

REPUBLIC OF KENYA



STATE DEPARTMENT FOR PUBLIC WORKS

BILLS OF QUANTITIES.

PROPOSED CONSTRUCTION OF A STOREY BUILDING AT
MAKASEMBO SECONDARY SCHOOL

Prepared by:

Quantity Surveyor,

P.O. BOX 803,

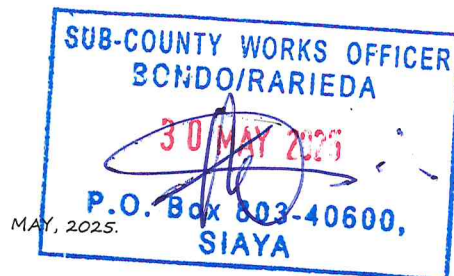
SIAYA.

Checked and Issued by:

Works Officer (Bondo/Rarieda),

P.O. BOX 803,

SIAYA.



ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO.01				
	SUB-STRUCTURES (All Provisional)				
	RATES INCLUSIVE OF V.A.T				
	Site clearance				
A	Clear site off all vegetation, small trees not exceeding 600mm girth, scrubs and undergrowth; grub up roots and including disposing appropriately or as directed	220	Sm		
	Excavations				
B	Excavate to remove vegetable soil average 150mm deep: and cart way from site	206	Sm		
C	Excavate to reduce levels 250mm n.e 1.5m deep from stripped level	50	Cm		
D	Excavate pit for column bases n.e 1.5m deep starting from the reduced level	40	Cm		
E	Excavate trenches for strip foundation not exceeding 1.5m deep starting from the reduced level	46	Cm		
F	Extra-over excavation in normal soil for rocks excavations irrespective of class	6	Cm		
	Disposal of excavated material				
G	Remove surplus spoil from site and deposit in permanent spoil heaps at a site to be agreed with the Local Authority	136	Cm		
H	Backfill and compact impoeted murrām to the sides of foundation walling.	68	Cm		
	Planking and strutting				
J	Planking and strutting to sides of all excavations: keep excavations free from all fallen materials		Item		
	Disposal of water				
K	Keep excavations free from all water		Item		
	Imported filling				
L	300mm Thick Crushed stone hardcore: deposited, handpacked, levelled and compacted in 150mm layers	186	Sm		
M	50mm quarry dust blinding to surfaces of hardcore	186	Sm		
	TOTAL CARRIED TO COLLECTION		K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	<u>Anti-termite treatment</u>				
A	"Gladiator TC" or equal approved chemical ant-termite treatment to sub-soil or filling: with and including a ten year written warranty	206	Sm		
	<u>Damp proof membrane</u>				
B	500 Gauge polythene damp proof membrane: to floors: 300mm laps	206	Sm		
	<u>In situ mass concrete class 15 (19mm aggregates): vibrated: to</u>				
C	50mm Blinding under strip foundations	56	Sm		
D	Ditto under Column bases	42	Sm		
	<u>In situ concrete class 25 (20mm aggregate): vibrated: reinforced:in</u>				
E	150mm Thick slab ground floor slab	175	Sm		
F	Column bases	16	Cm		
G	Strip foundation regardless of thickness	11	Cm		
H	Ditto in sub-columns	2	Cm		
	<u>Foundation Walling</u>				
	<u>Rough dressed Load bearing natural stones: in cement sand mortar (1:4)</u>				
J	200mm Thick walls; and reinforced with 20 gauge hoop iron wall ties at every alternate courses	56	Sm		
	<u>High Yield Deformed Steel bars grade 60/PNS 415 to B.S. 4449:2005 GR B500B including cutting, bending, fixing tying wires and spacer block (Provisional)</u>				
K	8mm Diameter bars	174	Kg		
L	10mm Diameter bars	260	Kg		
M	16mm Diameter bars	1,710	Kg		
	<u>Mesh fabric reinforcement to BS 4483 B.R.C A142 weighing 2.22Kg/Sm</u>				
N	Floor beds with 200 mm end laps	175	Sm		
	<u>Sawn formwork: 1-coat approved retarding agent: to</u>				
P	Under foundation works	106	Sm		
Q	Edges of floor slab exceeding 75 mm but not exceeding 150 mm height	60	Lm		
	TOTAL CARRIED TO COLLECTION		K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	Plinth				
A	15mm cement and sand (1:4) render on concrete or stonework: applied in two equal coats	26	Sm		
B	Prepare and apply three coats of first grade bituminous paint on rendered plinth	26	Sm		
	TOTAL CARRIED TO COLLECTION		K.sh		
	<p data-bbox="209 1402 563 1435"><u>SUMMARY FOR SUB-STRUCTURE WORKS</u></p> <p data-bbox="209 1458 491 1491">Total brought forward from page 1</p> <p data-bbox="209 1514 491 1547">Total brought forward from page 2</p> <p data-bbox="209 1570 491 1603">Total brought forward from Above</p>				
	TOTAL FOR SUB-STRUCTURES CARRIED TO MAIN SUMMARY		K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO. 02				
	REINFORCED CONCRETE SUPER-STRUCTURES (GROUND FLOOR)				
	<u>In situ concrete class 25 (20mm aggregate): vibrated; reinforced in</u>				
A	Columns generally	4	Cm		
B	Structural Beams and Ring beams.	6	Cm		
C	150mm thick suspended floor slab.	175	Sm		
D	Staircases.	2	Cm		
E	Ramps.	4	Cm		
	<u>High Yield Deformed Steel bars grade 60/PNS 415 to B.S.4449:2005 GR B500B including cutting, bending, fixing tying wires and spacer block (Provisional)</u>				
F	8mm Diameter bars	775	Kg		
G	10mm Diameter bars	2,180	Kg		
H	12mm Diameter bars	268	Kg		
J	16mm Diameter bars	912	Kg		
K	20mm Diameter bars	178	Kg		
	<u>Sawn formwork: 1-coat approved retarding agent: to</u>				
L	Sides and soffites: Beams.	150	Sm		
M	Vertical sides of columns	104	Sm		
N	Soffites of suspended slab	350	Sm		
P	Edges of suspended slab over 150mm but not exceeding 225mm high	120	Lm		
Q	Edges of stair risers	26	Lm		
R	Sloping soffites of staircase and soffits of ramp	45	Sm		
S	Sides of staircase and ramp wais over 150 but n.e 225mm.	52	Sm		
	TOTAL FOR REINFORCED CONCRETE FRAME CARRIED TO COLLECTION.		K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	REINFORCED CONCRETE SUPER-STRUCTURES (FIRST FLOOR)				
	<u>In situ concrete class 25 (20mm aggregate): vibrated: reinforced:in</u>				
A	Columns generally	4	Cm		
B	Structural Beams and Ring beams.	6	Cm		
C	150mm thick suspended floor slab.	175	Sm		
D	Staircases.	2	Cm		
	<u>High Yield Deformed Steel bars grade 60/PNS 415 to B.S.4449:2005 GR B500B including cutting, bending, fixing tying wires and spacer block (Provisional)</u>				
E	8mm Diameter bars	775	Kg		
F	10mm Diameter bars	2,180	Kg		
G	12mm Diameter bars	268	Kg		
H	16mm Diameter bars	912	Kg		
J	20mm Diameter bars	178	Kg		
	TOTAL FOR REINFORCED CONCRETE FRAME CARRIED TO COLLECTION.		K.sh		
	SUMMARY FOR SUB-STRUCTURE WORKS				
	Total brought forward from page 4				
	Total brought forward from page 5				
	TOTAL FOR REINFORCED CONCRETE FRAME CARRIED TO MAIN SUMMARY		K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO. 03				
	WALLING WORKS GROUND FLOOR.				
	<u>Natural hard stone with a crushing strength of 7.5N/mm²; walling bedded and jointed in c/s (1:4) mortar, reinforced with and including 25mm wide x 20 gauge hoop-iron at every alternate course as described in:-</u>				
A	200mm Thick walling; reinforced with 20 gauge hoop iron at alternate courses; externally	95	Sm		
	Damp-proofing				
B	200 mm Wide Hessian based bituminous felt damp proof course laid and bedded on cement sand (1:4) mortar with 300mm laps	49	Lm		
C	200mm Thick lourvered block walling	8	Sm		
	WALLING WORKS FIRST FLOOR.				
	<u>Natural hard stone with a crushing strength of 7.5N/mm²; walling bedded and jointed in c/s (1:4) mortar, reinforced with and including 25mm wide x 20 gauge hoop-iron at every alternate course as described in:-</u>				
D	200mm Thick walling; reinforced with 20 gauge hoop iron at alternate courses; externally	95	Sm		
	Damp-proofing				
E	200 mm Wide Hessian based bituminous felt damp proof course laid and bedded on cement sand (1:4) mortar with 300mm laps	49	Lm		
F	200mm Thick lourvered block walling	8	Sm		
	TOTAL FOR WALLING CARRIED TO MAIN SUMMARY		K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
ELEMENT NO: 04 - DOORS					
Steel Plate Doors					
A	Purpose made steel plate door overall size 1500 x 2400mm high; Double leafed; 2400 x 400mm high fanlight; comprising 50x50x4mm RHS framing and middle rails infilled with 3mm thick checkered plate; all ironmongery & permanent vents	4	No		
B	Single leafed size 900 x 2400mm high	6	No		
Prepare & apply three coats gloss paint: on timber: to					
C	Three coats of high gloss paint to metal surfaces	30	Sm		
Supply and fix the following iron-mongery as per "union" or equal and approved specification: to timber doors: with matching screws					
D	38mm floor mounted door stopper; complete with rawl bolt	10	No		
TOTAL FOR DOORS CARRIED					
MAIN SUMMARY		TO	K.sh		
ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
ELEMENT NO. 6 WINDOWS					
STEEL CASEMENT WINDOWS					
Supply, assemble and fix: natural steel casement windows as per Architects drawings: including screwed to concrete or blockwork: including ironmongery burglar proofing and accessories to Architects schedule					
A	Window size 2000 x 1500mm high	16	No		
Glazing					
B	4mm thick clear glass and glazing in panes 0.1-0.5sm girth; with approved metal putty or equivalent	48	Sm		
C	Touch up primer and prepare and apply three coats aluminium paint to general metal surfaces	96	Sm		
TOTAL FOR WINDOWS CARRIED					
SUMMARY		TO MAIN	K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	ELEMENT NO. 7 - FINISHES				
A	Cement & sand render (1:4): 25mm Plaster applied in two coats: wood floated to walls, ring-beams, exposed columns.	452	Sm		
B	Prepare and apply one undercoat and two coats of first grade approved paint. Rendered surfaces	452	Sm		
C	First coat of cement lime and sand (1:2:9) second coat of cement lime and sand (1:1:6) steel trowelled smooth 25mm thick two coat plaster to ceiling surfaces:	406	Sm		
D	ditto to soffits of sloping surfaces of stairs	22	Sm		
E	Prepare and apply one mist coat and three coats of prime grade Silk Vinyl Emulsion paint internally on Ceiling Plastered surfaces.	452	Sm		
F	Balustrading to stair & upper verandah Purpose-made mild steel rails overall size 950mm high fabricated from 50x50x3mm mild steel SHS standards, 50x25x3mm balusters and 50mm diameter mild steel CHS top railing; including forming pocket and fish-tailing ends to concrete surfaces; painting to rails inclusive	24	Lm		
G	Roof Finishes Sirrah P GR 5Kg/SM-APP bituminous membrane. Cement & sand render (1:3:1):	206	Sm		
H	25mm Plaster applied with wood floated to roof slab with waterproofed cement.	206	Sm		
I	Floor Finishes. Cement and sand (1:4):in 25mm Backing: finished to receive ceramic floor tiles.	624	Sm		
K	300 x 300 x 8mm thick SAJ Ceramic floor tile finish or other equal and approved coloured ceramic non-slip floor tiles bedded and jointed in c/s 1:1 and pointed in coloured cement grouting; to floor levels.	406	Sm		
L	ditto to stair landings	6	Sm		
M	ditto to risers	46	Lm		
N	ditto to treads	46	Lm		
P	ditto 100 mm high skirting	110	Lm		
Q	Raking cutting	110	Lm		
	TOTAL FOR FINISHES CARRIED				
	SUMMARY		TO MAIN		
			K.sh		

ITEM NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
MAIN BUILDER'S WORKS SUMMARY					
1	TOTAL FOR ELEMENT NO:1 (SUB-STRUCTURES)				
2	TOTAL FOR ELEMENT NO:2 (CONCRETE FRAMES)				
3	TOTAL FOR ELEMENT NO:3 (WALLING WORKS)				
4	TOTAL FOR ELEMENT NO:4 (DOOR WORKS)				
5	TOTAL FOR ELEMENT NO:5 (WINDOW WORKS)				
7	TOTAL FOR ELEMENT NO:6 (FINISHES WORKS)				
TOTAL FOR BUILDER'S WORK CARRIED TO GRAND SUMMARY					

ELECTRICAL WORKS.

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D.W1.1	<u>ELECTRICAL DISTRIBUTION SYSTEM</u>				
A.	16mm ² XLPE/SWA/PVC four core copper cable from transmission line to meterboard <u>Supply, installation, testing & commissioning of the following complete as specified. All cables shall be copper and shall be complete with cable glands, lugs and necessary termination kits.</u>	M	25		
B	16mm ² XLPE/SWA/PVC 3core copper cable from LV board at the gate to the ground floor CU	M	10		
C	10mm ² XLPE/SWA/PVC 3core copper cable from ground floor CU to the first floor CU	M	10		
D	SPN Consumer Unit CUs named as above as shown on the Contract Drawings 9 way CU as Tronics or approved	No.	2		
	<u>MINIATURE CIRCUIT BREAKERS</u>				
	10A SP MCB as Tronic or approved	No.	3		
	32A SP MCB as Tronic or approved	No.	3		
	65A SP MCCB as Tronic or approved	No.	1		
	Spare ways with complete labelling	Sum.	1		
	<u>METERBOARD</u>				
E	Supply, install and connect 14 gauge galvanised, powder-coated steel sheet meter box, with lockable hinged doors, Three phase KPLC meter, as detailed on the contract drawings. The meter board will have provision (terminals) for connection of a standby generator/power back-up system to be used during mains failure	No.	1		
	<u>EARTHING AND TESTING</u>				
	Complete earthing and bonding to the installations to IEE regulations	Sum.	1		
	Allow for testing the whole of the installation in the house in accordance with the standards	Sum.	1		
	TOTAL FOR ELECTRICAL DISTRIBUTION SYSTEM CARRIED TO SUMMARY.				
			K.sh		

SECTION D.W. 2.0 TITLE: LIGHTING AND POWER INSTALLATION

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D.W2.1	LIGHTING AND SMALL POWER INSTALLATION				
	<u>Ground Floor</u>				
	Supply and install the following complete as specified:				
A.	Lighting points wired in 1.5mm ² pvc/sc copper cables drawn in 20mm diameter pvc heavy gauge conduits complete with switching accessories as shown on drawings.	No.	19		
B.	The following luminaires complete with rated lamps as specified:				
	Type B1 T5, 12W LED tube light	No.	2		
	Type L - staircase and pavement lighting	No.	5		
	Type PL - LED panel lighting	No.	8		
	Type CR- Ceiling rose to approval	No.	1		
	Type Q1 - non cable solar lit security lighting complete with motion sensor, battery and photocell	No.	3		
C.	The following power outlets complete with 25mm diameter pvc heavy gauge conduit and wiring as specified:				
	▪ 13A Twin standard Socket outlets	No.	10		
	▪ 13A single standard Socket outlets	No.	1		
	▪ Twin Data / Tel Outlet.	No.	3		
	▪ TV outlet complete with Draw wire	No.	1		
	▪ Allow for vibration sensor installation points	No.	11		
D.	Any other item to complete the installation in this section (Please state).	Sum			
TOTAL CARRIED TO COLLECTION.		K.sh			

SECTION D.W. 2.0 TITLE: LIGHTING AND POWER INSTALLATION

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D.W2.2	LIGHTING AND SMALL POWER INSTALLATION				
	<u>Upper Floor</u>				
	Supply and install the following complete as specified:				
A.	Lighting points wired in 1.5mm ² pvc/sc copper cables drawn in 20mm diameter pvc heavy gauge conduits complete with switching accessories as shown on drawings.	No.	19		
B.	The following luminaires complete with rated lamps as specified:				
	Type B1 T5, 12W LED tube light	No.	2		
	Type L - staircase and pavement lighting	No.	5		
	Type PL - LED panel lighting	No.	8		
	Type CR- Ceiling rose to approval	No.	1		
	Type Q1 - non cable solar lit security lighting complete with motion sensor, battery and photocell	No.	3		
C.	The following power outlets complete with 25mm diameter pvc heavy gauge conduit and wiring as specified:				
	▪ 13A Twin standard Socket outlets	No.	10		
	▪ 13A single standard Socket outlets	No.	1		
	▪ Twin Data / Tel Outlet.	No.	3		
	▪ TV outlet complete with Draw wire	No.	1		
	▪ Allow for vibration sensor installation points	No.	11		
D.	Any other item to complete the installation in this section (Please state).	Sum			
TOTAL CARRIED TO COLLECTION.					
			K.sh		
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	LIGHTING AND SMALL POWER INSTALLATION				
	<u>Collection Page</u>				
	Ground Floor				
	Upper Floor				
TOTAL FOR LIGHTING AND SMALL POWER INSTALLATION CARRIED TO SUMMARY.					
			K.sh		

SECTION D.W. 3.0 TITLE: CABLE MANAGEMENT SYSTEM

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D.W.3.1	CABLE MANAGEMENT SYSTEMS For the supply and installation of the following complete as specified:				
A	PVC Heavy gauge Interlinking conduits as follows;				
	▪ 100mm dia.	No.	4		
	▪ 50mm dia.	No.	0		
	▪ 38mm dia.	No.	5		
	▪ 20mm dia.	No.	80		
	▪ 25mm dia.	No.	40		
B	1200mm x 600mm Manholes and manhole covers, including the 'DANGER HATARI' tiles	No.	0		
	Allow for the trench excavation, for the underground cable installation	Lm	10		
	Any other item necessary to complete the installation in this section (Please state)	Sum			
TOTAL FOR CABLE MANAGEMENT SYSTEM CARRIED TO SUMMARY.				K.sh	

SECTION D.W. 4.0 TITLE: FIRE DETECTION & ALARM SYSTEM

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
D.W.4	FIRE DETECTION AND ALARM SYSTEM Supply and install complete as specified:				
A.	Photoelectric type Analogue Addressable smoke detector mounted on ceiling or on walls as per Drawings complete with fire resistance cabling & conduit.				
	▪ Ground Floor	No.	2		
	▪ Upper Floor	No.	2		
B	Fire alarm visual flash light only complete with complete with fire resistant cable & conduit.	No.			
	▪ Upper Floor	No.	1		
	CAMERA INSTALLATION				
C	Final sub-circuit from the burglar alarm board or CCTV (Closed Circuit Television) monitor/multiplexer point or PIR (Passive Infra Red) control panel in a conduit and trunking installation comprising 25 mm diameter concealed super high impact gauge PVC conduits.	No.	4		
D	(40x133x133) mm steel box and cover for burglar alarm board as specified	No.	5		
TOTAL FOR FIRE DETECTION AND ALARM SYSTEM CARRIED TO SUMMARY.				K.sh	

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	SUMMARY				
DW1.0	SECTION 1 ELECTRICAL DISTRIBUTION SYSTEM				
DW2.0	SECTION 2 LIGHTING AND SMALL POWER INSTALLATION				
DW3.0	SECTION 3 CABLE MANAGEMENT SYSTEMS				
DW4.0	SECTION 4 FIRE DETECTION AND ALARM SYSTEM				
	Sub Total				
	Add 16% VAT Except on P.C. & Provisional sums				
	Allow a Provisional Sum of KShs.20,000.00 as Contingency to be expended at the discretion of the Architect				
TOTAL FOR ELECTRICAL WORKS CARRIED TO MAIN SUMMARY					

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>PLUMBING WORKS</u>				
A	Roof concealed water storage rectangular plastic tank of 1000 litres as Roto or equivalent; placed on timber bearers	3	NO		
B	Ground level PVC tank 3500 litres to rest on ground build concrete slab as Roto or equivalent	2	NO		
C	Single phase 240V, 50Hz 1KW booster water pump to deliver 2 litres per second at 15 meters head as ground force or equivalent	1	NO		
D	15mm dia. GI pipe	14	NO		
E	20mm dia. GI pipe	32	NO		
F	20mm dia. Low pressure bronze ball valve jointing pipe work	1	NO		
G	20mm dia. Back nut	4	NO		
H	20mm dia. Union	4	NO		
J	20mm dia. Bend	4	NO		
K	20mm dia. GI socket	14	NO		
L	20mm dia. Nipples	8	NO		
M	20mm dia. GI tee	4	NO		
N	20mm x 15mm GI reducing bush	4	NO		
P	20mm x 15mm GI reducing socket	4	NO		
Q	20mm dia. Gate valve as Regler or equivalent.	2	NO		
R	20mm dia. GI elbow	6	NO		
S	15mm dia. GI bends	6	NO		
T	15mm dia. GI Elbow	6	NO		
U	15mm dia. GI Tee.	16	NO		
V	15mm dia. GI Union	14	NO		
W	15mm dia. GI Sockets	12	NO		
X	15mm dia. GI Nipples	12	NO		
Y	15mm dia. GI cross Tee	4	NO		
Z	15mm dia. GI Plugs	8	NO		
A	Sawn neck brass plated laboratory taps with anti-splash nozzle.	14	NO		
B	Approved STD PVC chemical resistant laboratory sink 400 x 500 x 225 deep c/w rubber plugs, chrome plated chain, sink waste and diluting trap and mounting to work top.	14	NO		
C	20mm dia. stainless steel amoured spiral tap connector flex.	14	NO.		
D	Approved STD PVC chemical resistant laboratory drip cut for fume chamber drainage.	1	NO		
	TOTAL CARRIED TO SECTIONAL SUMMARY				

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>DRAINAGE WORKS</u>				
A	100mm dia. PVC waste pipe heavy gauge	32	LM		
B	40mm dia. P.V.C gulley trap as "TERRAIN" or equivalent	11	NO		
C	40mm dia. PVC waste as TERRAIN" or equivalent.	42	LM		
D	40mm dia. PVC cross tees	4	NO		
E	40mm dia. PVC plain tees c/w plug	8	NO		
F	40mm dia. PVC bends	12	NO		
G	100mm dia. PVC bends	6	NO		
H	100mm dia. PVC straight conductor	6	NO		
J	Holder bat screw to wall for 40mm PVC pipes	16	NO		
K	40mm dia. Straight connector	8	NO		
L	40mm dia. Shoe as TERRAIN or equivalent	8	NO		
M	Concrete Manhole cover size 18" x 18"	4	NO		
N	Allow Manhole construction not exceeding 1.5 deep.	4	NO		
P	Allow for a gulley traps construction	11	NO		
Q	Gulley traps access cover	11	NO		
R	Allow for construction of soak-pit		ITEM		
	TOTAL CARRIED TO SECTION SUMMARY				
	SUMMARY FOR PLUMBING/DRAINAGE WORKS				
1	PLUMBING WORKS				
2	DRAINAGE WORK				
	TOTAL FOR PLUMBING/DRAINAGE WORKS				

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	<u>GAS INSTALLATION WORKS</u>				
A	13kg industrial gas cylinder supplied by total (K) C/W pi-tailed adopter.	2	NO		
B	4-way 20mm diameter mild steel 300mm long Gas manifold c/w 5/16" flared nipple.	1	NO		
C	Gas regulator	1	NO		
D	Twin bench top gas taps c/w 5/6" flared nipple adapter	14	NO		
E	5/16" copper tubes	4	ROLLS		
F	5/6" straight joints with flared end c/w nuts (Brass)	4	NO		
G	5/16" flared end standard tee c/w nuts (brass)	14	NO		
H	5/16" flared end low pressure gas (LPG) line control valve	1	NO		
J	5/16" saddle clips to hold copper tube	4	PKTS		
K	Thread seal tapes	25	PCS		
L	Red joint compound 50g	5	TUBES		
	<u>FUME EXTRACTION SYSTEM</u>				
	Fume duct of 150mm min. dia. 6 meters long flexible type or hg PVC pipe.	6	LM		
B	Extract fan motor of 1KW, single phase 240V, 50Hz. Both fan and motor must be resistant to corrosion.	1	NO		
C	Ventilator fan on-off switch.	1	NO		
	<u>SASH</u>				
D	Single front & back sash for standard fume cupboard glazed with armoured plate glass of 6mm thick (740 x 740)mm ²	1	ITEM		
E	Sash counter balanced by weights supported by double nylon rope of 6mm diameter running on pulleys	1	ITEM		
	100 dia. alloy pulley c/w 100mm bolt cast in R/C and 200mm spacers	4	SETS		
	The button of sash shall have a full length of aerofoil section and two moulded handles fixed approximatly 100mm from the button of the sash.		ITEM		
H	Sash and channels will have a seal to ensure they are completely air tight and a minimum of 50mm shall remain when the sash is fully lowered.		ITEM		
J	Sash timber and other accessories as per the drawing.		ITEM		
K	9kg dry powder fire extinguisher c/w hose, charge and wall mounted brackets as BS EN3/BS1449.	1	NO.		
	4.5Kg Co2 gas fire extiguisher c/w hose, charge & wall mounting brackets as BS EN3/BS1449 or equivalent.	1	NO		
M	9kg form fire extinguisher c/w hose, ccharge and wall mounting brackets as BS EN3/BS1449 or equivalent.	1	NO.		
	5' x 5' fibre glass fiore blanket c/w metal/hardened plastic container and fixing wall brackets as BS1721 or equivalent.	1	NO.		
	TOTAL FOR GAS INSTALLATIONS, FUME CHAMBER AND FIRE FIGHTING CARRIED TO MAIN SUMMARY				

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
MAIN SUMMARY FOR MECHANICAL, GAS AND PLUMBING WORKS					
1	PLUMBING AND DRAINAGE				
2	GAS INSTALLATION/FUME CHAMBER & FIRE FIGHTING				
TOTAL FOR MECHANICAL/PLUMBING WORKS CARRIED TO GRAND SUMMARY					

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A	<p>CONTINGENCY SUM</p> <p>Allow a Provisional Sum of Ksh. 200,000.00 only for Contingencies to be spent in whole or part as instructed by the project manager</p>	Sum			
	TOTAL FOR CONTIGENCY SUMS CARRIED TO GRAND SUMMARY				

GRAND SUMMARY

ITEM	DESCRIPTION		TENDERERS' USE ONLY (K.sh)	OFFICIAL USE ONLY (K.sh)
1	TOTAL FOR BUILDER'S WORKS			
2	ELECTRICAL WORKS.			
3	MECHANICAL/PLUMBING WORKS.			
4	CONTIGENCY SUMS.			
5	Add, Ksh. <u>150000</u> for project management expenses.			
TOTAL CARRIED TO FORM OF TENDER				
	ADD: 0.03% PPCBLO (Public Procurement Capacity Building Levy Order)			
TOTAL CARRIED TO FORM OF TENDER				

SUB-COUNTY WORKS OFFICE
BONDO/RARIEDA
30 MAY 2023

P.O. Box 803-40600,
SIAYA

Amount in words

.....

.....

Tenderers signature and stamp

Address

Date

Witness Name

Signature

Address

Date