



REPUBLIC OF KENYA

**MINISTRY OF TRANSPORT AND INFRASTRUCTURE
DEPARTMENT OF PUBLIC WORKS**

BILLS OF QUANTITIES

FOR

PROPOSED CONSTRUCTION OF TWIN LABORATORY BLOCK

AT

IGUNGA SECONDARY

IN


SABATIA SUB-COUNTY

ISSUED BY:
COUNTY WORKS OFFICER
DEPARTMENT OF PUBLIC WORKS
P. O. BOX 1460
MARAGOLI.

AUGUST, 2023


BILL NO.1

MEASURED WORKS


ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	ELEMENT NO.1					
	SUBSTRUCTURES					
	ALL PROVISIONAL					
A	NOTE: All work measured under this element is upto and including the floorslab but excluding the finishes thereon:-					
B	Clear the site of all bush scrub undergrowth and small trees grub up roots and cart away or burn all arising	88	SM	100	8,800	
C	Excavate oversite average 300mm deep to remove vegetable soil load up wheel and cart away.	88	SM	200	17,600	
D	Excavate for strip foundation trenches occurring not exceeding 1.5metres deep commencing from reduced level	49	CM	500	24,500	
E	Disposal Load surplus excavated material and cart away from site and allow for planking and strutting to sides of excavations		ITEM		15,000	
F	Hardcore,Back filling as described Hand packed hardcore fillings under floor spread,levelled well rammed and consolidated in					
G	150mm thick layers Murram blinding		ITEM		20,000	
H	50MM Thick layermurram or quarry dust blinding to surface of hardcore 'TERMIDOR' or other equal and approved		ITEM		20,000	
I	Chemical insecticide treatment prepared and applied according to the manufacturers printed instructions.	160	SM	100	16,000	
	Damp proof membrane					
J	1000 Gauge polythene or other equal and approved plastic sheet damp proof membrane laid over blinding(measured net – allow for laps)	160	SM	70	11,200	
	COUNTY WORKS OFFICER (MOPW) VIHIGA DISTRICT P. O. Box 1460/ 50300, MARAGOLI Sign: 				118,100	

ELEMENT NO.2 - WALLING

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	In-situ concrete work					
	Mass concrete (1:4:8/28mm aggregate)					
A	50mm Thick blinding under foundations	4	CM	10,000	40,000	
B	<u>Vibrated rein forced concrete (1:2:4) 20/20 aggregate as described in:-</u>					
C	Strip foundations	35	SM	500	17,500	
D	150mm Thick floor slab	11	CM	10,000	110,000	
	<u>Mesh fabric reinforcement to B.S 4483 AND MEASURED NETT-Allow for laps</u>					
E	Fabric Ref A-98 weighing 2.22kg/m	160	SM	440	70,400	
	<u>Sawn formwork as described to:</u>					
F	Edges of slab over 100mm but not exceeding 200mm high	52	LM	150	7,800	
	FOUNDATION WALLING					
	Walling in concrete masonry stone bedded and jointed in cement and sand mortar (1:3)					
G	200mm thick natural stone wall reinforced with hoop iron at every alternate course.	85	LM	1600	136,000	
	<u>Insitu Finishes</u>					
H	14mm thick 2NO. coat work cement sand (1:3) render, wood floated to concrete or block work base to walls :external	26	SM	200	5,200	
	<u>Prepare and apply three coats black bituminous paint on:</u>					
J	Rendered plinths,externally.	26	SM	200	5,200	
	TOTAL CARRIED TO COLLECTION					
	<u>COLLECTION</u>					
	Brought Forward From Page 01					
	Brought Forward From Above					
	Total Carried to Collection				392,100	

ELEMENT NO.2 - WALLING						
K	Masonry stone wall in cement sand (1:4) mortar 200mm thick natural stone wall reinforced with hoop iron at every alternate courses Extra over walling for eaves and gabbles closing	208	SM	1500	312,000	
L	200mm wide Hessian based bituminous felt damp proof course in one layer including levelling and bedding in cement sand (1:3) mortar.	160	SM	70	11,200	
Total For Walling Carried to Summary					323,200	
<p>COUNTY WORKS OFFICER (MOPW) VIHIGA DISTRICT P. O. Box 1460, 50300, MARAGOLI</p> <p>Sign: </p>						

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>ELEMENT NO.3 – R.C FRAME & STEEL FRAMES</u>					
	Vibrated reinforced concrete (1:2:4/20 – 20mm aggregate) as described in:-					
A	Beams	5	CM	7,000	35,000	
B	100mm conc suspended worktop	29	SM	1,500	43,500	
C	50mm thick concrete to plinths	29	SM	1,000	29,000	
	Steel reinforcement					
	Supply and fix steel bar/rod reinforcement including bending hooks tyingwire cutting spacer blocks and supporting all in position					
	High tensile square twisted bars to B.S. 4461 as described in :					
D	Of assorted bars.	600	KG	150	90,000	
	Sawn formwork to insitu concrete as described to:					
E	Sides and soffites of beams	47	SM	500	23,500	
F	To soffits of worktops	29	SM	500	14,500	
G	Edges of suspended slab:75 to 150mm wide	66	LM	150	9,900	
H	Ditto to plinths; 75 to 150mm wide	66	LM	150	9,900	
	<u>STEEL COLUMNS</u>					
J	100mm x 3mm thick circular hollow section CHS 2500mm long fixed with fish tail lugs to concrete floor slab.	8	NO	5,000	40,000	
	Total For Structural Works Carried to Summary					
					295,300	


ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>ELEMENT NO.4 ROOF</u>					
A	<u>Galvanized corrugated sheet roofing:</u> 30 gauge pre-painted galsheet corrugated iron sheets on timber purlins. With roofing nails and neoprene washers J bolts nuts neoprene washers and caps Accessories, fixing as necessary to roof	117	SM	1200	140,400	
	<u>Construction Sawn cypress timber well treated and Seasoned.</u>					
B	100x50mm wall plate secured with heavy gauge hoop Iron at 1200mm centres.	122	LM	270	32,940	
C	75x50mm purlins	115	LM	150	17,250	
D	150x50mm Rafters	109	LM	300	32,700	
E	100x25mm collar piece.	53	LM	300	15,900	
F	100x50mm tie beam	150	LM	350	52,500	
G	100x50mm ties and struts	30	LM	270	8,100	
H	150x50mm timber beam in verandah					
	<u>Wrot Cypress</u>					
J	225X25mm fascia board	74	LM	400	29,600	
K	225x25mm verge board	47	LM	350	16,450	
L	Prepare and apply three coats gloss oil paint to general surface of wood 200-300mm girth.	117	LM	200	23,400	
	Carried to Collection					
	<p>COUNTY WORKS OFFICER (MOPW) VIHIGA DISTRICT P. O. Box 1460, 50300, MARAGOLI</p> <p>Sign: </p>					
					353,710	

<u>Rain Water Goods</u>					
M	150x150x150mm pre-fabricated galvanized steel gauge 28 box gutter fixed to fascia board with heavy gauge holder bats at 600mm centre.	34	LM	600	20,400
N	Extra over ditto for stopped ends.	4	NO	400	1600
O	Extra over gutters for 100mm diameter Nozzle outlet.	3	NO	400	1200
P	100mm diameter down pipe fabricated from gauge 28 plain sheet fixed to wall with holder bats.	24	LM	250	6,000
Q	Extra over ditto for sawn neck.	3	NO	300	900
R	Extra over ditto for shoe.	3	NO	250	750
S	PVC "ROTO" or "KEN TANK" cold water storage tank 5,000 litres complete with and including Base for the tank.	1	NO	25000	25,000
T	Approved Electrical water pump complete with flexible tube float switch.	1	NO	7000	7000
U	19mm "Peglar" tap.	1	NO	500	500
V	19mm UNION	1	NO	400	400
W	Allow for constructing a pump house size 400x500mm complete with a steel door size 400x500mm.	1	NO	10000	10,000
Carried to Collection					
					73,750

ITEM	DESCRIPTION	KSHS	CTS
	<u>COLLECTION</u>		
A	Brought forward from page LAB/06		
B	Brought forward from pageLAB/07		
	TOTAL FOR ROOF CARRIED TO SUMMARY – Ksh.	1,556,160	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>ELEMENT NO.5 – WINDOWS</u>					
	<u>Supply and fix Standard steel casement purpose made windows complete with window fastener. Stay and burglar proofing primed with red oxide.</u>					
A	Window size 2000x1500mm (W1)	7	NO	6,500	45,500	
B	Ditto size 1200x1000mm (W2)	5	NO	5000	25,000	
	<u>Glazing</u>					
C	4mm thick clear sheet glass in planes 0.1.m to 0.2.m in metal putty.	33	SM	1100	33,000	
	<u>Pelmet Boxes – Wrot Cypress</u>					
D	50x50mm bearer plugged	22	LM	200	4,400	
E	120x20mm fascia	22	LM	200	4,400	
F	100x20mm top	22	LM	200	4,400	
G	100X120X20mm end to fascia	17	NO	150	2,550	
	<u>Curtain tracks</u>					
H	Brass "I" Section curtain track complete with roller brackets and screwed to timber.	23	LM	1,500	34,500	
I	Prepare and apply one under coat and two coats gloss oil paint to general surfaces of metal.	33	SM	250	8,250	
J	Ditto to wood surfaces 100-200mm girth.	30	LM	250	7,500	
K	150x25mm pre cast concrete window cill once weathered and throated.	30	LM	350	10,500	
	Total for windows carried to Summary.....			Ksh.	180,000	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
<u>ELEMENT NO.5 DOORS</u>						
A	Steel double door overall sizes 1200x2400mm high. D1	2	NO	20,000	40,000	
B	45mm thick solid core flush door size 820x2030mm high.	3	NO	6000	18,000	
<u>Framing</u>						
C	100x50mm door frame	61	LM	400	24,400	
D	100x50mm transome	10	LM	300	3,000	
E	19x12mm beading	27	LM	300	8,100	
<u>Iron mongery</u>						
F	100mm pressed steel butt hinges	12	PRS	200	2,400	
G	2-lever "UNION" mortice lock complete with furniture.	4	NO	350	1,400	
H	3 – lever Ditto	4	NO	300	1,200	
J	Supply and fix "UNION" steel door lock complete with furniture.	3	NO	450	1,350	
K	Ditto but rebated steel lock.	3	NO	400	1,200	
L	250x25mm door cramps screwed to door frame and casted into walls with cement and sand (1:2) mortar.	24	NO	200	4,800	
<u>Glazing</u>						
M	4mm thick clear sheet glass in fanlight.	4	SM	400	1,600	
N	Ditto in steel door panes oil – 0.5m2 with steel putty.	6	SM	400	2,400	
Carried to Collection						
					107,300	
					Ksh.	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>PELMET BOXES</u> <u>Wrot Cypress</u>					
A	120x25mm fascia.	46	LM	350	16,100	
B	100X25mm top.	17	LM	250	4,250	
C	100x120x20mm ends to fascia.	13	NO	200	2,600	
D	50x50mm Batten.	17	LM	200	3,400	
E	Aluminum "I" section curtain rail complete with rollers, hooks and end tops screwed to timber.	11	LM	250	2,750	
	<u>Painting as described.</u>					
F	Prepare and apply one under coat and two coat gloss oil paint to general surface of wood.	18	SM	250	4,500	
G	Ditto but to wood surface 100-200mm girth.	13	LM	150	1,950	
H	Ditto but to general surface of metal.	9	SM	250	2,250	
	CARRIED TO COLLECTION				Ksh.	37,800
	<u>COLLECTION</u>					
	Brought forward as from page Lab/10					
	Brought down from above.					
	TOTAL FOR WINDOWS AND DOORS CARRIED TO SUMMARY.....				Ksh.	325,100
	<p>COUNTY WORKS OFFICER (MOPW) VIHIGA DISTRICT P. O. Box 1460 / 50300, MARAGOLI Sign: </p>					

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>ELEMENT NO. 6-FINISHES</u>					
A	40mm thick terrazzo floor with screed backing and polished.	160	SM	1800	288,000	
		88	LM	450	39,600	
B	100x20mm ditto skirting.					
	<u>Walls</u>					
C	15mm thick two coat gouged (1:1:6) plaster two walls internally.	146	SM	450	65,700	
		32	SM	300	9,600	
D	Ditto to reveal and jumps to opening.					
E	15mm thick cement and sand (1:3) rendering to walls externally.	124	SM	350	43,400	
F	Extra over ditto for 12mm thick Tyrolean a spray to rendered walls below cills.	21	SM	350	7,350	
	<u>Ceiling</u>					
G	12mm thick chip board ceiling lining on brandering (m.s.) in symmetrical panels and heat V-joints.	93	SM	700	65,100	
H	75x25mm moulded cornice plugged to wall.	88	LM	350	30,800	
	<u>Sawn cypress</u>					
J	75x50mm brandering plugged to wall.	96	LM	300	28,800	
K	50x50mm ditto brandering	50	LM	300	15,000	
L	75x50mm ditto.	69	LM	300	20,700	
	Carried to Collection.....					
					614,050	
				Ksh.		

ELEMENT NO. 7 – FITTINGS

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>The following in 1No. Centre working benches and 2No. Demonstration benches.</u>					
A	25mm thick mvule top	17	SM	250	4,250	
B	50x25mm mvule fascia	28	LM	150	4,200	
C	75x25mm mvule stile	4	LM	150	600	
	<u>Block board as described in:-</u>					
D	25mm thick sides	23	SM	200	4,600	
E	25mmx650mmx400mm doors (2 No)	4	SM	300	1,200	
F	19mm shelves	14	SM	250	3,500	
	<u>Wrot Cypress</u>					
G	50x25mm battens	18	LM	300	5,400	
H	50x50mm frame	68	LM	300	20,400	
J	100x25mm stiles	44	LM	300	13,200	
K	25x25mm battens.	30	LM	300	9,000	
	<u>Angle line as described:-</u>					
L	50x50x3mm stands	62	LM	200	12,400	
M	25x25x3mm ditto	18	LM	200	3,600	
N	25x25x3mm brackets	109	LM	200	21,200	
O	Piano hinges	11	LM	200	2,200	
P	Chromium plates "D" handle.	12	NO	350	4,200	
Q	50mm Hasp.	12	NO	350	4,200	
	Carried to Collection.....			Ksh.	114,150	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>The following in preparatory room concrete work top.</u>					
A	75mm thick concrete (1:3:6) in top.	53	SM	450	23,850	
B	25mm cement sand (1:3) screed to ditto.	53	SM	400	21,200	
C	Formwork to soffites of suspended top.	53	SM	250	13,250	
D	Ditto to edge of slab 75-100mm girth	36	LM	250	9,000	
E	150mm thick concrete block dwarf wall.	1	SM	1000	1,000	
F	12mm thick plaster to dwarf walls.	2	SM	350	700	
	Carried to Collection.....					
				Ksh.	69,000	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	Form hole size 450x450mm in 75mm thick concrete Top.	1	NO	400	400	
B	Prepare and apply three coat gloss oil paints to dwarf walls in pre room.	2	SM	250	500	
C	Ditto to dwarf walls in main laboratory.	43	SM	250	10,750	
<u>The following in store.</u>						
D	75mm thick concrete (1:3:6) in plinth	3	SM	250	750	
E	Formwork to edge of plinth 75-100mm girth	4	LM	250	1,000	
F	12mm cement sand (1:3) screed to plinth.	3	SM	300	900	
<u>Shelves – Wrot Cypress</u>						
G	25mm thick x300mm shelves	2	SM	250	500	
H	50x25mm brackets	10	LM	200	2,000	
J	25x25mm struts	5	LM	150	750	
K	Prepare and apply three coats glass oil paints to shelves.	4	SM	200	800	
<u>Cabinets</u>						
L	25mm thick block board top.	3	SM	250	750	
M	19mm ditto shelves	3	SM	250	750	
N	Ditto partitions	2	SM	250	500	
O	25mm thick door size 400x700mm in black board	4	NO	3000	12,000	
P	Cupboard (Solex) door lock	2	NO	350	700	
Q	Cupboards "D" handle	8	NO	150	1,200	
R	Piano hinges.	6	LM	100	600	
Carried to Collection.....						
				Ksh.	34,850	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	50X50mm door frames	6	LM	200	1,200	
B	75x25mm bearers	4	LM	200	800	
C	50x25mm ditto	9	LM	200	1,800	
D	75x25mm fascia to top	4	LM	250	1000	
E	Prepare and apply one under coat and two coat gloss oil paint to block board surface.	13	SM	200	2,600	
<u>Fume Cupboard Room (4x2.3m)</u>						
F	100mm thick concrete (1:3:6) work top	1	SM	450	450	
G	Form work to soffits of ditto	1	SM	350	350	
H	Ditto to edge of slab 75-100mm girth	2	LM	250	500	
J	150mm thick concrete block dwarf wall.	2	SM	400	800	
K	Plaster to walls internally.	4	SM	400	1,600	
L	Form hole size 450x400mm for sink in concrete top.	1	NO	3500	3,500	
M	Prepare and apply three coats gloss oil paint to walls internally.	4	SM	200	800	
<u>Fume Chamber.</u>						
N	150x25mm rebated wrot cypress frame.	11	LM	250	2,750	
P	50x50mm transome	1	LM	250	250	
Q	25x50mm frame	9	LM	200	1,800	
R	50x25mm rebated beading for glazing.	5	LM	400	2,000	
Carried to Summary				Ksh.	22,200	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	19X12mm Architrave	11	LM	150	1,650	
B	25mm quadrant	11	LM	150	1,650	
C	19mm thick block board.	1	SM	350	350	
D	50mm tower bolt	4	NO	100	400	
E	Aluminum "D" Cupboard handle	4	NO	100	400	
F	5mm clear sheet glass in timber frame.	3	SM	450	1,350	
G	Supply and fix hood complete with 150mm x 150mm Pipe fabricated from gauge 22 sheet.	1	NO	1000	1,000	
H	Prepare and apply clear vanish to wood surface not exceeding 100mm girth.	48	LM	200	9,000	
	<u>Sundries</u>					
J	50x25mm wrot cypress moulded picture rail.	21	LM	250	5,250	
	<u>Teachers Platform 2.1x3.3.m</u>					
K	100mm tick concrete (1:3:6) in platform	14	SM	350	4,900	
L	Formwork to edge of slab	15	LM	200	3,000	
M	12mm thick cement sand (1:3) screed to edge of slab.	15	LM	250	3,750	
N	Form 200x150mm deep channel in slab.	26	LM	200	5,200	
P	Steel grating complete with 25x25mm angle line with 10mm bars welded at 50mm centers.	26	LM	300	7,800	
	Carried to Collection.....			Ksh.	45,700	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>The following in black board</u>					
A	12mm thick plaster (1:3) to walls.	12	SM	350	4,200	
B	Prepare and apply black board paints to walls.	12	SM	200	2,400	
C	50x25mm wrot cypress moulded beeding around the Black board plugged to wall.	24	LM	150	3,600	
	<u>The following in pin boards (3No) size 950x1900mm (2No) and size 1300x1300mm (1NO.).</u>					
D	9mm thick soft board pin board	5	SM	300	1,500	
E	50x25mm thick wrot cypress moulded beading plugged to wall.	17	LM	200	3,400	
F	Prepare and apply three coats gloss oil paint to wood Surfaces not exceeding 100mm girth.	41	LM	200	8,200	
G	Prepare and apply emulsion paint to soft board surfaces.	5	SM	200	1,000	
	Carried to Collection			Ksh.	24,300	
	<u>COLLECTION</u>					
	Brought forward from page Lab/14					
	Brought forward from page Lab/15					
	Brought forward from page Lab/16					
	Brought forward from page Lab/17					
	Brought forward from page Lab/18					
	Brought down from above					
	TOTAL FOR FITTINGS CARRIED TO SUMMARY..			Ksh.	24,300	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>ELEMENT NO.8 – PLUMBING WORKS (PROVISIONAL) Galvanized Mild steel pipes as described including fitting and jointing.</u>					
A	25mm diameter pipe	45	LM	300	13,500	
B	20mm ditto	45	LM	250	11,250	
C	12mm ditto	30	LM	200	6,000	
	<u>Extra Over G.1 pipe for:-</u>					
D	25mm elbow	4	NO	200	800	
E	25mm Union	2	NO	200	400	
F	25mm gate valve	3	NO	200	600	
G	20mm x20mmx15mm tee	13	NO	250	3,250	
H	20mm elbow.	5	NO	150	750	
	<u>Key Terrain Pvc Pipes as described in:-</u>					
J	50mm waste pipe	68	LM	200	13,600	
K	100mm ditto	12	LM	250	3000	
	<u>Extra Over PVC Pipe for:-</u>					
L	50mm diameter tee	5	NO	250	1,250	
M	50mm Elbow	44	NO	250	11,000	
N	50mm diameter inspection tee	16	NO	300	4,800	
P	100mm ditto.	2	NO	350	700	
	<u>Excavations</u>					
Q	Excavate trench for small pipe not exceeding 1.5m deep average 500mm deep including grading bottom part backfill and part and part load and cert away.	27	LM	200	5,400	
					76,300	
	Carried to Collection			Ksh.		

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	Acid resistant laboratory sink size 400x400mmx2mm thick.	46	NO	3500	161,000	
B	38mm PVC bottle trap	46	NO	500	23,000	
C	12mm laboratory swan neck tap	46	NO	250	11,500	
D	100 gallon (460 litres) plastic water tank complete With cover and with all accessories and raising to roof (3m high) bearers.	2	NO	50,000	100,000	
Carried to Collection.....				Ksh.	295,500	
<u>COLLECTION</u>						
Brought forward from page Lab/19						
Brought down from above						
Total for Plumbing Work Carried to Summary				Ksh.		

ELEMENT NO.9 – GAS INSTALLATION

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>LABORATORY L.P. GAS INSTALLATION</u>					
A	L.P gas storage tank of capacity 50kg	1	NO	15000	15,000	
B	L.P. Gas Supply.	50	KG	450	22,500	
C	25mm diameter GMS Class B pipe	82	LM	450	36,900	
D	50mm diameter GMS Class B pipe for Sleeve	42	LM	500	22,500	
E	50mm diameter GMS Class bend	10	NO	300	3,000	
F	25mm diameter GMS bend	10	NO	250	2,500	
G	25mm diameter GMS tee	16	NO	250	4,000	
H	25x15mm diameter GMS reducer	15	NO	600	9,000	
J	L.P. Gas pressure gauge	1	NO	1500	1,500	
K	50mm diameter GMS manifold pipe with 3No branches tappings to gas cylinders complete with mounting plugs. Copper tubing	1	NO	5000	5,000	
L	6/8 dia copper tubing	85	LM	350	29,750	
M	8/10 ditto	80	LM	400	32,000	
N	10/12 ditto	15	LM	450	6,750	
	<u>Extra Over Copper Tubing for the following fittings:-</u>					
O	6/8mm diameter Brass Equal Tee	27	NO	1000	27,000	
P	8/10mm ditto	14	NO	1200	16,800	
Q	10/12mm ditto	12	NO	1500	18,000	
R	8/10x6/8mm diameter Brass Unequal Teel	27	NO	1200	40,500	
S	10/12 x 8/10 ditto	14	NO	1500	21,000	
T	10/12 x 8/10mm diameter Brass Reducer	12	NO	1500	18,000	
U	8/10x6/8mm ditto	12	NO	1200	14,400	
	Total Carried Collection			Ksh.	346,100	

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	Gas Valves 6/8mm diameter approved quarter turn, lever operated ball valve to BS 5154 and joints to copper.	16	NO	5000	80,000	00
B	Pressure Regulator 15mm dia. First stage gas pressure regulator as Rego 2403 V.9 complete with connections and brackets for 3No. gas cylinder Tanks.	4	NO	9000	36,000	00
C	15mm dia. Second stage gas regulator as Rego 2503 B for the supply pipe.	1	NO	15,000	15,000	00
D	Gas Outlet (Tap) Low pressure LP gas outlet with a safety drop lever to prevent accidental "Turn on" 2 CFM at 2 P.S.I, 4mm diameter outlet and ¼" BSP tail with back nut. The outlet shall be as vultex labline 2-way bench mounted with 2 cocks spaced at 90o angle Model No. VL 2601/D	16	NO	5000	80,000	00
E	Bunsen Burner Bunsen Burner to use the L.P. Gas with 9mm outside diameter riffled gas inlet tube and air regulator. Overall height 120mm and burner tube of 13mm outside diameter. The burner shall be as PARCO Ltd Ref. BYB-045 R or equal and approved.	24	NO	3500	84,000	00
F	12mm diameter 600mm long gas hose pipe to fit.	98	NO	1000	98,000	00
G	Testing and Commissioning	1	Item	20,000	20,000	00
				Ksh.	413,000	00
	COLLECTION					
	Brought forward from page LAB/21					00
	Brought down from above					S
	Total for Gas Installation					
	Carried to Summary.....					00
				Ksh.		

ELEMENT NO.10 – FUME CUPBOARD AND DRAINAGE.

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	<p>Fume Cupboard Supply, deliver and install a fume Cupboard or exterior dimensions of 1200mm wide x 1000mm deep x 2400mm high. Fume Cupboard to be complete with sliding plexiglass face with a 12" work opening running full width of cabinet, counter balance weight at the back, base cabinet with sliding doors, an 8" diameter exhaust collar connections, overhead instrument control panel, and shall incorporate a vulcathene sink, L.P. gas outlet and a non-corrosive bulkhead light. Fume Cupboard to be lined with epoxy coated Aluminum on working surface and sides. Fume cupboard to be as "Nimrod F 3000" or equal and approved equivalent.</p>	NO.	1	20,000	20,000	00
B	<p>Fume Cupboard Extract Fan. Supply, deliver and install a fume Cupboard extract fan capable of 0.4m3 against a system pressure drop of 50N/m2. Casing of the fan to be in rigid PVC, Impellers moulded in phenolic resin and motor protected by sealing coat of polyurethane compound. Fan to be complete with motor starter, Electrical control panel fixed near the Fume cupboard with ON/OFF and trip and a manual override in the plant room, flexible connections anti-vibration mountings, supports. Fan to be as "WOODS" fume cupboard fan size 12" running at 1400 RPM or equal and approved Equivalent.</p>	NO.	1	15,000	15,000	00
Carried to Collection				Ksh.	35,000	00

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	<p>Laboratory Sinks "Vulcathene" black injection moulded polypropylene Sink with self-draining base and an outlet to accept the waste described below as cat No.602 complete with:-</p> <p>-"Vultex Labline" bench mounted 1-way outlet fitting with inlet for supply and side valve having swivel nozzle and spout. -"Vulcathene" 1 1/2" waste, plug, back, nut butyl rubber gasket, grating and chain as Cat. No.504. -"Vulcathene" anti-siphon bottle trap as Cat No.W561.</p>	20	NO	3000	60,000	00
B	<p>Fume Cupboard Extract Duct work Supply, deliver and install 200mm diameter pvc ductwork for the fume cupboard above.</p>	12	LM	250	3,000	00
C	200mm diameter PVC pipe work class "D"	1	ITEM	300	300	00
D	Holderbats for 200mm diameter pipe work	2	NO	250	500	00
E	200mm diameter Bends	1	NO	250	250	00
F	200mm diameter ventilating cowls	1	NO	200	200	00
G	Weathering Slate for 200mm diameter pipe	1	NO	300	300	00
H	Weathering Apron for 200mm diameter pipe	1	NO	300	300	00
J	Neoprene Fan Connections	1	NO	2500	2,500	00
K	Supports and Anti vibration mountings for the fan and any other necessary items.	1	ITEM	450	450	00
L	<p>Water Supply Control valve as Vultex Labline Ref. No. VL.2105.</p>	14	NO	1500	21,000	00
M	Bench mounting outlet complete with back nut, spout as vultex Labline Ref. No. 2107/D	14	NO	1000	14,000	00
N	Allow for 1000mm long 12mm diameter copper tube And nuts.	20	NO	15,000	30,000	00
	Carried to Collection			Ksh.	132,500	00

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	Gas Supply Control Valve as Vultex Labline ref No.VL 2109	10	NO	1000	10,000	00
B	Back nut and nozzles as Vultex Labline Ref. No. VL 2110/D	10	NO	1000	10,000	00
C	Allow for 100mm long 6mm diameter copper tube with nuts.	10	NO	1000	10,000	00
D	Drainage 1 ¼" diameter waste complete with intergral grating, removable chained plug and backnut as Vulcathene Ref No.504.	10	NO	1500	15000	00
E	Testing and Commissioning Allow for setting to work, testing and commissioning	1	ITEM	20,000	20,000	00
					Ksh.	00
					65,000	00
<p>COLLECTION Brought forward from page Lab/24</p> <p>Brought forward from page Lab/25</p> <p>Brought forward from page above</p> <p>TOTAL FOR FUME CUPBOARD AND DRAINAGE CARRIED TO SUMMARY. Ksh.</p>						

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	ELEMENT NO 11 -EXTERNAL WORKS					
A	Excavate trench for 100mm diameter pipe part load and cart away.	23	LM	300	6,900	00
B	100mm diameter PVC pipe in trenches.	23	LM	300	6,900	00
C	100mm gulley trap including building surround.	22	NO	550	12,100	00
D	Construct soak pit size 2.1m diameter x 3m deep filled with boulders average diameter 150mm complete with 150mm block wall excavation and cover. (as per M.O.R and P.W. standard drawing).	1	NO	30,000	30,000	00
E	Extra over PVC pipe for 100mm bend.	5	NO	350	1,750	00
	<u>The following in Gas Chamber</u>					
F	150mm thick concrete block wall	1	NO	650	650	00
G	8mm diameter reinforcement bars	3	KGS	150	450	00
H	12mm plaster to walls	2	SM	350	700	00
J	100mm thick concrete (1:3:6) top.	1	SM	450	450	00
K	Formwork to soffites of suspended slab	1	SM	250	250	00
L	Ditto to edge of slab.	2	LM	200	400	00
M	100mm thick concrete (1:3:6) in plinth	1	SM	300	300	00
N	38mm thick cement sand screed to plinth.	1	SM	250	250	00
P	Ditto to top slab.	1	SM	250	250	00
	Carried to Collection					
				Ksh.	61,350	00

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
A	Steel door with gauge 24 plate complete with fixing and provision for padlock size 700x750mm.	1	NO	2500	2,500	00
B	Prepare and apply three coats plastic emulsion paint to rendered walls externally.	2	SM	200	400	00
<p><u>The following in 14NO. Rectangular Manhole size 900x900mm.</u></p>						
C	Excavate pit for manholes starting from ground level but not exceeding 1.5m deep average 600mm deep.	6	CM	450	2,700	00
D	Returns fill in and ram excavated material from site.	1	CM	250	250	00
E	Load and cart away surplus excavated materials from site.	5	CM	250	1,250	00
F	150mm thick mass concrete in manhole bases.	12	SM	500	6,000	00
G	Mass concrete (1:3:6) in benching to bottom of manhole internal size 600x450mm including haunching to a height of 200mm above channel and rendering in mortar (1:1) to fall.	14	NO	650	9,100	00
H	Extra over benching for forming 110mm diameter half round section straight main channel.	14	NO	350	4,900	00
Carried to Collection.....					27,100	00

ITEM	DESCRIPTION	QTY	UNIT	RATE	KSH	CTS
	<u>The following in 14No. Rectangular manhole size 900x900mm CTD.</u>					
A	150mm thick solid concrete block walling in cement sand (1:4) mortar.	23	SM	350	8,050	00
B	12mm cement and sand (1:3) plaster to block walling with water proofing cement to sides of manholes.	23	SM	350	8,050	00
C	Make hole through 150mm thick block walling for 100mm diameter pipe ((m.s) and make good.	20	LM	300	6,000	00
	Carried to Collection				Ksh.	
	<u>COLLECTION</u>					00
	Brought Forward from page LAB/27					00
	Brought Forward from page LAB/28					00
	Brought Forward from above					00
	TOTAL FOR EXTERNAL WORKS					
	CARRIED TO SUMMARY.....				Ksh.	00

SINGLE LABORATORY

ITEM	DESCRIPTION	KSHS	CTS
A	ELEMENT NO. 1 – Substructures from page LAB/03		00
B	ELEMENT NO.2 – Walling from page LAB/04		00
C	ELEMENT NO.4 – Roof from page LAB/07		
D	ELELMENT NO.5- Windows from LAB/08		00
E	ELEMENT NO.6 – Doors from LAB/10		00
F	ELEMENT NO.7 – Finishes from LAB/12		00
G	ELEMENT NO.8 – Fittings from LAB/18		00
H	ELEMENT NO.9 – Plumbing Works LAB/20		00
J	ELEMENT NO.10 – Gas Installation LAB/21		00
K	ELEMENT NO.11 – Fume Cupboard & Drainage LAB/24		00
L	ELEMENT NO.12 – External Works From Page LAB		00
TOTAL COST OF BUILDER'S WORK CARRIED TO GRAND SUMMAR..... KSH.			00

ITEM	P.C. AND PROVISIONAL SUMS	KSHS	CTS
A	Allow a P.C. sum of Kenya Shillings Fifty Thousand only for contingencies.	50,000	00
B	Allow a sum of Kenya Shillings Two Hundred Thousand only for Electrical works.	100,000	00
C	Allow a sum of Kenya Shillings Thirty Thousand only for the Fire Fighting Equipments.	30,000	00
D	Allow a sum of Kenya Shillings fifty Thousand only for the Lightening arresters.	50,000	00
E	Allow a sum of Kenya Shillings One Hundred Thousand only for the supervision of the project.	100,000	00
TOTAL CARRIED TO GRAND SUMMARYKSH		330,000	00

GRAND SUMMARY

PROPOSED TWIN LABORATORY					
ITEM	DESCRIPTION	CONTRACTOR'S USE		OFFICIAL USE	
		SHS	CTS	SHS	CTS
A	Preliminaries				
B	BILL NO.1 –Preliminaries from LAB			9,913,793	10
C	BILL NO.2 – From page PC/1			400,000	
	ADD 16% VAT			1,568,206	89
	SUB-TOTAL INCLUSSIVE OF 16%VAT			11,800,000	00
	TOTAL CARRIED TO FORM OF TENDER KSH.			11,800,000	00
<p>AMOUNT IN WORDS:</p> <p>.....</p> <p>CONTRACTOR'S FIRM:</p> <p>ADDRESS:.....</p> <p>DATE:</p> <p>SIGNATURE:</p> <p>CLIENT NAME:</p> <p>ADDRESS:</p> <p>SIGNATURE:</p> <p>DATE:</p> <p>WITNESS:</p> <p>ADDRESS:</p> <p>SIGNARTURE:</p> <p>DATE:.....</p>					