Switchboard cubical, fabricated from 16 gauge MS sheet with dust and vermin proof construction, powder coated in approved shade. All switchgear will be identified with etched plastic identification plates for each motor. The panel shall be wired with colour coded wiring. (All interconnecting wiring/cabling panels to motors, fuses, MCB, OFF/ON indicating lights, busbars, switchgears and accessories as required.)				
		Total C/f to Summary	LS	4.00	60000.00	240000.00
				Total NS Items [I]		3000000.00

**BILL OF QUANTITIES
FIRE PROTECTION WORKS**

Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
		SUB HEAD (1) :- ELECTRICAL				
		DSR ITEMS				
1.0		Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5% in convenient sections, joined with connectors suspended from the ceiling with M.S. suspenders including bolts and nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	20.00	405.00	8100.00
2.0	7.7	Laying and fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 kV grade of following size				
	7.7.1	Upto 35 sq. mm (clamped with 1 mm thick saddle)	RM	30.00	19.50	585.00
3.0		Providing and fixing ball valve (brass) of approved quality complete. (High or low pressure with plastic floats).				
	18.18.3	25 mm nominal bore	Each	4.00	421.65	1686.60
4.0		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 fitting and base support for tank. (@ 5.25/- per liter)				
	18.48	20000 litres capacity	Each	20000.00	6.10	122000.00
		Total C/f to Summary		Total	DSR ITEMS [i]	132371.60
		NON Scheduled items				
1.0		Auto DOL starter for 3.0 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Set	1	15000.00	15000.00
2.0		Supplying and making end terminations with brass compression glands and aluminium lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 KV grade as required.				
i		4 Core 4 sq. mm. Armoured Aluminium cable.	Nos.	2.00	450.00	900.00

3.0	Supply,testing and commissioning of 1100 Volt grade XLPE insulated and sheathed aluminium conductor Armoured cables including the cost of providing required gap between adjacent cables (minimum one cable dia.) and including the cost of providing identification tags etc. complete as per specification, as required.							
i	4 Core 2.5 sq. mm. Armoured Aluminium cable.	RM	20.00	85.00	1700.00			
II FIRE HYDRANT & SPRINKLER SYSTEM								
1.0	Providing, fixing, testing and commissioning of above ground M.S. C-Class Heavy Duty Pipes as per IS : 1239 (upto 150 mm dia.) and IS :3589 (upto 200 mm dia. And above) including cutting, screwing, welding etc. and providing all structural work fabricated from standard sections, (M.S. rounds, angles, channels etc.) and fittings like flanges, bends, tees, elbows, reducers, clamps, hangers, fasteners etc. including cutting, drilling, welding, cutting holes and chases in bricks /RCC walls/ slabs complete with painting of one coat of rich zinc primer and 2 or more coats of synthetic enamel paint of approved make / shade complete as per specification.							
i	150 mm dia.	RM	80	1750.00	140000.00			
ii	80 mm dia.	RM	70	1050.00	73500.00			
iii	25 mm dia.	RM	15	420.00	6300.00			
2.0	Providing and Fixing M.S. pipe to I.S. 1239 (Medium duty) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets, reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. (for drain pipe).The cost shall include the MS/GI structural supports as per approved drawings and specifications.							
a)	80 mm dia	Metre	80.00	735.00	58800.00			
3.0	Providing and fixing ISI marked S.S fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290-1969 Class C).		26	5940.00	154440.00			

4.0	Providing and fixing first aid fire hose reel drum wall mounting & swinging type fitted with 20 mm dia 36.5 m long high pressure hose to I.S. 5132 with 5 mm outlet SS nozzle with shut off valve (I.S. 884-1969). Name of Manufacturer should be embossed on the drum.	Each	22	7335.00	161370.00
5.0	Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification	Each	52	3837.00	199524.00
6.0	Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	26	1885.00	49010.00
7.0	Providing and fixing standard fireman's axe with heavy insulated rubber handle tested for 20000 watts.	Each	22	836.00	18392.00
8.0	Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.	Each			
a)	Four way	Each	4.00	20260.00	81040.00
9.0	Providing, fixing, testing & commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate, 200 mm in diameter and 1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release valve with stop cock, flanged inlet connection and drain arrangement with 25mm dia valve, pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968. (The cushion tank should be suitable for rated working pressure.	Each	4.00	12913.00	51652.00
10.0	Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)	Each			
a)	25 mm dia full bore type	Each	22.00	769.00	16918.00

11.0	Providing and fixing fully glazed fire hose cabinet door 2000x800 mm depth fabricated with 20x20x3 mm and 40x20x3 mm hollow box sections mounted with 3 Nos 100 mm M.S. anodised butt hinges on M.S. angle frame of 45x45x5 mm size with hold fasts fixed to wall with PCC (1:2:4) blocks 100x100x100 mm including hasp and steeple for locking with pad lock arrangement, 4 mm thick clear float glass panel "FIRE HOSE" written on it with fire red, stove enamelled red paint to M.S. sections, black paint on inner side of lower glass panel complete as per approved detail.	Each	22.00	6638.00	146036.00
12.0	Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle at terrace)	Each	4.00	4049.00	16196.00
13.0	Providing and fixing cast iron butterfly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table "E" complete in all respects.				
a	80 mm dia with lever operated	Each	4.00	3904.00	15616.00
b	150 mm dia with lever operated	Each	22.00	7335.00	161370.00
14.0	Providing and fixing C.I. double flanged horizontal dual plate wafer type non return valves PN 1.6 including washer, nuts, bolts, 3 mm thick compressed asbestos gasket companion flanges as per table "E" complete.				
a	150 mm dia	Each	1.00	17459.00	17459.00
15.0	Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.	Each	4.00	613.00	2452.00
16.0	Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.	Each	22.00	278.00	6116.00
17.0	Providing and fixing 'Y' strainer with CI body and S.S. strainer for outlet of OHT lines.(Terrace Level)	Each	1.00	10124.00	10124.00
a)	150 mm dia	Each	1.00	10124.00	10124.00

18.0	Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:						
a)	150 mm dia.	Each	4.00	6638.00		26552.00	
III	HAND APPLIANCES (INTERNAL)						
	Note: All extinguishers shall carry ISI mark.						
1	Providing and fixing water based CO2 type extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve 30 cms long high pressure discharge hose, discharge nozzle, suspension bracket, ISI marked as per IS:934 finished externally with red enamel paint and fixed to wall with brackets complete with internal charges.						
a)	Capacity 9 lit.	Each	22	8000.00		176000.00	
2	Providing and fixing CO2 extinguisher consisting of seamless MS cylindrical body squeeze lever discharge valve, internal discharge tube, 30 cms long high pressure discharge hose, discharge nozzle ISI marked as per IS 2878 including fixing with dash fasteners etc. complete.						
a)	Capacity 4.5 Kg	Each	22	5500.00		121000.00	
3	Providing and fixing mechanical foam type (ISI marked) fire extinguishers consisting of welded M.S. cylindrical body squeeze lever discharge valve 30 cm long high pressure discharge hose, discharge nozzle, suspension bracket as per ISI marked finished externally with red enamel paint and fixed to wall with brackets complete with internal charger.						
a)	Capacity 9 lit.	Each	22	6500.00		143000.00	
IV	SPRINKLER SYSTEM (INTERNAL)						
1.0	Providing and Fixing M.S. pipe to I.S. 1239 (Heavy class) complete with all fittings like, unions, couplings, bends, elbows, tees, offsets, reducers, flanges as per table 'E' etc. to complete the work as per the requirement at site including painting with two coats of synthetic enamel paint , cutting and making good the walls complete. Pipe upto 50 mm dia will be with threaded joints with holdtite and 65 mm dia and above will be with welded joint. The cost shall include the MS/GI structural supports as per approved drawings and specifications.						
a)	25 mm dia	Metre	830.00	420.00		348600.00	
b)	32 mm dia	Metre	90.00	500.00		45000.00	
c)	40 mm dia	Metre	60.00	600.00		36000.00	
d)	50 mm dia	Metre	140.00	700.00		98000.00	

e)	65 mm dia		Metre	200.00	850.00	170000.00
f)	80 mm dia		Metre	35.00	1050.00	36750.00
g)	100 mm dia		Metre	30.00	1500.00	45000.00
h)	150 mm dia		Metre	250.00	1750.00	437500.00
2.0	Providing and fixing 15 mm Chrome plated gunmetal sprinkler head with quartz bulb and set to operate at specified temperature pendent/upright/ side wall as per instruction.					
	Temperature of operation 68 deg.. C K-80					
a)	Normal Response Pendent type		Each	450.00	245.00	110250.00
b)	Normal Response Upright type		Each	10.00	245.00	2450.00
c)	Normal Response Side wall		Each	10.00	334.00	3340.00
d)	Nozzles of K value 40 and discharge 60 LPM		Each	36.00	500.00	18000.00
3.0	Providing & fixing inspecting testing assembly with drain valve arrangement as per approved drawing..					
a)	50 mm dia		Each	6.00	7251.00	43506.00
4.0	Providing and fixing brass ball valve full bore type with lever and screwed female ends. (20 kg/sq.cm)					
a)	25 mm dia		Each	6.00	557.00	3342.00
5.0	Providing and fixing electrically operated flow indicating switches System Sensor or Potter brand in sprinkler branch line on each floor with necessary junction box installed in accessible place.					
c)	100 mm dia		Each	6	3235.00	19410.00
6.0	Providing and fixing dial type pressure gauge with isolation cock and chrome coated copper pipe on main header Dial diameter 150 mm celebration 0-15/ Kg/Cm2.					
7.0	Providing and fixing 25 mm dia gunmetal single acting air release valve with screwed inlet tested for 20Kg/Cm2.		Each	22	278.00	6116.00
8.0	Providing and fixing cast iron butter fly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete		Each	6	613.00	3678.00
a)	50 mm dia with lever		Each	2	948.00	1896.00
b)	65 mm dia with lever		Each	2	1031.00	2062.00
c)	80 mm dia with lever		Each	6	1115.00	6690.00
d)	150 mm dia with lever		Each	6	1394.00	8364.00
9.0	Providing, fixing, testing and commissioning of SS Flexible Belows double flanged as below:					

a)	150 mm dia.	Each	4.00	2231.00	8924.00
EXTERNAL FIRE HYDRANT					
1.0	Excavating trenches of required width for pipes, etc. including excavation for sockets and dressing of sides in hard/dense soil, ramming of bottom, depth upto 1.5 m including getting out the excavated soil and then returning the soil as required in layers not exceeding 200mm in depth including consolidating each deposited layer by ramming, watering, and disposal of surplus excavated soil as directed within a lead of 100 m.				
a)	Pipes, upto 300 mm dia	Cum	100.00	279.00	27900.00
2.0	Providing and fixing M.S pipes confirming to IS. 1239 heavy duty including all fittings like couplings, bends, elbows, offsets, blind flanges, plugs, tees, flanges (flanges as per table E), etc. threaded or welded (all type) joints as per detailed specifications as required, with a coat of red oxide primer and two or more coats of synthetic enamel paint of approved colour, cutting holes and chases in brick or RCC walls or floors and making good complete .				
a)	80 mm dia	Metre	10.00	1050.00	10500.00
b)	150 mm dia	Metre	200.00	1750.00	350000.00
3.0	Providing and applying one coat of 4 mm thick'PYPKOTE' or COATEK anti rust pipe protection including approved primer as per manufacturers specifications and lap of 25 mm and fusing lam to make an impermeable layer on pipes in trenches or on structural/masonry members complete including surface				
a)	80 mm dia	Metre	10.00	100.00	1000.00
b)	150 mm dia	Metre	200.00	128.00	25600.00
4.0	Providing and fixing ISI marked S.S fire hydrant valve 80 mm inlet with single outlet and fitted with 63 mm dia instantaneous female coupling on the outlet complete including companion flange as per table "E", pvc blank cap and chain, nuts, bolts and 3 mm thick compressed asbestos gasket at locations as per drawings (inlet flange to I.S.5290-1969 Class C).				
5.0	Providing and fixing standard short size S.S branch pipe with SS nozzle 16 mm dia outlet with standard instantaneous type 63 mm dia coupling.(ISI marked).	Each	4.00	5940.00	23760.00
		Each	4.00	1885.00	7540.00

6.0	Providing and fixing fire hose cabinet fabricated from 16 gauge M.S. sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enamelled paint Fire Hose written on front including necessary supports approximate size 750x600x250 mm deep (to house two lengths of canvas hose with couplings, branch pipe and nozzle)(Including cabinet M.S.structure support with primer & painting etc.)	Each	4.00	4049.00	16196.00
7.0	Providing and fixing 63 mm dia 15 m long EPDM lined fabric hose including SS male and female instantaneous type coupling approved by fire authority, machine wound with copper wire complete in all respects. Hose shall conform to I.S. 636 Type II and coupling to I.S. 903-1975 with ISI certification.	Each	8.00	3837.00	30696.00
8.0	Providing and fixing cast iron butterfly valves of PN 1.6 rating complete with bolts, nuts, 3 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects.	Each	4.00	1115.00	4460.00
a)	80 mm dia with lever	Each	2.00	1394.00	2788.00
b)	150 mm dia with lever	Each	20.00	3841.00	76820.00
9.0	Providing and fixing anchor blocks of concrete 1:2:4 mix (1 cement : 2 coarse nominal size) for Fire pipe including necessary excavation, shuttering and centring, curing complete.(For irrigation line)	Cum			
10.0	Providing & fixing gunmetal collecting head with 63 mm dia instantaneous type inlet and 150 mm dia flanged outlet with (including check valve and butterfly valve) for fire brigade connection to fire risers (I.S. 904-1965) complete in all respects with companion flanges, nuts, bolts, gaskets, etc.	Each	1.00	20260.00	20260.00
a)	Four way	Each			
VI	FIRE PUMPS & ACCESSORIES				
	(All pumps should be supplied with wearing and mechanical seal. Performance curve should be approved before placing the order. All pumps should be supplied with base frame)				
1	Pump:				

	Providing, Fixing Supplying and fixing horizontal centrifugal pump with volute bronze impeller connected to TEFC induction motor suitable for 400/410 Volts, 3 Phase, 50 Cycles, AC supply with the following specifications:				
a)	Capacity : 450 LPM				
b)	Head : 25 m				
c)	HP : 3 HP approx. or As required.				
d)	RPM : 2900				
e)	Mover : Electric Motor driven				
f)	Material of Construction:				
g)	Shaft & Sleeve : S.S- 410				
h)	Impeller : Bronze				
i)	Bearing : Grease lubricated				
j)	Seal - Mechanical seal.				
n)	Quantity :	Set	1	50000.00	50000.00
Total C/f to Summary				Total NS Items [II]	3972865.00

BILL OF QUANTITIES

SOLAR ENERGY

Sr. No.	DSR 2012	Item Description	Unit	Qty	Unit Rate in Rs.	Amount in Rs.
A		Bill of Quantities				
1		Solar Panel 12V-125Wp	Nos.	176		
2		Module Mounting Structure	Nos.	176		
3		Battery Bank 120V-600Ah	Nos.	60		
4		Battery Protection Panel	Nos.	1		
5		PCU 120V DC , Three Phase 18.5 KVA AC	Nos.	1		
6		D.C Distribution Board	Nos.	1		
7		AC Breaker Box with Auto Change Over and six numbers output	Nos.	1		
8		PV Aarray Junction Boxes	Lot	1		
9		Main Junction box	Nos.	1		
10		DC Cables set	Set	1		
11		Earthing	Set	1		
12		Lighting Arrestors	Set	1		
13		Accessories-Danger, Display boards etc	Lumpsum	1		
I		Rating 11 KW	Set	4	4252369.00	17,009,476.00
		GRAND TOTAL				17,009,476.00

**CONSTRUCTION OF BASEMENT PARKING FOR FACULTY RESIDENCES (PHASE-II) AT N.I.T.
ROURKELA**

ABSTRACT OF COST		
DESCRIPTION	D.S.R AMOUNT	NON-DSR AMOUNT
SECTION A CIVIL WORK (BASEMENT PARKING)	21261159.33	8827484.83
SECTION B VENTILATION	185766.00	2779680.00
TOTAL	21446925.33	11607164.83
G.TOTAL	33054090.15	

Signature of N.I.T.

1 / 1
Abstract of Cost

Signature of Contractor

BASEMENT PARKING FOR FACULTY RESIDENCES

CIVIL WORKS

SUMMARY OF COST

S.NO	NAME OF SUB-HEAD	AMOUNT	
		DSR 2012 items	Non Scheduled Items
I	EARTH WORK	1463918.55	
II	CONCRETE WORK	1125492.37	
III	REINFORCED CEMENT CONCRETE	16550044.52	
IV	BRICK WORK	232060.30	
V	STEEL WORK	13395.11	
VI	FLOORING	339597.22	
VII	FINISHING	1013382.39	
VIII	WATER PROOFING	491687.50	
IX	HORTICULTURE & LANDSCAPING	31581.35	
X	NON SCHEDULE ITEMS	-	8827484.83
	TOTAL	21261159.33	8827484.83
		A-1	A-2

Signature of N.I.T.

5

1 / 1

Civil Summary Parking

Signature of Contractor

BASEMENT PARKING FOR FACULTY RESIDENCES

BILL OF QUANTITIES

CIVIL WORKS

S No	Ref DSR 2012	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
I EARTH WORK 2.0						
1	2.6	Earth work In excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth. 1.5m in width as per as 10 sq.m on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed.				
	2.6.1	All kinds of soil	Cu.M	4973.99	129.35	643384.96
2	2.7	Earth work n excavation over areas (exceeding 30cm in depth, 1.5 m in width as well as 10 Sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed:				
	2.7.1	Ordinary rock	Cu.M	497.40	197.75	98360.55
3	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering , lead up to 50 m and lift up to 1.5 m.				
	2.26	Extra for every additional lift of 1.5 m or part thereof in:	Cu.M	4222.50	83.80	353845.08
	2.26.1	All kinds of soil	Cu.M	1630.94	34.60	56430.52
5	2.27	Supplying and filling in plinth with jamuna river sand under floors including, watering, raming consolidating and dressing complete.	Cu.M	407.72	749.30	305500.85
6	2.32	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.	100 Sq.M	27.18	247.00	6713.46
7	2.36	Deduct for disposed soil levelled and neatly dressed.	Cum	12.50	25.35	-316.88

S No	Ref DSR 2012	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
				TOTAL		1463918.55
				TOTAL [I]		1463918.55
II CONCRETE WORK 4.0						
8	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level.				
	4.1.8	1:4:8 (1 cement :4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cu.M	299.95	3593.30	1077792.37
9	4.18	Extra for addition of synthetic polyester triangular fibre of length 12mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement concrete/RCC /Flooring / Water retaining structures by using 125gms of synthetic polyester triangular fiber for 50 Kg cement used as per directions of Engineer-in-charge.	Per Bag of 50 Kg of Cement	900.00	53.00	47700.00
				TOTAL		1125492.37
				TOTAL [II]		1125492.37
III REINFORCED CEMENT CONCRETE 5.0						
10	5.9	Centring and shuttering including strutting, proppintg etc. and removal of form for:				
	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sq.M	502.64	285.15	143326.37
	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sq.M	2158.30	311.20	671662.96
	5.9.5	Lintels, beams, plinth beams, girders, brassumers and cantilevers.	Sq.M	1335.18	262.25	350149.64
	5.9.6	Columns, pillars, piers, abutments, posts and struts	Sq.M	411.60	365.60	150480.96
	5.9.7	Stairs, (excluding landings) except spiral staircases	Sq.M	12.50	326.30	4078.75
	5.9.15	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings,	Sq.M	0.49	166.90	80.95
	5.9.16	Edges of slabs and breaks in floors and walls.				
11	5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				

S No	Ref DSR 2012	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	5.22.6	Thermo Mechanically Treated bars	Kg	75979.41	62.25	4729718.27
12	5.22A	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Above Plinth Level.				
	5.22A.6	Thermo Mechanically Treated bars.	Kg	67346.01	62.25	4192289.12
12	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but 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 as per direction of Engineer-in-charge.				
		(Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.33.1	All works upto plinth level.	Cu.M	51.05	5242.15	267585.55
	5.33.2	All works above plinth level upto floor V level.	Cu.M	57.96	5781.50	335095.74
13	5.34	Extra for providing richer mixes at all floor levels.(Note:- Excess/less cement over the specified cement content used is payable /recoverable separately.				
	5.34.1	Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg / Cum				
14	5.37	Providing and laying in position ready mixed M-25 grade concrete for reinforced concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete,improve workability without impairing strength and durability as per direction of the Engineer - in - charge	CUM	22.50	63.20	1422.00

S No	Ref DSR 2012	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	5.37.1	All works upto plinth level.	CUM	51.05	5590.60	285372.18
	5.37.2	All works above plinth level upto floor V level.	CUM	57.96	6130.00	355294.80
14	5.40	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using fly ash and cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost if admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per directions of the Engineer-in-charge.				
	5.40.1	All works upto Plinth level.	Cu.M	408.37	5519.40	2253957.38
	5.40.2	All works above plinth & upto Floor V Level.	Cu.M	463.68	6059.20	2809529.86
				TOTAL	TOTAL	16550044.52
				TOTAL [III]		16550044.52
IV 6.0 BRICK WORK						
15	6.1	Brick work with F.P.S. brick of class designation 75 in				
	6.1.2	Cement Mortar 1:6 (1 cement : 6 coarse sand)	cum	7.50	3316.55	24874.13
16	6.4	Brick work with modular fly ash lime brick (Flag Bricks) conforming to IS:12894-2002, class designation 100 average compressive strength in super structure above plinth level up to floor V level in:				
	6.4.2	Cement mortar 1:5 (1 cement: 6 coarse sand)	cum	51.28	3876.15	198768.97
17	6.13	Half brick masonry with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	14.89	476.05	7086.00

S No	Ref DSR 2012	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
26	11.26	Kota stone slab flooring over 20mm (average) thick based laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with based of cement mortar 1:4 (1 cement :4 coarde sand)	Sq.M	29.88	945.90	28258.76
	11.26.1	25mm thick				
27	11.27	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 shade of the slabs, including rubbing and polishing	Sq.M	34.33	954.10	32749.48
					TOTAL	339597.22
					TOTAL [VI]	339597.22
VII FINISHING 13.0						
28	13.4	12 mm cement plaster of mix:				
	13.4.1	1:4 (1 cement: 4 coarse sand)	Sq.M	327.24	132.10	43227.74
29	13.5	12 mm cement plaster of mix:				
	13.5.1	1:4 (1 cement: 4 coarse sand)	Sq.M	572.51	153.60	87936.77
30	13.16	6 mm cement plaster of mix:				
	13.16.1	1:3 (1 cement: 3 fine sand)	Sq.M	2718.23	101.00	274541.23
31	13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	Sq.M	3290.74	83.80	275763.59
32	13.37	White washing with lime to give an even shade:				
	13.37.1	New work (three or more coats)	Sq.M	2718.23	11.75	31939.20
33	13.42	Distemping with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.				
	13.42.1	Two or more coats on new work	Sq.M	572.51	37.35	21383.06
34	13.46	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade				

S No	Ref DSR No	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	13.46.1	New work (Two or more coats applied @ 1.67 Litres/10 Sq.M over and including base coat of water proofing cement paint applied @ 2.20 Kg/10 Sq.M.	Sq.M	327.24	67.50	22088.36
35	13.69	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :				
	13.69.1	New work	Sq.M	3.74	60.50	226.27
36	13.79	Extra for addition of synthetic polyester triangular fibre of length 6mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125gms of synthetic polyester triangular fibre for 50kgs. Cement used in cement mortar as per directions of Engineer-in-Charge.	Per Bag 50 Kg of Cement	113.51	53.00	6015.77
37	13.8	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	Sq.M	3290.74	76.05	250260.40
					TOTAL	1013382.39
				TOTAL [VII]		1013382.39

S No	Ref DSR 2012	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
VIII WATER PROOFING 22.0						
38	22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sq. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement: 5 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm				
		height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement : 4 coarse sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge including laying glass fibre cloth approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-In-Charge:				
	22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	Sq.M	625.00	786.70	491687.50
IX CH-23.0 HORTICULTURE & LANDSCAPING						
				TOTAL [VIII]		491687.50

S No	Ref DSR 2012	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
2	N.S-2	Providing and Fixing ISI marked 35mm thick flush Prelaminated door shutter, (with 1mm thick lamination on both sides) core of block board construction with frame of 1st class hardwood and well matched Commercial 3 ply veneering and as approved by Engineer.	Sq.M	1.87	3214.00	6010.18
3	N.S-3	Brick work flyash cement brick class designation 75				
		Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	21.98	4401.75	96728.46
4	N.S-4	Half brick work flash cement brick of class designation 75				
		Cement mortar 1:4 (1 cement : 4 coarse sand)	Sq.M	4.42	461.82	2038.94
5	N.S.-5	Supply and fixing of non OZONE make stainless steel railing with specifications SS-304 grade railing made of 38mm baluster and 38mm top rail of 1.6mm thickness with 3 mid rails of 12 OD tube connected with CNC machine made. Modular connectors fixed with dash fasteners. Centre distance between each baluster shall be 1000mm. (Market Rate Item).	Rm	48.20	6161.00	296929.40
6	N.S-6(a)	Providing applying waterproofing terrace garden to the walls and floor to make the structure watertight .Coating with Krystol T1, in the slurry consistency of 5:2 (5 parts Krystol T1:2 parts water) @0.80 kg /sqm & Coating second coat with Krystol T2, in the slurry consistency of 5:2 (5 Parts krystol T2 : 2 parts water)@0.80 kg/sqm complete in all respect as specification ,drawings and directed by Project manager.	Sq.M	1200.08	723.00	867654.23

S No	Ref DSR No	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
	N.S-6(b)	Providing and application of one coat of Hydrocrete , an acrylic polymer modified cementitious slurry coating, unrolling of fiber glass cloth while the slurry coat is in green condition application of 2nd coat of Hydrocrete slurry coating followed by one coat of Hydrocrete Brush Topping system including surface preparation complete in all respects. Supplying and admixing of Rheoplast-SP , a superplasticizer cum integral waterproofing compound @ 300 ml per bag of 50 kg cement and fixing of 18 NB nozzles of suitable length at a distance of 1.5 m c/c on grid pattern complete in all respects.Injection grouting of cement milk admixed with non shrink grouting compound Grot-EX @ 250 gm per bag of 50 kg cement by hand operated pump under max pressure of 2.5 kg/cum complete in all respects.P/L of Av. 20 mm thick plaster in 1:4 cement : c.sand admixed with Integral waterproofing compound Liksil-XL @ 200 ml per bag of cement and neat cement finish complete in all respects.	Sq.M	1200.08	955.00	1146071.63
7	N.S-7	Providing and applying cementations crystalline based waterproofing treatment for concrete walls and floors with Krystol T1 system. The application to be done from +ve (positive) side on a wet open pore concrete surface with brush @ 1 kg/sqm in accordance with manufacturer's specification, complete in all respect as specification, drawings and directed by Project Manager.	Sq.M	3507.07	498.00	1746520.86
8	N.S-8	Providing and Fixing Antiskid Vitrified pavement tiles 300X200X10mm thick make 'PAVIT' [DECOR Series or equivalent make and design laid on 20mm thick cement mortar 1:4 1 cement: 4 coarse sand] with Fairfix TA[STD]or other equivalent [Tile Adhesive 3-4mm thickness] and jointing with Fairfix TG[STD] or other equivalent Tile Grout as per approved colour complete .	Sq.M	2221.00	1604.00	3562484.00

S No	Ref DSR No	DESCRIPTION	UNIT	QTY	RATE (in Rs)	AMOUNT (in Rs)
		STAINLESS STEEL FITTINGS				
	9	N.S-9				
	a	Providing and fixing S.S.Sliding door bolt size 16mmx300mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebcco/Ozone/Dorma)	Nos	1.00	538.00	538.00
	b	Providing and fixing S.S.Sliding door bolt size 16mmx250mm finish SS Matt fixed with necessary screws etc. complete.(Makes : Ebcco/Ozone/Dorma)	Nos	1.00	457.00	457.00
	c	Providing & fixing S.S. tower bolt Size 250x12mm finish SS matt with necessary screws etc., complete (Makes : Ebcco/Ozone/Dorma)	Nos	1.00	269.00	269.00
	d	Providing & fixing S.S. handle size 25x150mm with necessary screws etc., complete.(Makes : Ebcco/Ozone/Dorma)	Nos	1.00	900.00	900.00
		TOTAL [XVI]				8827484.83

BILL OF QUANTITIES						
VENTILATION WORKS						
Sr. No.	DSR 2012	DESCRIPTION OF ITEM	UNIT	QTY	RATE	AMOUNT
I ELECTRICAL						
1.0	5.4	Earthing with GI earth plate 600mm x 600 mm x 6mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc, with coke and salt as required.	Set	2.00	3996.00	7992.00
2.0	5.11	Providing and Fixing 25 mm x 5 mm. G.I. strip in 40 mm dia. G.I. Pipe from earth electrode including connections with GI nut, bolt, spring, washer excavation and refilling etc. as required.	RM	10.00	364.00	3640.00
3.0	5.15	Providing & fixing 25mm x 5mm G.I. strip on surface or in recess for connections etc. as required.	RM	200.00	120.00	24000.00
4.0	4.1	Supplying, fabricating and installing following size of perforated pre painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with MS suspenders including bolts & nuts, painting suspenders etc. as required.				
i	4.1.1	100 mm width X 50 mm depth X 1.6 mm thickness	RM	300.00	405.00	121500.00
	7.8	Laying and fixing of One number PVC Insulated and PVC Sheathed/XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
5.0						
	7.8.1	Upto 35 sqmm (Clamped with 1 mm thick saddle)	RM	300.00	16.50	4950.00
	7.8.2	Above 95 sqmm and upto 185 sqmm (Clamped with 25/40 x 3 mm MS flat clamp)	RM	300.00	47.50	14250.00
6.0	9.1	Supplying and making indoor end termination with brass compression gland and aluminium lugs for the following sizes of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.				
i	9.1.25	3.5 Core 120 sq. mm. Armoured Aluminium cable.	Nos.	2.00	383.00	766.00
ii	9.1.32	4 Core 10 sq. mm. Armoured Aluminium cable.	Nos.	8.00	146.00	1168.00
7.0	7.5	Laying of One number PVC Insulated and PVC Sheathed/XLPE aluminium conductor cable of 1.1 KV grade of following size in the existing RCC/HUME/STONEWARE/METAL pipe as required.				
	7.5.3	Above 95 sqmm and upto 185 sqmm	RM	300.00	25.00	7500.00
					TOTAL	185766.00

Total C/ft to DSR Summary				185,766.00
	Non DSR			
1.0	Supplying and making indoor end termination with brass compression gland and aluminium lugs for the following sizes of PVC Insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.			
i	4 Core 6 sq. mm. Armoured Aluminium cable.	Nos.	16.00	130.00
2.0	Supply, testing and commissioning of 1100 Volt grade XLPE insulated and sheathed aluminium conductor armoured cables including the cost of providing required gap between adjacent cables (minimum one cable dia.) and including the cost of			
i	3.5 Core 120 sq. mm. Armoured Aluminium cable.	M	300.00	1315.00
ii	4 Core 10sq. mm. Armoured Aluminium cable.	M	100.00	857.00
iii	4 Core 6sq. mm. Armoured Aluminium cable.	M	200.00	462.00
	Design, fabrication, assembling, wiring, supply installation, testing and commissioning of Following Panels, fabricated out of 14/16 Gauge CRCA sheet steel in cubicle compartmentised modular construction complete with supporting rigid structure, interconnections, aluminium bus bar strip with heat shrinkable colour coded current density of bus bar 0.8 A per sqmm Identification on all breakers & MCCB to indicate the area they serve. Degree of protection IP 42, earthing hinged doors with 2.5 sqmm tinned braided copper wire, free standing floor mounted with removable Gland Plates on top & bottom of the panel, all mounting plates shall be GI sheets. Panels shall be treated with all anticorrosive process before powder coating as per specifications and final approved shade. Galvanised hardwares with zinc passivation shall be used in fabrication of panels 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415 V, 3 Phase, 4 Wire, 50Hz supply system.			
3.0				
	All MCCB's shall be with microprocessor based O/L, S/C and E/F releases and ON/OFF indication lamps.			
i	Basement Ventilation Panel			
	Incoming:			
	One (1) Nos.200A, TPN MCCB with microprocessor based O/L, S/C and E/F releases.			
	Metering, Indication & Protection:			
	1 Sets of (0-500 Volt) 96 x 96mm Voltmeter with control fuses and 3 way selector switch.			

		1 Sets of (0-200 Amps) 96 x 96mm CT operated Ammeter with 3 way selector switch and 200/5A, CL-1, 10VA CT.					
		1 Sets of phase indicating lamps with MCB.					
		Bus Bar: 250A, TPN Al. Bus Bar of suitable length (Neutral shall be half rated).					
		Outgoings: Five (5) Nos. 63 A, TPN MCCB	Set	1.00	50000.00	50000.00	
ii		Four (4) No. Auto Star/ Delta starter of 15 HP with single phasing prevention arrangement, O/L relays, ammeters with CTs, ON/OFF/Trip indication lamps and push buttons, potential free contacts for remote operation in each feeder as required.	Set	4.00	20000.00	80000.00	
II DUCTING:							
1.0		Sheet Metal Duct: Supplying, fabricating, installing and testing of factory fabricated sheet metal ducting complete as per SMACNA with splitter damper, duct damper, vanes etc. as per specifications and approved shop drawing complete as required.					
		Air-conditioning Ducting : Galvanized sheet steel					
	i	26 SWG	SQMT	50.00	550.00	27,500.00	
	ii	24 SWG	SQMT	70.00	650.00	45,500.00	
	iii	22 SWG	SQMT	140.00	750.00	105,000.00	
	iv	20 SWG	SQMT	230.00	850.00	195,500.00	
	v	18 SWG	SQMT	10.00	1,000.00	10,000.00	
2.0		Supplying, installing, and testing of GI volume control damper within ducts to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distribution system as per approved shop drawings.					
		Return Air Grills: Supplying, installing, testing and balancing of return air grilles (Linear/single louvred) with volume control dampers of various sizes. Each grill shall have be with fixed horizontal front bar at 15 deg. deflection, complete as per specification and drawing.					
3.0		Return Air Grills: Supplying, installing, testing and balancing of return air grilles (Linear/single louvred) with volume control dampers of various sizes. Each grill shall have be with fixed horizontal front bar at 15 deg. deflection, complete as per specification and drawing.	SQMT	8.00	5,500.00	44,000.00	
	i	Powder Coated linear Aluminium grilles with volume control damper (for exhaust of toilets).	SQMT	15.00	10,000.00	150,000.00	
4.0		Exhaust Air Louvers: Supplying, installing and balancing of exhaust air anodized aluminum intake louvers with bird screen & aluminum volume control damper, complete as per specification & drawings					
	i	Exhaust Air Louvers (with birdscreen but Without VCD)	SQMT	15.00	6,500.00	97,500.00	
III VENTILATION SYSTEM:							

1.0		Supply, installation, testing & commissioning of AMCA certified (for air performance) and fire-rated direct drive Tubeaxial supply air fan . Fans shall be suitable for installation in any position (Horizontal or Vertical). The motor shall be suitable for 415 V \pm 10% volts three phase 50 cycle, AC supply. The fans shall strictly adhere to the attached Specifications.				
i		Axial flow fans for basement exhaust 40,000cfm, 10mm SP, 15hp, 415 \pm 10% volts 50Hz power supply	Nos	4.00	350,000.00	1,400,000.00
		Total Cf/ to NON DSR Summary				2,779,680.00