

BoQ					
Project:	Construction of 3 Nos. of 6 units (3BHK) each Staff Quarter at Samtse College of Education, Samtse College.				
Client:	Samtse College of Education, ROYAL UNIVERSITY OF BHUTAN				
Type of Building:	3BHK STAFF QUARTER				
Location:	Samtse, Bhutan				
S.N.	Description	Qty.	Unit	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.	554.19	Sq.m		
	Felling of trees including removal of roots and disposal of rubbish using bull dozer (excluding cutting of trunks, branches & stacking)	5.00	Each		
Sub total 1					
2	Earth work				
2.1	Earth work in excavation over areas, depth >300mm, width >1.5m, area >10 Sq.m on plan, including, filling, levelling, disposal of excavated earth within 50m lead and 1.5m lift & disposed soil to be neatly dressed - All kinds of soil	417.05	Cu.m		
2.2	Excavation in foundation trenches or drains, width <1.5m, area <10Sq.M. in plan, depth >300mm including Dressing and ramming, disposal of surplus soil within 50m lead & 1.5m lift.				
	a) All kinds of soil in cluding small boulders upto 1m size	336.67	Cu.m		
	b) Hard rock requiring blasting	37.37	Cu.m		
2.3	Filling of trenches, sides of foundations, areas to be raised etc. including compaction in layers < 200mm using selected excavated earth within lead 50m & lift 1.5m.	309.62	Cu.m		
2.4	Providing and laying dry earth bedding, including consolidating each deposited layer by watering, ramming and dressing	33.96	Cu.m		
Sub total 2					
3	Damp Proof Course				
3.1	Providing and laying 20 mm thick sand bedding under floor, including watering, ramming, dressing.	45.27	Cu.m		
3.2	Providing and laying moisture barrier using plastic sheeting underlay -100 micro meter	276.55	Sq.M		
Sub total 3					
4	Stone Work:				
4.1	Providing and laying Hand packed stone filling or soiling with stones.	68.21	Cu.m		
4.2	Providing and laying RRM with hard stone in foundation and plinth-in cement mortar 1:4	60.26	Cu.m		
Sub total 4					
5	Concrete work (excluding centering and shuttering)				

5.1	Providing and laying in position PCC (1 cement : 3 sand : 6 graded crushed rock 40mm nominal size) excluding the cost of centering and shuttering-All work upto plinth level.	22.27	Cu.m		
5.2	Providing and laying in position PCC (1 cement : 3 sand : 6 graded crushed rock 20mm nominal size) excluding the cost of centering and shuttering-All work upto plinth level.	28.29	Cu.m		
Sub total 5					
6	RCC work (excluding form work and reinforcement)				
6.1	Providing and laying in position RCC (1 cement : 1.5 sand :3 graded crushed rock 20mm nominal size) excluding the cost of centering and shuttering and reinforcement in foundation- all work upto plinth level	146.23	Cu.m		
6.2	Providing and laying in position RCC (1 cement : 1.5sand :3graded crushed rock 20mm nominal size) excluding the cost of centering and shuttering and reinforcement in columns, Pillars, posts above plinth up to roof	47.69	Cu.m		
6.3	Providing and laying in position RCC (1 cement : 1.5sand :3graded crushed rock 20mm nominal size) excluding the cost of centering and shuttering and reinforcement in beams, lintels, slabs, staircase above plinth up to roof	238.76	Cu.m		
Sub total 6					
7	Steel reinforcement (providing & fixing Including cutting, bending, binding and placing in position)				
7.1	Providing and fixing HYSD TMT bars (Fe500) for RCC work including cutting, bending, binding and placing in position complete	54,675.00	Kg		
Sub total 7					
8	Formworks- Providing and fixing centering and shuttering (formwork), including bstrutting, propping, etc. and removal of formwork.				
8.1	Foundation and plinth	338.26	Sq.M.		
8.2	Columns, Pillars, posts, etc. in superstructure with Phenol bonded ply shuttering	422.82	Sq.M.		
8.3	Beams, Lintels,Slabs,Landings, Staircases,Walls etc. in superstructure with Phenol bonded ply shuttering	1,440.32	Sq.M.		
Sub total 8					
9	Concrete Brick work: (Providing and laying Concrete Block Brick)				
9.1	Providing & laying Concrete Block Brick. In CM 1:4, 250mm thick at all floor level.	192.27	Cu.m		

9.2	Providing & laying Concrete solid block masonry in superstructures. In CM 1:4, 125mm all floor level.	639.43	Sq.m		
Sub total 9					
10	Doors & Windows				
10.1	Providing & fixing in position with aluminum frame with aluminium windows including Shutter 6mm thick plain glass, Pelmet & curtain rod, fittings & fixtures & hold fasts as per drawing complete, including synthetic enamel paint on new work of steel on SHS and RHS. (Inclusive of traditional rcc cornices and painting works)				
	W250	36.00	Each		
	V69	12.00	Each		
	LW1	6.00	Each		
	SW1	2.00	Each		
	SW2	4.00	Each		
10.2	Providing & fixing in position doors in Timber frame including,40mm flush door treated with anti-termite ptreatment with all fittings & fixtures & hold fasts as per drawing (Inclusive of traditional cornices of rcc with paintings).				
	D90	18.00	Each		
	D82	18.00	Each		
	D100	6.00	Each		
10.3	Providing & fixing in position doors in Aluminium Frames including shutters with all fittings & fixtures & hold fasts as per drawing complete with RHS or SHS as the frame. synthetic enamel paint on new work of steel. (Inclusive of traditional cornices of rcc with paintings)				
	DW437	6.00	Each		
Sub total 10					
11	Steel works in Roof				
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				
	50 NB	2,114.87	Kg.		
	40 NB	1,175.33	Kg.		
	32 NB Purlins	1,111.45	Kg.		
11.2	Providing and fixing MS round hold-down bolts with nuts and washer plates, complete in all areas.	148.64	Kg		
11.3	Providing & fixing bolts of various sizes including nuts & washers	22.22	Kg		
11.4	Providing, making and fixing, M.S Gusset Plate, straps, flats, sole plates etc., complete in roof truss work	6,707.93	Kg		

Sub total 11					
12	Roofing				
12.1	Providing & fixing Pre Painted Steel Corrugated Roofing sheets, 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.	514.26	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.	33.00	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 -75mm dia	81.20	Mtr.		
12.4	Providing & fixing 450mm over all semi-circular plain G.I gutter, including brackets, bolts, nuts, washers & rain water pipes connections, excluding the cost of pipe - 24G	66.33	Mtr.		
12.5	providing and fixing eavesboard of mild steel flats,plates (225x6) with including including cutting, hoisting, fixing and appl. priming coat of red.	3,855.07	Kgs.		
12.6	Providing & fixing gable end, including hoisting, applying wood preservative on unexposed surfaces	85.40	sq m		
Sub total 12					
13	Flooring works				
13.1	Providing and laying vitrified tiles (600x600) in floorings laid on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	847.25	Sq.M		
13.2	Providing and laying vitrified tiles (600x600mm) in skirtingss on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	118.88	Sq.M		
13.3	Providing and laying anti skid tiles (300x300mm) in walls and floors on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.	105.94	Sq.M		
13.4	Providing and laying ceramic tiles (600X300mm) in walls on a bed of 12mm thick cement mortar of 1:3 finished with flush pointing in white cement.(W/C only)	306.82	Sq.M		
13.5	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 marble(Colour as per client choice).	98.80	Sq.M		

13.6	Providing and laying Pre-Polished/ Polished Granite of approved quality and source in flooring using necessary cement bedding in C.M. 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.	13.22	Sq.M		
Sub total 13					
14	Finishing				
14.1	Providing and laying cement plaster , 20 mm thick 1:4 . (Outside wall) including 20mm thick raised plaster band for Rabsey bead	316.26	Sq.m		
14.2	Providing and laying cement plaster , 15 mm thick 1:4 .(Inside wall)	2,147.22	Sq.m		
14.3	Providing and laying 6mm thick cement plaster in C.M 1:4 in cielling	786.67	Sq.m		
14.4	Providing and applying washable distemper 2 or more coats on new work including Cement primer coat- walls and ceiling - The color of the paint will be decided by the Site Supervising Engineer/ College				
	Outside	316.26	Sq.m		
	Inside	2,933.89	Sq.m		
Sub total 14					
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 (40mm)	189.61	Sq.m		
15.2	Constructing second class brick masonry open surface drain in cement mortar 1:4 including earth work in excavation 100mm thick concrete bed 1:5:10, 40mm aggregate and 25mm thick cement concrete 1:2:4, 12mm aggregate for filling haunches 12mm cement plastering 1:4 with a floating coat of neat cement and disposal of surplus earth as per the instruction of engineer in-charge complete as per drawing.	85.68	Mtr.		
Sub total 15					
16	Plumbing work				
16.01	Providing & fixing HDPE overhead tank including all accessories complete -2000 litre capacity	4.00	Each		
16.02	Providing & fixing Electric water heater including necessary fittings- 15 litres	12.00	Each		

16.03	Providing & fixing G.I. pipes including G.I. fittings & clamps & repair walls -15mm for hot water from gyser	96.23	Mtr.		
16.04	Providing & fixing H.D.P.E pipes including clamps & repair walls etc. complete- 25mm dia	159.23	Mtr.		
16.05	Providing & fixing white vitreous china wash basin with long pedestal in white (630x450mm) with a pair of 15mm c.p. brass pillar taps, including C.I brackets, 15mm C.P. pillar taps, c.p. chain & rubber plug, 32mm pvc waste, 32mm dia. trap & union, repair walls- (Hindware or equivalent)	12.00	Each.		
16.06	Providing & fixing c.p. brass mixers, 15mm- For basin, single-hole, casted spout (Hindware or Equivalent brand approved by BSB)	4.00	Each.		
16.07	Providing & fixing European-type vitreous china w.c pedestal including seat and lid with c.p brass hinges, 15 lit white vitreous china low level cistern, fittings, brackets, repair walls (Hindware or Equivalent brand approved by BSB)	6.00	Each.		
16.08	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.	6.00	Each		
16.09	Providing & fixing Kitchen Sinks including all connections and fittings - Stainless steel, 940 x 460 x 160 mm, single bowl & drainboard	12.00	Each		
16.1	Providing & fixing c.p. brass mixers, 15mm- For sink, with casted spout swinging	12.00	Each		
16.11	Providing & fixing c.p. brass mixers, 15mm - For wall, with telephonic shower arrangement with 115mm long bend pipe for over head shower connection. For wall -. (Hindware or Equivalent brand approved by BSB)	6.00	Each		
16.12	Providing & fixing C.P. Brass shower fittings- Shower with revolving joint, 15mm,	6.00	Each		
16.13	Providing & fixing 600x450mm bevelled edge mirror (superior glass) incl.4mm A.C sheet base fixed to wooden cleats.(Hindware or Equivalent brand approved by BSB)	12.00	Each		
16.14	Providing & fixing 450x120mm glass shelf, including c.p brass brackets fixed to wooden cleats, including repair and painting. (Hindware or Equivalent brand approved by BSB)	12.00	Each		

16.15	Providing & Fixing soap dish- including brackets, wooden cleats, c.p. brass screws. (Hindware or Equivalent brand approved by BSB)	12.00	Each		
16.16	Providing & fixing c.p. towel rail 600 x 20mm with all fixtures and fittings.(Hindware or Equivalent brand approved by BSB)	12.00	Each		
16.17	Providing & Fixing toilet paper holder with necessary fittings. C.P. brass (Hindware or Equivalent brand approved by BSB)	12.00	Each		
16.18	Const. Brick masonry Valve Chamber in CM1:5, RC top slab with 1:2:4 20mm agg. fdn. PCC 1:3:6 40mm agg.12mm CP 1:3 finished with floating coat & making channels in PCC 1:2:4. Inside dim.450x450 mm C.I. cover with frame complete as per drawing.	12.00	Each		
Sub total 16					
17	Sewerage works				
17.01	Providing & laying H.D.P.E Pipes 110mm dia including H.D.P.E fittings pressure class 4 kg/sq.cm (including trenching, refilling & thrust block)	64.50	Mtr.		
17.02	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip and repair walls complete, (excluding the cost of PVC fittings) - 75mm dia	132.42	Mtr.		
17.03	Providing & fixing P.V.C soil waste and vent pipes, single or double socketed, including pipe clip and repair walls complete (Excluding the cost of PVC fittings) - 110mm dia	64.21	Mtr.		
17.04	Providing and fixing PVC Nahni / Multi Floor trap- 110mm inlet & 75mm outlet	12.00	Each		
17.05	Providing & fixing P.V.C bend with door - 110mm dia	18.00	Each		
17.06	Providing & fixing P.V.C bend with door- 75mm dia	18.00	Each		
17.07	Providing & fixing P.V.C Single Tee with door - 110mm dia	18.00	Each		
17.08	Providing & fixing P.V.C Single Tee with door - 75mm dia	18.00	Each		
17.09	Providing & fixing P.V.C plain bend- 110mm dia	18.00	Each		
17.1	Providing & fixing P.V.C plain bend- 75mm dia	18.00	Each		
17.11	Providing & fixing P.V.C Double Tee plain with door-110 mm dia	6.00	Each		

17.12	Providing & fixing P.V.C Double Tee plain with door- 75mm dia	6.00	Each			
17.13	Providing & fixing PVC vent cowl(Terminal guard) -75mm or 110mm dia	2.00	Each			
17.14	Const. Brick masonry manhole in CM1:5, RC top slab with 1:2:4 20mm agg. fdn. PCC 1:3:6 40mm agg.12mm CP 1:3 finished with floating coat & making channels in PCC 1:2:4. Inside dim. 600x600 mm incl. C.I. cover with frame complete as per drawing- Inside dimension 900 x 800mm & 450mm deep including C.I cover & frame (weight>38kg)	1.00	Each			
17.15	Const. Brick masonry manhole in CM1:5, RC top slab with 1:2:4 20mm agg. fdn. PCC 1:3:6 40mm agg.12mm CP 1:3 finished with floating coat & making channels in PCC 1:2:4. Inside dim. 600x600 mm incl. C.I. cover with frame complete as per drawing- Inside dimension 900 x 800mm & 600mm deep including C.I cover & frame (weight>38kg) - Inspection Chamber	2.00	Each			
Sub total 17						
Site Development Works						
18	Soak Pits and Septic Tanks					
18.1	Constructing Septic Tanks, in R.R Masonry in cement mortar 1:6, including fittings, C.I cover with frame, 40mm thick concrete flooring (40mm aggregates) cement plaster concrete base in C.C 1:4:8 etc. complete as per standard design - 50 users	1.00	Each			
18.2	Constructing Septic Tanks, in R.R Masonry in cement mortar 1:6, including fittings, C.I cover with frame, 40mm thick concrete flooring (40mm aggregates) cement plaster concrete base in C.C 1:4:8 etc. complete as per standard design - 25 users	1.00	Each			
18.3	Constructing Soak Pit- Size 1200x1200x1200mm, filled with brick bats including 100mm SW drain pipe X 1200mm long	2.00	Each			
Sub total 18						
19	RRM Wall					
19.1	Providing & laying Random Rubble Masonry with hard stone- In cement mortar 1:5	85.15	cu.m			
19.2	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- 1:3:6 (1 cement : 3 sand : 6 graded crushed rock 40 mm nominal size)	2.60	cu.m			

19.3	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-1:2:4 (1 cement : 2 sand : 4 graded crushed rock 20 mm nominal size)	0.65	cu.m		
19.4	Providing and laying Hand packed stone filling or soling with stones	3.90	cu.m		
Sub total 19					
CIVIL TOTAL FOR ONE BUILDING (Nu.)					