

SUMMARY OF BILL OF QUANTITIES

Guest House

A. SUB STRUCTURE

1 Excavation and earth work.....	Birr
2 Concrete work.....	Birr
3 Masonry work	Birr
Total A.....	Birr

B. SUPER STRUCTURE

1 Concrete work.....	Birr
2 Block work.....	Birr
3 Aluminum Work.....	Birr
4 Plastering	Birr
5 Floor & Wall Finishing	Birr
6 Painting	Birr
7 Electrical Installation,.....	Birr
8 Sanitary Installation.....	Birr

Total B **Birr**

Total A + B **Birr**

VAT 15% **Birr**

CONTINGENCY 10% **Birr**

GRAND SUMMARY **Birr**

1,528,630.96
574,502.80
111,268.78
2,214,402.54

2,395,704.50
1,330,919.80
1,185,041.78
1,203,764.72
1,690,641.39
250,207.54
1,489,964.00
777,525.00

10,323,768.74

12,538,171.28

1,880,725.69

1,253,817.13

15,672,714.10

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	A. SUB-STRUCTURE				
	1. EXCAVATION & EARTH WORK				
1.1	Site clearing to remove the top soil to an average depth of 20 cm for ordinary soil.	m ²	350.02	24.57	8,599.99
1.2	Bulk excavation in ordinary soil to a depth not exceeding 1500mm from reduced level.	m ³	139.88	208.50	29,163.94
1.3	Ditto item No. 1.2, but in soft rock .	m ³	69.94	438.00	30,632.63
1.4	Ditto item No. 1.2, but in boulder rock .	m ³	41.96	761.40	31,950.25
1.5	Ditto item No. 1.2, but in hardrock .	m ³	27.98	1,326.38	37,105.48
1.6	Ditto as item No.1.2 but over 1500mm not exceeding 3000mm.	m ³	139.88	260.63	36,455.62
1.7	Ditto item No. 1.6, but in soft rock .	m ³	69.94	527.95	36,923.50
1.8	Ditto item No. 1.6, but in boulder rock .	m ³	41.96	1,019.73	42,790.42
1.9	Ditto item No. 1.6, but in hardrock .	m ³	27.98	1,657.97	46,381.71
1.10	Ditto as item No.1.2 but over 3000mm not exceeding 4500mm.	m ³	139.88	312.75	43,745.91
1.11	Ditto item No. 1.10, but in soft rock .	m ³	69.94	671.93	46,993.10
1.12	Ditto item No. 1.10, but in boulder rock .	m ³	41.96	1,189.69	49,922.37
1.13	Ditto item No. 1.10, but in hardrock .	m ³	27.98	2,210.63	61,842.37
1.14	Excavation for pit to depth not exceeding 1500mm	m ³	95.24	144.52	13,763.36
1.15	Ditto item No. 1.14, but in soft rock .	m ³	47.62	567.00	26,999.12
1.16	Ditto item No. 1.14, but in boulder rock .	m ³	28.57	878.54	25,100.33
1.17	Ditto item No. 1.14, but in hardrock .	m ³	19.05	1,312.88	25,006.43
1.18	Excavation for pit to depth over 1500mm but not exceeding 3000mm	m ³	95.24	288.69	27,493.39
1.19	Ditto item No. 1.18, but in soft rock .	m ³	47.62	671.82	31,990.39
1.2	Ditto item No. 1.18, but in boulder rock .	m ³	28.57	1,142.10	32,630.37
1.21	Ditto item No. 1.18, but in hardrock .	m ³	19.05	1,500.43	28,578.69
1.22	Excavation for continous trench to a depth not exceeding 1500mm .starting from reduced ground level.	m ³	42.21	234.56	9,899.60
1.23	Ditto item No. 1.22, but in soft rock .	m ³	21.10	671.82	14,177.08
1.24	Ditto item No. 1.22, but in boulder rock .	m ³	12.66	761.40	9,640.47
1.25	Ditto item No. 1.22, but in hardrock .	m ³	8.44	1,500.43	12,665.13
1.26	Back fill around isolated footing and masonry wall foundation column with non-expansive selected material from quarry and compact in layers not exceeding 200mm thick by sprinkling water to insure the requirment of AASHTO dry density .	m ³	391.15	442.82	173,209.49
1.27	Ditto as item No. 1.26, but from Site	m ³	195.58	392.30	76,724.27
1.28	Back fill under hard core with non-expansive selected material from quarry and compact in layers not exceeding 200mm thick by sprinkling water to insure the requirment of AASHTO dry density.	m ³	214.48	442.82	94,973.82
1.29	Ditto as item No.1.28, but but from Site	m ³	107.24	392.30	42,069.27
1.30	Cart away surplus excavated material and disopise at a distance not exceeding 10km.from site as per the Engineers Direction.	m ³	1,374.60	257.85	354,441.64
1.31	25cm thick basaltic or equivalent stone hardcore well rolled,consolidated and blinded with crushed stone.	m ²	162.66	164.52	26,760.82
	TOTAL CARRIED TO SUMMARY				1,528,630.96

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	2.CONCRETE WORKS				
	Particular attention !!! must be given to the following notes along with the Technical Specification and Method of Measurement prepared by BaTCoDA.				
	Constituents of concrete:				
	The quality of ingredients of concrete must fulfill the requirements, concrete trial mixes shall be done and certified & confirmed by laboratory test results before casting of structural elements & Cement shall be use OPC for Structure above C-25 Mpa of Compresive strength. During concrete casting samples should be taken for laboratory tests.				
	Concrete :				
	The specified concrete strength must be confirmed by laboratory test.				
	Reinforcement bar :				
	The specified yield strength and other related properties of reinforcement bar must be certified both in manufacturer's catalogue/manual and by laboratory test.				
	Form Work				
	Formwork shall be constructed to the exact sizes, shapes lines and dimensions shown and as required to obtain accurate alignment, location grade, level and plumb work in finished structures. Provision shall be made for openings, offset, sinking, keyways, recesses, moldings, reglets, chamfers, blockings, screeds bullheads, anchorages, inserts and other features as required.				
2.1	5cm thick lean concrete class C-5, 150kg of cement /m ³ under:				
	a) Footing pads	m ²	90.02	88.34	7,951.92
	b) Basement Floor beam	m ²	26.55	88.34	2,345.30
	c) Stone masonry wall	m ²	33.76	88.34	2,982.19
2.2	Reinforced concrete class C-25,360kg of cement/ m ³ filled into form work and vibrated around reinforcement bar.Reinforcement bar and formwork measured separately.				
	a) Footing pads	m ³	41.46	2,693.52	111,673.34
	b) Basement Floor beam	m ³	14.80	2,693.52	39,864.10
	c) Ground floor beam	m ³	13.73	2,693.52	36,982.03
	d) 10 cm thick Basement floor slab.	m ²	175.36	269.35	47,233.57
	e) 15 cm thick Ground floor slab.	m ²	166.79	404.03	67,387.83
	f) entrance concrete steps	m ³	3.06	2,693.52	8,242.17
2.3	Reinforced concrete class C-30,400kg of cement/ m ³ filled into form work and vibrated around reinforcement bar.Reinforcement bar and formwork measured separately.				
	a) Foundation column	m ³	4.04	2,833.92	11,449.04
	b) Retaining Wall	m ³	18.42	2,833.92	52,200.81

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
2.4	Provide, cut and fix in position sawn seasoned timber or wrought iron form work made up of minimum 3mm thick sheet metal & folded thickness of 50mm whichever is appropriate; Contractor to submit formwork design;				
	a) Footing pads	m ²	80.16	223.98	17,954.24
	b) Foundation column	m ²	51.88	248.01	12,866.76
	c) Retaining Wall	m ²	184.19	248.01	45,680.96
	d) Basement Floor beam	m ²	98.80	248.01	24,503.39
	e) Ground floor beam	m ²	91.56	265.50	24,309.18
	f) 15 cm thick Ground floor slab.	m ²	166.79	251.02	41,867.63
	g) entrance concrete steps	m ²	33.40	248.01	8,283.53
2.5	Steel reinforcement for use in Sub Structure Concrete works with a minimum yield strength Fyk of 300MPa for reinforcement bar of dia. less than and equal to 10 mm & Fyk of 400MPa for reinforcement bar of dia. greater than and equal to 12 mm. Reinforcement shall be according to Structural Drawings and Technical Specifications. Price includes cutting, bending, placing in position and tying wires.				
	a) Dia 8mm deformed bar	kg	25.91	39.00	1,010.57
	b) Dia10mm deformed bar	kg	-	39.00	0.00
	c) Dia 12mm deformed bar	kg	-	39.00	0.00
	d) Dia 14mm deformed bar	kg	-	39.00	0.00
	e) Dia16mm deformed bar	kg	-	39.00	0.00
	f) Dia 20mm deformed bar	kg	-	39.00	0.00
	g) Dia 24mm deformed bar	kg	-	39.00	0.00
	Expansion joints				
2.6	Supply and fix 10mm thick and 10cm high Styrofoam for the expansion joint in between the basement floor beam and the basement floor slab.	ml	173.469	56.00	9,714.26
TOTAL CARRIED TO SUMMARY					574,502.80
3. MASONRY WORKS					
3.1	Construct 50cm thick trachitic or equivalent stone masonry foundation wall bedded in cement sand mortar ratio 1:3				
	A. Below Natural Ground Floor Level (BNGL)	m ³	22.51	1,560.41	35,124.83
	B. Above Natural Ground Floor Level (ANGL)	m ³	19.69	1,662.67	32,737.97
3.2	Construct 60mm thick single brick bedded on cement mortar 1:3 mix (as vertical laying) to protect damp proofing course on retaining wall & cores.	m ²	126.41	343.38	43,405.98
TOTAL CARRIED TO SUMMARY					111,268.78

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	B. SUPER-STRUCTURE				
	1. CONCRETE WORK				
	Particular attention !!! must be given to the following notes along with the Technical Specification and Method of Measurement prepared by BaTCoDA.				
	Constituents of concrete:				
	The quality of ingredients of concrete must fulfill the requirements, concrete trial mixes shall be done and certified & confirmed by laboratory test results before casting of structural elements & Cement shall be use OPC for Structure above C-25 Mpa of Compressive strength. During concrete casting samples should be taken for laboratory tests.				
	Concrete :				
	The specified concrete strength must be confirmed by laboratory test.				
	Reinforcement bar :				
	The specified yield strength and other related properties of reinforcement bar must be certified either by manufacturer's catalogue/manual or/and by laboratory test.				
	Form Work				
	Formwork shall be constructed to the exact sizes, shapes lines and dimensions shown and as required to obtain accurate alignment, location grade, level and plumb work in finished structures. Provision shall be made for openings, offset, sinking, keyways, recesses, moldings, reglets, chamfers, blockings, screeds bullheads, anchorages, inserts and other features as required.				
1.1	Reinforced concrete class C-25,360kg of cement / m ³ filled into form work and vibrated around reinforcement bar.Reinforcement bar and formwork measured separately.				
	a) Floor Beams	m ³	54.92	2,915.21	160,103.33
	b) Roof Beam	m ³	16.24	2,915.21	47,343.01
	c) 15 cm thick Suspended Floor solid slab	m ²	749.40	437.28	327,698.76
	d) 15 cm thick Suspended Roof solid slab	m ²	206.22	437.28	90,176.19
	e) Stair case	m ³	33.10	2,915.21	96,493.45
1.2	Reinforced concrete class C-30,400kg of cement/ m ³ filled into form work and vibrated around reinforcement bar.Reinforcement bar and formwork measured separately.				
	a) Elevation column	m ³	29.94	3,055.61	91,484.96
1.3	Provide, cut and fix in position sawn seasoned timber or wrought iron form work made up of minimum 3mm thick sheet metal & folded thickness of 50mm whichever is appropriate; Contractor to submit formwork design;				
	a) Elevation column	m ²	383.12	283.22	108,507.25
	b) Floor Beams	m ²	366.10	283.22	103,686.84
	c) Roof Beam	m ²	108.36	283.22	30,689.72
	d) 15 cm thick Suspended Floor solid slab	m ²	749.40	251.02	188,114.39
	e) 15 cm thick Suspended Roof solid slab	m ²	206.22	251.02	51,765.34
	f) Stair case	m ²	171.77	308.38	52,970.43

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1.4	Steel reinforcement for use in Super Structure Concrete works with a minimum yield strength Fyk of 300MPa for reinforcement bar of dia. less than and equal to 10 mm & Fyk of 400MPa for reinforcement bar of dia. greater than and equal to 12 mm. Reinforcement shall be according to Structural Drawings and Technical Specifications. Price includes cutting bending, placing in position and tying wires.				
	a) Dia 8mm deformed bar	kg	10,188.15	39.00	397,337.93
	b) Dia 10mm deformed bar	kg	2,885.52	39.00	112,535.41
	c) Dia12mm deformed bar	kg	-	39.00	0.00
	d) Dia 14mm deformed bar	kg	1,944.00	39.00	75,815.98
	e) Dia 16mm deformed bar	kg	11,820.04	39.00	460,981.51
	f) Dia 20mm deformed bar	kg	-	39.00	0.00
	g) Dia 24mm deformed bar	kg	-	39.00	0.00
	h) Dia 32mm deformed bar	kg	-	39.00	0.00
	TOTAL CARRIED TO SUMMARY				2,395,704.50
	2. BLOCK WORK				
2.1	Construct class 'B' 200x200x400mm HCB wall with cement mortar 1:3 mix ratio. Both faces left for plaster.	m ²	650.00	509.99	331,493.50
2.2	Ditto as item 2.1, but 15cm thick HCB	m ²	847.00	488.26	413,556.22
2.3	Ditto as item 2.1, but 10cm thick HCB	m ²	128.00	452.11	57,870.08
2.4	Construct 40cm thick fine Dressed ambo or Equivalent stone type it should lay horizontal left for 12mm.wide straight pointing and vertically fix or inter locked to be look as a single ston wall bedded in cement sand mortar ratio 1:3 as per the drawing and inspection of the Engineer.	m ²	220.00	2,400.00	528,000.00
	TOTAL CARRIED TO SUMMARY				1,330,919.80

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	3. ALUMINUM WORK				
	Supply and fix Doors & Windows made of Aluminum tubular profile frames ALLCO-5 or equivalent, 2mm thick average weight 1000gm/ml, door kick plate 1500gm/ml, partly covered with aluminum sheet according to the detail drawing and window door schedule . Complete work includes all the necessary iron mongery and ASSA or equivalent type of cylindrical lock. All aluminum windows and doors type shall be approved by the Engineer. Price includes 4mm thick non - reflective tinted clear glass.				
3.1	Windows:				
	a) Type W1 ,150 x 150cm.	No	40.00	8,005.77	320,230.80
	b) Type W2 , 60 x150cm.	No	36.00	3,202.31	115,283.09
	c) Type TW1, 80 x 40cm.	No	20.00	1,138.60	22,771.97
	d) Type TW1, 40 x 40cm.	No	25.00	569.30	14,232.48
3.2	Doors:				
	a)Type D-1', 135x 210cm.	No	1.00	10,087.27	10,087.27
	b)Type D-1, 135 x 210cm.	No	16.00	10,087.27	161,396.32
	c)Type D-2, 90 x 210cm.	No	15.00	6,724.85	100,872.70
	d)Type D-3, 80 x 210cm.	No	36.00	5,977.64	215,195.10
	e)Type D-4, 100 x 210cm.	No	1.00	7,472.05	7,472.05
3.3	Staircase:				
	Aluminum hand rail & baluster consists of .				
	a) Dia.50/3mm CHS Hand rail top Horizontal baluster	ml	37.00	1,900.00	70,300.00
3.4	Glased Aluminum Wall				
	Supply and fix curtain wall made of concealed Aluminum frames (Two studded structurally Glazed curtain wall) , glazing consists externally 5mm thick non reflective glass.Complete all works as per the drawing, standard specification and as per the engineers approval . Works shall include glazing, all accessories including trims and flashings and best quality iron mongery and supply and fixing of the curtain wall which shall be subject to approval of shop drawings from the manufacturer.	m ²	32.00	4,600.00	147,200.00
	TOTAL CARRIED TO SUMMARY				1,185,041.78
	4. PLASTERING & Pointing				
	Finishing work shall include all surface pre-cleaning, preparation and application of finishing and cleaning at the end of finishing work				
4.1	Apply two coats of plaster in cement sand mortar mix [1:3] in Internal wall surfaces.	m ²	2,600.00	110.58	287,508.00
4.2	Ditto as item 7.1 but for all Internal structural elements like soffits, beams & columns surfaces.	m ²	1,984.97	179.55	356,401.36
4.3	Ditto as item 7.1 but for External wall surfaces.	m ²	650.00	110.58	71,877.00
4.4	Apply smooth and standard type of Gypsum as third coat over the plastered internal wall surfaces.	m ²	2,600.00	106.43	276,718.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
4.5	Ditto as item 7.4 but for all Internal structural elements like soffits, beams & columns surfaces.	m ²	1,984.97	106.43	211,260.36
4.6	Apply pointing in cement mortar mix(1:2) to fine masonry wall as where shown on the Architectural drawing.Price shall include pre-cleaning and preparation of the surface.	m ²	220.00	44.22	9,728.40
TOTAL CARRIED TO SUMMARY					1,203,764.72
5. FLOOR & WALL FINISHING					
5.1	Apply 48mm thick rough cement sand screed on concrete slab in cement mortar.	m ²	889.00	158.99	141,342.11
5.2	10mm thickness Supply and fix 600mmx600mm non Slippery ceramic tile flooring bedded in cement sand ratio (1:3) including mortar bedding,Price shall include 30mm thick cement mortar bedding. Color and pattern of tile shall be approved by the engineer.	m ²	139.00	812.72	112,968.08
5.3	Supply and fix approved 200x300x6mm glazed Ceramic wall tiles stuck to wall with cement mortar mix (1:2) backing and 2 mm joints to be grouted in white cement.	m ²	585.2	449.67	263,146.88
5.4	8mm thickness(600*600)mm. Porcelain Floor Tile bedded on & including cement sand mortar mix 1:3 and joints grouted in cement mortar. Price shall include 30mm thick cement mortar bedding.	m ²	102.00	532.16	54,280.32
5.5	Supply and fix 100mm high 10mm thick porcelain skirting to wall.	ml	93.34	106.43	9,934.36
5.6	25mm thickness(500*500)mm. polished granite Floor Tile bedded on & including cement sand mortar mix 1:3 and joints grouted in cement mortar. Price shall include 30mm thick cement mortar bedding colour shall be approve as per the inspection of the engineer.	m ²	106.00	4,580.00	485,480.00
5.7	Supply and apply approved type 3mm thick Epoxy paint over leveled,cured and hardened cement,sand & gravel screed with mix ratio of (1:2:3). Price includes standard painting, primer,cement-sand-gravel screed & polishing. Application shall be as per the Manufacturer's catalog & the Engineer's inspection.	m ²	154.00	893.00	137,522.00
5.8	100mm high 2mm thick PVC skirting. Price shall include adhesive or glue to fix with the wall.	ml	21.95	94.16	2,066.81
5.9	Supply and fix 2cm thick wooden parquet floor finish. Complete all works as per AR drawing and engineers approval.	m ²	374.00	449.67	168,176.58
5.10	Supply and fix white approved Marble bedded & joined in cement and sand mortar mix 1:3.Price shall include cement sand mortar bedding.				
	a) Marble Window sill 230mmx 20mm	ml	113.65	560.05	63,649.68
	b) Marble Treads 330mmx30mm thickness	ml	96.00	1,204.50	115,632.00
	c) Marble Risers 160mmx20mm thickness	ml	108.00	389.60	42,076.80
	d) Landing 30mm thickness	m ²	16.83	3,650.00	61,429.50

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
5.11	Supply & fix 2cm thick White or Equivalent marble bedded on and including 3cm thick cement sand screed 1:3 ratio and joints grouted in White or equivalent type of cement mortar (1:2) ratio.all work prosidur shall inspect by the engineer.	m ²	14.00	2,352.59	32,936.26
TOTAL CARRIED TO SUMMARY					1,690,641.39
6. PAINTING					
6.1	Apply two coats of plastic paint to plastered in Internal wall surfaces.	m ²	2,600.00	45.23	117,598.00
6.2	Ditto as item 9.1 but for all Internal structural elements like Soffits, beams & columns surfaces.	m ²	1,984.97	48.60	96,469.54
6.3	Ditto as item 9.1 but for External wall surfaces.	m ²	650.00	55.60	36,140.00
TOTAL CARRIED TO SUMMARY					250,207.54
7.ELECTRICAL INSTALLATION					
Supply and Install :-					
7.1	Power & Tele Intakes				
	Manhole				
7.1.1	Manhole in bricks and with concrete base internally of 800x800x700mm including concrete cover with lifting hole.	No	1.00	5,500.00	5,500.00
	Conduits & pipes				
7.1.2	PVC conduit of 110mm diameter for main power cable intake provision	ml	10.00	155.00	1,550.00
7.1.3	PVC conduit of 50mm diameter for main Tel. cable intake provision	ml	20.00	120.00	2,400.00
7.2	Low Voltage System Earthing				
7.2.1	20x3000mm earth rod	No	1.00	1,000.00	1,000.00
7.2.2	Single core, 1x50 sq mm bare copper earth/grounding conductor from MDB earth terminal to earth rods in PVC pipe 25mm diameter (measured elsewhere).	ml	13.00	310.00	4,030.00
7.3	Feeder Power Cables in Conduits				
	Multi-core power cable copper conductor, insulated PVC sheathed, colour coded, type SIEMENS NYM 0.3/0.5KV or equivalent, in PVC conduits, connected and tested, including mounting clips, all as specified and as shown on drawings:-				
7.3.1	Cables				
7.3.1.1	5x2.5mm sq. from MDB to SDB-B	ml	5.00	108.00	540.00
7.3.1.2	3x4mm sq. from MDB to SDB-G1	ml	17.00	95.00	1,615.00
7.3.1.3	3x4mm sq. from MDB to SDB-G2	ml	18.00	95.00	1,710.00
7.3.1.4	3x4mm sq. from MDB to SDB-G3	ml	15.00	95.00	1,425.00
7.3.1.5	5x4mm sq. from MDB to SDB-1A	ml	21.00	138.00	2,898.00
7.3.1.6	5x4mm sq. from MDB to SDB-1B	ml	21.00	138.00	2,898.00
7.3.1.7	5x4mm sq. from MDB to SDB-2A	ml	26.00	138.00	3,588.00
7.3.1.8	5x4mm sq. from MDB to SDB-2B	ml	26.00	138.00	3,588.00
7.3.1.9	5x10mm sq. from MDB to SDB-3A	ml	32.00	315.00	10,080.00
7.3.1.10	5x10mm sq. from MDB to SDB-3B	ml	30.00	315.00	9,450.00
7.3.1.11	5x10mm sq. from MDB to SDB-4A	ml	37.00	315.00	11,655.00
7.3.1.12	5x10mm sq. from MDB to SDB-4B	ml	35.00	315.00	11,025.00
7.3.1.13	3x95/50mm sq. from intake point to MDB	ml	23.00	2,800.00	64,400.00
7.3.2	Conduits and Pipies				
7.3.2.1	20mm diameter from MDB to SDB-B	ml	5.00	26.00	130.00
7.3.2.2	25mm diameter from MDB to SDB-G1	ml	17.00	30.00	510.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
7.3.2.3	25mm diameter from MDB to SDB-G2	ml	18.00	30.00	540.00
7.3.2.4	25mm diameter from MDB to SDB-G3	ml	15.00	30.00	450.00
7.3.2.5	25mm diameter from MDB to SDB-1A	ml	21.00	30.00	630.00
7.3.2.6	25mm diameter from MDB to SDB-1B	ml	21.00	30.00	630.00
7.3.2.7	25mm diameter from MDB to SDB-2A	ml	26.00	30.00	780.00
7.3.2.8	25mm diameter from MDB to SDB-2B	ml	26.00	30.00	780.00
7.3.2.9	32mm diameter from MDB to SDB-3A	ml	32.00	65.00	2,080.00
7.3.2.10	32mm diameter from MDB to SDB-3B	ml	30.00	65.00	1,950.00
7.3.2.11	32mm diameter from MDB to SDB-4A	ml	37.00	65.00	2,405.00
7.3.2.12	32mm diameter from MDB to SDB-4B	ml	35.00	65.00	2,275.00
7.3.2.13	110mm diameter from intake point to MDB	ml	13.00	155.00	2,015.00
7.4	Distribution Boards				
	Supply, fix and connect flush mounted sheet steel enclosure distribution board of Siemens, Legrand, ABB or approved equal with the same brand circuit breakers, lockable door and corrosion resistant paint, phase, neutral and earth bus bars of appropriate rating including, earthing leads, connectors, cable terminals, top bottom cable entry and all the necessary fixing and connecting accessories complete, consisting of :-				
7.4.1	MDB flush mounted distribution board with busbar of 250A and 3 ammeters with current transformer, 3 voltage indicator lamps with fuse, voltage selector switch and consisting of; 1 pc main 200A, MCCB, 3Phase 4 pcs 40A MCB 3Phase	No	1.00	23,450.00	23,450.00
7.4.2	SDB-B flush mounted sub distribution board with phasebar of 20A and consisting of; 1 pc main 16A, MCB, 3Phase 2 pcs 16A, MCB, 1Phase 4 pcs 10A, MCB, 1Phase Reserve pitches	No	1.00	4,950.00	4,950.00
7.4.3	SDB-G1, SDB-G2, SDB-G3 flush mounted sub distribution board with phasebar of 25A and consisting of; 1 pc main 20A, MCB, 1Phase 1 pc 16A, MCB, 1Phase 1 pc 10A, MCB, 1Phase Reserve pitches	No	3.00	2,550.00	7,650.00
7.4.4	SDB-3A/3B/4A/4B flush mounted sub distribution board with phasebar of 50A and consisting of; 1 pc main 40A, MCB, 1Phase 3 pcs 25A, MCB, 1Phase 9 pcs 16A, MCB, 1Phase 2 pcs 10A, MCB, 1Phase Reserve pitches	No	4.00	8,750.00	35,000.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
7.4.5	SDB-1B/2B/1A/2A flush mounted sub distribution board with phasebar of 25A and consisting of; 1 pc main 20A, MCB, 3Phase 1 pc 25A, MCB, 1Phase 5 pcs 16A,	No	4.00	6,250.00	25,000.00
7.5	Light Points				
7.5.1	Flush mounted light points fed through PVC insulated conductors of 3x2.5mm ² inside PVC conduits of 16mm diameter, including junction boxes with covers, screw type insulating caps, all complete	No	250.00	309.00	77,250.00
7.6	Extra Over Light Points for Flush Mounted Switches				
	Supply and fix Legrand Mosiac 45 or approved equivalent 10/16A, 250V flush mounted light switch, fed through PVC insulated conductor of 2 x 2.5mm ² inside thermo plastic conduit of ø 16mm, connected and tested, complete with plate and including appropriate wall boxes, all complete as specified and/or shown on drawings.				
7.6.1	Single switch	No	42.00	190.00	7,980.00
7.6.2	Double/two gang single switch	No	48.00	217.00	10,416.00
7.6.3	Two way switch	No	53.00	203.00	10,759.00
7.6.4	Two gang two way switch	No	6.00	230.00	1,380.00
7.6.5	Intermediate switch	No	9.00	230.00	2,070.00
7.6.6	Dimmer switch	No	40.00	210.00	8,400.00
7.7	Light Fittings/Fixtures With Lamps				
	Connected and tested lamps including wires, flexible cables, conduits, boxes, mounting materials and accessories complete, all as specified or described in light fittings schedule and as shown on the drawings.				
7.7.1	Type 1: Philips TCS 098 TLD 2C36W IC-CL OR EQUIVALENT FLUORESCENT LAMP, 2x36, Philips TCS 098 2x TL-D 36w , lamp socket G13 with 2x36w flourescent lamp	No	28.00	2700	75,600.00
7.7.2	Type 3: Philips TCS 098 4XTLD-A\18W IC C3 OR EQUIVALENT FLUORESCENT LAMP, 4x18, Philips TCS 398 4xTLD-18w , lamp socket G13 with 4x18w flourescent lamp	No	-	2800	0.00
7.7.3	Type 4: Batten Fluorescent fitting with 2xTLD 18W lamp	No	14.00	1320	18,480.00
7.7.4	Type 5: Incandescent ceiling fitting suitable for toilet area, with 1xGLS 60W lamp. Massive 30148/55/10, lamp socket of G9 and 60w Osram lamps	No	24.00	1650	39,600.00
7.7.5	Type 6: Incandescent wall fitting suitable for mirror lighting, with 1xGLS 60W lamp Massive 32010/11/10, lamp socket of E27 and 60w Osram lamps	No	24.00	1800	43,200.00
7.7.6	Type 7: Incandescent ceiling fitting with 1xGLS 60W lamp.	No	24.00	1750	42,000.00
7.7.7	Type 8: Incandescent wall fitting with 1xGLS 60W lamp.	No	40.00	1850	74,000.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
7.7.8	Type 9: Halogen Recessed down light fitting with 1xQPAR20 50W lamp.	No	32.00	850	27,200.00
7.7.9	Type 11: Incandescent pendant fitting suitable for dining table lighting, with 1xGLS 60W lamp.	No	-	1700	0.00
7.7.10	Type 12: Crystal/Chandelier light suitable for lobby/living room area, with 10xGLS 25W lamps.	No	4.00	4300	17,200.00
7.7.11	Type 13: Compact fluorescent wall fitting suitable for outdoor area, with 1xCFL 18W lamp	No	6.00	950	5,700.00
7.7.12	Type 14: Compact fluorescent ceiling fitting suitable for outdoor area, with 1xCFL 18W lamp	No	54.00	950	51,300.00
7.7.13	Type 15 FLUORESCENT 2x18W LAMP, CEILING FITTING EXIT LIGHT WITH PICTOGRAM, Philips TCS 198 2x TL-D 18w , lamp socket G13 with 2x18w flourescent lamp +3hrs emergency kit	No	7.00	3800	26,600.00
7.7.14	Type 16 FLUORESCENT 2x18W LAMP, WALL FITTING EXIT LIGHT WITH PICTOGRAM, Philips TCS 198 2x TL-D 18w , lamp socket G13 with 2x18w flourescent lamp +3hrs emergency kit	No	7.00	3800	26,600.00
7.8	Flush Mounted Socket Outlet Points				
7.8.1	10-16A/1P flush mounted socket outlet points fed through PVC insulated conductors of 3x2.5mm ² inside PVC conduit of 16mm diameter including junction boxes with covers, screw type insulating caps and all complete.	No	193.00	370	71,410.00
7.8.3	25A/1P flush mounted socket outlet points fed through PVC insulated conductors of 3x6 mm ² inside rigid PVC conduits of 25mm diameter including junction boxes with covers, and insulating screw cap connectors all for flush mounting	No	16.00	480	7,680.00
7.8.4	16A/3P flush mounted socket outlet points fed through PVC insulated conductors of 5x2.5 mm ² inside rigid PVC conduits of 20mm diameter including junction boxes with covers, screw type insulating caps, and all complete.	No	2.00	610	1,220.00
7.9	Flush Mounted Socket Outlets with Earth Contact				
	Type Legrand or Equivalent complete with boxes, screw type plates and accessories.				
7.9.1	Socket outlet of 10A/16A 1Phase	No	157.00	110.00	17,270.00
7.9.2	Water Heater Socket outlet of 10A/16A 1Phase	No	36.00	150.00	5,400.00
7.9.4	Socket outlet of 25A 1Phase	No	16.00	190.00	3,040.00
7.9.5	Socket outlet of 16A/3P	No	2.00	195.00	390.00
7.10	TV System				
7.10.1	Supply and install sattelite dish 2.0m diameter with universal LNB per sattelite station including roof mounting bracket and SAT-IF cable up to head end equipment.	No	1.00	3,000.00	3,000.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
7.10.2	TV point fed through RG6 75ohms broad band Co-axial cable (47-2500MHz) suitable for TV/FM/SAT signal distribution inside PVC conduit of 20mm diameter, including junction boxes with covers, insulating screw cap connectors	No	29.00	450.00	13,050.00
7.10.3	TV Terminal Box	No	5.00	550.00	2,750.00
7.10.4	Flush mounting terminal SAT/TV/FM outlet.	No	29.00	160.00	4,640.00
7.11	Telecom / Data				
7.11.1	Supply and install all server equipment such as - switches, PABX, MDF, chords, cable organizer, patch panels, UPS etc... inside rack cabinete. Terminate incoming cables, test and commission. Prepare shop drawings and agree with the engineer before supply and install products.	Ls	5.00	16,294.00	81,470.00
7.11.2	Data/telephone points fed through 2x(twisted pair category 6E UTP cable) inside PVC conduit of 25mm diameter.	No	36.00	380.00	13,680.00
7.11.3	Flush mounting RJ45 Data/telephone outlet CAT5E type LEGRAND Suno, range with 8-contacts complete with cover and clip on support frame.	No	36.00	182.00	6,552.00
7.12	Bell System				
7.12.1	Suply and install Bell call points fed through PVC insulated conductor of 2 x 1.5mm2 inside thermo plastic conduit of ø 16mm complete with all connection and fixing accessories.	No	8.00	295.00	2,360.00
7.12.2	Bell push button with bell sign for flush mounting	No	4.00	110.00	440.00
7.12.3	Bell/buzzer for bell call system	No	4.00	450.00	1,800.00
7.13	Generator				
7.13.1	Supply and install Generator that can operate automatically (power/supply turned off), Standby diesel generator: Smax=125kVA, voltage=3 Phase, 380/220 Volt, 0.8 power factor, 4 Wire + Earth, 50 Hz The generator shall be equipped with: automatic voltage regulator (AVR), automatic transfer switch (ATS)	No	1.00	437,500.00	437,500.00
TOTAL CARRIED TO SUMMARY					1,489,964.00
8.SANITARY INSTALLATION					
	All fixtures which specified below is subjected to the consultant approval, based on samples,catalogues and brochures presented by the contractor.				
8.1	Hand Wash Basin				
	Supply and fix Hand Wash Basin , made of white vitreous China (BS3402) ,with pedestal. The fixture shall conform to BS5506-3 or equivalent institution. Size 700 x 405 mm. The waste fittings, connecting pieces, fixing and supporting element and other accessories which complete the set shall comply with the relevant clauses of BS standard or equivalent institution. The tap ware shall comply to BS2878:1980 for Disabled Hand Wash Basin supply and fix all the necessary accessories must be provided.	No	36.00	3,700.00	133,200.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
8.2	Water closet				
	Supply and fix water closet , of wash down action, floor mounted , vertical outlet (floor drainage), close coupled ,made of white vitreous China (BS3402).The fixture shall conform to BS5503-2 or equivalent institution. The waste fittings, connecting pieces, fixing and supporting element and other accessories which completes the set shall comply with the relevant clauses of BS standards or equivalent institution. (For Disabled Water Closet supply and fix all the necessary accessories must be provided.)	No	36.00	3,700.00	133,200.00
8.3	Urinals				
	Supply and fix approved quality wall mountedconcealed steel hanger,concealed flush pipes, built in p-trap 50cmx70cm,15mm thick ceramics urinal partition wall complete with all necessary accessories.Unit price shall include all the necessary assistances to the installation works.	No	36.00	2,100.00	75,600.00
8.4	Toilet Paper Holder				
	Supply and fix toilet paper holder , made from white vitreous china(BS3402) ,concealed/surface mounted of approved quality complete with all the necessaryaccessories.	No	36.00	150.00	5,400.00
8.5	Crystal glass mirror				
	Supply and fix approved quality framless crystal glass mirror ,back-silvered ,minimum 6mm thick Size 600mm x 500mmComplete with thef tresistant concealed wall fastening fittings and other accessories.	No	36.00	760.00	27,360.00
8.6	Soap Holder				
	Supply and fix soap holder leassed type of approved quality ,made of white vitreous china , European standard or equivalent institution, complete with all the necessary accessories.	No	36.00	500.00	18,000.00
8.7	Floor Drain				
	Supply and fix 50mm diameter enamelled cast iron floor drain conform to ASME standardes, A112.6.3(heavy duty) or equivalent institution complete wit P-smel trap and all the necessary accessories.	No	17.00	277.00	4,709.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
8.8	Shower Trey				
	Supply and fix Shower trays made from vitreous enameled sheet steel, slip resistant with adjustable shower head and all other necessary accessories. The fixture shall conform to BS6340-7:1983 or equivalent institution. The waste fittings, connecting pieces, fixing and supporting element shall comply with the relevant clauses of BS standards or equivalent institution. Size:- 700 x 700 mm.	No	20.00	2,300.00	46,000.00
8.9	Tower hanger				
	Supply and fix towel hanger 610 x 25 mm with chrome plated tubular towel rail complete with the necessary accessories.	No	20.00	210.00	4,200.00
8.10	Kitchen Sink				
	Supply and fix double bowl stainless steel kitchen sink with brass chrome plate trap. The waste fittings, connecting pieces, fixing and supporting element and other accessories which complete the set shall comply with BSEN 695:1997 or the relevant clauses of BS standards or equivalent institution. The tap ware shall comply to BS2878:1980 Size 1500 x 600 x 150mm (bowl depth)	No	16.00	1,200.00	19,200.00
8.11	Electric Water Heater				
	Supply and fix approved quality storage type water heaters, complete with insulation, one way valve and safety valve, including all fixing accessories. The water heater shall also be :- * made from steel :- highly resistance to any deformation caused by variation in temperature and internal pressure. * With Glass lining treatment:- The lining of the tank is subjected to a treatment with titanium or equivalent glass lining. * With High performance heating element:- Comes with high performance copper heating element. * With Dual thermostat :- For adjusting water temperature and automatic power cut off in the event of over heating. Type: Ariston or equivalent type Storage Capacity: 80 liters	No	20.00	2,700.00	54,000.00

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
8.12	PPR-Pipes				
	POLYPROPYLENE RANDOM CO-POLYMER (PP-R TYPE3)pressure pipes ,(PN20),for cold and hot water supply system to sanitary fixtures which comply with BS 6920:part 2&3 or DIN 8078 and equivalent institution complete with all the necessary connecting pieces such as bends, Ys, Tees, reducers, nipples,teflon, unions, threaded male or female with de-zincication resistance (DZR)brass inserts complying with BS 6920 or equivalent institution, hangers(as per manufacturer's recommendation) & supporters (if any) etc...The installation shall be tested at a pressure of 10kg/cm2 or DIN 1988 part 2 or Supply, lay and connect outer diameter 20mm BS 6700 . Unit price shall include ,disinfection of the pipes with Chlorine, painting all exposed PP-R pipes with UV Reflexive oil paint, installation works any all additional works there to .	ml	70.00	70.00	4,900.00
8.13	Ditto Item No 12, but 25mm diameter	ml	70.00	90.00	6,300.00
8.14	Ditto Item No 12, but 32mm diameter	ml	40.00	115.00	4,600.00
8.15	Ditto Item No 12, but 40mm diameter	ml	210.00	153.00	32,130.00
8.16	Supply and fix chrome plated service (angle) valves of approved standard, before sink, shower and other fixtures complete with unions, elastic water proofing, hand wheels of normal quality and with all other necessary accessories. Diameter:1/2"(20mm OD)	No	256.00	135.00	34,560.00
8.17	Bronze Gate Valve				
	Supply and fix bronze gate valves (PN 16),diameter 32 mm of approved standards, on internal branch water pipes , pipe inlet to buildings at where shown on the drawing complete with all the necessary accessories .	No	9.00	93.00	837.00
8.18	Ditto Item No 17, but 40mm diameter	No	12.00	143.00	1,716.00
	uPVC Foul Water Pipe				
8.19	Supply and lay 50mm(2") diameter uPVC pipes minimum wall thickness 2.0mm for foul water collection and vent system.The pipes shall be supported with galvanized clips screwed to slab,beam columns ... etc at every joints, bends and at 0.5meters interval in straight line. All exposed pipes shall be painted with UV reflective oil paint,similar to the walls,slabs,beams...etc it is fixed on & complete with all necessary fittings and clean out. The pipes,to BS 5255 or Equivalent Institution.Unit price shall include all the necessary assistance to the installation works there to.	ml	70.00	93.00	6,510.00
8.20	Ditto Item No 19, but 110mm diameter	ml	150.00	173.00	25,950.00
8.21	uPVC Down Pipe				

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	Supply and fix Diameter 110mm uPVC Down pipes, min. wall thickness 3.2mm ,with mass concrete support at ground level & complete with UV reflective oil painting, basket strainer at inlet ,galvanized clips at every 1.0meters interval and all accessories .The pipes ,accessories, fittings &method of welding shall comply with the requirement of BS 4514or equivalent Institution. Unit price shall include all the necessary assistances to the installation works there to.	ml	124.00	125.00	15,500.00
	Spout				
8.22	Ditto Item No 21 but outer diameter 80mm with	ml	1.00	67.00	67.00
8.23	Vent Cape				
	Supply and fix 110 mm uPVC vent pipe for toilets,minimum wall thickness 3.2 mm, painted with UV reflective oil paint. Unit price shall include all the necessary assistance to the installation work.	No	7.00	93.00	651.00
8.24	Water Tank				
	externally well finished,which include :- Inlet diameter-40mm; Outlet diameter-40mm,50mm; Over flow diameter-32mm; Drain diameter-32mm; Vent pipe diameter-100mm; Inspection manhole-600 x 600 mm; Unit price shall include all the necessary works there to.	No	2.00	15,000.00	30,000.00
	Necessary accessories for water tank				
8.25	Supply and fix bronze gate valves (PN 16), diameter 40mm,of approved standards for outlet,	No	3.00	970.00	2,910.00
8.26	Supply and fix bronze gate valves (PN 16), diameter 40 mm,of approved standards for inlet,	No	2.00	650.00	1,300.00
8.27	Supply and fix bronze gate valves (PN 16), diameter 50 mm(2"),of approved standards for outlet,	No	1.00	570.00	570.00
8.28	Diameter 100mm vent pipe with vent cap length = 0.5 m;	No	2.00	90.00	180.00
8.29	Diameter 32mm HDPE drain and over flow pipe;	No	2.00	115.00	230.00
8.30	Diameter 160mm stainless steel strainer;	No	1.00	95.00	95.00
8.31	Galvanized Steel Pipes				

ITEM No.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
	Supply, lay , test and commision 110mm (21/2")GSP/ Galvanised Steel Pipe/, (PN16) for Fire Fighting water supply as shown on the drawing.The GS pipes shall be supplied complete with all the necessary accessories connecting pieces such as bends, Tees, reducers, adaptors, sockets, unions or standard approved type metallic clamps.The installation shall be tested at a pressure of 16kg/cm2.The GS pipes, accessories, fittings & method of connection shall comply with the requirement BS 4991& BS6920 part 2 &3 or equivalent institution.	ml	35.00	470.00	16,450.00
8.32	Ditto Item No 31, but diameter 40mm	ml	16.00	320.00	5,120.00
8.33	Ditto Item No 31, but diameter 20mm	ml	5.00	150.00	750.00
8.34	Supply and fix BS ,NFPA or DIN standard ,surface mounted with full metal door model, fire hose reel cabinet . Cabinet and door leaf made of stainless steel 2mm thick sheets with full 180 degree swinging action and painted with electro--statics powder paint oven baked to temperatures between 160-200 oc.Hose is made of 100% synthetic Jacket ,the outer fabric is made of circular woven SYNTHETIC FIBER and root proof yarn, while inner layer is a substrate of tropical rubber, with working pressure 20 bar and bursting pressure 60 bar with standard red color. Nozzle is made of brass with Chrome plated with three way control .Cabinet:-W=65cm,H=65cm and D=19cm The installation shall be tested at a pressure of 16kgf/cm2. The hose shall be compatible to Galvanized Steel pipes, accessories & fittings.GS pipe installation & method of connection shall comply with the requirement of BS 4991 & BS 6920 part 2 &3 or equivalent institution.Unit price shall include all the necessary assistance to the installation works	No	5.00	13,000.00	65,000.00
8.35	Supply and fix bronze gate valves (PN16), innerdiameter 20 mm(2"),for Air release Valve	No	1.00	330.00	330.00
TOTAL CARRIED TO SUMMARY					777,525.00

	<u>TAKE OFF SHEET</u>

ST						
Itemizing	Dimension		Quantity	Item	Description	
					A.SUB-STRUCTURE	
					1.Excavation & earthwork	
					Site clearing	
1	1	15.91	350.02	m²		
		22.00				
			350.02	m²	total	
					Bulk excavation in ordinary soil to a depth not exceeding 1500 mm from reduced level.	
1	1	186.50	279.75	m³		
		1.50				
			279.75	m³	total	
					Bulk excavation in ordinary soil to a depth not exceeding 3000 mm from reduced level.	
1	1	186.50	279.75	m³		
		1.50				
			279.75	m³	total	
					Bulk excavation in ordinary soil to a depth not exceeding 3000 mm from reduced level.	
1	1	186.50	279.75	m³		
		1.50				
			279.75	m³	total	
					Bulk excavation in ordinary soil to a depth not exceeding 3000 mm from reduced level.	
1	1	186.50	279.75	m³		
		1.50				
			279.75	m³	total	
					Pit excavation in ordinary soil to a depth not exceeding 1500 mm from reduced level.	
1	6	2.20	43.56	m³	F-1	
		2.20				
		1.50				
1	12	2.60	121.68	m³	F-2	
		2.60				
		1.50				
1	2	2.90	25.23	m³	F-3	
		2.90				
		1.50				
			190.47	m³	Total	
					Pit excavation in ordinary soil to a depth not over 1500 mm but not exceeding 3000mm from reduced level.	
1	6	2.20	43.56	m³	F-1	
		2.20				
		1.50				
1	12	2.60	121.68	m³	F-2	
		2.60				
		1.50				
1	2	2.90	25.23	m³	F-3	
		2.90				
		1.50				
			190.47	m³	Total	
					Trench to a depth not exceeding 1500mm.starting from reduced ground level.	
1	1	56.27				
		1.50				

		1.00	84.41	m ³	
			84.41	m ³	Total
				1.30	Back fill around isolated footing foundation column, and masonry wall with....
1	1	465.35			
		-74.20	391.15	m ³	
			391.15	m ³	Total

					Ditto as item above , but under hard core
1	1	279.75			
		-65.27	214.48	m ³	
			214.48	m ³	Total
					Cart away surplus excavated.....
			1,374.60		
			1,374.60		Total
				1.37	25cm thick basaltic or equivalent stone hardcore
1	1	10.30			
		15.46	159.24		
1	1	2.70			
		1.27	3.42		
			162.66	m	total
				1.1	5cm thick lean concrete class C-5, 150kg of cement /m ³ under:
					a) Footing pads
1	6	1.80			F-1
		1.80	19.44	m ²	
1	12	2.20			F-2
		2.20	58.08	m ²	
1	2	2.50			F-3
		2.50	12.50	m ²	
			90.02	m ²	Total
					b) Basement Floor Beam
1	1	10.52			BFB 3
		0.40	4.21	m ²	
1	1	10.67			BFB 4
		0.40	4.27	m ²	
1	1	10.87			BFB 5
		0.40	4.35	m ²	
1	2	17.16			BFB 8
		0.40	13.72	m ²	
			26.55	m ²	
					c) Stone masonry wall
1	1	56.27			
		0.60	33.76		
			33.76		Total
				1.2	Reinforced concrete class C-25,360kg of cement
					a) Footing pads
1	6	1.70			F-1
		1.70			
		0.40	6.94	m ³	
1	12	2.10			F-2
		2.10			
		0.50	26.46	m ³	
1	2	2.40			F-3
		2.40			
		0.70	8.06	m ³	
			41.46	m ³	Total
					b) Foundation column
1	14	2.15			C-1
		0.30			
		0.30	2.71	m ³	
1	4	2.05			C-2
		0.30			
		0.30	0.74	m ³	

1	2	1.85			C-3
		0.40			
		0.40	0.59	m ³	
			4.04	m ³	Total
					c) Basement Floor Beam
1	1	3.20			BFB 1
		0.30			
		0.40	0.38	m ³	
1	1	10.32			BFB 2
		0.30			
		0.40	1.24	m ³	
1	1	10.52			BFB 3
		0.30			
		0.40	1.26	m ³	
1	1	10.67			BFB 4
		0.30			
		0.40	1.28	m ³	
1	1	10.87			BFB 5
		0.30			
		0.40	1.30	m ³	
1	1	11.10			BFB 6
		0.30			
		0.40	1.33	m ³	
1	2	15.97			BFB 7
		0.30			
		0.40	3.83	m ³	
1	2	17.43			BFB 8
		0.30			
		0.40	4.18		
			14.80	m ³	
					d) Retaining wall
1	1	48.47			
		0.20			
		1.90	18.42	m ³	
			18.42	m ³	total
					e) Ground Floor Beam
1	1	3.72			GB 1
		0.30			
		0.40	0.45	m ³	
1	1	3.70			GB 2
		0.30			
		0.40	0.44	m ³	
1	1	10.52			GB 3
		0.30			
		0.40	1.26	m ³	
1	1	10.67			GB 4
		0.30			
		0.40	1.28	m ³	
1	1	10.87			GB 5
		0.30			
		0.40	1.30	m ³	
1	1	11.10			GB 6
		0.30			
		0.40	1.33	m ³	
1	4	15.97			GB 7
		0.30			
		0.40	7.67	m ³	
			13.73	m ³	
					f) In 10cm thick Basement floor slab.
1	1	175.36			

		1.00	175.36		
			175.36		Total
					e) In 15cm thick ground floor slab.
1	1	166.79			
		1.00	166.79		
			166.79		Total
					f) entrance concrete steps
1	12	3.46			Steps Area=1/2*0.15*0.3 =0.0225
		0.02	0.93		
1	1	3.46			Soffit Area=2.3*0.15=0.615
		0.615	2.13		
			3.06		
					Provide, cut and fix in position sawn wooden or steel formwork which ever appropriate.
					a) Footing pads
4	6	1.70			F-1
		0.40	16.32	m ²	
4	12	2.10			F-2
		0.50	50.40	m ²	
4	2	2.40			F-3
		0.70	13.44	m ²	
			80.16	m ²	Total
					b) Foundation column
4	14	2.15			C-1
		0.30	36.12	m ²	
4	4	2.05			C-2
		0.30	9.84	m ²	
4	2	1.85			C-3
		0.40	5.92	m ²	
			51.88	m ²	Total
					c) Basement Floor Beam
2	1	3.20			BFB 1
		0.40	2.56	m ²	
2	1	10.32			BFB 2
		0.40	8.26	m ²	
2	1	10.52			BFB 3
		0.40	8.42	m ²	
2	1	10.67			BFB 4
		0.40	8.54	m ²	
2	1	10.87			BFB 5
		0.40	8.70	m ²	
2	1	11.10			BFB 6
		0.40	8.88	m ²	
2	2	15.97			BFB 7
		0.40	25.55	m ²	
2	2	17.43			BFB 8
		0.40	27.89	m ²	
			98.80	m ²	
					d) Retaining wall
2	1	48.47			
		1.90	184.19		
			184.19	m ²	
					e) Ground Floor Beam
2	1	3.72			GB 1
		0.40			
			2.97	m ²	
2	1	3.70			GB 2
		0.40			
			2.96	m ²	
2	1	10.52			GB 3

		0.40			
			8.42	m ²	
2	1	10.67			GB 4
		0.40			
			8.54	m ²	
2	1	10.87			GB 5
		0.40			
			8.69	m ²	
2	1	11.10			GB 6
		0.40			
			8.88	m ²	
2	4	15.97			GB 7
		0.40			
			51.10	m ²	
			91.56	m ²	
					e) In 15cm thick ground floor slab.
1	1	166.79			
		1.00	166.79		
			166.79		Total
					f) entrance concrete steps
1	12	3.46			Steps
		0.30	12.46		
1	13	3.46			Steps
		0.15	6.75		
1	1	3.46			soffit
		4.10	14.19		
			33.40		
					MASONERY WALL
					Below NGL
1	1	56.27			
		0.80			
		0.50	22.51	m ³	
			22.51	m ³	Total
					Dito but above NGL
1	1	56.27			
		0.70			
		0.50	19.69	m ³	
			19.69	m ³	Total
					B.SUPER-STRUCTURE
					1.Concrete Works
					1.1 Reinforced concrete work in c-25 with
					a) Elevation Column

1	14	15.10			C-1
		0.30			
		0.30	19.03	m ³	
1	4	16.90			C-2
		0.30			
		0.30	6.08	m ³	
1	2	15.10			C-3
		0.40			
		0.40	4.83	m ³	
			29.94	m ³	Total
b) floor Beam (1 st - Roof)					
4	1	3.72			FB-1
		0.40			
		0.30	1.79	m ³	
4	1	3.70			FB-2
		0.40			
		0.30	1.78	m ³	
4	1	10.52			FB-3
		0.40			
		0.30	5.05	m ³	
4	1	10.67			FB-4
		0.40			
		0.30	5.12	m ³	
4	1	10.86			FB-5
		0.40			
		0.30	5.21	m ³	
4	1	11.10			FB-6
		0.40			
		0.30	5.33	m ³	
4	4	15.96			FB-7
		0.40			
		0.30	30.64	m ³	
			54.92	m ³	total
d) roof Beam					
1	3	3.20			RB-1'
		0.40			
		0.30	1.15	m ³	
1	2	5.71			RB-2'
		0.40			
		0.30	1.37	m ³	
1	1	3.72			RB-1
		0.40			
		0.30	0.45	m ³	
1	1	3.70			RB-2
		0.40			
		0.30	0.44	m ³	
1	1	10.52			RB-3
		0.40			
		0.30	1.26	m ³	
1	1	10.67			RB-4
		0.40			
		0.30	1.28	m ³	
1	1	10.86			RB-5
		0.40			
		0.30	1.30	m ³	
1	1	11.10			RB-6
		0.40			
		0.30	1.33	m ³	
1	4	15.96			RB-7
		0.40			
		0.30	7.66	m ³	

			16.24	m ³	total
					e) Suspended Floor solid slab
1	4	187.35			1st - 4th floor slab
		1.00	749.40	m ²	
			749.40	m ²	total
					f) Suspended roof solid slab
1	1	206.22			Roof slab
		1.00	206.22	m ²	
			206.22	m ²	total
					g) Stair case-1
10	1	3.10			soffit
		3.25			
		0.25	25.19	m ³	
5	1	3.25			landing
		1.27			
		0.25	5.16	m ³	
5	18	1.20			Steps Area=1/2*0.15*0.3 =0.0255
		0.03	2.75	m ³	
			33.10	m ³	total
					Provide cut and Fix in position sawn zigba wood formwork or equivalent.
					a) Elevation Column
4	14	15.10			C-1
		0.30			
			253.68	m ³	
4	4	16.90			C-2
		0.30			
			81.12	m ³	
4	2	15.10			C-3
		0.40			
			48.32	m ³	
			383.12	m ²	Total

					b) floor Beam (1 st - 4 th floor)	
4	2	3.72	11.90	m ²	FB-1	
		0.40				
4	2	3.70	11.84	m ²	FB-2	
		0.40				
4	2	10.52	33.66	m ²	FB-3	
		0.40				
4	2	10.67	34.14	m ²	FB-4	
		0.40				
4	2	10.86	34.75	m ²	FB-5	
		0.40				
4	2	11.10	35.52	m ²	FB-6	
		0.40				
4	8	15.96	204.29	m ²	FB-7	
		0.40				
			366.10	m ²	total	
					d) roof Beam	
2	3	3.20	7.68	m ²	RB-1'	
		0.40				
2	2	5.71	9.14	m ²	RB-2'	
		0.40				
2	1	3.72	2.98	m ²	RB-1	
		0.40				
2	1	3.70	2.96	m ²	RB-2	
		0.40				
2	1	10.52	8.42	m ²	RB-3	
		0.40				
2	1	10.67	8.54	m ²	RB-4	
		0.40				
2	1	10.86	8.69	m ²	RB-5	
		0.40				
2	1	11.10	8.88	m ²	RB-6	
		0.40				
2	4	15.96	51.07	m ²	RB-7	
		0.40				
			108.36	m ²	total	
					e) Suspended Floor solid slab	
1	4	187.35	749.40	m ²	1st - 4th floor slab	
		1.00				
			749.40	m ²	total	
					f) Suspended roof solid slab	
1	1	206.22	206.22	m ²	Roof slab	
		1.00				
			206.22	m ²	total	

					g) Stair case-1
10	1	3.10			soffit
		3.25			
			100.75	m²	
5	1	3.25			landing
		1.27			
			20.62	m²	
5	18	1.20			Steps
		0.30	32.40	m²	
5	20	1.20			Steps
		0.15	18.00	m²	
			171.77	m²	total
		220			Masonry wall
		1.00			
			220.00	m²	
			220.00		

LOCATION	DIA (MM)	LENGTH (M)	NO. OF BARS PER MEMBER	NO. OF MEMBER	TOTAL NO. OF BARS					
						8.00	10.00	12.00	14.00	16.00
<u>SUB STRUCTURE</u>										
<u>Footing Pad</u>										
	8	0.8	41	2	82	65.60				
			TOTAL LENGTH, M			65.60	0.00	0.00	0.00	0.00
			UNIT WEIGHT , KG/ M			0.40	0.62	0.89	1.21	1.58
			TOTAL WEIGHT,KG			25.91	-	-	-	-
<u>SUPER STRUCTURE</u>										
<u>Elevation Column</u>										
C-1	16	14.60	8	14	112					1635.20
	16	6.85	6	14	84					575.40
St-up	8	1.10	108	14	1512	1663.20				
C-2	16	14.60	8	1	8					116.80
	16	9.80	6	1	6					58.80
St-up	8	11.10	122	1	122	1354.20				
C-3	16	3.65	10	3	30					109.50
	16	17.90	8	3	24					429.60
St-up	8	1.50	108	3	324	486.00				
<u>1st Floor to Roof Beam</u>										
FB-1	16	4.37	6	5	30					130.95
	16	1.595	2	5	10					15.95
St-up	8	1.20	28	5	140	168.00				
FB-2	16	4.35	6	5	30					130.50
	16	1.59	2	5	10					15.90
St-up	8	1.20	28	5	140	168.00				
FB-3	16	11.12	6	5	30					333.60

LOCATION	DIA (MM)	LENGTH (M)	NO. OF BARS PER MEMBER	NO. OF MEMBER	TOTAL NO. OF BARS					
						8.00	10.00	12.00	14.00	16.00
St-up FB-4	16	1.60	2	5	10					15.95
	16	2.205	1	5	5					11.03
	16	2.20	1	5	5					11.00
	8	1.20	87	5	435	522.00				
St-up FB-5	16	11.27	6	5	30					338.10
	16	1.68	1	5						0.00
	16	2.23	1	5						0.00
	16	2.23	1	5						0.00
	16	1.68	1	5						0.00
	8	1.20	90	5	450	540.00				
St-up FB-6	16	11.47	6	5	30					343.95
	16	1.71	3	5	15					25.65
	16	2.26	2	5	10					22.60
	16	3.50	2	5	10					35.00
	10	1.20	69	5	345		414.00			
St-up FB-7	16	11.70	6	5	30					351.00
	16	1.75	2	5	10					17.50
	16	2.30	2	5	10					23.00
	8	1.20	86	5	430	516.00				
St-up	16	17.26	6	20	120					2071.20
	16	6.48	1	20	20					129.60
	16	4.98	2	20	40					199.20
	8	1.20	61	20	1220	1464.00				
	10	1.20	56	20	1120		1344.00			
1st Floor to Roof Slab										
1	8	6.11	14	5	70	427.70				
2	8	5.98	14	5	70	418.25				
3	8	5.03	13	5	65	326.63				

LOCATION	DIA (MM)	LENGTH (M)	NO. OF BARS PER MEMBER	NO. OF MEMBER	TOTAL NO . OF BARS					
						8.00	10.00	12.00	14.00	16.00
4	8	3.25	91	5	455	1478.75				
5	8	5.04	13	5	65	327.60				
6	8	4.47	5	5	25	111.63				
7	8	4.28	12	5	60	256.80				
8	8	4.48	5	5	25	112.00				
9	8	4.28	12	5	60	256.80				
10	8	5.22	26	5	130	678.60				
11	8	5.23	26	5	130	679.90				
12	8	5.38	33	5	165	887.70				
13	8	5.38	33	5	165	887.70				
14	8	5.49	23	5	115	630.78				
15	8	5.05	19	5	95	479.28				
16	8	5.00	23	5	115	574.43				
17	8	3.25	24	5	120	390.00				
18	8	4.25	69	5	345	1466.25				
19	8	6.32	26	5	130	820.95				
19'	8	5.72	30	5	150	857.25				
20	8	5.48	19	5	95	520.13				
21	10	2.30	30	5	150		345.00			
22	10	2.30	43	5	215		494.50			
23	8	2.30	19	5	95	218.50				
24	8	2.30	19	5	95	218.50				
25	8	2.30	28	5	140	322.00				
26	8	2.30	28	5	140	322.00				
27	10	2.34	23	5	115		268.53			
28	10	3.03	24	5	120		363.60			

LOCATION	DIA (MM)	LENGTH (M)	NO. OF BARS PER MEMBER	NO. OF MEMBER	TOTAL NO. OF BARS					
						8.00	10.00	12.00	14.00	16.00
29	8	2.34	74	5	370	863.95				
30	8	2.89	75	5	375	1083.75				
31	10	2.24	21	5	105		235.20			
32	10	2.21	20	5	100		220.50			
33	10	2.48	36	5	180		446.40			
Water tanker slab										
1	8	5.12	36	1	36	184.32				
2	8	7.64	19	4	76	580.26				
3	10	2.93	19	2	38		111.15			
RB-1 st-up	16	3.85	6	2	12					46.20
	16	1.43	2	2	4					5.70
	8	1.20	24	2	48	57.60				
RB-1	16	6.37	6	2	12					76.38
	16	3.28	1	2	2					6.55
	16	1.76	1	2	2					3.52
st-up Staircase	8	1.20	45	2	90	108.00				
	14	5.64	12.00	5.00	60				338.40	
	14	1.85	12.00	5.00	60				110.70	
	14	1.72	12.00	5.00	60				103.20	
	14	2.18	12.00	5.00	60				130.50	
	14	2.24	12.00	5.00	60				134.10	
	8	1.55	35.00	5.00	175	271.25				
	8	1.55	35.00	5.00	175	271.25				
	8	1.23	100.00	5.00	500	615.00				
	14	4.13	12.00	5.00	60				247.80	
	14	1.88	12.00	5.00	60				112.50	
	14	1.63	12.00	5.00	60				97.80	

LOCATION	DIA (MM)	LENGTH (M)	NO. OF BARS PER MEMBER	NO. OF MEMBER	TOTAL NO . OF BARS					
						8.00	10.00	12.00	14.00	16.00
	14	2.36	12.00	5.00	60				141.30	
	8	1.55	31.00	5.00	155	240.25				
	8	1.55	31.00	5.00	155	240.25				
	8	1.23	100.00	5.00	500	615.00				
	14	1.96	24.00	1.00	24				46.92	
	14	6.03	24.00	1.00	24				144.72	
	10	0.896	264.00	1.00	264		236.54			
	10	2.22	24.00	1.00	24		53.28			
	8	3.66	22.00	1.00	22	80.41				
Landing Beam-1	16	3.85	7.00	5.00	35					134.75
	10	1.20	24.00	5.00	120		144.00			
Landing Beam-2	16	4.38	3.00	5.00	15					65.70
	8	1.20	5.00	5.00	25	30.00				
TOTAL LENGTH, M						25,792.79	4,676.70	-	1,607.94	7,485.78
UNIT WEIGHT , KG/ M						0.40	0.62	0.89	1.21	1.58
TOTAL WEIGHT,KG						10,188.15	2,885.52	-	1,944.00	11,820.04

20.00	24.00
-	-
2.47	3.56
-	-