

BILL OF QUANTITIES
Proposed 02 Classroom, Health Room & Science Lab
at Th.Omadhoo School

CLIENT : MINISTRY OF EDUCATION, GOVERNMENT OF MALDIVES

SUMMARY OF BILLS OF QUANTITIES

Proposed 02 Classroom, Health Room & Science Lab at Th.Omadhoo School

DESCRIPTION	AMOUNT	%
Bill No: 01 - PRELIMINARIES		
Bill No: 02 - EXCAVATION AND FILLING		
Bill No: 03 - INSITU CONCRETE WORKS		
Bill No: 04 - MASONRY		
Bill No: 05 - STRUCTURAL METAL WORKS		
Bill No: 06 - ROOFING		
Bill No: 07 - WINDOWS, SCREENS & LIGHTS		
Bill No: 08 - DOORS, SHUTTERS & HATCHES		
Bill No: 09 - FLOOR, WALL, CEILING, AND ROOF FINISHINGS		
Bill No: 10 - SUSPENDED CEILING		
Bill No: 11 - PAINTING & DECORATIONS		
Bill No: 12 - STAIRS, WALKWAYS AND BALUSTRADES		
Bill No: 13 - MECHANICAL & ELECTRICAL SERVICES		
Bill No: 14 - PLUMBING		
Bill No: 15 - INSULATION, FIRE STOPPING & FIRE PROTECTION		
Bill No: 16- ADDITIONS AND OMMISIONS		
TOTAL AMOUNT		

BILL OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
1.0.00	Bill №: 01 - PRELIMINARIES					
1.1.00	<u>GENERAL NOTES</u> Abbreviations m - metre nr - numbers m3 - cubic metres m2 - square metres m - linear metre t - tons inc. - including mm - millimetre SS - stainless steel GI - galvanized iron					
1.2.00	<u>SITE MANAGEMENT COSTS</u> Allow for all on and off site management cost including costs of foreman and assistants, temporary services, telephone, fax, hoardings & similar.	item	1.00			
1.3.00	<u>SIGN BOARD</u> Allow for sign board.	nr	1.00			
1.4.00	<u>CLEAN-UP</u> Allow for clean-up upon completion of works.	item	1.00			
1.5.00	<u>INSURANCE, BONDS, GUARANTEES AND WARRANTIES</u> Insurance as stated in the general conditions.	item	1.00			
1.6.00	TOTAL OF BILL №: 01 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
2.0.00	BILL №: 02 - EXCAVATION AND FILLING					
2.1.00	<u>GENERAL</u> (a) Rates shall include for: leveling, grading, trimming, compacting to faces of excavation, keep sides plumb, backfilling, consolidating, and disposing surplus soil.					
2.2.00	<u>SITE CLEARING</u>					
2.2.01	Clear the area of site from rubbish and vegetable matters, stumps, roots. Rates shall include for removal of trees and tree stumps	m ²	332.10			
2.3.00	<u>EXCAVATION</u>					
2.3.01	Excavation quantities are measured to the faces of concrete members. Rates shall include for all the additional excavation required to place the formwork. Rates shall include for backfilling. Excavation for Foundation pads	m ³	65.74			
2.3.02	Excavation for Foundation beams	m ³	27.25			
2.4.00	<u>FILLING</u>					
2.4.01	Rate shall include for: levelling, grading, trimming, compacting and similar Compacted earth filling under ground slab	m ²	246.25			
2.5.00	<u>DAMP-PROOF MEMBRANE</u>					
2.5.01	Rate shall include for: dressing around and sealing to all penetrations,laps and turnups. Polythene damp proof membrane (500 gauge)	m ²	246.25			
2.6.00	<u>DE-WATERING</u>					
2.6.01	De-watering the excavation until completion of concrete work as required	item	1.00			
2.7.00	TOTAL OF BILL №: 02 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
3.0.00	Bill No: 03 - INSITU CONCRETE WORKS					
3.1.00	GENERAL (a) Rates shall include for: placing in position, making good after removal of formwork, mortar touch up to all concrete and casting in all required items; additional concrete required to conform to structural and excavated tolerances (b) Mix ratio for reinforced concrete shall be 1:2:3 and lean concrete shall be 1:2:6. (c) All structural concrete shall be GRADE M25 and lean concrete shall be GRADE M15 (d) Rates shall include for: concrete, formwork, reinforcement, cleaning, fabrication, placing, the provision for all necessary temporary fixings and supports including tie wires and chair supports, laps, distribution bars and wastage. (e) Rates shall include for: all necessary boarding, supports, erecting, framing, temporary cambering, cutting, perforations for reinforcing bars, bolts, straps, ties, hangers, pipes and removal of formwork. (f) Rates shall include for: cleaning, fabrication, placing the provision for all necessary temporary fixings and supports including tie wires and chair supports, laps, distribution bars and wastage. (g) All reinforcing bars shall be high strength bars. (h) Slab soffits to be finished fairfaced, use plasteciser and formwork with reducing agent. (i) All exposed & external concrete members shall be casted with masterpel 777 or equivalent water proofing chemical. (j) Rate shall include for applying 2 coats of waterproofing chemical to substructure.(Below ground level).					
3.1.01	Allow for Concrete Testing.	item	1.00			
3.2.00	MASS CONCRETE Quantity is measured to the edges of concrete foundation members. Rates shall be inclusive for any additional concrete required to place the formwork.					
3.2.01	50 mm Lean Concrete (Foundations)	m ³	4.35			
3.3.00	REINFORCED INSITU CONCRETE SUB-STRUCTURE FOUNDATION PADS 3.3.01 1800 x 1800 x 300mm Foundation pads, F1 3.3.02 1600 x 1600 x 300mm Foundation pads, F2 3.3.03 1400 x 1400 x 300mm Foundation pads, F3 3.3.04 1200 x 1200 x 300mm Foundation pads, F4 3.3.05 1100 x 1100 x 300mm Foundation pads, F5 3.3.06 750 x 750 x 300mm Foundation pads, F6 FOUNDATION BEAMS 3.3.07 450 x 200 mm Foundation beam, TB STAIR STARTER 3.3.08 200 x 1275 mm Concrete stair starter COLUMNS 3.3.09 200 x 350 mm Concrete columns C1 3.3.10 200 x 350 mm Concrete columns C2 3.3.11 200 x 300 mm Concrete columns C3 3.3.12 200 x 200 mm Concrete columns C4 3.3.13 150 x 150 mm Concrete columns SC					
3.4.00	GROUND FLOOR COLUMNS 3.4.01 200 x 350 mm Concrete columns C1 3.4.02 200 x 350 mm Concrete columns C2 3.4.03 200 x 300 mm Concrete columns C3 3.4.04 200 x 200 mm Concrete columns C4 3.4.05 150 x 150 mm Concrete columns SC SLABS 3.4.06 100 mm thk Concrete Slab on ground 3.4.07 100 mm thk Concrete Slab on ramp 3.5.08 150 mm thk Concrete Slab on half landing level STAIRCASE 3.4.09 Concrete staircase GF to FFL 3.4.10 Concrete staircase GF to 1st FL HALF LANDING BEAMS 3.4.11 400 x 200 mm Beam B2 3.4.12 400 x 200 mm Beam B3					
3.5.00	FIRST FLOOR COLUMNS 3.5.01 200 x 350 mm Concrete columns C1 3.5.02 200 x 350 mm Concrete columns C2 3.5.03 200 x 300 mm Concrete columns C3 3.5.04 200 x 200 mm Concrete columns C4 3.5.05 150 x 150 mm Concrete columns SC SLABS 3.5.06 180 mm thk Concrete Slab on first floor					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
3.5.07	135 mm thk Concrete Slab on first floor	m ³	16.12			
	BEAMS					
3.5.08	475 x 200 mm Beam B1	m ³	2.38			
3.5.09	400 x 200 mm Beam B2	m ³	6.49			
3.5.10	400 x 200 mm Beam B3	m ³	2.28			
3.5.11	400 x 200 mm Beam B4	m ³	2.28			
3.5.12	180 x 350 mm Beam HB	m ³	1.16			
	RC WALL					
3.5.13	100mm thk 100mm high RC starter	m ³	0.22			
3.6.00	<u>ROOF LEVEL - 01</u>					
	BEAMS					
3.6.01	300 x 200 mm Beam RB	m ³	2.84			
3.7.00	<u>ROOF LEVEL - 02</u>					
	BEAMS					
3.7.01	300 x 200 mm Beam RB	m ³	6.58			
3.8.00	<u>OTHER WORKS</u>					
	Lintel and Sill beams					
3.8.01	150 x 150 mm Beam LT1	item	1.00			
3.8.02	300 x 150 mm Beam LT2	item	1.00			
	SHADING					
3.8.03	120 mm thk Concrete shading @ 1st slab level	item	1.00			
3.8.04	120 mm thk Concrete shading @ roof beam level	item	1.00			
	FIN					
3.8.05	62 X 150 mm thk Concrete fin GF	item	1.00			
3.8.06	62 X 150 mm thk Concrete fin 1ST	item	1.00			
	RC bench					
3.8.07	75 mm thk Concrete Slab for vanity at toilet	item	1.00			
	SEPTIC TANK					
3.8.09	3300x5300x1900mm Septic tank as per detailed rawing	item	1.00			
3.9.00	TOTAL OF BILL №: 03 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
4.0.00	Bill №: 04 - MASONRY					
4.1.00	GENERAL (a) Rates shall include for: cleaning out cavities, forming rebated reveals and pointing and cleaning down to reveals where necessary; fractional size blocks, all necessary machine cutting, cutting or forming chases or edges of floor slabs, cutting or leavingholes and openings as recesses for and building in pipes, conduits, sleeves and similar as required for all trades; leaving surfaces rough or raking out joints for plastering and flashing, bedding frames or plates, building in joists, bearers or similar, temporary supports to openings, templates, reinforcement in walls and for all necessary making good.					
4.2.00	BLOCK WORK Cement block wall, bricks laid to form alternate courses of headers and stretchers, laid on and inc. mortar. (EXTERNAL WALLS)					
4.2.01	150 mm thk full height GROUND FLOOR	m ²	230.46			
4.2.02	FIRST FLOOR	m ²	172.06			
4.2.03	150 mm thk full height BELOW GROUND LEVEL	m ²	13.50			
4.2.04	Cement block wall, bricks laid to form alternate courses of headers and stretchers, laid on and inc. mortar (INTERNAL WALLS). 150 mm thk full height GROUND FLOOR	m ²	141.19			
4.2.05	FIRST FLOOR	m ²	79.95			
4.2.06	100 mm thk 2.4m height GROUND FLOOR	m ²	15.12			
4.2.07	FIRST FLOOR	m ²	29.76			
4.2.08	100 mm thk full height GROUND FLOOR	m ²	16.14			
4.2.09	FIRST FLOOR	m ²	18.34			
4.3.00	TOTAL OF BILL №: 04 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
5.0.00	Bill №: 05 - STRUCTURAL METAL WORKS					
5.1.00	GENERAL (a) Rates shall include for: all fabrication work, welding, marking, drilling for bolts incl. those securing timbers, steel plates, bolts, nuts and any type of washer, riveted work, counter sinking and tapping for bolts or machine screws. (b) Rates shall include for fabrication and erection and temporary supports and fixing into position. (c) "Welding" is deemed to be in accordance with the specification and for the material to which it is to be used. Gusset plates, shoe plates, ends, caps, cleats, brackets, stiffeners, bolts, etc.,are required to be included to the rate of the associated steel work in which they occur. (d) For the description of materials and workmanship refer to the Specification of works, pricing Preambles and Drawings. (e) Contractor shall submit shop drawings for approval prior to fabrication. (f) Unless specified otherwise, rate shall include for: All shop fabrication work, marking, delivery, unloading, hoisting, erecting and fixing as per detail drawings, All welds & allowance for rolling margin, the weight of weld metal in welded constructions, members of any length, cutting to size and shape and joints in the running length, grinding to a smooth finish, unless otherwise required, Machine drilled bolt, holes, bolts, nuts and washers, cleats, shoe and gusset plates and all other connections, Wire brushing to clean all the steel surfaces (except stainless steel) after fabrication and spray painting with two coats of quick drying metal primer zinc phosphate & two coats of matt anti corrosive paint with final paint, all necessary accessories and preparation and submission of Shop Drawings and As Built Drawings as specified.					
5.2.00	STEEL TRUSS					
5.2.01	TRUSS TR1 Steel truss 11.525m span with 60.3mm dia x 3.2mm thick CHS pipe top and bottom chord and 42.4mm dia. x 2.0mm thick CHS pipe web members	nr	10.00			
5.2.02	STEEL FRAMING 60.3mm dia x 3.2mm thick GI bracing beam	m	28.50			
5.2.03	50 x 100 x 2.5mm 'C' Purlins at 900 c/c	m	412.50			
5.3.00	TOTAL OF BILL №: 05 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
6.0.00	Bill №: 06 - ROOFING					
6.1.00	<u>GENERAL</u> (a) Rates shall include for: fair edges, dressing over angel fillets, roof sealant, turning into grooves, all other labours, circular edges, nails, screws and other fixings and laps.					
6.2.00	<u>MAIN ROOF COVERING</u>					
6.2.01	Lysaght roofing sheet to specification	m²	359.55			
6.2.02	50mm mineral wool insulation with reflective layers on both installed as per suppliers specifications with recommended lap length and air gap tape. Rate shall include for BRC mesh over purlins to support insulation layer.	m²	359.55			
6.3.00	<u>CAPPING</u>					
6.3.01	Lysaght ridge cap as per roofing sheet suppliers assembly	m	29.40			
6.4.00	<u>GUTTER</u>					
6.4.01	200 x 200 mm Zinc gutter	m	57.00			
6.5.00	<u>DOWN PIPE</u>					
6.5.01	82 mm dia rain water pipe	item	1.00			
6.5.02	50 mm dia rain water pipe	item	1.00			
6.6.00	<u>FASCIA</u>					
6.6.01	50 x 200 mm fascia board	m	80.98			
6.7.00	TOTAL OF BILL №: 06 - Carried Over To Summary					

ITEM	DESCRIPTION		UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
7.0.00	Bill №: 07 - WINDOWS, SCREENS & LIGHTS						
7.1.00	GENERAL (a) Rates shall include for locks, latches, closers, push plates, pull handles, bolts, kick plates, hinges and all door & window hardware. (b) Rates shall include for door frames, mullions, transoms, trims, glazing, tinting, timber panels, boardings, framing, lining, fastenings and all fixings. (c) Sizes are given overall outside dimensions of actual doors and windows. (d) Thickness and sizes of glass panels are shown on the Drawings and doors and windows schedule (e) Rates shall include for all painting as specified (f) Rates shall include all items specified in the door schedule and specification. (g) Frames and sashes to be 25-60 micron white powder coated aluminium other wise specified.						
7.2.00	WINDOWS						
	GROUND FLOOR						
7.2.01	1525 x 1300	W1 - Aluminium sliding window with clear glass panel on aluminium frame	nr	6.00			
7.2.02	2450 x 1535	W2 - Aluminium side/top hung window with reflective glass panel on aluminium frame	nr	6.00			
7.2.03	650 x 785	W3 - Aluminium window with aluminium louvers on aluminium frame	nr	4.00			
7.2.04	3000 x 600	V1 - Aluminium window with aluminium louvers on aluminium frame	nr	7.00			
7.2.05	2975 x 600	V2 - Aluminium window with aluminium louvers on aluminium frame	nr	1.00			
7.2.06	1875 x 600	V3 - Aluminium window with aluminium louvers on aluminium frame	nr	2.00			
7.2.07	2550 x 600	V4 - Aluminium window with aluminium louvers on aluminium frame	nr	1.00			
	FIRST FLOOR						
7.2.08	1525 x 1300	W1 - Aluminium sliding window with clear glass panel on aluminium frame	nr	6.00			
7.2.09	2450 x 1535	W2 - Aluminium side/top hung window with reflective glass panel on aluminium frame	nr	6.00			
7.2.10	650 x 785	W3 - Aluminium window with aluminium louvers on aluminium frame	nr	2.00			
7.2.11	1200 x 1535	W4 - Aluminium side/top hung window with reflective glass panel on aluminium frame	nr	1.00			
7.2.12	3000 x 600	V1 - Aluminium window with aluminium louvers on aluminium frame	nr	7.00			
7.2.13	2975 x 600	V2 - Aluminium window with aluminium louvers on aluminium frame	nr	1.00			
7.2.14	1875 x 600	V3 - Aluminium window with aluminium louvers on aluminium frame	nr	2.00			
7.2.15	2550 x 600	V4 - Aluminium window with aluminium louvers on aluminium frame	nr	1.00			
7.3.00	TOTAL OF BILL №: 07 - Carried Over To Summary						

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
8.0.00	Bill №: 08 - DOORS, SHUTTERS & HATCHES					
8.1.00	GENERAL (a) Rates shall include for locks, latches, closers, push plates, pull handles, bolts, kick plates, hinges and all door & window hardware. (b) Rates shall include for door frames, mullions, transoms, trims, glazing, tinting, timber panels, boardings, framing, lining, fastenings and all fixings. (c) Sizes are given overall outside dimensions of actual doors and windows. (d) Thickness and sizes of glass panels are shown on the Drawings and doors and windows schedule. (e) Rates shall include for all painting as specified (f) Rates shall include all items specified in the door schedule and specification. (g) Frames and sashes to be 25-60 micron white powder coated aluminium other wise specified.					
8.2.00	DOORS					
	GROUND FLOOR					
8.2.01	1000 x 2300 D1 - Aluminium panel door on Aluminium frame with 6mm thk clear glass	nr	5.00			
8.2.02	1000 x 2300 D2 - Aluminium panel door on Aluminium frame with aluminium louvers	nr	3.00			
8.2.03	900 x 2200 D3 - PVC panel door on PVC frame (single swing)	nr	2.00			
8.2.04	700 x 2000 D4 - PVC panel door on PVC frame (single swing)	nr	3.00			
8.2.05	1000 x 2300 D5 - Aluminium panel door on Aluminium frame	nr	1.00			
	FIRST FLOOR					
8.2.06	1000 x 2300 D1 - Aluminium panel door on Aluminium frame (single swing)	nr	7.00			
8.2.07	1000 x 2300 D2 - Aluminium panel door on Aluminium frame (single swing)	nr	2.00			
8.2.08	900 x 2200 D3 - PVC panel door on PVC frame (single swing)	nr	2.00			
8.2.09	700 x 2000 D4 - PVC panel door on PVC frame (single swing)	nr	6.00			
8.3.00	TOTAL OF BILL №: 08 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
9.0.00	Bill №: 09 - FLOOR, WALL, CEILING, AND ROOF FINISHINGS					
9.1.00	<u>GENERAL</u> (a) Rates shall include for: fixing, bedding, grouting, and pointing materials; making good around pipes, sanitary fixtures, and similar; cleaning down and polishing. (b) "Masterseal 588" or equivalent should be applied on top of screeds and walls upto 300mm in all toilets. (C) All external surface of masonry wall should be waterproofed with"Masterseal 588" or equivalent					
9.2.00	<u>PLASTERING</u> 20 mm thk cement plaster on external surface as specified on the drawing.					
9.2.01	GROUND FLOOR	m ²	233.22			
9.2.02	FIRST FLOOR	m ²	172.06			
	16 mm thk cement plaster on internal surface as specified on the drawing					
9.2.03	GROUND FLOOR	m ²	559.75			
9.2.04	FIRST FLOOR	m ²	399.10			
9.3.00	<u>CEMENT SCREED</u> 50 mm thk cement screed					
9.3.01	GROUND FLOOR	m ²	207.55			
9.3.02	FIRST FLOOR	m ²	203.04			
	35 mm thk cement screed with 2.5mm self levelling screed					
9.3.03	GROUND FLOOR	m ²	73.14			
9.3.04	FIRST FLOOR	m ²	59.23			
	25 mm thk cement screed					
9.3.05	GROUND FLOOR	m ²	26.30			
9.3.06	FIRST FLOOR	m ²	31.23			
9.4.00	<u>FLOOR TILING</u> 600 x 600 mm Homogenous Non-slip tiles					
9.4.01	GROUND FLOOR	m ²	253.46			
9.4.02	FIRST FLOOR	m ²	248.95			
	300 x 300 mm Homogenous Non-slip tiles					
9.4.03	GROUND FLOOR	m ²	26.30			
9.4.04	FIRST FLOOR	m ²	31.23			
9.5.00	<u>FLOOR PAINTING</u> Epoxy floor paint					
9.5.01	GROUND FLOOR	m ²	6.59			
9.6.00	<u>WALL TILING</u> 300 x 600 mm Homogenous tiles					
9.6.01	GROUND FLOOR	m ²	77.82			
9.6.02	FIRST FLOOR	m ²	68.36			
9.7.00	TOTAL OF BILL №: 09 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
10.0.00	Bill №: 10 - SUSPENDED CEILING					
10.1.00	<u>GENERAL</u> (a) Rates shall include for: all labour in framing, notching and fitting around projections, pipes, light fittings, hatches, grilles and similar and complete with cleats, packers, wedges and similar and all nails and screws.					
10.2.00	<u>PLASTERBOARD CEILING</u> Fixed "Boral" or equivalent plasterboard ceiling system with timber framing					
10.2.01	FIRST FLOOR	m ²	168.31			
10.2.02	6mm Cement board ceiling on roof eave / gable ceiling / toilet area GROUND FLOOR	m ²	26.30			
10.2.03	FIRST FLOOR	m ²	174.68			
10.3.00	TOTAL OF BILL №: 10 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
11.0.00	Bill №: 11 - PAINTING & DECORATIONS					
11.1.00	<u>GENERAL</u> (a) Rates shall include for: the provision, erection and removal of scaffolding, preparation, wall putty application, rubbing down between coats and similar work, the protection and/or masking floors, fittings and similar work, removing and replacing door & window furniture. (b) All painting work shall be carried in accordance with the Specifications.					
11.2.00	<u>WALL PAINTING</u>					
11.2.01	Weatherbound paint finish as specified (EXTERNAL SURFACES) GROUND FLOOR	m ²	267.48			
11.2.02	FIRST FLOOR	m ²	207.63			
	Emulsion paint finish including putty application on brick walls as specified (INTERNAL SURFACES)					
11.2.03	GROUND FLOOR	m ²	559.75			
11.2.04	FIRST FLOOR	m ²	399.10			
11.3.00	<u>CEILING PAINTING</u>					
11.3.01	Weatherbound paint finish as specified (SLAB SOFFIT) GROUND FLOOR	m ²	314.63			
	Emulsion paint finish including putty application on ceiling as specified (CEILING)					
11.3.02	GROUND FLOOR	m ²	28.11			
11.3.03	FIRST FLOOR	m ²	342.99			
11.4.00	TOTAL OF BILL №: 11 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
12.0.00	Bill №: 12 - STAIRS, WALKWAYS AND BALUSTRADES					
12.1.00	<u>GENERAL</u> (a) Rates shall include for: all fabrication work, welding, marking, drilling for bolts incl. those securing timbers, steel plates, bolts, nuts and any type of washer, riveted work, counter sinking and tapping for bolts or machine screws. (b) Rates shall include for fabrication and erection and temporary supports and fixing into position.					
12.2.00	<u>RAMP RAILING</u>					
12.2.01	50mm dia SS hollow pipe handrail at 900mm height as per drawing RAMP	m	9.80			
12.3.00	<u>STAIRCASE RAILING</u>					
12.3.01	25 & 50mm dia GI powder coated handrail at 900mm height as per drawing GROUND - 1ST FLOOR	m	6.40			
12.4.00	<u>WALKWAY RAILING</u>					
12.4.01	25 & 50mm dia SS hollow pipe handrail at 1100mm height as per drawing FIRST FLOOR	m	21.70			
12.5.00	TOTAL OF BILL №: 12 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
13.0.00	Bill No: 13 - MECHANICAL & ELECTRICAL SERVICES					
13.1.00	<p><u>GENERAL</u></p> <p>(a) Design, provide and install electrical network for the entire building complete in accordance to standards set by the local governing body STELCO/FENAKA</p> <p>(b) The following items and description and the drawings are given as a guidance as to the nature of the information required to be returned by the contractor. Should they not be appropriate the contractor should provide a similar BOQ using the Additions/Omissions sheets provided at the back of this BOQ.</p> <p>(c) The cost shall include for: screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories.</p> <p>(d) Rate shall include for necessary chasings, trenching, conduits, cables, cable trays, fittings and clips, cutting holes and chases in brick work/ block work/ concrete work complete with all necessary accessories such as sockets, connections, cable glands and boxes, hardware clips, soldering and jointing materials etc., for proper installing and laying of cables.</p> <p>(e) Rates for electrical isolators, conduits, fittings, equipment and similar items shall include for: all fixings to various building surfaces.</p> <p>(f) A light fixture is measured as one point; switch end of wire is not included in the quantity.</p> <p>(g) A point wiring for power points is measured (regardless of 1 gang, 2 gang etc) as one point for each socket outlet; other end of wire is not included in the quantity.</p> <p>(h) All under ground cables directly buried in ground/run in trenches to be properly laid and covered with cable tiles/trench covers. Rate for under ground cables shall include for all necessary excavation, sand layers, concrete tiles, warning strips and back filling with approved quality earth properly compacted, hot dipped galvanized brackets for trenches, accessories etc as applicable</p> <p>(i) The contractors are requested to refer Conditions of Contract, Special Conditions of Contract, Drawings and Specification and other relevant documents related to this tender prior to pricing of the following items</p> <p>(j) The contractor shall provide a schedule of all builder's work in connection with details of such items as necessary, along with the tender.</p> <p>(k) Rates for materials/ plants/ equipments not approved for duty free facilities to be quoted on duty paid basis.</p> <p>(l) All equipments shall be guaranteed for a period of 12 months from the date of commissioning or date of practical completion of the project which ever later</p> <p>(m) The rate shall include for insurance during handling, rehandling, transport, storage until ready for installation, delivery of equipments up to the point of installation and until handing over.</p> <p>(n) The rates shall include for comprehensive maintenance during defects liability period of 12 months from the date of handing over</p> <p>(o) The tenderer shall submit the following information on the items/equipments quoted for together with the tender.</p> <p>a. make</p> <p>b. model No.</p> <p>c. technical data</p> <p>d. country of manufacture</p> <p>e. delivery period</p> <p>f. lead time for manufacturing.</p> <p>g. port of shipping</p> <p>h. CIF value of each item in foreign currency.</p> <p>j. Optional items and their additional cost. (additional cost to be submitted separately)</p> <p>k. Schedule of items to be carried out by others connected to installation of generators/transformers/Electrical panels such as some builders work and electrical connection.</p> <p>l. Details of all special features</p> <p>m. schedule attached to specification.</p> <p>(p) Rate for all electrical panels shall include for supply and installation of all necessary MCCBs, MCBS, EFRs, ELCBs, auxiliary contacts, Voltmeters, ammeters, Digital analyser,kWh meters, indicator lamps, selector switches, copper bus bars, inter locks, aligning and grounding of the panel, inter connectors, internal wiring connections to switch gear,steel channels and necessary hardware fixing insulating materials,all in fully enclosed metal clad panels and distribution boards completed as shown in drawing. They shall comply with the specifications and I.E.E.regulations and be complete to working order to the approval of local authorities.</p> <p>(q) Rate shall include for supply, installation, maintaining, testing and commissioning of the system for power and lighting according to drawings and specifications to working order.</p> <p>(r) All materials, equipment wiring shall confirm to local codes, specifications, standards/latest I.E.E. regulations (BS 7671).</p>					
13.2.00	<p><u>MAIN DISTRIBUTION, SUB DISTRIBUTION AND DISTRIBUTION SYSTEM</u></p> <p><u>Distribution Boards (DB)</u></p>					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
	Electrical and internet distribution Panel for each floor as shown on the drawing, complete with all incoming and outgoing MCBs, RCCBs, etc any other item required to working order, wall mounted wall mount steel powder coated, IP44 encloser with neutral link, earth bar and required accessories, all complete as per the specifications & drawings.					
13.2.01	Distribution Boards	nr	6.00			
13.2.02	Internet switch board	nr	1.00			
	<u>MAIN / SUB CABLING</u> All under ground cables directly buried in ground/ in the trenches as appilcable, to be laid properly and covered with cable tiles, protection tapes, etc for mechanical protection, PVC sleeves may use if required. Rate shall include for all necessary works/accessories such as excavation, sand layers, cable tiles, warning strips and back filling with approved quality earth,properly compacted, to the satisfaction of the Engineer. All above ground cables shall be laid on cable tray/ trucnking /conduits as appilcable and covered by tray covers, etc. for mechanical protection. PVC sleeves may use if required. Rate shall include for all necessary works/ accessories such as galvernized brackets, supporting materials, fittings, nails, cable ties, earthing, etc, trays shall be of required sizes, GI powder coated, and shotted, to the satisfaction of Engineer <u>CABLING UP TO MDB (If the existing panel board cant cater proposed</u> Feeder cable Cabling from Main Panel Board to DBs Cabling from main internet source to internet switch board Supply and installation of panel board with KWh meter Wiring and connection to main panel board from main electrical network	item item item item item	1.00 1.00 1.00 1.00 1.00			
13.3.00	GENERAL EARTHING					
13.3.01	Allow for the total earthing system inclusive of the necessary cables from all the DBs	item	1.00			
13.4.00	POINT WIRING AND FITTINGS					
	Rate shall include for supply & installation of cable, conduits for point wiring in concealed installations including lights,switches, power outlet,data points,isolators, etc, all as specified in the drawing					
13.4.01	Supply and Installation of 2 x 1C 1.5mm2 PVC/PVC/Cu + 2.5mm2 PVC/Cu earth cable c/w uPVC conduit, junction boxes etc. for lights and switches point wiring	nr	220.00			
13.4.02	Supply and Installation of 2 x 1C 2.5mm2 PVC/PVC/Cu + 2.5mm2 PVC/Cu earth cable c/w uPVC conduit, junction boxes,ethernet cables, RJ45 Connectors, VGA cables etc. for the Socket outlets point wiring	nr	97.00			
13.5.00	LIGHTS,SWITCHES AND SOCKETS					
	Rate shall include supply and installation of following lighting fixtures, socket outlets as specified and detailed, fixed in position including all fixing accessories, supports and connect to power, under following conditions 1. All bathrooms, out door light fixtures shall be IP65 2. All switches & sockets shall be ABB or equivalent brand.					
	<u>LIGHTS AND SWITCHES</u>					
13.5.01	Outdoor wall light 40W (IP65)	nr	33.00			
13.5.02	Mirror light (7W LED light)	nr	7.00			
13.5.03	Recessed Down light 12W LED	nr	18.00			
13.5.04	Ceiling light 18W LED	nr	4.00			
13.5.05	2 x 4' tube light with weather proof opal casing	nr	5.00			
13.5.06	2 x 4' fluorescent light with opal casing	nr	51.00			
13.5.07	Ceiling fan (52" - 54")	nr	24.00			
13.5.08	Light switch (1 G)	nr	20.00			
13.5.09	Light switch (2 G)	nr	13.00			
13.5.10	Light switch (4 G)	nr	13.00			
13.5.11	Light switch (5 G)	nr	3.00			
13.5.12	Exhaust fan	nr	4.00			
13.5.13	Emergency Lights	nr	12.00			
13.5.14	Exit lights	nr	13.00			
	<u>SOCKETS</u>					
13.5.16	13 A twin sockets outlet	nr	43.00			
13.5.17	13 A power outlet	nr	24.00			
13.5.18	Twin compute network outlet	nr	3.00			
13.5.19	Data points	nr	4.00			
13.5.20	HDMI,VGA & RAC AV Sockets	nr	3.00			
13.5.21	HDMI,VGA & RAC AV Twin Sockets	nr	3.00			
13.5.22	Volume controller	nr	1.00			
13.5.23	Speakers	nr	7.00			
13.5.24	Paging mic	nr	1.00			
13.5.25	Two gang TV/SAT socket outlet	nr	3.00			
13.5.26	15 A power outlet for AC	nr	2.00			
13.5.27	15 A twin sockets outlet for AC	nr	3.00			
	<u>A/C work</u>					
13.6.00	Supply and Installation of Ac in science lab room as specified in detail drawing					
13.6.01	DAIKIN OR APPROPRIATE SINGLE SPLIT AC 24,000 BTU	nr	2.00			

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
13.6.00	TOTAL OF BILL №: 13 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
14.0.00	Bill №: 14 - PLUMBING					
14.1.00	<u>GENERAL</u> (a) Rates shall include for sockets, running joints, connectors, elbows, junctions, valves, reducers, expansion joints, backnuts and similar, incidental fitting, clips saddles, brackets, straps, hangers, screws, nails and fixing complete, including cutting and forming holes, excavating, laying pipes and backfilling trenches. (b) All pipe work and fittings shall be high pressure PVC. (c) Rates shall include for supply and fixing of all pipes. (d) All sanitary fixtures used shall be of superior quality and approved by the architect/consultant on submission of samples.					
14.2.00	<u>WATER SUPPLY</u> Provide and fix UPVC high pressure pipes including piping, connections, fittings, valves, excavations, ducting, fixing with brackets and leak testing. <u>INTERNAL PLUMBING - FRESH WATER SUPPLY PIPE</u> Note: Internal plumbing to all toilets, kitchen and lab sink including supply and laying of pipes. <u>EXTERNAL PLUMBING</u> All pipe works under groundfloor screed/slab to be laid for Waste water, sewage, fresh water and well water connection. Waste water and sewage connection from all the toilets and lab sink including the necessary catch pits and manholes as necessary. Rates shall include for supply and laying of pipes including clean-outs as necessary. Water connection to all toilets. Rate shall include for supply and laying of pipes.					
14.2.01		item	1.00			
14.2.02		item	1.00			
14.2.03		item	1.00			
14.2.04		item	1.00			
14.3.00	<u>DISCHARGE WORK</u>					
14.3.01	Provide and fix UPVC pipes including vent pipes, vent cowls, cleaning eye, connections, fittings, valves, excavations, ducting, fixing with brackets, connecting to proposed septic tank and leak testing as specified in the detail drawing.	item	1.00			
14.4.00	<u>FIXTURES</u> Complete installation, cleaning and testing of:					
14.4.01	Wash basin	nr	9.00			
14.4.02	Wash basin tap	nr	9.00			
14.4.03	Muslim shower with stop valve	nr	10.00			
14.4.04	Soap holder	nr	10.00			
14.4.05	Floor Drain	nr	4.00			
14.4.06	Floor Gully	nr	5.00			
14.4.07	510 x 1110 Face Mirror	nr	7.00			
14.4.08	Water Closet	nr	10.00			
14.4.09	1000 x 600 Counter top with tile finish	nr	1.00			
14.4.10	1875 x 600 Counter top with tile finish	nr	4.00			
14.4.11	Water booster pump	nr	1.00			
14.4.12	Water dispenser	set	2.00			
	<u>DISABLED TOILET</u>					
14.4.13	Wash basin	nr	1.00			
14.4.14	Wash basin tap	nr	1.00			
14.4.15	Muslim shower with stop valve	nr	1.00			
14.4.16	Soap holder	nr	1.00			
14.4.17	510 x 1110 Face Mirror	nr	1.00			
14.4.18	Water Closet	nr	1.00			
14.4.19	SS Railings as per detailed drawing	set	1.00			
14.5.00	TOTAL OF BILL №: 14 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
15.0.00	BILL №: 15 - INSULATION, FIRE STOPPING & FIRE PROTECTION					
15.1.00	<u>GENERAL</u> (a) Rates shall include for: cabinet,screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories (b) Rates shall include for cable conduits, fittings, equipment and similar items shall include for: all fixings to various building surfaces (c) Rates shall include for all necessary electrical wiring and accessories required for completion					
15.2.00	<u>FIRE EXTINGUISHERS (Confirming to BS EN 3-10)</u>					
15.2.01	Supply and installation of 2Kg CO2 Extinguishers	nr	3.00			
15.2.02	Supply and installation of 9 Lt. water Extinguishers.	nr	3.00			
15.3.00	TOTAL OF BILL №: 15 - Carried Over To Summary					

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL RATE	LABOUR RATE	AMOUNT
16.0.00	Bill №: 16- ADDITIONS AND OMMISIONS					
16.1.00	ADDITIONS					
16.1.01	Bill №: 01 - PRELIMINARIES					
16.1.02	Bill №: 02 - EXCAVATION AND FILLING					
16.1.03	Bill №: 03 - INSITU CONCRETE WORKS					
16.1.04	Bill №: 04 - MASONRY					
16.1.05	Bill №: 05 - STRUCTURAL METAL WORKS					
16.1.06	Bill №: 06 - ROOFING					
16.1.07	Bill №: 07 - WINDOWS, SCREENS & LIGHTS					
16.1.08	Bill №: 08 - DOORS, SHUTTERS & HATCHES					
16.1.09	Bill №: 09 - FLOOR, WALL, CEILING, AND ROOF FINISHINGS					
16.1.10	Bill №: 10 - SUSPENDED CEILING					
16.1.11	Bill №: 11 - PAINTING & DECORATIONS					
16.1.12	Bill №: 12 - STAIRS, WALKWAYS AND BALUSTRADES					
16.1.13	Bill №: 13 - MECHANICAL & ELECTRICAL SERVICES					
16.1.14	Bill №: 14 - PLUMBING					
16.1.15	Bill №: 15 - INSULATION, FIRE STOPPING & FIRE PROTECTION					
	TOTAL					
16.2.00	OMISSIONS					
16.2.01	Bill №: 01 - PRELIMINARIES					
16.2.02	Bill №: 02 - EXCAVATION AND FILLING					
16.2.03	Bill №: 03 - INSITU CONCRETE WORKS					
16.2.04	Bill №: 04 - MASONRY					
16.2.05	Bill №: 05 - STRUCTURAL METAL WORKS					
16.2.06	Bill №: 06 - ROOFING					
16.2.07	Bill №: 07 - WINDOWS, SCREENS & LIGHTS					
16.2.08	Bill №: 08 - DOORS, SHUTTERS & HATCHES					
16.2.09	Bill №: 09 - FLOOR, WALL, CEILING, AND ROOF FINISHINGS					
16.2.10	Bill №: 10 - SUSPENDED CEILING					
16.2.11	Bill №: 11 - PAINTING & DECORATIONS					
16.2.12	Bill №: 12 - STAIRS, WALKWAYS AND BALUSTRADES					
16.2.13	Bill №: 13 - MECHANICAL & ELECTRICAL SERVICES					
16.2.14	Bill №: 14 - PLUMBING					
16.2.15	Bill №: 15 - INSULATION, FIRE STOPPING & FIRE PROTECTION					
	TOTAL					
16.3.00	TOTAL OF BILL №: 16 - Carried Over To Summary					