

Jg 19/2/24

PROPOSED CONSTRUCTION OF TRANSFORMER REPAIR SHED AT KAKAMEGA SOTORAGE YARD					
ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	<u>TRANSFORMER REPAIR SHED</u>				
	<u>ELEMENT 1</u>				
	<u>Substructures (All Provisional)</u>				
	<u>Excavations</u>				
A	Excavate over site to remove vegetable soil and reduce levels average 200mm deep	300	CM		
B	Ditto for strip foundation commencing from stripped level but not exceeding 1.50 m deep.	103	CM		
C	Ditto for column bases	34	CM		
D	Ditto for column bases commencing from 1.5m deep but not exceeding 3.0m deep	8	CM		
E	Level and compact foundation bases	92	SM		
F	Load cart away surplus excavated material away from site and dispose to areas designated within the depot.	27	CM		
G	Return, fill and ram selected materials around foundations.	118	CM		
	<u>Filling</u>				
H	Fill up excavation in approved hardcore hand packed to make up levels and compact mechanically in layers not exceeding 150mm deep	105	CM		
J	Supply and spread to level 50mm thick quarry dust as blinding to hardcore surfaces. Rate to include surface treatment for vegetation.	224	SM		
	<u>Insecticide.</u>				
K	Prepare and apply "Premise 200 SC " or equal and approved insecticide to surfaces of blinding as per Manufacturer's written instructions.	224	SM		
	<u>Planking and strutting.</u>				
L	Allow for all necessary planking and strutting.	1	ITEM		
	<u>Disposal of Water</u>				
M	Allow for keeping excavation free from general water.	1	ITEM		
	<u>Concrete</u>				
N	<u>Mass Concrete Class P as described</u> Plain concrete (1:4:8-20mm aggregates) in 50mm thick blinding to columns and strip foundation bases	92	SM		
O	<u>Vibrated reinforced concrete class 20/25 1:2:4/25 as described in:</u> Stub column bases, columns and strip foundation	30	CM		
P	150mm thick bed slab	224	SM		
Q	100mm Insitu paving	42	SM		
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	<u>Steel reinforcement bars including cutting, bending, spacer blocks, tying wires and fixing high tensile bars to BS 4461:</u>				
A	Assorted reinforcement in column bases, stub columns and strip foundation	1100	KG		
	<u>Mild steel bar to BS 4449:</u>				
B	BRC mesh reference No. A142 including 150mm minimum end and side lap,	230	SM		
	<u>Formwork</u>				
	<u>Sawn timber formwork to:</u>				
C	Vertical Sides of foundations and columns	70	SM		
D	Sides of ground floor slab 150-225mm high	120	LM		
	<u>Walling</u>				
E	200mm thick approved local natural stone walling ; chisel dressed; in cement sand (1:3) mortar and hoop iron in every alternate course	210	SM		
	<u>Damp proofing</u>				
F	200mm wide; bituminous felt base 150 mm laps (no allowance made for laps); horizontal, 1 no. layer, bedded in cement sand (1:3) mortar under the walls	64	LM		
G	1000 gauge polythene DPM laid on top of blinding including 200mm side and end lap.	230	SM		
	<u>Plinth Area.</u>				
H	14mm thick 2 No. coatwork cement sand (1:3) render; wood floated to concrete or blockwork base to walls; external	120	SM		
J	Prepare and apply three coats of bituminous paint to plinth.	60	SM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	From page BW/1				
	From page above				
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
A	<u>ELEMENT NO. 2</u> <u>SUPERSTRUCTURES</u> 200mm thick dressed natural stone walling in c/s (1:3) mortar and hoop iron in ever alternate course	55	SM		
	<i>carried to collection</i>				

19/12/24

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	ELEMENT NO. 3 METAL FABRICATION WORKS/(TRANSFORMER SHED FRAMEWORK) <u>All materials and workmanship shall confirm with the requirement of BS 449 and shall include all necessary cutting, welding, bolting, pinning, lugging and fixing, in approved metal primer and 2 finishing coats of 1st quality gloss paint all to Clients approval.</u> <u>Supply and fix</u>				
A	305mmx127mmx42kg/M Universal Columns 10No. Stanchions each 6200 mm long(average)	2604	KG		
B	300 x 300 x 8mm as base plate welded to stanchion complete with angle cleats , 6mm fillet welded.	10	NO		
C	250x150x8mm as Stiffener Plates welded to stanchions and the base plates	60	NO		
D	Ditto 19mm diameter X 381mm long H.D. bolts complete with nuts , flat washers and including anchor plates as necessary	60	NO		
E	75x75x4mm thick metallic angle line and fabricate 5 No. trusses as per the attached detailed drawing including hoisting and fixing in position and fixing purlins (provided on site)	2800	KG		
F	Zed purlins size 100x50x2mm thick bolted to 100x100x6mm cleats.(M/S)	800	KG		
G	Ditto and fabricate walling skeleton as detailed in the drawing to to hold iron sheets cladding (m/s)	2000	KG		
H	100x100x6mm cleats welded to rafters(M.S)	80	NO		
J	40x40x4mm angle lines and fabricate fascia framework, on the gable sides sections only	72	KG		
K	Supply and fix gauge 28 pre-painted IT4 profile sheets to an approved standard colour laid with 94mm side laps and 150mm minimum end lap fixed to Z purlins including J bolts, washers, nuts and rubber caps at 600mm centers.	310	SM		
L	Ditto in wall cladding fixed to the framework (m/s)	200	SM		
M	Ditto in ridge cap	18	LM		
N	Supply and fix 300mm wide x 1.5mm thick mild steel plate on fascia framework(m.s) adb	10	SM		
O	Supply and install Galvanized Cyclone Roof ventilators Super Eco 601 Rate to include materials required and fixing to approval	8	NO		
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	ELEMENT NO. 6 METAL FABRICATION WORKS (TRANSFORMER WORKSHOP INTERNAL) <u>All materials and workmanship shall conform with the requirement of BS 449 and shall include all necessary cutting, welding, bolting, pinning, lugging and fixing in approved metal primer and 2 finishing coats of 1st quality gloss paint all to Clients approval.</u>				
	UN-TANKING & TANKING BAY Steel grating works Fabricate and fix removable gratings in six parts ,fabricated from 75 x 50 x 4mm steel angles framing and 50mm x 6mm steel flat section main bearing at 30mm centers as described below; <u>Take supplied and delivered on site by the client;</u>				
A	75mm x 50mm x 4mm Steel Angle and fabricate framing as described before; Approximately 150m total length in fabrication. (Quote for labour only)	1	ITEM		
B	<u>Supply and fix :</u> 50mm x 6mm Steel Flat as described before	1300	KG		
	OIL SUMP COVER(2400mm x 2000mm) Framing <u>Take supplied and delivered on site by the client;</u>				
C	75mm x 50mm x 4mm Steel Angle and fabricate framing as shall be described by client ; Approximately 15m total length in fabrication. (Quote for labour only)	1	ITEM		
D	Ditto 40x40x4mm steel angles for intermediate framing; Approx. 50m. total length in fabrication. (Quote for labour only)	1	ITEM		
	Cover <u>Supply and fix:</u>				
E	16Gauge steel plate welded on the framework (measured separately) and allow for 2No. Approved inspection covers	5	SM		
	TEST BAY, TEST BENCH & MECHANICAL BAY Steel Safety Guard Supply and fix 2000mm High steel safety guard with ;main Framing to be in 25 x25 x 4mm steel Angles and Intermediate framing in 25 x 25 x 4mm steel Angle and on 50mmx50mmx4mm welded Steel wire mesh cover all as shall be directed by the client and as described in below details: <u>Take delivery on site by the client;</u>				
F	40 x 40 x 4mm steel Angle in main frame and Intermediate framing in both Horizontal and vertical members ; Approximately 150m. total length in fabrication. (Quote for labour only)	1	ITEM		
G	<u>Supply and fix:</u> Welded Steel wire mesh 50mmx50mmx4mm fixed on framing as described(m.s)	70	SM		
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	<u>ELEMENT NO. 7</u>				
	<u>OPENINGS</u>				
	<u>Door: Supply and fix.</u>				
	<u>Composite purpose made mild steel sliding door;to slide on both sides ,with frame fabricated out of 25 x 25 x 4mm Steel Angle frame, complete with internal members fabricated out of 25 x 25 x 4mm Steel Angle frame, covered with welded steel wire mesh size 50mmx50mmx4mm, including sliding gear complete fixed at the top and sliding rails at the bottom Complete with approved heavy</u>				
A	Ditto but Double leaf door Size 1200mmx2200mm Height	2	NO		
B	Supply, fabricate and fix heavy duty metallic sliding door size 4800x5000mm high overall as per the drawing schedule including the top and bottom railing, one priming coat and two coats of gloss oil paint window	2	NO		
	<u>Timber doors</u>				
C	45mm thick solid core flush doors :veneered both sides with Quality mahogany veneer and lipped on all edges in approved hardwood all round				
D	Door Size 900mm x 2100mm	2	NO		
	<u>Wrot Cypress framed frames and framings</u>				
E	200 x 38 mm; 4 No. labours; plugged door frame	11	LM		
F	100 x 38mm architraves with 4 No. labours	22	LM		
G	38 x 38mm quadrants with 3 No. labours	22	LM		
	<u>Windows complete with Grills:Supply and fix</u>				
H	Composite purpose made mild steel casement window frames out of 4mm thick steel T-Section Complete with approved: fixed 5mm clear glass in steel putty complete with all necessary Iron mongery Size 3000 x 2200mm High	12	NO		
J	250 x 50mm thick precast concrete weathered and throated window cill , reinforced,finished fair face on all exposed surfaces,bedded and jointed in cement sand mortar(1:3)	40	LM		
	<u>Iron mongery</u>				
	<u>Supply and fix the following to UNION catalogue or other equal and approved</u>				
K	Two lever mortice lock complete with set lever brass handle furniture	2	NO		
L	100mm steel butt hinges	3	PRS		
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	ELEMENT NO. 9				
	<u>PLUMBING WORKS:</u>				
	<u>Piping and fittings -All Provisional</u>				
	<u>Supply, deliver and install PPR tubing including fixing and jointing. Tenderer must allow in their pipework prices for all couplings, connectors, joints e.t.c as required in the running lengths of the pipework and also where necessary, for pipe fixing clips, holderbats plugged and screwed and pipe sleeves through structural members.</u>				
A	15mm diameter PPR tubing	30	LM		
B	Ditto but 20mm ditto	36	LM		
	<u>UPVC pipe</u>				
C	100mm diameter UPVC pipe	30	LM		
D	50mm Ditto	12	LM		
E	100mm Ditto but bend ditto	6	NO		
F	50mm Ditto	4	NO		
	<u>Extra-over PPR tubing for the following:-</u>				
	<u>½ Inch fittings</u>				
G	nipple	2	NO		
H	union	4	NO		
J	2ft Flexible tubes	4	NO		
	<u>¾ Inch fittings</u>				
K	nipple	2	NO		
L	union	4	NO		
M	Reducing bush ¾ by ½	2	NO		
	<u>Sanitary fittings (Supply and install) all to clients' approval</u>				
N	1st quality ½" Brass stop cock	2	NO		
S	1st quality ½" Pillar tap long nose	2	NO		
O	1st quality ½" Gate valve	2	NO		
P	1st quality ¾" Gate valve	2	NO		
Q	1st quality C.P Shower Head	2	NO		
R	Chrome plated overhead shower arm with sliding flange.	2	NO		
T	38 mm. diameter bottle trap and waste complete with chain and plug	2	NO		
U	Excavate trench from ground level for burried drain pipes not exceeding 1000mm and average 450mm deep, part return, fill in, ram and remainder cart away.	36	LM		
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	Supply, deliver, install, test and commission the following sanitary appliances complete with all the accessories including all connections to the services, waste, jointing to water supply overflows, supports and all plugging and screwing to walls and floors.				
A	White WC suite comprising pan, heavy duty : plastic seat and cover, low level ceramic cistern, flush pipe trap complete with all necessary accessories.	2	NO		
B	Range of <u>one</u> ceramic urinal bowls with automatic cistern, stainless steel piping and divider as per armitage shanks/ Twyford or equal approved connect to supplies and wastes complete with all necessary fittings and accessories.	1	SET		
	<u>Mirrors</u>				
C	6mm thick polished plate glass silver backed mirror with bevelled and smoothed edges, size 500 x 600mm x 6mm thick , and drilled four times at corners plugged and screwed to wall with mild screws chrome plated.	2	NO		
D	Approved Ceramic wash hand basin size 500x300mm fixed on galvanised round pipes brackets complete with 1No. approved 12mm approved pillar tap.	2	NO		
E	150x150mm semi- recessed "Twyford" white toilet roll holder	2	NO		
	<u>Septic Tank and soakaway pit</u>				
F	Allow for construction of a <u>Septic tank</u> as per drawing including <u>four in number manholes</u> , all necessary excavations, backfilling, wallings, piping, water proofing, cover slab, manhole covers and all necessary finishes as directed on site		Item		
G	Ditto but soak pit size 800mm diameter x 3000mm deep backfilled with approved hardcore and sand as directed ditto	1	NO		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u>				
	From page BW/10				
	From page above				
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	<u>ELEMENT NO. 10</u>				
	<u>STORAGE WATER TANKS</u>				
	<u>Ground mounted Storage water tank & Steel deck</u>				
A	Supply and install 10,000 litres capacity polyethylene moulded water storage tank as Roto or similar approved complete with 20mm diameter inlet and outlet connections, overflow pipes and connections and all requisite fittings; Bib tap on and including 2000x2000x150mm thick screeded V.R.C concrete 1:2:4 base slab with 10mm diameter bar reinforcement at 150mm c/c ; casted 300mm high above ground level on 600mm thick blinded hardcore filling in 200mm thick x1000mm high (minimum) masonry walling on 600 X 200mm thick V.R.C 1:2:4 strip footing reinforced with 10mm diameter mains and 8mmdiameter secondary bars , including all necessary excavations, disposal, backfilling & formwork.	1	NO		
B	Ditto but 2000 litre storage tank installed at approximately 5.0m High on steel deck m.s	1	NO		
C	Supply and install 0.5 h.p. booster pump allowing for all plumbing and electrical connections to facilitate boosting of water to the hoisted tank apprx. 5M above the ground level.	1	NO		
D	Supply and install float switches to both ground and hoisted tank to control water flow allowing for all electrical wiring.	2	NO		
	<u>Steel Water Tank Deck</u>				
	Take supplied and delivered on site by the client;				
E	Fabricate steel water tank tower 5.0m High above ground level works to include 75x75x4 mm steel angle posts, 40x40x4mm for braces, ladder and guard rail complete with 75x75x4mm steel angle platform (Quote for labour only)	1	ITEM		
	<u>Excavation</u>				
F	Excavate pits to receive columns size 1000x1000mm wide commencing from ground level and not exceeding 1.5m deep wheel and cart away.	1	CM		
	<u>Concrete</u>				
G	4no 500x600x500mm deep 1:2:4; reinforced concrete bases for the stand	1	CM		
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	ELEMENT NO. 11				
	MASONRY GENERAL IN TEST BENCH,CLOAKROOM AND OIL SUMP				
	Concrete				
	<u>In situ concrete; reinforced; class 20 / (20mm); 1:2:4; vibrated in: -</u>				
A	100mm thick Testbench worktop slab	5	SM		
B	Ring beam	2	CM		
	Sawn timber form work to :				
C	soffit of suspended slab.	5	SM		
D	Edges of worktop 75-150mm girth	10	LM		
E	Sides of the beam 150-225mm girth	60	LM		
	Damp proofing				
F	200mm wide; B.S. 743 Type A bitumen hessian base 150 mm laps (no allowance made for laps); horizontal, 1 no. layer, bedded in cement sand (1:3) mortar under walls	30	LM		
	Walling				
G	200mm thick natural stone walling; machine -dressed, bedded and jointed in cement sand (1:3) mortar; reinforced with hoop iron at alternate courses	80	SM		
	Reinforcement				
	<u>Steel reinforcement</u>				
	<u>Bars; high yield deformed steel bar; cold worked to B.S. 4461 and hot rolled to B.S 4449 including cutting, bends, hooks, tying wire, spacer block and fixing.</u>				
H	In assorted reinforcement of diameters (8,10 & 12)	126	KG		
	FINISHES				
	Wall finishes				
J	Plaster; 18mm thick, 2 No. coatwork, 15mm first coat of cement sand (1:3); 3mm second coat of cement and lime putty (1:9); steel trowelled to concrete or blockwork base generally to Walls, beams; internal	240	SM		
K	Extra over ditto for sraight key pointing and perpends flush with the wall	73	SM		
	Tile, Slab or Block Finishings				
L	Approved ceramic tiles ; white glazed wall tiles to regular or approved other pattern; bedding and jointing in cement sand (1:4) mortar, with grouting to approval 300x 100 x 6mm thick or equally approved size ; butt joints straight both ways; to cement sand base (m/s) to walls internal	30	SM		
	Beds or Backings				
	<u>Render; cement and sand (1:3)</u>				
M	12mm thick one coat backings; wood floated to receive ceramic tiles (m/s) to concrete or blockwork base; to walls internal	30	SM		
	<i>carried to collection</i>				

By 19/2/24

ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
A	<u>Painting and decorations</u> Prepare and apply one undercoat and three coats of first quality silk vinyl paint to: - Plastered surfaces	240	SM		
B	Prepare and apply 1st quality clear varnish to General surfaces of timber doors .	20	SM		
	<u>Floor finishes</u> <u>Terrazo with approved coloured aggregates.</u>				
C	40mm thick(25mm c/s backing and 15mm thick coloured terrazzo floor finish polished to approval with and including screed backing.	240	SM		
D	PROVISIONAL: 25 x 3mm plastic dividing strips cut to lengths and set vertically to screed to form margins with approved pattern	230	LM		
	<u>Granite work tops</u>				
E	Approved 10mm thick Polished granite slab ground smooth fixed to Test bench worktop	5	SM		
	<u>Multi Compartment Powder coated Changing room Lockers</u>				
F	<u>Supply ,Fabricate and install steel changing lockers with 25x2x3mm angles main frame covered with 18gauge plate as described;</u> Overall measurements;- 1800 mm high x 532mm depth x 5000m long complete with all necessary framing, ironmongery, doors,lockable padbolts and necessary accessories each locker with double compartment to measure apprx. 600mm Heght x 325mm Width x 532mm Depth	1	ITEM		
	<i>Carried to Collection</i>				
	<u>COLLECTION</u> From page BW/13 From page above				
	<i>carried to collection</i>				

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ITEM	DESCRIPTION	QTY	UNIT	RATE	AMOUNT (KSH)
	ELEMENT NO.12				
	ELECTRICAL WIRING & FITTINGS				
	<u>Supply, Deliver to site, install, set to work and commission the following.</u>				
A	Lighting points completely wired in 3x1.5 mm single cable drawn in 20mm diameter heavy gauge conduit for two way switching couplers, sandle clips, circular boxes and switch boxes but excluding the fittings.	500	LM		
B	3x2.5mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the socket outlets. (for SP sockets)	250	LM		
C	4x10mm single core pvc insulated copper cables drawn in 50mm diameter heavy gauge pvc conduits including couplers and twin boxes excluding the meter board & DB	30	LM		
D	Protective multiple earthing comprising of 6.0mm pvc insulated cable drawn in 20mm heavy gauge conduits, 15mm by 1200mmlong copper eletrode with clamp and earthing manhole with inspection cover to KPLC Ltd by laws and statutory requirements.	1	ITEM		
E	45A DP cooker control point, completely wired in 3x4mm single core pvc insulated copper cables drawn in 20mm diameter heavy gauge pvc but excluding the cooker- unit.	1	NO		
F	Cooker connector unit as MK. Or equivalent.	1	NO		
G	8 ways consumer unit complete with 100A integral isolator as MEM or equivalent excluding the MCBs and blanking plates.	1	NO		
H	12ways distribution board complete with rated integral isolator as MEM or equivalent excluding the MCBs and blanking plates.	1	NO		
J	Lighting fittings-1200mm 36W HPF single batten fluorescent luminaire complete with 18 watt LED tubes(frosted) as philips or equivalent.	24	NO		
K	Switches- 10A two gang two way switch as MK or equivalent.	6	NO		
L	Sockets-13A double socket outlet	9	NO		
M	Supply and fix 50W LED floodlight as directed	6	NO		
N	Supply and fix approved 3 phase industrial socket 32A	2	NO		
	<i>carried to collection</i>				

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ELEM ENT NO.	TITLE		PAGE NO.	AMOUNT (KSH)
	COLLECTION			
1	SUBSTRUCTURES (ALL PROVISIONAL)		BW/2	
2	SUPERSTRUCTURES		BW/3	
3	METAL FABRICATION WORKS(TRANSFORMER SHED FRAMEWORK)		BW/4	
4	RAIN WATER GOODS		BW/5	
5	OIL SUMP		BW/6	
6	METAL FABRICATION WORKS(TRANSFORMER WORKSHOP INTERNAL)		BW/7	
7	OPENINGS		BW/8	
8	ALUMINIUM PARTITION(PROVISIONAL)		BW/9	
9	PLUMBING WORKS		BW/11	
10	STORAGE WATER TANKS		BW/12	
11	MASONRY GENERAL IN TEST BENCH,CLOAKROOM AND OIL SUMP		BW/14	
12	ELECTRICAL WIRING & FITTINGS		BW/15	
	TOTAL FOR TRANSFORMER REPAIR SHED CARRIED TO GRAND SUMMARY PAGE			

tg 19/2/20

PROPOSED CONSTRUCTION OF TRANSFORMER REPAIR SHED AT KAKAMEGA STORAGE YARD

GRAND SUMMARY

NO.	DESCRIPTION	Page No.		
			K.SHS.	CTS.
1	PRELIMINARIES	P/15		
2	BUILDER'S WORKS - TX SHED	BW/16		
	SUB-TOTAL			
	Add: VAT 16%			
	GRAND TOTAL ESTIMATE			

