

GOLDEN JUBLEE BUILDING

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON-DSR Rates	Total of DSR and NON-DSR works
	MASTER ABSTRACT_PART A			
1	CIVIL WORKS FOR MAIN BUILDING	482,407,813	194,653,074	677,060,886
2	CIVIL WORKS FOR SITE	37,958,141	11,770,720	49,728,861
3	ELECTRICAL WORKS	23,657,352	43,794,148	67,451,500
4	PA & FA WORKS	882,600	5,231,533	6,114,133
5	PLUMBING AND SANITARY WORKS	3,569,884	2,940,724	6,510,608
6	FIRE FIGHTING WORKS	49,680	15,022,266	15,071,946
7	HVAC WORKS	3,877,166	98,700,319	102,577,485
	TOTAL	552,402,635	372,112,784	924,515,419

CIVIL WORKS BOQ FOR MAIN BUILDING

- 1 DIVIDER
- 2 SUMMARY OF CIVIL WORKS BOQ FOR MAIN BUILDING
- 3 CIVIL WORKS BOQ DSR ITEMS FOR MAIN BUILDING
- 4 CIVIL WORKS BOQ NON DSR ITEMS FOR MAIN BUILDING
- 5 SCHEDULE OF FINISHES

SI No	ITEMS	Amount as per DSR Rates [Rs]	Amount as per NON DSR Rates [Rs]	Total of DSR and NON DSR works [Rs]
	SUMMARY OF CIVIL WORKS FOR MAIN BUILDING			
1	CARRIAGE OF MATERIAL	1,626,544.22		1,626,544.22
2	EARTH WORK	4,998,345.64		4,998,345.64
3	CONCRETE WORK	6,976,164.75		6,976,164.75
4	REINFORCED CEMENT CONCRETE	338,120,139.00		338,120,139.00
5	MASONRY WORKS	7,546,027.30		7,546,027.30
6	STONE WORK	10,036,251.45		10,036,251.45
7	MARBLE & GRANITE WORK	3,660,729.30		3,660,729.30
8	WOOD & P.V.C. WORK	1,396,131.40		1,396,131.40
9	STEEL WORKS (MS)	13,202,199.00		13,202,199.00
10	FLOORING	31,432,336.70		31,432,336.70
11	ROOFING	19,858,353.90		19,858,353.90
12	FINISHING	32,930,458.75		32,930,458.75
13	DISMANTLING & DEMOLISHING	269,459.50		269,459.50
14	ALUMINIUM WORK	796,760.60		796,760.60
15	WATERPROOFING WORK	9,557,911.05		9,557,911.05
16	NON SCHEDULE ITEMS		194,653,073.59	194,653,073.59
	TOTAL	482,407,812.56	194,653,073.59	677,060,886.15
	TOTAL OF CIVIL WORKS FOR MAIN BUILDING	482,407,812.56	194,653,073.59	677,060,886.15

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		CIVIL WORKS BOQ FOR MAIN BUILDING DSR ITEMS				
1	1	CARRIAGE OF MATERIAL				
	1.1	Carriage of materials by mechanical transport including loading, unloading and stacking.				
1.00	1.1.2	Earth Up to 1 Km	Cum	19649.00	82.78	1,626,544.22
		TOTAL OF CARRIAGE OF MATERIAL				1,626,544.22
2	2	EARTH WORK				
2.01	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	100 Sqm	233.42	482.00	112,508.44
2.02	2.36	Deduct for disposed soil not leveled and neatly dressed.	Cum	19649.00	25.35	-498,102.15
2.03	2.6	Earth work in Excavation by mechanical means (hydraulic excavation / manual means over areas exceeding 30 cm in depth, 1.5M in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 M and lift up to 1.5M, disposed earth to be leveled and neatly dressed.				
2.03.1	2.6.1	All kinds of soil	Cum	16720.00	129.35	2,162,732.00
2.04	2.7	Earth work in Excavation by mechanical means (hydraulic excavation/ manual means over areas exceeding 30 cm in depth, 1.5M in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 M and lift up to 1.5M, disposed earth to be leveled and neatly dressed.				
2.04.1	2.7.1	Ordinary rock	Cum	50.00	197.75	9,887.50
2.04.2	2.7.3	Hard rock (blasting prohibited)	Cum	50.00	490.10	24,505.00
2.05	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 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
2.05.1	2.8.1	All kinds of soil	Cum	11721.00	130.80	1,533,106.80

2.06	2.9	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.				
2.06.1	2.9.1	Ordinary rock	Cum	100.00	212.00	21,200.00
2.06.2	2.9.3	Hard rock (blasting prohibited)	Cum	100.00	491.95	49,195.00
2.07	2.24	Extra rates for quantities of works executed:				
2.07.1	2.24.1	In or under water and / or liquid mud, including pumping out water as required	metre	5132.00	26.16	134,253.12
2.07.2	2.24.2	In or under foul position, including pumping out water as required	metre	500.00	32.70	16,350.00
2.08	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 50m and lift up to 1.50m	Cum	5132.00	83.80	430,061.60
2.09	2.26	Extra for every additional lift of 1.5 m or part there of in excavation / banking excavated or stacked materials				
2.09.1	2.26.1	a) All kinds of soil	Cum	11889.00	34.60	411,359.40
2.09.2	2.26.1	b) Extra for 3.0m to 4.5m (2 lifts)				
		34.60x2 = 69.20	Cum	7423.00	69.20	513,671.60
2.09.3	2.26.2	Ordinary or hard rock	cum	100.00	62.00	6,200.00
2.10	2.37	Supply and stacking of Fly ash conforming to IRC- 58 at site including carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).	cum	100.00	110.75	11075.00
2.11	2.28	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.				
2.11.1	2.28.1	All kinds of soil	100 Sqm	64.52	935.25	60,342.33
		TOTAL OF EARTH WORK				4,998,345.64
3	4	CONCRETE WORK				
3.01	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All Work up to plinth level				
3.01.1	4.1.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	10.00	4,514.05	45,140.50
3.01.2	4.1.8	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cum	1659.00	3,593.30	5,961,284.70

3.01.3	4.1.10	1:5:10 (1 Cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	Cum	150.00	3,357.40	503,610.00
3.02	4.6	Providing and fixing at or near ground level precast cement concrete in Kerbs / Edging etc as per approved pattern and setting in position with cement mortar 1 : 3 (1 Cement : 3 coarse sand) including the cost of required centering, shuttering complete.				
3.02.1	4.6.1	1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size)	Cum	11.00	4,712.80	51,840.80
3.03	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	per 50 kg	2000.00	35.25	70,500.00
3.03(a)	4.14	Extra for concrete work in superstructure above floor V level for each four floors or part there of				
		Height from 6th floor to 9th floor	Cum	20.00	539.35	10,787.00
		Height from 10th floor to 13th floor	Cum	20.00	1,078.70	21,574.00
		Height from 14th floor to 17th Floor	Cum	20.00	1,618.05	32,361.00
3.04	4.17	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75 mm bed by dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	Sqm	305.00	338.75	103,318.75
3.04(a)	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 fibre for used 50 Kg of as per directions of Engineer-in-Charge.	Per Bag of 50 Kg cement	3316.00	53.00	175,748.00
		TOTAL OF CONCRETE WORK				6,976,164.75
4	5	REINFORCED CEMENT CONCRETE				
	5.1	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
	5.1.2	1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	Cum	10.00	5,094.85	50,948.50

		Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level , excluding cost of centering, shuttering, finishing and reinforcement				
		1:1.5:3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	Cum	10.00	5,735.75	57,357.50
4.01	5.9	Centering and shuttering including strutting, propping etc. and removal of form for:				
4.01.1	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sqm	2972.00	166.90	496,026.80
4.01.2	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	20228.00	285.15	5,768,014.20
4.01.3	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sqm	31769.00	311.20	9,886,512.80
4.01.4	5.9.4	Shelves (Cast in-situ)	Sqm	100.00	311.20	31,120.00
4.01.5	5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	Sqm	21855.00	262.25	5,731,473.75
4.01.6	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	Sqm	12332.00	365.60	4,508,579.20
4.01.7	5.9.7	Stairs, (excluding landings) except spiral-staircases.	Sqm	3005.00	326.30	980,531.50
4.01.8	5.9.15	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like	Sqm	100.00	166.90	16,690.00
4.01.9	5.9.16	Edges of slabs and breaks in floors and walls				
4.01.9.1	5.9.16.1	Under 20 cm wide	metre	100.00	99.45	9,945.00
4.01.9.2	5.9.16.2	Above 20 cm wide	Sqm	100.00	441.10	44,110.00
4.01.9.2 (a)	5.9.13	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards.	sqm	100.00	470.10	47,010.00
4.01.10	5.9.17	Cornices and mouldings	Sqm	100.00	495.50	49,550.00
4.01.11	5.9.19	Weather shade, Chajjas, corbels etc., including edges	Sqm	100.00	411.10	41,110.00

4.02	5.11	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc., including cost of de-shuttering and de-centering 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).				
4.02.1	5.11.1	Suspended floors, roofs, landing beams and balconies.(Plan area to be measured)	Sqm	30822.00	121.65	3,749,496.30
4.03	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
4.03.1	5.22.6	Thermo-Mechanically Treated bars.	kilogram	413675.00	62.25	25,751,268.75
4.03.2	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete above plinth level.				
	5.22.6	Thermo-Mechanically Treated bars	kilogram	2551535.00	62.25	158,833,053.75
	5.29	Providing and fixing sheet covering over expansion joints with iron screws as per design				
	5.29.2	Aluminium fluted strips 3.15 mm thick.				
	5.29.2.2	200 mm wide	metre	400.00	437.30	174,920.00
4.04	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).				
4.04.1	5.33.1	All works upto plinth level	Cum	100.00	5,242.15	524,215.00
		Footing and rafts, column upto plinth level, plinth beams, shear walls				
4.04.2	5.33.2	All works above plinth level upto floor V level	Cum	100.00	5,781.50	578,150.00
4.05	5.34	Extra for providing richer mixes at all floor levels				
4.05.1	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)	Cum	819.00	63.20	51,760.80

4.05.2	5.34.2	Providing M-35 grade concrete instead of M-25 grade BMC/RMC. (Note : Cement content considered in M-35 is @ 350 kg/cum)	Cum	1235.00	126.45	156,165.75
4.05.3	5.34.3	Providing M-40 grade concrete instead of M-25 grade BMC/RMC.(Note : Cement content considered in M-40 is @ 360 kg/cum)	Cum	1804.00	186.90	337,167.60
	5.35	Add for using extra cement in the items of design mix over and above the specified cement content therein.	quintal	10.00	589.80	5,898.00
4.06	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.				
		(Note :- Cement content considered in this item is @ 330 Kg/Cum. Excess/less cement used as per design mix is Payable / recoverable separately).				
4.06.1	5.37.1	All works up to plinth level	Cum	4683.00	5,590.60	26,180,779.80
4.06.2	5.37.2	All works above plinth up to floor V level.	Cum	15098.00	6,130.00	92,550,740.00
4.07	5.38	Extra for R.C.C./ B.M.C/ R.M.C. work above floor V level for each four floors or part thereof	Cum	2661.00	151.00	401,811.00
4.07.1	i	6th floor to 9th floor				
4.07.2	ii	Extra for R.C.C. work above 9th floor level for each FOUR floor or part thereof. (10th floor to 13th floor) 2lifts $151 \times 2 = 302.00$ per cum	Cum	851.00	302.00	257,002.00
4.07.3	iii	Extra for R.C.C. work above 13th floor level for each FOUR floor or part thereof. (13th floor to 16th floor) 3lifts $151 \times 3 = 453.00$ per cum	Cum	292.00	453.00	132,276.00

	5.4	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 direction of the Engineer-in-charge.				
		NOTE- (1) Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately				
		(2) Fly ash conforming to grade I of IS 3812 (Part-1) only be used as part replacement of OPC as per IS : 456. Uniform blending with cement to be ensured in accordance with clauses 5.2 and 5.2.1 of IS:456 -2000 in the items of BMC and RMC.				
	5.40.1	All works up to Plinth level	Cum	50.00	5,519.40	275,970.00
	5.40.2	All works above plinth & up to floor V level.	Cum	50.00	6,059.20	302,960.00
4.08	5.43	Providing and fixing in position Stainless steel Grade 304 plate-1.0 mm thick as per design for expansion joints.				
4.08.1	5.43.1	200 mm wide.	Kg	100.00	559.85	55,985.00
4.08.2	5.43.2	300 mm wide.	Kg	100.00	815.40	81,540.00
		TOTAL OF REINFORCED CEMENT CONCRETE				338,120,139.00
5	6	MASONRY WORKS				
5.01	6.1	Brick work with Common burnt clay FPS (Non Modular) Brick of class designation 7.5 in foundation and plinth in .				
5.01.1	6.1.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	100.00	3,316.55	331,655.00
5.02	6.4	Brick work with Common burnt clay FPS (non modular) Brick of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and size in:				
5.02.1	6.4.2	Cement mortar 1:6 (1 cement: 6 coarse sand) .	Cum	1683.00	3,876.15	6,523,560.45

5.03	6.5	Extra for brick work / AAC block masonry / Tile brick masonry in superstructure above floor V level for each four floors or part thereof by mechanical means .				
5.03.1		i)From 6th floor to 9th floor	Cum	1253.00	250.45	313,813.85
5.03.2		ii)From 10th floor to 12th floor (2 lifts- 2x250.45 = 500.90)	Cum	306.00	500.90	153,275.40
	6.13	Half brick masonry 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				
	6.13.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	Sqm	100.00	476.85	47,685.00
5.04	6.14	Extra for half brick work masonry in superstructure, above floor V level for each four floors or part thereof by mechanical means.				
5.04.1		i)From 6th floor to 9th floor	Sqm	265.00	22.20	5,883.00
5.04.2		ii)From 10th floor to 12th floor (2 lifts- 2x22.20 = 44.40)	Sqm	117.00	44.40	5,194.80
5.05	6.15	Extra for providing and placing in position 2 nos of 6 mm dia MS bars at every third course of half brick masonry.	Sqm	2606.00	63.30	164,959.80
		TOTAL OF MASONRY WORK				7,546,027.30
6	7	STONE WORK				
6.01	7.40	Providing and fixing dry cladding upto 10 metre heights with 30 mm thick gang saw cut stone with (machine cut edges) of uniform colour and size upto 1mx1m, fixed to structural steel frame work and / or with the help of cramps, pins etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately).				
	7.40.2	White sand stone	Sqm	1731.00	2,048.35	3,545,693.85

6.02	7.41	Providing and fixing structural steel frame (for dry cladding with 30 mm thick gang saw cut with machine cut edges sand stone) on walls at all heights using M.S. Square / rectangular tube in the required pattern as per architectural drawing, including cost of cutting, bending, welding etc. The frame work shall be fixed to the wall with the help of M.S. Brackets / lugs of angle iron / flats etc. which shall be welded to the frame and embedded in brick wall with cement concrete block 1:2:4 (1 cement : 2 coarse sand :4 graded stone aggregate 20 mm nominal size) of size 300x230x300 mm, including cost of necessary centering and shuttering and with approved expansion hold fasteners on CC/RCC surface, including drilling necessary holes.				
		Approved cramps / pins etc. shall be welded to the frame work to support stone cladding, the steel work will be given a priming coat of Zinc primer as approved by Engineering - charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. (Only structural steel frame work shall be measured for the purpose of payment, stainless steel cramps shall be paid for separately and nothing extra shall be paid).	kg	34620.00	119.00	4,119,780.00
	7.42	Providing and fixing adjustable stainless steel cramps of approved quality, required shape and size, adjustable with stainless steel nuts, bolts and washer (total weight not less than 260 gms), for dry stone cladding fixed on frame work at suitable location, including making necessary recesses in stone slab, drilling required holes etc complete as per direction of the Engineer-in-charge.	Each	13848.00	171.20	2,370,777.60
		TOTAL OF STONE WORK				10,036,251.45
7	8	MARBLE & GRANITE WORK				
7.01	8.1	Marble work gang saw cut (polished and machine cut) of thickness 18 mm for wall lining (veneer work) backing filled with a grout of average 12 mm thick cement mortar 1:3 (1 Cement: 3 Coarse sand), including pointing with white cement mortar 1:2 (1white cement, 2 marble dust) with an admixture of pigment to match the marble / granite shade. (To be secured to the backing by means of cramps , which shall be paid for separately).				

7.01.1	8.1.1	Granite/Raj nagar plain white marble/ Udaipur green marble/ zebra black marble.				
7.01.1.1	8.1.1.1	Area of slab upto 0.50 sqm	Sqm	66.00	2,222.90	146,711.40
7.01.1.2	8.1.1.2	Area of slab over 0.50 sqm	Sqm	400.00	2,314.10	925,640.00
7.02	8.2	Providing and fixing 18mm thick gang saw cut, mirror polished, pre-moulded and pre-polished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and textured laid over 20mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joint treated with white cement , mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc., complete at all levels.				
7.02.1	8.2.2	Granite of any colour and shade.				
7.02.1.1	8.2.2.1	Area of slab up to 0.50 sqm.	Sqm	480.00	3,041.15	1,459,752.00
7.02.1.2	8.2.2.2	Area of slab over 0.50 Sqm	Sqm	57.00	3,083.40	175,753.80
7.03	8.3	Providing edge mouldings to 18 mm thick marble stone counters, vanities etc. including machine polishing to edge to give high gloss finish etc. complete as design approved by engineer in charge.				
7.03.1	8.3.2	Granite work	Rmt	4454.00	178.75	796,152.50
7.04	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/stone work including necessary holes for pillar taps etc .including rubbing and polishing of cut edges etc. complete.	Each	65.00	281.10	18,271.50
	8.6	Mirror polishing on marble work / Granite work / stone work where ever required to give high gloss finish complete.	Sqm	100.00	163.10	16,310.00
7.05	8.7	Providing and fixing cramps of required size & shape in RCC / CC / Brick masonry backing with cement mortar 1:2 (1 cement :2 coarse sand), including drilling necessary hole in stones and embedding the cramp in the hole (fastener to be paid separately).				
7.05.1	8.7.2	Stainless steel cramps	kg	132.00	524.10	69,181.20

7.06	8.10	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer -in-charge and finished smooth.				
7.06.1	8.10.2	Granite stone of approved shade.	Sqm	18.00	2,942.05	52,956.90
		TOTAL OF MARBLE & GRANITE				3,660,729.30
8	9	WOOD & P.V.C. WORK				
8.01	9.21	Providing and fixing ISI marked flush door shutters conforming to IS 2202 (part 1) Non decorative type , core of block board construction with frame of 1st class hard wood and well matched commercial teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.				
8.01.1	9.21.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	Sqm	110.00	1,578.30	173,613.00
	9.21.3	25 mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws.	Sqm	50.00	1,266.75	63,337.50
8.02	9.23	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of flush door shutters (over all area of door shutter to be measured)	Sqm	110.00	325.20	35,772.00
8.03	9.24	Extra for providing vision panel not exceeding 0.10 sqm in all type of flush doors (Cost of glass excluded) (over all area of door shutter to be measured)				
8.03.1	9.24.1	Rectangular or square	Sqm	10.00	127.75	1,277.50
	9.25	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).				
	9.25.1	Decorative type door	Sqm	80.00	336.25	26,900.00
	9.26	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	Sqm	80.00	92.90	7,432.00

	9.42	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed 3 layer or graded wood particle board medium density grade I, IS : 3087 marked, including top cover of 6 mm commercial ply wood conforming to IS: 303 BWR grade, nickel plated M.S. pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets, including fixing with 25x3 mm M.S. flat 10 cm long fixed to pelmet with hollock wood cleats of size 100 mm x 40 mm x 40 mm on both inner side of pelmet and rawl plugs 75 mm long etc. all complete.	metre	50.00	298.45	14,922.50
8.04	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. including priming coat with approved steel primer all complete.				
8.04.1	9.48.2	Fixed to openings/wooden frames with rawl plugs screws etc.				
		For Sky light	Kg	5535.00	98.20	543,537.00
8.05	9.71	Providing and fixing IS: 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc.,complete:				
8.05.1	9.71.1	125x64x2.5mm	Each	282.00	66.95	18,879.90
	9.81	Providing and fixing bright finished brass handles with screws etc. complete				
	9.81.1	125 mm	Each	10.00	169.60	1,696.00
	9.82	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete	Each	10.00	73.40	734.00
	9.84	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	Each	4.00	981.75	3,927.00
	9.88	Providing and fixing chromium plated brass 100mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete	Each	10.00	646.50	6,465.00
	9.90	Providing and fixing special quality chromium plated brass cupboard locks with six levers of approved quality including necessary screws etc. complete				
	9.90.1	Size 40 mm	Each	10.00	137.75	1,377.50
	9.91	Providing and fixing chromium plated brass 50mm cupboard or wardrobe knobs with nuts complete.	Each	10.00	57.65	576.50

	9.92	Providing and fixing chromium plated brass handles with necessary screws etc. complete:				
	9.92.1	125 mm	Each	10.00	192.80	1,928.00
8.06	9.97	Providing and fixing aluminum tower bolts ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:				
8.06.1	9.97.4	150x10 mm	Each	94.00	59.00	5,546.00
8.07	9.101	Providing and fixing aluminum hanging floor door stopper ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.				
8.07.1	9.101.1	Single rubber stopper	Each	94.00	28.60	2,688.40
	9.117	Providing and fixing factory made uPVC door frame made of uPVC extruded sections having an overall dimension as below (tolerance ± 1 mm), with wall thickness 2.0 mm (± 0.2 mm), corners of the door frame to be Jointed with galvanized brackets and stainless steel screws, joints mitred and Plastic welded. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19 mm and 1mm (± 0.1 mm) wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturer's specification and direction of Engineering-charge.				
	9.117.2	Extruded section profile size 42x50 mm	metre	76.00	177.05	13,455.80
	9.118	Providing and fixing to existing door frames				

	9.118.2	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm (± 0.2 mm), with inbuilt decorative moulding edging on one side. The styles and rails mitred and joint at the corners by means of M.S. galvanized/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanized M.S. tube of size 25x20 mm and 1 mm (± 0.1 mm) wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 mm and 2 mm (± 0.2 mm) wall thickness fixed to the shutter styles by means of plastic / galvanized M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm (± 0.1 mm) wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanized M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.				
			Sqm	57.00	2,587.25	2,644.25
8.08	9.121	Providing and fixing Fiber Glass Reinforced plastic (FRP) door frame of cross section 90x45mm having single rebate of 32x15mm to receive shutter of 30mm thickness. The laminate shall be moulded with fire resistant grade unsaturated polyester resin and chopped mat. Door frame laminate shall be 2 mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiber glass from all sides. MS stay shall be provided at bottom to steady the frame.				
			Rmt	300.00	445.25	133,575.00
8.09	9.122.1	Providing and fixing 30 mm thick glass fiber reinforced plastic (FRP) paneled door shutter of required colour and approved brand and manufacture, made with fire retardant grade unsaturated polyester resin , moulded to 3mm thick FRP laminate for forming hollow rails and styles , with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 mm thick FRP laminate for panels conforming to IS: 14856, including fixing to frames.				
			Sqm	157.00	2,139.15	335,846.55
		TOTAL OF WOOD & P.V.C. WORK				1,396,131.40
9	10	STEEL WORKS (MS)				

9.01	10.6	Supplying and fixing rolling shutters of approved make, made of required size M.S.laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS:4454 - part 1 and M.S.top cover of required thickness for rolling shutters.				
9.01.1	10.6.1	80x1.25 mm M.S.laths with 1.25mm thick top cover	Sqm	22.00	1,840.85	40,498.70
9.02	10.7	Providing and fixing ball bearings for rolling shutters.	Each	6.00	429.85	2,579.10
9.03	10.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.				
9.03.1	10.8.2	Exceeding 16.8 sqm in area	Sqm	22.00	662.20	14,568.40
9.04	10.14	Providing and fixing pressed steel door frames conforming to IS 4351 manufactured from commercial mild steel sheet of 1.60 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.60mm pressed mild steel welded or rigidly fixed together by mechanical means, including MS pressed butt hinges 2.5mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge :				
9.04.1	10.14.2.1	Profile C: fixing with adjustable lugs with split end tile to each jamb.	Rmt	60.00	370.00	22,200.00
9.04.2	10.14.2.2	Profile C : Fixing with carbon steel galvanized dash fastener of required dia and size(to be paid for separately)	Rmt	10.00	363.10	3,631.00
9.05	10.15	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with rectangular / L-Type sections, made of 1.60 mm thick M.S. Sheet, joints mitred, welded and grinded finish, with profiles of required size, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.				

9.05.1	10.15.2	Fixing with carbon steel galvanized dash fastener of required dia and size(to be paid for separately)	Kgs	50.00	114.30	5,715.00
9.06	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.				
9.06.1	10.25.1	In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete	Kg	180200.00	67.20	12,109,440.00
9.06.2	10.25.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	kg	11092.00	77.90	864,066.80
9.06.3	10.28	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge. (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	kg	250.00	558.00	139500.00
		TOTAL OF STEEL WORK				13,202,199.00
10	11	FLOORING				
10.01	11.4	52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 grade stone aggregate 6 mm nominal size) by volume hardening compound mixed @ 2 liter per 50kg of cement or as per manufacturer specifications This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete	Sqm	2134.00	420.50	897,347.00

10.02	11.5	62mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm th cement concrete 1:2:4 (1 cement : 2 course sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6mm nominal size) by volume, hardening compound is mixed @ 2 liters per 50 kg of cement or as per manufacturer's specifications . This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	Sqm	1885.00	464.80	876,148.00
10.03	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.				
10.03.1	11.6.1	18mm thick	Sqm	139.00	258.20	35,889.80
10.04	11.13	Providing and fixing glass strips in joints of Terrazo/Cement concrete floor.				
10.04.1	11.13.1	40 mm wide and 4 mm thick	Rmt	5988.00	29.40	176,047.20
10.05	11.24	Extra for pre-finished nosing to treads of steps of marble stone.	Rmt	1382.00	197.75	273,290.50
10.06	11.25	Extra for marble stone flooring in treads of steps and risers using single length up to 2.00 Rmt.	Sqm	841.00	230.55	193,892.55
10.07	11.26	Kota stone slab flooring over 20mm (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 Cement mortar 1 : 4 (1 cement : 4 coarse sand) :				
10.07.1	11.26.1	25 mm thick	Sqm	1583.00	945.70	1,497,043.10
10.08	11.27	Kota stone slab 20mm thick in risers of steps, skirting, dado and pillars laid on 12mm (Average) with cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry with pigment to match the shade of the slab, including rubbing and polishing complete.	Sqm	1061.00	954.10	1,012,300.10
10.09	11.29	40mm thick fine dressed stone flooring over 20 mm (Average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand), including pointing with cement mortar 1:2 (1 cement : 2 Stone dust) with an admixture of pigment to match the shade of stone.				
10.09.1	11.29.2	White sand stone	Sqm	171.00	557.50	95,332.50
10.10	11.31	Extra for pre-finished nosing in treads of steps of kotah stone / sand stone slab.	Rmt	2978.00	52.45	156,196.10

10.11	11.32	Extra for kota stone / sand stone in treads of steps and risers using single length up to 1.05 Rmt.	Rmt	858.00	12.10	10,381.80
10.12	11.36	Providing and laying 1st quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by manufacturer) of approved make in all colors, shades except burgundy, bottle green, black of any size as approved by engineer -in-charge in skirting , risers, of steps and dados over 12 mm thick bed of cement mortar 1:3 (1 Cement : 3 Coarse sand) and jointing with grey cement slurry @ 3.3 kg/ sqm including pointing in white cement mixed with pigments of matching shade complete.	Sqm	2455.00	724.25	1,778,033.75
10.13	11.39	Providing and laying rectified glazed ceramic floor tiles 300x300 mm or more (thickness to be specified by manufacturer) of 1st quality conforming to IS: 15622 of approved make, in colors white, Ivory, grey, fume Red brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand) including grouting the joints with white cement and matching pigments etc., complete.	Sqm	882.00	931.50	821,583.00
10.14	11.41	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08% and confirming to IS : 15622, of approved make, in all colours and shades, laid on 20mm thick bed of Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including grouting the joints with white cement and matching pigments etc., complete.				
10.14.1	11.41.2	Size of Tile 60x60 cm	Sqm	14880.00	1,337.10	19,896,048.00
10.14.2	11.41.4	Size of Tile 100x100 cm	Sqm	1653.00	2,246.10	3,712,803.30
		TOTAL OF FLOORING				31,432,336.70
11	12	ROOFING				
11.01	12.34	Providing and fixing Thermal insulation of ceiling (Under deck insulation) with resin bonded fibre glass wool conforming to IS : 8183, density 24Kg/Cum, 50mm thick, wrapped in 200 G virgin polythene bags fixed to ceiling with metallic cleats (50x50x3mm) @ 60cm and wire mesh of 12.5x24 gauge wire mesh, for top most ceiling of building.	Sqm	5650.00	431.70	2,439,105.00

11.02	12.45	<p>Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections,power pressed from M.S.sheets and galvanized with Zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 27mm and 37mm, at 1200mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5mm dia x 50mm long 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9mm running at the spacing of 1200mm centre to centre, to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26mm each having lips of 10.5mm, at 450mm centre to centre, shall be fixed in a direction perpendicular to G.I.intermediate channel with connecting clips made out of 2.64mm dia x 230mm long G.I.wire at every junction.</p>				
		<p>Including fixing perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm center, with 25mm long dry wall screws @ 230mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5x25mm at 230 c/c, including jointing and finishing to aflush finish of tapered and square edges of the board with recommended jointing compound,jointing tapes,finishing with jointing compound in 3 layers covering upto 150mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings,grills,diffusers,cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in charge but excluding the cost of painting with:</p>				
11.02.1	12.45.3	12.5 mm thick tapered edge gypsum moisture resistant board.	Sqm	5942.00	826.80	4,912,845.60

		Providing and fixing 15mm thick densified regular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture spintone/cosmos/Hexa or equivalent of size 595x595mm in true horizontal level, suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanizing @120 grams per sqm including both sides) consisting of main 'T' runner suitably spaced at joints to get required length and of size 24x38 mm made from 0.33mm thick (minimum) sheet, spaced 1200mm centre to centre, and cross "T" of size 24x28mm made out of 0.33mm(Minimum) sheet,1200mm long spaced between main 'T' at 600mm centre to centre to form a grid of 1200x600mm and secondary cross 'T' of length 600mm and size 24x28mm made of 0.33mm thick(Minimum) sheet,				
		to be interlocked at middle of the 1200x600mm panel to from grid of size 600x600mm, resting on periphery wwalls/partitions on a perimeter wall angle pre-coated steel of size(24x24x3000) mm made of 0.40mm thick (minimum) sheet with the help of rawl plugs at 450mm centre to centre with 25mm long dry wall screws @ 230mm interval and laying 15mm thick densified edges calcium silicate ceiling tiles of approved texture (Spintone/Cosmos/hexa) in the grid,including, cutting/making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required. Main 'T' runners to be suspended from ceiling using G.I.slotted cleats of size 25x35x1.6mm fixed to ceiling with 12.5mm dia and 50mm long dash fasteners.				
		4mm G.I.adjustable rods with galvanized steel level clips of size 85x30x0.8 mm, spaced at 1200mm centre to centre along main 'T', bottom exposed with 24mm of all T-sections shall be pre-painted with polyster baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-charge.				
11.03	12.53	Note: Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut-outs) having area less than 0.30 sqm. The calcium silicate ceiling tile shall have NRC value of 0.50(Minimum), light reflection > 85%, non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity< 0.043 w/m 0 KC.	Sqm	6000.00	1,566.00	9,396,000.00

11.04	12.55	Providing and fixing Heat Resistant Terrace Tiles (300mmX300mmX20mm) 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 ratio 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.				
			Sqm	3009.00	1,033.70	3,110,403.30
		TOTAL OF ROOFING				19,858,353.90
12	13	FINISHING				
12.01	13.1	12 mm cement plaster of mix :				
12.01.1	13.1.1	1:4 (1 cement : 4 fine sand)	Sqm	33246.00	123.50	4,105,881.00
12.01.2	13.1.2	1:6 (1 cement : 4 fine sand)	Sqm	500.00	112.50	56,250.00
12.02	13.5	15 mm thick cement plaster on rough side of single or half brick wall of mix:				
12.02.1	13.5.1	1:4 (1 cement: 4 fine sand)	Sqm	45132.00	153.60	6,932,275.20
12.02.2	13.5.2	1:6 (1 cement: 4 fine sand)	Sqm	500.00	140.45	70,225.00
12.03	13.12	18 mm cement plaster in 2 coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) and a top layer of 6 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) finished rough with sponge.				
			Sqm	32973.00	198.25	6,536,897.25
12.04	13.21	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturer.	per bag of 50 kg cement used in the mix	811.00	37.40	30,331.40
12.05	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.	Sqm			
	13.22	10 to 13m 1 lifts	Sqm	1699.00	28.85	49,016.15
	13.22	13 to 16m 2 lifts	Sqm	1801.00	57.70	103,917.70
	13.22	16 to 19 m 3 lifts	Sqm	2039.00	86.55	176,475.45
	13.22	19 to 22 m 4 lifts	Sqm	1790.00	115.40	206,566.00
	13.22	22 to 25 m 5 lifts	Sqm	1624.00	144.25	234,262.00
	13.22	25 to 28 m 6 lifts	Sqm	2153.00	173.10	372,684.30
	13.22	28 to 31 m 7 lifts	Sqm	1941.00	201.95	391,984.95
	13.22	31 to 34 m 8 lifts	Sqm	1675.00	230.80	386,590.00

	13.22	34 to 37 m 9 lifts	Sqm	1709.00	259.65	443,741.85
	13.22	37 to 40 m 10 lifts	Sqm	2296.00	288.50	662,396.00
	13.22	40 to 43 m 11 lifts	Sqm	2003.00	317.35	635,652.05
	13.22	43 to 46 m 12 lifts	Sqm	732.00	346.20	253,418.40
	13.22	46 to 49 m 13 lifts	Sqm	435.00	375.05	163,146.75
	13.22	49 to 52 m 14 lifts	Sqm	408.00	403.90	164,791.20
	13.22	52 to 55 m 15 lifts	Sqm	414.00	432.75	179,158.50
	13.22	55 to 58 m 16 lifts	Sqm	413.00	461.60	190,640.80
	13.22	58 to 61 m 17 lifts	Sqm	469.00	490.45	230,021.05
	13.22	61 to 64 m 18 lifts	Sqm	453.00	519.30	235,242.90
	13.22	64 to 67 m 19 lifts	Sqm	360.00	548.15	197,334.00
	13.22	67 to 70 m 20 lifts	Sqm	545.00	577.00	314,465.00
	13.22	70 to 71.50 m 21 lifts	Sqm	283.00	605.85	171,455.55
	13.26	Providing and applying plaster of paris putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	Sqm	3903.00	83.80	327,071.40
	13.37	White washing with lime to give an even shade				
	13.37.1	New work (three or more coats)	Sqm	100.00	11.75	1,175.00
	13.45	Finishing walls with textured exterior paint of required shade :				
	13.45.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	Sqm	3081.00	117.70	362,633.70
	13.46	Finishing walls with Acrylic Smooth exterior paint of required shade				
	13.46.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	Sqm	1000.00	67.50	67,500.00
12.06	13.52	Finishing with epoxy paint (two or more coats) at all locations prepared and and applied as per manufacturers specifications including appropriate priming coat , preparation of surface , etc. complete.				
12.06.1	13.52.2	On concrete work	Sqm	50.00	108.55	5,427.50
	13.68	French spirit polishing :				

	13.68.1	Two or more coats on new works including a coat of wood filler	Sqm	25.00	137.45	3,436.25
12.07	13.78	Providing and applying 12mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite / perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick / block / RCC work on walls & ceiling at all floors locations, finished in smooth line and level etc. complete.	Sqm	100.00	214.40	21,440.00
12.08	13.80	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer over plastered surface to prepare the surface even and smooth complete.	Sqm	40000.00	76.05	3,042,000.00
12.09	13.82	Wall painting with acrylic emulsion paint , having VOC (Volatile Organic Compound) content less than 50 grams / litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
12.09.1	13.82.2	Two coats	Sqm	33746.00	56.60	1,910,023.60
12.10	13.83	Wall painting with premium acrylic emulsion paint , of interior grade, having VOC (Volatile Organic Compound) content less than 50grams/litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
12.10.1	13.83.2	Two coats	Sqm	45632.00	61.45	2,804,086.40
12.11	13.85	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile organic Compound) content.				
12.11.1	13.85.1	With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/litre.	Sqm	291.00	27.40	7,973.40
12.11.2	13.85.2	With ready mixed red oxide zinc chromatic on steel / iron works having VOC content less than 50 grams/litre.	Sqm	1663.00	24.30	40,410.90
12.11.3	13.85.3	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre.	Sqm	32973.00	25.55	842,460.15
		TOTAL OF FINISHING				32,930,458.75
13	15	DISMANTLING & DEMOLISHING				

13.01	15.2	Dismantling cement concrete manually / by mechanical means and disposal of material within 50 metres lead as per direction of engineer in-charge.				
13.01.1	15.2.1	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	Cum	20.00	671.05	13,421.00
13.02	15.3	Demolishing RCC work manually / by mechanical means including stacking of steel bars and disposal of unserviceable material with in 50 m lead as per direction of engineer in-charge.	Cum	20.00	978.95	19,579.00
13.03	15.7	Demolishing Brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable materials within 50 m lead as per direction of engineer in-charge.				
13.03.1	15.7.4	In Cement mortar	Cum	20.00	566.60	11,332.00
	16.42	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.	Cum	50.00	4,502.55	225,127.50
		TOTAL DISMANTLING & DEMOLISHING				269,459.50
14.00	21.00	ALUMINIUM WORK				
		Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections / appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately)				
14.1	21.1.1	For fixed portion				
14.1.1	21.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron.	Kg	700.00	387.60	271,320.00
14.1.2	21.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges / pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately)				

14.1.3	21.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	Kg	900.00	436.35	392,715.00
14.2	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 snap beading shall be paid in basic item):				
14.2.1	21.3.2	With float glass panes of 5.50 mm thickness	Sqm	80.00	905.75	72,460.00
14.3	21.8	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.				
14.3.1	21.8.1	Upto 5mm depth and 5 mm width	metre	300.00	75.10	22,530.00
14.4	21.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc. complete as per direction of Engineer-in-Charge.				
14.4.1	21.12.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar	Each	4.00	544.40	2,177.60
14.5	21.18	Providing and fixing 12mm 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)	SQm	8.00	4,444.75	35,558.00
		TOTAL OF ALUMINIUM WORKS				796,760.60
15	22	WATERPROOFING WORK				
		Sunken area water proofing				
	22.3	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of :				
		(i) Ist course of applying cement slurry @ 4.4kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface				
		(ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface				

		(iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg. per sqm of area.				
		(iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100mm wide and pasted to each other with bitumen @ 1.7 kg/sqm).	Sqm	4368.00	399.60	1,745,452.80
15.01	22.4	Providing and placing in position suitable PVC water stopper conforming to IS : 12200 for construction / expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc complete.				
15.01.1	22.4.2	Dumb bell with central bulb (180 mm wide, 8 mm thick.	metre	577.00	413.85	238,791.45
		Terrace water proofing				
15.03	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/sqm 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 300 mm 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,				

		<p>c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.</p> <p>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 of 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 3 mm deep.</p> <p>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.</p>				
15.03.1	22.7.1	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	Sqm	6636.00	786.70	5,220,541.20
15.04	22.16	Providing and laying in situ 5 course water proofing treatment with APP (Atactic polypropylene) modified polymeric mebrane over roof consisting of first coat of bitumen primer 0.4 kg/sqm, 2nd and 4th courses of bonding material @1.2 kg/sqm, which shall consist of blown type bitumen grade 85/25 conforming to IS 702, 3rd layer of roofing membrane APP modified polymeric membrane 2.0 mm thick of 3.0 kg/sqm weight consisting of five layers of prefabricated with centre core as 100 micron HMHDPE film sandwiched on both sided with Polymeric mix and the polymeric mix is protected on both side with 20 micron HMHDPE film. The top most layer shall be finished with water proofing as per Ino 5.02.which is paid separately	Sqm	6636.00	300.75	1,995,777.00
15.05	22.21	Extra for covering top of membrane with geo textile , 120 Gsm, non woven , 100% polyster of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by butane torch as per manufacturers recommendation	Sqm	6636.00	53.85	357,348.60
		TOTAL OF WATER PROOFING WORKS				9,557,911.05
		TOTAL OF DSR ITEMS				482,407,812.56
		TOTAL OF CIVIL WORKS BOQ FOR MAIN BUILDING DSR ITEMS				482,407,812.56

SL.NO	NON DSR item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		CIVIL WORKS BOQ FOR MAIN BUILDING NON DSR ITEMS				
15.0		NON SCHEDULE ITEMS				
1	NS 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.b(Plinth area of the building at ground floor only shall be measured for payment). Chlorpyriphos Emulsifiable concentrate of 20% with 1% Concentration.	SQM	6,991.00	310.39	2,169,936.49
	NS-1 (a)	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	100.00	300.00	30,000.00
		TOTAL OF EARTH WORK				2,199,936.49
2	4	CONCRETE WORK				
2	NS 2	Providing Core cutting in concrete slabs / wall etc of the following diameter including finishing etc complete.				
a	a	100 mm dia	Each	20.00	950.00	19,000.00
b	b	150 mm dia	Each	20.00	1,250.00	25,000.00
c	c	200 mm dia	Each	20.00	1,500.00	30,000.00
		TOTAL OF CONCRETE WORK				74,000.00
3	5	REINFORCED CEMENT CONCRETE				
3	NS 3	Providing, placing and fixing in position 100mm thick PVC board of supreme make – CAPCELL HD100 of 100 kg/cum density at all expansion joints and separation joints at all levels and wherever specified to the required sizes, shapes, etc., complete.				
		Same as above but with 50 mm mm thick board at Expansion joints	Sqm	8.00	2,117.00	16,936.00
4	NS 4	Same as above but with 100 mm thick board at Expansion joints	Sqm	330.00	4,509.00	1,487,970.00

5	NS 5	Providing and sealing the expansion joints of 100mm thick with joint sealing systems on floors with necessary backer rod, Aluminum / S.S extrusions, Anchor bolts, sealants, tapes, SS.capping's, gaskets, etc., complete as per approved details / drawings. Cost to include drilling and fixing of extrusions using heavy duty anchor bolts, and sealing the joints capable of withstanding repeated extensions, compressions, vibrations and cyclic movement without lot of adhesion and resist deterioration by weathering, sunlight, ozone, water, salt water, oil, fuels, acids and most of the commonly used acids, etc., complete within 50% movement capacity.				
		1000 series straight works	metre	50.00	8,000.00	400,000.00
6	NS 6	Providing synthetic Spray enamel paint of approved brand and manufacture of required color to give an even shade for structural Steel works, grills, railing etc. complete as directed.	Sqm	18,020.00	127.00	2,288,540.00
		TOTAL OF REINFORCED CEMENT CONCRETE				4,193,446.00
4	6	BRICK WORKS				
7	NS 7	Brick work flyash cement brick class designation 75 above plinth level cement mortar Super structure above plinth up to Floor V level in				
		Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	3,927.00	3,589.32	14,095,259.64
8	NS 8	Half brickwork fly ash 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.				
		in Cement mortar 1:4 (1 cement: 4 coarse sand)	Sqm	2,606.00	378.41	986,136.46
		TOTAL OF BRICK WORK				15,081,396.10
5	9	WOOD & P.V.C. WORK				
9	NS 9	Providing and fixing Dorset – Indicator bolt – IB 390, For toilet (WC)	Each	66.00	365.00	24,090.00
10	NS 10	Providing and fixing Dorset CS10SS (Pair handle + Mortise lock + Cylinder)	Each	28.00	2,470.00	69,160.00
11	NS 11	Providing and fixing PANIC PUSH BAR with lock mechanism.	Each	33.00	9,535.00	314,655.00
12	NS 12	Providing and fixing Dorset CS OR SS (Pair Handle without key hole)	Each	66.00	1,220.00	80,520.00
13	NS 13	Providing and fixing door closer DC-80 EXT 9Dorset	Each	25.00	1,482.00	37,050.00
		FIRE PROOF DOORS				

		Providing & fixing in position FIRE PROOF / GENERAL PURPOSE Single leaf door leaf / Double leaf door manufactured by approved manufacturer, conforming to IS 3614 (part-2) 1992 BS 476 revisions with door frames of 1.6mm thick galvanized steel sheet press formed to rebated profile of size 100x57m with chamfered bottom frame filled with concrete and fixed in position with metallic expansion shield with counter sunk screws and door leaves made of 1.25mm thick galvanized steel sheet press formed to provide a 46mm thick fully, flush, double skin door shell, with lock seam joints at style edges with no visible joints, screws, welding on the face of the shutter. Internal reinforcements provided at top, bottom and style edges, etc complete..double leaf door shall have lipping / rebate for shutter so that there is no gap seen between two shutters.				
		The internal construction of the door is a specially designed Honey-combed structure with reinforcements at top, bottom and stile surrounds. Door to be provided with rectangular view panel as indicated in architectural drawings all as per manufacturer's specifications including necessary hardware like stainless steel imported butt hinges. mortise lock, door closer with holding option, S.S. handles of approved make, painting with Duco spray paint finish of approved colour and shade over approved primer all complete. (Measurement of door will be only on the clear finished opening provided in masonry)				
		Vision glass :Vision glass with 6mm thick clear glass of 380 dia or 200x300 mm rectangular sections or as per architectural drawing. (Make Shakti met / Signum or approved equivalent.				
		hinges : stainless steel butt hinges 3mm thick flush to frame and shutter.				
		Lock: Mortise sash lock with lever handles, mortise dead bolt, mortise latch etc.				
		Flush bolts (Double door) : Concealed extended lever action bolts provided on the top of the door to the leading style edge.				
		Double leaf fire resistant double shutter door (2hr fire rating Electrical Room) (shutter made of 1.25 mm thick GI sheet) .				
14	NS 14	Door - D8- 1.5x2.4 m	Sqm	32.00	9,300.00	297,600.00
		Single leaf fire resistant doors 2 hr fire rating (shutter made of 1.25 mm thick GI sheet) @ fire staircase				
15	NS 15	D-7 Fire escape single shutter 1.5x2.4m and D-16 Electrical and data duct single shutter 0.75x2.1m.	Sqm	254.00	9,430.00	2,395,220.00
16	NS 16	General purpose door	Sqm	390.00	7,560.00	2,948,400.00

17	NS 17	Providing, fabricating assembling and fixing in position powder coated aluminum door using following aluminum matte or glossy finish powder coated sections.				
		OUTER FRAME: 63.5 mm x 38.1mm x 1.7 mm - Jindal Section #4648 @ 1.148 kg/m				
		DOOR SHUTTER				
		Vertical section: 85.00mm x 44.45mm x 1.8mm - Jindal Section #4526 @1.302 kg/m				
		Top Section: 83.50mm x 44.45mm x 1.62mm - Jindal Section #4589 @1.139 kg/m				
		Centre Section: 83.50mm x 44.45mm x 1.62mm - Jindal Section #4589 @1.139 kg/m				
		Bottom Section : 114.3mm x 44.45mm x 3.18mm - Jindal Section #4530 @ 2.646 kg/m				
		All the sections should be powder coated to approved color and shade, cut to length, joints mitred and corners grinded. The bottom hand rail hinged with heavy duty aluminum alloy including providing and fixing standard approved accessories such as aluminum handles, tower bolts, cylindrical locks, EPDM gasket and beadings as required, 5mm thick glass for top and bottom panel. All the aluminum sections used should be treated for removal of any rust and prevention of further rust formation and coated with greasy materials for non adherence of mortar or any other sticky material and this coating shall be cleaned thoroughly prior to handing over.				
		The assembled frame should be stiffened with corner angle, strips and fixed with screws, rawl plugs and teak wood guttas / anchor fasteners to RCC column or masonry on sides, beams and flooring at bottom including cutting, chiselling and making good with cement mortar to match the surface. All the frames should be thoroughly cleaned, free from rust, scale or dirt, with all lead and lift. INCLUDING DORMA FLOOR SPRINGS				
		The rate shall include providing & removing scaffolding if necessary, cost of all materials, cost of labour, cost of equipment and machinery, all lead and lift, loading and unloading, transportation, and all other incidental charges etc. complete. The sizes & drawings shown are indicative and are subject to changes - No claim for extra will be entertained for any deviations / changes in dimensions and subdivisions that are made to the drawings during the execution phase. The work shall be carried out as per the drawings issued and under the directions of the Engineer-In-Charge.				
			Sqm	261.00	7,000.00	1,827,000.00

18	NS 18	Providing and fixing powder coated (approved shade) Louvered ventilators with 'Z ' Type Aluminium louvers of JINDAL make section 63.5x34.93x1.45 mm no 8775 @ 0.429 Kg/Rmt fixed to glazing clip 44.45x3.04 mm @ 0.137 kg/Rmt section no 4432 including providing and fixing this louver panel to Aluminium frame of size 50.8x38.1x3.05 mm @ 1.363 kg/ Rmt section no 2404, cost of bug mesh, including cutting, mitring joints, fixing to masonry or concrete openings sealing all round with approved water proof sealant and making it water proof etc as directed complete. At all levels.	Sqm	249.00	5,940.00	1,479,060.00
19	NS 19	Providing and fixing of 63x38mm partition powder coated frame work with 8mm clear float toughened glass with 85 x 65mm profile attached to the partition member with all standard accessories to suit the overall sizes.	Sqm	554.00	7,893.00	4,372,722.00
		PATCH FITTING DOORS				
20	NS 20	Providing and fixing double leaf door using 10mm thick clear, Toughened glass of approved make, supported on stainless steel (brush-finished) top and bottom hung patch fittings and Floor spring of DORMA or equivalent make. The glass panel edges shall be properly machine polished. Rate to include providing necessary hardware like handles, patch lock, heavy duty floor springs etc., of Dorma or equivalent make.	Sqm	114.00	8,510.00	970,140.00
		ALUMINIUM CAPPING WORKS				
21	NS 21	Aluminium Capping section : Providing and fixing Aluminium band composed of Aluminium extrusions of size 450 mm x 60 mm fixed to the structural glazing to shapes and profiles called for in the detailed drawing.	RM	565.00	3,500.00	1,977,500.00
22	NS 22	Fabricating, supplying and installing in position ALUMINIUM COMPOSITE PANEL cladding either straight or curved in plan of approved make comprising POLYETHYLENE CORE sandwiched between two skins of 0.5mm thick special alloyed aluminium sheet to have overall thickness of 4mm cladding to masonry / concrete faces as called for including appropriate and adequate frame work in aluminium to receive the composite panel to shapes and profiles of approved make. Allow for anchoring the panel work to masonry / concrete in approved manner, all fixing and other accessories and all incidental work complete with complete water tightness using backer rod and approved make of weather sealant. The cladding has to be sides and faces of columns / piers, to cills and soffits of window openings, returned over copings,etc, to line and level. Over all girthed area trims shall be measured.	sqm	1,715.00	4,500.00	7,717,500.00

23	NS 23	Providing and fixing LUXALON SL-4 Louvers in 84R Plain Panel manufactured by M/s. Hunter Douglas India Pvt. Ltd or equivalent. of approved colour consisting of panel 84 mm wide x 16mm deep x 0.6mm thick with round edges panel length upto 6mtrs coil coated on a continuous paint line double baked and roll formed from enameled corrosion Resistance Aluminium Alloy AA3005 (Al.Mg.) for higher strength and good Roll forming characteristics. Panels shall be clipped at a distance of 86 mm to baked enameled Aluminium SL-4 panel stringer 33mm wide and 86mm deep x 0.95 mm thick in a standard length of 5mtrs made of double baked enameled Aluminium Alloy AA5050 (Al.Mg.) white to hold the panel in a module of 86mm centre to centre. The prongs on SL-4 stringers shall be to accommodate an angle of 21.30 Degrees between two panels. SL-4 stringers shall be fixed at 150 mm from panel ends and at a distance of maximum 900 mm center to center across the panel span.				
		The carrier shall be fixed to a suitable structure by means of rigid fixing details. All properties and specifications shall comply with ECCA directives and more specifically. EN 1396:1996				
		Paint Finish: Panel shall be stove enameled and finished with Luxacote, a patented special three layered coating system (consisting of first a conversion layer of thickness 800-2000mg/sq mtr, a polyurethane basecoat of 16-20 microns, and a special top coat of polyamide particles of 8-12 microns thick to provide excellent abrasion and damage resistance) in a continuous coil coating process of the approved colour on the exposed side and the reverse side with epoxy.				
		Terrace & Elevation area.	Sqm	1,168.00	5,290.00	6,178,720.00
24	NS 24	UPVC WINDOWS				
24a	NS 24 a	Providing, supplying & fixing of glazed 2 Track -2 Panel Sliding Windows cum Fixed panels 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 45mm 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 1mm 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)	Sqm	350.00	5,312.00	1,859,200.00

24b	NS 24 b	Providing, supplying & fixing of glazed 3Track - 2 Panel Sliding Window cum fixed panel 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 mesh shutter. Windows shall be provided with 5 mm thick SOLAR glass and 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)	Sqm	350.00	5,691.00	1,991,850.00
24c	NS 24 c	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)	Sqm	37.00	5,314.00	196,618.00
		STRUCTURAL GLAZING WORKS				
25	NS 25	Fabricating, supplying & installing pressure equalized, ventilated and drained Schueco TROPTEC FACADE SC 50 SG.NI system or equivalent performance system of other reputed brand to be approved by the Architects / glazing consultant / Client to external faces of the building consisting of main panel work of vertical Mullion and Horizontal Transom made from extruded colour anodized Aluminum (20 Microns minimum thickness) sections of 6063-T6 Grade, as per IS 8147-1976 Anchored to RCC elements with structurally adequate MS brackets (hot dip Galvanized 80-100 micron thick) & clamps.				

		The transom should overlap the mullion with an EPDM separator. Supply of all stainless steel screws, hardware, EPDM gaskets and accessories from system supplier. Glass to be fixed to the mullion using concealed toggles. Sub-frame is allowed only in the spandrel area with single glass. Glass to Glass joint to be 20mm and sealed with non-bleeding sealant or silicone gasket. The facade and the projected fin should comply with Design wind pressure in Rourkela for 150 kg/sqm . The deflection criteria shall be L/175 or 19mm whichever is the least. Facade design should allow for building movements (wind deflection) of H/500.(H= building ht from Formed ground level). The Facade should comply with air infiltration at 300 Pa (EN 12152) and Static water penetration at 600 Pa (EN 12154). All anchor fasteners to be made of SS 304 grade.				
		Spandrel in-fills with insulation backing (50 mm thick semi-rigid Black/White tissue faced phenol bonded glass wool at a density of 48 kg. per cum & 1mm thick powder coated galvabond backing) including brackets, fasteners, all incidental works, etc as per the manufacturer's detail and approved by the Architects / glazing consultant / Client.				
		Rate shall include fire dampers in powder coated galvabond sheet formed sections to required profile with smoke seal of minimum 100mm depth filled with 50 mm thick glass wool at a density of 100 kg. per cum at floor all floor level, anodized/ powder coated Aluminum flashings & trims wherever required, etc. Provide openable panels of Schueco AS 58.NI system complete with appropriate hardwares, 2/4 point locking system with corner mechanisms and imported handles, including application of weather proof sealant of approved make & color in locations as per requirement. All Aluminum sections to conform 6063-T6 Grade as per IS 8147-1976 members shall be colour anodized to approved color (20 Microns minimum thickness) in an anodizing plant fully equipped for such works.				
		Overall area including glazed panels shall be measured. The areas of the individual components of the structural glazing such as vision panels, spandrel panels & openable panels etc shall be arrived at based on the center to center measurements between the grooves. Vendor to provide technical & as built drawings (which will be approved by the Architects / glazing consultant / Client) and details and Design wind pressure in Rourkela to be considered as 150 kg/sqm inclusive of factor of safety for the Design of the Structural members, Glass panel, MS Brackets and Anchors.				
a	a	Vision Area with SGU Cool- LITE Turquoise ST - 436 Single glazed made of 6mm thick heat strengthened glass : at North ,East & West sides	Sqm	4,865.00	9,000.00	43,785,000.00

b	b	Vision Area with DGU Cool- LITE Turquoise ST - 436 Double glazing made of 6mm thick heat strengthened glass + 12mm air gap + 6mm thick clear annealed glass.	Sqm	1,121.00	11,000.00	12,331,000.00
c	c	Extra for providing top hung openable shutters with 2/4 point locking system, handles etc. in SGU Areas	Sqm	730.00	3,750.00	2,737,500.00
d	d	Extra for providing top hung openable shutters with 2/4 point locking system, handles etc. in DGU areas	Sqm	168.00	4,500.00	756,000.00
26	NS 26	Providing and fixing Dorma Clamp facade system with tempered laminated safety glass (8CT+1.52PVB+8CT) m including, Dorma SS 316 spider, SS 304 clamp, SS 304 custom made RHS drop brackets, Dow corning structural silicon sealant, Hilti anchors for withstanding wind pressure of 2.5KPa.etc complete as directed.	sqm	117.00	25,800.00	3,018,600.00
		TOTAL OF WOOD & P.V.C WORK				97,365,105.00
6	10	STEEL WORKS (MS)				
27	NS 27	Providing and fixing GI weld mesh of size 50x50x2.9mm (10 gauge) including fixing to the frame with necessary bolts etc complete.	Sqm	191.00	486.20	92,864.20
		Stair case hand rail(SS)				
28	NS 28	Providing and fixing a Single line of Stainless of SS 316 grade , brush finished rounds of 50 mm dia with necessary accessories of maximum 150 to 300 mm height as directed over masonry /RCC/ Structural member complete all as per drawings including the cost of all materials, cost of labour, cost of equipment, machinery, all lead and lift, loading and unloading, transportation and all other incidental charges etc, complete. The work shall be carried out as per direction of engineer incharge. make : OZONE or equivalent.				
		Single rail over parapet	Rmt	1,974.00	2,000.00	3,948,000.00
29	NS 29	Providing fabricating & erecting SS hand rails about 1.0 m height as per design & drawings for Staircases. using 50mm dia SS 304 grade pipe for top member, 40mm dia for verticals at about 900 mm centre to centre, and 5 nos of 20mm dia pipe lateral runners in the middle including all accessories , stainless steel fastners, SS bolts etc of required size on top of floor, steps, side/top of waist slab as directed including SS welding, buffing etc as directed. For measurement only the sloping length of rail and height above nosing of treads will be considered for measuring the area. individual railing will not be measured.	Sqm	1,322.00	6,200.00	8,196,400.00
		TOTAL OF STEEL WORKS				12,237,264.20
7	11	FLOORING				
30	NS 30	Providing and laying 3.2 mm thick Rubberized flooring for Auditorium and seminar hall of approved make.				
a	a	Flooring	Sqm	1,152.00	1,865.00	2,148,480.00

b	b	same as above for skirting.	Sqm	47.00	1,865.00	87,655.00
31	NS 31	Providing and fixing PVC edge beading at corners for tile fixing as per manufacturers specification.	Rmt	322.00	60.00	19,320.00
32	NS 32	Providing and laying 18mm thick Granite stone flooring, as per sample of Granite 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 :	Sqm	13,462.00	2,760.00	37,155,120.00
		TOTAL OF FLOORING				39,410,575.00
8	12	ROOFING				
33	NS 33	Supplying and fixing 22 mm thick multicell DANPALON for roofing work / sky lights etc including all necessary approved fixtures and fastners etc complete including necessary Flashing wherever required.	Sqm	426.00	5,500.00	2,343,000.00
34	NS 34	Supplying and fixing 12 mm thick multicell DANPALON for roofing work / sky lights etc including all necessary approved fixtures and fastners etc complete including necessary Flashing wherever required.	Sqm	931.00	4,232.00	3,939,992.00
35	NS 35	Providing and fixing trap door manufactured from 19 mm Block Board with 50x50 mm hard wood frame work including necessary Fixtures and fastners etc complete as directed as per architectural drawings.	Sqm	64.00	3,200.00	204,800.00
		TOTAL OF ROOFING				6,487,792.00
9	13	FINISHING				
36	NS 36	Providing and applying 2 or more coats (to ensure adequate coverage)of Asian Paints Apex Ultima paint or equivalent including surface preparation and application of exterior wall primer – all as per manufacturer's specification	Sqm	19,000.00	210.00	3,990,000.00
37	NS 37	Providing and applying 2 or more coats (to ensure adequate coverage) of Asian Paints Duracast Fine Tex paint or equivalent including surface preparation and application of exterior wall primer – all as per manufacturer's specification.	Sqm	9,891.00	231.00	2,284,821.00
		TOTAL OF FINISHING				6,274,821.00
10	22	WATERPROOFING WORK				
38	NS 38	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering 1:5:10 (1 cement : 5 coarse sand : 10 Brick aggregate 40 mm nominal size) for sunken floors.				
		In Kitchen / Pantry /Toilet and Other locations at all levels	Cum	260.00	3,396.00	882,960.00
		TOTAL OF WATER PROOFING WORK				882,960.00

39	NS 39	CARPETING Supplying & fixing of 4.3mm thickness heavy commercial range flopped flooring with advantage of water proof, antifungal, allergy proof sanitized, total weight 1.8 kg/m ² , fire resitant, stain resitant duly installed at floor.	Sqm	50.00	3,008.00	150,400.00
40	NS 40	Providing and installing of Accolade plus impregnated PUR Vinyl Sheet flooring 6 feet (1.83m) wide in Rolls having a nominal total thickness of [0.08 in (2mm)] of approved colour and shade laid over smooth, flat, hard and free from moisture, grease etc. using water based adhesive like VC 31 of pidilite or similar Accolade plus shall confirm to group P of wear Resistance as per EN 660-2 Fire Resistance of more than 11KW/m ² as per ISO 9329-1.	Sqm	50.00	2,193.00	109,650.00
41	NS 41	Providing and fixing Acid Proof Tiles 300x300mm 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.	Sqm	50.00	1,084.00	54,200.00
42	NS 42	Providing & fixing Float Glass 4mm thick (10Kg / Sqm) with steel beading of approved shape & section with screws in pressed steel door, window & CSW's Frames/Shutter & M.S. Tubular section shutters of doors & windows.	Sqm	50.00	610.00	30,500.00
43	NS 43	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.	Rmt	50.00	150.00	7,500.00
44	NS 44	Acoustic wall cladding : Providing and fixing Ecophon SUPER G A with 40 mm natural square edge, demountable panels with the option of weekly wet cleaning (Akutex T and Super G surfaces) and vacuum cleaning (Colorado surface), manufactured from High density glass wool, with the visible surface has an Akutex T coating, a glass fibre fabric (TEXONA) or a strong glass fibre (Super G) and the back of the tile should be covered with glass tissue. The glass wool core of the tiles should be tested and classified as non combustible according to prEN ISO 1182. The system should have Sound Absorption NRC value of 0.9 (according to EN ISO 11654). Tiles should withstand a permanent ambient RH upto 95% at 30 * C without sagging, warping or delaminating (ISO 4611). The light reflectance of the tiles should not be less than 84% (for Akutex T surface)	Sqm	1,287.00	6,073.40	7,816,465.80

45	NS 45	ACOUSTICAL FALSE CEILING Providing and fixing of Armstrong Mineral Fibre Acoustical Suspended Ceiling System with Fire fissured (Micro Look) edge tiles with Armstrong superfine 15mm exposed grid in module size 600x600x16mm with Bio Block Casting on the face of the tile. The grid shall be 15mm wide T-Section flanges colour white, main runner 1200mm & 600mm Cross Tees.	Sqm	892.00	2,141.00	1,909,772.00
46	NS 46	Providing and applying cementitious crystalline based waterproofing for concrete rafts, walls, water tanks, slabs, concrete floors etc. with krystol T1 system. The application to be done from +ve (postive) /-ve (negative)side on a wet open pore concrete surface with brush @ 1 Kg/Sq.M as per manufacturer specification.	Sqm	50.00	441.00	22,050.00
47	NS 47	Providing and applying Silicon Based Water repellent coating by brush or by spray.	Sqm	50.00	232.00	11,600.00
48	NS 48	WOODEN FLOORING Providing and fixing wooden flooring of 25mm thick with pre laminated flat pressed three layer Engineered Hard Wood Flooring on Stage of Armstrong or equivalent make exterior grade including edge profiles as may be required in desired shape and size of approved colour and texture. including front cladding of stage riser 38mm thick parquet (wood block) flooring of first class teak wood laid over 25mm thick levelling layer of cement concrete 1:2:4 (1 cement : 2 coarse sand: 4 stone aggregate 10mm nominal size) to be paid separately coated with thin layert of hot bitumen (blown type) @ 2.45 kg per sqm including gfixing blocks in position after dipping in hot bitumen (blown type) upto half depth, planded, leveled smooth and finished complete.	Sqm	50.00	4,913.00	245,650.00
49	NS 49	Providing and fixing Ceramic designer tiles of size 300x450mm to 300x600mm as in dado (upto 2.10m height) over 15mm thick cement mortar 1:4 [1cemnet : 4 coarse sand] set, jointed with neat cement slurry & pointed with white cement using pigment to match the shade of colour of the tile. meeting edges of the tile to be chamfured.	Sqm	50.00	1,455.00	72,750.00
50	NS 50	Providing and fixing of SS Handle 100 mm (Kitch make, C type)	Each	10.00	231.00	2,310.00
51	NS 51	providing and fixing of SS Aldrop 14x300mm SS matt finish with necessary screws etc., Complete.(make: AKS,Ebco,Ozone,Dorma or equivalent)	Each	10.00	439.00	4,390.00
52	NS 52	providing and fixing of SS towerbolt 10x150mm SS matt with necessary screws etc., Complete.(make: AKS,Ebco,Ozone,Dorma or equivalent)	Each	10.00	147.00	1,470.00

53	NS 53	providing and fixing of SS towerbolt 10x300mm SS matt with necessary screws etc., Complete.(make: AKS,Ebco,Ozone,Dorma or equivalent)	Each	10.00	407.00	4,070.00
53	NS 53	Providing and fixing of SS hanging type door stopper with necessary screws etc.	Each	10.00	300.00	3,000.00
		SUB TOTAL				10,445,777.80
		TOTAL OF CIVIL WORK BOQ FOR MAIN BUILDING NON DSR ITEMS				194,653,073.59

SHCHEDULE OF FINISHES			
S.NO.	ITEM	DESCRIPTION	MATERIAL
A STRUCTURE			
1	ROOFS – FLAT	TYPE	RCC
2	RETAINING WALLS	TYPE	RCC
3	BUILDING WALLS	TYPE	Solid Fly-Ash Block masonry, FPS bricks
4	TOILET PARTITIONS	TYPE	100 mm thk masonry with tile dado
5	PARTITIONS	TYPE	Plywood partition with wooden framework (will be done under interior scope)
B PLASTERING & FALSE CEILING			
1	INTERNAL PLASTERING		
	INTERNAL FACE OF EXTERNAL WALL	TYPE	Smooth cement plaster with Asian paint wall putty
	INTERNAL WALLS	TYPE	Smooth cement plaster
	CEILING	TYPE	Smooth cement plaster
2	EXTERNAL PLASTERING	TYPE	Sand faced cement plaster
C FLOORING – BUILDING & SITE			
1	AUDITORIUM-SEMINAR BLOCK	TYPE	Grano Flooring + edge protection angles + Rubberized flooring
2	LIBRARY & OFFICE SPACES	TYPE	Vitrified Tiles
3	PLAZA & INFORMAL ACTIVITY ZONES		Sandstone + Tact Tiles
4	LOBBIES & CORRIDORS	TYPE	Polished Granite
5	RAMPS	TYPE	Sandstone + Tact Tiles
6	STAIRCASES	TYPE	Open stairs and steps – Polished granite. Treads to have anti-skid grooves / flamed strips.
		TYPE	Closed staircase – Kota
7	PARKING	TYPE	Grano flooring + Epoxy paint for parking slots
8	SERVICES AND UTILITY ROOMS	TYPE	Grano flooring
9	BALCONIES	TYPE	Water-proofing + Kota
10	TERRACE	TYPE	Water-proofing + Heat-resistant tiles
11	COPING – BUILDING	TYPE	Polished Granite
12	COPING – SITE	TYPE	Red Sandstone
13	ROADS	TYPE	Bituminous roads with soling, WBM & hume pipe crossings.
14	HARD PAVED SURFACES	TYPE	Shot-blasted flexi-pavers
15		BRAND	Basant betons or equivalent
16	KERBS	TYPE	Concrete kerb stones, cast in-situ
17	DRAINS	TYPE	RCC box drains on one side of the road with cast in-situ drain covers.
18	INTERNAL SURFACE DRAINS	TYPE	GI grating

D TOILETS & PANTRY			
1	FLOORING – ALL TOILETS	TYPE	Anti-skid Ceramic tiles
2	DADO – ALL TOILETS	TYPE	Ceramic tile, glossy
		SIZE	300 x 300 mm / 600 x 600 mm
3	WASHBASIN COUNTERS	TYPE	Polished granite
E OPENINGS - DOORS, WINDOWS & VENTILATORS			
1	DOORS	TYPE	FRP Door frames with FRP Flush shutters
		TYPE	METAL doors for Fire stairs, service rooms and ducts.
2	HARDWARE	TYPE	SS; As approved by Client/ Architect
3	WINDOWS	TYPE	uPVC Windows, Structural glazing
4	WINDOW GLASS		Saint Gobain – SGU and DGU
6	VENTILATORS		Aluminum, powder coated
7	LOUVRES	TYPE	Aluminum, powder coated
F VI – RAILINGS AND GRILLS			
1	RAILINGS		
2	STAIRCASE	TYPE	SS Railing – 50mm dia (top member), 40mm dia (vertical member) & 20mm dia (lateral members)
3	PARAPET WALL	TYPE	SS Railing – 50 mm dia (top member), 20mm dia (verticals @ 1m interval)
4	RAMPS	TYPE	SS Railing – 50 mm dia (top member), 20mm dia (horizontal fixed to side wall)
G PAINT			
1	INTERNAL PAINT – WALL & CEILING	TYPE	Asian Paints Premium Emulsion paint / Dulux.
2	EXTERNAL PAINT – WALL & CEILING	TYPE	Asian Paints Apex Ultima paint / Dulux.
		TYPE	Asian Paints Duracast Fine Tex paint or equivalent
3	ALL METAL WORK	TYPE	Asian Paints Premium Semi Gloss Enamel paint or equivalent
4	ALL SERVICE ROOMS	TYPE	washable enamel paint as per Asian specifications
H MISCELLANEOUS			
1	FALSE CEILING	TYPE	Armstrong Grid-Ceiling with POP Border
2	SKYLIGHTS	TYPE	Multi-cell polycarbonate + MS Grills and GI Mesh
I PANELLING & CLADDING			
1	AUDITORIUM AND SEMINAR HALLS		Off-white Sandstone Dry-cladding
			Acoustical cladding not considered.[to be taken up separately]
2	TOWER		Structural Glazing with performance glass + ACP cladding + Aluminum louvers + Al. Fins

CIVIL WORKS BOQ FOR SITE

- 1 DIVIDER
- 2 SUMMARY OF CIVIL WORKS BOQ FOR SITE
- 3 CIVIL WORKS BOQ DSR ITEMS FOR SITE
- 4 CIVIL WORKS BOQ NON DSR ITEMS FOR SITE

SI No	ITEMS	Amount as per DSR Rates [Rs]	Amount as per NON DSR Rates [RS]	Total of DSR and NON DSR works [Rs]
	SUMMARY OF CIVIL WORKS FOR SITE			
1	CARRIAGE OF MATERIALS	881,524.22		881,524.22
2	EARTH WORK	3,883,606.35		3,883,606.35
3	CONCRETE WORK	4,056,835.70		4,056,835.70
4	READY MIX CONCRETE CONCRETE	23,230,276.60		23,230,276.60
5	MASONRY WORKS	1,247,380.65		1,247,380.65
6	STONE WORK	407,038.70		407,038.70
7	STEEL WORKS (MS)			0.00
8	FLOORING	3,387,253.25		3,387,253.25
9	CIVIL WORKS BOQ FOR SITE	317,591.70		317,591.70
10	ROAD	491,186.00		491,186.00
11	DRAINAGE	55,448.00		55,448.00
12	NON SCHEDULE ITEMS	-	11,770,720.00	11,770,720.00
	TOTAL	37,958,141.17	11,770,720.00	49,728,861.17
	TOTAL OF CIVIL WORKS FOR SITE	37,958,141.17	11,770,720.00	49,728,861.17

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		CIVIL WORKS BOQ FOR SITE DSR ITEMS				
1	1	CARRIAGE OF MATERIALS				
	1.1	Carriage of materials by mechanical transport including loading , unloading and stacking.				
1.01	1.1.2	Earth	Cum	10,649.00	82.78	881,524.22
		TOTAL OF CARRIAGE OF MATERIALS				881,524.22
2	2	EARTH WORK				
2.01	2.3	Banking excavated earth in layers not exceeding 20cm in depth, breaking clods, watering, rolling, each layer with 1/2 tonne roller, or wooden or steel rammers, and rolling every third layer and top most layer with power roller of minimum 8 tonnes and dressing up , in embankments for roads, flood banks, marginal banks, and guide banks etc, lead up to 50 mtrs and lift up to 1.5 mtr.				
2.01.1		All kinds of soil	Cum	945.00	181.25	171,281.25
2.02	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 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be leveled and neatly dressed.				
2.02.1	2.6.1	All kinds of soil	Cum	23,342.00	129.35	3,019,287.70
		site grading				
2.03	2.7	Earth work in excavation over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 Sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be leveled and neatly dressed :				
2.03.1	2.7.1	Ordinary rock – site grading	Cum	100.00	197.75	19,775.00
2.03.2	2.7.3	Hard rock (blasting prohibited)	Cum	100.00	490.10	49,010.00
2.04	2.8	Earth work in excavation in foundation trenches or drains (not exceeding 1.5 m in width or 10 Sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 m.				
2.04.1	2.8.1	All kinds of soil	Cum	4,503.00	130.80	588,992.40

2.05	2.9	Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.				
2.05.1	2.9.1	Ordinary rock	Cum	150.00	212.00	31,800.00
2.06	2.26	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.				
2.06.1	2.26.1	All kinds of soil	Cum	100.00	34.60	3,460.00
		TOTAL OF EARTH WORK				3,883,606.35
3	4	CONCRETE WORK				
3.01	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level:				
3.01.1	4.1.8	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)	Cum	1,129.00	3,593.30	4,056,835.70
		TOTAL OF CONCRETE WORK				4,056,835.70
4	5	REINFORCED CEMENT CONCRETE				
4.01	5.1	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:				
4.01.1	5.1.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	582.00	4,703.90	2,737,669.80
		R wall				
4.02	5.9	Centering and shuttering including strutting, propping etc. and removal of form for:				
4.02.1	5.9.1	Foundations, footings, bases of columns etc. for mass concrete.	Sqm	741.00	166.90	123,672.90
		R wall				
4.02.2	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	5,993.00	285.15	1,708,903.95
4.02.3	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sqm	951.00	311.20	295,951.20
4.03	5.22	Steel reinforcement for RCC. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
4.03.1	5.22.6	Thermo-Mechanically Treated bars.	Kilogram	166,580.00	62.25	10,369,605.00

4.04	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).				
4.04.1	5.33.1	All works upto plinth level	Cum	697.00	5,242.15	3,653,778.55
4.05	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.				
		(Note :- Cement content considered in this item is @ 330 Kg/Cum. Excess/less cement used as per design mix is Payable / recoverable separately).				
4.05.1	5.37.1	All works upto plinth level	Cum	442.00	5,590.60	2,471,045.20
4.05.2	5.37.2	All works above plinth level upto floor V level	Cum	305.00	6,130.00	1,869,650.00
		TOTAL OF REINFORCED CEMENT CONCRETE				23,230,276.60
5	6	BRICK WORKS				

5.01	6.4	Brick work with Common burnt clay FPS (non modular) Brick of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and size in:				
5.01.1	6.4.1	Cement mortar 1:4 (1 cement: 4 coarse sand)	Cum	259.00	4,067.85	1,053,573.15
5.01.2	6.4.2	Cement mortar 1:6 (1 cement: 6 coarse sand)	Cum	50.00	3,876.15	193,807.50
		TOTAL OF BRICK WORK				1,247,380.65
6	7	STONE WORK				
6.01	7.8	Coursed rubble masonry with hard stone (First or second sort) in super structure above plinth level and up to floor V level.				
6.01.1	7.8.2	Masonry work(Second sort), in cement mortar 1:6(1 cement: 6 coarse sand)	Cum	107.00	3,804.10	407,038.70
		TOTAL OF STONE WORK				407,038.70
8	11	FLOORING				
8.01	11.29	40mm thick fine dressed stone flooring over 20 mm (Average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand), including pointing with cement mortar 1:2 (1 cement : 2 Stone dust) with an admixture of pigment to match the shade of stone.				
8.01.1	11.29.2	White sand stone	Sqm	5,842.00	557.50	3,256,915.00
8.02	11.31	Extra for pre-finished nosing in treads of steps of kotah stone / sand stone slab.	meter	2,485.00	52.45	130,338.25
		TOTAL OF FLOORING				3,387,253.25
9	13	FINISHING				
9.01	13.4	12 mm cement plaster of mix :				
9.01.1	13.4.1	1:4 (1 cement : 4 coarse sand)	Sqm	2,227.00	132.10	294,186.70
9.02	13.5	15 mm thick cement plaster on rough side of single or half brick wall mix:				
9.02.1	13.5.1	1:4 (1 cement : 4 coarse sand)	Sqm	100.00	153.60	15,360.00
9.03	13.47	Finishing walls with Premium Acrylic smooth exterior paint with silicone additives of required shade:				
9.03.1	13.47.1	New work (two or more coats applied @ 1.43lit/10 Sqm over and including priming coat of exterior primer applied @ 2.20 lit/10 Sqm)	Sqm	100.00	80.45	8,045.00
		TOTAL OF FINISHING				317,591.70
10	16	ROAD WORK				

10.01	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating the earth to an average of 22.5 cm depth, dressing to camber and consolidating with power road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead up to 50 metres.	Sqm	3,360.00	61.25	205,800.00
10.02	16.2	Extra for compaction of earth work in embankment under optimum moisture conditions to give atleast 95% of the maximum dry density (proctor density).	Cum	1,008.00	7.75	7,812.00
10.03	16.69	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). Precast C.C. kerb stone shall be approved by Engineer-in-charge	Cum	55.00	5046.80	277,574.00
TOTAL OF ROAD WORK						491,186.00
11	19	DRAINAGE				
11.01	19.6	Providing and laying non pressure NP2 class (light duty) RCC pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete:				
11.01.1	19.6.3	250mm dia. R.C.C. pipe		40.00	342.45	13,698.00
11.01.2	19.6.4	300mm dia. R.C.C. pipe		40.00	422.90	16,916.00
11.01.3	19.6.5	450mm dia. R.C.C. pipe		40.00	620.85	24,834.00
TOTAL OF DRAINAGE						55,448.00
TOTAL OF CIVIL WORKS BOQ FOR SITE DSR ITEMS						37,958,141.17
TOTAL OF CIVIL WORKS BOQ FOR SITE DSR ITEMS						37,958,141.17

Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs	Amount Rs
CIVIL WORKS BOQ FOR SITE NON DSR ITEMS						
NON SCHEDULE ITEMS						
12.0						
1	NS-1	Supplying and filling in plinth with local sand under floors, including watering, ramming, consolidating and dressing complete.	Cum	100.00	300.00	30,000.00
2.0	NS 2	Providing and fixing shot blasted 65 mm thick Flexi pavers of basant baton or equivalent make of approved colour and size including cost of 50 mm thick well consolidated sand cushion, watering curing etc complete. (Basant betons or equivalent)				
		For 7.2m wide pathway	Sqm	3,360.00	1,694.00	5,691,840.00
3.0	NS 3	Providing and fixing a Single line of Stainless of SS 316 grade, brush finished rounds of 50 mm dia with necessary accessories of maximum 150 to 300 mm height as directed over masonry / RCC / Structural member complete all as per drawings including the cost of all materials, cost of labour, cost of equipment, machinery, all lead and lift, loading and unloading, transportation and all other incidental charges etc, complete. The work shall be carried out as per direction of engineer incharge. make : OZONE or equivalent.				
		Railing for Physically challenged	Rmt	284.00	2,000.00	568,000.00
4.0	NS 4	Providing and fixing Tactile flooring for pathways for use of physically challenged persons .	Sqm	124.00	1,520.00	188,480.00
5.0	NS 5	Providing and laying 18mm thick Granite stone flooring, as per sample of Granite 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 :	Sqm	210.00	2,760.00	579,600.00
6.0	NS 6	Providing and laying 500x500x40 mm thick Turf paver (Turf pave XD) on 150 mm thick sub grade of compacted bed of 20 mm thick nominal size stone aggregate and base course and filling with 150 mm thick local sand, including spreading, well ramming, consolidating and finishing smooth etc. all complete as per direction of Engineer-in-charge	Sqm	1,000.00	4,712.80	4,712,800.00
TOTAL OF CIVIL WORKS FOR SITE NON DSR ITEMS						11,770,720.00

ELECTRICAL WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF ELECTRICAL WORKS BOQ
- 3 LIGHTENING ARRESTER BOQ FOR NON DSR ITEMS
- 4 ELECTRICAL BOQ FOR DSR ITEMS
- 5 ELECTRICAL BOQ FOR NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON DSR Rates	Total of DSR and NON DSR works
SUMMARY OF ELECTRICAL WORKS				
1	COPPER WIRING IN PVC CONDUIT	14,110,048.00		14,110,048.00
2	STEEL / PVC CONDUIT, METAL BOXES	3,257,052.00		3,257,052.00
3	MCB & PRE-WIRED MCB DISTRIBUTION BOARDS	1,330,672.00		1,330,672.00
4	BUS TRUNKING AND OVER HEAD BUSBAR SYSTEM	2,112,113.00		2,112,113.00
5	CABLE TRAYS	906,108.00		906,108.00
6	EARTHING	811,094.00		811,094.00
7	LIGHTNING CONDUCTOR	287,956.00		287,956.00
8	MV CABLE LAYING	716,140.50		716,140.50
9	MV CABLE JOINTING AND END TERMAINATION	126,168.00		126,168.00
10	TOTAL OF NON DSR ITEMS		43,794,148.34	43,794,148.34
	TOTAL	23,657,351.50	43,794,148.34	67,451,499.84
	TOTAL OF ELECTRICAL WORKS	23,657,351.50	43,794,148.34	67,451,499.84

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs.	Rs.
		Generation-3 Lightening system(for Satelit 3 60)				
1	NS 1	Supply ,erection,installation,testing and commissioning of Generation-3, Duval Messien -Satelit 3 60 with 5.0 mtr Mast radius of protection for Level 1 = 79 mtrs,Level 2 = 97 mtrs, Level 3 = 107 mtrs, Lightning Protection system based on proactive ESE techonology. No external power source required to operate in all weather conditions, in an Industrial environment. The device & its installation, including earthing system should confirm to NFC 17-102,with appropriate mounting arrangement, including the necessary mounting mast should be provided .The above system should have the desired level & radius of protection.The ESE system should be tested by a reputed testing agency (C.P.R.I)	Set	2.00	280,000.00	560,000.00
2	NS 2	Supply ,erection,installation,testing and commissioning of 5.0 meter mast made of G.I Class B of reputed make gavelnising with arrangements to withstand wind velocity as per drawing enclosed.	Set	2.00	19,500.00	39,000.00
3	NS 3	Supply ,installation,testing & commissioning of 25 x 6 mm GI / 25 x 3 Cu down conductor for connecting the air terminal system to the earthing network inclusive of down conductor tape clip, at every 0.5 mtr, Oblong test clamp, DC square clamp and necessary looping connections at right angle bends & providing pvc sheath for D.C at the height of 2 mtrs from ground level, mounting & fixing of lightning counter at the height of 2.0 mtrs from the ground level.	RM	200.00	985.00	197,000.00
4	NS 4	Supply,installation, commissioning & testing of Lightning counter for counting number of lightning strike.The counter should work without any external power supply and to be tested by a reputed testing agency.(C.P.R.I.)	Set	2.00	17,500.00	35,000.00
5	NS 5	Supply of Teletester for testing healthyness of Satelit 3.	Set	RO	45,000.00	
6	NS 6	Supply,installation,testing of Earthing system with 3 nos electrode of 19 mm dia 1.8 meter long steel cored electrolytically coated copper of 250 micron.These electrode should be connected in crow foot manner. The distance between them being not less then 3mtrs. The system should have Maintenance Free, non toxic, environment friendly back fill metrial with high ionic conductivity Terec+ or equivalent.The combined Earth Pit (3 nos) resistance should be less then 10 ohms.Interconnection of the earth pits should be done using Square Clamp the earthing system . In case the soil resistivity exceeds you may add the back fill compound to get the required Value at the unit cost mentioned.	Set	2.00	30,000.00	60,000.00
7	NS 7	Necessary Earth Pit chambers should be provided -3 nos having poly plastic covers capable of withstanding loads up to 2 tonnes having easily removable and lockable covers for inspection of earth pits.	Set	6.00	1,200.00	7,200.00
TOTAL OF Cost of Generation-3 Lightening system NON DSR ITEMS						898,200.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		ELECTRICAL WORKS BOQ FOR DSR ITEMS				
1		COPPER WIRING IN PVC CONDUIT				
1.1	1.10	Wiring for light point! fan point/exhaust fan point/ call bell point with 1.5 sq.mm 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 Sq mm FR PVC insulated copper conductor single core cable etc as required				
	1.10.3	1.10.3 Group C - LIGHT POINTS	Point	3,000	664.00	1,992,000.00
	1.10.3	1.10.3 Group C - CEILING FAN POINTS, with GI box and modular plate etc., (without stepped type electronic fan regulator)	Point	100	664.00	66,400.00
	1.10.3	1.10.3 Group C - WALL FAN POINTS	Point	30	664.00	19,920.00
	1.10.3	1.10.3 Group C - CALLING BELL POINT	Point	12	664.00	7,968.00
	1.10.3	1.10.3 Group C - EXHAUST FAN POINT	Point	25	664.00	16,600.00
1.2	1.4	Wiring for twin control light point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed pye conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required.	Point	62	990.00	61,380.00
1.3	1.12	Wiring for light /power plug with 2X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed PVC conduit alongwith 1 No 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Rmt	RO	162.00	
1.4	1.13	Wiring for light/ power plug with 4X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed PVC conduit alongwith 2 Nos 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	Rmt	10	268.00	
1.5	1.14	Subsequent light point in group control with avrage of three(3) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Point	2,500	321.00	802,500.00

1.6	1.14	Subsequent light point in group control with average of TWO (2) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Point	600.00	214.00	128,400.00
1.7	1.14	Subsequent light point in group control with average of ONE (1) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Point	100.00	107.00	10,700.00
1.8	1.14	Subsequent light point in group control with average of four (4) meters of 2 x 1.5 Sq.mm + 1 x 1.5 Sqmm earth wire of FR PVC wire in a PVC conduit of not less than 19 mm dia. 2mm thick along with above points.	Nos.	10.00	428.00	
1.9		Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of PVC insulated copper conductor, single core cable in surface/ recessed PVC conduit as required				
	1.14.1	2 X 1.5 sq. mm +1 X 1.5 sq. mm earth wire	Rmt	10.00	107.00	1,070.00
	1.14.2	2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	Rmt	30,000	131.00	3,930,000.00
	1.14.3	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	Rmt	10,000	162.00	1,620,000.00
	1.14.4	2 X 6 sq. mm + 1 X 6 sq. mm earth wire	Rmt	20,000	206.00	4,120.00
	1.14.5	2 X 10 sq. mm + 1 X 10 sq. mm earth wire	Rmt	20	310.00	6,200.00
	1.14.6	2 X 16 sq. mm + 1 X 16 sq. mm earth wire	Rmt	10	429.00	4,290.00
	1.14.7	4 X 2.5 sq. mm + 2 X 2.5 sq. mm earth wire	Rmt	5,000	204.00	1,020,000.00
	1.14.8	4 X 4 sq. mm + 2 X 4 sq. mm earth wire	Rmt	4,000	268.00	1,072,000.00
	1.14.9	4 X 6 sq. mm + 2 X 6 sq. mm earth wire	Rmt	500	358.00	179,000.00
	1.14.10	4 X 10 sq. mm + 2 X 10 sq. mm earth wire	Rmt	3,800	562.00	2,135,600.00
	1.14.11	4 X 16 sq. mm + 2 X 16 sq. mm earth wire	Rmt	1,200	789.00	946,800.00
1.9 b	1.17	Supply and drawing of following size FR PVC insulated copper conductor, single core cable in the existing surface / recessed steel / PVC conduit as required.				
	1.17.1	1 x 1.5 sq. mm	Rmt	10	20.00	200.00
	1.17.2	2 x 1.5 sq. mm	Rmt	10	33.50	335.00
	1.17.3	3 x 1.5 sq. mm	Rmt	10	50.00	500.00
	1.17.4	4 x 1.5 sq. mm	Rmt	10	63.50	635.00
	1.17.5	5 x 1.5 sq. mm	Rmt	10	80.00	800.00
	1.17.6	6 x 1.5 sq. mm	Rmt	5	93.50	467.50
	1.17.11	2 x 2.5 sq mm.	Rmt	5	49.50	247.50
	1.17.12	3 x 2.5 sq mm.	Rmt	5	74.50	372.50
	1.17.13	4 x 2.5 sq mm.	Rmt	5	96.50	482.50
	1.17.14	5 x 2.5 sq mm.	Rmt	5	121.00	605.00
	1.17.21	3 x 4 sq. mm	Rmt	5	108.00	540.00
	1.17.23	5 x 4 sq. mm	Rmt	5	173.00	865.00
	1.17.24	6 x 4 sq. mm	Rmt	5	205.00	1,025.00

	1.17.31	4 x 6 sq. mm	Rmt	5	195.00	975.00
	1.17.32	5 x 6 sq. mm	Rmt	5	240.00	1,200.00
a	1.17.33	6 x 6 sq. mm	Rmt	5	290.00	1,450.00
1.10	1.18	Supplying and drawing following pair, 0.5 sq.mm FR PVC insulated copper conductor, unarmoured telephone cable in the existing surface/ recessed steel PVC conduit as required.				
	1.18.1	1 Pair	Rmt	100	11.00	1,100.00
	1.18.2	2 Pair	Rmt	200	15.50	3,100.00
	1.18.3	4 Pair	Rmt	200	21.00	4,200.00
1.11	1.19	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface / recessed steel / PVC conduit as required.	Rmt	3,000	22.00	66,000.00
TOTAL OF COPPER WIRING IN PVC CONDUIT						14,110,048.00

2		STEEL / PVC CONDUIT, METAL BOXES				
2.1		Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.				
a	1.20.1	20 mm	Rmt	200	123.00	24,600.00
b	1.20.2	25 mm	Rmt	400	143.00	57,200.00
c	1.20.3	32 mm	Rmt	500	195.00	97,500.00
2.2	1.21	Supplying and fixing of following sizes of PVC conduit along with accessories In surface / recess including cutting the wall and making good the same in case of recessed conduit as required.				
a	1.21.1	20 mm	Rmt	26,600	56.50	1,502,900.00
b	1.21.2	25 mm	Rmt	13,300	64.50	857,850.00
c	1.21.3	32 mm	Rmt	1,210	80.50	97,405.00
d	1.21.4	40 mm	Rmt	10	106.00	1,060.00
e	1.21.5	50 mm	Rmt	10	135.00	1,350.00
2.3	1.22	Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.				
a	1.22.1	75 mm X 75 mm X 60 mm deep	Each	2	72.00	144.00
b	1.22.2	100 mm X 100 mm X 60 mm deep	Each	2	86.50	173.00
c	1.22.4	150mm X 150 mm X 60 mm deep	Each	1	131.00	131.00
d	1.22.7	200 mm X 150 mm X 60 mm deep	Each	1	154.00	154.00
e	1.22.8	200 mm X 150 mm X 75 mm deep	Each	2	158.00	316.00
f	1.22.9	200 mm X 250 mm X 60 mm deep	Each	1	211.00	211.00
g	1.22.10	200 mm X 250 mm X 75 mm deep	Each	1	218.00	218.00
h	1.22.11	200 mm X 150 mm X 100 mm deep	Each	1	180.00	180.00
i	1.22.12	200 mm X 250 mm X 100 mm deep	Each	2	239.00	478.00
j	1.22.13	250 mm X 300 mm X 60mm dee	Each	2	259.00	518.00
k	1.22.14	200 mm X 300 mm X 100 mm deep	Each	2	267.00	534.00
l	1.22.15	250 mm X 300 mm X 60 mm deep	Each	2	286.00	572.00
m	1.22.16	250 mm X 300 mm X 100 mm deep	Each	2	310.00	620.00
2.4	1.24	Supplying and fixing following modular switch/socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
a	1.24.1	5/6 amps switch	Each	1	75.00	75.00
b	1.24.2	2 way 5/6 amps switch	Each	1	98.50	98.50
c	1.24.3	15/16 amp switch	Each	1	109.00	109.00
d	1.24.4	3 pin 5/6 amp socket outlet	Each	1	96.00	96.00
e	1.24.5	6 pin 15/16 amp socket outlet	Each	1	147.00	147.00
f	1.24.6	Telephone socket outlet	Each	1	89.00	89.00
g	1.24.7	TV antenna socket outlet	Each	1	93.00	93.00

2.5	1.25	Supplying and fixing stepped type electronic fan regulator on the existing modular plate, switch box including connections but excluding modular plate etc. as required.	Each	30	322.00	9,660.00
2.6	1.26	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	100	22.00	2,200.00
2.7	1.27	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc as required.				
a	1.27.1	1 or 2 Module (75mmX75mm)	Each	1	142.00	142.00
b	1.27.2	3 Module (100mmX75mm)	Each	1	154.00	154.00
c	1.27.3	4 Module (125mmX75mm)	Each	1	173.00	173.00
d	1.27.4	6 Module (200mmX75mm)	Each	1	221.00	221.00
e	1.27.5	8 Module (125mmX 125mm)	Each	1	255.00	255.00
f	1.27.6	12 Module (200mmX 150mm)	Each	1	344.00	344.00
2.8	1.28	Supplying and fixing follow'ing Modular base & cover plate on existing modular ITIetal boxes etc. as required.				
a	1.28.1	1or 2 Module	Each	50	63.00	3,150.00
b	1.28.2	3 Module	Each	20	75.00	1,500.00
c	1.28.3	4 Module	Each	1	81.50	81.50
d	1.28.4	6 Module	Each	1	98.50	98.50
e	1.28.5	8 Module	Each	1	121.00	121.00
f	1.28.6	12 Module	Each	1	162.00	162.00
2.9	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 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection, etc. as required. (For light plugs to be used in non residential building)	Each	1,450	288.00	417,600.00
2.10	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 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	370	366.00	135,420.00

2.11	1.36	Supplying and fixing stiff pendent with 300 mm long, 20 mm dia X 1.6 mm thick steel conduit, aluminium cast back plate and brass holder complete. including wiring the down rod with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and painting etc. as required.	Each	2	135.00	270.00
2.12	1.37	Supplying and fixing stiff pendent with 600 mm long, 20 mm dia X 1.6 mm thick steel conduit, aluminium cast back plate and brass holder complete, including wiring the down rod with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and painting etc. as required.	Each	30	167.00	5,010.00
2.13	1.38	Supplying and fixing call bell / buzzer suitable for single phase, 230 volts, complete as required.	Each	12	54.50	654.00
2.14	1.39	Providing and fixing 16/0.20 mm (0.50sqmm) twin flat flexible, FR PVC insulated, copper cable, in PVC sleeve of suitable size on the floor / wall, or side of the table / door etc. as required.	Rmt	500	19.00	9,500.00
2.15	1.40	Providing and fixing 16/0.20 mm (0.50sqmm), twin circular flexible FR PVC insulated, PVC sheathed copper cable direct on the wall with PVC clips etc. as required.	Rmt	1.00	17.50	17.50
2.16	1.41	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, with all accessories and tube etc. directly on ceiling / wall, including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	100	69.50	6,950.00
2.17	1.42	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, with all accessories and tube etc., including supplying and fixing ball and socket arrangement, 2 no. down rods of 20 mm dia X 1.6 mm thick steel conduit up to 30 cm length, painting and wiring the down rods and connection with 1.5 Sq mm FRPVC insulated, copper conductor, single core cable and earthing etc as required.	Each	10	195.00	1,950.00

2.18	1.43	Providing and fixing extra conduit down rod of 20 mm dia, 2X10 cm length wiring with 2 X 1.5 sq. mm FR PVC insulated, copper conductor, single core cable including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	300	28.50	8,550.00
2.19	1.44	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable etc. as required.	Each	1.00	73.50	73.50
2.20	1.45	Installation, testing and commissioning of ceiling fan, including wiring the down rods 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	30	99.00	2,970.00
2.21	1.46	Installation, testing and commissioning of ceiling fan regulator, in existing switch box including connection with 1.5 sq.mm FR PVC insulated, copper conductor, single core cable, earthing the regulator etc. as required.	Each	1.00	41.00	41.00
2.22	1.47	Supplying and fixing extra down rod of 10 cm length G.I. pipe, 15 mm dia, heavy gauge including painting etc. as required. (Note: More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	1.00	19.50	19.50
2.23	1.48	Supplying and fixing extra conduit down rod of 20 cm length G.I.pipe ,15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	Each	1.00	23.00	23.00
2.24	1.49	Numbering of ceiling fan/ exhaust fan/ fluorescent fittings as required.	Each	1.00	19.50	
2.25	1.50.1	Installation of exhaust fan upto 450 mm sweep in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.	Each	20	163.00	3,260.00

2.26	1.50.2	Installation of exhaust fan upto 510 mm sweep in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.	Each	1.00	226.00	226.00
2.27	1.51	Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	Each	20	68.50	1,370.00
2.28	1.52	Painting of ceiling fan in installed position with one or more coats of spray painting with synthetic enamel paint of approved brand and manufacture to give an even shade, including cleaning of surface with detergent etc as required.	Each	1.00	64.00	64.00
STEEL / PVC CONDUIT, METAL BOXES						3,257,052.00
3	MCB DISTRIBUTION BOARDS					
3.1	2.34	S/F Pre-wired SP MCB DB:				
		Supplying and fixing following way, single pole and neutral, prewired, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with loose wire box, terminal blocks, tinned copper busbar, neutral link, earth bar, din bar, detachable gland plate, interconnections, including powder coat painting, earthing etc. as required. (But without MCB/RCCB/Isolator)				
	2.34.4	4 way double door	Each	1	2,526.00	2,526.00
	2.34.5	8 way double door	Each	1	3,192.00	3,192.00
	2.34.6	12 way double door	Each	1	4,100.00	4,100.00
3.2	2.6	Supplying and fixing following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar, common neutral link, earth bar, Din bar for mounting MCB's with provision of 100A TP 16kA MCCB as incommer , interconnection between, incomer MCCB and bUS bars. (but without MCB's / MCCB) as requirequired.				
		Note: Vertical type MCB TPDB is normally used 3 phase outlets as required.				
	2.6.1	4 Way TP Double door	Each	1	4,770.00	4,770.00
	2.6.2	8 Way TP Double door	Each	2.00	6,081.00	12,162.00
	2.6.3	12 Way TP Double door	Each	1.00	7,916.00	7,916.00
PRE-WIRED MCB DISTRIBUTION BOARDS						

3.3	2.7	Supplying and fixing following way, SP&N MCB distribution board of steel sheet for 240 volts, on surface/ recess, complete with loose wire box, terminal connectros for all incoming and outgoing circuits, duly prewired with suitable size FR PVC insulated copper conductor upto terminal block, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc., as required. (BUt without MCB / RCCB / Isolators.)				
	2.7.4	2 + 4 way, Double door	Each	1	2,152.00	2,152.00
	2.7.5	2 + 8 way, Double door	Each	1	2,572.00	2,572.00
	2.7.6	2 + 12 way, Double door	Each	1	3,108.00	3,108.00
3.4	2.8	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 connectors for all incoming and outgoing circuits, duly prewired with suitable size FR PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, detachable gland plate, interconnections, powder painted including earthing ets. as required (but with out MCB/RCCB/Isolator)				
	2.8.5	4 way (4 + 12), Double door	Each	69	6,345.00	437,805.00
	2.8.6	6 way (4 + 18). Double door	Each	32	8,197.00	262,304.00
	2.8.7	8 way (4 + 24), Double door	Each	5	8,984.00	44,920.00
	2.8.8	12 way (4 + 36), Double door	Each	3	11,042.00	33,126.00
3.5	2.9	Supplying and fixing following ways prewired vrtical type TP & N MCB distribution board of shteel sheet for 415 volts, on surface and recess complete with loss wire box of sheet steel dust protected, duly powder painted, inclusive of 200 amps tinned copper busbar, common neutral link, earth bar, din bar for mounting MCB's termianl connectors for all incoming and out going circuits duly prewired with adequete size of FR PVC insultaed copper conductor upto the terminal connector / neutral link,, earth bar etc., as required. (but without MCB's / RCCB / Isolator /MCCB)				
		Note: Vertical type MCB TPDB is normally used 3 phase outlets as required.				
	2.9.5	4 way Double door	Each	1	6,816.00	6,816.00
	2.9.6	6 way Double door	Each	1	8,810.00	8,810.00
	2.9.7	8 way Double door	Each	4	9,606.00	38,424.00
	2.9.8	12 way Double door	Each	4	12,762.00	51,048.00

3.6	2.10	Supplying and fixing 5 amps to 32 amps rating, 240 / 415 volts, 'C' Curve, miniature circuit breaker 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	1,600	141.00	225,600.00
	2.10.2	Single pole and neutral	Each	RO	367.00	
	2.10.3	Double pole	Each	RO	379.00	
	2.10.4	Triple pole	Each	RO	562.00	
	2.10.5	Triple pole and neutral	Each	RO	723.00	
3.7	2.11	Supplying and fixing single pole blanking plate in the existing MCB DB complete etc. as required.	Each	100	5.50	550.00
3.8	2.12	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.12.1	40 amps	Each	1	245.00	245.00
	2.12.2	63 amps	Each	1	303.00	303.00
3.9	2.13	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.13.2	63 amps	Each	45	563.00	25,335.00
	2.13.3	100 amps	Each	1	709.00	709.00
3.10	2.14	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milli amperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
	2.14.1	25 amps	Each	1	1,318.00	1,318.00
3.11	2.15	Supplying and fixing following rating, four pole, (three phase and 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.				
	2.15.1	25 amps	Each	1	1,679.00	1,679.00
	2.15.2	40 amps	Each	30	1,703.00	51,090.00
	2.15.3	63 amps	Each	16	1,965.00	31,440.00

3.11A	2.2	Providing and fixing following rating and braking capacity MCCB in the existing cubicle panel board including drilling holes in cubicle panel, making connections etc., as required.				
	2.2.1	100 A MCCB 16 KA	Each	4	2,801.00	11,204.00
	2.2.2	125 A MCCB 16 KA	Each	1	3,914.00	3,914.00
	2.2.3	160 A MCCB 16 KA	Each	1	4,792.00	4,792.00
3.12		S/F 20A SPN MCB industrial socket outlet:				
	2.18	Supplying and fixing 20amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top along with 20 amps 'C' curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out and complete with connections, testing and commissioning etc. as required.	Each	10	693.00	6,930.00
3.13		S/F 20A TPN MCB industrial socket outlet:				
	2.19	Supplying and fixing 20amps, 415volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 20 amps 'C' curve, TPMCB, 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	10	1,718.00	17,180.00
3.14		S/F 30A TPN MCB industrial socket outlet:				
	2.20	Supplying and fixing 30amps, 415volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top along with 30 amps 'C' curve, TPMCB, 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	10	1,983.00	19,830.00
3.15		P/F M.V. danger notice plate:				
	2.21	Providing and fixing M.V. danger notice plate of 200mm X 150 mm. made of mild steel. at least 2 mm thick, and vitreous enamelled white on both sides, and with inscription in single red colour on front side as required.	Each	12	121.00	1,452.00
3.16		P/F H.V. danger notice plate:				
	2.22	Providing and fixing H.T. danger notice plate of 250mm X 200 mm, made of mild steel, at least 2 mm thick, and vitreous enamelled white on both sides, and with inscription in single red colour on front side as required.	Each	10.00	135.00	1,350.00
MCB & PRE-WIRED MCB DISTRIBUTION BOARDS						1,330,672.00

4		BUS TRUNKING AND OVER HEAD BUSBAR SYSTEM				
4.1	3.1	Supplying, installing on wall, testing and commissioning of following capacity rising mains with made of 1.6mm thick steel enclosure duly painted with powder coating, wall straps, fully PVC insulated 4nos aluminium busbars in convenient sections and suitable for 415volts, 3 phase, 4 wire, 50 Hz, A.C. supply with extension joints, fire proof barriers, expansion joints, thrust pads including jointing, and earthing with 2 runs of galvanised iron strips etc. as required. (Rising mains confirming to IS 8623, TEC 439) .				
a	3.1.3	400 amps (SC rating for 1sec. - 25 KA)	Rmt	140	5,991.00	838,740.00
b	3.1.4	630 amps (SC rating for 1sec. - 45 KA)	Rmt	125	6,705.00	838,125.00
4.2	3.2	Supplying, installing, testing and commissioning of following capacity TPN tap off box made of 1.6mm thick sheet steel enclosure duly painted with powder coating on existing rising mains and complete with TPN disconnecter FSU and HRC fuse, connections, earthing etc. as required.				
a	3.2.3	63 amps TPN	Each	1	6,640.00	6,640.00
b	3.2.4	100 amps TPN	Each	38	7,649.00	290,662.00
c	3.2.5	200 amps TPN	Each	1	12,012.00	12,012.00
4.3	3.4	Supplying, installing, testing and commissioning of following capacity End Feed Unit made of 1.6mm thick sheet steel enclosure duly painted with powder to existing raising mains complete with TPN disconnecter FSU and HRC fuses, mounting stands, cable end box, brass compression gland, connections, earthing etc. as required.				
a	3.4.3	400 amps TPN	Each	2	17,152.00	34,304.00
b	3.4.4	600 amps TPN	Each	4	18,570.00	74,280.00
4.4	3.7	Supplying, installing, testing and commissioning of following capacity TPN tap of box /plug-in box made of 1.6mm thick sheet steel enclosure duly painted with powder coated on existing overhead bus bar system complete with TPN disconnecter FSU and HRC fuses, mounting stands, cable end box, brass compression gland, connections, earthing etc. as required.				
a	3.7.1	32 amps	Each	1	5,079.00	5,079.00
b	3.7.2	63 amps	Each	1	5,703.00	5,703.00
c	3.7.3	100 amps	Each	1	6,568.00	6,568.00

TOTAL OF BUS TRUNKING AND OVER HEAD BUSBAR SYSTEM						2,112,113.00
5		CABLE TRAYS				
5.1	4.1	Supplying, installing following size of perforated pre-painted M.S cable trays with perforation not more than 17.5%, in convenient section, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required.				
a	4.1.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	200	405	81,000.00
b	4.1.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	400	464	185,600.00
c	4.1.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	RO	570	
d	4.1.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	100	677	67,700.00
e	4.1.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	100	974	97,400.00
f	4.1.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	300	1210	363,000.00
g	4.1.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1	1475	1,475.00
5.2	4.2	Supplying, installing following size of perforated pre-painted M.S cable trays bends with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				
a	4.2.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	12	678	8,136.00
b	4.2.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	8	790	6,320.00
c	4.2.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1	989	989.00
d	4.2.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	12	1197	14,364.00
e	4.2.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	1	1751	1,751.00
f	4.2.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	8	2196	17,568.00
g	4.2.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1	2700	2,700.00

5.3	4.3	Supplying, installing following size of perforated pre-painted M.S cable trays reducers with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required.				
a	4.3.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	1	936	936.00
b	4.3.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	1	1108	1,108.00
c	4.3.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1	1406	1,406.00
5.4	4.4	Supplying, installing following size of perforated pre-painted M.S cable trays Tee's with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				
a	4.4.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	2	1195	2,390.00
b	4.4.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	1	1408	1,408.00
c	4.4.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1	1822	1,822.00
d	4.4.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	2	2228	4,456.00
e	4.4.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	2	3282	6,564.00
f	4.4.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	6	4143	24,858.00
g	4.4.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1	5088	5,088.00
5.5	4.5	Supplying, installing following size of perforated pre-painted M.S cable trays cross members with perforation not more than 17.5%, joined with connectors,suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc. as required				
a	4.5.1	100mm width x 50 mm depth x 1.6mm thickness	Mtr	1	549	549.00
b	4.5.2	150mm width x 50 mm depth x 1.6mm thickness	Mtr	1	626	626.00
c	4.5.3	200mm width x 50 mm depth x 1.6mm thickness	Mtr	1	788	788.00
d	4.5.4	300mm width x 50 mm depth x 1.6mm thickness	Mtr	1	945	945.00
e	4.5.6	450mm width x 50 mm depth x 2.0mm thickness	Mtr	1	1378	1,378.00

f	4.5.7	600mm width x 50 mm depth x 2.0mm thickness	Mtr	1	1680	1,680.00
g	4.5.12	750mm width x 62.5 mm depth x 2.0mm thickness	Mtr	1	2103	2,103.00
CABLE TRAYS						906,108.00
6	EARTHING					
6.1	5.1	Earthing with G.I earth pipe 4.5 mtr long, 40 mm dia including accessones. and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) as required.	Set	1	2,537.00	2,537.00
6.2	5.2	Earthing with G.I. earth pipe 4.5mtrs long, 40mm dia including accessones, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal and salt as required.	Set	10	3,385.00	33,850.00
6.3	5.3	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessones, and providing masonry enclosure with cover plate having locking arrangement and watering pipe OF 2.7 Mtr long etc. (but without charcoal or coke and salt) as required.	Set	1	3,063.00	3,063.00
6.4	5.4	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessones, and providing masonry enclosure with cover plate having locking arrangement and watering pipe OF 2.7 Mtr long etc. with charcoal or coke and salt as required.	Set	10	3,996.00	39,960.00
6.5	5.5	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessones, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) as required.	Set	1	7,627.00	7,627.00
6.6	5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessones, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal or coke and salt) as required.	Set	8	8,559.00	68,472.00

6.7	5.7	Supplying and laying 6 SWG G.I. wire at 0.50 Rmt below ground level for conductor earth electrode, including connection / termination with GI thimble etc. as required.	Rmt	5	23.00	115.00
6.8	5.8	Supplying and laying 25 mm X 5 mm copper strip at 0.50 Rmt below ground as strip earth electrode, including connection / terminating with nut , bolt,spring ,washer etc. as required (jointing shall be done by overlapping and with 2 sets of brass nutbolt & & spring washer spaced at 50mm).	Rmt	10	680.00	6,800.00
6.9	5.9	Supplying and laying 25 mm X 5 mm GI strip at 0.50 Rmt below ground as strip earth electrode, including connection / terminating with nut , bolt,spring ,washer etc. as required (jointing shall be done by overlapping and with 2 sets of GI nutbolt & spring washer spaced at 50mm).	Rmt	1000	97.50	97,500.00
6.10	5.10	Providing and fixing 25mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut , bolt,spring , washer , excavation and re-filling etc. as required.	Rmt	200	962.00	192,400.00
6.11	5.11	Providing and fixing 25mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut , bolt,spring , washer , excavation and re-filling etc. as required.	Rmt	1	364.00	364.00
6.12	5.12	Providing and laying earth connection from earth electrode with 6 SWG dia G.I. Wire in 15 mm dia G.I. pipe from earth electrode including connection with GI thimble excavation and re-filling as required.	Rmt	220	131.00	28,820.00
6.13	5.13	Providing and laying earth connection from earth electrode with 4.00mm dia Copper Wire in 15 mm dia G.I. pipe from earth electrode including connection with Copper thimble excavation and re-filling as required.	Rmt	1.00	186.00	186.00
6.14	5.14	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Rmt	200	766.00	153,200.00
6.15	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Rmt	300	120.00	36,000.00

6.16	5.16	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Rmt	500	30.00	15,000.00
6.17	5.17	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Rmt	300.00	87.50	26,250.00
6.18	5.18	Providing and fixing 6 SWG dia G.I. wire on surface or In recess for loop earthing along with existing surface/recessed conduit/submain wiring/cable as required.	Rmt	200.00	19.50	3,900.00
6.19	5.19	Providing and fixing 4.00mm dia copper wire on surface or in recess for loop earthing along with existing surface/recessed conduit/submain wiring/cable as required.	Rmt	300	77.00	23,100.00
6.20	5.20	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface for connections etc. as required.	Rmt	50	1,439.00	71,950.00
TOTAL OF EARTHING						811,094.00
7	LIGHTNING CONDUCTOR					
7.1	6.1	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, copper tube, having single prong at top, with 85 mm dia 3 mm thick copper base plate including holes etc. complete as required.	Each	4	701.00	2,804.00
7.2	6.2	Providing and fixing of lightning conductor finial, made of 25 mm dia 300 mm long, G.I. tube, having single prong at top, with 85 mm dia 6 mm thick G.I. base plate including holes etc. complete as required.	Each	4	326.00	1,304.00
7.3	6.3	Fixing of lightning conductor finial(Single prong) with base plate including holes etc. complete as required.	Each	4	121.00	484.00
7.4	6.4	Joinitng copper / G.I. tape (with another copper / G I tape, base of the finial or any other metallic object) by riveting /nut bolting/sweating and slodering etc. as required.	Each	4	60.50	242.00
7.5	6.5	Providing and fixing copper tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Rmt	600	336.00	201,600.00

7.6	6.6	Providing and fixing copper tape 20mm X 3mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Rmt	RO	359.00	
7.7	6.7	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Rmt	600	58.00	34,800.00
7.8	6.8	Providing and fixing G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Rmt	550	81.50	44,825.00
7.9	6.9	Fixing of copper / G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For horizontal run)	Rmt	10	27.00	270.00
7.10	6.10	Fixing of copper / G.I. tape 20 mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required.(For vertical run)	Rmt	1	55.50	55.50
7.11	6.11	Providing and fixing testing joint, made of 20mm X 3mm thick copper strip, 125 mm long, with 4 nos. of tinned brass bolts, nuts, check nuts and spring washers etc. complete as required.	Each	1	176.00	176.00
7.12	6.12	Providing and fixing testing joint, made of 20 mm X 3 mm thick G.I. strip, 125mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	Each	4	58.50	234.00
7.13	6.13	Providing and laying copper tape 32 mm X 6 mm from earth electrode directly in ground as required.	Rmt	1	1,012.00	1,012.00
7.14	6.14	Providing and laying G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.	Rmt	1	125.00	125.00
7.15	6.15	Laying copper / G.I. tape 32 mm X 6 mm from earth electrode directly in ground as required.	Rmt	1	24.50	24.50
TOTAL OF LIGHTNING CONDUCTOR						287,956.00
8	MV CABLE LAYING					

8.1	7.1	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.		RO		
a	7.1.1	Upto 35 sq.mm	mtr	750	167.00	125,250.00
b	7.1.2	Above 35sq.mm and upto 95sq.mm	mtr	100	173.00	17,300.00
c	7.1.3	Above 95sq.mm and upto 185sq.mm	mtr	50	179.00	8,950.00
d	7.1.4	Above 185sq.mm and upto 400sq.mm	mtr	500	196.00	98,000.00
8.2	7.2	Laying of one number pvc insulated and pvc sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc as required				
a	7.2.1	Upto 35 sq.mm	mtr	100	115.00	11,500.00
b	7.2.2	Above 35sq.mm and upto 95sq.mm	mtr	100	121.00	12,100.00
c	7.2.3	Above 95sq.mm and upto 185sq.mm	mtr	50	127.00	6,350.00
d	7.2.4	Above 185sq.mm and upto 400sq.mm	mtr	200	144.00	28,800.00
8.3	7.3	Laying of one number pvc insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground including excavation and refilling the trench etc. as required, but excluding sand cushioning, protective covering.				
a	7.3.1	Upto 35 sq.mm	mtr	10	65.50	655.00
b	7.3.2	Above 35sq.mm and upto 95sq.mm	mtr	10	71.00	710.00
c	7.3.3	Above 95sq.mm and upto 185sq.mm	mtr	10	77.00	770.00
d	7.3.4	Above 185sq.mm and upto 400sq.mm	mtr	10	94.00	940.00
8.4	7.4	Laying of one number additional PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size direct in ground in the same trench in one tier horizontal formation including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.				
a	7.4.1	Upto 35 sq.mm	mtr	5	41.50	207.50
b	7.4.2	Above 35sq.mm and upto 95sq.mm	mtr	5	47.00	235.00
c	7.4.3	Above 95sq.mm and upto 185sq.mm	mtr	5	53.00	265.00
d	7.4.4	Above 185sq.mm and upto 400sq.mm	mtr	5	70.00	350.00
8.5	7.5	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following in the existing RCC/HUME/ METAL/STONEWARE/ METAL pipe as required.				
a	7.5.1	Upto 35 sq.mm	mtr	50	12.00	600.00

b	7.5.2	Above 35sq.mm and upto 95sq.mm	mtr	10	18.50	185.00
c	7.5.3	Above 95sq.mm and upto 185sq.mm	mtr	10	25.00	250.00
d	7.5.4	Above 185sq.mm and upto 400sq.mm	mtr	100	44.00	4,400.00
8.6	7.6	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct required.				
a	7.6.1	Upto 35 sq.mm	mtr	5	9.10	45.50
b	7.6.2	Above 35sq.mm and upto 95sq.mm	mtr	5	15.00	75.00
c	7.6.3	Above 95sq.mm and upto 185sq.mm	mtr	5	20.50	102.50
d	7.6.4	Above 185sq.mm and upto 400sq.mm	mtr	5	37.50	187.50
8.7	7.7	Laying of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
a	7.7.1	Upto 35 sq.mm (Clamped with 1mm thick saddle)	mtr	10	19.50	195.00
b	7.7.2	Above 35sq.mm and upto 95sq.mm (Clamped with 25x3mm MS Flat clamp)	mtr	10	60.00	600.00
c	7.7.3	Above 95sq.mm and upto 185sq.mm(Clamped with 25/40x3mm MS Flat clamp)	mtr	10	69.00	690.00
d	7.7.4	Above 185sq.mm and upto 400sq.mm (Clamped with 40x3mm MS Flat clamp)	mtr	10	95.00	950.00
8.8	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.				
a	7.8.1	Upto 35 sq.mm (Clamped with 1mm thick saddle)	mtr	6,600	16.50	108,900.00
b	7.8.2	Above 35sq.mm and upto 95sq.mm (Clamped with 25x3mm MS Flat clamp)	mtr	1,600	38.50	61,600.00
c	7.8.3	Above 95sq.mm and upto 185sq.mm(Clamped with 25/40x3mm MS Flat clamp)	mtr	1.00	47.50	47.50
d	7.8.4	Above 185sq.mm and upto 400sq.mm (Clamped with 40x3mm MS Flat clamp)	mtr	3,000	72.50	217,500.00
8.9	7.9	Supply and making cable route marker with cement concrete 1:2:4(1 cement:2 coarse sand:4 graded stone aggregate 20mm nominal size) of size 60cm x 60cm at the bottom and 50 cm at the top with a thickness of 10cm including inscription duly engraved as required	Each	10	255.00	2,550.00
8.10	7.10	Supply and fixing cable route marker with 10cm x 10cm x 5 mm thick G.I. plate with inscription there on, bolted / welded to 35mm x 35mm x 6mm angle iron, 60cm long and fixing the same in ground as required.	Each	20	244.00	4,880.00
TOTAL OF MV CABLE LAYING						716,140.50

7		MV CABLE JOINTING AND END TERMAINATION				
7.1	9.1	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
a	9.1.20	3.5 X 25 sq. mm (28mm)	Each	2	191.00	382.00
b	9.1.21	3.5 X 35 sq. mm (32mm)	Each	2	223.00	446.00
c	9.1.22	3.5 X 50 sq. mm (35mm)	Each	2	262.00	524.00
d	9.1.23	3.5 X 70 sq. mm (38mm)	Each	90	297.00	26,730.00
e	9.1.24	3.5 X 95 sq. mm (45mm)	Each	2	366.00	732.00
f	9.1.25	3.5X120 sq.mm (45mm)	Each	2	383.00	766.00
g	9.1.26	3.5 X 150 sq. mm (50mm)	Each	2	458.00	916.00
h	9.1.27	3.5X185 sq.mm (57mm)	Each	2	616.00	1,232.00
i	9.1.28	3.5 X 225 sq. mm (62mm)	Each	2	747.00	1,494.00
j	9.1.29	3.5 X 240 sq. mm (62mm)	Each	26	771.00	20,046.00
k	9.1.30	3.5 X 300 sq. mm (70mm)	Each	2	867.00	1,734.00
l	9.1.31	3.5 X 400 sq. mm (82mm)	Each	44	1,109.00	48,796.00
m	9.1.32	4 X 10 sq. mm (25mm)	Each	20	146.00	2,920.00
n	9.1.33	4 X 16 sq. mm (28mm)	Each	70	188.00	13,160.00
o	9.1.34	4 X 25 sq. mm (28mm)	Each	16	192.00	3,072.00
p	9.1.35	4 X 35 sq. mm (32mm)	Each	12	224.00	2,688.00
q	9.1.36	4 X 50 sq. mm (35mm)	Each	2	265.00	530.00
TOTAL OF MV CABLE JOINTING AND END TERMAINATION						126,168.00
TOTAL OF DSR ITEMS						23,657,351.50
TOTAL OF ELECTRICAL WORKS BOQ FOR DSR ITEMS						23,657,351.50

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		ELECTRICAL WORKS BOQ FOR NON DSR ITEMS				
1	1	LIGHTING FIXTURES				
		Supply, delivery, assemble, installation and testing of following types of incandescent / CFL fitting on wall/ ceiling/ column of building including supply of suitable wattage CFL lamps, complete fitting and making connection from the suitable point outlet complete as required and as per the direction of Engineer-in-charge.				
1	NS1	9 W CFL Bulk Head (WKP 14109) (1 X 9 W CFL(TC-S)) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	180	953.79	171,681.66
2	NS2	2 x 18 Watt CFL surface Mounted light Fixture (Round type) (FWP 41218) (2 x 18 W CFL (TC-D)) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	5	4,287.15	21,435.77
3	NS3	2 x 18W Surface mounted fixtures with CFL lamps (WVP 41218) 2 x 18 W CFL (TC-L) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	15	1,632.38	24,485.69
4	NS4	Supply, delivery, installation and testing of following types of fluorescent tube fixtures directly on wall / ceiling of building with all accessories such as electronics ballast, lamps, stove enamelled box, perpex sheet cover etc complete assembly including supply & fixing of teak wood round block and making connection from the suitable point outlet as per the direction of Engineer-in-charge.				
5	NS5	1 x 14 W FTL mirror light fixture (Philips Victor 14 W TCH 207 1 x TL5- 14) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	35	707.47	24,761.40
6	NS6	1 X 28 W FTL (T5) wall / surface mounted light Fixture (WRF 80128 SG) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	625	1,070.14	668,840.00
		Supply, delivery, installation and testing of following types of recess mounted compact fluorescent tube light type luminaires with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required nos. fluorescent tube,(Truelite)etc complete as required as per the direction of Engineer-in-charge.				

7	NS7	4X14W FTL (T5) recess mounted indirect - direct luminaire with high efficiency transluence (HET) technology, suitable for FTL (T5) lamps (2' x 2' fixture) (WVF 53414 SGW) 4 x 14 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	725	5,806.05	4,209,386.98
8	NS8	4X14W FTL (T5) recess mounted indirect - direct luminaire with high efficiency transluence (HET) technology, suitable for FTL (T5) lamps (2' x 2' fixture) (WVF 78414 SGA) 4 x 14 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	650	5,963.37	3,876,191.15
9	NS9	2X18 W CFL recess mounted down light Fixtures (WCP 39218) 2 x 18 W CFL (TC-D) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	460	1,678.26	772,001.44
10	NS10	1X18 W CFL recess mounted down light Fixtures (WCP 36118 SGW) 1 x 18 W CFL (TC- DE) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	110	1,788.66	196,753.04
11	NS11	Supply, delivery, installation, testing & commissioning of 1X35/70W CDMT Track mounted light Fixture with wide beam reflector , with all accessories as per standard item ballasts, including required nos. lamps (WIPRO GTH 41070 W OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	135	9,150.85	1,235,364.62
12	NS12	Supply, delivery, installation & testing of 1X35/70W CDMT Track with all accessories as per standard item ballasts, track & track accessories like power feed, end cap, suspension, starters, capacitor, control gear box, including fixing of track as required.	RMT	160	2,083.55	333,367.52
13	NS13	Supply, delivery, installation & testing of 1X250W MH integral type Highbay light Fixture , with all accessories as per standard item ballasts, starters, capacitor, control gear box, including required nos. lamps OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	62	7,135.04	442,372.29
14	NS14	Supply and Fixing of Aviation Yellow painted die - cast AL alloy housing, red coloured polycarbonate domeLight Fixture (GLS 2 X 100W ES) Bajaj 020115 (BJAOL 2 ES) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	2	4,815.83	9,631.66

15	NS15	Supply and Fixing of 1X26W die cast aluminium Bollard with UV stabilized polycarbonate diffuser suitable for CFL lamps Wipro (FBP 32126) 1 X 26 W CFL (TC-D) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	50	3,963.96	198,197.90
16	NS16	Supply and Fixing of 1X50W halogen PAR 20 symmetrical bush light with housing in die cast aluminium with clear toughened glass suitable for PAR 20 lamps. Wipro (FFQ 51050, FFX 511, 512) 1 X 50 Halogen PAR 20 OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	40	2,651.12	106,044.72
17	NS17	Supply and Fixing of 1X150W IP 65 Integral flood light with symmetric wide beam reflector. Wipro (WFH 51150) 1 X 150 W MHL (double ended) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	10	5,951.57	59,515.72
18	NS18	Supply and Fixing of 1X400W IP 65 Integral flood light with symmetric wide beam reflector. Wipro (WFH 52400) 1 X 150 W MHL (T) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	25	8,398.27	209,956.65
19	NS19	Supply and Fixing of 2.2 W 230V IP 65 Integral LED step light Wipro (LT54-002-XXX-RD-XX) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	200	3,100.02	620,004.10
20	NS20	Supply and Fixing of 3 X 1 W 12V IP 67 Integral LED inground light with Transformer 240V/12V. Wipro (LI10-003-045-RD-XX*) (LG12-010) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	35	6,610.22	231,357.81
21	NS21	Supply and Fixing of 1 X 70 W HIT-CE wall mounted up-down light in die cast aluminium housing with clear toughened glass suitable for HIT-CE lamps. Wipro (UWH 11070B) 1 X 70 W HIT-CE OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	40	15,415.54	616,621.72
22	NS22	Supply and Fixing of 1X250W HPSV (T) IP 66 die cast aluminium top maintainable Street Light with covered toughened glass & pot optics reflector with an IP 54 control gear box compartment. (with inclusive pole cost) (WST 71250) 1X250 W HPSV (T) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	30	7,927.04	237,811.26

23	NS23	Supply and Fixing of 2X36 W FTL surface mounted mirror optics light Fixture (WCF 82236) 2X 36 W FTL (T8) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	1	3,107.69	3,107.69
24	NS24	Supply and Fixing of 1X28 W FTL recess mounted mirror optics light Fixture WVF 58128 SGW (1 X 28 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	1	2,997.31	2,997.31

25	NS25	Supply and Fixing of 1X28 W FTL surface / suspension mounted contour light with FTL lamps for continuous band of light fixture (GCF 32128 SGW CT) 1 X 28 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make. (Trip light)	Nos	1,000	5,652.09	5,652,089.00
26	NS26	Supply and Fixing of 1X54 W FTL surface / suspension mounted contour light with FTL lamps for continuous band of light fixture (GCF 32154 SGA CT) 1 X 54 W FTL (T5) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make. (strip light)	Nos	1,000	6,396.37	6,396,369.00
		LED LIGHTING FIXTURES CONSIDERD FOR SOLAR				
		Supply, delivery, installation and testing of following types of recess mounted LED light type luminaires with all accessories.				
27	NS27	1X25W the next generation recess mounted LED light luminaries for new age workspace WIPRO LM11-025-XXX-WH-XX (25 X 1 W) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	150	13,403.09	2,010,463.35
28	NS28	3X6 W recess mounted LED light luminaire Wipro LD41-018-XXX-WH-XX(3 X 6 W LED) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	150	7,773.98	1,166,097.41
29	NS29	1X6 W recess mounted LED light luminaire Wipro LD45-006-XXX-WH-XX (1 X 6 W LED diffuser) OR Philips as per the light fixture details in details of light fixture OR Equivalent approved make.	Nos	50	3,496.85	174,842.26
TOTAL OF LIGHT FIXTURES AS PER NON DSR						29,671,749.12
2	2	SUPPLY OF FANS AND EXHAUST FANS				
30	NS30	Supply, delivery, installation and testing of following sweeps of a.c. ceiling fan as per the specification of DGS &D complete with fan blades, down rod, canopies, capacitor etc including supply of sundry materials, making connection from the suitable point outlet but excluding cost of fan regulator complete as required				
		1400 mm sweep	Nos	100	1,918.73	191,872.90
31	NS31	Supply, delivery, installation and testing of following sweeps of a.c. Energy efficient ceiling fan (60 W) as per the specification of DGS &D complete with fan blades, down rod, canopies, capacitor etc including supply of sundry materials, making connection from the suitable point outlet but excluding cost of fan regulator complete as required and as per the direction of Engineer-in-charge.				
		1400 mm sweep	Nos	1	1,781.07	1,781.07

32	NS32	Supply, delivery, installation & testing of following sweeps and speed of exhaust fans suitable for operation at 1 phase, 250 volt, 50 Hz, a.c. supply complete with a set of propeller blade, tripod leg for mounting of motor, ring frame, blades, gravity louvre complete assembly including supply of sundry materials, making hole of suitable size for housing of exhaust fan, making connection from suitable point outlet, making good the damages caused complete as required and as per direction of Engineer-in-charge.				
		300 mm sweep 900 rpm	Nos	20	1,413.99	28,279.88
33	NS33	Supply, delivery, installation & testing of 400-mm sweep wall mounted type bracket fans suitable for operation at 250 volt, 50 Hz, a.c. supply complete assembly including oscilating arrangement, supply of sundry materials, making connection from suitable point outlet, making good the damages caused complete as required and as per direction of Engineer-in-charge.	Nos	1.00	1,690.00	1,690.00
TOTAL OF FANS AS PER NON DSR						223,623.85
3	3	LT PANELS				
34	NS34	Design and Supplying of following L.T. Panels manufactured out of 16SWG CRCA. sheet, totally vermin and dust proof duly painted complete with bus bars, neutral links, earth strips, cable alleys etc as required and as per detailed specs with following components & generally to				
a	A	Main PCC Panel	SET	1	1,245,434.26	1,245,434.26
	1.1.	INCOMER				
	(i)	1 Set of 1250A. 415 Volts Electrically Control 4P EDO type A.C.B. of 50 kA with overload, O/V, O/C and S/C protection. With 1 Set of Digital multi function meter with 1250/5A CTs,CT shorting links RYB LED indicating lamps and 2A control SP MCBs				
	(ii)	1 Set of 1250A. 415 Volts Electrically Control 4P EDO type A.C.B. of 50 kA with overload, O/V, O/C and S/C protection. With 1 Set of Digital multi function meter with 1250/5A CTs,CT shorting links RYB LED indicating lamps and 2A control SP MCBs				
	1.2.	METERING				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-1250A (96 sq.mm) Ammeter with ASS & CT's.				
	iii)	2 Sets of phase indication lights LED type with protection MCB.				

1.3.	MAIN BUS BARS				
	1400A 3 phase 4 wire 415 volts 50 Hz aluminium bus bars with colour coded PVC heat shrinkable sleeves (Bidders to submit Bus Bar sizing with fault level calculation)				
	Note: Interlocking between two incomers and bus coupler shall be provided				
1.4.	BUS COUPLER				
	1 Set of 1250A. 415 Volts Electrically Control 4P EDO type A.C.B. of 50 kA				
1.5.	OUTGOING				
i)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For APFC Panel - 1st Feeder.)				
ii)	1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 2nd Feeder.)				
iii)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 3rd Feeder.)				
iv)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For UPS output Panel - 4th Feeder.)				
v)	1 No 800A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PCC - 2 Panel - 5th Feeder.)				
vi)	1 No 100A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PHE Panel - 6th Feeder.)				
vii)	2 Nos 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Lift Panel - 1 & 2 - 7th & 8th Feeder.)				
viii)	1 No 63A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Spare Feeder.)				
ix)	1 No 125A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Spare Feeder.)				
x)	1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 2 - 11th Feeder.)				
xi)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 4- 12th Feeder.)				
xii)	2 Nos 125A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Spare Feeder.)				
xiii)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Lift Panel - 3 - 15th Feeder.)				
xiv)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For UPS output Panel - 16th Feeder.)				
xv)	1 No 800A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PCC - 2 Panel - 17th Feeder.)				

	xvi)	1 No 315A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Fire Fighting Panel -18th Feeder.)				
	xvii)	1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For PCC - 1 Panel -19th Feeder.)				
	xviii)	1 No 80A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For Lift Panel - 4 - 20th Feeder.)				
	xix)	1 No 63A TPN MCCB of 35 kA with overload, O/V and O/C protection. (For External Lighting DB - 1 -21th Feeder.)				
b	B	Power Control Centre PCC - 1	SET	1	294,383.91	294,383.91
	1.1.	<u>INCOMER</u>				
		1 No 400A TPN MCCB of 36 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 400/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
	1.2.	<u>BUS BARS</u>				
		400A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	1 Set of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	1 Set of 0-400A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	3 Nos phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB 1 (BF) - 1st Feeder).				
	ii)	1 No 63A TPN MCCB of 25 kA (AHU 1 (BF) - 2nd Feeder).				
	iii)	1 No 63A TPN MCCB of 25 kA (AHU 2 (BF) - 3rd Feeder).				
	iv)	1 No 63A TPN MCCB of 25 kA (PDB 1 (BF) - 7th Feeder).				
	v)	1 No 63A TPN MCCB of 25 kA (PDB 2 (BF) - 8th Feeder).				
	vi)	1 No 63A TPN MCCB of 25 kA (AUDITORIUM PDB - 10th Feeder).				
	vii)	1 No 63A TPN MCCB of 25 kA (AUDITORIUM STAGE LIGHT PODIUM - 11th Feeder).				
	viii)	1 No 63A TPN MCCB of 25 kA (TOILET EXHUAST FAN 01 - 12th Feeder).				
	ix)	1 No 63A TPN MCCB of 25 kA (TOILET EXHUAST FAN 02 - 13th Feeder).				
	x)	1 No 63A TPN MCCB of 25 kA (UPS - 16th Feeder).				
	xi)	1 No 63A TPN MCCB of 25 kA (EXTERNAL LIGHTING DB - 17th Feeder).				
	xii)	3 Nos 63A TPN MCCB of 25 kA (Spare).				
	xiii)	1 No 40A TPN MCCB of 25 kA (LDB 1 BF - 5th Feeder).				
	xiv)	1 No 40A TPN MCCB of 25 kA (LDB 2 BF - 6th Feeder).				
	xv)	1 No 40A TPN MCCB of 25 kA (AUDITORIUM LDB -9th Feeder).				
c	C	Power Control Centre PCC - 2	SET	1	693,433.29	693,433.29
	1.1.	<u>INCOMER</u>				

		2 Nos 800A 4P Motorised MCCB of 36 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 800/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
	1.2.	BUS BARS				
		800A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	BUS COUPLER				
		1 No 800A 4P Motorised MCCB of 36 kA				
		Note: Interlocking between two incomers and bus coupler shall be provided				
	1.4.	METERING				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-800A (96 sq.mm) Ammeter with ASS & CT's.				
	iii)	2 Sets of phase indication lights LED type with protection MCB.				
	1.5.	OUTGOINGS				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB LGF - 1st Feeder).				
	ii)	1 No 100A TPN MCCB of 25 kA (AHU 3 LGF - 2nd Feeder).				
	iii)	1 No 63A TPN MCCB of 25 kA (AHU 4 - 3rd Feeder).				
	iv)	1 No 40A TPN MCCB of 25 kA (LDB 1 LGF - 4th Feeder).				
	v)	1 No 63A TPN MCCB of 25 kA (LDB 2 LGF - 5th Feeder).				
	vi)	1 No 63A TPN MCCB of 25 kA (PDB 1 LGF - 6th Feeder).				
	vii)	1 No 63A TPN MCCB of 25 kA (PDB 2 LGF - 7th Feeder).				
	viii)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 5 8th Feeder.)				
	ix)	1 No 80A TPN MCCB of 25 kA (LIFT -5) -9th Feeder).				
	x)	1 No 80A TPN MCCB of 25 kA (LIFT -6) -10th Feeder).				
	xi)	1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection & 1 set of CT's with Dual source kWh & Ammeter with Selector Switch (For Raising Main - 6 11th Feeder.)				
	xii)	2 Nos 80A TPN MCCB of 25 kA (Spare).				
	xiii)	1 No 63A TPN MCCB of 25 kA (UPS -1 14th Feeder).				
	xiv)	1 No 100A TPN MCCB of 25 kA (UPS - 2 15th Feeder).				
	xv)	1 No 63A TPN MCCB of 25 kA (UPS - 3 16th Feeder).				
	xvi)	1 No 40A TPN MCCB of 25 kA (UPS -4 SIXTH FLOOR -17th Feeder).				
	xvii)	1 No 63A TPN MCCB of 25 kA (EXTERNAL LIGHTING DB-3 - 18th Feeder).				
	xviii)	3 Nos of 160A TPN MCCB of 25 kA Secondary Pumps 1,2 & 3).				
	xix)	1 No 63A TPN MCCB of 25 kA (Spare).				
d	D	Floor Distribution Panel as per Schematic TYPE - 1 (7 Nos)	SET	7	120,023.21	840,162.50

	1.1.	<u>INCOMER</u>				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	<u>BUS BARS</u>				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB - 3rd				
	ii)	1 No 63A TPN MCCB of 25 kA (LDB - 1st				
	iii)	1 No 63A TPN MCCB of 25 kA (PDB - 2nd				
	iv)	1 No 63A TPN MCCB of 25 kA (Spare).				
	v)	1 No 40A TPN MCCB of 25 kA (Spare).				
e	E	Floor Distribution Panel as per Schematic TYPE - 2 (5 Nos)	SET	5	185,573.48	927,867.39
	1.1.	<u>INCOMER</u>				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	<u>BUS BARS</u>				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 63A TPN MCCB of 25 kA (ACDB 1 - 7th				
	ii)	1 No 63A TPN MCCB of 25 kA (ACDB 2 - 8th				
	iii)	1 No 63A TPN MCCB of 25 kA (ACDB 3 - 9th				
	iv)	2 No 63A TPN MCCB of 25 kA (Spare).				
	v)	1 No 32A TPN MCCB of 25 kA (LDB 1 -1st				
	vi)	1 No 32A TPN MCCB of 25 kA (LDB 2 -2nd				
	vii)	1 No 32A TPN MCCB of 25 kA (LDB 3 -3rd				
	viii)	1 No 32A TPN MCCB of 25 kA (PDB 1 -4th				
	ix)	1 No 32A TPN MCCB of 25 kA (PDB 2 -5th				
	x)	1 No 32A TPN MCCB of 25 kA (PDB 3 -6th				

f	F	Floor Distribution Panel as per Schematic TYPE -3 (4 Nos)	SET	4	129,223.82	516,895.28
	1.1.	<u>INCOMER</u>				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	<u>BUS BARS</u>				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 80A TPN MCB of 25 kA (PDB 1 - 3rd				
	ii)	1 No 80A TPN MCB of 25 kA (AHU 5 - 4th				
	iii)	1 No 63A TPN MCB of 25 kA (LDB 1 - 1st				
	iv)	1 No 63A TPN MCB of 25 kA (LDB 2 - 2nd				
	v)	1 No 63A TPN MCB of 25 kA (Spare).				
	vi)	1 No 32A TPN MCCB of 25 kA (AHU 4- 5th				
g	G	Floor Distribution Panel as per Schematic TYPE - 4 (3 Nos)	SET	3	129,223.82	387,671.46
	1.1.	<u>INCOMER</u>				
		2 Nos 100A TPN Motorised MCCB of 25 kA with overload, O/V and O/C protection. & 1 Set of Digital multi function meter with 100/5A CTs, CT shorting links RYB LED indicating lamps and 4A control SP MCBs.				
		Note: Interlocking between two incomers shall be provided.				
	1.2.	<u>BUS BARS</u>				
		200A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-100A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 80A TPN MCCB of 25 kA (ACDB 1 - 3rd Feeder).				
	ii)	1 No 80A TPN MCCB of 25 kA (ACDB 5 - 4th				
	iii)	1 No 63A TPN MCCB of 25 kA (LDB 1 - 1st				
	iv)	1 No 63A TPN MCCB of 25 kA (PDB 1 - 2nd				
	v)	1 No 63A TPN MCCB of 25 kA (Spare).				
	vi)	1 No 32A TPN MCCB of 25 kA (Spare).				

h	H	UPS out put Distribution Panel	SET	1	156,539.30	156,539.30
	1.1.	<u>INCOMER</u>				
		2 Nos 80A TPN MCCB of 25 kA with overload, O/V and O/C protection. & 2 Sets of Kilo Watt Hour meter with 80/5A CTs, CT shorting links RYB LED indicating lamps and 4A control TP MCBs.				
	1.2.	<u>BUS BARS</u>				
		160A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING</u>				
	i)	2 Sets of 0-500V (96 sq.mm) Voltmeter with VSS & protection MCB				
	ii)	2 Sets of 0-80A (96 sq.mm) Ammeter with ASS & CT"s.				
	iii)	2 Sets phase indication lights LED type with protection MCB.				
	1.4.	<u>OUTGOINGS</u>				
	i)	1 No 40A TPN MCB (UDB 7th Floor- 1 Feeder).				
	ii)	1 No 40A TPN MCB (UDB 8th Floor - 2 Feeder).				
	iii)	1 No 40A TPN MCB (UDB 9th Floor - 3 Feeder).				
	iv)	1 No 40A TPN MCB (UDB 10th Floor - 4 Feeder).				
	v)	1 No 40A TPN MCB (UDB 11th Floor - 5 Feeder).				
	vi)	1 No 40A TPN MCB (UDB 12th Floor - 6 Feeder).				
	vii)	1 No 40A TPN MCB (UDB 13th Floor -7 Feeder).				
	viii)	2 Nos 40A TPN MCB (Spare).				
i	I	Raising Main I/C Feeder - 01 & 02	SET	2	61,089.28	122,178.56
		1 No 400A TPN MCCB of 35 kA with overload, O/V and O/C protection with 1 Sets phase indication lights LED type with protection MCB.				
j	J	Raising Main I/C Feeder - 03 & 04	SET	2	61,089.28	122,178.56
		1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection with 1 Sets phase indication lights LED type with protection MCB.				
k	K	Raising Main I/C Feeder - 05 & 06	SET	2	61,089.28	122,178.56
		1 No 630A TPN MCCB of 35 kA with overload, O/V and O/C protection with 1 Sets phase indication lights LED type with protection MCB.				
l	L	300 kVAR APFC Panel	SET	1	931,639.48	931,639.48
	1.1.	<u>INCOMER</u>				
		1 Set of 630A. 415 Volts Electrically Control 4P MDO type A.C.B. of 50 kA with overload, O/V, O/C and S/C protection. With 1 Set of Digital multi function meter with 630/5A CTs,CT shorting				
	1.2.	<u>BUS BARS</u>				
		800A 3 phase 4 wire 415 volts 50Hz Al. Bus bars with colour coded PVC heat shrinkable sleeves.				
	1.3.	<u>METERING & CONTACTORS</u>				
		1 set of 12 stage automatic (Electronic) correction relay with PF meter along with 630/5A C.T.S. for 300kVAr Capacitor Panel				

		1 No. Auto / manual selector switch with auto / manual 'ON' indication.				
		1 set of control contactors / timer / back up HRC fuses for the required interlocking / operation.				
	1.4.	OUTGOING				
		12 Nos. outgoing feeders each comprising of,				
		1 Set of ON / OFF indicating light				
		1 Set of start / stop push button				
		1 No. Auto by-pass selector.				
	i)	2 Sets of 5 kVAr capacitor bank with 63A TPN MCCB and 63A contactors with capacitor duty.				
	ii)	1 Sets of 10 kVAr capacitor bank with 80A TPN MCCB and 80A contactors with capacitor duty.				
	iii)	2 Sets of 15 kVAr capacitor bank with 100A TPN MCCB and 100A contactors with capacitor duty.				
	iv)	2 Sets of 25 kVAr capacitor bank with 125A TPN MCCB and 125A contactors with capacitor duty.				
	v)	4 Sets of 50 kVAr capacitor bank with 160A, TPN MCCB and 160A contactors with capacitor duty.				
	vi)	1 Set of without capacitor bank with 100A TPN MCCB and 100A contactors with capacitor duty with space provision for capacitors.				
TOTAL OF PANELS AS PER NON DSR						6,360,562.54
4	4	CABLES & OTHER ELECTRICAL WORKS				
35	NS35	Supply, Commissioning of power cables of 1100V grade XLPE aluminium or copper armoured cable as per specification.				
a	a	3.5 Core x 400 sq.mm. AL AYFY				
		SUPPLY	Rmt	1,400	1,502.94	2,104,111.08
b	b	3.5 Core x 240 sq.mm. AL AYFY				
		SUPPLY	Rmt	1,600	966.68	1,546,691.58
c	c	3.5 Core x 185 sq.mm AL AYFY				
		SUPPLY	Rmt	50	763.17	38,158.51
d	d	3.5 Core x 150 sq.mm AL AYFY				
		SUPPLY	Rmt	50	626.82	31,340.86
e	e	3.5 Core x 120 sq.mm AL AYFY				
		SUPPLY	Rmt	50	529.13	26,456.57
f	f	4 Core x 70 sq.mm AL AYFY				
		SUPPLY	Rmt	1,600	367.34	587,742.80
g	g	4 Core x 50 sq.mm AL AYFY				
		SUPPLY	Rmt	50	275.76	13,787.94
h	h	4 Core x 35 sq.mm AL AYFY				
		SUPPLY	Rmt	900	214.71	193,234.69
i	i	4 Core x 25 sq.mm AL AYFY				
		SUPPLY	Rmt	350	169.93	59,476.40
j	j	4 Core x 16 sq.mm AL AYFY				
		SUPPLY	Rmt	1,100	132.28	145,511.12
k	k	4 Core x 10 sq.mm AL AYFY				
		SUPPLY	Rmt	20	119.05	2,381.09
l	l	4 Core x 6 sq.mm AL AYFY				

		SUPPLY	Rmt	20.00	98.70	1,974.07
m	m	1 Core x 95 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	10	945.31	9,453.13
n	n	1 Core x 50 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	10	495.55	4,955.52
o	o	1 Core x 35 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	200	361.23	72,246.78
p	p	1 Core x 25 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	20	261.51	5,230.26
q	q	1 Core x 16 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	3,500	169.93	594,763.97
r	r	1 Core x 10 sq.mm CU YY UNARMERD				
		SUPPLY	Rmt	1,500	125.16	187,739.87
s	s	3 Core x 2.5 sq.mm CU YWY				
		SUPPLY	Rmt	220	117.87	25,931.56
t	t	4 Core x 4 sq.mm CU YWY				
		SUPPLY	Rmt	110	215.72	23,729.51
36	NS36	Supply and Laying of CAT - 6 Data cable in existing conduits				
		Supply & Laying	Rmt	60,000	21.95	1,316,934.00
37	NS37	Supply and fixing of information out let points with 2 module box, along with 2 DATA outlet & 1 numbers voice and one space closure outlet plate with RJ 45 & RJ 11 socket out let of AMP or equivalent makes.	SET	400	993.91	397,564.20
38	NS38	Supply and fixing of information outlet points with 2 module box, along with 1 DATA outlet and 1 numbers voice outlet plate with RJ 45 & RJ 11 socket out let of AMP or equivalent makes.	SET	100	554.17	55,417.35
39	NS39	Supplying and fixing 5 amps to 32 amps rating, 240 / 415 volts, 'D' Curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
		Single pole	Each	198	210.00	41,580.00
40	NS40	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
a	a	40 amps	Each	1	950.00	950.00
b	b	63 amps	Each	45	1,100.00	49,500.00
c	c	100 amps	Each	1	1,350.00	1,350.00
		TOTAL OF CABLES AND OTHER ELECTRICAL WORKS AS PER NON DSR				7,538,212.84
TOTAL OF NON DSR ELECTRICAL WORKS						43,794,148.34

PA and FA WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF PA & FA WORKS BOQ
- 3 FA & PA BOQ FOR DSR ITEMS
- 4 FA & PA BOQ FOR NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON DSR Rates	Total of DSR and NON DSR works
SUMMARY OF PA & FA WORKS				
1	PA SYSTEM WORKS	324,000.00		324,000.00
2	FA SYSTEM WORKS	558,600.00		558,600.00
3	TOTAL OF NON DSR ITEMS		5,231,533.41	5,231,533.41
	TOTAL	882,600.00	5,231,533.41	6,114,133.41
	TOTAL OF PA & FA WORKS	882,600.00	5,231,533.41	6,114,133.41

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
		PA & FA WORKS BOQ FOR DSR ITEMS				
1		PA SYSTEM				
		CONDUITS & CABLES				
1.1	1.17.2	Supply & Laying of 1100 V Grade 2R X 1.5sq.mm PVC insulated, FRLS, Multi Strand Copper Conductor wires in 25 mm Dia PVC conduits as required.	Rmt.	4,500	25.00	112,500.00
1.2	1.21.2	Supply & Laying of PVC 25mm conduit along with accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required.	Rmt.	4,500	47.00	211,500.00
TOTAL OF PA SYSTEM WORKS						324,000.00
		FA SYSTEM				
2		CONDUITS & CABLES				
2.1		S/F PVC conduit:				
	1.21.1	20 mm	Rmt	5,000	41.00	205,000.00
	1.21.2	25 mm	Rmt	660	47.00	31,020.00
	1.21.3	32 mm	Rmt	55	56.00	3,080.00
2.2		Supply and Laying of 3 runs of 1.5 Sqmm wire in 2 mm thick FRLS PVC conduit with all the required accessories like collers, bends, junction boxes, etc as complete.				
a	1.14.1	In 20 / 25mm dia existing conduit.	Rmt	4,500	71.00	319,500.00
TOTAL OF FA SYSTEM WORKS						558,600.00
TOTAL OF DSR ITEMS						882,600.00
TOTAL OF PA & FA WORKS BOQ FOR DSR ITEMS						882,600.00

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs.	Rs.
PA & FA WORKS BOQ FOR NON DSR ITEMS						
	1.0	P.A. SYSTEM				
1	NS1	Supply, installation, testing and commissioning of 16 zone selector P.A. console and with CRCA sheet housing and control desk (Rack) as required. Console shall have all call / call back facility complete with battery back up and it should also work on AC	No	1	84,841.25	84,841.25
2	NS2	Supply, installation, testing and commissioning of 8 zone selector P.A. console and with CRCA sheet housing and control desk (Rack) as required. Console shall have all call / call back facility complete with battery back up and it should also work on AC	No	1	37,199.63	37,199.63
3	NS3	Supply, installation, testing and commissioning of solid state Amplifier of 100 W RMS out put in rack, including necessary control wires, complete.	No	1	24,147.13	24,147.13
4	NS4	Supply, installation, testing and commissioning of 6W wall / ceiling mounted type speakers with talk back facility, in CRCA sheet fabricated housing, complete.(Make: Philips / Ahuja)	No	275	1,892.61	520,468.44
5	NS5	Supply, installation, testing and commissioning of Volume controller mounted with metal box fixed in wall / partition / conlead in wall.	No	25	978.94	24,473.44
TOTAL FOR PA SYSTEM NON DSR ITEMS						691,129.88
	2.0	FIRE ALARM SYSTEM (ADDRESSABLE)				
6	NS6	Supply, installation, testing & commissioning of analogue addressable Multi sensing detector make of Secutron / Tyco / Apollo / System sensor or equivalent make with necessary fixing accessories required.	SET	700	4,505.00	3,153,500.00
7	NS7	Supply, installation, testing & commissioning of analogue addressable Heat detector make of Secutron / Tyco / Apollo / System sensor or equivalent with necessary fixing accessories required.	SET	23	3,002.00	69,046.00
8	NS8	Supply, installation, testing, & commissioning of addressable dual tone fire alarm hooters cum strobe. Of make of Secutron / Tyco / Apollo / System sensor or equivalent with necessary fixing accessories required.	SET	40	4,001.00	160,040.00
9	NS9	Supply, installation, testing, & commissioning of Response indicators of make of Secutron / Tyco / Apollo / System sensor or equivalent suitable for surface / flush mounting with necessary fixing accessories required.	SET	700	110.00	77,000.00

10	NS10	Supply, installation, testing & commissioning of addressable fault isolator module of make of Secutron / Tyco / Apollo / System sensor or equivalent.	SET	52	3,524.18	183,257.10
11	NS11	Supply, installation, testing & commissioning of addressable control module of make of Secutron / Tyco / Apollo / System sensor or equivalent.	SET	30.00	5,514.68	165,440.44
12	NS12	Supply, installation, testing & commissioning of addressable Manual call point of make of Zicom / Tyco / Apollo / System sensor or equivalent.	SET	40	3,303.00	132,120.00
13	NS13	Supply, installation, testing & commissioning of 8 Loop panel with all accessories required of make of Secutron / mircom / Tyco / Apollo / System sensor compatible with batteries. (The panel shall have NO / NC to trip the AC units in case of Emergency &	SET	2	300,000.00	600,000.00
TOTAL OF FIRE DETECTION SYSTEM NON DSR ITEMS						4,540,403.54
TOTAL OF PA & FA WORK BOQ FOR NON DSR ITEMS						5,231,533.41

PLUMBING & SANITARY WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF PLUMBING & SANITARY WORKS BOQ
- 3 PLUMBING & SANITARY WORKS BOQ FOR DSR ITEMS
- 4 PLUMBING & SANITARY WORKS BOQ FOR NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates [Rs]	Amount as per NON DSR Rates [Rs]	Total of DSR and NON DSR works [Rs]
I	SANITARY FIXTURES	215,781.15		215,781.15
II	SOIL, WASTE AND VENT PIPE SYSTEM	1,636,038.80		1,636,038.80
III	WATER SUPPLY SYSTEM	1,284,387.25		1,284,387.25
IV	RAIN WATER HARVESTING SYSTEM	311,244.70		311,244.70
V	LANDSCAPE WATER SUPPLY SYSTEM:	122,431.90		122,431.90
VI	NON SCHEDULE ITEMS		2,940,724.39	
	Total	3,569,883.80	2,940,724.39	6,510,608.19
	TOTAL OF PLUMBING & SANITARY WORKS	3,569,883.80	2,940,724.39	6,510,608.19

		PROJECT: GOLDEN JUBILEE BUILDING, NIT ROURKELA				
Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		PLUMBING & SANITARY BOQ FOR DSR ITEMS				
I		SANITARY FIXTURES.				
1.00	17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required.				
1.01	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests.	No.	2	2964.10	5928.20
1.02	17.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :				
1.02.1	17.2.1	W.C. pan with ISI marked white solid plastic seat and lid.	No.	13	2885.10	37506.30
1.03	17.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350 mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required.				
1.03.1	17.5.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.	No.	9	8445.00	76005.00
1.03.2	17.5.3	Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern.	No.	2	11046.80	22093.60

1.04	17.6	Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. / PVC flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete, including painting of fittings and cutting and making good the walls and floors etc. wherever required .				
1.04.1	17.6.2	Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern.	No.	2	5152.40	10304.80
1.04.2	17.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern.	No.	2	6826.65	13653.30
1.05	17.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require.				
1.05.1	17.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	No.	11	1848.35	20331.85
1.05.2	17.7.2	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap	No.	2	1628.95	3257.90
1.06	17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	No.	2	894.70	1789.40
1.07	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS : 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required.				
1.07.1	17.10.1	Kitchen sink with drain board				
1.07.2	17.10.1.1	510x1040 mm bowl depth 250 mm	No.	2	6743.55	
1.08	17.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	No.	15	94.00	1410.00
1.09	17.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm or 340x410x265 mm sizes respectively.	No.	2	792.60	1585.20
1.10	17.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings				
1.10.1	17.25.2	Flat back wash basin of size 550x400 mm	No.	2	725.15	1450.30
1.11	17.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				

1.11.1	17.28.1	Semi rigid pipe				
1.11.2	17.28.1.1	32 mm dia	No.	13	59.50	773.50
1.12	17.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	No.	11	674.05	7414.55
1.13	17.34	Providing and fixing toilet paper holder :				
1.13.1	17.34.1	C.P. brass	No.	13	250.95	3262.35
1.14	17.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.				
1.14.1	17.70.2	Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms.	No.	13	435.30	5658.90
1.15	17.71	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	No.	9	180.10	1620.90
1.16	17.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour.				
1.16.1	17.73.2	600 mm long towel rail with total length of 645 mm, width 78 mm and effective height of 88 mm, weighing not less than 190 gms.	No.	2	415.20	830.40
1.17	17.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour, weighing not less than 300 gms.	No.	2	452.35	904.70
		TOTAL OF SANITARY FIXTURES				215,781.15
II	SOIL, WASTE AND VENT PIPE SYSTEM:					
1.00	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 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	140	165.60	23184.00
1.02	17.35	Providing and fixing soil, waste and vent pipes :				

1.02.1	17.35.1	100 mm dia				
1.02.2	17.35.1.2	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989.	Rmt	83	857.30	71155.90
1.02.3	17.35.2	75 mm diameter :				
1.02.4	17.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	Rmt	110	744.50	81895.00
1.03	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 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc.				
1.03.1	17.37.1	For 100 mm dia pipe	No	200	112.50	22500.00
1.03.2	17.37.2	For 75 mm dia pipe	No	200	110.15	22030.00
1.04	17.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
1.04.1	17.38.1	100 mm dia				
1.04.2	17.38.1.2	Sand cast iron S&S as per IS - 3989	No	150	353.25	52987.50
1.04.3	17.38.2	75 mm dia				
1.04.4	17.38.2.2	Sand cast iron S&S as per IS- 3989	No	150	281.15	42172.50
1.05	17.39	Providing and fixing plain bend of required degree.				
1.05.1	17.39.1	100 mm dia				
1.05.2	17.39.1.2	Sand cast iron S&S as per IS : 3989	No	100	296.35	29635.00
1.05.3	17.39.2	75 mm dia				
1.05.4	17.39.2.2	Sand cast iron S&S as per IS - 3989	No	100	221.95	22195.00
1.06	17.40	Providing and fixing heel rest sanitary bend				
1.06.1	17.40.1	100 mm dia				
1.06.2	17.40.1.2	Sand cast iron S&S as per IS - 3989	No	75	342.80	25710.00
1.06.3	17.40.2	75 mm dia				
1.06.4	17.40.2.2	Sand cast iron S&S as per IS - 3989	No	80	297.45	23796.00
1.07	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.				
1.07.1	17.43.1	100x100x100 mm				

1.07.2	17.43.1.2	Sand cast iron S&S as per IS - 3989	No	120	579.75	69570.00
1.07.3	17.43.2	75x75x75 mm				
1.07.4	17.43.2.2	Sand cast iron S&S as per IS - 3989	No	100	438.00	43800.00
1.08	17.44	Providing and fixing single equal plain junction of required degree :				
1.08.1	17.44.1	100x100x100 mm				
1.08.2	17.44.1.2	Sand cast iron S&S as per IS - 3989	No	120	522.85	62742.00
1.08.3	17.44.2	75x75x75 mm				
1.08.4	17.44.2.2	Sand cast iron S&S as per IS - 3989	No	120	378.75	45450.00
1.09	17.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :				
1.09.1	17.55.1	100 mm				
1.09.2	17.55.1.2	Sand cast iron S&S as per IS - 3989	No	120	469.40	56328.00
1.09.3	17.55.2	75 mm				
1.09.4	17.55.2.2	Sand cast iron S&S as per IS - 3989	No	120	333.45	40014.00
1.10	17.56	Providing and fixing terminal guard :				
1.10.1	17.56.1	100 mm				
1.10.2	17.56.1.2	Sand cast iron S&S as per IS - 3989	No	120	244.10	29292.00
1.10.3	17.56.2	75 mm				
1.10.4	17.56.2.2	Sand cast iron S&S as per IS - 3989	No	120	221.95	26634.00
1.11	17.57	Providing and fixing collar :				
1.11.1	17.57.1	100 mm				
1.11.2	17.57.1.2	Sand cast iron S&S as per IS - 3989	No	120	238.25	28590.00
1.11.3	17.57.2	75 mm				
1.11.4	17.57.2.2	Sand cast iron S&S as per IS - 3989	No	120	169.65	20358.00
1.12	17.58	Providing lead caulked joints to sand cast iron/centrifugally cast (spun) iron pipes and fittings of diameter :				
1.12.1	17.58.1	100 mm	No	120	207.85	24942.00
1.12.2	17.58.2	75 mm	No	120	176.50	21180.00
1.13	17.59	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :				
1.13.1	17.59.1	100 mm	No	120	61.70	7404.00

1.13.2	17.59.2	75 mm	No	120	52.35	6282.00
1.14	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 :				
1.14.1	17.60.1	100 mm inlet and 100 mm outlet				
1.14.2	17.60.1.1	Sand cast iron S&S as per IS: 3989	No	147	801.70	117849.90
1.15	17.61	Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size), including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :				
1.15.1	17.61.1	100 mm dia	No	20	252.10	5042.00
1.15.2	17.61.2	75 mm dia	No	20	180.40	3608.00
1.16	17.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work .				
1.16.1	17.65.1	100 mm diameter pipe	Rmt	83	28.75	2386.25
1.16.2	17.65.2	75 mm diameter pipe	Rmt	110	22.00	2420.00
2.00	19.1	Providing, laying and jointing glazed stoneware pipes Class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :				
2.01.1	19.1.1	100mm dia	Rmt	15	150.10	2251.50
2.01.2	19.1.2	150mm dia	Rmt	85	219.05	18619.25
2.01.3	19.1.3	200 mm diameter	Rmt	10	323.05	3230.50
2.01.4	19.1.4	250mm dia	Rmt	190	446.15	84768.50
2.02	19.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design.				
2.02.1	19.2.2	150 mm diameter S.W. pipe	Rmt	85	607.70	51654.50
2.02.2	19.2.3	200 mm diameter S.W. pipe	Rmt	10	708.40	7084.00
2.02.3	19.2.4	250 mm diameter S.W. pipe	Rmt	190	819.20	155648.00

2.03	19.4	Providing and fixing square-mouth Square gully trap class Sp-1 complete with C.I grating brick masonry chamber with water tight C.I. Cover with frame of 300X300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be less than 2.70 kg as per standard design :				
2.03.1	19.4.3	180x150 mm size P type				
2.03.2	19.4.3.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No.	5	1365.55	6827.75
2.04	19.7	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm 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 with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design.				
2.04.1	19.7.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg).				
2.04.2	19.7.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	No.	20	1732.00	34640.00
2.05	19.7.2	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg).				
2.05.1	19.7.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	No.	2	15322.95	30645.90
2.06	19.8	Extra for depth for manholes :				
2.06.1	19.8.1	Size 90x80 cm				
2.06.2	19.8.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	Rmt	10	4061.70	40617.00
2.06.3	19.8.2	Size 120x90 cm				
2.06.4	19.8.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5.	Rmt	10	4866.75	48667.50
2.07	19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m				

2.07.1	19.10.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	10	3498.25	34982.50
2.08	19.11	Constructing brick masonry circular manhole 1.22m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 Coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1 cement : 3 Coarse sand) finished with a floating coat of neat cement , foundation concrete 1:3:6 (1 cement : 3 Coarse sand : 6 graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 Coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design :				
2.08.1	19.11.1	1.68 m deep with SFRC Cover and frame (heavy duty HD-20 grade designation) 560mm internal diameter conforming to I.S.12592, total weight of cover and frame to be not less than 182kg. fixed in cement concrete 1:2:4 (1 cement : 2 sand:4 graded stone aggregate 20mm nominal size) including centering shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :				
2.08.2	19.11.1.1	With Common Burnt Clay F.P.S (non modular) bricks of class designation 7.5	No.	3	12943.40	38830.20
2.09	19.12	Extra depth for circular type manhole 1.22m internal dia (at bottom) beyond 1.68 m to 2.29 m :				
2.09.1	19.12.1	With Common Burnt Clay F.P.S (non modular) bricks of class designation 7.5	No.	3	4522.30	13566.90
2.10	19.15	Providing MS Foot rests including fixing in manhole 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) as per standard design:				
2.10.1	19.15.1	With 20x20mm square bar	No.	45	227.95	10257.75
2.11	19.16	Providing 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 mmx25 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 manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	No.	88	256.75	22594.00

		TOTAL OF SOIL, WASTE AND VENT PIPE SYSTEM				1,636,038.80
III		WATER SUPPLY SYSTEM:				
1.00	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 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	100	165.60	16560.00
2.00	18.8	Providing and 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 the 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.				
2.01.1	18.8.1	15 mm nominal outer dia Pipes	Rmt	10	218.65	2186.50
2.01.2	18.8.2	20 mm nominal outer dia Pipes	Rmt	483	243.05	117393.15
2.01.3	18.8.3	25 mm nominal outer dia Pipes	Rmt	10	297.95	2979.50
2.01.4	18.8.4	32 mm nominal outer dia Pipes	Rmt	10	358.90	3589.00
2.02	18.10	Providing and fixing G.I. pipes complete with Internal work - Exposed on wall.				
2.02.1	18.10.2	20mm dia. Nominal bore	Rmt	10	188.05	1880.50
2.02.2	18.10.3	25mm dia. Nominal bore	Rmt	38	243.15	9239.70
2.03.3	18.10.4	32mm dia. Nominal bore	Rmt	76	296.50	22534.00
2.03.4	18.10.5	40mm dia. Nominal bore	Rmt	47.25	364.10	17203.73
2.03.5	18.10.6	50mm dia. Nominal bore	Rmt	560	453.65	254044.00
2.04	18.11	Providing and fixing G.I Pipes complete with G.I fittings and clamps including making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall:				
2.04.1	18.11.1	15 mm dia nominal bore	Rmt	5	229.10	1145.50
2.04.2	18.11.2	20 mm dia nominal bore.	Rmt	5	251.30	1256.50

2.05	18.12	Providing and fixing G.I pipes complete with G.I fittings including trenching and refilling etc. External Work				
2.05.1	18.12.6	50 mm dia nominal bore	Rmt	1192	355.95	424292.40
2.05.2	18.12.7	65 mm dia nominal bore	Rmt	390	453.55	176884.50
2.05.3	18.12.8	80 mm dia nominal bore	Rmt	10	573.40	5734.00
2.06	18.17	Providing and fixing gun metal gate valve with C.I wheel of approved quality (screwed end):				
2.06.1	18.17.1	25 mm nominal bore.	Each	35	372.95	13053.25
2.06.2	18.17.2	32 mm nominal bore.	Each	7	450.90	3156.30
2.06.3	18.17.3	40 mm nominal bore.	Each	4	546.05	2184.20
2.06.4	18.17.4	50 mm nominal bore.	Each	18	780.60	14050.80
2.06.5	18.17.5	65 mm nominal bore.	Each	4	1073.25	4293.00
2.06.6	18.17.6	80 mm nominal bore.	Each	2	1832.95	3665.90
2.07	18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete:				
			Each	3	360.20	1080.60
2.07.1	18.18.2	20 mm dia nominal bore				
2.07.2	18.18.3	25 mm dia nominal bore	Each	1	421.65	421.65
2.08	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm 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.				
2.08.1	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	2	5392.90	10785.80

2.09	18.34	Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm 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.				
2.09.1	18.34.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	2	9277.10	18554.20
2.10	18.40	Painting G.I. Pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality:				
2.10.1	18.40.1	15 mm diameter pipe	Rmt	10	4.40	44.00
2.10.2	18.40.2	20 mm diameter pipe	Rmt	493	5.15	2538.95
2.10.3	18.40.3	25 mm diameter pipe	Rmt	314	6.60	2072.40
2.10.4	18.40.4	32 mm diameter pipe	Rmt	116	7.80	904.80
2.10.5	18.40.5	40 mm diameter pipe	Rmt	47.25	8.90	420.53
2.10.6	18.40.6	50 mm diameter pipe	Rmt	1752	10.55	18483.60
2.10.7	18.40.7	65 mm diameter pipe	Rmt	415	12.95	5374.25
2.10.8	18.40.8	80 mm diameter pipe	Rmt	32	15.00	480.00
2.11	18.48	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISI : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	Per Litre	1000	6.10	6100.00
2.12	18.49	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931.				
2.12.1	18.49.1	15 mm nominal bore	No.	2	397.50	795.00
2.13	18.53	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931 a) 15 mm nominal bore.				
2.13.1	18.53.1	15mm nominal bore	No.	222	449.35	99755.70
2.14	18.54	Providing and fixing PTMT bib cock of approved quality and colour.				
2.14.1	18.54.1	15mm nominal bore, 86 mm long, weighing not less than 88 gms	No.	2	130.10	260.20

2.14.2	18.54.3	15 mm nominal bore, 165 mm long, weighing not less than 110 gms	No.	2	199.80	399.60
2.15	18.55	Providing and fixing PTMT stop cock of approved quality and colour.				
2.15.1	18.55.3	Concealed stop cock, 15 mm nominal bore, 108 mm long, weighing not less than 108 gms	No.	2	214.90	429.80
2.16	18.56	Providing and fixing PTMT pillar cock of approved quality and colour .				
2.16.1	18.56.1	15 mm nominal bore, 107 mm long, weighing not less than 110 gms	No.	11	202.25	2224.75
2.17	18.57	Providing and fixing PTMT, push cock of approved quality and colour.				
2.17.1	18.57.2	15 mm nominal bore, 80 mm long, weighing not less than 46 gms	No.	9	106.85	961.65
2.18	18.58	Providing and fixing PTMT grating of approved quality and colour.				
2.18.1	18.58.1	Circular type				
2.18.2	18.58.1.2	125 mm nominal dia with 25 mm waste hole	No.	147	50.15	7372.05
2.19	18.62	Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.				
2.20	18.62.3	25 mm nominal bore, 152mm long, weighing not less than 440 gms	No.	2	543.65	1087.30
2.21	18.72	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :				
2.21.1	18.72.1	100 mm dia Ductile Iron Class K-7 pipes	Rmt		840.25	0.00
2.22	18.74	Providing and fixing unplasticised P.V.C. connection pipe with PTMT Nuts, collar and bush of approved quality and colour.				
2.22.1	18.74.1	15 mm nominal bore with 30cm length	No.	10	59.50	595.00
2.23	18.76	Cutting holes up to 30x30 cm in walls including making good the same.				
2.23.1	18.76.1	With common burnt clay F.P.S. (non modular) bricks	No.	20	152.00	3040.00
2.24	18.77	Cutting holes up to 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.	No.	20	143.95	2879.00
		TOTAL OF WATER SUPPLY SYSTEM				1,284,387.25

IV		RAIN WATER HARVESTING SYSTEM:				
1.00	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 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	150	165.50	24825.00
2.00	19.9	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement :4 coarse sand), in side cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 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), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :				
2.01	19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 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 12mm thick cement plaster at the external surface shall be paid for separately) :				
2.01.1	19.9.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No.	18	7007.40	126133.20
2.02	19.10	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m				
2.02.1	19.10.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	metre	10	3498.25	34982.50
2.03	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 (1 cement : 2 fine sand) including testing of joints etc. complete:				
2.03.1	19.6.4	300 mm dia. R.C.C. Pipe.	metre	126	422.90	53285.40
2.03.2	19.6.5	450 mm dia. R.C.C. Pipe.	metre	116	620.85	72018.60
		TOTAL OF RAIN WATER HARVESTING SYSTEM:				311,244.70
V		LANDSCAPE WATER SUPPLY SYSTEM:				

1.00	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 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	460	165.60	76176.00
2.00	18.17	Providing and fixing gun metal gate valve with C.I wheel of approved quality (screwed end):				
2.01.1	18.17.1	25 mm nominal bore.	Each	20	372.95	7459.00
2.01.2	18.17.5	65 mm nominal bore.	Each	6	1073.25	6439.50
2.02	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm 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.				
2.02.1	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	6	5392.90	32357.40
		TOTAL OF LANDSCAPE WATER SUPPLY SYSTEM:				122,431.90
		TOTAL OF DSR ITEMS				3,569,883.80
		TOTAL OF PLUMBING & SANITARY WORKS BOQ FOR DSR ITEMS				3,569,883.80

PROJECT: GOLDEN JUBILEE BUILDING, NIT ROURKELA						
Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		PLUMBING & SANITARY BOQ FOR NON DSR ITEMS				
V		NON SCHEDULE ITEMS				
I		SANITARY FIXTURES.				
1	NS1	Supplying, installing, testing and commissioning approved make oval wash basin white colour fixed under counter with single hole 15mm Long body Pillar cock unit, 32mm dia CP waste coupling, 32mm dia C.P.bottle trap with C.P. extension pipe, 1 No.15mm dia C.P. angle cock 1 No. C.P. flexible inlet connection pipe G.I. expansion bolts etc., complete including silicon sealant. Size 560 x 430 mm.	No	6	5,912.00	35,472.00
		Note: We have designed for low volume flow rate 2.75 liters/min of water for sink to meet the requirement of Griha standards.				
		Make:-Hind ware, Model 10049				
		Pillar Cock Make Jaguar Model No.021				
2	NS2	Supplying, installing, testing and commissioning approved make white colour European water closet wall mounted pattern type 'p' trap with 4/2 Lts.Capacity Dual Flush Concealed Tank. The quoted price shall also include plastic solid seat and cover with rubber buffers and flap, heavy duty plastic hinges, chair Brackets etc., complete.	No.	6	15,306.50	91,839.00
		Make:-Hindware,Pure Model 20061, Concealo 508179				
		Note: We have designed for low volume flushing from 2-4 liters/flush of water for EWC to meet the requirement of Griha standards.				
3	NS3	Supplying, installing, testing and commissioning approved make 15mm CP health faucet with CP flexible tube 1.0m long, CP crutch, nozzle angular stop cock with wall flange etc.,complete.	No.	6	2,254.00	13,524.00
		Note: We have designed for low volume flow rate 6.0 liters/min of water for Health Faucet to meet the requirement of Griha standards.				
		Make:-Jaguar ,Model No.573				
4	NS4	Supplying and fixing approved make C.P. toilet paper holder complete.	No.	6	1,236.25	7,417.50
		Make:- Jaguar Model no.1153N				
5	NS5	Supplying and Fixing of approved make C.P.towel ring including C.P. screws with Fischer plugs etc., complete.(Near Wash Basin)	No.	6	903.00	5,418.00
		Make:- Jaguar Model no.1121				
6	NS6	Supplying and fixing approved make FRP Liquid Soap dispensers complete with CP fixing screws and first fill of liquid soap.	No.	10	1,552.50	15,525.00
		Make:- Kimberly Calrk				

7	NS7	Supplying, installing, testing and commissioning approved make white coloured large flat back urinals with 40 mm C.P. dome type waste coupling 40 mm dia heavy duty PVC waste pipe up to Nahani trap, 15 mm dia C.P. push cock with C.P. flush pipe, C.P. spreader, expansion bolts etc., complete. Size: 600 X 400 X 380 (Urinal partition excluded).	No.	4	11,960.00	47,840.00
		Note: We have designed for low volume flow rate 1.50 liters/min of				
		water for Urinals to meet the requirement of Griha standards.				
		Make:- Jaquar Model no.077				
		Make:-Hind ware, Model 60010				
8	NS8	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with Aluminum frame of approved make and shade with 6 mm thick hard board backing: Rectangular shape 453X357mm.	No.	6	1,250.00	7,500.00
9	NS9	Supplying and fixing approved make C.P. twin robe hook with C.P. screws etc., complete. Fixed on the toilet door.	No.	6	632.50	3,795.00
		Make:- Jaquar Model no.1161N				
10	NS10	Supplying and fixing approved make Automatic Hand drier Sensor operated working on 230V electric supply complete including wiring.	No.	6	5,000.00	30,000.00
		Make:- Kimberly Calrk				
11	NS11	Fixing of approved make 20 mm dia CP grab bar 1000 mm long with CP end clamps, screws etc., complete.	No.	4	2,500.00	10,000.00
12	NS12	Supplying, installing, testing and commissioning approved make SS kitchen sink with single bowl & drainboard made of 18 guage sheet, 1 No. 40mm dia C.P. wastecoupling, 40 mm dia C.P. Bottle trap with C.P. extension pipe, 1 Nos. 15mm dia hot and cold sink mixer unit wall mounted type , C.I.brackets etc., complete. Size:-900x500	No.	3	11,198.00	33,594.00
		Note: We have designed for low volume flow rate 2.75 liters/min of				
		water for Sink Cock to meet the requirement of Griha standards.				
		Sink Make:- Franke / Futura/Jayna/Nirali				
		Make:-Jaquar, Model No.347, Sink Make:-Jayna Model no.SBSD 04				
13	NS13	Suppling and Fixing of approved make 15mm CP hose bib with necessary CP wall flanges etc.,complete.	No.	5	960.25	4,801.25
		Make:-Jaquar, Model No.107				
		TOTAL OF SANITARY FIXTURES.				306,725.75
II		SOIL, WASTE AND VENT PIPE SYSTEM:				

15	NS 15	Supplying, laying, jointing, testing and commissioning approved make UPVC pipes class III 6 Kg/cm ² with solvent cement joints confirming to IS 4985 for kitchen sink, wash basin outlets & anti syphonage pipes. the quoted rate shall include necessary chasing in walls making good the same in C.M. 1:4, necessary fittings viz., elbows, tees etc., including M.S angle with G.I clamps complete.				
a	a	40 mm dia	Rmt	90	135.15	12,163.50
b	b	50 mm dia	Rmt	60	146.07	8,764.20
c	c	63 mm dia	Rmt	140	188.86	26,440.40
16	NS 16	Supplying, laying, jointing, testing and commissioning approved make UPVC pipes SWR grade B confirming to IS 13592 with rubber ring joints confirming to IS 5382. The quoted rate shall include necessary fittings like Tees, Bends, Offsets etc., including M.S angle with G.I clamps complete.				
a	a	75 mm dia	Rmt	441	314.86	138,853.26
b	b	110 mm dia	Rmt	330	361.15	119,179.50
c	c	160 mm dia	Rmt	55	646.26	35,544.30
17	NS 17	Supplying and fixing approved make UPVC multi inlet floor trap with 75mm dia outlet and C.P. cover on top etc., complete with cement concrete support around the floor trap.	Each	147	450.00	66,150.00
18	NS 18	Supplying, jointing, testing & Commissioning of approved make UPVC pipe SWR grade "A" confirming to IS: 13592 with rubber ring joints for rain water disposal confirming to IS5382.The quoted rate shall include necessary bends,etc.,including M.S angle with G.I clamps complete .				
a	a	110 mm dia	Rmt	58	337.06	19,549.48
b	b	160 mm dia	Rmt	50	587.08	29,354.00
c	c	225 mm dia	Rmt	485	1,050.00	509,250.00
19	NS 19	Providing, Supplying & Drilling/Core Cutting of required dia outlets using low vibration mechanical means. Cost to include identification of embedded reinforcement using proformeter, closing of core cut using self sealing non-shrink grouts of approved make either single or double component with necessary form work, staging, tools, etc.,				
		SLABS				
		RCC slabs (115mm to 175mm Thick)				
a	a	For 50 mm pipes	No.	1	650.00	650.00

b	b	For 100 mm pipes	No.	1	1,100.00	1,100.00
c	c	For 125 mm pipes	No.	220	1,250.00	275,000.00
d	d	For 150 mm pipes	No.	1	1,500.00	1,500.00
e	e	For 200 mm pipes	No.	1	2,000.00	2,000.00
TOTAL OF SOIL, WASTE AND VENT PIPE SYSTEM:						1,245,498.64
III	WATER SUPPLY SYSTEM:					
20	NS 20	Providing and fixing G.I Pipes complete with G.I fittings and clamps including making good the walls etc. concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall:				
a	a	25 mm dia nominal bore.	Rmt	276	350.00	96,600.00
b	b	32 mm dia nominal bore.	Rmt	40	410.00	16,400.00
21	NS 21	Providing and fixing G.I. pipes complete with G.I.fittngs and clamps, including cutting and making good the walls etc. Internal work - Exposed on wall.				
a	a	65mm dia. Nominal bore	Rmt	25	650.00	16,250.00
b	b	80mm dia. Nominal bore	Rmt	32	850.00	27,200.00
22	NS 22	Supplying and fixing in position P.C.C. pedestals 400x230x230mm with MS brackets & GI clamps for laying pipes on terrace.	No	15	350.00	5,250.00
23	NS 23	Supplying, installing, testing and commissioning approved make Pressure Reducing Valve internal parts having screwed ends etc., complete..				
a	a	32 mm dia	No	2	6,500.00	13,000.00
24	NS 24	Supplying, installing, testing and commissioning approved make Sludge Cutter pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph, with starter,				
a	a	Duty of Pump : 3.0 Lps @ 15.0m Head 1 No. Working + 1 No. Stand By = 1 Set (From Sewage Sump to Chamber)	Set	2	165,000.00	330,000.00
25	NS 25	Supplying, fixing and testing inlet, outlet, vent and over flow pipes, fittings with C.I frame with cover to over head tank complete with PVC rungs, etc complete as shown in the drawing. all puddle flanges to be hot dip galvanized	Set	1	100,000.00	100,000.00
a	a	32 mm dia - 4 Nos				
b	b	50 mm dia - 8 Nos.				
c	c	65 mm dia - 2 Nos.				
d	d	80 mm dia - 2 Nos.				
e	e	150 mm dia - 2 Nos.				
f	f	Manhole frame and cover 600 X 600mm - 6 nos.				
g	g	PVC rungs - 60				

26	NS 26	Supplying, fixing and testing inlet, outlet, vent and over flow pipes, fittings with C.I frame with cover to U.G.Sump complete with PVC rungs, etc complete as shown in the drawing. all puddle flanges to be hot dip galvanized.	Set	1	75,000.00	75,000.00
a	a	50 mm dia - 2 Nos.				
b	b	65 mm dia - 2 Nos.				
c	c	80 mm dia - 1 Nos.				
d	d	100 mm dia - 1 Nos.				
e	e	200 mm dia - 1 Nos.				
f	f	Manhole frame and cover 600 X 600mm - 4 nos.				
g	g	PVC rungs - 60				
29	NS 29	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	Set	1	130,000.00	130,000.00
		Duty of Pump :				
		2.0 Lps @ 90.0m Head				
		1 No. Working + 1 No. Stand By = 1 Set				
		(From Domestic Water Sump to Over Head Tank)				
30	NS 30	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	Set	1	90,000.00	90,000.00
		Duty of Pump :				
		2.50 Lps @ 60.0m Head				
		1 No. Working + 1 No. Stand By = 1 Set				
		(From STP Sump to Over Head Tank)				
32	NS 32	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1PH.	No	1	50,000.00	50,000.00
		Duty of Pump :				
		4.0 Lps @ 15.0m Head				
		1 No. Working + 1 No. Stand By = 1 Set				
		(From Basement Sump to External Drain)				
33	NS 33	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	No	1	60,000.00	60,000.00
		Duty of Pump :				
		10.0 Lps @ 15.0m Head				
		1No. Working +1 No. Stand By = 1 Set				
		(From Rain Water Sump to External Drain)				

34	NS 34	Supplying, installing, testing and commissioning approved make Submersible pump made of C.I Construction suitable for building application. The quoted rate shall also include for providing necessary safety devices viz. dry run protection, over load relays etc., complete working on 230V, 50Hz, 1Ph.	No	1	40,000.00	40,000.00
		Duty of Pump :				
		1.0 Lps @ 15.0m Head				
		1No. Working +1 No. Stand By = 1 Set				
		(From Pump Room Sump to External Drain)				
35	NS 35	Providing, installing, testing and commissioning of approved make Conductive type level sensor with SS 316 probes MS 2-1/2" table E std flange and weather proof cast aluminium enclosure to sense two levels of the under ground sump and the over head water storage tank.	No	12	3,800.00	45,600.00
36	NS 36	Supply & laying of 4 core 1.5sqmm copper armoured cable from UG sump sensors to level control instruments laid in a 32mm dia. PVC 6Kg/sqcm pipes.	No	12	800.00	9,600.00
37	NS 37	Supplying and fixing of digital percentage level indicator for the storage tanks consisting of display unit and level sensor. The display unit should have 2-1/2 digit seven segment LED to display the levels as 0%, 10% --- 100%. The unit should be weather proof and wall / panel mounted input to the unit should be 230V AC. The level sensor should consists of float operated magnetic float switch with one PUF float suitable mounting flange and flame proof enclosure. Quoted rate shall include necessary conduits and cabling.	No	12	2,800.00	33,600.00
38	NS 38	Supplying Installing, testingand commissioning COMMON control panel for PHE system consisting of Domestic Water 7.50HPx 2nos., Basement collection sump 2HP, Pump Room Collection Sump 1HP,Sewage Pump 2HP x 2nos, Rain Water Pumps 5HP x 3nos.,Spare 5HP 2nos. consisting of the following :				
		INCOMING :				
		1No.Set of phase indicating lamps with SFU Rated 350A				
		1 No. Set of 400 Amps. TPNE Al. Bus bars				
		1 No. 0-400 Amps. Ammeter, 1 No. 0-600V Voltmeter				
		with phase selector switch, Isolating Switch 400A				
		OUTGOING for Domestic Water Pump:				
		1No. 100 Amps MCB				
		1 No. S/D starter suitable for 7.50 HP x 2nos.				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Basement collection sump pump:				
		1No. 50 Amps MCB				

		1 No. DOL starter suitable for 2 HP				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Pump Room collection sump pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 1 HP				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Sewage collection sump pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 2 HP x 2nos.				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Rain water pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 5 HP x 3nos.				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
		1No. Automanual selector switch				
		OUTGOING for Spare pump:				
		1No. 50 Amps MCB				
		1 No. DOL starter suitable for 5 HP(2nos)				
		1No. Single phase preventor suitable for the pump				
		described above				
		1No. set of ON/OFF indicating lamps				
a	a	1No. Automanual selector switch	No	1	100,000.00	100,000.00
39	NS 39	CONTROL CABLES Supplying, laying, testing & commissioning of FRLS, PVC outer sheath, steel armoured, aluminium / copper conductor, 1100v grade power cables with glands etc. The cables shall be laid in tray / Hume pipe / in trenches/on walls/ floor etc. as required. For cables laid out door the rate shall include earth excavation providing brick and sand protection, refilling and compacting the earth. The rate shall excludes tray & Hume pipes. The minimum size of the cables shall as mentioned below,				
a	a	3.0 sq.mm	Rmt	1000	150.00	150,000.00
		TOTAL OF WATER SUPPLY SYSTEM:				1,388,500.00
		TOTAL OF LANDSCAPE WATER SUPPLY SYSTEM:				2940724.39
		TOTAL OF PLUMBING & SANITARY WORK BOQ FOR NON DSR ITEMS				2,940,724.39

FIRE FIGHTING SYSTEM BOQ

- 1 DIVIDER
- 2 SUMMARY OF FIRE FIGHTING BOQ
- 3 FIRE FIGHTING BOQ FOR DSR ITEMS
- 4 FIRE FIGHTING BOQ FOR NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates [RS]	Amount as per NON DSR Rates [RS]	Total of DSR and NON DSR works [Rs]
	SUMMARY OF FIRE FIGHTING WORKS			
I	CIVIL WORKS & FIRE FIGHTING WROKS	49,680.00	-	49,680.00
II	NON SCHEDULE ITEMS		15,022,265.69	
	TOTAL	49,680.00	15,022,265.69	15,071,945.69
	TOTAL OF FIRE FIGHTING WORKS	49,680.00	15,022,265.69	15,121,625.69

PROJECT: GOLDEN JUBILEE BUILDING, NIT ROURKELA						
Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		FIRE FIGHTING BOQ FOR DSR ITEMS				
I		CIVIL WORKS				
1	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 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:				
1.01	2.10.1	All Kinds of Soil.				
1.01.1	2.10.1.2	a) Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.	Rmt	300	165.60	49680.00
		TOTAL OF CIVIL WORK				49,680.00
		TOTAL OF FIRE FIGTHING WORK BOQ FOR DSR ITEMS				49,680.00
		TOTAL OF FIRE FIGHTING WORKS BOQ FOR DSR ITEMS				49,680.00

		PROJECT: GOLDEN JUBILEE BUILDING, NIT ROURKELA				
Sl. No.	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate	Amount
					Rs	Rs
		FIRE FIGHTING BOQ FOR NON DSR ITEMS				
1	NS 1	Supply, Ertection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		100mm nominal dia	Rmt	10.00	1,667.00	16,670.00
2	NS 2	Supply, Installation, testing and commissioning of Non Return Valve CI Double Flanged with Nut, Bolt and Washers etc., as per IS:5312 (SIR/AARKO/LP/KALPNA/KARTAR/ISI Marked)				
a		100mm nominal dia	Rmt	1.00	2,721.48	2,721.48
3	NS 3	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings. (Make : Kirolskar/Zolota/Kartar/Sir				
a		100mm nominal dia	Rmt	1.00	4,135.86	4,135.86
4	NS 4	Supply, Installation, Testing and Commissioning of ``Y'' Strainer, including Nut, Bolt, Gasket complete in all respects.				
a		200mm nominal dia	Rmt	1.00	41,732.35	41,732.35
5	NS 5	Supply, Erection, Testing and commissioning of C.I.Gate valves as per IS:14846 (PN 10 Rating, for suction side of the pumps) and rising spindle type with flanges, bolts, nuts, washers, gaskets etc.				
a		200mm nominal dia	No.	1.00	42,846.70	42,846.70
6	NS 6	Supply, Installation of Flow metre (Electronic type) on Test line to measure 150 % of pump flow and suitable to 200 mm dia.				
			No.	4.00	1,840.00	7,360.00

7	NS 7	Exhaust pipe for Diesel engine of 150 mm dia M.S. Medium grade with mineral wool insulation with aluminum sheet.				
a		150 mm dia M.S. Medium grade with mineral wool insulation with aluminum sheeting.	Rmt	25.00	2,702.50	67,562.50
8	NS 8	Supplying, erecting and commissioning of Landing Hydrants comprising of the following in the Fire duct;	Set	30.00	32,200.00	966,000.00
		twin headed hydrant valve as per IS 5290, made of gunmetal with 63 mm dia instantaneous outlet of 80 mm dia fanged inlet ,Blank caps , chain and hand wheels etc complete.-				
		2 lengths of 15 M long, 63mm dia RRL hose with instantaneous couplings and Hoses shall be stored in side the hose cabinet.				
		1 no. Gun metal short branch pipe with nozzle.				
		Hose reel drum of swinging type with 19mm dia Rubber braided hose of 40M. length with Gate valve (upstream) and Shut off nozzle, complete.				
		Fire duct Shutter fabricated out of M.S.sheet and frame, door shall be 900mm x 1200 mm min. & fixed with 4 mm thick Glass, suitable Rubber beeding and Locking arrangement. Quoted rate shall include all fasteners etc, and complete shutter shall be powder coated of approved colour both inside and out side. 1 No				
9	NS 9	Supplying, installing, testing and commissioning of yard hydrant comprising of the following,	Set	14.00	30,475.00	426,650.00
		twin headed hydrant valve as per IS 5290, made of gunmetal with 63 mm dia instantaneous out & 80 mm dia fanged inlet inlet, Blank cap , chain and hand wheel etc complete.				
		2 lengths of 15 M long, 63mm dia RRL hose with instantaneous couplings and Hoses shall be stored in side the hose cabinet.				
		1 no. Gun metal short branch pipe with nozzle.				
		M.S. Hose cabinet stand mounted type fabricated out of M.S. sheet of 16 swg. with glass fronted (4mm thick glass with rubber beading) door and size of the cabinet shall be 600mm x 750 mm x 250 mm Quoted rate shall be includes suitable stand for mounting, all fasteners etc, and cabinet shall be powder coated of approved colour both inside and out side.				
		M.S. Hose cabinet stand mounted type fabricated out of M.S. sheet of 16 swg. with glass fronted (4mm thick glass with rubber beading) door and size of the cabinet shall be 600mm x 750 mm x 250 mm Quoted rate shall be includes suitable stand for mounting, all fasteners etc, and cabinet shall be powder coated of approved colour both inside and out side.				

10	NS 10	Supplying and fixing approved make 20mm dia. with automatic air release valve with unions etc. complete.	No.	3.00	2,895.60	8,686.80
11	NS 11	Supplying, installing, testing and commissioning of Gun metal chrome finished Ball valves with fittings of screwed end type.				
a		50 mm dia	Nos.	23.00	5,306.00	122,038.00
12	NS 12	Supplying, installing, testing and commissioning flow switch on sprinkler distribution header on each floor and shall be connected to fire alarm panel through cable. Cable shall be measured separately.	Nos.	28.00	7,475.00	209,300.00
13	NS 13	Supply & fixing of approved type rosette plates (Recessed type, in two piece) for Sprinklers below false ceiling area. The Rosette shall be fabricated by M.S. plate of 2mm thick and the finish shall be powder coated and color shall be as approved by architects / clients.	Nos.	2000.00	92.00	184,000.00
14	NS 14	Supplying, installing and commissioning Portable Fire extinguishers of following type & capacity.				
a		Carbon-di-oxide type fire extinguisher of 2 kgs. Capacity, CO2 gas filled in brand new seamless cylinder with powder coated finish, made out of Manganese steel, with wheel type valve, discharge nozzle, bend & horn, wall mounting bracket etc. complete, confirming to IS: 2878.	Nos.	2.00	3,910.00	7,820.00
b		Carbon-di-oxide type fire extinguisher of 4.5 kgs. Capacity, CO2 gas filled in brand new seamless cylinder with powder coated finish, made out of Manganese steel, with wheel type valve, discharge nozzle, bend & horn, wall mounting bracket etc. complete, confirming to IS: 2878.	Nos.	28.00	6,095.00	170,660.00
c		Mechanical Foam type fire extinguisher 9Lts. Capacity, with initial filling in brand new cylinder with powder coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge, hose and ABS type branch pipe and wall mounting bracket etc. complete, confirming to IS: 10204.	Nos.	2.00	1,782.00	3,564.00
d		ABC type fire extinguisher of 5 Kgs. Capacity, with initial filling in brand new cylinder with powder coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge, discharge hose, wall mounting bracket etc. complete, confirming to IS:2171.	Nos.	12.00	2,357.00	28,284.00
e		Water CO2 type fire extinguisher 9 lts. Capacity, initial filling in brand new cylinder of powder coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge & wall mounting bracket etc. complete confirming to IS:940.	Nos.	28.00	1,380.00	38,640.00

15	NS 15	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut, PVC non-reflective self adhesive vinyl painted foam board, complete with mirror fasteners.				
a		Signage with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm x 30 cm and shall be fixed at the height of 2 mts. from finished floor near Manual call points.	Nos.	30.00	1,265.00	37,950.00
b		Floor identification signage (ie, GROUND FLOOR ...etc.) at each stair enclosure on every floor, indicating the floor number in words, lettering size shall be 7.5 cm with contrasting colour from back ground. Size shall be 15cm x 60cm.	Nos.	30.00	1,265.00	37,950.00
16	NS 16	Providing and fixing in position the signages " FIRE ORDER" it should contain the following matter on 3mm thick "Opaque" PVC foam board of computerized cut, PVC non-reflective self adhesive vinyl painted foam board of 3' x 4'.				
a		ALERT THE SECURITY AT SECURITY ROOM BY ACTUATING MANUAL CALL POINT LOCATED AT STRATEGIC LOCATIONS.	Nos.	4.00	6,670.00	26,680.00
		EVACUATE THE OCCUPANTS BY USING FIRE EXITS AND EMERGENCY EXITS ONLY AND ASSEMBLE AT VARIOUS ASSEMBLY POITS.				
		IF POSSIBLE TRY TO EXTINGUISH THE FIRE BY USING NEAREST / SUITABLE PORTABLE EXTINGUISHER OR WATER FROM NEAREST WET RISER.				
		BE CALM AND DO NOT GIVE ANY ROOM FROM PANIC, WALK, DO NOT RUN.				
		IF YOU ENCOUNTER SERIOUS DIFFICULTY IN EVACUATION, FLAT AND TRY TO ATTRACT ATTENTION OF RESCUE TEAM.				
b		ACTION BY SECURITY/RECEPTION UPON RECEIPT OF INFORMATION THROUGH FIRE ALARM OR FIRE DETECTORS OR BY USING PUBLIC ADDRESS SYSTEM.	Nos.	4.00	3,450.00	13,800.00
		ALERT THE OCCUPANTS BY USING PUBLIC ADDRESS SYSTEM.				
		INFORM FIRE CONTROL THROUGH ANY ONE OF THE FOLLOWING PHONE NUMBERS:				
		REFER EVACUATION PLAN FROM EVACUATING STANDARD PEOPLE.				
		GUIDE THE FIRE FORCE, ON THEIR ARRIVAL TO THE SEAT OF FIRE.				

		IN CASE OF THE CASUALTIES, CALL AMBULANCE BY DIALLING NUMBER.....				
		FIRE FIGHTING AGENCY -----				
		PHONE : -----				
		FAX : -----				
		FIRE PUMP ROOM EQUIPMENT				
17	NS 17	SITC of Electric Driven Hydrant/Sprinkler Fire Pump suitable for automatic operation consisting of Horizontally Mounted Centrifugal Fire Pump 2280 LPM, 2900 RPM, 60 HP, 90 Mtr. Head. The Pump casing shall be of C.I. and Impeller shall be of Bronze and Shaft shall be Stainless Steel. (Make : Kirloskar/Mather & Platt)	No.	2.00	378,566.00	757,132.00
18	NS 18	SITC of Diesel Engine Driven Fire Pump 2280 LPM, 90 Mtr. Head 72 HP, 1500/1800 RPM, Horizontal Split Casing type fire pump with Water Cooled Diesel Engine with Flexible coupling, Common Bed Plate etc. for mounting the Diesel Engine and Pump, complete in all respects.	No.	1.00	674,130.00	674,130.00
19	NS 19	Supply, Installation, Testing and Commissioning of Jockey Pump 180 LPM, 90 Mtr. Head, 2900 RPM, 15 HP, complete in all respects (Make : Kirloskar/Mather & Platt)	No.	1.00	117,894.00	117,894.00
20		Control Panel for Fire pumps.				
a	NS 20	Supply, Installation, Testing and Commissioning of Motor Control Centre for above Pumps, made out of 2 mm thick CRCA Sheet with suitable relays ,SF units with MCCB, for incoming and outgoing feeders, connects star delta starter indicating lamp, ammeter, voltmeter selector switch complete in all respects.	No.	1.00	268,550.00	268,550.00
21	NS 21	Supply, Installation, Testing and Commissioning of GI Earthing Strip 50 x 5 mm	Rmt	15.00	175.00	2,625.00
22	NS 22	Supply and Laying of Aluminum Armoured Cable, including necessary fittings for the above motor pumps. 50 x 3 1/2 Core	Rmt	100.00	519.00	51,900.00
23	NS 23	Supply and Laying of Aluminum Armoured Cable, including necessary fittings for the above motor pumps. 16 x 4 Core	Rmt	50.00	298.00	14,900.00
24	NS 24	Supply and Laying of Aluminum Armoured Cable, including necessary fittings for the above motor pumps. 8 x 2 Core	Rmt	50.00	198.00	9,900.00

25	NS 25	Supply, Ertection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		200mm nominal dia	Rmt	15.00	3,000.00	45,000.00
26	NS 26	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		150mm nominal dia	Rmt	20.00	2,394.00	47,880.00
c		80mm nominal dia	Rmt	10.00	1,191.00	11,910.00
27	NS 27	Supply, Installation, testing and commissioning of Non Return Valve CI Double Flanged with Nut, Bolt and Washers etc., as per IS:5312 (SIR/AARKO/LP/KALPNA/KARTAR/ISI Marked)				
a		150 mm nominal dia	No.	3.00	17,647.00	52,941.00
c		80 mm nominal dia	No.	1.00	11,011.00	11,011.00
28	NS 28	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings. (Make : Kirolskar/Zolota/Kartar/Sir)				
a		150mm nominal dia	No.	6.00	8,628.00	51,768.00

c		80mm nominal dia	No.	1.00	4,048.00	4,048.00
29	NS 29	Supply, Installation, Testing and Commissioning of "Y" Strainer, including Nut, Bolt, Gasket complete in all respects.				
a		150mm dia.	No.	1.00	16,582.00	16,582.00
30	NS 30	Supply, Installation, Testing and Commissioning of Pressure Switch	Set	4.00	3,478.00	13,912.00
31	NS 31	Supply, Installation, Testing and Commissioning of Pressure Gauge	Set	4.00	1,135.00	4,540.00
32	NS 32	Supply, Installation, Testing and Commissioning of Pressure Gauge	Set	4.00	1,135.00	4,540.00
		HYDRANT SYSTEM				
33	NS 33	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		150mm nominal dia	Rmt	500.00	2,394.00	1,197,000.00
34	NS 34	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		150mm nominal dia	Rmt	600.00	2,394.00	1,436,400.00

35	NS 35	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings.				
a		150mm nominal dia	No.	3.00	8,628.00	25,884.00
36		Supply, Installation, Testing and Commissioning of Fire S/S Fire Brigade inlet Connection (Geetch/Newage/Minimax/Equivalent)	No.	2.00	21,704.00	43,408.00
AUTOMATIC SPRINKLER SYSTEM						
37	NS 37	Supply, Erection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				
		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		150mm nominal dia	Rmt	520.00	2,394.00	1,244,880.00
b		80mm nominal dia	Rmt	452.00	1,191.00	538,332.00
c		65mm nominal dia	Rmt	1550.00	978.00	1,515,900.00
d		50mm nominal dia	Rmt	1100.00	803.00	883,300.00
e		40mm nominal dia	Rmt	525.00	584.00	306,600.00
f		32mm nominal dia	Rmt	525.00	509.00	267,225.00
g		25mm nominal dia	Rmt	3785.00	401.00	1,517,785.00
38	NS 38	Supply, Ertection and Testing of ISI marked M.S. Pipe (Class-C heavy duty) and special etc. (as per IS:1239) for above ground laying for hydrants and sprinkler system including transportation of materials upto the worksite, cutting the pipes to required size.				
		The pipes and accessories will be provided with all type of supports at maximum 3 meter. Spacing by 3 mm thick clevis/sprinkler hangers/clamps/tie rod supports with nuts, bolts, anchore/dash fastener and washer for hydrant/sprinkler piping.				

		The quoted rates shall also include for making holes in masonry/RCC slab, wall chases in wall providing sleeves in RCC wall and slabs wherever required and making good the same by sealing the opening to original conditions.				
		Make Jindal (Hissar) / Bharat/ QST/ Prakash)				
a		150mm nominal dia	Rmt	25.00	2,394.00	59,850.00
39	NS 39	Supply and fixing of position ISI marked Cast Iron Double flanged Butterfly Valves (PN 1.6 Mpa) as per IS: 13095, with S.S. disc, shaft, seating rings, internal fastening, nuts, bolts including transporting to worksite, 3 mm thick rubber gaskets etc. including all fittings.				
		(Make : Kirolskar/Zolota/Kartar/Sir				
a		150mm dia	Nos.	2.00	8,628.00	17,256.00
c		80mm dia	Nos.	22.00	4,048.00	89,056.00
40	NS 40	Supply, Fixing, Testing and Commissioning of C.P. Bronze Sprinklers as per IS: 9972, comprises of 15mm dia conventional pattern, 68 deg C. Quartzoid bulb type pendent/upright sprinklers, UL listed. The installation shall be complete as per the drawings.				
a		Pendent sprinkler	Nos.	2000.00	586.00	1,172,000.00
41	NS 41	Supply, Fixing, Testing and Commissioning of Cast Iron Box and Brass/Bronze working parts, UL listed installation Control Valve Assembly complete with Hydraulic Alarm Motor and Hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/sprinkler system activates.				
a		150mm dia.	Set	1.00	81,175.00	81,175.00
		TOTAL OF AUTOMATIC SPRINKLER SYSTEM				15,022,265.69

HVAC WORKS BOQ

- 1 DIVIDER
- 2 SUMMARY OF HVAC WORKS BOQ
- 3 HVAC BOQ FOR NON DSR ITEMS
- 4 AC ELECTRICAL RELATED BOQ DSR ITEMS
- 5 AC ELECTRICAL RELATED BOQ NON DSR ITEMS

SI No	ITEMS	Amount as per DSR Rates	Amount as per NON DSR Rates	Total of DSR and NON DSR works
	SUMMARY OF HVAC WORKS & LATED WORKS RELATED TO HVAC WORKS			
A	HVAC WORKS			
I	TOTAL OF NON DSR ITEMS		97,019,923.00	
	TOTAL	0.00	97,019,923.00	97,019,923.00
	TOTAL OF HVAC WORKS	0.00	97,019,923.00	97,019,923.00
B	AC RELATED ELECTRICAL WORKS			
1	CASSETTE AHU CONNECTION	3,412,600.00		
2	CABLE TRAYS	327,463.00		
3	EARTHING	113,070.00		
4	MV CABLE LAYING	15,642.50		
5	MV CABLE JOINTING AND END TERMAINATION	8,390.00		
6	TOTAL OF NON DSR ELECTRICAL ITEMS	0.00	1,680,395.54	
	TOTAL	3,877,165.50	1,680,395.54	5,557,561.04
	TOTAL OF AC RELATED ELECTRICAL WORKS [B]	3,877,165.50	1,680,395.54	5,557,561.04
	GRAND TOTAL OF HVAC WORKS	3,877,165.50	98,700,318.54	102,577,484.04

SL.NO	DSR 2012 item no.	Tender Items	Unit	Quantity	Rate Rs.	Amount Rs.
I		HVAC WORKS BOQ FOR NON DSR ITEMS				
1	1	SECONDARY PUMP				
1	NS1	Supply, installation, testing and commissioning of Centrifugal split casing secondary pump sets for chilled water circulation to deliver required USGPM & head . The pumps should be of cast iron body and bronze impeller. It should be coupled with a factory mounted and aligned with coupling and coupling guard, suitable rating TEFC 4 pole motor on a common steel frame duly painted, bellows for suction and discharge, spring vibration isolators, weather hood, etc. the pump shall be suitable for outdoor installation on the terrace of the building. The inertia block shall be provided by Civil team / others.	Nos.			
	a	1working & 1 stand by for 1st, 2nd & 3rd floors 25mts.discharge head & 1130Us.gpm		2.00	425,000.00	850,000.00
	b	1 working & 1 stand by for 4 th , 5 th ,& 6 th floors 35mts.discharge head & 877Us.gpm		2.00	475,000.00	950,000.00
	c	1 working & 1 stand by for G.Floor,7th,8th,9th,10th,11th,12 th & 13 th floors 75mts.discharge head &1130 Us.gpm		2.00	625,000.00	1,250,000.00
						0.00
2	NS2	VFD with By pass starter along with star delta suitable enclosure for the following				
		Secondary Pump	Nos.	6.00	127,285.00	763,710.00
TOTAL OF SECONDARY PUMP						3,813,710.00
2	2	CHILLED WATER CASSETTE TYPE UNITS AND ACCESSORIES				
3	NS3	Supply, installation, testing and commissioning of chilled water Cassette type units for the following capacities complete with fan section, compact cooling coil, synthetically woven type filters, decorative panel, thermostat and cordless remote control. Noise level of indoor unit should not exceed 35dBA at high speed fan operation and at a distance of 1m from the indoor unit in all directions. Indoor unit to be supplied with inbuilt condensate drain pump, with 6 mm thick nitrile rubber insulation provided for drain connection. Remote should be with speed control, temperature control, On / Off Control, etc. thermostat to have memory backup for set point restore for power failure start-up. All valves (2 way Motorized Valve on/off type, Ball valve with strainer and ball valve without strainer) for the chilled water circuit should be factory fitted.				
	a	400cfm, 1 Tr	Nos.	1.00	48,525.00	48,525.00
	b	600 cfm 1.5 Tr	Nos.	156.00	52,405.00	8,175,180.00
	c	800 cfm, 2 Tr	Nos.	75.00	55,845.00	4,188,375.00
	d	1000 cfm, 2.5 Tr	Nos.	20.00	58,000.00	1,160,000.00
TOTAL OF CHILLED WATER CASSETTE TYPE UNITS AND ACCESSORIES						13,572,080.00

3	3	FAN COIL UNIT:				
4	NS4	Supply, installation, testing and commissioning of factory fabricated Double Skinned Chilled/Hot Water sectionalized Air-handling unit horizontal type fabricated out of extruded aluminium section with 0.6mm pre-plasticized / pre-coated Galvanised steel sheet outside & 0.6mm plain Galvanised steel sheet inside with blower section comprising plenum/plug type AMCA certified blower (for air & sound performance), direct drive TEFC type motor with Variable Frequency Drive, suitable for operation on 415 volts \pm 10%, 50 Hz \pm 5% AC supply, 6 Rows ARI certified cooling coil made of Aluminium finned Copper tube with coil section, thermostat, pre-filter section with nonwoven synthetic media of 10micron particle size with an efficiency of 90%, stainless steel drainpan made out of 22 G sheet duly insulated, motor and belt drive package with belt guard, safety switch etc. without face and bypass dampers.				
		The AHU panels shall be with double skin 45 \pm 2 mm thick insulated with CFC free polyurethane foam (PUF) panels of 42 Kg/cum, sandwiched between two 0.6 mm thick G.I. Sheet. The motor & blower assembly shall be mounted on Aluminium extruded section only. The fan shall be complete with factory installed flow monitoring station (by fan manufacturer), and shall be a standard part of fan assembly. The complete AHU shall conform to standard specification. The face velocity across cooling coil shall be limited to 450 FPM maxm. Expansion bellows with spacers shall be provided at pipe connections. Capacity of Air-handlers shall be as follows:				
a	a	400cfm,1TR	Nos.	1.00	18,600.00	18,600.00
b	b	600cfm,1.5TR	Nos.	1.00	23,500.00	23,500.00
c	c	800cfm,2TR	Nos.	1.00	27,350.00	27,350.00
TOTAL OF FAN COIL UNIT:						69,450.00
4	4	AIR HANDLING UNIT:				
5	NS5	Supply, installation, testing and commissioning of factory fabricated Double Skinned Chilled/Hot Water sectionalized Air-handling unit horizontal type fabricated out of extruded aluminium section with 0.6mm pre-plasticized / pre-coated Galvanised steel sheet outside & 0.6mm plain Galvanised steel sheet inside with blower section comprising plenum/plug type AMCA certified blower (for air & sound performance), direct drive TEFC type motor with Variable Frequency Drive, suitable for operation on 415 volts \pm 10%, 50 Hz \pm 5% AC supply, 6 Rows ARI certified cooling coil made of Aluminium finned Copper tube with coil section, thermostat, pre-filter section with nonwoven synthetic media of 10micron particle size with an efficiency of 90%, stainless steel drainpan made out of 22 G sheet duly insulated, motor and belt drive package with belt guard, safety switch etc. without face and bypass dampers.				

		The AHU panels shall be with double skin 45±2 mm thick insulated with CFC free polyurethane foam (PUF) panels of 42 Kg/cum, sandwiched between two 0.6 mm thick G.I. Sheet. The motor & blower assembly shall be mounted on Aluminium extruded section only. The fan shall be complete with factory installed flow monitoring station (by fan manufacturer), and shall be a standard part of fan assembly. The complete AHU shall conform to standard specification. The face velocity across cooling coil shall be limited to 450 FPM maxm. Expansion bellows with spacers shall be provided at pipe connections. Capacity of Air-handlers shall be as follows:				
a	a	Lower Ground - Exhibition Hall				
		22000 Cfm, 55 TR, 22 H.P, 70 mm SP	Nos.	1.00	1,419,025.00	1,419,025.00
		8000 Cfm, 20 TR, 12 H.P, 50 mm SP	Nos.	1.00	437,000.00	437,000.00
b	b	Lower Ground - GJB Seminar Hall				
		18000 Cfm, 45 TR, 16 H.P, 50 mm SP	Nos.	1.00	1,143,510.00	1,143,510.00
		12000 Cfm, 30 TR, 12 H.P, 50 mm SP	Nos.	1.00	1,040,430.00	1,040,430.00
c	c	Lower Ground - Reception				
		6000 Cfm, 15 TR, 5.5 H.P, 50 mm SP	Nos.	1.00	550,932.00	550,932.00
d	d	First, Second & Third Floor - Library & Corridor				
		22000 Cfm, 55 TR, 22 H.P, 70 mm SP	Nos.	6.00	1,439,025.00	8,634,150.00
e	e	Fourth Floor- Corridor and Lobby				
		14000 Cfm, 35 TR, 14 H.P, 50 mm SP	Nos.	1.00	1,342,435.00	1,342,435.00
f	f	Fifth Floor- Corridor and Lobby				
		14000 Cfm, 35 TR, 14 H.P, 50 mm SP	Nos.	1.00	1,342,435.00	1,342,435.00
g	g	Sixth Floor- Corridor and Lobby				
		12000 Cfm, 30 TR, 12 H.P, 50 mm SP	Nos.	1.00	1,040,430.00	1,040,430.00
h	h	Fourth to Seventh (Office Areas)				
		10000 Cfm, 25 TR, 7.5 H.P, 50 mm SP	Nos.	1.00	808,000.00	808,000.00
		4000 Cfm, 10 TR, 5.5 H.P, 50 mm SP	Nos.	1.00	360,000.00	360,000.00
g	g	Optional item				
		3000 Cfm, 7.5 TR, 5.5 H.P, 50 mm SP	Nos.	1.00	200,000.00	200,000.00
		2000 Cfm, 5.5 TR, 3.7 H.P, 50 mm SP	Nos.	1.00	180,000.00	180,000.00

6	6	Ceiling Suspended UNITS				
6	NS6	Supply, installation, testing and commissioning of factory fabricated Double Skinned Chilled/Hot Water sectionalized Ceiling suspended unit fabricated out of extruded aluminium section with 0.6mm pre-plasticized / pre-coated Galvanised steel sheet outside & 0.6mm plain Galvanised steel sheet inside with blower section comprising plenum/plug type AMCA certified blower (for air & sound performance), direct drive TEFC type motor with Variable Frequency Drive, suitable for operation on 415 volts \pm 10%, 50 Hz \pm 5% AC supply, 6 Rows ARI certified cooling coil made of Aluminium finned Copper tube with coil section, thermostat, pre-filter section with nonwoven synthetic media of 10micron particle size with an efficiency of 90%, stainless steel drainpan made out of 22 G sheet duly insulated, motor and belt drive package with belt guard, safety switch etc. without face and bypass dampers.				
		The AHU panels shall be with double skin 45 \pm 2 mm thick insulated with CFC free polyurethane foam (PUF) panels of 42 Kg/cum, sandwiched between two 0.6 mm thick G.I. Sheet with Thermal break, return air mixing box. The motor & blower assembly shall be mounted on Aluminium extruded section only. The fan shall be complete with factory installed flow monitoring station (by fan manufacturer), and shall be a standard part of fan assembly. The complete AHU shall conform to standard specification. The face velocity across cooling coil shall be limited to 450 FPM maxm. Expansion bellows with spacers shall be provided at pipe connections. Capacity of Air-handlers shall be as follows:				
		Ground Floor - Entrace Lobby				
a	a	16 TR, 6400 Cfm, 7.5 H.P, 40 mm SP	Nos.	1.00	453,620.00	453,620.00
		Optional items for replacing cassettes				
b	b	12TR, 5000 Cfm, 7.5 H.P, 40 mm SP	Nos.	1.00	306,085.00	306,085.00
c	c	10TR, 4000 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	248,695.00	248,695.00
d	d	8.5TR, 3400 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	214,260.00	214,260.00
e	e	7.5TR, 3000 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	191,305.00	191,305.00
f	f	5.5TR, 2200 Cfm, 5 H.P, 40 mm SP	Nos.	1.00	145,390.00	145,390.00
7	NS7	AIR HANDLING UNITS TFA				
		Double Skin Horizontal/Vertical Treated Air Handling Units, complete with double skin (45 \pm 2 mm) insulated with CFC free polyurethane foam (PUF) panels of 42 Kg/cum density sandwiched between 0.6 mm thick G.I. Sheets. Outer skin shall be preplastized G.I. sheet and internal skin shall be powder coated G.I. Sheet.,AHU frame works shall be of pre cast vertical and horizontal extruded aluminium (Anti corrosive) profile, with three way corner frame sections. Frame construction should bear the load of structure and load of the frame structure shall be uniformly distributed along the entire housing of the AHU.				

		Self adhesive coated neoprene gasket to be provided between panels and structure of the AHU to ensure the entire housing is airtight. DIDW fans to be supplied along with motor. Motors shall be capable of operating through VFD and shall be of EFF2 efficiency rating. The base of the fan motor and blower should be made of extruded aluminum section. The fan and motor shall be completely isolated from the unit casing with antivibration spring isolators along with drive package. Fan outlet should have fire retardant type flexible connection to prevent vibration transmission to the casing.				
		Chilled water fed cooling coils shall be of 6 Row deep. Full face coil to be provided. Drain tray for chilled water cooling coils shall be made of single sheet of SS 304 grade stainless steel sheet and should have uniform slope from all sides leading to drain connection. Drain Pan shall be insulated with 25mm thick, 55kg/cum density closed cell elastomeric insulation.				
		Filters Section shall house a pre filter section (90% down to 10 microns)				
a	a	Fourth & Fifth Floor				
		3400 Cfm, 8.5 TR, 40 mm Sp	Nos.	2.00	214,260.00	428,520.00
b	b	Sixth Floor				
		3000 Cfm, 7.5 TR, 40 mm Sp	Nos.	1.00	191,305.00	191,305.00
c	c	Above thirteenth floor Roof for core-1 .				
		10000 Cfm, 22 TR, 40 mm Sp	Nos.	1.00	325,000.00	325,000.00
TOTAL OF AIR HANDLING UNIT:						21,002,527.00
5	5	CHILLED WATER PIPING & INSULATION				
8	NS8	Supplying, laying, fixing, testing & commissioning MS class 'C' pipes. For fixing valves, strainers and accessories pipes cut to required length with necessary, clamps, supports, antivibration pads, hangers, fittings such as bends, tees, reducers, flange				
a	a	350 mm dia MS pipes	Rmt	10.00	3,300.00	33,000.00
b	b	300 mm dia MS pipes	Rmt	90.00	2,750.00	247,500.00
c	c	250 mm dia MS pipes	Rmt	180.00	2,500.00	450,000.00
d	d	200 mm dia MS pipes	Rmt	220.00	2,350.00	517,000.00
e	e	150 mm dia MS pipes	Rmt	200.00	2,075.00	415,000.00
f	f	125 mm dia MS pipes	Rmt	500.00	2,000.00	1,000,000.00
g	g	100 mm dia MS pipes	Rmt	520.00	1,800.00	936,000.00
h	h	80 mm dia MS pipes	Rmt	530.00	1,550.00	821,500.00
i	i	65 mm dia MS pipes	Rmt	660.00	1,300.00	858,000.00
j	j	50 mm dia MS pipes	Rmt	980.00	975.00	955,500.00
k	k	40 mm dia MS pipes	Rmt	250.00	850.00	212,500.00
l	l	32 mm dia MS pipes	Rmt	210.00	700.00	147,000.00
m	m	25 mm dia MS pipes	Rmt	2,800.00	625.00	1,750,000.00
9	NS9	Supply and erection of butterfly valves as per the specifications. The valves shall be as per BS6755 part -1 for leak rate. The valve seat material shall be with nitrile rubber NON- Corrosive type.				
a	a	200 mm dia	Nos	12.00	16,000.00	192,000.00
b	b	150 mm dia	Nos	12.00	9,505.00	114,060.00
c	c	125 mm dia	Nos	24.00	6,500.00	156,000.00
d	d	100 mm dia	Nos	45.00	5,500.00	247,500.00
e	e	80 mm dia	Nos	32.00	4,000.00	128,000.00
f	f	65 mm dia	Nos	20.00	3,650.00	73,000.00
g	g	50 mm dia	Nos	55.00	3,250.00	178,750.00
h	h	40 mm dia	Nos	25.00	3,175.00	79,375.00
i	i	32 dia butter fly valve	Nos	20.00	2,900.00	58,000.00
j	j	25 dia ball valve (Cassette units & AHU Drain)with Y-strainer.	Nos	320.00	3,500.00	1,120,000.00

k	k	25 dia ball valve with y-strainer	Nos	285.00	2,500.00	712,500.00
10	NS10	Y- strainers of approved make of following size as per the specifications with bronze / SS mesh flanged end connection.				
a	a	200 mm dia	Nos	6.00	24,455.00	146,730.00
b	b	150 mm dia	Nos	6.00	14,970.00	89,820.00
c	c	125 mm dia	Nos	1.00	12,905.00	12,905.00
d	d	100 mm dia	Nos	25.00	10,885.00	272,125.00
e	e	80 mm dia	Nos	15.00	8,290.00	124,350.00
f	f	65 mm dia	Nos	5.00	5,750.00	28,750.00
g	g	50 mm dia	Nos	6.00	4,795.00	28,770.00
h	h	40 mm dia	Nos	5.00	3,415.00	17,075.00
i	i	32 mm dia	Nos	1.00	2,635.00	2,635.00
11	NS11	Manual Balancing valves of approved make as per the specifications with flanged connections. The valve shall be of PN 16 rating and shall with stand to a pressure of 16 BAR as per the specifications.				
a	a	200 mm dia	Nos	1.00	99,500.00	99,500.00
b	b	150 mm dia	Nos	1.00	50,250.00	50,250.00
c	c	125 mm dia	Nos	12.00	34,000.00	408,000.00
d	d	100 mm dia	Nos	13.00	25,000.00	325,000.00
e	e	80 mm dia	Nos	9.00	15,400.00	138,600.00
f	f	65 mm dia	Nos	9.00	14,225.00	128,025.00
g	g	50 mm dia	Nos	22.00	9,850.00	216,700.00
h	h	40 mm dia	Nos	3.00	6,100.00	18,300.00
i	i	32 mm dia	Nos	1.00	4,911.00	4,911.00
j	j	25 mm dia	Nos	250.00	3,950.00	987,500.00
11.1	NS 11.1	Supply, Installation, testing and commissioning of 2 way control valves ON OFF type for AHU Chilled water out lets with necessary flanges, power control module with complete control wiring. (If BMS interfacing is not required)				
a	a	100 mm dia	Nos	8.00	69,756.00	558,048.00
b	b	80 mm dia	Nos	4.00	66,174.00	264,696.00
c	c	65 mm dia	Nos	1.00	63,404.00	63,404.00
d	d	50 mm dia	Nos	2.00	36,713.00	73,426.00
e	e	40 mm dia	Nos	3.00	32,792.00	98,376.00
f	f	32 mm dia	Nos	1.00	31,345.00	31,345.00
g	g	25 mm dia	Nos	250.00	22,950.00	5,737,500.00
12	NS12	Supply, Installation, testing and commissioning of electronic, Self-balancing, Pressure independent type dynamic balancing Valve with integrated 2 way modulating Control valves in a single body. The valves accept 2-10V DC or 4-20 mA and shall be capable of providing 4-20 mA, 2-10V DC flow feedback signal to the control system. adjustable maximum flow rate setting to enable flow limitation and balancing to the coil or zones that the valves are controlling. All actuators shall be microprocessor based with a self-calibrating feature. The actuator shall be capable of accepting 2-10V DC, 4-20 ma electric signal. The valve actuator shall be equipped to provide actual flow feedback signal to the BMS/control system. The flow feedback provision shall be permanently available on the actuator. The minimum close off pressure of actuator must be 1.5 times shut off head of pump.				
a	a	100 mm dia (117 USGPM,143 USGPM)	Nos	1.00	43,775.00	43,775.00
b	b	80 mm dia (91 US GPM, 78 USGPM)	Nos	1.00	50,000.00	50,000.00
c	c	65 mm dia (70.2 USGPM)	Nos	1.00	50,000.00	50,000.00
d	d	50 mm dia (52 USGPM, 41.6 USGPM, 39 USGPM)	Nos	1.00	50,000.00	50,000.00
e	e	40 mm dia (22.1 USGPM, 19.5 USGPM)	Nos	1.00	35,000.00	35,000.00

f	f	32 mm dia	Nos	1.00	35,000.00	35,000.00
g	g	25 mm dia (2.4 USGPM upto 6 USGPM)	Nos	1.00	35,000.00	35,000.00
13	NS13	Supply and Installation of Purge Valve of following sizes				
a	a	20 mm dia	Nos	528.00	900.00	475,200.00
14	NS14	Metallic flexible rubber bellows on the out let and inlet of the pumps with necessary hard ware as per the specifications of following sizes.				
a	a	200 mm dia	Nos	6.00	13,705.00	82,230.00
b	b	150 mm dia	Nos	4.00	12,110.00	48,440.00
c	c	100 mm dia	Nos	2.00	10,520.00	21,040.00
15	NS15	Non return valves, dual plate wafer type as per the specifications of following sizes:				
a	a	200 mm dia	Nos	3.00	23,545.00	70,635.00
b	b	150 mm dia	Nos	6.00	22,230.00	133,380.00
d	d	100 mm dia	Nos	2.00	18,925.00	37,850.00
16	NS16	Supply and Installation of Dial type Pressure gauge with ball valve, calibrated in metric & British units				
a	a	100 mm Dial - 0 to 10 kg/cm2	Nos	50.00	2,235.00	111,750.00
17	NS17	Supply and Installation of Dial Type Imported Thermometers with flexible sensing probe and thermo well (Brass). Gauges shall be suitable for outdoor application.				
a	a	100 mm Dial	Nos	50.00	1,905.00	95,250.00
		INSULATION CHILLED WATER				
18	NS18	Piping insulation with 50 mm thick TF quality puf having density 20 Kg/cum with Al Cladding				
a	a	300 mm dia	Rmt	90.00	2,500.00	225,000.00
b	b	250 mm dia	Rmt	180.00	2,035.00	366,300.00
c	c	200 mm dia	Rmt	220.00	1,750.00	385,000.00
d	d	150 mm dia	Rmt	200.00	1,350.00	270,000.00
e	e	125 mm dia	Rmt	500.00	1,150.00	575,000.00
f	f	100 mm dia	Rmt	520.00	980.00	509,600.00
g	g	80 mm dia	Rmt	530.00	800.00	424,000.00
h	h	65 mm dia	Rmt	660.00	650.00	429,000.00
i	i	50 mm dia	Rmt	980.00	550.00	539,000.00
j	j	40 mm dia	Rmt	250.00	485.00	121,250.00
k	k	32 mm dia	Rmt	210.00	450.00	94,500.00
l	l	25 mm dia	Rmt	2,800.00	410.00	1,148,000.00
19	NS19	Butterfly Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	12.00	1,890.00	22,680.00
b	b	150 mm dia	Nos	12.00	1,470.00	17,640.00
c	c	125 mm dia	Nos	24.00	1,205.00	28,920.00
d	d	100 mm dia	Nos	45.00	1,035.00	46,575.00
e	e	80 mm dia	Nos	32.00	845.00	27,040.00
f	f	65 mm dia	Nos	20.00	725.00	14,500.00
g	g	50 mm dia	Nos	55.00	590.00	32,450.00
h	h	40 mm dia	Nos	25.00	530.00	13,250.00
i	i	32 dia ball valve	Nos	20.00	490.00	9,800.00
j	j	25 dia ball valve	Nos	320.00	445.00	142,400.00
k	k	25 dia ball valve with ystrainer	Nos	285.00	445.00	126,825.00
20	NS20	Y Strainer insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	6.00	1,890.00	11,340.00
b	b	150 mm dia	Nos	6.00	1,470.00	8,820.00

c	c	125 mm dia	Nos	1.00	1,205.00	1,205.00
d	d	100 mm dia	Nos	25.00	1,035.00	25,875.00
e	e	80 mm dia	Nos	15.00	845.00	12,675.00
f	f	65 mm dia	Nos	5.00	725.00	3,625.00
g	g	50 mm dia	Nos	6.00	590.00	3,540.00
h	h	40 mm dia	Nos	5.00	530.00	2,650.00
i	i	32 mm dia	Nos	1.00	490.00	490.00
21	NS21	Manual Balancing Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	1.00	1,890.00	1,890.00
b	b	150 mm dia	Nos	1.00	1,470.00	1,470.00
c	c	125 mm dia	Nos	12.00	1,205.00	14,460.00
d	d	100 mm dia	Nos	13.00	1,035.00	13,455.00
e	e	80 mm dia	Nos	9.00	845.00	7,605.00
f	f	65 mm dia	Nos	9.00	725.00	6,525.00
g	g	50 mm dia	Nos	22.00	590.00	12,980.00
h	h	40 mm dia	Nos	3.00	530.00	1,590.00
i	i	32 mm dia	Nos	1.00	490.00	490.00
j	j	25 mm dia	Nos	250.00	445.00	111,250.00
21.1	NS 21.1	2 way control valves insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	100 mm dia	Nos	8.00	1,035.00	8,280.00
b	b	80 mm dia	Nos	4.00	845.00	3,380.00
c	c	65 mm dia	Nos	1.00	725.00	725.00
d	d	50 mm dia	Nos	2.00	590.00	1,180.00
e	e	40 mm dia	Nos	3.00	530.00	1,590.00
f	f	32 mm dia	Nos	1.00	490.00	490.00
g	g	25 mm dia	Nos	250.00	445.00	111,250.00

22	NS22	Pressure independent type dynamic balancing Valve insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	100 mm dia	Nos	8.00	1,035.00	8,280.00
b	b	80 mm dia	Nos	4.00	845.00	3,380.00
c	c	65 mm dia	Nos	1.00	725.00	725.00
d	d	50 mm dia	Nos	2.00	590.00	1,180.00
e	e	40 mm dia	Nos	3.00	530.00	1,590.00
f	f	32 mm dia	Nos	1.00	490.00	490.00
g	g	25 mm dia	Nos	250.00	445.00	111,250.00
23	NS23	NRV insulation with 50 mm thick TF quality PUF having density 20 Kg/cum with Al Cladding				
a	a	200 mm dia	Nos	3.00	1,890.00	5,670.00
b	b	150 mm dia	Nos	1.00	1,470.00	1,470.00
c	c	125 mm dia	Nos	1.00	1,205.00	1,205.00
d	d	100 mm dia	Nos	1.00	1,035.00	1,035.00
e	e	80 mm dia	Nos	1.00	845.00	845.00
24	NS24	Supply and Installation of PVC Pipe (4kg) for AHU Drain & Fresh air connection for Cassette units of the following sizes				
a	a	50 mm dia	Rmt	800.00	1,100.00	880,000.00
b	b	40 mm dia	Rmt	200.00	900.00	180,000.00
c	c	32 mm dia	Rmt	500.00	800.00	400,000.00
d	d	25 mm dia	Rmt	800.00	600.00	480,000.00
	NS 24.1	Supply & insulation of Nitral rubber insulation of 32mm thick	Sq.mt	100.00	2,500.00	250,000.00
TOTAL OF CHILLED WATER PIPING & INSULATION						30,968,156.00
6	6	SHEET METAL DUCT:				
25	NS25	Supplying, fabricating, installing and testing of factory fabricated GI sheet metal of 120 GSM 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 :				
a	a	Galvanized sheet steel of 120gsm	Sqmt	3,800.00	650.00	2,470,000.00
b	b	24 SWG	Sqmt	3,500.00	750.00	2,625,000.00
c	c	22 SWG	Sqmt	2,300.00	850.00	1,955,000.00
d	d	20 SWG	Sqmt	1,520.00	1,000.00	1,520,000.00
		18 SWG				
TOTAL OF SHEET METAL DUCT:						8,570,000.00
7	7					
26	NS26	DIFFUSER, GRILLES, DAMPERS				
		Supply Air Diffuser				
		Supplying, fixing and balancing of powder coated Aluminium square supply air diffusers, air distribution grid for straightening the air flow through the collar and register and removable key operated volume control dampers. Complete as per specification and drawing	Nos	260.00	3,300.00	858,000.00
27	NS27	SA DIFFUSER (450x 450)				
		Return Air Diffuser				
		Supplying & fixing of square return air diffusers, air distribution grid for straightening the air flow through the collar and register without volume control dampers. Powder Coated Aluminium square diffuser without volume control damper	Nos	260.00	2,045.00	531,700.00
28	NS28	RA DIFFUSER (450x 450)				
		Jet Diffuser				

		Supplying, fixing and balancing of powder coated Aluminium jet diffusers, air distribution grid for straightening the air flow removable key-operated volume control dampers. Complete as per specification and drawing	Nos	30.00	7,000.00	140,000.00
		Jet Diffuser (Dia 300)	Nos	40.00	6,500.00	130,000.00
		Jet Diffuser (Dia 250)				
29	NS29	Supply and installation of G I Butterfly damper as per specification				
a	a	250 mm dia	Nos	5.00	770.00	3,850.00
b	b	200 mm dia	Nos	260.00	560.00	145,600.00
c	c	150 mm dia	Nos	200.00	480.00	96,000.00
30	NS30	Linear Grills:				
		Supplying, installing, testing and balancing of Powder Coated Aluminium continous linear air grilles (Linear/single) without volume control damper of various sizes.				
a	a	150 mm wide	Sqmt	200.00	15,000.00	3,000,000.00
31	NS31	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 drawing	Sqmt	70.00	5,500.00	385,000.00
32	NS32	Supply, installation & testing of AMCA certified & UL listed motorized smoke cum fire dampers of at least 90 minute fire rating and as per the specifications as detailed earlier in the relevant sections. The fire dampers shall be located in the supply/return air ducts/walls, at all fire rated crossovers (shaft/walls etc.).	Sqmt	40.00	30,000.00	1,200,000.00
33	NS33	Supplying, installing, testing and commissioning of fusible link shut off type fire dampers with thermal release mechanism as per approved drawings and specifications.	Sqmt	1.00	9,000.00	9,000.00
34	NS34	Acoustic insulation of ducting with 25 mm thick fibreglass of crown 150 with 28G perforated aluminium sheet as per specs.	Sqmt	2,000.00	450.00	900,000.00
35	NS35	Supplying, installing of external thermal insulation on ducts with approved sample of closed cell insulation class "O" rating, prelaminated with aluminium foil & density complete as per specifications.				
a	i	19mm thick insulation.	Sqmt	4,000.00	1,600.00	6,400,000.00
36	NS36	Acoustic insulation of rooms with 50 mm thick 32kg/cum density fibre glass with 24G perforated G.I sheet and frame work as per specifications.	Sqmt	500.00	1,115.00	557,500.00

37	NS37	Insulated flexible duct for supply air diffuser. Ducts to be hung stretched and not left sagging.				
a	a	250 mm dia	Rmt	10.00	550.00	5,500.00
b	b	200 mm dia	Rmt	500.00	500.00	250,000.00
c	c	150 mm dia	Rmt	520.00	475.00	247,000.00
38	NS38	Supply & Erection of Mixing box . Mixing Boxes to have projected notch for firmly fixing the diffuser. Supports to be included.	Nos	240.00	1,215.00	291,600.00
39	NS39	Factory fabricated, powder coated Double skin AHU construction plenum with acoustic Insulation of 50mm thick rigid fibreglass of 48kg/Cum density covered with RP tissue and 22G Al. Perforated Sheet. Appropriate Cutout to be made to connect the branch duct.	Sqmt	250.00	5,705.00	1,426,250.00
TOTAL OF DIFFUSER, GRILLES, DAMPERS						16,577,000.00
8	8					
40	NS40	TOILET EXHAUST	Nos	1.00	780,000.00	780,000.00
		Cabinet type, modular double skin Exhaust units with 25 mm thick panels complete with Fan section with forward curved DIDW centrifugal fan, fan motor, drive set with V-Belt drive, empty section and Aluminium louvers with bird screen for air outlet. The EUs shall be capable of handling 15600 CFM air at static pressure of 45mm WC.				
41	NS41	Cabinet type, modular double skin Exhaust units with 25 mm thick panels complete with Fan section with forward curved DIDW centrifugal fan, fan motor, drive set with V-Belt drive, empty section and Aluminium louvers with bird screen for air outlet. The EUs shall be capable of handling 2500 CFM air at static pressure of 45mm WC.	Nos	1.00	145,000.00	145,000.00
42	NS42	Toilet exhaust fans Supply, installation, testing and commissioning of Wall mounted / Duct Inline exhaust fans.				
		1000 CFM - (Toilet)	Nos	4.00	28,000.00	112,000.00
TOTAL OF TOILET EXHAUST						1,037,000.00
9	9	STAIR CASE PRESSURISATION UNITS				
43	NS43	Cabinet type, modular double skin air handling units with 25 mm thick panels complete with Fan section with forward curved DIDW centrifugal fan, fan motor, drive set with V-Belt drive, empty section and Aluminium louvers with bird screen for air outlet. The AHUs shall be capable of handling 14000 CFM air at static pressure of 45mm WC. (fire rate is 2 hrs.@250 'C)	Nos	1.00	710,000.00	710,000.00
44	NS44	Cabinet type, modular double skin air handling units with 25 mm thick panels complete with Fan section with forward curved DIDW centrifugal fan, fan motor, drive set with V-Belt drive, empty section and Aluminium louvers with bird screen for air outlet. The AHUs shall be capable of handling 7000 CFM air at static pressure of 45mm WC. (fire rate is 2 hrs.@250 'C)	Nos	2.00	350,000.00	700,000.00
STAIR CASE PRESSURISATION UNITS						1,410,000.00
TOTAL OF NON DSR HVAC WORKS						97,019,923.00