

**Construction of Skill Training Center
Hamilton, Freetown**

Bill of Quantities

Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
1.00	PRELIMINARIES				
1.01	MOBILIZATION The contractor will mobilise and deliver to the site all relevant equipment, personnel and materials necessary for the execution of the works	item	1		
1.02	SITE OFFICE/STORE Allow for providing suitable secure store for materials used for the project and also a Temporary secure office on site for the site Foreman-in -charge and other craftsmen,	item	1		
1.03	INSURANCE/LICENSES Provide Insurance against injury to personnel Also make all arrangements for the issue of licenses, permit etc required by law for the execution of the contract	item	1		
1.04	PROGRESS PHOTOGRAPHS Progress photographs should be provided in intervals. Number and sizes of the photographs will be directed by the Supervising Engineer or his representative	item	1		
105	DEMOBILIZATION Allow for the demobilization of all plants equipment and personnel and left over materials on work completion. The surrounding within the building must be thoroughly cleared and cleaned before the final inspection and handing over the facilities to the Client.	item	1		
	Preliminaries carried to summary				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
2.00	SUBSTRUCTURE				
2.10	<u>SITE CLEARANCE</u>				
2.11	Clear site of all vegetation (grass and trees) for the building site and its surrounding area 10 m from the proposed building	lump Sum	1		
2.20	<u>EXCAVATION</u>				
2.21	Excavate surface to remove top soil, starting at ground level and maximum depth not exceeding 450mm and deposite in spoil on site	m ²	560		
2.22	Excavate trenches to receive strip foundation not exceeding 1.0 m in depth and deposite on site for re-use	m ³	180		
2.23	Excavation for column and column bases with dimensions 600mm x 600mm and maximum depth not exceeding 1000mm	m ³	15		
2.24	Extranoverexcavation: Excavating in rocks	m ³	117		
2.30	<u>FILLING</u>				
2.31	Filling to on the side of foundation blockwork of selected excavated material deposited and compacted in layers	m ³	156		
2.32	Ditto to make up levels below ground floor slab of selected excavated material	m ³	80		
2.33	Ditto; imported excavated material off site	m ³	50		
2.34	Ditto imported hardcore materials of laterite ballstones , 200mm thick	m ³	70		
2.35	Sand blinding average 50mm thick on hardcore filling	m ³	30		
	SUBSTRUCTURE summary on Page 1 B/D				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
	SUBSTRUCTURE summary on page 1 B/F				-
	SUBSTRUCTURE Works continues				
2.40	CONCRETE WORK IN FOUNDATION				
2.41	Plain in-situ concrete mix (1:4:8-19mm aggregate) as blinding to column bases	m ³	13.5		
2.42	Plain in-situ concrete mix (1:3:6 -19mm aggregate) in foundations poured against faces of excavation with thickness of 225 mm (strip foundation)	m ³	18		
2.43	Ditto: in 150mm thick ground floor slab and steps	m ³	51.15		
2.44	Reinforced in-situ in column bases and columns in foundations (1:2:4;mix)	m ³	6		
2.5	REINFORCEMENT WORK				
	Mild steel as per BS4449, cut , bentm straight or hook as 16mm incolumn and column bases	ton	0.4		
	10mm as stirrup in column	ton	0.2		
2.60	FORMWORK				
2.61	To sides of column and column bases				
2.62	To edges of concrete floor slab, 150mm high.	m ²	54		
2.70	DAMP PROOF MEMBRANE				
2.71	"Waterproof black plastic horizontal damp-proof membrane laid over sand blind hardcore with 600mm laps at all joint	m ²	180		
2.80	BLOCKWORK IN FOUNDATION				
2.81	150mm thick solid sandcrete block bedded and jointed in cement motar (1:6) in foundation	m ²	142		
2.82	12mm thick cement and sand (1:6) rendering in foundation	m ²	185		
	SUBSTRUCTURE CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
3.00	CONCRETE WORKS				
3.10	Reinforced in-situ concrete mix (1:2:4-19mm aggre) in rectangular columns	m ³	8.5		
3.11	Ditto in beams and lintels	m ³	28		
	CONCRETE WORKS CARRIED TO SUMMARY				
4.00	REINFORCEMENT WORKS				
4.10	12mm in column	ton	0.7		
	8mm as stirrup	ton	0.2		
4.11	16mm in beams and lintels	ton	1.8		
	8mm as links	ton	0.35		
	REINFORCEMENT WORKS CARRIED TO SUMMARY				
5.00	FORM WORKS				
5.10	To sides of column, beams, and lintels	m ³	180		
	FORMWORK WORKS CARRIED TO SUMMARY				
6.00	BLOCKWORK				
6.10	Precast sandcrete (1:6) solid blocks bedded and jointed in cement mortar (1:6) in 150mm thick walls	m ²	450		
	BLOCKWORK CARRIED TO SUMMARY				
7.00	REINFORCED CONCRETE BALLUSTER RAILING				
7.10	Provide and fix high-quality reinforced concrete ballusters with reinforced pre-routed top and bottom rails in the verandahs as shown on the architectural drawings provided by the Engineer.	m	35		
	BALLUSTER RAILING INSTALLATION CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
8.00	ROOF STRUCTURE Fabricated Steel Work Steel roof trusses constructed with 50 x 50mm RHS as top chord steel lattice truss rafters and 25 x 25mm RHS verticals in lattice truss together with 40 x 40mm RHS as diagonal fabricated by wedging, housing, and fixing in position to concrete 3m above ground floor. The whole pre-painted with red anti-corrosive oxide				
8.11	Duo-pitch roof trusses spanning between walls and concrete columns with 600mm overhang on both sides 11.5m span x 2.8 m pitch	No	20		
	Purlins				
8.12	75X50mm treated timber purline at 1.2m centres centres	m	650		
	Cross Bracings				
8.13	50 x 50mm cross bracing to steel trusses	m	345		
8.14	Steel Gusset plates on roof trusses as shown in the drawing	No	170		
8.15	Purline angle iron cleats welded on steel rafters	No	450		
8.16	Metal Facial Board as shown on the diagram	m	185		
	COVERING				
8.17	Corrugated coloured aluzinc sheets, 28 gauge x 2400mm long complete with all fixing accessories	m ²	440		
8.18	600mm girth ridge/hip covering nailed to timber purlins to match roof covering	m	230		
8.19	Cutting to ridges, hips, or vertical angle	m	85		
	ROOF STRUCTURE AND COVERING CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
9.00	WOODWORK				
	DOORS				
9.10	750mm wide x 2050mm high semi solid core plywood				
9.11	faced flush door lipped all round with hardwood for all toilet doors	No	5		
9.12	Timber panel door with dimensions 900mm wide x 2050mm high	No	4		
9.13	Double leaves timber panel door with dimensions 1500mm x 2050 mm high	No	0		
	Door frame				
9.14	44mm thick x150mm wide wrought hardwood rebated frame fixed into wall with built -in lugs	m	75		
	Ironmongery				
9.15	100 mm brass butt hinges screwed to timber frame and doors	pair	10		
9.16	3-lever mortice door lock:(EU quality) with accessories	No	9		
9.17	Bathroom lockset of approved quality & locking accessories	No	5		
9.18	150mm brass flush bolts to back of doors	No	5		
	WOODWORKS CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
10.00	METAL WORK				
	Door				
10.1	1500mm wide x 2100 mm high solid heavy duty steel double-leaves flushed door complete with 4- turns lock and accessories for the main entrance	No	3		
10.11	900mm wide x 2100 mm high solid heavy duty single stell flushed door complete with 4- turns lock and accessories for the two side doors	No	2		
	Aluminium Windows				
	Aluminium sliding windows in bronzed anodised frame and tinted glazing complete with mosquito screen (glazing included) overall sizes, double tracks- double sliding leaves				
10.12	1800mm x 1200mm	No	7		
10.13	900mm x 1200mm	No	2		
10.14	600mm x 600mm	No	5		
	Guard Bars				
	Steel Guard bars constructed with 50mm x 25mm RHS as Horizontal & vertical members fabricated to Supervising Engineering's Design				
10.15	1800mm x 1200mm	No	7		
10.16	900mm x 1200mm	No	2		
10.17	600mm x 600mm	No	5		
	METAL WORKS CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
11.00	PLUMBING INSTALLATION				
	Plumbing and cold water installations in UPVC pipes and fittings including joints and support in the running length to the following				
11.10	W C	No	5		
11.11	Wash hand basin	No	5		
11.12	Cold water storage tank	No	5		
	Appliance by Approved manufacturer				
11.13	Vitreous China W.C suit complete with 9litre flushing cistern with float ball valve flexible connector ring seat and cover	No	5		
11.14	425m x 535m vitreous china wash hand basin complete with fixing brackets, 1Nr 12m pillar, tap plug, chain and stay with waste outlet	No	5		
11.15	150 x 150mm chromium plated soap holder plugged and screwed to blockwall	No	5		
11.14	Toilet roll holder plugged and screwed to wall	No	5		
11.15	Towel rail; chromium plated, 600mm end brackets, , plugged and screwed to blockwork	No	5		
11.16	Stainless Floor drain, Toilet	No	5		
	PLUMBING INSTALLATION CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
12.00	ELECTRICAL INSTALLATION All electrical cables , wiring and fittings should be British or EU standard and should be approved by Supervising Engineer before installation Motice walls to install completely electrical wiring conduits, metal boxes, inspection boxes and cables. All lighting conduits must use 1.5 mm2 twin PVC sheathed (insulated) cables in concealed 20mm diameter PVC conduits in circuit wiring complete from distribution Board to switch points then to outlet points				
12.10	LIGHT AND SWITCH POINTS				
12.11	Wall light point				
12.12	10 Amp light switch points	No	18		
12.13	13 amp double switched socket outlet points	No	30		
12.14	ceiling light points	No	18		
12.15	ceiling Fan Regurator point	No	12		
12.16	20 amp AC switch point	No	1		
	FITTINGS AND ACCESSORIES				
12.17	Ceiling Single florescent light and fittings: 1x36 watts (1200mm long and corrosion resistant) in training seating hall	No	16		
12.18	Ceiling: Double florescent light and fittings: 2x36watts (1200mm long and corrosion resistant in the office of Judge and the other offices in the main buildings	No	0		
	ELECTRICAL INSTALLATION B/D				-

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
	ELECTRICAL INSTALLATION B/F				-
12.19	Ceiling light in toilets: 18Watt LED surface light	No	5		
12.20	Wall Sockets: 10amp 1gang 2way switch	No	9		
12.21	Wall Sockets: 10amp 1 gang 1 way switch	No	5		
12.22	Wall Sockets: 10amp 2gang 2way switch	No	4		
12.23	Wall Sockets: 20 amp AC switch	No	1		
12.24	Wall Sockets: 13 amp switch 2 gang	No	30		
12.25	Wall Ceiling fan Regulator	No	15		
12.26	Provide and install 12 BTU tropicalized Air conditional, Model Samsung , Sharp or JSK	No	1		
12.27	Provide and install 56 inches ceiling fans	No	16		
12.27	Supply and install the following board with approved light fittings mains switch gear fuse etc and including				
12.27	25mm ² diameter concealed PVC conduits and wiring Proteus TYPE B or similar approved 415/240 C 50 HZ,				
12.28	63 Amp 12-way TP & N distribution board	No	1		
12.29	63 Amp change over switch	No	1		
12.30	EARTHING, LIGHTING AND PROTECTION SYSTEM Allow a sum for installing all earthing, lighting and protection system complete with all earth pits, copper conductor cables including all excavations and earth works	item	1		
	ELECTRICAL INSTALLATION CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
13.00	FLOOR, WALL AND CEILING FINISHINGS				
13.10	12mm thick cement and sand (1:4) rendering on walls (internally and Externally)	m ²	900		
13.11	Ditto revealing	m ²	75		
13.12	<u>Floor bed</u>				
13.13	31mm thick cement and sand (1:3) screeded bed laid level on concrete floor to receive ceramic floor tiles	m ²	305		
13.14	<u>Tile Finishings</u> Non slip Porcelain floor tiles butt jointed straight on the the sides 450mm x 450 x 10mm thick laid level on cemrent and sand bedding	m ²	305		
13.15	6mm thick glazed wall tiles fixed vertically on rendered backing to walls in toilets	m ²	70		
13.16	100mm wide ceramic skirting fixed vertically to walls	m	35		
13.17	3/4mm Ceiling hard board nailed to and including first grade treated timber battens with clout nails in grids of 600 x 1200mm complete with cover strips and matching covings	m ²	305		
13.18	50mm x 50mm treated hardwood noggins to receive 600mm x 600mm hardboard ceilings	m	850		
	FLOOR, WALLS, AND CEILING FINISHINGS CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
14.00	PAINING AND DECORATING				
14.1	Prepare and apply one coat sealer and two coats emulsion paint on rendered walls (Internally and Externally)	m ²	900		
14.11	Ditto to soffit of hardboard ceiling	m ²	305		
14.12	Prepare and apply one undercoat and two coats gloss paint on wood and metal doors and windows	m ²	28		
14.13	Ditto on frames not exceeding 300m grith	m ²	15		
	PAINING AND DECORATING CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
15.00	WATER SUPPLY				
	CONSTRUCTION OF WATER WELL AND TOWER INCLUDING PIPE NETWORK FROM WELL TO CORRECTIONAL CENTRE USING SUBMERSIBLE PUMP AND 5KVA GENERATOR				
15.10	Provide lump sum for the construction of 900mm deep concrete culvert lined well as shown on the drawings	Lump Sum	1		
15.11	Provide and Install 10,000 liters tank on the water tower build	Lump Sum	1		
15.12	Provide lump sum for high pressure water pipes and fittings as required to supply water to the milla tanks provided for onwards distribution of water into the cells	Lump Sum	1		
15.13	Provide a lump sum for the construction of 2400 mm x 2400 mm by 6000mm high water tower inside the compound far from the internal security perimeter fence wall for 10.000 liter milla tank	Lump Sum	1		
15.14	Provide and install 3 HP electric submersible pump to supply to center	Lump sum	1		
15.15	Provide 5 KVA diesel electrical generator to be used with the submersible pump to send water to the correctional center	Lump Sum	1		
	WATER SUPPLY CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
16.00	EXTERNAL WORKS				
	<u>Aprons/Surface Water Drain</u>				
16.10	Excavate surface to remove top soil starting at ground level and maximum depth not exceeding 750mm and deposit excavated materials in spoil heaps on site	m ³	40		
16.11	150mm thick laterite hardcore material laid to slight falls to receive concrete aprons	m ³	10		
16.12	75mm thick plain in-situ concrete mix (1:3:6 -37mm aggregate) in aprons complete with formwork to edges	m ³	12		
16.13	Construct concrete U-shaped drain right round the building as directed by the Engineer and provide reinforced concrete cover slabs on top of the drain (1:2:4 mix) at all the entrances to the halls and offices as shown on the drawings	m	120		
	Soil Drainage				
16.14	Septic Tank with size as showing on the drawings with manholes and all associated pipe works	lump Sum	1		
16.15	Soakaway with dimension 3m diameter and 2 m deep filled with laterite ballstones and covered with lean concrete	lump Sum	1		
	EXTERNAL TOILET				
16.16	Construct a two units of toilets , one for men and the other for women. The building should be constructed of sandcrete blocks, with a linto roof structure of corrugated iron sheets. Provide one WC and wash hand basin for each toilet unit. The building must be plastered, painted with the provision of two panel doors and locks. The external toilet must be about 10m from the building	item	1		
	EXTERNAL WORKS CARRIED TO SUMMARY				

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Item No	Description	Units	Quantity	Unit Rate (Le)	Amount (Le)
17.00	SOLAR PANELS AND SOLAR BATTERIES FOR PROVIDING THE LIGHTING SYSTEM FOR THE BUILDING				
17.10	Supply and install six (6) Solar panels of Polycrystalline OSDA 250-275 Watt Solar module	No	8		
17.12	Supply and instal fully configured solar INVERTER with maximum current output that should have provision for A.C input and output and D.C input The inverter shall give adequate power with an inrush current and should be designed to run the solar pump	No	1		
17.13	Supply and install solar batteries 12V-200 Amps capable to run dual power source	No	8		
17.14	Supply and install control Panel (48 volts) for the inverter, solar batteries and pump	NO	1		
17.15	Provide all the necessary accessories including cables wiring. bulbs and installation	item	1		
	SOLAR PANELS AND SOLAR BATTERIES FOR LIGHTING SYSTEM CARRIED TO SUMMARY				

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	SUMMARY				
1	PRELIMINARIES				-
2	SUBSTRUCTURE				-
3	CONCRETE WORKS				-
4	REINFORCEMENT WORKS				-
5	FORM WORKS				-
6	BLOCKWORKS				-
7	BALLUSTER RAILINGS				-
8	ROOF STRUCTURE				-
9	WOODWORKS				-
10	METAL WORKS				-
11	PLUMBING INSTALLATION				-
12	ELECTRICAL INSTALLATION				-
13	FLOOR, WALLS, AND CEILING FINISHINGS				-
14	PAINTING AND DECORATION				-
15	WATER SUPPLY				-
16	EXTERNAL WORKS				-
17	SOLAR PANELS AND SOLAR BATTERIES FOR LIGHT SYSTEM				-
A	COST OF CONSTRUCTION				-
B	CONTINGENCY 5%				-
C	TOTAL COST OF THE BUILDING				-
					-