



REPUBLIC OF KENYA

DEPARTMENT OF PUBLIC WORKS

PROPOSED ERECTION & COMPLETION

OF

KITCHEN & DINING HALL

AT

MERILE MIXED SECONDARY

SCHOOL

LAISAMIS NG-CDF

BILL OF QUANTITIES

PREPARED AND ISSUED BY

SUB COUNTY WORKS OFFICER

MARSABIT

Nov-20

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>SUBSTRUCTURES</b> (ALL PROVISIONAL)				
A.	Excavate over site average 200 mm deep to remove vegetable soil, wheel deposit on site as directed.	384	SM	160	61,440
B	Excavate from stripped level to reduce levels but not exceeding 1.5 meters deep	73	CM	800	58,400
C	Return, fill material and compact in layers not exceeding 150mm high.	36	CM	200	7,200
	<b>Fillings</b>				
D	50mm thick approved muram or quarry dust blinding to hardcore	300	SM	100	30,000
E	250mm thick approved hardcore filling consolidated and laid in layers of 150mm	300	SM	400	120,000
	<b>ANTI-TERMITE TREATMENT</b>				
	Gladiator T.C.: 2% Solution At the rate of 5Litres per square metre To hardcore (m.s)beds and tops of foundations walls	300	SM	350	105,000
G	Load and cart away	36	CM	200	7,200
	<b>Damp proofing</b>				
H	500 gauge polythne or other equal and approved plastic sheet damp proof membrane laid horizontally over blinding with 300mm side and end laps.	300	SM	200	60,000
	<b>Lean concrete 1:4:8</b>				
J	50mm thick lean concrete blinding (1:4:8) class Q in foundation trench	4	CM	10,000	40,000
	carried to collection				489,240

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>Vibrated reinforced concrete(1:2:4) Class 20/20 in :-</b>				
A	Foundation bases	19	CM	15,000	285,000
B	150mm thick in surface slab	300	SM	2,250	675,000
	<b>Reinforcement</b>				
C	12mm diameter reinforcement square twisted high yield mild steel bars to B.S 4461	303	KG	200	60,600
D	10mm diameter reinforcement square twisted high yield mild steel bars to B.S.4461	144	KG	200	28,800
	<b>B.R.C MESH FABRIC</b>				
	Steel mesh fabric ref No. A142 weighing 2.22kg per square meter laid in surface bed				
E	Measured net.	300	SM	500	150,000
	<b>Sawn formwork</b>				
F	Sawn formwork to edge of surface bed over 75mm and not exceeding 150mm girth	94	LM	200	18,800
	<b>Natural stone walling laid and jointed in cement sand (1:4) mortar and reinforced with 25mm wide hooping iron at each alternative course</b>				
G	200mm thick walling	141	SM	2,050	289,050
	<b>Hessian based bituminous felt damp Proof course to B.S 473 and setting in cement sand(1:4) mortar</b>				
H	200mm wide including leveling bed	102	LM	150	15,300
J	150mm wide including leveling bed	16	LM	120	1,920
					1,524,470
	<b>Collection</b>				
L	Brought forward from page 2				489,240
M	Brought forward from above page 3				1,524,470
	carried to summary				2,013,710

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>SUPERSTRUCTURES</b>				
	<b>WALLING</b>				
	<b>Vibrated reinforced concrete (1:2:4) class 20/20 in</b>				
A.	Ring beams	6	CM	15,000	90,000
	<b>High yield steel reinforcement bars to B.S. 4461 including ties</b>				
B.	12mm diameter reinforcement bars	432	KG	200	86,400
C.	8mm diameter reinforcement bars	135	KG	200	27,000
	<b>sawn cypress formwork to:-</b>				
D.	vertical sides of ring beams	49	SM	1,200	58,800
E.	Soffits of ring beams	7	SM	1,200	8,400
	<b>Natural stone walling laid and jointed in cement sand (1:4 ) mortar and reinforced with 25mm wide hooping iron at each alternative corner</b>				
F.	200mm thick walling	309	SM	2,050	633,450
G.	150mm thick walling	50	SM	2,000	100,000
J.	Fair rake cutting on 200mm walling	21	LM	450	9,450
	carried to summary				1,013,500

## Proposed Kitchen and Dining Hall

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ROOFING</b> The following in second grade celcured sawn cypress, pressure impregnated treated with wood preservative				
A	200x25mm fascia and verge board	112	LM	450	50,400
B	100x50mm wall plate	78	LM	450	35,100
C	150x50mm rafters	388	LM	650	252,200
D	100x50mm struts and ties	512	LM	450	230,400
E	150x50mm tie beams	381	LM	450	171,450
F	75 x50mm purlins	528	LM	400	211,200
	<b>ROOF COVERING</b> 28 gauge prepainted g.c.i roofing sheets laid on purlins (m.s) with 75side and 150mm top and bottom laps.				
G		405	SM	1,200	486,000
H	28 gauge ditto Ridge cap	31	LM	600	18,600
	<b>RAINWATER GOODS</b> <b>24g Galvanised mildsteel sheeting;all weilds ground smooth</b> 150 x100mm box gutter including soldered joints in the running length fixed to fascia board with and including brackets at approved centers				
J		62	LM	600	37,200
K	Extra; for blocked ends with 75mm diameter outlet 100mm long	4	No	500	2,000
L	Extra; for 90° bends	4	No	500	2,000
M	75mm diameter rainwater downpipe fixed with and including mildsteel straps at 900mm centers,plugged and screwed to wall	12	LM	600	7,200
N	Extra over; swanneck bend	4	No	500	2,000
P	Extra over; horse shoe bend	4	No	500	2,000
	carried to summary				1,507,750

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>DOORS</b> Supply and fix standard section Purpose made steel casement doors with in-built permanent vents, fixed to wall opening with steel lugs, including assembling fabricating and filling wall steel frame joint with cement mortar(1:4) and applying one coat red-oxide primer.				
A	1200 x 2100 mm	5	No	25,000	125,000
B	900 x 2100 mm	2	No	15,000	30,000
C	Door stopper screwed to wall or floor	2	pcs	200	400
	<b>Glazing</b>				
D	4mm thick clear sheet glass and glazing in putty in panes over 0.10 and not exceeding 0.5 square meters	2	SM	1,800	3,600
	carried to summary				159,000

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>WINDOWS</b>				
	<b>Supply and fix standard section Purpose made steel casement windows with in-built permanent vents, fixed to wall opening with steel lugs, including assembling fabricating and filling wall steel frame joint with cement mortar(1:4) and applying one coat red-oxide primer.</b>				
A	Window size 1800 x 1500mm high	16	No.	15,000	240,000
	<b>Glazing</b>				
B	4mm thick clear sheet glass and glazing in putty in panes over 0.10 and not exceeding 0.5 square meters	40	SM	1,800	72,000
	<b>Pre-cast concrete 1:2:4 in</b>				
C	Window cill size 250x50mm,throated laid and jointed in cement mortar (1:4)	38	LM	1,500	57,000
	carried to summary				369,000

## Proposed Kitchen and Dining Hall

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>CIELLING</b>				
	<b>Soft swan cypress timber</b>				
A	50x50mm timber brandering at 600mm centres	300	SM	750	225,000
B	12mm Thick chip board ciellings with a symmetrical v-joints	300	SM	730	219,000
C	75x25mm cornice	96	LM	200	19,200
D	Extra-over ceiling lining for forming removable access trap door size 600x450mm with 100x38 mm sawn treated cypress trimming joists between the beams, 120x20mm(finished) wrott cedar frame all round and 12mm softboard removable panel set loose on top of framming.	3	No	1,000	3,000
	<b>PAINTING AND DECORATION</b>				
	<b>Prepare and apply one undercoat and two finishing coats of plastic emulsion paint to:-</b>				
E	12mm Thick chip boards cielling boards	300	SM	300	90,000
F	Surfaces not exceeding 100mm girth	96	LM	40	3,840
	<b>Total Carried to Summary</b>				<b>560,040</b>

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>FINISHES</b>				
	<b>FLOORS</b>				
A.	25mm thick coloured cement sand (1:4) screeding to floors	300	SM	500	150,000
	<b>WALLS</b>				
B	12mm thick lime plaster (1:1:6) to walls internally.	340	SM	400	136,000
C	100x25mm thick cement sand skirting	96	SM	200	19,200
D	12mm thick rendering.	19	SM	300	5,700
E	25mm wide cement sand Horizontal wall pointing	297	SM	200	59,400
	<b>PAINTING AND DECORATION</b>				
	<b>Prepare and apply one undercoat and two finishing coats of plastic emulsion paint to:-</b>				
F	Plastered walls	339	SM	300	101,700
G	rendered walls	19	SM	300	5,700
	<b>Prepare and apply one undercoat and two finishing coats of gloss oil paint to:-</b>				
H	General surfaces of woodwork	20	SM	300	6,000
I	Surfaces over 100mm but not exceeding 200mm girth	98	SM	120	11,760
	<b>Prepare and apply one undercoat and two finishing coats of gloss oil paint to general surfaces of metal :-</b>				
J	windows; internally	48	SM	300	14,400
K	windows; externally	48	SM.	300	14,400
L	General surfaces of steel	18	SM	300	5,400
	carried to summary				529,660

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>Kitchen worktops</b>				
A	kitchen worktop overall size 6000x600x900mm high;75mm thick v.r.c top on 100mm wall;100mmx50mm cypress frame;25mm thick block board door; all to details	1	No.	100,000	100,000
	<b>Shelves</b>				
B	Top hung shelves overall size 2000x900mmx300mm;25mm thick block board ;to details	4	No.	30,000	120,000
	<b>FURNITURE</b>				
	<b>Supply the following furniture to the following specifications</b>				
	<b>DINING TABLES</b>				
C	2400 x 1200 x 25mm Thick Block board top Screwed to 50x50x3mm Thick metal framework; to details provided; Prepare and apply three coats of gross paint to edges of board	20	No.	20,000	400,000
	<b>DINING BENCHES</b>				
D	2400 x 300 x 25mm Thick Block board top Screwed to 50x50x3mm Thick metal framework; to details provided; Prepare and apply three coats of gross paint to edges of board	40	No.	8,000	320,000
	carried to summary				940,000

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>ELECTRICAL INSTALLATION WORKS</b>				
	<b>Supply, install, test and commission the following :</b>				
	<b><u>LIGHTING POINTS</u></b>				
A	Lighting point wired in 3x1.5mm <sup>2</sup> SC-PVC-Cu cables drawn in 20mm diameter HG PVC conduits concealed inside ceiling complete with all necessary accessories excluding switches and fittings for two way switching.	6	No.	2,000	12,000
B	Ditto but one way switching	28	No	1,800	50,400
C	10A moulded ivory switch plates as Crabtree or approved equivalent as follows:				
	i). one gang one way	6	No.	200	1,200
	ii). two gang two way	4	No.	250	1,000
	iii). three gang two way	4	No.	300	1,200
	<b><u>LIGHTING FITTINGS</u></b>				
D	Light fittings complete with fixing accessories and lamps as follows:-				
	i) 1200mm 1 x 36w Fluorescent batten fitting of slim crosssection with clip-on cover plate and adjustable end cap system. As Thorn Popular Pack Batten.	24	No	2,000	48,000
	ii) Bulk head fittings with vandal proof screws	10	No	1,800	6,000
	<b><u>SOCKET OUTLETS AND POWER POINTS</u></b>				
E	Socket outlet point comprising wiring in 3x2.5mm <sup>2</sup> PVC-SC-Cu cables in concealed in conduits.	16	No.	2,500	40,000
F	13A 1-gang switched moulded socket outlet plate as Crabtree or approved equivalent.	16	No.	1,000	16,000
	<b>Total Carried Forward To Next Page</b>				<b>175,800</b>

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Brought forward from page 12				<b>175,800</b>
	<b><u>CONSUMER UNITS/DISTRIBUTION BOARDS</u></b>				
A	4-way SP/N consumer unit flush mounted on wall complete with a 100A SP/N integral isolator as CRABTREE or approved equivalent.	1	No.	1,500	1,500
B	Single pole Miniature Circuit Breakers to fit into the above consumer unit as follows:				
	(i) 10A SP	3	No	1,200	3,600
	(ii) 30A SP	3	No	1,200	3,600
	(ii) 30A TP	2	No	3,000	6,000
	(iii) Blanking plates	6	No.	200	1,200
	<b><u>SUB-MAINS CABLES</u></b>				
C	4 x 10.0 mm <sup>2</sup> Copper Amoured underground cables	20	LM	2,500	50,000
	Standard galvanized 14 swg c/w cut-out for TPN	1	No	3,000	3,000
D	5 x 10.0mm <sup>2</sup> single-Core copper cables drawn inside HG conduits.	10	LM	1800	18,000
E	Electrical earthing comprising 6.0 mm <sup>2</sup> single-Core copper cables drawn inside HG conduits, 1500mm by 15mm diameter copper electrode complete with clamp and a pre-cast concrete inspection pit with cover.	1	Item	15,000	15,000
F	Cooker point comprising wiring in 3x6.0mm <sup>2</sup> PVC-SC-Cu cables in concealed PVC conduits.	1	No	12000	12,000
G	45A Cooker control unit incorporating a 13A switched socket outlet and neon indicator lamp as MK range or approved equivalent.	1	No	15000	15,000
H	Cooker connector as MK or approved equivalent	1	No	500	500
	<b>Total Carried Forward to summary</b>				<b>305,200</b>

Proposed Kitchen and Dining Hall

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<p><b>PROVISIONAL SUMS</b></p> <p>A Allow a Provisional sum for mechanical installation; Plumbing works, kitchen sinks, drainage works, manhole and soak pit as directed by the DR.</p> <p>B Allow for a provisional sum of Twenty Thousand for Branding as directed by the Project Manager.</p>				<p>100,000</p> <p>20,000</p>
	carried to summary				120,000

Proposed Kitchen and Dining Hall

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<b>SUMMARY</b>				
A	Substructures				2,013,710
B	Walling				1,013,500
C	Roofing and rain water goods				1,507,750
D	Doors				159,000
E	Windows				369,000
F	Ceiling				560,040
G	Finishes				529,660
H	Fixtures				940,000
I	Electrical Installation				305,200
J	Provisional sums				120,000
	<b>GRAND SUMMARY</b>				7,517,860