

PROPOSED CIVIL AND BUILDING WORKS AT HOLA 33/11KV SUBSTATION					
Item	Description	Unit	Qty	Rate	Amount (Kshs)
ELEMENT No.1					
A	PRELIMINARIES AND ENABLING WORKS				
1	Allow for temporary site office with notice-board, shelves, store for materials and tools storage and changing room for operatives and able to accommodate 10 people, furniture and meeting accessories including refreshments etc. during site meetings (once in amonth).	ITEM	1		
2	Allow for all necessary statutory approvals for the works by relevant County Authorities, replication of drawings to required formats by county government, endorsement by relevant professional persons and submit a set of approved drawings to client before commencement of the works.	ITEM	1		
3	Allow for registration of site/project and staff (foreman, Masons, Capenters, etc) with the National Construction Authority (NCA)	ITEM	1		
4	Allow for a qualified person conversant with Kenya Power safety regulations with capacity to receive safety electrical permits and to double up as 'Safety Officer' for the entire contract period	ITEM	1		
5	Allow for prompt communications and updates facilitation to client supervision team, including communication and project data storage facilities, laptops, had drives, airtime, etc (minimum 3 Nos.)	ITEM	1		
6	Allow for security and insurance for the proposed works	ITEM	1		
7	Allow for temporary sign post for the proposed works.	ITEM	1		
8	Allow for temporary hoarding for the proposed works	ITEM	1		
9	Allow for temporary metered electricity supply for the works (if Lv supply within site) or a Generator for fabrication works.	ITEM	1		
10	Allow for a temporary sanitary facility on site preferably a pit latrine for staff on site and make good after works completion.	ITEM	1		
11	Allow for clean water on site for the construction works.	ITEM	1		
12	Allow for the provision of ground spot heights and general site levelling.	ITEM	1		
ELEMENT No.2					
A	SWITCH YARD REHABILITATION				
1	Clear site of all existing bushes, shrubs and under-growth including grubbing up roots and burning the arising	SM	2700		
2	Excavate oversite vegetable soil average depth 300mm and cart way to Municipal Council designated damping site.	CM	900		
3	Level and Compact bottom of excavation to receive approved imported murrum fill to approval including keeping it free from surface water.	SM	2700		
TOTAL CARRIED TO SAMMARY PAGE 1					

Item	Description	Unit	Qty	Rate	Amount (Kshs)
4	Provide averagelly 1000mm thick selected and approved imported murrum fill in switchyard, compacted in layers not exceeding 150mm thick using a 10 tonne vibrating roller to gradual slope as instructed making the final substation yard level.	CM	2700		
5	Prepare and apply Gradiator 4TC or equal and approved insecticide to surfaces of murrum fill and blinding as per Manufacturer's written instructions (to be done by a specialist subcontractor and guarantee given, a certificate as a proof required by client)	SM	2700		
6	Apply suitable weed killer, herbicide to surfaces of blinding as per the Manufacture's written instructions (to be done by a specialist subcontractor and guarantee given, a certificate as a proof required by client)	SM	2700		
7	1000 gauge polythene or other equal and approved mebrane laid on compacted and treated murrum with welted laps of 200mm wide.	SM	2400		
8	Supply and spread a uniform layer of 150mm thick 'one inch ' (25mm) ballast in switchyard	SM	2400		
	ELEMENT No. 3				
	TRANSFORMER PLINTHS 2Nos.				
A	Excavations.(All Provisional)				
1	Excavate for 2No. transformer plinth pits sizes (9400x6900)mm, depths n.e. 1.5m from final ground level.	CM	220		
2	Ditto exceeding 1.5m but n. e. 3m	CM	44		
3	Extra over excavation in rock.	CM	40		
4	Allow for keeping excavated pits water free by pumping, bailling or otherwise.	ITEM	1		
5	Allow for planking and strutting to uphold the foundations.	ITEM	1		
6	Return,fill and ram selected excavated materials around transformer plinth.	CM	95		
7	Removing excess excavated materials from Site and disposing off.	CM	125		
	Compacting bases of the transformer plinths foundation bases and blinding with concrete mix (1:4:8 - 50 mm thick)	SM	80		
B	High yeled steel reinforcement bars including cutting,bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.				
1	Reinforcement bars T8, T10 and T12 to bases, upstand beams and top slabs for Tx. plinths all spaced @ 200 c/c.	KG	4700		
C	Formwork				
1	Vertical Sides of bases, 350mm	LM	55		
2	Steel/ wooden formwork to sides of plinths upstand beams and the plinths sides to produce a fairly smooth concrete surface finish (plastering concrete surfaces will	SM	1400		
	TOTAL CARRIED TO SAMMARY PAGE 2				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
D	Reinforced Concrete				
1	Class 25(20) concrete in the transformer foundation base 300mm thick.	CM	30		
2	Class 25(20) concrete in the plinth upstand beams.	CM	35		
3	Class 25(20) concrete in the plinths top slabs sizes (5000x2500)	CM	10		
E	Hardcore fill				
1	Well compacted hardcore fill in the plinths.	CM	50		
2	50mm thick concrete (1:4:8) blinding and DPM on the hardcore	SM	30		
F	TX Sump Grating				
1	Supply, fabricate and fabricated 1000 mm wide, heavy duty grating of deformed R20 @ 50mm c/c welded to 50x50x4mm mild steel angle Iron and reinforced, made in panels of approximately 1000mmx2500mm to ease handling and placing in position. The grating panels to rest on mild steel angle oron 50x50x4mm thick fastened to sump walling and transformer plinth side wall using fish tailed lugs. (All steel used for grating to be galvanized).	ITEM	1		
G	Finishes				
1	Surfaces finish smooth trowelled in (1:3) cement/ Sand mortar including 50mm chamfer all round top edges of plinths.	SM	35		
H	Transformer Ground Anchors				
1	Excavate for 2No. Ground anchors size (1500x1500)mm depth n.e. 1.5m from stripped level and dispose off the spoil	CM	8		
I	Vibrated mass concrete class 20/25 1:2:4 as described in;				
1	Ground anchors	CM	10		
2	Allow for fixing ground anchors in place before concreting as instructed, client to provide the steel	ITEM	1		
ELEMENT No. 4					
FOUNDATION PLINTHS					
6No. typical foundation plinths for 33&11Kv bus bars					
A	Excavations. (All Provisional)				
1	Excavate for 6No. Bus bar structure plinths foundation pits size (3200x2800) depths not exceeding 1.5m from final ground level.	CM	86		
2	Ditto exceeding 1.5m but n.e 3.0m.	CM	28		
3	Extra over excavation in rock.	CM	10		
4	Allow for keeping excavated pits water free by pumping, bailling or otherwise.	ITEM	1		
5	Allow for planking and strutting to uphold the foundations.	ITEM	1		
6	Return, fill and ram selected excavated materials around foundations.	CM	60		
TOTAL CARRIED TO SAMMARY PAGE 3					

Item	Description	Unit	Qty	Rate	Amount (Kshs)
7	Removing excess excavated materials from Site and disposing off.	CM	26		
B	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
1	Compacting bases of pits and blinding with mass concrete mix (1:4:8 - 50 mm thick)	SM	30		
2	Stub columns and foundation bases, (1600x1200x1500 high) and (2200x1800x300 thick) respectively.	CM	27		
C	High yielded steel reinforcement bars including cutting, bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.				
1	Reinforcement bars T12 to bases and stub columns of bus bars.	KG	600		
2	Reinforcement bars T8 in rings.	KG	217		
D	Foundation Bolts, washers & Nuts				
1	Supply and fix 25mm dia. X 600mm long hot dipped galvanized foundation bolts with flat and & spring washers, nuts and locknuts to Engineer's details (Sample to be provided and returned after fabrication)	No.	96		
2	Grouting the foundation bolts in stub columns by setting to precision and securing them in place when pouring concrete. The threaded portion of the bolt to protrude at least 75mm above the finished plinth level and be protected from poured concrete.	No.	96		
E	Formwork				
1	Steel/ wooden formwork to sides of stub columns and bases to produce a fairly smooth concrete surface finish to stub columns faces. (plastering concrete surfaces will not be allowed))	SM	70		
2	Top surface finish smooth trowelled including 50mm chamfer all round on all plinths.	SM	12		
	ELEMENT No. 4A				
	82No. typical foundation plinths for 33 & 11Kv Air Break Switches, Post insulators, Current transformers, Voltage transformers and lightning arresters structures, as per the general arrangement drawing (GA)				
A	Excavations.				
1	Excavate for 82No. structure plinths foundation pits size (2000x1800) depths not exceeding 1.5m from final ground level.	CM	480		
2	Ditto exceeding 1.5m but n.e 3.0m.	CM	97		
3	Extra over excavation in rock.	CM	10		
4	Allow for keeping excavated pits water free by pumping, bailling or otherwise.	ITEM	1		
5	Allow for planking and strutting to uphold the foundations.	ITEM	1		
6	Return, fill and ram selected excavated materials around foundations.	CM	375		
7	Removing excess excavated materials from Site and disposing off.	CM	105		
	TOTAL CARRIED TO SAMMARY PAGE 4				

4/20
14/2/18

Item	Description	Unit	Qty	Rate	Amount (Kshs)
B	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
1	Compacting bases of pits and blinding with mass concrete mix (1:4:8 - 50 mm thick)	SM	200		
2	Stub columns and foundation bases, (700x700x1500 high) and (1200x1200x300 thick) respectively.	CM	118		
C	High yielded steel reinforcement bars including cutting, bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.				
1	Reinforcement bars T12 to bases and stub columns of plinths.	KG	3280		
2	Reinforcement bars T8 in rings.	KG	820		
D	Foundation Bolts, washers & Nuts				
1	Supply and fix 25mm dia. X 600mm long hot dipped galvanized foundation bolts with flat and & spring washers, nuts and locknuts to Engineer's details (Sample to be provided and returned after fabrication)	No.	328		
2	Grouting the foundation bolts in stub columns by setting to precision and securing them in place when pouring concrete. The threaded portion of the bolt to protrude at least 75mm above the finished plinth level and be protected from poured concrete.	No.	328		
E	Formwork				
1	Steel/ wooden formwork to sides of stub columns and bases to produce a fairly smooth concrete surface finish to stub columns faces. (plastering concrete surfaces will not be allowed))	SM	530		
2	Top surface finish smooth trowelled including 50mm chamfer all round on all plinths.	SM	45		
	ELEMENT No. 5				
	CABLE TRENCHES AND DUCTS				
A	Trench (600x600mm deep) length 200 metres at various locations (All Provisional)				
1	Excavate for cable trench 1.2m wide from reduced level not exceeding 0.7 metres deep.	CM	170		
2	Load, cart away excavated materials and dispose at areas designated by local authority.	CM	101		
3	Backfill and ram selected excavated materials around trench walls.	CM	72		
4	50mm plain concrete(1:4:8) blinding on cable trench base	SM	160		
B	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
1	In 150mm thick trench base with slope for drainage.	CM	30		
2	In 150mm thick trench walls with fairly smooth face finish.	CM	45		
	TOTAL CARRIED TO SAMMARY PAGE 5				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
3	Provide and put in place (900x300x75mm) thick precast concrete trench covers reinforced with Y8 bars spaced at 100mm both ways with fairly smooth face finish on both sides, including angle iron size (25x25x3mm thick) galvanized protection cage all round the slab edges.	No.	667		
C	High yielded steel reinforcement bars including cutting, tying, bending and fixing in place, spacer blocks and tying wires to BS 4449.				-
1	Y 8 in cable trench @ 200 c/c both ways	KG	2000		
D	Form work to				
1	To sides of trench walls.	SM	590		
E	Cable Ducts				
1	Provide and put in place 150mm diameter class 41 pvc cable ducts at various points surrounded 150mm mass concrete (1:2:4)	LM	300		
2	Provide and fix as necessary 150mm diameter PVC bends	No.	60		
F	Ladder Cable Tray				
1	Fabricate and fix in cable trench galvanized ladder cable tray 580mm wide and its rungs spaced at 300mm c/c , supported at intervals of 1500mm, and supported 150mm above trench bed.Main frame made out of (50x50x4mm thick) angle irons, Rungs made out of (50x4mm thick) and reinforced at intervals	LM	200		
	ELEMENT No. 6				
A	OIL INTERCEPTOR				
1	Excavate starting from ground level a pit size (5mx3mx2m depth)	CM	32		
2	Return,fill and ram selected excavated materials around the interceptor walls	CM	22		
3	Removing excess excavated materials from Site and disposing off.	CM	10		
4	Compacting bases of pit and blinding with concrete mix (1:4:8 - 50 mm thick)	SM	7		
5	Concrete (1:2:4/25) reinforced with BRC A142 including 200mm laps, and all necessary tying wires and supports in slab 200mm thick.	SM	7		
6	Concrete block walling 225mm thick in cement/sand mortar (1:3) reinforced with 20SWG hoop iron at every two alternating courses.	SM	30		
7	25mm thick cement/sand water proof (1:4) rendering on wall surfaces and floor slab finished smooth and waterproofed.	SM	50		
B	Sawn Formwork				
1	Vertical sides of slabs and beams girth 150-300 high	LM	40		
2	Soffits of slab	SM	6		
C	High yielded steel reinforcement bars including cutting, tying, bending and fixing in place, spacer blocks and tying wires to BS 4449.				
1	In slab and ring beams Y8 and Y10 @ 200 c/c	KG	500		
	TOTAL CARRIED TO SAMMARY PAGE 6				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
D	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
1	Slab and beams	CM	6		
2	Provide and fix (600x450)mm heavy duty coated cast iron manhole covers and frames, or approved equivalent in the market	No.	2		
3	Soakpit 1.8m dia n.e 25ft deep to seepage level including filling with boulders and loose sand at top 1m layer with provision for inlet point for pvc pipes with cover slab 150mm with BRC layer overlying 3 masonry courses	ITEM	1		
4	Provide and lay 100mm class 41 PVC pipes with 100mm concrete surrounded, connecting the plinth sumps to the oil interceptor.	LM	60		
5	Construct on site manholes to M.O.P.W. specifications including (600x450)mm heavy duty coated cast iron manhole covers or approved equivalent	No.	2		
	ELEMENT No. 6				
A	ACCESS ROAD (Paving Blocks)				
1	Excavate for a 4m wide access road depth not exceeding 600mm starting from the reduced levels and cart away the spoil.	CM	216		
2	Level and compact Road Base with imported and approved murrum to an average thickness of 150mm in layers of 50mm thick to receive hardcore	SM	360		
3	Approved handpacked hardcore fill, average depth of 300mm and well compacted in layers of 150mm using a 10 tonne vibrating roller.	SM	360		
4	50mm thick approved and well compacted quarry dust blinding on hardcore surfaces	SM	360		
4	Heavy duty industrial concrete paving blocks size (210x105x80mm) minimum strength 49N/mm square laid to slope on quarry dust and compacted.	SM	360		
5	125 x 250 mm Splayed kerb to BS 340 including 125 x 100 mm channel on and including concrete Class 'E' foundation and 100 mm haunching to back of a kerb including all necessary excavation, formwork and disposal.	LM	160		
5	Ditto curved to plan.	LM	16		
	Extra over for junction between straight and curved kerbs.	No.	8		
8	Prepare surfaces and apply three coats of approved road marking paint: to Kerb stones and parking 75-150mm girth with kenya power branded colours.	LM	160		
9	Supply and install as shall be directed by client, 150mm diameter heavy gauge PVC pipes as ducts for cables crossing the access road including all necessary excavations, concrete surround 200mm ,to ducts .	LM	24		
B	External Access Road (Murraum)	CM	108		
1	Excavate for a 5m wide road, 150m long murrum access road depth not exceeding 600mm from ground level and cart away.	CM	450		
2	Imported murrum fill compacted in layers of 150mm to match the existing murrum road	ITEM	1		
3	Allow for 450mm ID culvert including all the necessary concrete surrounding, head walls and wing walls.	LM	6		
	TOTAL CARRIED TO SAMMARY PAGE 7				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
ELEMENT No. 7					
CONTROL BUILDING 10M X5M					
A	SUBSTRUCTURE				
1	Excavate for foundation strip 700mm wide commencing at stripped level, not exceeding 1.5m deep.	CM	63		
2	Ditto but cable trenches, column bases.	CM	20		
3	Ditto but to reduce level for hardcore and floor slab.	CM	14		
4	Extra over for excavation in all classes of rock at any depth	CM	2		
5	Allow for all necessary planking and strutting.	ITEM	1		
6	Allow for keeping excavation free from general water.	ITEM	1		
B	Mass Concrete Class P as described.				
1	Plain concrete (1:4:8-20mm aggregates) in 50mm thick blinding to foundation strip, column bases and cable trench.	SM	35		
C	High yield mild steel reinforcement bars from 8mm to 12mm including cutting, bending, spacer blocks, tying wire and fixing to BS 4449 in, strip foundation, substructure columns including footings and cable trench.				
1	Y 12 in substructure columns and bases	KG	128		
2	Y 10 in foundation strip	KG	172		
3	Y8 in cable trench and column rings	KG	125		
D	Sawn formwork to: -				
1	Sides of substructure columns and strip foundation	SM	40		
2	Ditto but cable trench	SM	40		
E	Vibrated reinforced concrete class 20/20 (1:2:4/25) as described in				
1	Strip foundation (700mmx250mm)	CM	6		
2	Cable trenches 150mm thick	CM	4		
	Column bases (100mmx1000mm)	CM	3		
4	Columns footings/stubs	CM	2		
5	concrete door ramps	CM	2		
F	Substructure natural stone walling in cement sand mortar (1:3) including and reinforced with 20 SWG Hoop iron in every alternative course				
1	200mm thick wall.	SM	70		
G	Filling.				
1	Return, fill and ram selected excavated materials around foundations.	CM	20		
2	Load cart away surplus excavated materials and dispose in areas designated by local authorities.	CM	16		
TOTAL CARRIED TO SAMMARY PAGE 8					

Item	Description	Unit	Qty	Rate	Amount (Kshs)
3	Selected hardcore filling, compacted in layers of 150mm thick to make up levels in control building to satisfaction of client	CM	15		
4	50mm thick approved and compacted murrum blinding on hardcore fill.	SM	32		
H	Insecticide.				
1	Prepare and apply "Premise 200 SC " or equal and approved insecticide to surfaces of blinding as per manufacturer's written instructions.	SM	50		
I	Damp Proofing.				
1	1000 gauge polythene DPM laid on the blinding including 200mm side and end overlaps.	SM	40		
2	Double BRC mesh reference No. A142 weighing 2.22kg per square meter including 150mm minimum end and side overlaps,bends, tying wires and spacer blocks.	SM	40		
J	Vibrated reinforced concrete class 20/20 (1:2:4/25) as described in				
1	150mm thick ground floor slab.	SM	40		
	Sawn formwork to;				
1	Sides of ground floor slab and trench 100-150mm high	LM	80		
	SUPERSTRUCTURE				
L	Damp Proof Course.				
1	200mm wide damp proof course (DPC) laid with 1:3mix cement sand mortar.	LM	35		
	Walling				
M	walling in cement sand mortar (1:3) including and reinforced with 20 SWG hoop iron in every two alternating course.				
1	200mm thick smooth dressed natural stone wall/approved concrete blocks/Machine cut including making horizontal keys on external wall surface.	SM	150		
N	Sawn formwork to;				
1	Vertical sides of ring beam	SM	15		
2	Ditto but soffit	SM	5		
3	Ditto but soffit of roof slab	SM	45		
	Sides of roof slab 100-150mm high	LM	50		
P	Steel reinforcement bars including cutting, bending, spacer blocks, tying wires and fixing. High tensile bars to BS 4461: 8mm to 12mm bars to:				
1	Y 8 in rings	KG	100		
2	Y 10 in slab	KG	500		
3	Y 12 in columns and beams	KG	235		
Q	Vibrated reinforced concrete class 20/20 (1:2:4/25) as described in				
1	Columns	CM	3		
2	Ring beams	CM	4		
3	150mm thick roof slab	SM	50		
	TOTAL CARRIED TO SAMMARY PAGE 9				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
V	Doors				
1	Double leaf steel doors overall size (1650x3075mm) openable 1500x3650mm high in two panels 750mm wide consisting of 1.6mm thick plate welded to 50x25x3mm framework; 75x50x6mm main frame with wall anchors; client approved steel louvres size (400x300)mm fixed at top and bottom of all shutters as per the clients requirement.	NO	2		
2	Ditto but single leaf steel internal door 1200mm wide	NO	1		
3	Prepare and apply 2 coats of red oxide primer and 3 coats of gloss paint on all steel doors internally and externally. (Color scheme be provided by client)	SM	190		
W	Finishes (Walling)				
1	13mm thick cement sand plaster (1:4) to walling internal surface and soffits of roof slab mixed with lime giving a smooth finish to receive paint	SM	160		
2	13mm cement sand mortar(1:4) on the walling external surface and the gable.	SM	120		
3	Prepare and apply undercoat, 2 coats and 2 coats of premium grade silk vinyl emulsion paint on all plastered surfaces internally.Ceiling to receive 2 coats of undercoat and 2 coats of brilliant white vinyl matt emulsion paint	SM	160		
4	Prepare 2 coats of external paint currently in the market (use paints recommended for external use, eg rough & tough)	SM	120		
X	Flooring				
1	20mm thick cement sand (1:3) screed for floor to receive terrazzo	SM	42		
2	25mm thick well polished terrazzo floor finish	SM	42		
3	32 x 2mm thick Plastic dividing strips.	LM	108		
Y	Plinth Area.				
1	12mm thick cement sand mortar(1:4) render to plinth.	SM	21		
2	Prepare and apply undercoat and three coats of bituminous gloss paint to plinth.	SM	21		
3	Prepare and lay one line of paving slabs all round control room.				
	Cable Trench Covers				
1	Provide 50x50x3mm angle iron embeded on the edges of cable trench to receive chequer plate covers	LM	28		
2	Provide 600x600x3mm thick chequer plate covers welded onto (1.5"x1.5"x3mm) SHS framework of same size to cable trench including provision of adequate handles to ease lifting to client approval, prime with undercoat and two coats of black paint (gloss)	NO	24		
	ELEMENT No. 8				
A	ELECTRICAL INSTALLATIONS WORKS				
1	Builders work in relation to Electrical power supply to various points in control room including chasing, conduits, recommended wiring cables, switches and socket boxes etc. Provide, fix and test the followig	ITEM	1		
	TOTAL CARRIED TO SAMMARY PAGE 11				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
2	12way-3hase distribution board (Havels) rated 100 Amps	No.	1		
3	Flourescent lamps (Philips make) 1200mm long complete with fittings	No.	6		
4	3-phase socket outlet 32Amps	No	1		
5	1-phase socket outlets 15 Amps	No	2		
6	1-phase socket outlets 32 Amps	No	5		
7	MCBs-10amps 2No, 16Amps 2No, 32Amps 5No, 32Amps 3phase 1No,	ITEM	1		
8	Earthing of the control room	ITEM	1		
9	Security lamps on control room external	No	4		
B	Sub-Station Lighting				
1	Supply 240 watts AC (LIGHT DEPENDENT TYPE) bulky head floodlights complete with energy saver 100 watts sodium metal halide lamps and other fittings (for kplc to install on the bus bars and lay the necessary cables)	NO	6		
	ELEMENT No. 9	ITEM	1		
A	SMOKE DETECTORS				
1	Allow for Hardwired Smoke detectors installations; including a battery back up; to be carried out by a nominated sub-contractor	ITEM	1		
2	Allow for general attendance on specialist contractor	ITEM	1		
3	Builder's work in connection with Smoke detector installations; cut away for and attend in all trades on the sub-contractor installing the following points in a mainly concealed system; including chases, holes and recess notching in timber etc; and making good all finishes for cut in boxes, electrical wiring, mounting brackets, smoke detector feeds, fire alarm points etc	ITEM	1		
	ELEMENT NO. 10 - FIRE EXTINGUISHERS				
A	Supply and fix controlled discharge 9 litre water, carbon dioxide gas fire extinguisher manufactured to BS EN 3-9:2006, Bs 7863:2009, BS 5306-4:2001 and the cylinder manufactured to BS 5045 complete with the following:				
	Charge and fixing bracket				
	Pictorial instructions				
	Colour code				
	Servicable on site				
	Discharge horn and hose				
	Brass hot stamping				
	Operating valve				
	Local Fire Brigade approval				
1	Ditto but powder fire extinguishers	No	2		
2	Ditto but carbon dioxide fire extinguishers	No	2		
3	Ditto fire blanket 6' x 4' container	No	2		
4	Charge and fixing bracket	No	4		
	TOTAL CARRIED TO SAMMARY PAGE 12				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
5	Charge and fixing bracket for horses	No	2		
	ELEMENT NO. 11 - AIR CONDITIONING				
A	Supply and fix air conditioners complete with all fixing accessories including related power supply to controll room temperatures from approved suppliers (LG)				
1	12000 BTU split type	3			
	ELEMENT No.12				
A	STORM WATER DRAINS (All Provisional)				
1	Excavate on site drain trench not exceeding 1.5m deep including plunking and strutting, disposal of spoil to receive drainage channels and forming sloping sides in well compacted murram bed.	LM	60		
2	Lay (300x450)mm precast concrete invert block drains to suitable fall with grooved edges and tongued, joints filled with cement/sand mortar (1:3) and laid on 75mm weak concrete bed.	LM	60		
3	Lay on sides of sloped trench (600x225x50mm) precast concrete slabs jointed in 1:3 mortar	SM	120		
4	Stone pitching in 1:3 mortar at various locations as directed by client	SM	50		
5	Allow for mass concrete (1:2;4) mix in drainage channels works	CM	10		
6	Fabricate grating overal size (600x6000mm long) made from angle irons size (75x75x8mm thick), spaced at 50mm with gratings made out of 75x75x6mm thick, including the sides angle irons 75x75x8mm embedded into drainage trench and three coats of gloss paint.	ITEM	1		
	ELEMENT No.13				
	PPERIMETER WALLING(220M LONG X 2.5M HIGH)				
A	Walling Excavations				
1	Excavate for foundation trench 1000mm wide commencing from ground level depth not exceeding 1.5m	CM	350		
2	Excavations for widening 75No. column bases size (1.0x1.0)m spaced at 3.0m c/c (75 pillars)	CM	10		
3	Extra over for excavation in all classes of rock at any depth.	CM	10		
4	Fill in and ram selected excavated materials around the substructural walling and columns.	CM	300		
5	Load, cart away from site surplus excavated materials and dispose at areas designated by local authority.	CM	50		
6	Provide all the necessary planking and strutting to uphold sides of trenches.	ITEM	1		
7	Allow for keeping all excavations water free by pumping, bailing or otherwise.	ITEM	1		
8	50mm thick (1:4:8) mass concrete blinding to walling and column bases	SM	220		
	TOTAL CARRIED TO SAMMARY PAGE 13				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
B	Vibrated reinforced concrete class 20/25 1:2:4 as described in;				
1	Foundation strip size (700x250)mm and columns size (1000x1000)mm.	CM	50		
2	Substructure and superstructure columns (200x200)mm	CM	6		
	(300x200)mm ground beam and ring beam size (200x200)mm respectively.	CM	23		
C	High yielded steel reinforcement bars including cutting, tying, bending and fixing in place, spacer blocks and tying wires to BS 4449.				
1	T10 in foundation strip spaced @ 200mm both ways, ground beam and ring beams.	KG	2300		
2	T12 in column bases @ 200mm c/c both ways, and in columns.	KG	1750		
3	T8 in rings to columns, ground beam and ring beam @ 200mm c/c.		890		
D	Sawn/Steel form work to				
1	Vertical sides of substructure and superstructure columns, foundation strip, ground beam and ring beam.	SM	460		
E	225mm thick natural stone/machine dressed stones/approved concrete blocks in substructure and superstructure walling in cement sand mortar (1:3) including and reinforcing with 20 SWG hoop iron in every two alternating course.				
1	225mm thick in substructure walling	SM	440		
2	25mm thick cement/sand (1:4) rendering on plinth area finished smooth to receive bituminous paint-600mm high	SM	140		
3	225mm thick and 2400mm high machine-cut or fair faced dressed natural or approved concrete blocks stone walling in cement/sand (1:3) mortar including 20SWG hoop-iron in every alternate courses. Internally plastered (1:4) cement/sand and trowelled smooth to receive paint. Externally horizontal joints keyed in cement /sand mortar 1:3 and moulds to columns and ring beams externally.	SM	580		
	Prepare surface and apply three coats of greyish Crown permoplast paint to the boundary wall plastered surfaces.	SM	580		
5	300mm wide pre-cast concrete coping twice weathered and throated fixed on walling.	LM	220		
F	Expansion Joints 4No.				
1	40mm thick construction joints in flex cell or equally approved expansion jointis including (25x25)mm expedite sealer.	No.	4		
G	Razor Wire				
	Supply and fix Razor Wire at the top of boundary wall conforming to the following specifications:				
	TOTAL CARRIED TO SAMMARY PAGE 14				

Item	Description	Unit	Qty	Rate	Amount (Kshs)
1	Coil size-450mm diameter, Blade profile-ripper razor wire,Stretch factor-maximum of 10m per coil and secured to wall with galvanised steel plates @ 1m centres and 20mm thick and 600mm high galvanised rods embedded on each concrete column to secure the razor wire also.	LM	220		
2	Apply undercoat and two coats of greyish Crown permoplast paint to all the boundary wall plastered surfaces and column moulds	SM	800		
3	Provide 100mm diameter pvc pipes weep holes at 2000mm centers on the walls.	ITEM	1		
ELEMENT No.14					
A	Substation Access Gate				
1	Fabricate fix in position a primary Substation gate as per provided drawing.	ITEM	1		
TOTAL CARRIED TO SUMMARY PAGE 15					
SUMMARY PAGES					
TOTAL FROM PAGE 1					
TOTAL FROM PAGE 2					
TOTAL FROM PAGE 3					
TOTAL FROM PAGE 4					
TOTAL FROM PAGE 5					
TOTAL FROM PAGE 6					
TOTAL FROM PAGE 7					
TOTAL FROM PAGE 8					
TOTAL FROM PAGE 9					
TOTAL FROM PAGE 10					
TOTAL FROM PAGE 11					
TOTAL FROM PAGE 12					
TOTAL FROM PAGE 13					
TOTAL FROM PAGE 14					
TOTAL FROM PAGE 15					
SUB TOTAL					
NCA Fees 0.5% Of Contract sum					
Total					
16%VAT					
GRAND TOTAL					

	AMOUNT IN WORDS				
	COMPANY STAMP				
	SIGN:				
	NAME & ADDRESS:				

WJMS
14/2/17