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KHOLONGCHHU HYDRO ENERGY LIMITED

A Joint Venture of Druk Green (Bhutan) & SJVN (India) Incorporated under the Companies Act of Kingdom of Bhutan,
2000

KHOLONGCHHU HYDROELECTRIC PROJECT (600 MW)



BIDDING DOCUMENT FOR

CONSTRUCTION OF BHU BUILDING & AUXILIARY WORK AT DOKSUM/KHITSHANG

TRASHIYANGTSE

TENDER NO.: INFRA – 2022-1

BILL OF QUANTITIES (ANNEXURE – III)

January, 2022

BILL OF QUANTITIES
Construction of BHU Building and Auxiliary Work at Doksum Town
Tender No.: INFRA 2022-1

Sl.No.	Item Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
				Figure	Words	
1	Clearing & Grubbing					
1.1	Clearing jungle including uprooting of vegetation & trees of girth <300mm & disposal within 50m of the site.	831.36	sq.m			
2	Earth work					
	Excavation in foundation trenches or drains, width <1.5m, area <10 sq.m in plan, depth >300mm including dressing and ramming, disposal of surplus soil within 50m lead & 1.5m lift.					
2.1	a) All kinds of soil	1,008.92	cu.m			
2.1.1	b) All Kinds of Rock with or without blasting	1,008.92	cu.m			
2.2	Filling of trenches, sides of foundations, areas to be raised etc. including compaction in layers < 200mm using selected excavated earth within lead 50m & 1.5m lift.	1,564.46	cu.m			
2.3	Providing and laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing.	179.80	cu.m			
3	Damp Proof Course					
3.1	Providing & laying 75mm thick sand bedding, including watering, ramming, dressing.	27.81	cu.m			
3.2	Providing and laying moisture barrier using plastic sheeting underlay -100 micro metre.	617.64	sq.m			
4	Stone Work					
4.1	Providing and laying dry hand packed stone soling/course aggregate filling with hard stone.	184.64	cu.m			
4.2	Random Rubble Masonry with hard stone in cement mortar 1:4 in foundation and plinth.	322.19	cu.m			
5	PCC work (excluding centering and shuttering)					
5.1	Providing and laying in position plain cement concrete - 1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	61.76	cu.m			



5.2	Providing and laying in position plain cement concrete 1:3:6 (1 cement : 3 sand : 6 graded crushed rock 40 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	143.34	cu.m		
5.3	Providing and laying in position plain cement concrete 1:3:6 (1 cement : 3 sand : 6 graded crushed rock 20 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	30.88	cu.m		
6	RCC work (excluding form work and reinforcement)				
6.1	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in foundation for footings and beams up to plinth.	179.77	cu.m		
6.2	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in columns, Pillars, posts above plinth up to roof.	38.20	cu.m		
6.3	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in beams, lintels, slabs, staircase above plinth up to roof.	0.55	cu.m		
6.4	Providing & laying in position reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) in suspended floor, roofs having slope upto 150, landings, balconies, shelves and chajjas upto floor five level excluding the cost of centering, shuttering and reinforcement.	0.55	cu.m		
6.5	Providing & laying in position reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) in walls (any thickness) including attached pilasters buttresses, piers, abutments etc. upto floor five level excluding the cost of centering, shuttering and reinforcement.	39.06	cu.m		
7	Steel reinforcement				
7.1	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete. (PERFECT THERMEX TMT or equivalent).	69,083.00	Kg		
8	Form Work				
8.1	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Foundation and plinth.	512.16	sq.m		
8.2	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Columns, Pillars, posts, etc. in superstructure with Phenol bonded ply shuttering.	382.00	sq.m		



8.3	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Beams, Lintels, Slabs, Landings, Staircases etc. in superstructure with Phenol bonded ply shuttering.	1,622.60	sq.m		
8.4	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Suspended floor, roof, landing, shelves and their supports, balconies, chajjas, etc.	2.13	sq.m		
8.5	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Walls, pilasters, buttresses, string course etc.	335.34	sq.m		
9	Coursed Rubble Masonry/Concrete Block Brick				
9.1	Providing & laying Coursed Rubble Masonry with hard stone hammer/machine dressed in foundation & plinth (In cement mortar 1:4) including superstructure above plinth level upto floor three level (including all lifts and heights) - 400mm thk.	156.72	cu.m		
9.2	Providing & laying concrete block brick in Foundation & Plinth in cement mortar 1:4 including superstructure above plinth level upto floor three level (including all lifts and heights) - 250mm & 150mm thk.	205.77	cu.m		
10	Doors & Windows				
10.1	Providing & fixing in position with timber (of mixed conifer) in window frames with aluminium window shutter including 6mm thick plain glass, 25mm diameter pelmet & curtain rod, tower bolt, handle and hook of eye, all three of 100mm, 100mm long hinges and 400mm long hold fast as per drawing, etc., complete - (inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).				
10.1.1	RW-01	4.00	Each		
10.1.2	RW-02	2.00	Each		
10.1.3	DW285	1.00	Each		
10.1.4	WA243	5.00	Each		
10.1.5	WA180	12.00	Each		
10.1.6	WA180a	1.00	Each		



10.1.7	WA100		7.00	Each			
10.1.8	WA100a		9.00	Each			
10.1.9	WA80		12.00	Each			
10.2	Providing & fixing in position with timber (of mixed conifer) in door frames including 30mm thick timber shutter, 100mm long hinges, 100mm long L-drop latch, 100mm long tower bolts, 125mm long door handle, door stopper and 400mm long hold fasts as per drawing, etc., complete. - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices)						
10.2.1	D135		2.00	Each			
10.2.2	D120		7.00	Each			
10.2.3	D100		23.00	Each			
10.2.4	D100a		2.00	Each			
10.2.5	D85		3.00	Each			
10.2.6	D85a		12.00	Each			
10.3	Providing & fixing in position with timber (of mixed conifer) in entrance porch complete (Inclusive of traditional wooden cornices, drey-zhu, kachen, etc., pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).						
11	Steel works						
11.1	Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and applying priming coat of red- In tubular sections. (BSTL Brand or equivalent)						
			11,230.65	kg			
11.2	Providing and fixing MS round hold-down bolts with nuts and washer plates, complete in all areas.						
			278.18	Kg			
11.3	Providing & fixing bolts of various sizes including nuts & washers, complete in all areas.						
			87.05	Kg			
11.4	Providing, making and fixing, M.S Gusset Plate, straps, flats, sole plates etc., complete in roof truss work.						
			1,377.14	Kg			



11.5	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 fittings the same with necessary stainless steel nuts and bolts complete that is fixing railing with necessary accessories and 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 engineers in charge	34.65	Mtr.		
12	Roofing				
12.1	Providing & fixing 0.5mm thick pre-painted Al-Zn alloy coated Steel roofing sheets of 24G in natural finish, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses of Colour Roof India Limited. (CRIL or equivalent)	1,026.72	sq.m		
12.2	Providing & fixing 600mm ridges or hips in Pre Painted Steel sheets, including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection- 25g. (CRIL or equivalent)	55.38	Mtr.		
12.3	Providing and fixing on wall face single socketed rigid PVC (Working Pressure 4kgf per sq.cm) rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion- complete - 90mm dia.	24.00	Mtr.		
12.4	Providing & fixing 180mm over all semi-circular plain G.I gutter, including brackets, bolts, nuts, washers & rain water pipes connections, excluding the cost of pipes.	103.50	Mtr.		
12.5	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed (for timber truss and purlins) - Mixed Conifer.	1.15	cu.m		
13	Flooring & Tiling Works				
13.1	Providing & laying 40mm thick marble chips flooring (mosiac flooring) top layer 6mm thick with white, black or black and white marble chips of nominal size 1.5-3mm in proportion 1:2 (cement: chips), on 34mm thick concrete base in cement concrete 1:2:4, 12.5mm aggregate (cement and marble powder mix shall be of the ratio 3 part of cement to 1 part of marble powder) - In White Cement.	14.75	sq.m		
13.2	Providing & fixing Terrazzo or Marble chips skirting < 300mm height top layer 6mm thick with white or black, black and white marble chips size 4mm in proportion 1:2, laid on 12.5mm thick cement plaster 1:3 base (for mosaic flooring).	0.32	sq.m		



13-3	Providing & laying marble stone flooring over 20mm thick base of cement mortar 1:4, jointed with grey cement slurry mixed with pigment where necessary, rubbing & polishing complete.	419.58	sq.m		
13-4	Providing and laying anti skid tiles (NITCO Brand or equivalent) of size 300x300mm in floors on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	61.83	sq.m		
13-5	Providing and laying ceramic tiles (NITCO Brand or equivalent) of size 300x300mm in walls on 10mm thick cement mortar of 1:3 finished with flush pointing in white cement.	189.97	sq.m		
13-6	Providing & fixing 300x300mm white/ coloured glazed tiles (NITCO Brand or equivalent) in flooring, treads of steps and landings laid on bed of 12mm thick cement mortar 1:3 finished with flush pointing in white cement.	532.43	sq.m		
13-7	Providing & fixing 150x150mm white/ coloured Glazed tiles (NITCO Brand or equivalent) in skirting, step risers, dado, finished with flush pointing in white cement.	71.49	sq.m		
14	Finishing				
14.1	Providing and laying 15mm thick cement plaster in cement mortar 1:4 in inside wall.	2,815.25	sq.m		
14.2	Providing and laying 12mm thick cement plaster in cement mortar 1:4 in ceiling.	873.70	sq.m		
14.3	Providing & laying 20mm cement plaster in cement mortar 1:4 in Staircase & Ramp.	62.99	sq.m		
14.4	Acrylic washable distemper (SWAGAT Brand or equivalent), two coats on new work, including cement primer coat - Inside wall and ceiling.	3,688.95	sq.m		
14.5	High gloss synthetic enamel (SWAGAT Brand or equivalent) for steel & wood work, two coats on new work - For Eaves Board.	59.84	sq.m		
15	External Works				
15.1	Providing & laying 50mm thick Plinth Protection and grouted with fine sand mix including well rammed, finishing the top smooth - With cement concrete 1:3:6, 20mm aggregates, laid over 75mm thick layer of compacted gravel.	269.00	sq.m		
15.2	Providing & fixing Plywood lining with necessary nails etc. including beading complete (excluding cost of frame) 6 mm, commercial.	243.34	sq.m		



15.3	Synthetic enamel (SWAGAT brand or equivalent), for steel & wood work, two coats on new work - for plywood lining.	243.34	sq.m		
15.4	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed (frames for the external ceiling) -Mixed Conifer.	3.42	cu.m		
15.5	Providing & fixing 12mm thick bison panel (pre-laminated both sides for wall/ceiling) lining with necessary nails/screws etc. complete, excluding the cost of frame - Eaves Board.	29.92	sq.m		
16	Plumbing Works				
16.1	Providing & laying G.I. pipes (PKM brand or equivalent) including G.I. fittings (excluding trenching, refilling & thrust block) - 32mm.	25.90	Mtr.		
16.2	Providing & laying G.I. pipes (PKM brand or equivalent) including G.I. fittings (excluding trenching, refilling & thrust block) - 25mm.	78.93	Mtr.		
16.3	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN 16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings excluding trenching, refilling but including testing of joints complete as per direction of Engineer-in- Charge. - 25mm. (FUSION brand or equivalent).	78.93	Mtr.		
16.4	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN-16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings including fixing pipe with clamps at 1.0m spacing. This includes testing of joints, cutting chases and making good the wall complete as per direction of Engineer-in- Charge. - 20mm. (FUSION brand or equivalent)	69.86	Mtr.		
16.5	Providing & fixing white vitreous flat back wash basin size 630x450mm with single 15mm c.p brass pillar taps, including C.I brackets, 15mm C.P brass pillar taps, c.p. chain & rubber plug, 32mm pvc waste, 32mm dia trap & union, repair walls. (SIMPOLO Brand or equivalent)	12.00	Each		
16.6	Providing & fixing European-type vitreous china w.c pedestal including coloured plastic seat and lid with c.p brass hinges, 10 lit white plastic cistern, fittings, brackets, repair walls. (SIMPOLO Brand or equivalent)	8.00	Each		
16.7	Providing & fixing Indian-type vitreous china w.c squatting pan, including 100 mm H.C.I P or S trap, 10 lit plastic cistern & fittings, repair walls, 580mm, colour Orissa-model. (SIMPOLO Brand or equivalent)	2.00	Each		



16.8	Providing & fixing 600x450mm bevelled edge mirror (superior glass) including 4mm A.C sheet base fixed to wooden cleats.	4.00	Each		
16.9	Providing & fixing 800x1200mm bevelled edge mirror (superior glass) including 4mm A.C sheet base fixed to wooden cleats.	4.00	Each		
16.10	Providing & Fixing C.P. brass toilet paper holder with necessary fittings. (Jaquar Brand or equivalent)	10.00	Each		
16.11	Providing & fixing brass stop cock -32mm. (Jaquar Brand or equivalent)	8.00	Each		
16.12	Providing and fixing c.p. brass bibcock- 15mm standard vertical, c.p. knob. (Jaquar Brand or equivalent)	10.00	Each		
16.13	Providing & fixing 2000 ltrs. plastic tank including all accessories complete. (RABTEN Brand or equivalent)	4.00	Each		
16.14	Constructing Brick masonry valve chamber in cement mortar 1:4, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 40mm aggregates, 12mm plaster in cement mortar 1:3 finished, Inside dimension 600 x 600mm & 400mm deep including C.I. cover & frame (weight >38 kg).	1.00	Each		
16.15	Providing & fixing Connecting Hose in WC cistern, Geyser, Wash Basin etc.	30.00	Each		
16.16	Providing & fixing pedestals for basins, white vitreous china, recessed back for pipes and necessary fittings. (SIMPOLO Brand or equivalent)	2.00	Each		
16.17	Providing & fixing Angle valves 20 mm.	30.00	Each		
16.18	Providing & fixing c.p. brass mixers, 15mm - For basin, single-hole, casted spout. (Jaquar Brand or equivalent)	4.00	Each		
16.19	Providing & fixing c.p. towel rail 600 x 20mm with c.p brass brackets fixed to wooden cleats. (Jaquar Brand or equivalent)	8.00	Each		
16.20	Providing & fixing Grab Rail/Hand Rail 600mm.	4.00	Each		
16.21	Providing & fixing Hinged Grab Rail.	2.00	Each		
16.22	Providing & fixing 25 litres Electric water heater including necessary fittings.	2.00	Each		
17	Sewerage Works				
17.1	Providing & laying H.D.P.E Pipes, 4 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) - 160mm dia.	80.18	Mtr.		



17.2	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 50mm dia.	26.18	Mtr.			
17.3	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 75mm dia.	16.46	Mtr.			
17.4	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 90mm dia.	13.88	Mtr.			
17.5	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 110mm dia.	16.46	Mtr.			
17.6	Providing & fixing P.V.C Long arm bend with door- 75mm dia.	6.00	Each			
17.7	Providing & fixing P.V.C Single Tee with door - 110mm dia.	6.00	Each			
17.8	Providing & fixing P.V.C Single Tee with door- 75 dia.	6.00	Each			
17.9	Providing & fixing P.V.C plain bend- 110mm dia.	6.00	Each			
17.10	Providing & fixing P.V.C plain bend- 90mm dia.	4.00	Each			
17.11	Providing & fixing P.V.C plain bend- 50mm dia.	6.00	Each			
17.12	Providing & fixing P.V.C Double Tee with door- 110mm dia.	4.00	Each			
17.13	Providing & fixing P.V.C Double Y, plain- 110mm dia.	2.00	Each			
17.14	Providing & fixing P.V.C Nahani Trap- 110mm inlet & 75mm outlet.	12.00	Each			
17.15	Constructing Brick masonry interception chamber in cement mortar 1:5, reinforced concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 40mm aggregates, 12mm plaster in cement mortar 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 20mm aggregates, neatly finished complete, inside dimension 900 x 800mm & 600mm deep including C.I. cover & frame (weight >38 kg) - Interception pit.	6.00	Each			
Total for BHU Building						
Total in Words:						



A. BHU Building (Electrical)		Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
Sl.No	WIRING				Figure	Word	
1	1.1	Providing & Wiring for light, fans, call bell and 2 pin light socket outlet with 1.5 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with 6A modular type switch, MS boxes including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equivalent)					
	1.1.1	Short Point	9.00	Point			
	1.1.2	Medium point	131.00	Point			
	1.1.3	Long point	129.00	Point			
	1.20	Providing & Wiring for 5/6 pin, 6/16 ampere plug point with 4 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with providing and fixing 5/6 pin, 6/16 ampere socket outlet and switch including earthing the third pin, connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equivalent)					
	1.2.1	Medium point	1.00	Point			
	1.2.1	Long point	92.00	Point			
	1.30	Providing & Wiring for points in excess length above long points with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equivalent)					
	1.3.1	2x1.5 sq.mm	220.00	Mtr			
	1.3.2	2x4 sqmm	685.00	Mtr.			
	1.40	Providing & Wiring for points in excess length above long points with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equivalent); - 2x2.5 sq.mm	684.00	Mtr.			



1.5.0	Providing & Wiring for sub-main with 1.1kV grade, PVC insulated copper conductor cable(RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment)					
1.5.1	4x10 sq.mm Cu. Cable	30.00	Mtr.			
1.5.2	4x16 sq.mm Cu. Cable	85.00	Mtr.			
2	FITTING & ACCESSORIES					
2.1	Supplying of light fittings complete set with all accessories as required, with lamp (Havells/HPL/Vinay or Equivalent).					
2.1.1	Cat No./LED Surface Ceiling Light(Round)/(Code-650027,18W	97.00	Each			
2.1.2	Cat No./LED Surface Ceiling Light(Round)/(Code-650024,6W	117.00	Each			
2.2	Cat No. LED Up-Down Wall Light(Outdoor)/(Code-680701,5W	4.00	Each			
2.3	Supplying of exhaust fan 240 volt A.C 1400 rpm with all accessories such as frame with arm 3 Nos., sweep 3 Nos., condenser and fan body etc. complete as required. - 300mm sweep	2.00	Each			
2.40	Supplying of ceiling fan 240 volt A.C 1400 rpm with all accessories such as down rod, sweep 3 Nos., canopy 2 Nos., condenser and fan body etc. complete as required. - 1200 mm sweep	48.00	Each			
3	CONTROL, SWITCHGEARS AND BUSBAR					
3.1	Supplying of panel moulded case circuit breaker (MCCB) with electronic release, breaking capacity 36KA, 4 pole 415 volt A.C complete with all accessories etc. as required(BSB Approved Make); - 250A	1.00	Each			
3.2	Supplying of Aluminium alloy/wrought aluminium busbar complete with all accessories etc. to accommodate in prefabricated MS cubical panel board as required(BSB Approved Make); - 4 strips, 600mm bar, 300A	1.00	Each			
3.3	Supply of miniature circuit breaker (MCB) single pole, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make)					
3.3-1	10A	15.00	Each			
3.3-2	20A	93.00	Each			



3-4	Supply of miniature circuit breaker (MCB) tripe pole & neutral, 415 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make)					
3-4.1	40A	2.00	Each			
3-4.2	63A	3.00	Each			
3-5	Supply & fixing of residual current circuit breaker (RCCB) 4 pole, sensitivity 100mA, 415 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make)					
3-5.1	40A	2.00	Each			
3-5.2	63A	3.00	Each			
3-6	Supply of TPN distribution board (DIN type, vertical) with acrylic door, 415 volt A.C complete with all accessories without MCB/isolator/RCCB out going or incoming etc. as required (BSB Approved Make)					
3-6.1	6 way	2.00	Each			
3-6.2	8 way	3.00	Each			
3-7	Design, fabrication, providing, erection, connection, testing & commissioning of cubical indoor, floor mounting type, sheet steel, clad dust, and vermin proof, I.P. - 54 protection (Indoor type) L.T. Panel Boards as per the provided in drawings, including 3 phase energy meter provision. The panel should be suitable for 440 Volts, 3 Phase, 4 Wire, 50 Hz, supply System. Complete with cable allays, bus BOTTOM cable entries as required, powder coated finish of approved shade etc. all as specified. with Schneider/ Legrand Make Components. Built by reputed panel manufacturer.	1.00	Set			
4	ERECTION/ INSTALLATION					
4-1	Erection of all indoor/outdoor surface type wall bracket (single or double)/ surface ceiling fittings GLS lamps/ bulk head GLS lamp / all types call bell / ail type picture or mirror lighting luminaries fittings with all accessories, fixing of lamp, testing etc. as required including connection with PVC insulated copper conductor, - 1.5 sq.mm single core cable 1.1 KV grade	218.00	Each			



4-2	Installation, testing and commissioning of exhaust fan upto 450mm sweep the existing opening including making the hole to suit the size of the indicated fan making good the damages, and connection with PVC insulated copper conductor, - 1.5 sq.mm single core cable 1.1 KV grade	2.00	Each		
4-3	Installation, testing and commissioning of all size ceiling fan and regulator including wiring the down rod of standard length upto 300mm with PVCinsulated copper conductor, - 1.5 sq.mm single core cable 1.1 KV grade	48.00	Each		
4-4	Installation, testing and commissioning of SP/DP miniature circuit breaker DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required, - 6/10/16/20A	108.00	Each		
4-5	Installation, testing & commissioning of aluminium alloy/wrought aluminium bus bar complete with all accessories accessories to accommodate in prefabricated MS cubical control panel board including connections etc. as required, - 4 strips, 600mm length, 300A	1.00	Each		
4-6	Installation, testing and commissioning of four pole moulded case circuit breaker (DIN type) breaking capacity 36/70K/earthleakage module complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required, - 250A, 415V	1.00	Each		
4-7	Installation, testing and commissioning of TPN/four pole miniature circuit breaker (DIN type) complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required				
4-7.1	40A, 415V	2.00	Each		
4-7.2	63A, 415V	3.00	Each		
4-8	Installation, testing and commissioning of TPN DB (DIN type, horizontal/vertical) with no door, metal door or acrylic door (double/single door) complete with all accessories to accommodate incoming RCCB FP 40/63A sensitivity 30/100/300mA and outgoing SP MCB 6/10/16A on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc. as required				
4-8.1	6 way	2.00	Each		
4-8.2	8 way	3.00	Each		



5	EARTHING					
5-1	Provide and install earthing with GEE slab 4' x 1' x 2" - 8 nos connected in series, including 25x4mm GI strip running upto DBs. Manufactured by Druk-Care GEE slab earthing system at Jimena, Thimphu or equivalent. For installation- visit website: www.drukcare.com	2.00	Set			
5-2	Providing and fixing lightning conductor including holes etc. complete as required, 25mm dia 300mm long G.I tube single prong at top with 85mm dia 6mm thick copper base plate	1.00	Each			
5-3	Providing and fixing metal strip on parapet or surface of wall/roof for lightning conductor as required for vertical run, 25x4mm G.I strip	53.00	Mtr.			
5	POWER CABLE					
5-1	Supplying of 4- Core 1.1KV grade PVC insulated and sheathed Aluminium conductor armoured power cables - 150 sq.mm	55.00	Mtr.			
5-2	Supplying of heavy duty brass single compression gland for 4- Core 1.1KV grade PVC insulated and sheathed Copper/ Aluminium conductor armoured/un-armoured power cables - 50mm dia, - 150sq.mm	2.00	Each			
5-3	Laying of one number PVC insulated and sheathed power cable copper/aluminium,armoured/un-armoured 1.1KV single core to four core direct in the ground including excavation, sand cushioning, protective covering and refilling the trenches etc. as required ; - Above 70sq.mm to 150sq.mm	55.00	Mtr.			
5-4	Installation, Testing and Commissioning of end termination with single/double compression gland for PVC insulated and sheathed aluminium/ copper conductor cable of 1.1KV grade including connections etc. as required - 45/50/55mm dia	2.00	Each			
6	TELEVISION NETWORK					
6.1	Provide and draw high density polythene insulated & sheathed copper conductor 0.5mm dia telephone wire in recessed HDPE pipe wiring system complete as required - 2 pair	360.00	Mtr			
6.2	Supplying & fixing of socket/regulator on existing metal box with fibre sheet cover (recessed or surface) including necessary cutting, connection testing etc.as required.- RJ 11 telephone socket	15.00	Each			
6.3	Supply, Installation, Testing and commissioning Powder coated Telephone Tag Box including with all accessories. - Supplying Telephone Terminal Cabinet (TTC)(SQCA Appd.)as required.	1.00	Each			



6.4	Supplying and fixing of HDPE pipe on recessed including all accessories such as screws, bends, elbows, Tees, corners, etc. complete as required - 25 mm	240.00	Mtr				
6.5	Providing and supplying of air Conditioning, Hitachi or equivalent 1.5 MT, Hot and Cold including wiring of cables and associated works such as painting, testing and commissioning	16.00	Each				
7	LIGHTING ARRESTOR						
7.1	25mm dia 900mm long copper tube four prong	1.00	Each				
7.2	GI tube with finial base plate with 85x6 mm copper strip ,25mm dia,300mm long.	1.00	Each				
8	Earthing for LA						
8.1	Providing and fixing of earthing including all accessories, machinery enclosure, C.I cover plate having locking arrangement, water pipe with excavation and refilling work including charcoal or coke and salt complete required as per standard earthing drawing - With copper earth plate 600x600x3mm.	1.00	Sets				
8.2	Providing and drawing wire for loop earthing in existing surface/recessed PVC/MSP steel conduit or casing capping or wooden batten along with other wires as required - 2.032mm (14 SWG) copper wire.	60.00	Mtr				
8.3	Providing and laying earth connection from earth electrodes in 15mm dia. GI pipe from earth electrode as required as per guidance of standard earthing drawing ... with 4.06mm dia (8SWG) copper wire.	60.00	Mtr				
Total for BHU Building							
Total in Words							
B	CARETAKER AND DRIVER'S QUARTER (CIVIL)						
SL.No.	Item Description	Quantity	Unit	Figure	Rate (Nu.)	Words	Amount (Nu.)
1	Clearing & Grubbing						
1.1	Clearing jungle including uprooting of vegetation & trees of girth <300mm & disposal within 50m of the site.	122.22	sq.m				
2	Earth work						
2.1	Excavation in foundation trenches or drains, width <1.5m, area <10 sq.m in plan, depth >300mm including dressing and ramming, disposal of surplus soil within 50m lead & 1.5m lift.						



2.1.1	a) All kinds of soil	47.97	cu.m			
2.1.2	b) All Kinds of Rock with or without blasting	47.97	cu.m			
2.2	Filling of trenches, sides of foundations, areas to be raised etc. including compaction in layers < 200mm using selected excavated earth within lead 50m & 1.5m lift.	25.36	cu.m			
2.3	Providing and laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing.	12.61	cu.m			
3	Damp Proof Course					
3.1	Providing & laying 75mm thick sand bedding, including watering, ramming, dressing.	6.30	cu.m			
3.2	Providing and laying moisture barrier using plastic sheeting underlay -100 micro metre.	84.05	sq.m			
4	Stone Work					
4.1	Providing and laying dry hand packed stone soling/course aggregate filling with hard stone.	23.51	cu.m			
4.2	Random Rubble Masonry with hard stone in cement mortar 1:4 in foundation and plinth.	43.03	cu.m			
5	Concrete work (excluding centering and shuttering)					
5.1	Providing and laying in position plain cement concrete 1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	8.41	cu.m			
5.2	Providing and laying in position plain cement concrete 1:3:6 (1 cement: 3 sand: 6 graded crushed rock 40mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	7.27	cu.m			
5.3	Providing and laying in position plain cement concrete:1:3:6 (1 cement: 3 sand: 6 graded crushed rock 20mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	4.20	cu.m			
6	RCC work (excluding form work and reinforcement)					
6.1	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in foundation for footings and beams up to plinth.	14.46	cu.m			



6.2	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in beams, lintels, slabs above plinth up to roof.	19.75	cu.m		
7	Steel reinforcement (providing & fixing including cutting, bending, binding and placing in position)				
7.1	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete. (PERFECT THERMEX TMT or equivalent)	3,529.00	Kg		
8	Form work (Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork)				
8.1	Foundation and plinth.	63.24	sq.m		
8.2	Beams, Lintels, Slabs, Landings, Staircases, Walls etc. in superstructure with Phenol bonded ply shuttering.	173.14	sq.m		
9	Coursed Rubble Masonry/Concrete Block Brick				
9.1	Providing & laying Coursed Rubble Masonry with hard stone hammer/machine-dressed in foundation & plinth (In cement mortar 1:4) including superstructure above plinth level upto floor three level (including all lifts and heights) - 400mm thick.	68.22	cu.m		
9.2	Providing & laying concrete block brick in Foundation & Plinth in cement mortar 1:4 including superstructure above plinth level upto floor three level (including all lifts and heights) - 250mm & 150mm thick.	35.19	cu.m		
10	Doors & Windows				
10.1	Providing & fixing in position with timber (of mixed conifer) in window frames including 6mm thick plain glass, 25mm diameter pelmet & curtain rod, tower bolt, handle and hook of eye, all three of 100mm, 100mm long hinges and 400mm long hold fast as per drawing, etc., complete - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).				
10.1.1	W/95	4.00	Each		
10.1.2	W/243	6.00	Each		
10.1.3	W/175	2.00	Each		



10.2	Providing & fixing in position with timber (of mixed conifer) in door frames including 30mm thick timber shutter, 100mm long hinges, 100mm long L-drop latch, 100mm long tower bolts, 125mm long door handle, door stopper and 400mm long hold fasts as per drawing, etc., complete. - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).						
10.2.1	DW240	2.00	Each				
10.2.2	D95	2.00	Each				
10.2.3	D85	2.00	Each				
10.2.4	D85a	2.00	Each				
11	Steel works						
11.1	Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and applying priming coat of red- In tubular sections. (BSTL Brand or equivalent)	2,070.53	Kg				
11.2	Providing and fixing MS round hold-down bolts with nuts and washer plates, complete in all areas.	106.54	Kg				
11.3	Providing & fixing bolts of various sizes including nuts & washers, complete in all areas.	22.32	Kg				
11.4	Providing, making and fixing, M.S Gusset Plate, straps, flats, sole plates etc., complete in roof truss work.	357.96	Kg				
12	Roofing						
12.1	Providing & fixing 0.5mm thick pre-painted Al-Zn alloy coated Steel roofing sheets of 24G in natural finish, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses of Colour Roof India Limited. (CRIL or equivalent)	178.60	sq.m				
12.2	Providing & fixing 600mm ridges or hips in Pre Painted Steel sheets, including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection - 25g. (CRIL or equivalent)	17.95	Mtr.				



12.3	Providing and fixing on wall face single socketed rigid PVC (Working Pressure 4kgf per sq.cm) rain water pipes including jointing with seal ring leaving 10mm gap for thermal expansion- complete - 90mm dia.	8.20	Mtr.		
12.4	Providing & fixing 180mm over all semi-circular plain PVC gutter, including brackets, bolts, nuts, washers & rain water pipes connections, excluding the cost of pipes.	35.90	Mtr.		
13	Wood Work				
13.1	Providing, making & fixing woodwork dressed in traditional cornices, kaws,zhu and other frames complete as per standard design in Mixed Conifer, including providing and fixing pre-laminated partical board, applying wood preservative and traditional painting (sumdang) on exposed surfaces with all necessary fittings and fixtures.	1.00	Each.		
14	Flooring & Tiling Works				
14.1	Providing and laying anti skid tiles (NITCO Brand or equivalent) of size 300x300mm in floors on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	19.52	sq.m		
14.2	Providing & fixing Anti-Skid tiles (NITCO Brand or equivalent), 300 x 150 mm in skirting, step risers, dado, finished with flush-pointing in white cement.	19.10	sq.m		
14.3	Providing and laying ceramic tiles (NITCO Brand or equivalent) of size 300x300mm in walls on 8mm thick cement mortar of 1:3 finished with flush pointing in white cement.	24.66	sq.m		
14.4	Providing and laying vitrified tiles (NITCO Brand or equivalent) 10mm thick (500x600) in floorings laid on a bed of 20mm thick cement mortar of 1:3 finished with flush pointing in white cement.	78.50	sq.m		
14.5	Providing and laying vitrified tiles (NITCO Brand or equivalent) in skirting (300x150) on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	11.60	sq.m		
14.6	Providing and laying Pre-Polished/ Polished Granite of approved quality and source in flooring using necessary cement bedding in cement mortar 1:4 upto 20 mm thick average cement slurry for fixing the tiles with required slopes, curing, cleaning, filling the joints with pigments of similar colour and at all levels with all leads and lifts etc. complete as per directions of site in-charge and as per pattern required, 20mm thick granite stone flooring over 20mm thick base of cement mortar 1:4.	6.32	sq.m		



14.7	Providing & laying marble stone flooring over 20mm thick base of cement mortar 1:4, jointed with grey cement slurry mixed with pigment where necessary, rubbing & polishing complete 20mm thick coloured marble.	8.67	sq.m		
15	Finishing				
15.1	Providing and laying 15mm thick cement plaster in cement mortar 1:4 in inside wall.	220.61	sq.m		
15.2	Providing and laying 12mm thick cement plaster in cement mortar 1:4 in ceiling.	74.60	sq.m		
15.3	Acrylic washable distemper (SWAGAT Brand or equivalent), two coats on new work, including cement primer coat - Inside wall and ceiling.	354.25	sq.m		
15.4	High gloss synthetic enamel (SWAGAT Brand or equivalent) for steel & wood work, two coats on new work - For Eaves Board.	30.29	sq.m		
16	External Works				
16.1	Providing & laying 50mm thick Plinth Protection and grouted with fine sand mix including well rammed, finishing the top smooth - With cement concrete 1:3:6, 20mm aggregates, laid over 75mm thick layer of compacted gravel.	103.00	sq.m		
16.2	Providing & fixing Plywood lining with necessary nails etc. including beading complete (excluding cost of frame) 6 mm, commercial.	79.23	sq.m		
16.3	Synthetic enamel (SWAGAT Brand or equivalent), for steel & wood work, two coats on new work - for plywood lining.	79.23	sq.m		
16.4	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed (frames for the external ceiling) -Mixed Conifer.	0.54	cu.m		
16.5	Providing & fixing 12mm thick bison panel (pre-laminated both sides for wall/ceiling) lining with necessary nails/screws etc. complete, excluding the cost of frame -Eaves Board.	15.15	sq.m		
17	Plumbing Works				
17.1	Providing & laying G.I. pipes (PKM Brand or equivalent) including G.I. fittings (excluding trenching, refilling & thrust block) - 32mm.	14.59	Mtr.		
17.2	Providing & laying G.I. pipes (PKM Brand or equivalent) including G.I. fittings (excluding trenching, refilling & thrust block) - 25mm.	34.81	Mtr.		



				14.59	Mtr.		
17.3	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN-16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings including fixing pipe with clamps at 1.0m spacing. This includes testing of joints, cutting chases and making good the wall complete as per direction of Engineer-in-Charge. - 20mm. (FUSION Brand or equivalent)						
17.4	Providing & fixing white vitreous china wash basin, including C.I brackets, 15mm C.P. brass pillar taps, c.p. chain & rubber plug, 32mm pvc waste, 32mm dia. trap & union, repair walls- Flat back wash basin 630x450mm with single 15mm c.p. brass pillar taps. (SIMPOLO Brand or equivalent)			2.00	Each.		
17.5	Providing & fixing pedestals for basins, white vitreous china, recessed back for pipes and necessary fittings. (SIMPOLO Brand or equivalent)			2.00	Each		
17.6	Providing & fixing Indian-type vitreous china w.c squatting pan, including 100 mm H.C.I P or S trap, 10 lit low level vitreous china cistern & fittings, repair walls, 580mm, colour Crissa-model. (SIMPOLO Brand or equivalent)			2.00	Each.		
17.7	Providing & fixing 600x450mm bevelled edge mirror (superior glass) incl.4mm A.C sheet base fixed to wooden cleats.			2.00	Each		
17.8	Providing & Fixing superior soap dish- including all necessary fixtures and fittings. including brackets, wooden cleats, c.p. brass screws.			2.00	Each		
17.9	Providing & Fixing toilet paper holder with necessary fittings. (C.P. brass). (Jaquar Brand or equivalent)			2.00	Each		
17.10	Providing & fixing brass full way valve with wheel - 32mm.			2.00	Each		
17.11	Providing & fixing angle valve, 20mm dia. (Jaquar Brand or equivalent)			6.00	Each		
17.12	Providing & fixing C.P. Brass shower fittings, Shower with revolving joint, 15mm. (Jaquar Brand or equivalent)			2.00	Each		
17.13	Providing & fixing C.P. brass mixers, 15mm ,For wall, non-telephonic type. (Jaquar Brand or equivalent)			2.00	Each		
17.14	Providing & fixing Kitchen Sinks including all connections and fittings, Stainless steel, 580 x 480 x 175 mm, single bowl. (SIMPOLA Brand or equivalent)			2.00	Each		
17.15	Providing & fixing C.P Brass pillar-cock -15mm, standard, c.p knob. (Jaquar Brand or equivalent)			2.00	Each		



17.16	Providing & fixing C.P. towel rail 600 x 20mm with c.p brass brackets fixed to wooden cleats. (Jaquar Brand or equivalent)	2.00	Each			
17.17	Providing & fixing stop cock - 32mm dia.	2.00	Each			
17.18	Providing & fixing connecting hose in wash basin or kitchen sink.	6.00	Each			
17.19	Providing & fixing 2000 litres. plastic tank including all accessories complete. (RABTEN Brand or equivalent)	1.00	Each			
17.2	Constructing Brick masonry valve chamber in cement mortar 1:4, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 (1 cement: 4 sand: 8 graded crushed rock 40mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished, inside dimension 600 x 600mm & 400mm deep including C.I. cover & frame (weight >38 kg).	1.00	Each			
18	Sewerage Works					
18.1	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) -50mm.	7.43	Mtr.			
18.2	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 75mm dia.	9.80	Mtr.			
18.3	Providing & laying H.D.P.E Pipes, 4 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) - 90mm.	4.00	Mtr.			
18.4	Providing & laying H.D.P.E Pipes, 4 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) - 110mm.	2.00	Mtr.			
18.5	Providing & laying H.D.P.E Pipes, 4 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) - 160mm.	35.85	Mtr.			
18.6	Providing & fixing P.V.C Nahani Trap - 110mm inlet & 75mm outlet.	4.00	Each			
18.7	Providing & fixing P.V.C door bend - 75mm Dia.	4.00	Each			
18.8	Providing & fixing P.V.C plain bend - 75mm.	4.00	Each			
18.9	Providing & fixing H.D.P.E Elbow - 110mm.	2.00	Each			



18.10	Constructing Brick masonry interception chamber in cement mortar 1:5, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 (1 cement: 4 sand: 8 graded crushed rock 40mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), neatly finished complete, Inside dimension 900 x 800mm & 450mm deep including C.I. cover & frame (weight >38 kg) - Interception pit.	5.00	Each					
Total for CARETAKER AND DRIVER'S QUARTER								
Total in Words;								
B. CARETAKER & DRIVER'S QUARTER (ELECTRICAL)								
Sl. No.	Description	Quantity	Unit	Figure	Rate (Nu.)	Word	Amount (Nu.)	
1	WIRING							
1.1	Providing & Wiring for light, fans, call bell and 2 pin light socket outlet with 1.5 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with 6A modular type switch, MS boxes including connections, painting, testing and commissioning etc. as required (Legrand/ schneider make or equipment)							
1.1.1	Short Point	2.00	Point					
1.1.2	Medium point	26.00	Point					
1.1.3	Long point	2.00	Point					
1.2	Providing & Wiring for 5/6 pin, 6/16 ampere plug point with 4 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with providing and fixing 5/6 pin, 6/16 ampere socket outlet and switch including earthing the third pin, connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment)							
1.2.1	Medium point	6.00	Point					
1.2.2	Long point	14.00	Point					



1.3	Providing & Wiring for points in excess length above long points with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required(Legrand/ Schneider make or equipment); -2X4 sq.mm	14.00	Mtr.		
1.4	Providing & Wiring for lighting circuit and lighting point with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required(Legrand/ Schneider make or equipment); - 2x2.5 sq.mm	58.00	Mtr.		
1.5	Providing & Wiring for sub-main with 1.1kV grade, PVC insulated copper conductor cable(RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment), ; 2x16 sq.mm cu cable	38.00	Mtr.		
2	FITTINGS AND ACCESSORIES				
2.1	Supplying of light fittings complete set with all accessories as required, with lamp (Philips/Havells/HPL/Minay or Equivalent).				
2.1.1	Cat No./LUMILINE Plus LED Tube/LUMILINEPLUS20WLED865PCSS, 20W	10.00	Each		
2.1.2	Cat No. LED Surface Ceiling Light(Round)/(Code-650024,6W	6.00	Each		
2.1.3	Cat No. LED Up-Down Wall Light(Indoor)/(Code-688576,6W	4.00	Each		
2.2	Supplying of prewired call bell 250 volt A.C with base, terminal block and all accessories complete; - Gong bell assembly	2.00	Each		
2.3	Supply, Installation and commissioning of single phase energy meter of suitable size after consulting BPC complete as required.	2.00	Job		
2.4	Supplying of ceiling fan 240 volt A.C 1400 rpm with all accessories such as down rod, sweep 3 Nos., canopy 2 Nos., condenser and fan body etc. complete as required; - 1200mm sweep	6.00	Each		
3	CONTROL SWITCHGEAR & BUSBAR				
3.1	Supplying of pre-fabricated MS busbar chamber with copper busbar complete with all accessories etc. as required(BSB Approved or equivalent Make), ; 4 strips, 450mm bar, 100A	1.00	Each		
3.2	Supplying of panel moulded case circuit breaker (MCCB) with electronic release, breaking capacity 25KA, 4 pole 415 volt A.C complete with all accessories etc. as required(BSB Approved or equivalent Make);:- 32A	1.00	Each		



3-3	Supply of miniature circuit breaker (MCB) single pole, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved or equivalent Make)						
3-3-1	10A	2.00	Each				
3-3-1	20A	18.00	Each				
3-4	Supply & Fixing of residual current circuit breaker (RCCB) double pole, sensitivity 100mA, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved or equivalentMake), ; - 25A	2.00	Each				
3-5	Supply of miniature circuit breaker (MCB) double pole, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved or equivalent Make); - 63A	2.00	Each				
3-6	Supply of SPN distribution board (DIN type) with arcylic door, 230 volt A.C complete with all accessories without MCB/isolator/RCCB out going or incoming etc. as required(BSB Approved or equivalent Make);; - 12 way	2.00	Each				
3-7	Providing and fixing of wooden frame structure appropriate with wire mesh duly approved by engineer in-charge for enclosing the MCB DB Box (distribution board) locking arrangement etc. as required	1.00	Set				
4	ERECTION /INSTALLATION						
4.1	Erection of all indoor/outdoor surface type wall bracket (single or double)/ surface ceiling fittings GLS lamps/ bulk head GLS lamp / all types call bell / all type picture or mirror lighting luminaries fittings with all accessories, fixing of lamp, testing etc. as required including connection with PVC insulated copper conductor;; - 1.5 sq.mm single core cable 1.1 KV grade	12.00	Each				
4.2	Installation, testing and commissioning of prewired fluorescent fittings of all surface type complete with all accessories and tubes directly on ceiling/wall as required including connection with PVC insulated copper conductor, ; - 1.5 sq.mm single core cable 1.1 KV grade	10.00	Each				
4.3	Installation, testing and commissioning of all size ceiling fan and regulator including wiring the down rod of standard length upto 300mm with PVCInsulated copper conductor;; - 1.5 sq.mm single core cable 1.1 KV grade	6.00	Each				



4.4	Installation, testing and commissioning of SP/DP miniature circuit breaker DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required; ; - 6/10/16/20A	20.00	Each		
4.5	Installation, testing and commissioning of SPN/DP miniature circuit breaker/ isolator DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required; - 50/63A	2.00	Each		
4.6	Installation, testing and commissioning of four pole moulded case circuit breaker (DIN type) breaking capacity 16/25K complete with all accessories to accommodate on/in prefabricated MS surface/MS cubical control panel board including drilling holes, connections etc as required; - 63A, 415V	1.00	Each		
4.7	Installation, testing and commissioning of prefabricated bus bar chamber with copper bus bar complete with all accessories including connections etc. as required; - 4 strips, 300/450mm length, 100A	1.00	Each		
4.8	Installation, testing and commissioning of SPN DB (DIN type, horizontal/vertical) with no door, metal door or arcylic door (double/single door) complete with all accessories to accommodate incoming RCCB DP 63A sensitivity 30/100/300mA and outgoing SP MCB 6/10/16A on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc. as required; - 10 way	2.00	Each		
5	EARTHING				
5.1	Provide and install earthing with GEE slab 4' x 1' x 2" -8 nos connected in series, including 25x4mm GI strip running upto DBs. Manufactured by Druk-Care GEE slab earthing system at Jimena, Thimphu or equivalent. For installation- visit website: www.drukcare.com	1.00	Set		
6	POWER CABLE				
6.1	Supplying of 4- Core 1.1KV grade PVC insulated and sheathed Aluminium conductor armoured power cables, ; - 10 sq.mm	150.00	Mtr.		
6.2	Supplying of heavy duty brass single compression gland for 4- Core 1.1KV grade PVC insulated and sheathed Copper/ Aluminium conductor armoured/un-armoured power cables; - 25mm dia, 10sq.mm	2.00	Each		



6.3	Laying of one number PVC insulated and sheathed power cable copper/aluminium,armoured/un-armoured 1.1KV single core to four core direct in the ground including excavation, sand cushioning, protective covering and refilling the trenches etc. as required,; - Above 6sq.mm to 25sq.mm	150.00	Mtr.		
6.4	Installation, Testing and Commissioning of end termination with single/double compression gland for PVC insulated and sheathed aluminium/ copper conductor cable of 1.1KV grade including connections etc. as required,; - 20/22/25mm dia	2.00	Each		
7	TELEVISION				
7.1	Supplying and drawing coaxial cable, RG6 in recessed HDPE pipe including necessary cutting, connection, testing etc. as required.	30.00	Mtr		
7.2	Supplying & fixing of socket/regulator on existing metal box with fibre sheet cover (recessed or surface) including necessary cutting, connection testing etc.as required,; - TV coaxial socket	2.00	Each		
7.3	Supply, Installation, Testing and commissioning Powder coated Telephone Tag Box including with all accessories,; - Supplying Television Terminal Cabinet (TTC)(SQCA Appd.)as required.	1.00	Each		
7.4	Supplying and fixing of HDPE pipe on recessed including all accessories such as screws, bends, elbows, Tees, corners, etc. complete as required,; - 25mm	20.00	Mtr		
8	Lighting Arrestor				
8.1	25mm dia 900mm long copper tube four prong	1.00	Each		
8.2	GI tube with finial base plate with 85x6 mm copper strip ,25mm dia,300mm long.	1.00	Each		
9	Earthing for LA				
9.1	Providing and fixing of earthing including all accessories, machinery enclosure, C.I cover plate having locking arrangement, water pipe with excavation and refilling work including charcoal or coke and salt complete required as per standard earthing drawing - With copper earth plate 600x600x3mm.	1.00	Sets		
9.2	Providing and drawing wire for loop earthing in existing surface/recessed PVC/MS/ steel conduit or casing capping or wooden batten along with other wires as required - 2.032mm (14 SWG) copper wire.	60.00	Mtr		
9.3	Providing and laying earth connection from earth electrodes in 15mm dia. GI pipe from earth electrode as required as per guidance of standard earthing drawing ... with 4.06mm dia (8SWG) copper wire.	60.00	Mtr		



Total for Caretaker and Driver's Quarter (Electrical)						
Total in Words;						
C	DOCTOR'S QUARTER (CIVIL)		Quantity	Unit	Rate (Nu.)	Amount (Nu.)
SL No.	Item Description				Figure	Words
1	Clearing & Grubbing					
1.1	Clearing jungle including uprooting of vegetation & trees of girth <300mm & disposal within 50m of the site.		247.84	sq.m		
2	Earth work					
2.1	Excavation in foundation trenches or drains, width <1.5m, area <10 sq.m in plan, depth >300mm including dressing and ramming, disposal of surplus soil within 50m lead & 1.5m lift.					
2.1.1	a) All kinds of soil		65.57	cu.m		
2.1.2	b) All Kinds of Rock with or without blasting		65.57	cu.m		
2.2	Filling of trenches, sides of foundations, areas to be raised etc. including compaction in layers < 200mm using selected excavated earth within lead 50m & 1.5m lifts.		108.67	cu.m		
2.3	Providing and laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing.		13.89	cu.m		
3	Damp Proof Course					
3-1	Providing & laying 75mm thick sand bedding, including watering, ramming, dressing.		6.95	cu.m		
3-2	Providing and laying moisture barrier using plastic sheeting underlay -100 micro metre.		137.68	sq.m		
4	Stone Work					
4-1	Providing and laying dry hand packed stone soling/course aggregate filling with hard stone.		28.91	cu.m		
4-2	Random Rubble Masonry with hard stone in cement mortar 1:4 in foundation and plinth.		47.08	cu.m		
5	Concrete work (excluding centering and shuttering)					
5-1	Providing and laying in position plain cement concrete 1:2:4 (1 cement :2 sand :4 graded crushed rock 20 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.		9.26	cu.m		



5.2	Providing and laying in position plain cement concrete 1:3:6 (1 cement :3 sand :6 graded crushed rock 40 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	7.20	cu.m		
5.3	Providing and laying in position plain cement concrete 1:3:6 (1 cement :3 sand :6 graded crushed rock 20 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	4.63	cu.m		
6	RCC work (excluding form work and reinforcement)				
6.1	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in foundation for footings and beams up to plinth.	10.69	cu.m		
6.2	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in columns, Pillars, posts above plinth up to roof.	0.94	cu.m		
6.3	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm aggregate nominal size) excluding form work and reinforcement in beams, lintels, slabs, staircase above plinth up to roof.	17.10	cu.m		
7	Steel reinforcement (providing & fixing including cutting, bending, binding and placing in position)				
7.1	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete. (PERFECT THERMEX TMT or equivalent)	5,835.10	Kg		
8	Form work (Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork)				
8.1	Foundation and plinth.	56.05	sq.m		
8.2	Beams, Lintels, Slabs, Landings, Staircases, Walls etc. in superstructure with Phenol bonded ply shuttering.	159.76	sq.m		
9	Coursed Rubble Masonry/Concrete Block Brick				
9.1	Providing & laying Coursed Rubble Masonry with hard stone hammer/machine-dressed in foundation & plinth (In cement mortar 1:4) including superstructure above plinth level upto floor three level (including all lifts and heights) - 400mm thick.	28.19	cu.m		
9.2	Providing & laying concrete block brick in Foundation & Plinth in cement mortar 1:4 including super-structure above plinth level upto floor three level (including all lifts and heights) - 250mm & 150mm thick.	37.66	cu.m		



10	Doors & Windows						
10.1	Providing & fixing in position with timber (of mixed conifer) in window frames with window shutter including 6mm thick plain glass, 25mm diameter pelmet & curtain rod, tower bolt, handle and hook of eye, all three of 100mm, 100mm long hinges and 400mm long hold fast as per drawing, etc., complete - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).						
10.1.1	W210	5.00	Each				
10.1.2	W160	1.00	Each				
10.2	Providing & fixing in position with timber (of mixed conifer) in window frames with window shutter including 6mm thick plain glass, 25mm diameter pelmet & curtain rod, tower bolt, handle and hook of eye, all three of 100mm, 100mm long hinges and 400mm long hold fast as per drawing, etc., complete - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).;- W95	3.00	Each				
10.3	Providing & fixing in position with timber (of mixed conifer) in door frames including 30mm thick timber snutter, 100mm long hinges, 100mm long L-drop latch, 100mm long tower bolts, 125mm long door handle, door stopper and 400mm long hold fasts as per drawing, etc., complete. - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).						
10.3.1	D130	1.00	Each				
10.3.2	D100	1.00	Each				
10.3.3	D95	3.00	Each				
10.3.4	D35	2.00	Each				
10.3.5	D35a	2.00	Each				



10.4	Providing, making & fixing woodwork dressed in traditional cornices, kaws,zhu and other frames complete as per standard design in Mixed Conifer, including providing and fixing pre-laminated partical board, applying wood preservative and traditional painting (sumdang) on exposed surfaces with all necessary fittings and fixtures.	1.00	Each		
11	Steel works				
11.1	Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and appl. priming coat of red- In tubular sections. (BSTL Brand or equivalent)	3,635.71	Kg		
11.2	Providing and fixing MS round hold-down bolts with nuts and washer plates, complete in all areas.	168.68	Kg		
11.3	Providing & fixing bolts of various sizes including nuts & washers, complete in all areas.	29.76	Kg		
11.4	Providing, making and fixing, M.S Gusset Plate, straps, flats, sole plates etc., complete in roof truss work.	479.16	Kg		
12	Roofing				
12.1	Providing & fixing 0.5mm thick pre-painted Al-Zn alloy coated Steel roofing sheets of 24G in natural finish, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses of Colour Roof India Limited. (CRIL or equivalent)	167.16	sq.m		
12.2	Providing & fixing 600mm ridges or hips in Pre Painted Steel sheets, including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection - 25g. (CRIL or equivalent)	56.57	Mtr.		
12.3	Providing and fixing on wall face single socketed rigid PVC (Working Pressure 4kgf per sq.cm) rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion- complete - 90mm dia.	18.42	Mtr.		
12.4	Providing & fixing 180mm over all semi-circular plain G.I gutter, including brackets, bolts, nuts, washers & rain water pipes connections, excluding the cost of pipes.	87.95	Mtr.		
13	Flooring & Tiling Works				
13.1	Providing & laying marble stone flooring over 20mm thick base of cement mortar 1:4, jointed with grey cement slurry mixed with pigment where necessary, rubbing & polishing complete.	11.23	sq.m		



13-2	Providing and laying vitrified tiles (NITCO Brand or equivalent) 10mm thick (600x600) in floorings laid on a bed of 20mm thick cement mortar of 1:3 finished with flush pointing in white cement.	23.70	sq.m			
13-3	Providing & fixing Pre-Fabricated Flooring Profiles in mixed conifer including necessary screws etc. complete - 30mm thick.	68.52	sq.m			
13-4	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed (frames for MC flooring) -Mixed Conifer.	0.40	cu.m			
13-5	Providing and laying anti skid tiles NITCO Brand or equivalent) of size 300x300mm in floorings on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	8.00	sq.m			
13-6	Providing and laying ceramic tiles (NITCO Brand or equivalent) of size 300x300mm in walls on 10mm thick cement mortar of 1:3 finished with flush pointing in white cement.	14.22	sq.m			
14	Finishing					
14.1	Providing and laying 15mm thick cement plaster in cement mortar 1:4 - Inside wall.	309.65	sq.m			
14.2	Providing and laying 12mm thick cement plaster in cement mortar 1:4 in ceiling	97.57	sq.m			
14.3	Acrylic washable distemper (SWAGAT Brand or equivalent), two coats on new work, including cement primer coat in inside wall and ceiling.	407.22	sq.m			
14.4	High gloss synthetic enamel (SWAGAT Brand or equivalent) for steel & wood work, two coats on new work - For Eaves Board.	40.46	sq.m			
15	External Works					
15.1	Providing & laying 50mm thick Plinth Protection and grouted with fine sand mix including well rammed, finishing the top smooth - With cement concrete 1:3:6, 20mm aggregates, laid over 75mm thick layer of compacted gravel.	131.97	sq.m			
15.2	Providing & fixing Plywood lining with necessary nails etc. including beading complete (excluding cost of frame) 6 mm, commercial.	110.33	sq.m			
15.3	Synthetic enamel (SWAGAT Brand or equivalent), for steel & wood work, two coats on new work - for plywood lining.	110.33	sq.m			



15.4	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed (frames for the external ceiling) -Mixed Conifer.	0.39	cu.m		
15.5	Providing & fixing 12mm thick bison panel (pre-laminated both sides for wall/ceiling) lining with necessary nails/screws etc. complete, excluding the cost of frame -Eaves Board.	112.50	sq.m		
16	Plumbing Works				
16.1	Providing & laying G.I. pipes (PKM Brand or equivalent) including G.I. fittings (excluding trenching, refilling & thrust block) 32mm.	11.08	Mtr.		
16.2	Providing & laying G.I. pipes (PKM Brand or equivalent) including G.I. fittings (excluding trenching, refilling & thrust block) - 25mm.	32.42	Mtr.		
16.3	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN-16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings including fixing pipe with clamps at 1.0m spacing. This includes testing of joints, cutting chases and making good the wall complete as per direction of Engineer-in-Charge. - 20mm. (FUSION Brand or equivalent)	8.63	Mtr.		
16.4	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN-16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings including fixing pipe with clamps at 1.0m spacing. This includes testing of joints, cutting chases and making good the wall complete as per direction of Engineer-in-Charge. - 25mm. (FUSION Brand or equivalent)	32.42	Mtr.		
16.5	Providing & fixing white vitreous china wash basin, including C.I brackets, 15mm C.P. brass pillar taps, c.p. chain & rubber plug, 32mm pvc waste, 32mm dia. trap & union, repair walls- Flat back wash basin 630x450mm with single 15mm c.p. brass pillar taps. (SIMPLO Brand or equivalent)	2.00	Each.		
16.6	Providing & fixing Kitchen Sinks including all connections and fittings, Stainless steel, 580 x 480 x 175 mm, single bowl. (SIMPLO Brand or equivalent)	1.00	Each.		
16.7	Providing & fixing European-type vitreous china w.c pedestal including coloured seat and lid with c.p brass hinges, 15 lit white vitreous china low level cistern, fittings, brackets, repair walls. (SIMPLO Brand or equivalent)	2.00	Each.		
16.8	Providing & fixing 600x450mm bevelled edge mirror (superior glass) incl.4mm A.C sheet base fixed to wooden cleats.	2.00	Each		



16.9	Providing & Fixing soap dish- including all necessary fixtures and fittings including brackets, wooden cleats, c.p. brass screws.	4.00	Each		
16.10	Providing & fixing c.p. towel rail 600 x 20mm with c.p brass brackets fixed to wooden cleats. (Jaquar Brand or equivalent)	2.00	Each		
16.11	Providing & Fixing c.p. toilet paper holder with necessary fittings. (Jaquar Brand or equivalent)	2.00	Each		
16.12	Providing & fixing brass full way valve with wheel - 32mm.	2.00	Each		
16.13	Providing & fixing stop cock, 32mm dia. (Jaquar Brand or equivalent)	4.00	Each		
16.14	Providing & fixing angle valve, 20mm dia. (Jaquar Brand or equivalent)	4.00	Each		
16.15	Providing & fixing c.p. Brass shower fittings, Shower with revolving joint, 15mm. (Jaquar Brand or equivalent)	2.00	Each		
16.16	Providing & fixing connecting hose in wash basin or kitchen sink.	4.00	Each		
16.17	Providing & fixing 2000 liters plastic tank including all accessories complete. (KABTEN Brand or equivalent)	2.00	Each		
16.18	Providing and fixing bath tubs with fittings and accessories complete - Porcelain, white enamelled, with a pair of 20mm C.P pillar tap, 40mm C.P brass waste, 32mm C.P brass over flow, rubber plug, 40mm C.P trap etc. (SIMPLO Brand or equivalent)	1.00	Each		
16.19	Constructing Brick masonry valve chamber in cement mortar 1:4, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 (1 cement: 4 sand: 8 graded crushed rock 40mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished, inside dimension 600 x 600mm & 400mm deep including C.I. cover & frame (weight >38 kg).	1.00	Each		
17	Sewerage Works				
17.1	Providing & laying H.D.P.E Pipes, 4 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) -110mm.	12.76	Mtr.		
17.2	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 50mm.	7.43	Mtr.		



17.3	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 75mm.	0.80	Mtr.			
17.4	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 90mm.	2.90	Mtr.			
17.5	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 110mm.	4.65	Mtr.			
17.6	Providing & fixing P.V.C Nahani Trap - 110mm inlet & 75mm outlet.	2.00	Each			
17.7	Providing & fixing P.V.C plain bend - 75mm.	3.00	Each			
17.8	Providing & fixing P.V.C plain bend - 110mm.	3.00	Each			
17.9	Constructing Brick masonry interception chamber in cement mortar 1:5, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 (1 cement: 4 sand: 8 graded crushed rock 40mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), neatly finished complete, inside dimension 900 x 800mm & 600mm deep including C.I. cover & frame (weight >38 kg) - Interception pit.	3.00	Each			
Total for DOCTOR'S QUARTER (Civil)						
Total in Words;						
C. DOCTOR'S QUARTER (ELECTRICAL)						
Sl.No	Description	Quantity	Unit	Figure	Rate (Nu.)	Amount(Nu.)
1	WIRING				Word	



1.1	Providing & Wiring for light, fans, call bell and 2 pin light socket outlet with 1.5 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with 6A modular type switch, MS boxes including connections, painting, testing and commissioning etc. as required (Legrand/ schneider make or equipment)				
1.1.1	Short Point	3.00	Point		
1.1.2	Medium point	21.00	Point		
1.1.3	Long point	4.00	Point		
1.2	Providing & Wiring for 5/6 pin, 6/16 ampere plug point with 4 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with providing and fixing 5/6 pin, 6/16 ampere socket outlet and switch including earthing the third pin, connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment)				
1.2.1	Medium point	3.00	Point		
1.2.2	Long point	12.00	Point		
1.3	Providing & Wiring for points in excess length above long points with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment), ; - 2x4 sq.mm	60.00	Mtr.		
1.4	Providing & Wiring for lighting circuit and lighting point with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment), ; - 2x2.5 sq.mm	115.00	Mtr.		
2	FITTINGS & ACCESSORIES				
2.1	Supplying of light fittings complete set with all accessories as required, with lamp (Havells/HPL/Minay or Equivalent).				
2.1.1	Cat No./LUMILINE Plus LED Tube/LUMILINEPLUS20WLED865SPCSS, 20W	8.00	Each		
2.1.2	Cat No. LED Surface Ceiling Light(Round)/(Code-650024,6W	7.00	Each		



2.1.3	Cat No. LED Up-Down Wall Light(Indoor)/(Code-688576,6W	5.00	Each		
2.1.4	Cat No. LED Up-Down Wall Light(Outdoor)/(Code-680701,5W	1.00	Each		
2.2	Supply, Installation and commissioning of three phase energy meter of suitable size after consulting BPC complete as required.	1.00	Job		
2.3	Supplying of prewired call bell 250 volt A.C with base, terminal block and complete with all accessories.; - Gong bell assembly	1.00	Each		
2.4	Supplying of ceiling fan 240 volt A.C 1400 rpm with all accessories such as down rod, sweep 3 Nos., canopy 2 Nos., condenser and fan body etc. complete as required				
2.4.1	1200mm sweep	5.00	Each		
2.4.2	1400mm sweep	1.00	Each		
3	CONTROL, SWITCHGEARS & BUSBAR				
3.1	Supplying of panel moulded case circuit breaker (MCCB) with electronic release, breaking capacity 25KA, 4 pole 415 volt A.C complete with all accessories etc. as required(BSB Approved Make); - 63A	1.00	Each		
3.2	Supply of miniature circuit breaker (MCB) single pole, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make)				
3.2.1	10A	3.00	Each		
3.2.2	20A	15.00	Each		
3.3	Supply & Fixing of residual current circuit breaker (RCCB) 4 pole, sensitivity 30mA/100mA, 415 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make); - 32 A	1.00	Each		
3.4	Supply of TPN distribution board (DIN type, vertical) with acrylic door, 415 volt A.C complete with all accessories without MCB/isolator/RCCB out going or incoming etc. as required (BSB Approved Make); - 6 way	1.00	Each		
3.5	Providing and fixing of wooden frame structure appropriate with wire mesh duly approved by engineer in-charge for enclosing the MCB DB Box (distribution board) locking arrangement etc. as required	1.00	Set		
4	ERECTION /INSTALLATION				



4.1	Erection of all indoor/outdoor surface type wall bracket (single or double) surface ceiling fittings GLS lamps/ bulk head GLS lamp / all types call bell / all type picture or mirror lighting luminaries fittings with all accessories, fixing of lamp, testing etc. as required including connection with PVC insulated copper conductor;; - 1.5 sq.mm single core cable 1.1 KV grade	14.00	Each		
4.2	Installation, testing and commissioning of prewired fluorescent fittings of all surface type complete with all accessories and tubes directly on ceiling/wall as required including connection with PVC insulated copper conductor, ; - 1.5 sq.mm single core cable 1.1 KV grade, ; - 1.5 sq.mm single core cable 1.1 KV grade	8.00	Each		
4.3	Installation, testing and commissioning of all size ceiling fan and regulator including wiring the down rod of standard length upto 300mm with PVC insulated copper conductor ; - 1.5 sq.mm single core cable 1.1 KV grade	5.00	Each		
4.4	Installation, testing and commissioning of SP/DP miniature circuit breaker DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required;; - 6/10/16/20A	15.00	Each		
4.5	Installation, testing and commissioning of four pole moulded case circuit breaker (DIN type) breaking capacity 16/25K complete with all accessories to accommodate on/in prefabricated MS surface/MS cubical control panel board including drilling holes, connections etc as required, ; - 63A, 415V	1.00	Each		
4.6	Installation, testing and commissioning of TPN DB (DIN type, horizontal/vertical) with no door, metal door or arcylic door (double/single door) complete with all accessories to accommodate incoming RCCB FP 40/63A sensitivity 30/100/300mA and outgoing SP MCB 6/10/16A on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc. as required, ; - 6way	1.00	Each		
5	EARTHING				
5.1	Provide and install earthing with GEE slab 4' x 1' x 2" - 8 nos connected in series, including 25x4mm GI strip running upto DBs. Manufactured by Druk-Care GEE slab earthing system at Jimena, Thimphu or equivalent. For installation visit website: www.drukcare.com	1.00	Set		
6	POWER CABLE				
6.1	Supplying of 4- Core 1.1KV grade PVC insulated and sheathed Aluminium conductor armoured power cables;; - 10 sq.mm	75.00	Mtr.		



6.2	Supplying of heavy duty brass single compression gland for 4- Core 1.1KV grade PVC insulated and sheathed Copper/ Aluminium conductor armoured/un-armoured power cables.; - 25mm dia, 10sq.mm	2.00	Each		
6.3	Laying of one number PVC insulated and sheathed power cable copper/aluminium,armoured/un-armoured 1.1KV single core to four core direct in the ground including excavation, sand cushioning, protective covering and refilling the trenches etc. as required.; - Above 6sq.mm to 25sq.mm	75.00	Mtr.		
6.4	Installation, Testing and Commissioning of end termination with single/double compression gland for PVC insulated and sheathed aluminium/ copper conductor cable of 1.1KV grade including connections etc. as required, ; - 20/22/25mm dia	2.00	Each		
7	TELEVISION NETWORK				
7.1	Supplying and drawing coaxial cable, RG6 in recessed HDPE pipe including necessary cutting, connection, testing etc. as required.	60.00	Mtr		
7.2	Supplying & fixing of socket/regulator on existing metal box with fibre sheet cover (recessed or surface) including necessary cutting, connection testing etc.as required.; - TV coaxial socket	4.00	Each		
7.3	Supply, Installation, Testing and commissioning Powder coated Telephone Tag Box including with all accessories.; - Supplying Television Terminal Cabinet (TTC)(SQCA Appd.)as required.	1.00	Each		
7.4	Supplying and fixing of HDPE pipe on recessed including all accessories such as screws, bends, elbows, Tees, corners, etc. complete as required, ; - 25mm	45.00	Mtr		
7.5	Providing and supplying of air Conditioning, Hitachi or equivalent 1.5 MT , Hot and Cold including wiring of cables and associated works such as painting, testing and commissioning	2.00	Each		
8	LIGHTING ARRESTOR				
8.1	25mm dia 900mm long copper tube four prong	1.00	Each		
8.2	GI tube with finial base plate with 85x6 mm copper strip ,25mm dia,300mm long.	1.00	Each		
9	Earthing for LA				



9.1	Providing and fixing of earthing including all accessories, machinery enclosure, C.I cover plate having locking arrangement, water pipe with excavation and refilling work including charcoal or coke and salt complete required as per standard earthing drawing - With copper earth plate 600x600x3mm.	1.00	Sets			
9.2	Providing and drawing wire for loop earthing in existing surface/recessed PVC/MS/ steel conduit or casing capping or wooden batten along with other wires as required - 2.032mm (14 SWG) copper wire.	60.00	Mtr			
9.3	Providing and laying earth connection from earth electrodes in 15mm dia. GI pipe from earth electrode as required as per guidance of standard earthing drawing ... with 4.06mm dia (8SWG) copper wire.	60.00	Mtr			
Total for Doctor's Quarter (Electrical)						
Total in Words;						
D	LAUNDRY AND KITCHEN (CIVIL)					
SL.No.	Item Description	Quantity	Unit	Figure	Rate (Nu.)	Amount (Nu.)
1	Clearing & Grubbing					
1.1	Clearing jungle including uprooting of vegetation & trees of girth <300mm & disposal within 50m of the site.	243.20	sq.m			
2	Earth work					
2.1	Excavation in foundation trenches or drains, width <1.5m, area <10 sq.m in plan, depth >300mm including dressing and ramming, disposal of surplus soil within 50m lead & 1.5m lift.					
2.1.1	a) All kinds of soil	53.04	cu.m			
2.1.2	b) All Kinds of Rock with or without blasting	53.04	cu.m			
2.2	Filling of trenches, sides of foundations, areas to be raised etc. including compaction in layers < 200mm using selected excavated earth within lead 50m & 1.5m lift.	42.50	cu.m			



2.3	Providing and laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing.	21.47	cu.m		
3	Damp Proof Course				
3.1	Providing & laying 75mm thick sand bedding, including watering, ramming, dressing.	5.37	cu.m		
3.2	Providing and laying moisture barrier using plastic sheeting underlay -100 micro metre.	104.51	sq.m		
4	Stone Work				
4.1	Providing and laying dry hand packed stone soling/course aggregate filling with hard stone.	24.35	cu.m		
4.2	Random Rubble Masonry with hard stone in cement mortar 1:4 in foundation and plinth.	39.04	cu.m		
5	Concrete work (excluding centering and shuttering)				
5.1	Providing and laying in position plain cement concrete 1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	8.11	cu.m		
5.2	Providing and laying in position plain cement concrete 1:3:6 (1 cement : 3 sand : 6 graded crushed rock 40 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	6.89	cu.m		
5.3	Providing and laying in position plain cement concrete 1:3:6 (1 cement : 3 sand : 6 graded crushed rock 20 mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	4.05	cu.m		
6	RCC work (excluding form work and reinforcement)				
6.1	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm nominal size aggregates) excluding form work and reinforcement in foundation for footings and beams up to plinth.	8.17	cu.m		
6.2	Providing & laying in position reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm nominal size aggregates) in walls (any thickness) including attached pilasters buttresses, piers, abutments etc. upto floor five level excluding the cost of centering, shuttering and reinforcement.	10.41	cu.m		



6.3	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm nominal size aggregates) excluding form work and reinforcement in columns, Pillars, posts above plinth up to roof.	1.38	cu.m		
6.4	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm nominal size aggregates) excluding form work and reinforcement in beams, lintels, slabs, staircase above plinth up to roof.	10.41	cu.m		
7	Steel reinforcement (providing & fixing Including cutting, bending, biriding and placing in position)				
7.1	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, biriding and placing in position complete. (PERFECT THERMEX TMT or equivalent)	5,527.87	Kg		
8	Form work (Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork)				
8.1	Foundation and plinth.	34.59	sq.m		
8.2	Columns, Pillars, posts, etc. in superstructure with Phenol bonded ply shuttering.	15.75	sq.m		
8.3	Beams, Lintels, Slabs, Landings, Staircases, Walls etc. in superstructure with Phenol bonded ply shuttering.	191.50	sq.m		
9	Coursed Rubble Masonry/Concrete Block Brick				
9.1	Providing & laying Coursed Rubble Masonry with hard stone hammer/machine-dressed in foundation & plinth (In cement mortar 1:4) including superstructure above plinth level upto floor three level (including all lifts and heights) - 400mm thick.	43.06	cu.m		
9.2	Providing & laying concrete block brick in Foundation & Plinth in cement mortar 1:4 including superstructure above plinth level upto floor three level (including all lifts and heights) - 250mm & 150mm thick.	15.71	cu.m		
10	Doors & Windows				



10.1	Providing & fixing in position with timber (of mixed conifer) in window frames with window shutter including 6mm thick plain glass, 25mm diameter pelmet & curtain rod, towerbolt, handle and hook of eye, all three of 100mm, 100mm long hinges and 400mm long hold fast as per drawing, etc., complete - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).				
10.1.1	V/175	2.00	Each		
10.1.2	V/95	6.00	Each		
10.2	Providing & fixing in position with timber (of mixed conifer) in door frames including 30mm thick timber shutter, 100mm long hinges, 100mm long L-drop latch, 100mm long tower bolts, 125mm long door handle, door stopper and 400mm long hold fasts as per drawing, etc., complete. - (Inclusive of traditional wooden cornices, pink primer in woodworks and painting works of Sumdang 'Rab' quality in traditional cornices).				
10.2.1	D100	3.00	Each		
10.2.2	D85	2.00	Each		
11	Steel works				
11.1	Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and applying priming coat of red- In tubular sections. (BSTL Brand or equivalent)	1,308.56	Kg		
11.2	Providing and fixing MS round hold-down bolts with nuts and washer plates, complete in all areas.	43.15	Kg		
11.3	Providing & fixing bolts of various sizes including nuts & washers, complete in all areas.	10.42	Kg		
11.4	Providing, making and fixing, M.S Gusset Plate, straps, flats, sole plates etc., complete in roof truss work.	275.25	Kg		
12	Roofing				
12.1	Providing & fixing 0.5mm thick pre-painted Al-Zn alloy coated Steel roofing sheets of 24G in natural finish, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses of Colour Roof India Limited. (CRIL or equivalent)	120.12	sq.m		



12.2	Providing & fixing 600mm ridges or hips in Pre Painted Steel sheets, including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection - 25g. (CRIL or equivalent)	13.65	Mtr.		
12.3	Providing and fixing on wall face single socketed rigid PVC (Working Pressure 4kgf per sq.cm) rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion- complete -90mm.	15.00	Mtr.		
12.4	Providing & fixing 180mm over all semi-circular plain PVC gutter, including brackets, bolts, nuts, washers & rain water pipes connections, excluding the cost of pipes.	89.80	Mtr.		
13	Flooring & Tiling Works				
13-1	Providing and laying anti skid tiles (NITCO Brand or equivalent) of size 300x300mm in floors on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	64.63	sq.m		
13-2	Providing and laying ceramic tiles (NITCO Brand or equivalent) of size 300x300mm in walls on 10mm thick cement mortar of 1:3 finished with flush pointing in white cement.	8.73	sq.m		
13-3	Providing and laying Pre-Polished/ Polished Granite of approved quality and source in flooring using necessary cement bedding in cement mortar 1:4 upto 20 mm thick average cement slurry for fixing the tiles with required slopes, curing, cleaning, filling the joints with pigments of similar colour and at all levels with all leads and lifts etc. complete as per directions of site in-charge and as per pattern required.	8.01	sq.m		
14	Finishing				
14-1	Providing and laying 15mm thick cement plaster in cement mortar 1:4 in inside wall.	112.34	sq.m		
14-2	Providing and laying 12mm thick cement plaster in cement mortar 1:4 in ceiling	106.62	sq.m		
14-3	Acrylic washable distemper (SWAGAT Brand or equivalent), two coats on new work, including cement primer coat in inside wall and ceiling.	218.97	sq.m		
14-4	High gloss synthetic enamel (SWAGAT Brand or equivalent) for steel & wood work, two coats on new work - For Eaves Board	20.33	sq.m		
15	External Works				



15.1	Providing & laying 50mm thick Plinth Protection and grouted with fine sand mix including well rammed, finishing the top smooth - With cement concrete 1:3:6 (1 cement: 3 sand: 6 graded crushed rock 20mm nominal size aggregates), laid over 75mm thick layer of compacted gravel.	126.54	sq.m			
15.2	Providing & fixing Plywood lining with necessary nails etc. including beading complete (excluding cost of frame) 6 mm, commercial.	40.99	sq.m			
15.3	Synthetic enamel (SWAGAT Brand or equivalent), for steel & wood work, two coats on new work - for plywood lining.	40.99	sq.m			
15.4	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed (frames for the external ceiling) -Mixed Conifer.	2.47	cu.m			
15.5	Providing & fixing 12mm thick bison panel (pre-laminated both sides for wall/ceiling) lining with necessary nails/screws etc. complete, excluding the cost of frame -Eaves Board.	10.16	sq.m			
15.6	Constructing second class brick masonry open surface drain in cement mortar 1:4 including earth work in excavation 100 mm thick concrete bed 1:5:10 (1 cement: 5 sand: 10 graded crushed rock 40mm nominal size aggregates) and 25mm thick cement concrete 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 12 mm nominal size aggregates) for filling haunches including 12mm cement plastering 1:4 with a floating coat of neat cement and disposal of surplus earth etc. complete - 250mm x 300mm depth.	15.80	Mtr.			
16	Plumbing Works					
16.1	Providing & laying G.I. pipes (PKM Brand or equivalent) including G.I. fittings (excluding trenching, refilling & thrust block) - 32mm.	25.10	Mtr.			
16.2	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN 16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings excluding trenching, refilling but including testing of joints complete as per direction of Engineer-in-Charge. - 25mm. (FUSION Brand or equivalent)	4.02	Mtr.			



16.3	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN-16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings including fixing pipe with clamps at 1.0m spacing. This includes testing of joints, cutting chases and making good the wall complete as per direction of Engineer-in-Charge. - 20mm. (FUSION Brand or equivalent)	5.20	Mtr.		
16.4	Providing & fixing Kitchen Sinks including all connections and fittings, Stainless steel, 580 x 480 x 175 mm, single bowl. (SIMPOLO Brand or equivalent)	4.00	Each		
16.5	Providing & fixing stop cock- 32mm dia. (Jaquar Brand or equivalent)	2.00	Each		
16.6	Providing & fixing angle valve, 20mm dia. (Jaquar Brand or equivalent)	2.00	Each		
16.7	Providing & fixing connecting hose in wash basin or kitchen sink.	2.00	Each		
16.8	Providing & fixing 2000 litres plastic tank including all accessories complete. (RABTEN Brand or equivalent)	2.00	Each		
16.9	Constructing Brick masonry valve chamber in cement mortar 1:4, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 (1 cement: 4 sand: 8 graded crushed rock 40mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished, inside dimension 600 x 600mm & 400mm deep including C.I. cover & frame (weight > 38 kg).	1.00	Each		
17	Sewerage Works				
17.1	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 50mm.	6.09	Mtr.		
17.2	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 75mm.	2.61	Mtr.		
17.3	Providing & fixing P.V.C Nahani Trap - 110mm inlet & 75mm outlet.	1.00	Each		
17.4	Providing & fixing P.V.C door bend - 75mm.	2.00	Each		
				Total for LAUNDRY & KITCHEN (Civil)	



Total in Words;						
D Sl.No	LAUNDRY AND KITCHEN (ELECTRICAL) Description	Quantity	Unit	Rate(Nu.)		Amount (Nu.)
				Figure	Word	
1	WIRING					
1.1	Providing & Wiring for light, fans, call bell and 2 pin light socket outlet with 1.5 sq.mm 1.1kV grade, PVC insulated copper conductor cable(RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with 6A modular type switch, MS boxes including connections, painting, testing and commissioning etc. as required (Legrand/ schneider make or equipment)					
1.1.2	Short Point	5.00	Point			
1.1.3	Medium point	10.00	Point			
1.1.4	Long point	2.00	Point			
1.2	Providing & Wiring for 5/6 pin, 6/16 ampere plug point with 4 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with providing and fixing 5/6 pin, 6/16 ampere socket outlet and switch including earthing the third pin, connections, painting, testing and commissioning etc. as required(Legrand/ Schneider make or equipment), ; - Long point	10.00	Point			
1.3	Providing & Wiring for points in excess length above long points with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required(Legrand/ Schneider make or equipment), ; - 2x4 sqmm	56.00	Mtr.			
1.4	Providing & Wiring for lighting circuit and lighting point with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required(Legrand/ Schneider make or equipment), ; - 2x2.5 sq.mm	54.00	Mtr.			
2	FITTINGS & ACCESSORIES					



2.1	Supplying of light fittings complete set with all accessories as required, with lamp (Havells/HPL/Minay or Equivalent).					
2.1.1	Cat No./LUMILINE Plus LED Tube/LUMILINEPLUSB20WLED865SPCSS, 20W	9.00	Each			
2.1.2	Cat No. LED Up-Down Wall Light(Outdoor)(Code-680701,6W	3.00	Each			
2.2	Supplying of ceiling fan 240 volt A.C 1400 rpm with all accessories such as down rod, sweep 3 Nos., canopy 2 Nos., condenser and fan body etc. complete as required					
2.2.1	1200mm sweep	3.00	Each			
2.2.2	1400mm sweep	2.00	Each			
3	CONTROL, SWITCHGEARS & BUSBAR					
3.1	Supply of miniature circuit breaker (MCB) single pole, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make)					
3.1.1	10A	1.00	Each			
3.1.2	20A	10.00	Each			
3.2	Supplying of panel moulded case circuit breaker (MCCB) with electronic release, breaking capacity 25KA, 4 pole 415 volt A.C complete with all accessories etc. as required(BSB Approved Make), ; - 32A	1.00	Each			
3.3	Supply & Fixing of residual current circuit breaker (RCCB) double pole, sensitivity 100mA, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required, ; - 25A	1.00	Each			
3.4	Supply of SPN distribution board (DIN type) with acrylic door, 230 volt A.C complete with all accessories without MCB/isolator/RCCB out going or incoming etc. as required, ; 12 way	1.00	Each			
3.5	Providing and fixing of wooden frame structure appropriate with wire mesh duly approved by engineer in-charge for enclosing the MCB DB Box (distribution board) locking arrangement etc. as required	1.00	Set			
4	ERECTION / INSTALLATION					



4.1	Erection of all indoor/outdoor surface type wall bracket (single or double)/ surface ceiling fittings GLS lamps/ bulk head GLS lamp / all types call bell / all type picture or mirror lighting luminaries fittings with all accessories, fixing of lamp, testing etc. as required including connection with PVC insulated copper conductor, ; - 1.5 sq.mm single core cable 1.1 KV grade	3.00	Each		
4.2	Installation, testing and commissioning of prewired fluorescent fittings of all surface type complete with all accessories and tubes directly on ceiling/wall as required including connection with PVC insulated copper conductor, ; - 1.5 sq.mm single core cable 1.1 KV grade	9.00	Each		
4.3	Installation, testing and commissioning of all size ceiling fan and regulator including wiring the down rod of standard length upto 300mm with PVC insulated copper conductor, ; - 1.5 sq.mm single core cable 1.1 KV grade	3.00	Each		
4.4	Installation, testing and commissioning of SP/DP miniature circuit breaker DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required, ; - 6/10/16/20A	11.00	Each		
4.5	Installation, testing and commissioning of SPN/DP miniature circuit breaker/ isolator DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required, ; - 50/63A	1.00	Each		
4.6	Installation, testing and commissioning of SPN DB (DIN type, horizontal/vertical) with no door, metal door or arcylic door (double/single door) complete with all accessories to accommodate incoming RCCB DP 63A sensitivity 30/100/300mA and outgoing SP MCB 6/10/16A on/in prefabricated MS surface/MS cubical control panel board including drilling holes, connections etc. as required, ; - 12way	1.00	Each		
5	EARTHING				
5.1	Provide and instal earthing with GEE slab 4' x 1' x 2" -8 nos connected in series, including 25x4mm GI strip running upto DBs. Manufactured by Druk-Care GEE slab earthing system at Jimena, Thimphu or equivalent. For installation- visit website: www.drukcare.com	1.00	Set		
6	POWER CABLE				
6.1	Supplying of 2- Core 1.1KV grade PVC insulated and sheathed Aluminium conductor armoured power cables, ; - 10 sq.mm	95.00			



6.2	Supplying of heavy duty brass single compression gland for 2- Core 1.1KV grade PVC insulated and sheathed Copper/ Aluminium conductor armoured/un-armoured power cables, ; - 25mm dia, 10sq.mm	2.00	Each		
6.3	Laying of one number PVC insulated and sheathed power cable copper/aluminium,armoured/un-armoured 1.1KV single core to four core direct in the ground including excavation, sand cushioning, protective covering and refilling the trenches etc. as required, ; - Above 6sq.mm to 25sq.mm	95.00	Mtr.		
6.4	Installation, Testing and Commissioning of end termination with single/double compression gland for PVC insulated and sheathed aluminium/ copper conductor cable of 1.1KV grade including connections etc. as required, ; - 20/22/25mm dia	2.00	Each		
7	LIGHTING ARRESTOR				
7.1	25 mm dia 900mm long copper tube four prong	1.00	Each		
7.2	GI tube with finial base plate with 85x6 mm copper strip ,25mm dia,300mm long.	1.00	Each		
8	Earthing for LA				
8.1	Providing and fixing of earthing including all accessories, machinery enclosure, C.I cover plate having locking arrangement, water pipe with excavation and refilling work including charcoal or coke and salt complete required as per standard earthing drawing - With copper earth plate 600x600x3mm.	1.00	Sets		
8.2	Providing and drawing wire for loop earthing in existing surface/recessed PVC/MS/ steel conduit or cassing capping or wooden batten along with other wires as required - 2.032mm (14 SWG) copper wire.	60.00	Mtr.		
8.3	Providing and laying earth connection from earth electrodes in 15mm dia. GI pipe from earth electrode as required as per guidance of standard earthing drawing ... with 4.06mm dia (8SWG) copper wire.	60.00	Mtr.		
Total for Laundry & Kitchen (Electrical)					
Total in Words;					
E	STAFF QUARTER (CIVIL)			Rate (Nu.)	Amount (Nu.)



Sl.No	Item Description	Quantity	Unit	Figure	Words	Remarks (if any)
1	Clearing & Grubbing					
1.1	Clearing jungle including uprooting of vegetation & trees of girth <300mm & disposal within 50m of the site.	213.79	sq.m			
2	Earth work					
2.1	Excavation in foundation trenches or drains, width <1.5m, area <10 sq.m in plan, depth >300mm including dressing and ramming, disposal of surplus soil within 50m lead & 1.5m lift.					
2.1.1	a) All kinds of soil.	154.04	cu.m			
2.1.2	b) All Kinds of Rock with or without blasting.	154.04	cu.m			
2.2	Filling of trenches, sides of foundations, areas to be raised etc. including compaction in layers < 200mm using selected excavated earth within lead 50m & 1.5m lift.	244.15	cu.m			
2.3	Providing and laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing.	19.19	cu.m			
3	Damp Proof Course					
3-1	Providing & laying 75mm thick sand bedding, including watering, ramming, dressing.	9.59	cu.m			
3-2	Providing and laying moisture barrier using plastic sheeting underlay -100 micro metre.	127.91	sq.m			
4	Stone Work					
4-1	Providing and laying dry hand packed stone soling/course aggregate filling with hard stone.	39.69	cu.m			
4-2	Random Rubble Masonry with hard stone in cement mortar 1:4 in foundation and plinth.	4.00	cu.m			
5	Concrete work (excluding centering and shuttering)					
5.1	Providing and laying in position plain cement concrete 1:3:6 (1 cement: 3 sand: 6 graded crushed rock 40mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	10.55	cu.m			



5.2	Providing and laying in position plain cement concrete 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	12.79	cu.m		
5.3	Providing and laying in position plain cement concrete 1:3:6 (1 cement: 3 sand: 6 graded crushed rock 20mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	6.40	cu.m		
5	RCC work (excluding form work and reinforcement)				
6.1	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm nominal size aggregates) excluding form work and reinforcement in foundation for footings and beams up to plinth.	38.72	cu.m		
6.2	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm nominal size aggregates) excluding form work and reinforcement in columns, Pillars, posts above plinth up to roof.	15.77	cu.m		
6.3	Providing and laying reinforced cement concrete 1:1.5:3 (1 cement: 1.5 sand: 3 graded crushed rock 20mm nominal size aggregates) excluding form work and reinforcement in beams, lintels, slabs, staircase above plinth up to roof.	65.33	cu.m		
7	Steel reinforcement (providing & fixing including cutting, bending, blinding and placing in position)				
7.1	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete. (PERFECT THERMEX TMT or equivalent)	17,154.00	Kg		
8	Form work (Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork)				
8.1	Foundation and plinth.	167.10	sq.m		
8.2	Columns, Pillars, posts, etc. in superstructure with Phenol bonded ply shuttering.	166.32	sq.m		
8.3	Beams, Lintels, Slabs, Landings, Staircases, Walls etc. in superstructure with Phenol bonded ply shuttering.	503.71	sq.m		
9	Coursed Rubble Masonry/Concrete Block Brick block				



		120.20	cu.m			
9.1	Providing & laying Coursed Rubble Masonry with hard stone hammer/machine dressed in foundation & plinth (In cement mortar 1:4) including superstructure above plinth level upto floor three level (including all lifts and heights) - 400mm thick.					
9.2	Providing & laying concrete block brick in Foundation & Plinth in cement mortar 1:4 including superstructure above plinth level upto floor three level (including all lifts and heights) - 250mm & 150mm thick.	36.25	cu.m			
10	Doors & Windows					
10.1	Providing & fixing in position with timber in mixed conifer with aluminium windows including Shutter 6mm thick plain glass, Pelmet & curtain rod, fittings & fixtures & hold fasts as per drawing complete - synthetic enamel paint on new work of steel.(Inclusive of traditional wooden cornices and painting works).					
10.1.1	W/243	10.00	Each			
10.1.2	DW251	4.00	Each			
10.1.3	W/95	4.00	Each			
10.1.4	W/175	4.00	Each			
10.1.5	RW01	4.00	Each			
10.1.6	RW02	2.00	Each			
10.1.7	Balcony Rabsey	1.00	Each			
10.2	Providing & fixing in position doors in timber of mixed conifer including, timber shutter with all fittings & fixtures & hold fasts as per drawing (complete)with timber as the frame. (Inclusive of traditional cornices and all types of paintings).					
10.2.1	D110	4.00	Each			
10.2.2	D95	8.00	Each			
10.2.3	D85	4.00	Each			



10.2.4	D85a	4.00	Each		
11	Steel works				
11.1	Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and applying priming coat of red- In tubular sections. (BSTL Brand or equivalent)	2,081.39	Kg		
11.2	Providing and fixing MS round hold-down bolts with nuts and washer plates, complete in all areas.	48.83	Kg		
11.3	Providing & fixing bolts of various sizes including nuts & washers, complete in all areas.	17.48	Kg		
11.4	Providing, making and fixing, M.S Gusset Plate, straps, flats, sole plates etc., complete in roof truss work.	192.61	Kg		
12	Roofing				
12.1	Providing & fixing 0.5mm thick pre-painted Al-Zn alloy coated Steel roofing sheets of 24G in natural finish, including bolts, hooks and nuts 8mm dia. with bitumen and G.I limpet washers filled with white lead for connection, excluding the cost of purlins, rafter and trusses of Colour Roof India Limited. (CRIL or equivalent)	293.78	sq.m		
12.2	Providing & fixing 600mm ridges or hips in Pre Painted Steel sheets, including bolts, hooks and nuts 8mm dia G.I limpet and bitumen washers for connection - 25g. (CRIL or equivalent)	23.00	Mtr.		
12.3	Providing and fixing on wall face single socketed rigid PVC (Working Pressure 4kgf per sq.cm) rain water pipes including jointing with seal ring leaving 10 mm gap for thermal expansion-complete -90mm.	17.38	Mtr.		
12.4	Providing & fixing 180mm over all semi-circular plain PVC gutter, including brackets, bolts, nuts, washers & rain water pipes connections, excluding the cost of pipes.	57.98	Mtr.		
13	Flooring & Tiling Works				
13.1	Providing and laying anti skid tiles (NITCO Brand or equivalent) of size 300x300mm in floors on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	17.28	sq.m		



13.2	Providing and laying ceramic tiles (NITCO Brand or equivalent) of size 300x300mm in walls on 10mm thick cement mortar of 1:3 finished with flush pointing in white cement.	50.27	sq.m		
13.3	Providing & laying marble stone flooring over 20mm thick base of cement mortar 1:4, jointed with grey cement slurry mixed with pigment where necessary, rubbing & polishing complete, 20mm thick coloured marble - Including Skirting.	16.17	sq.m		
13.4	Providing and laying vitrified tiles (NITCO Brand or equivalent) 10mm thick (500x600) in floorings laid on a bed of 20mm thick cement mortar of 1:3 finished with flush pointing in white cement.	199.14	sq.m		
13.5	Providing and laying vitrified tiles (NITCO Brand or equivalent) in skirting(300x150) on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	20.38	sq.m		
14	Finishing				
14.1	Providing and laying 15mm thick cement plaster in cement mortar 1:4 in inside wall.	720.07	sq.m		
14.2	Providing and laying 12mm thick cement plaster in cement mortar 1:4 in ceiling.	235.86	sq.m		
14.3	Providing & laying 20mm thick cement plaster in cement mortar 1:4 staircase and ramp.	9.50	sq.m		
14.4	Acrylic washable distemper (SWAGAT Brand or equivalent), two coats on new work, including cement primer coat in inside wall and ceiling.	955.93	sq.m		
14.5	High gloss synthetic enamel (SWAGAT Brand or equivalent) for steel & wood work, two coats on new work - For Eaves Board.	35.63	sq.m		
15	External Works				
15.1	Providing & laying 50mm thick Plinth Protection and grouted with fine sand mix including well rammed, finishing the top smooth - With cement concrete 1:3:6, 20mm aggregates, laid over 75mm thick layer of compacted gravel.	109.56	sq.m		
15.2	Providing & fixing Plywood lining with necessary nails etc. including beading complete (excluding cost of frame) 6 mm, commercial.	86.94	sq.m		



15.3	Providing & fixing in position dressed wood work in frames of doors, windows, clerestory windows and other frames, wrought and framed (frames for the external ceiling) -Mixed Conifer.	0.84	cu.m			
15.4	Providing & fixing 12mm thick bison panel (pre-laminated both sides for wall/ceiling) lining with necessary nails/screws etc. complete, excluding the cost of frame -Eaves Board.	17.82	sq.m			
16	Plumbing work					
16.1	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN 16 pipes, SDR 7.4 UV Stabilized and anti-microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings excluding trenching, refilling but including testing of joints complete as per direction of Engineer-in-Charge. -25mm. (FUSION Brand or equivalent)	30.24	Mtr.			
16.2	Providing and fixing 3-layer PP-R (Polypropylene Random Copolymer) PN-16 pipes, SDR 7.4 UV Stabilized and anti microbial fusion welded, having thermal stability for hot and cold water supply including all PP-R plain and brass Threaded Polypropylene random fittings including fixing pipe with clamps at 1.0m spacing. This includes testing of joints, cutting chases and making good the wall complete as per direction of Engineer-in-Charge -20mm. (FUSION Brand or equivalent)	17.32	Mtr.			
16.3	Providing & fixing white vitreous china wash basin, including C.I brackets, 15mm C.P. brass pillar taps, c.p. chain & rubber plug, 32mm pvc waste, 32mm dia. trap & union, repair walls- Flat back wash basin 630x450mm with single 15mm c.p. brass pillar taps. (SIMPOLO Brand or equivalent)	4.00	Each.			
16.4	Providing & fixing Indian-type vitreous china w.c squatting pan, including 100 mm H.C.I P or S trap, 10 lit low level vitreous china cistern & fittings, repair walls. 500mm, white. (SIMPOLO Brand or equivalent)	4.00	Each.			
16.5	Providing & fixing 600x450mm bevelled edge mirror (superior glass) incl.4mm A.C sheet base fixed to wooden cleats.	4.00	Each			
16.6	Providing & Fixing c.p toilet paper holder with necessary fittings. (Jaquar Brand or equivalent)	4.00	Each			
16.7	Providing & fixing c.p. Brass shower fittings, Shower with revolving joint -15mm. (Jaquar Brand or equivalent)	4.00	Each			



16.8	Providing & fixing 2000 litres plastic tank including all accessories complete. (RABTEN Brand or equivalent)	2.00	Each		
16.9	Providing & fixing angle valve, 20mm dia. (Jaquar Brand or equivalent)	4.00	Each		
16.10	Providing & fixing connecting hosepipe in wash basin or kitchen sink.	4.00	Each		
16.11	Providing & fixing G.I. pipes (PKM Brand or equivalent) including G.I. fittings & clamps & repair walls.				
16.11.1	25mm	19.68	Mtr.		
16.11.2	32mm	6.81	Mtr.		
16.12	Constructing Brick masonry valve chamber in cement mortar 1:4, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 (1 cement: 4 sand: 8 graded crushed rock 40mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished, inside dimension 600 x 600mm & 400mm deep including G.I. cover & frame (weight >38 kg).	1.00	Each		
17	Sewerage works				
17.1	Providing & laying H.D.P.E Pipes, 4 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) -160mm.	11.31	Mtr.		
17.2	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) -50mm.	9.85	Mtr.		
17.3	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 75mm.	4.00	Mtr.		
17.4	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 110mm.	4.00	Mtr.		
17.5	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip complete (excluding the cost of PVC fittings) - 90mm.	3.46	Mtr.		



17.6	Providing & fixing P.V.C Nahani Trap ,110mm inlet & 75mm outlet.	4.00	Each				
17.7	Providing & fixing P.V.C Single Tee with door - 110mm.	4.00	Each				
17.8	Constructing Brick masonry manhole in cement mortar 1:5, reinforced cement concrete top slab with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), foundation concrete 1:4:8 (1 cement: 4 sand: 8 graded crushed rock 40mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), neatly finished complete, inside dimension 900 x 800mm & 600mm deep including C.I. cover & frame (weight >38 kg) - Interception pit.	2.00	Each				
Total for Staff Quarter (Civil)							
Total in Words;							
E STAFF QUARTER (ELECTRICAL)							
S.No	Description	Quantity	Unit	Figure	Word	Amount (Nu.)	
WIRING							
1.1	Providing & Wiring for light, fans, call bell and 2 pin light socket outlet with 1.5 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with 6A modular type switch, MS boxes including connections, painting, testing and commissioning etc. as required (Legrand/ schneider make or equipment)						
1.1.1	Short Point	12.00	Point				
1.1.2	Medium point	46.00	Point				
1.1.3	Long point	6.00	Point				
1.2	Providing & Wiring for 5/6 pin, 6/16 ampere plug point with 4 sq.mm 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe with providing and fixing 5/6 pin, 6/16 ampere socket outlet and switch including earthing the third pin, connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment)						



1.2.1	Medium point		16.00	Point			
1.2.2	Long point		32.00	Point			
1.3	Providing & Wiring for points in excess length above long points with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required(Legrand/ Schneider make or equipment), ; - 2x4 sqmm		89.00	Mtr.			
1.4	Providing & Wiring for lighting circuit and lighting point with 1.1kV grade, PVC insulated copper conductor cable (RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections, painting, testing and commissioning etc. as required(Legrand/ Schneider make or equipment), ; - 2x2.5 sq.mm		212.00	Mtr.			
1.5	Providing & Wiring for sub-main with 1.1kV grade, PVC insulated copper conductor cable(RR Kabel/HPL/Havels or equivalent) in recessed HDPE pipe including connections including connections, painting, testing and commissioning etc. as required (Legrand/ Schneider make or equipment), ; - 4x10 sq.mm Cu. Cable		56.00	Mtr.			
2	FITTINGS AND ACCESSORIES						
2.1	Supplying of light fittings complete set with all accessories as required,with lamp (Havells/HPL/Minay or Equivalent).						
2.1.1	Cat No./LUMILINE Plus LED Tube/LUMILINEPLUSB20WLED865PCSS, 20W		20.00	Each			
2.1.2	Cat No. LED Surface Ceiling Light(Round)/(Code-650024,6W		14.00	Each			
2.1.3	Cat No. LED Up-Down Wall Light(indoor)/(Code-688576,6W		12.00	Each			
2.1.4	Cat No. /LED Up-Down Wall Light(Outdoor)/(Code-680701,6W		2.00	Each			
2.2	Supplying of prewired call bell 250 volt A.C with base, terminal block and all accessories complete,; - Gong bell assembly		4.00	Each			
2.3	Supply, Installation and commissioning of three phase energy meter of suitable size after consulting BPC complete as required.		4.00	Job			



2.4	Supplying of ceiling fan 240 volt A.C 1400 rpm with all accessories such as down rod, sweep 3 Nos., canopy 2 Nos., condenser and fan body etc. complete as required, ; -1200mm sweep	12.00	Each		
3	CONTROL, SWITCHGEARS & BUSBAR				
3-1	Supplying of pre-fabricated MS busbar chamber with copper busbar complete with all accessories etc. as required(BSB Approved Make), ; - 4 strips, 450mm bar, 100A	1.00	Each		
3-2	Supplying of panel moulded case circuit breaker (MCCB) with electronic release, breaking capacity 25KA, 4 pole 415 volt A.C complete with all accessories etc. as required(BSB Approved Make),; - 4 strips, 450mm bar, 100A	1.00	Each		
3-3	Supply of miniature circuit breaker (MCB) single pole, 230 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make)				
3-3.1	6A	12.00	Each		
3-3.2	16A	48.00	Each		
3-4	Supply & Fixing of residual current circuit breaker (RCCB) 4 pole, sensitivity 30mA/100mA, 415 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make),; - 40A	4.00	Each		
3-5	Supply of miniature circuit breaker (MCB) triple pole & neutral, 415 volt A.C complete with all accessories suitable to fix on a din-bar etc. as required(BSB Approved Make), ; - 25A	4.00	Each		
3-6	Supply of TPN distribution board (DIN type, vertical) with acrylic door, 415 volt A.C complete with all accessories without MCB/isolator/RCCB out going or incoming etc. as required (BSB Approved Make),; - 6way	4.00	Each		
3-7	Providing and fixing of wooden frame structure appropriate with wire mesh duly approved by engineer in-charge for enclosing the MCB DB Box (distribution board) locking arrangement etc. as required	1.00	Set		
4	ERECTION/INSTALLATION				
4.1	Erection of all indoor/outdoor surface type wall bracket (single or double) / surface ceiling fittings GLS lamps/ bulk head GLS lamp / all types call bell / all type picture or mirror lighting luminaries fittings with all accessories, fixing of lamp, testing etc. as required including connection with PVC insulated copper conductor,; - 1.5 sq.mm single core cable 1.1 KV grade	32.00	Each		



4.2	Installation, testing and commissioning of prewired fluorescent fittings of all surface type complete with all accessories and tubes directly on ceiling/wall as required including connection with PVC insulated copper conductor, ; - 1.5 sq.mm single core cable 1.1 KV grade	20.00	Each		
4.3	Installation, testing and commissioning of all size ceiling fan and regulator including wiring the down rod of standard length upto 300mm with PVCinsulated copper conductor, ; - 1.5 sq.mm single core cable 1.1 KV grade	12.00	Each		
4.4	Installation, testing and commissioning of SP/DP miniature circuit breaker DIN type complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required, ; - 6/10/16/20A	60.00	Each		
4.5	Installation, testing and commissioning of TPN/four pole miniature circuit breaker (DIN type) complete with all accessories to accommodate on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc as required, ; - 25A, 415V	4.00	Each		
4.6	Installation, testing and commissioning of four pole moulded case circuit breaker (DIN type) breaking capacity 16/25K complete with all accessories to accommodate on/in prefabricated MS surface/MS cubical control panel board including drilling holes, connections etc as required, ; - 100A, 415V	1.00	Each		
4.7	Installation, testing and commissioning of prefabricated bus bar chamber with copper bus bar complete with all accessories including connections etc. as required, ; - 4 strips, 300/450mm length, 100A	1.00	Each		
4.8	Installation, testing and commissioning of TPN DB (DIN type, horizontal/vertical) with no door, metal door or arcylic door (double/single door) complete with all accessories to accommodate incoming RCCB FP 40/63A sensitivity 30/100/300mA and outgoing SP MCB 6/10/16A on/in prefabricated MS surface /MS cubical control panel board including drilling holes, connections etc. as required, ; - 6way	4.00	Each		
5	EARTHING				
5.1	Provide and install earthing with GEE slab 4' x 1' x 2" -8 nos connected in series, including 25x4mm GI strip running upto DBs. Manufactured by Druk-Care GEE slab earthing system at Jimena, Thimphu or equivalent. For installation- visit website: www.drukcare.com	1.00	Set		
6	POWER CABLE				
6.1	Supplying of 4- Core 1.1KV grade PVC insulated and sheathed Aluminium conductor armoured power cables, ; - 25 sq.mm	45.00	Mtr.		



6.2	Supplying of heavy duty brass single compression gland for 4- Core 1.1KV grade PVC insulated and sheathed Copper/ Aluminium conductor armoured/un-armoured power cables,;- 29mm dia, 25sq.mm	2.00	Each		
6.3	Laying of one number PVC insulated and sheathed power cable copper/aluminium,armoured/un-armoured 1.1KV single core to four core direct in the ground including excavation, sand cushioning, protective covering and refilling the trenches etc. as required, ; - Above 6sq.mm to 25sq.mm	45.00	Mtr.		
6.4	Installation, Testing and Commissioning of end termination with single/double compression gland for PVC insulated and sheathed aluminium/ copper conductor cable of 1.1KV grade including connections etc. as required,; - 27/29/33mm dia	2.00	Each		
7	TELEVISION NETWORK				
7-1	Supplying and drawing coaxial cable, RG6 in recessed HDPE pipe including necessary cutting, connection, testing etc. as required.	202.00	Mtr		
7-2	Supplying & fixing of socket/regulator on existing metal box with fibre sheet cover (recessed or surface) including necessary cutting, connection testing etc.as required,; - TV coaxial socket	12.00	Each		
7-3	Supply, Installation, Testing and commissioning Powder coated Telephone Tag Box including with all accessories.				
7-3.1	Supplying Television Terminal Cabinet (TTC)(SQCA Appd.)as required.	1.00	Each		
7-3.2	Supplying and fixing of HDPE pipe on recessed including all accessories such as screws, bends, elbows, Tees, corners, etc. complete as required, ; - 25mm	126.00	Mtr		
7-4	Providing and supplying of air Conditioning, Hitachi or equivalent 1.5 MT, Hot and Cold including wiring of cables and associated works such as painting, testing and commissioning	16.00	Each		
8	Lighting Arrestor (Supply and Fix)				
8.1	25mm dia 900mm long copper tube four prong	1.00	Each		
8.2	CI tube with finial base plate with 85x6 mm copper strip ,25mm dia,300mm long.	1.00	Each		
9	Earthing for LA				



9.1	Providing and fixing of earthing including all accessories, machinery enclosure, C.I cover plate having locking arrangement, water pipe with excavation and refilling work including charcoal or coke and salt complete required as per standard earthing drawing - With copper earth plate 600x600x3mm.	1.00	Sets					
9.2	Providing and drawing wire for loop earthing in existing surface/recessed PVC/MS/ steel conduit or casing capping or wooden batten along with other wires as required - 2.032mm (14 SWG) copper wire.	60.00	Mtr					
9.3	Providing and laying earth connection from earth electrodes in 15mm dia. GI pipe from earth electrode as required as per guidance of standard earthing drawing ... with 4.06mm dia (8SWG) copper wire.	60.00	Mtr					
Total for Staff Quarter (Electrical)								
Total in Words;								
F BENCHING (CIVIL)								
Sl.No	Item Description	Quantity	Unit	Figure	Words	Rate (Nu.)	Amount (Nu.)	
1	DEEP BURIAL PIT AND SOLID WASTE							
1.0	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.							
1.1.1	All kinds of soil.	210.61	cu.m					
1.1.2	All kinds of rock with or without blasting.	210.61	cu.m					
1.2	Construction of embankment by providing and laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50m lead.	803.16	cu.m					
2 LAUNDRY AND KITCHEN AND BACK								
2.0	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.							



2.1.1	All kinds of soil.		835.49	CU.M		
2.1.2	All kinds of rock with or without blasting.		835.49	CU.M		
2.1	Construction of embankment by providing and laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50m lead.		142.80	CU.M		
2.2	Transport of excavated materials in designated locations including loading/unloading, dressing of dump sites up to 3.0km.		1,528.18	CU.M		
3	BASIC HEALTH UNIT BUILDING					
3.0	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.					
3-1.1	All kinds of soil.		1,387.18	CU.M		
3-1.2	All kinds of rock with or without blasting.		1,387.18	CU.M		
3.2	Construction of embankment by providing and laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50m lead.		2,606.55	CU.M		
3-3	Transport of excavated materials in designated locations including loading/unloading, dressing of dump sites up to 3.0km.		167.81	CU.M		
4	COURT AND PARKING					
4-1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.					
4-1.1	All kinds of soil.		227.57	CU.M		
4-1.2	All kinds of rock with or without blasting.		227.57	CU.M		



4.2	Construction of embankment by providing and laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50m lead.	71.84	CU.M		
4.3	Transport of excavated materials in designated locations including loading/unloading, dressing of dump sites up to 3.0km.	383.30	CU.M		
5	UNIT STAFF QUARTER				
5.1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.				
5.1.1	All kinds of soil.	247.24	CU.M		
5.1.2	All kinds of rock with or without blasting.	247.24	CU.M		
5.2	Construction of embankment by providing and laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50m lead.	358.73	CU.M		
5.3	Transport of excavated materials in designated locations including loading/unloading, dressing of dump sites up to 3.0km.	135.75	CU.M		
6	CARETAKERS AND DRIVERS QUARTER				
6.1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.				
6.1.1	All kinds of soil.	110.65	CU.M		
6.1.2	All kinds of rock with or without blasting.	110.65	CU.M		
6.2	Construction of embankment by providing and laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50m lead.	106.47	CU.M		



6.3	Transport of excavated materials in designated locations including loading/unloading, dressing of dump sites up to 3.0km.	114.83	cu.m		
7	DOCTORS QUARTER				
7.1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.				
7.1.1	All kinds of soil.	1,149.48	cu.m		
7.1.2	All kinds of rock with or without blasting.	1,149.48	cu.m		
7.2	Construction of embankment by providing and laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50m lead.	11.78	cu.m		
7.3	Transport of excavated materials in designated locations including loading/unloading, dressing of dump sites up to 3.0km.	2,287.18	cu.m		
8	ROAD				
8.1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 Sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.				
8.1.1	All kinds of soil.	388.24	cu.m		
8.1.2	All kinds of rock with or without blasting.	388.24	cu.m		
8.2	Transport of excavated materials in designated locations including loading/unloading, dressing of dump sites up to 3.0km.	776.48	cu.m		
Total for BENCHING					

Total in Words;

C	Chained-Link Fencing (5m Height)	Quantity	Units	Figure	Rate (Nu.)		Amount (Nu.)
					Words	Words	
SI.No	Item Description						



1	Clearing jungle including uprooting of vegetation & trees of girth <300mm & disposal within 50m of the site.	78.23	sq.m			
2	Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and appl. priming coat of red lead paint - In Tubular sections.	166.91	Kg			
3	Providing and laying in position plain cement concrete 1:3:6 (1 cement: 3 sand: 6 graded crushed 40mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	2.55	cu.m			
4	Steel work welded in Angles - 75x75x8mm, in built up sections, trusses, frame-works including cutting, hoisting, fixing and applying priming coat of red lead paint.	3,125.32	Kg			
5	Providing & fixing G.I chain-link mesh 4mm (8 SGW) x 50mm including fixing of post or struts, G.I staples (excluding the cost of posts/struts, earthwork, concrete etc.)	260.80	sq.m			
Total for Chained Lined Fencing						

Total in Words;

H SL-No.	EXTERNAL STAIRCASE IN RRM (CIVIL) Item Description	Quantity	Unit	Figure	Rate (Nu.)	
					Words	Amount (Nu.)
1	Clearing & Grubbing					
1.1	Clearing jungle including uprooting of vegetation & trees of girth <300mm & disposal within 50m of the site.	243.20	sq.m			
2	Earth work					
2.1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed.					
2.1.1	a) All kinds of soil.	156.64	cu.m			
2.2	Providing and laying 150mm thick dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing.	21.36	cu.m			
3	Stone Work					
3.1	Random Rubble Masonry with hard stone in cement mortar 1:4 in foundation and plinth.	24.71	cu.m			



4	Concrete work (excluding centering and shuttering)							
4.1	Providing and laying in position plain cement concrete 1:3:6 (1 cement: 3 sand: 6 graded crushed 40mm nominal size aggregates) excluding the cost of centering and shuttering - All work upto plinth level.	6.91	cu.m					
5	Form work (Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork)							
5.1	Beams, Lintels, Slabs, Landings, Staircases, Walls etc. in superstructure with Phenol bonded ply shuttering.	25.34	sq.m					
Total for EXTERNAL STAIRCASE IN RRM								
Total in Words;								
1	FOOTPATH (CIVIL)							
Sl.No.	Item Description	Quantity	Unit	Figure	Rate (Nu.)	Words		Amount (Nu.)
1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m. lift and disposed soil to be neatly dressed.							
1.1	All kinds of soil.	1210.00	sq.m					
2	Providing and laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing.	121.00	cu.m					
3	Providing and laying dry hand packed stone soling/course aggregate filling with hard stone.	121.00	cu.m					
4	Providing and laying plain cement concrete 1:3:6 (1 cement: 3 sand: 6 graded crushed rock 20mm nominal size aggregate) in and under foundation, plinth, column footing and wall bases.	36.30	cu.m					
5	Providing and laying 25 mm thick sand bedding under floor.	30.25	cu.m					
6	Providing and laying 40mm thick paver block.	1210.00	sq.m					



Sl.No.	Item Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
				Figure	Words	
7	Providing and laying Concrete edging 300 x 300 x 80 mm including excavation, refilling and disposal of surplus earth within 30m lead.	500.00	Mtr.			
Total in Words;						
Total for FOOTPATH						
J PARKING AND ROAD WORKS						
1	Earth Work					
1.1	Earth work in surface excavation, depth <300mm, width >1.5m, area >10 sq.m in plan, including disposal of excavated earth within 50m lead & 1.5m lift and disposed soil to be neatly dressed - All kinds of soil.	1,205.58	sq.m			
2	Subgrade					
2.1	Preparation of sub grade with proper camber by excavating earth to depth equal to pavement thickness, consolidation with roller, disposal of surplus earth up to 50m - All kinds of soil.	241.12	cu.m			
2.2	Cosolidation of subgrade with roller, and making good the undulation with earth and re-rolling the subgrade.	241.12	sq.m			
3	Granular Sub-grade					
3.1	Providing and laying 150mm thick Granular sub-base course (GSB) to required degree of compaction with proper formation of cross fall using motor for laying and compacted to required density as per material gradation and aggregate quality specified	180.84	cu.m			
3.2	Providing and laying 100mm thick wet mix macadam graded aggregate base course to required degree of compaction with proper formation of cross fall by using well graded crushed aggregates premixed with OMC using suitable mixer, motor grader as per material gradation and a aggregates quality specified.	120.56	cu.m			
3.3	Providing and Laying 60 mm thick Dense Bituminous Macadam (DBM) to required degree of compaction based on mixture design (job mix formula) approved by the supervising engineer including preparation of surface with road broom, application of prime coat @ 0.75 kg/Sq.M by mechanized method using asphalt plant, paver, steel roller, tyre roller etc. complete.	1205.58	sq.m			



3.4	Providing and Laying 25mm thick Asphalt/Bituminous Concrete to required degree of compaction based on the job mixture design approved by the supervising engineer using asphalt plant, paver, steel roller, tyre roller etc. as per material gradation and aggregate quality specified.	1,205.58	sq.m			
3.5	Providing seal coat of premixed sand with bitumen emulsion using 5-3 kg of emulsion and 0.045 Cu.M coarse sand per 10 Sq.M of road surface complete.	1,205.58	sq.m			
3.6	Road marking with hot applied thermoplastic compound with reflectorising glass beads on Bituminous surface as per IRC:35 and technical specifications. The finished surface to be level and free from streaks and holes -Along Edges and Parking Space.	25.50	sq.m			
4. Drainage and Shoulder						
4.1	Construction of Lined V Shaped drain 600 X 300 with 50mm thick plain cement concrete 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), 150mm thick stone soling, random rubble masonry in cement mortar 1:5 on sides, finished with 20mm thick 1:4 cement plaster including excavation, levelling and disposal of surplus earth within 50m.	163.37	Mtr.			
4.2	Providing and laying Concrete edging 300 x 300 x 80 mm including excavation, refilling and disposal of surplus earth within 30m lead	163.37	Mtr.			
Total for PARKING AND ROAD WORKS						

Total in Words;

Sl.No.	Item Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
				Figure	Words	
1.0	2.0m HEIGHT RETAINING WALL					
1.1	Earth work in excavation over areas, depth >300mm, width >1.5m, area >10 Sq.M on plan, including disposal of excavated earth within 50m lead and 1.5m lift & disposed soil to be neatly dressed.	10.80	cu.m			
1.2	All kinds of soil	10.80	cu.m			
1.3	All kinds of rock requiring blasting /without blasting					



2.0	Extra for every additional lead beyond 50m up to 3km and deposit to a required level including dressing & levelling.							
2.1	All kinds of soil/rocks	21.60	CU.M					
3.0	Providing and laying Hand packed stone filling or soling with stones	6.42	CU.M					
4.0	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level (1:3:6 with 40mm nominal size)	1.08	CU.M					
5.0	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth In cement mortar 1:4 including all lifts & heights	16.72	CU.M					
6.0	Providing and laying in position plain cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto floor five level, excluding the cost of centering and shuttering- In 1:3:6 (20mm nominal size crushed rock) in top capping	0.30	CU.M					
7.0	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Foundation and plinth including all lifts and heights	6.54	SQ.M					
8.0	Providing & laying pointing on stone work with cement mortar 1:3 (Raised and cut pointing)	24.00	SQ.M					
9.0	Filling of trenches, sides of foundations etc. in layers < 200mm using selected excavated earth, ramming etc. within lead 50 m & lift 1.5m	3.29	CU.M					
10.0	Providing and fixing mild steel railing made of Hollow tubes, channels, plates etc... including welding, grinding, buffing, polishing and making curvature (wherever required) and fittings the same with necessary mild steel nuts and bolts complete, i/e fixing railing with necessary accessories and mild steel dash fasteners, mild 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 engineers in charge.	10.00	Mtr.					
Total for 2.0m HEIGHT RETAINING WALL								
Total in Words;								



Sl. No.	Item Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
				Figure	Words	
	3.0m HEIGHT RETAINING WALL					
1.0	Earth work in excavation over areas, depth >300mm, width >1.5m, area >10 Sq.M on plan, including disposal of excavated earth within 50m lead and 1.5m lift & disposed soil to be neatly dressed.					
1.1	All kinds of soil	27.90	cu.m			
1.2	All kinds of rock requiring blasting /without blasting	27.90	cu.m			
2.0	Extra for every additional lead beyond 50m up to 3km and deposit to a required level including dressing & levelling.; - All kinds of soil/rocks	55.80	cu.m			
3.0	Providing and laying Hand packed stone filling or soling with stones	9.99	cu.m			
4.0	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level (1:3:6 with 40mm nominal size)	1.86	cu.m			
5.0	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth in cement mortar 1:4 including all lifts & heights	36.146	cu.m			
6.0	Providing and laying in position plain cement concrete in retaining walls, return walls, walls (any thickness) including attached plasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto floor five level, excluding the cost of centering and shuttering- In 1:3:6 (20mm nominal size crushed rock) in top capping	0.36	cu.m			
7.0	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Foundation and plinth including all lifts and heights	8.663	sq.m			
8.0	Providing & laying pointing on stone work with cement mortar 1:3 (Raised and cut pointing)	36.00	sq.m			
9.0	Filling of trenches, sides of foundations etc. in layers<200mm using selected excavated earth, ramming etc. within 50m lead & 1.5m lift.	22.44	cu.m			



SL.No.	Item Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
				Figure	Words	
10.0	Providing and fixing mild steel railing made of Hollow tubes, channels, plates etc... including welding, grinding, buffing, polishing and making curvature (wherever required) and fittings the same with necessary mild steel nuts and bolts complete, i/e fixing railing with necessary accessories and mild steel dash fasteners, mild 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 engineers in charge.	10.00	Mtr.			
Total for 3.0m HEIGHT RETAINING WALL						
Total in Words						
M	4.0m HEIGHT RETAINING WALL	Quantity	Unit	Figure	Words	Amount (Nu.)
1.0	Earth work in excavation over areas, depth >1.5m, width >10 Sq.M on plan, including disposal of excavated earth within 50m lead and 1.5m lift & disposed soil to be neatly dressed.	39.60	cu.m			
1.1	All kinds of soil	39.60	cu.m			
1.2	All kinds of rock requiring blasting /without blasting	79.20	cu.m			
2.0	Extra for every additional lead beyond 50m up to 3km and deposit to a required level including dressing & levelling - All kinds of soil/rocks	11.16	cu.m			
3.0	Providing and laying Hand packed stone filling or soling with stones	2.64	cu.m			
4.0	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level (1:3:6 with 40mm nominal size)	49.646	cu.m			
5.0	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth in cement mortar 1:4 including all lifts & heights	0.432	cu.m			
6.0	Providing and laying in position plain cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto floor five level, excluding the cost of centering and shuttering- In 1:3:6 (20mm nominal size c-ushed rock) in top capping					



7.0	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Foundation and plinth including all lifts and heights	9.15	sq.m			
3.0	Providing & laying pointing on stone work with cement mortar 1:3 (Raised and cut pointing)	36.00	sq.m			
9.0	Filling of trenches, sides of foundations etc. in layers <200mm using selected excavated earth, ramming etc. within lead 50 m & lift 1.5m	22.44	cu.m			
10.0	Providing and fixing mild steel railing made of Hollow tubes, chains, plates etc... including welding, grinding, buffing, polishing and making curvature (wherever required) and fittings the same with necessary mild steel nuts and bolts complete, i/a fixing railing with necessary accessories and mild steel dash fasteners, mild 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 engineers in charge.	10.00	Mtr.			
Total for 4.0m HEIGHT RETAINING WALL						

Total in Words:

Sl.No.	Item Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
				Figure	Words	
1.0	Earth work in excavation over areas, depth >300mm, width >1.5m, area >10 Sq.M on plan, including disposal of excavated earth within 50m lead and 1.5m lift & disposed soil to be neatly dressed.					
1.1	All kinds of soil	79.50	cu.m			
1.2	All kinds of rock requiring blasting /without blasting	79.50	cu.m			
2.0	Extra for every additional lead beyond 50m up to 3km and deposit to a required level including dressing & levelling - All kinds of soil/rocks	159.00	cu.m			
3.0	Providing and laying Hand packed stone filling or soling with stones	22.77	cu.m			
4.0	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level (1:3:6 with 40mm nominal size)	3.18	cu.m			
5.0	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth: 1:1 cement mortar 1:4 including all lifts & heights	101.027	cu.m			



6.0	Providing and laying in position plain cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto floor five level, excluding the cost of centering and shuttering- In 1:3:6 (20mm nominal size crushed rock) in top capping	1.80	cu.m				
7.0	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Foundation and plinth including all lifts and heights	7.59	sq.m				
8.0	Providing & laying pointing on stone work with cement mortar 1:3 (Raised and cut pointing)	50.00	sq.m				
9.0	Filling of trenches, sides of foundations etc. in layers <200mm using selected excavated earth, ramming etc. within lead 50 m & lift 1.5m	29.04	cu.m				
10.0	Providing and fixing mild steel railing made of Hollow tubes, channels, plates etc... including welding, grinding, buffing, polishing and making curvature (wherever required) and fittings the same with necessary mild steel nuts and bolts complete, i.e. fixing railing with necessary accessories and mild steel dash fasteners, mild 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 engineers in charge.	10.00	Mtr.				
Total for 5.0m HEIGHT RETAINING WALL							
Total in Words;							
O	WATER SUPPLY, RAW WATER STORAGE AND SEWERAGE NETWORK						
SL.No.	Item Description	Quantity	Unit	Figure	Words	Rate (Nu.)	Amount (Nu.)
1	Water Supply Network						
1.1	Hand excavation and refilling in layers < 200mm, of trenches for pipes & sockets, cables, including dressing of sides/ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m. All kinds of soil.	200.54	Mtr.				
1.2	Hand excavation and refilling in layers < 200mm, of trenches for pipes & sockets, cables, including dressing of sides/ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m. Ordinary rock with or without blasting.	50.13	Mtr.				



1.3	Providing & laying 75mm H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) inclusive of elbows and other required parts, inclusive of butt fusion.	12.03	Mtr.		
1.4	Providing & laying 50mm H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) inclusive of elbows and other required parts, inclusive of butt fusion.	75.38	Mtr.		
1.5	Providing & laying 32mm H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) inclusive of elbows and other required parts, inclusive of butt fusion.	163.27	Mtr.		
1.6	Providing and fixing C.I./D.I. gate valves (with cap) complete with bolts, nuts, rubber insertions etc., resilient seated.				
1.6.1	80 mm	1.00	Nos		
1.6.1	50 mm	2.00	Nos		
2	RCC Raw Water Storage				
2.1	Clearing grasses including removal of rubbish within 50m of site.	30.00	sq.m		
2.2	Earth work in excavation over areas, depth >300mm, width >1.5m, area >10 sq.m on plan, including disposal of excavated earth within 50m lead and 1.5m lift & disposed soil to be neatly dressed.				
2.2.1	All Kinds of Soil	67.43	cu.m		
2.2.2	All Kinds of Rock	67.43	cu.m		
2.3	Filling of trenches, sides of foundations etc. in layers <200mm using selected excavated earth, ramming etc. within lead 50 m & 1.5m lifts.	123.16	cu.m		
2.4	Providing & laying Hand packed stone filling or soling with stones.	3.47	cu.m		
2.5	Providing & laying plain cement concrete 1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size) excluding the cost of centering, shuttering and reinforcement - all work upto plinth level.	2.31	cu.m		
2.6	Applying a cat of hot bitumen (maxphalt) 80/100 or equivalent using 1.7 kg per Sq.M including the surface cleaning.	39.00	sq.m		



2.7	Providing & laying in position reinforced cement concrete 1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size) excluding the cost of centering, shuttering and reinforcement - all work upto plinth level.	9.24	cu.m			
2.8	Providing & laying in position reinforced cement concrete work in walls (any thickness) including attached pilasters buttresses, piers, abutments etc. upto floor five level excluding the cost of centering, shuttering and reinforcement 1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size aggregates).	10.73	cu.m			
2.9	Providing & laying in position reinforced cement concrete 1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size aggregates) in slabs up to floor five level excluding the cost of centering, shuttering and reinforcement.	1.52	cu.m			
2.1	Providing & laying in position reinforced cement concrete 1:1:2 (1 cement : 1 sand : 2 graded crushed rock 20 mm nominal size aggregates) in beam, lintels & staircase upto floor five level excluding the cost of centering, shuttering and reinforcement.	1.23	cu.m			
2.11	Providing and fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork.					
2.11.1	Foundation and plinth etc.	2.91	sq.m			
2.11.2	Walls, pilasters, buttresses, string course etc.	78.00	sq.m			
2.11.3	Lintels, beams, girders, bressumers, cantilevers etc.	46.20	sq.m			
2.11.4	Suspended floor, roof, landing, shelves and their supports, balconies, chajjas, etc.	10.14	sq.m			
2.12	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete - - 10mm dia.	2,660.70	Kg			
2.13	Providing and fixing 80 mm C.I./D.I. gate valves (with cap) complete with bolts, nuts, rubber insertions etc., resilient seated.	4.00	Each			
3	Sewerage Network					
3.1	Hand excavation and refilling in layers < 200mm, of trenches for pipes & sockets, cables, including dressing of sides/ ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m. All kinds of soil.	274.976	Mtr.			



3-2	Hand excavation and refilling in layers < 200mm, of trenches for pipes & sockets, cables, including dressing of sides/ ramming of bottom, depth upto 1.5m, disposal of surplus material within lead of 50m. Ordinary rock with or without blasting.	68.744	Mtr.				
3-3	Providing & laying 160mm H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) inclusive of elbows and other required parts, inclusive of butt fusion	99.61	Mtr.				
3-4	Providing & laying 225mm H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) inclusive of elbows and other required parts, inclusive of butt fusion.	148.56	Mtr.				
3-5	Providing & laying 90mm H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) inclusive of elbows and other required parts, inclusive of butt fusion.	28.90	Mtr.				
3-6	Providing & laying 250mm H.D.P.E pipes, 12.5 PN, including H.D.P.E fittings (excluding trenching, refilling & thrust block) inclusive of elbows and other required parts, inclusive of butt fusion.	66.65	Mtr.				
3-7	Constructing reinforced cement concrete manhole, reinforced cement concrete top slab and foundation with 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), 12mm plaster in cement mortar 1:3 finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement: 2 sand: 4 graded crushed rock 20mm nominal size aggregates), neatly finished complete.						
3-7.1	Inside dimension 900dia & 600mm deep including C.I. cover & frame (weight >38 kg)	9.00	Each.				
3-7.2	Inside dimension 1200dia & 2450mm deep including C.I. cover & frame weight >116 kg)	4.00	Each.				
Total for WATER SUPPLY, RAW WATER STORAGE AND SEWERAGE NETWORK							
Total in Words;							
P.	STORM WATER DRAINS						
SL.No.	Item Description	Quantity	Unit	Figure	Words	Rate (Nu.)	Amount (Nu.)
1.0	Earth work in excavation over areas, depth >300mm, width >1.5m, area >10 Sq.M on plan, including disposal of excavated earth within 50m lead and 1.5m lift & disposed soil to be neatly dressed.						
	A) Drain Size: (300x300)mm						



1.1.1	All Kinds of Soil		22.28	CU.M		
1.1.2	All Kinds of Rock		22.28	CU.M		
	B) Drain Size: (400x550)mm					
1.2.1	All Kinds of Soil		20.56	CU.M		
1.2.2	All Kinds of Rock		20.56	CU.M		
	C) Drain Size: (500x700)mm					
1.3.1	All Kinds of Soil		47.61	CU.M		
1.3.2	All Kinds of Rock		47.61	CU.M		
	D) Drain Size: (550x800)mm					
1.4.1	All Kinds of Soil		38.48	CU.M		
1.4.2	All Kinds of Rock		38.48	CU.M		
2.0	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level. 1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size aggregates)					
2.1	A) Drain Size: (300x300)mm		7.00	CU.M		
2.2	B) Drain Size: (400x550)mm		4.00	CU.M		
2.3	C) Drain Size: (500x700)mm		8.00	CU.M		
2.4	D) Drain Size: (550x800)mm		5.00	CU.M		
3.0	1:2:4 (1 cement : 3 sand : 6 graded crushed rock 40 mm nominal size aggregates)					
3.1	A) Drain Size: (300x300)mm		11.14	CU.M		
3.2	B) Drain Size: (400x550)mm		6.00	CU.M		
3.3	C) Drain Size: (500x700)mm		10.00	CU.M		



3-4	D) Drain Size: (550x800)mm		7.00	cu.m		
4.0	Providing & laying Hand packed stone filling or soling with stones.					
4.1	A) Drain Size: (300x300)mm		14.86	cu.m		
4.2	B) Drain Size: (400x550)mm		7.00	cu.m		
4.3	C) Drain Size: (500x700)mm		14.00	cu.m		
4.4	D) Drain Size: (550x800)mm		10.00	cu.m		
5.0	Providing & laying Random Rubble Masonry with hard stone in foundation & plinth - In cement mortar 1:5.					
5.1	A) Drain Size: (300x300)mm		16.71	cu.m		
5.2	B) Drain Size: (400x550)mm		19.00	cu.m		
5.3	C) Drain Size: (500x700)mm		40.00	cu.m		
5.4	D) Drain Size: (550x800)mm		31.00	cu.m		
6.0	Providing & laying cement plaster, finished with floating coat of neat cement - 20mm plaster in cement mortar 1:4.					
6.1	A) Drain Size: (300x300)mm		111.42	sq.m		
6.2	B) Drain Size: (400x550)mm		74.77	sq.m		
6.3	C) Drain Size: (500x700)mm		158.70	sq.m		
6.4	D) Drain Size: (550x800)mm		123.14	sq.m		
7.0	Neat cement punning.					
7.1	A) Drain Size: (300x300)mm		55.71	sq.m		
7.2	B) Drain Size: (400x550)mm		27.19	sq.m		
7.3	C) Drain Size: (500x700)mm		56.68	sq.m		



7.4	D) Drain Size: (550x800)mm		38.48	sq.m		
	MS Gratings					
8.0	Steel work in single section including cutting, hoisting, fixing and applying priming coat of red lead paint- In Tees, angles and channels (drain).					
8.1	A) Drain Size: (300x300)mm		817.08	Kgs		
8.2	B) Drain Size: (400x550)mm		299.07	Kgs		
8.3	C) Drain Size: (500x700)mm		498.78	Kgs		
8.4	D) Drain Size: (550x800)mm		338.62	Kgs		
9.0	Providing & fixing ornamental steel grills in frames with M.S. flats & bars including round headed bolts and nuts etc. (drain).					
9.1	A) Drain Size: (300x300)mm		1,637.87	Kgs		
9.2	B) Drain Size: (400x550)mm		732.72	Kgs		
9.3	C) Drain Size: (500x700)mm		1,444.21	Kgs		
9.4	D) Drain Size: (550x800)mm		1,055.89	Kgs		
10.0	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork - Foundation and plinth etc.					
10.1	A) Drain Size: (300x300)mm		176.54	sq.m		
10.2	B) Drain Size: (400x550)mm		57.96	sq.m		
10.3	C) Drain Size: (500x700)mm		96.55	sq.m		
10.4	D) Drain Size: (550x800)mm		65.62	sq.m		
Total for STORM WATER DRAINS						
Total in Words;						



Q SI.No	COMPOUND ELECTRIFICATION FOR BHU AND PSSD (ELECTRICAL) Description	Quantity	Unit	Rate (Nu.)		Amount (Nu.)
				Figure	Word	
1.0	Providing and fixing 1.1kV grade PVC insulated copper conductor from fittings to marshalling box: - P/D 2x2.5 Sq.mm 1.1KVG PVC insul. copper cond.	360.00	Mtr			
2.0	Providing and laying of HDPE pipe for incoming and outgoing line for compound light post. ; - 32mm dia HDPE conduit pipe	75.00	Mtr			
3.0	Providing and laying of 1.1kV grade PVC insulated and sheathed (PVC I&S), armoured underground aluminium cable (AUGC) in the cable trench 500x1000deep with necessary sand bed, required size of thimbles and cable gland, etc for compound light post.					
3.1	6Sq.mm 2core PVC I&S, AUGC	960.00	Mtr			
3.2	240Sq.mm 4core PVC I&S, AUGC	110.00	Mtr			
3.3	150Sq.mm 4core PVC I&S, AUGC	50.00	Mtr			
4.0	Compound light					
4.1	Providing and fixing 70W Slim LED Flood Light,8.5m Street Light Steel Tubular Pole with base plate 250x250x5.4mm, entry hole of 40mm dia 1.1m from bottom and strude bolt as earth terminal complete as required and other required accessories to make the set complete.(Vinay or Equivalent)	2.00	set			
4.2	Providing and fixing 3x8 W COB LED POLE LAMP,4.5m, 5.4mm thick compound light steel tubular pole 50/60mm outer dia having a base plate 250x250x5.4mm, entry hole of 20mm dia 1.1m from bottom and strude bolt as earth terminal complete as required and other required accessories to make the set complete.(Vinay or Equivalent)	70.00	set			
5.0	Providing & fixing Four pole MCBs & DBs, ; - 2 pole MCB: 32A & 4way SPNDB	2.00	set			
6.0	Earthings					
6.1	Provide and installing earthing with 20mm x1800mm GI spike including 8 or 10mm dia GI nuts and bolts, 3m long 2.5 Sq.mm bare copper conductor.	74.00	set			
7.0	Switch Gear Stand					



7.1	Switch gear stand with RCC 1000x500x1200mm(ratio 1:2:4)	2.00	no			
8.0	Switch Gear Boxes					
8.1	Providing & fixing feeder pillar of MS sheet metal box 1000mm long 500mm wide 200mm high (external) with fitted in busbars and to house in meters, Main Switches, timer switch and any other auxiliaries	2.00	no			
9.0	MCCB					
9.1	Providing & fixing 4pole MCCB, 250A,415V, 36KA breaking capacity.	1.00	no			
9.2	Providing & fixing 4pole MCCB, 315A,415V, 36KA breaking capacity	1.00	no			
10.0	Timer switch and contactor					
10.1	Supply and fixing of electronic timer switch double pole,7days/24hrs, 50Hz, sensitivity 30mA, 230 volt A.C complete with all accessories suitable to to fix on a din-bar etc. as required	2.00	no			
10.2	Supply and fixing of 32A 3 pole contactor, 440V with single phase solenoid coil	2.00	no			
10.3	Supply and fixing of 250x180x100 metal box with din bar and hinged, lockable cover.	2.00	no			
11.0	Supplying and fixing of CT energy meter(approved by BPC)	1.00	set			
12.0	Design, manufacture, supply at site, storing, handling, erection, installation, testing and commissioning of 500 kVA, 33/0.415kv package sub-station with HT Compartment having RMU, having HT metering Provision, Supply and laying of 33 KV Aluminium Conductor crosslinked polyethylene PVC Sheathed XLPE UG Cable,3 Core and complete with all accessories required(From BPCL 33KV HT Line to Proposed PSS 500KVA Sub-station (actual length/cable size as recommended by BPCL as per site conditions) and complete with earthing and all accessories required(KOTSONS(ResQ), Schneider Electric / ABB Make or equivalent)	1.00	set			
13.0	Civil Work including foundation as per the specifications and drawings provided & recomanded by the manufacturer	1.00	set			
	Total for Compound Electrification with PSSD Set					



Total in Words;				
R	OCUPATIONAL HEALTH AND SAFETY (OHS)	Unit	Figure	Rates (Nu)
SL.No	Description		Words	Amount (Nu)
1	Providing basic necessary personal protective equipment (PPE) likes safety helmet, protective gloves, safety shoes/ gumboot, safety belt,dust mask for the construction workers and common protection measures (CPMs) like First Aid tool box with aid kits, Adequate safety signs and signboards, Housekeeping, etc	Lump sum		
Total for Occupational Health and Safety				
Total in Words;				





