

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	BILL OF QUANTITIES				
	PROPOSED CIVIL WORKS AT TONONOKA 33/11KV SUBSTATION				
	SECTION. 1				
1	Preliminaries				
A	Allow for a temporary site office and store house for materials and tools	ITEM	1		
B	Allow for clean water for the works	ITEM	1		
C	Allow for all the necessary statutory approvals for the drawings for the proposed works from relevant authorities Including replication to required formats and necessary stamps approval for engineer & architect and handover copy of drawing to client..	ITEM	1		
D	Allow for temporary sign post for the works as described in the drawing	ITEM	1		
E	Allow for security and insurance for the proposed works	ITEM	1		
F	Allow for supply of power connection for use for the works.	ITEM	1		
G	Allow for a qualified person conversant with Kenya Power safety regulations for the entire contract period	ITEM	1		
H	Allow for prompt communication and updates facilitation to client supervision team	ITEM	1		
I	Relocate existing scada mast structure including casting all the R.C foundations, supplying and fixing of 1mx39mm dia. Galvanized foundation bolts complete with nuts and washers, disassembly and reassembly of the structures and attendance to client for related cabling works and the like	ITEM	1		
J	Allow for relocation and refurbishment of existing concrete access road including laying of approved road kerbs and standard road making as necessary	ITEM	1		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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K	Rehabilitate the entire substation drainage system to mitigate against flooding, introducing perimeter IBD(Invert Block Drains) to details	LM	96		
L	Allow for lighting and sockets in the new extension	ITEM	1		
SECTION 2					
SWITCHYARD					
1	Switch vard(Live and New)				
B	Scope, load, excavated materils, rubbles and cart away to County designated damping site.	ITEM	1		
C	Clear ALL grown vegetative matter on entire substation yard by pulling up roots removal of soil and spraying of herbicide fumigation and provide copy of guarantree to client	ITEM	1		
D	Allow for scooping the entire existing ballast and later re - use after sieving of vegetative matter, heap as directed and re-spreading the approved as directed.	ITEM	1		
E	Scoop loose top soil by cutting average 200mm deep to recieve imported fill in the entire switch-yard	SM	800		
F	Provide average 150 mm thick selected well compacted imported murrum fill, compacted in layers of 150mm thick using a plate compactor to achieve slope	SM	800		
G	Prepare and apply Gradiator 4TC or equal and approved insecticide to surfaces of blinding as per Manufacturer's written instructions	SM	800		
H	Apply suitable weed killer, herbicide to surfaces of blinding as per the Manufacture's written instructions	SM	800		
I	1000 gauge polythene or other equal and approved membrane laid on compacted and treated quarry dust with welted laps of 200mm wide.	SM	700		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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J	Supply and spread uniformly 150mm thick (1") ballast in switch yard-singly graded	SM	700		
K	Rehabilitate by making good any disturbed areas, eg boundary wall finishes, drains and existing trenches, foundations etc to Engineer's satisfaction.	ITEM	1		
2	<u>CABLE TRENCHES</u>				
1	Trench (600x600mm deep) external				
A	Excavate trench commencing from reduced level but not exceeding 1.5m deep.	CM	30		
B	Load, cart away from site surplus excavated materials and dispose at areas designated by local authority.	CM	30		
	<i>Trench bed</i>				
C	50mm plain concrete(1:3:6) blinding cable trenches bed <u>Vibrated reinforced concrete class 20/25 1:2:4/25 as described in;</u>	SM	27		
D	in 150mm thick trench base and vertical walls	CM	56		
	<i>Sawn form work to</i>				
E	Sides of trench walls <u>Steel reinforcement bars including tying bending spacer blocks tying wires and fixing high tensile bars to BS 4461</u>	SM	97		
F	Y8mm in cable trench	KG	389		
3	Trench (900x900mm deep) external				
A	Excavate trench commencing from reduced level but not exceeding 1.5m deep.	CM	12		
B	Load, cart away from site surplus excavated materials and dispose at areas designated by local authority.	CM	12		
	<i>Trench bed</i>				
C	50mm plain concrete(1:3:6) blinding cable trenches bed	SM	15		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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5	CABLE TRENCH COVERS AND TRAYS				
	<i>Precast concrete trench covers (external cable trenches)</i>				
A	Supply and put in place 900x300x75mm thick precast concrete trench covers reinforced Y8 bars spaced at 100mm both ways with handles for ease of lifting, with perimeter angle line nosing with 25mmx3mm M.S. edge protector	NO	110		
B	Ditto But 1200x1200x75mm thick	No	39		
C	Ditto But 1500x1500x75mm thick	No	39		
	<i>Cable trays(New trenches)</i>				
D	Supply and fix steel fabricated cable trays for the various trenches viz: 50x50x4mm thick angle iron frame, jointed together with 50x4mm thick , angle iron bar 600 long dividers and place on top of angle iron spaced at 400C/C to form cable tray and with 200mm high vertical trainglular support stand spaced at 1200mm C/C.	LM	30		
E	Ditto But 900mm wide trench	LM	10		
F	Ditto But 1200mm wide trench	LM	10		
6	33KV FOUNDATIONS				
	<u>The following Switchgear Foundation plinthes for structural steel, as per the General arrangement drawing(GA) and all to structural engineers details Viz: AirBreak Switch-4fnds, Circuit Breaker-1fnd., CTS-2fnds, Surge Diverters-2fnds, O/H to U/G transition-1fnds, Post Insulators-4fnd, Neutral CT-1fnd. BusBars-2fnds: Total =17fnds</u>				
A	Excavate pit foundatin commencing from ground level but not exceeding 3.0 metres deep	CM	175		
B	Extra-Over for Excavating in all forms of rock	CM	27		
C	Return fill and ram selected excavated material	CM	127		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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D	Cart away from site surplus excavated materials to designated county dumping site.	CM	48		
	Bed				
E	50mm plain concrete(1:3:6) blinding	SM	52		
	Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:-				
F	Foundation bases	CM	15		
G	Stub columns	CM	34		
	High vied Steel Reinforcement Bars:				
	Cold Worked to BS 4461				
H	Y8 - 12	KG	3479		
	Fairface Formwork to:-				
J	Sides of bases	LM	117		
K	Vertical sides of footing	SM	101		
	FINISHES				
L	13mm thick cement/sand steel float finish to stub column top surface to receive steel structure base plate measured separately.	SM	119		
M	Allow for KPLC attendance for earthing all the equipment and transformer plinth foundations prior to blinding the bases	ITEM	1		
7	23mva.TRANSFORMER PLINTH				
A	Excavate transformer pit commencing from reduced level but not exceeding 1.5 metres deep	CM	60		
B	Return fill and ram selected excavated material to the sides of the plinths	CM	15		
C	Cart away from site surplus excavated materials to designate County dumping site.	CM	45		
D	Plain concrete 50mm thick blinding 1:4:8 to footing	SM	40		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:-				
E	Base	CM	10		
F	Pedestalls	CM	4		
G	Cover slab	CM	5		
	High Tensile Steel Reinforcement Bars; Cold Worked to BS 4461 (Provisional)				
I	8 mm diameter	KG	155		
J	12 mm diameter	KG	1413		
	Fairface Formwork to:-				
K	Sides of base 225-300mmhigh.	LM	26		
L	Ditto slab	LM	16		
M	Vertical sides of concrete surfaces.	SM	60		
	Hardcore filling				
N	Approved hardcore filling compacted to Engineer's approval	CM	16		
O	<u>50mm thick blinding to surface of hardcore with lean concrete</u>	SM	15		
P	1000 gauge polythene sheet laid over hardcore	SM	15		
	SUMP RCC WALLING				
	Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:-				
A	Walling finished fair face	CM	5		
	Formwork				
B	Vertical sides of base	SM	49		
	High Yield deformed Reinforcement Bars, to BS 4449 including cutting, bending, tying, fixing, and spacer blocks.				
D	D8	KG	71		
E	D10	KG	119		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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	Supply and fix fabricated grating, with deformed D16 reinforcement bar welded on 50x50x4mm angle line framing spaced at 25mm centres, as described:				
F	Fabricated grating size, 1.2x1.0m	NO	14		
G	Ditto but 1.0 x 1.0m	NO	2		
H	Ditto but 0.6x1.0m	NO	2		
I	50x50x4mm angle line embedded in concrete sump walling to receive grating	LM	40		
J	OIL sump chamber 2m x 4m x 2m deep; perimeter 200mm thick natural stone walling; internal plaster complete with niru finish; with ring beam with 4 nos. 12mm bars and 8mm shear links at 200mm spacing; cover slab with manhole opening 150mm reinforced with 10mm steel both ways at 150mm spacing; heavy duty man hole covers; including pvc pipe 4" connecting with the main transformer pit not exceeding 6m away.-in two compartments	ITEM	1		
K	Provide galvanized 125 x 75mm U Channels welded to triangular shape (1.5x1.2x1.9metres); placed in reinforced concrete size, 1.0x1.0metres), with approx. of the tip exposed above the concrete, including 50mm diameter hole drilled on exposed section.	NO	1		
H	Prepare and apply undercoat primer to all metal surfaces.	SM	90		
I	Ditto but two coats of gloss aluminium paint.	SM	90		
<u>SUSTATION LIGHTING</u>					
A	Supply 240 watts AC (LIGHT DEPENDENT TYPE) bulky head floodlights with energy saver 100 watts sodium metal halide lamps (for kplc to install on the bus bars)	No	4		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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	SECTION 3				
	PROPOSED CONTROL ROOM EXTENSION/MODIFICATION WORKS				
1	ENABLING WORKS				
A	Demolish existing external masonry wall and hack the existing RC floor slab, beams roof and the like including internal trenches and extend the same to connect to the new trench and cart away rubbles.	ITEM	1		
B	Provide an approved fire, water and dust proof hoarding or barrier between the wall being demolished and the control room installed equipment.	ITEM	1		
C	Secure from any damage or mishandling the existing control cables during the entire construction period	ITEM	1		
D	Supply and fix 600x600x6mm thick chequered plate trench covers, including notching and making holes where necessary and apply metal undercoat primer and two finishing coats of first quality gloss Aluminium paint	NO	20		
E	Ditoo but 1300x500x6mm and reinforcing underth with 25x25mm square tube along the edges and a cross the sides.	NO	20		
F	Prepare and apply two coats of first grade paint to internal and external walls of the existing control room including all metal surfaces to match existing, but all metal surfaces to be painted with kplc corporate blue clours	ITEM	1		
G	Rehabilitate existing rainwater goods	ITEM	1		
H	Rehabilitate and repair the entire water supply system in the control room and the entire substation, supply and fix new valves, taps and changing all worn out and leaking accessories including liasing with the local water body to fix the water supply system to the utility	ITEM	1		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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I	Re-locate the existing Septic Tank and Soak-pit to give room for control room extension as shall be directed by client including all necessary connections and fittings from the existing control room	ITEM	1		
2	EXCAVATION				
A	Excavate Pit commencing from stripped level and not exceeding 1.5 m deep and cart-away including all necessary formwork, plunking, strutting, leveling and blinding trench bottom and water disposal	CM	66		
B	Extra over for excavating in all classes of rock	CM	13		
C	Approved murrum filling and compaction in layers not exceeding 150mm thick to raise levels and receive hardcore	CM	34		
D	Approved Hardcore compacted in layers not exceeding 150mm thick including blinding murrum top	CM	17		
	Vibrated reinforced concrete class 20/20 (1:2:4/25) as described in				
E	Strip foundation	SM	16		
F	Column bases(1000mm x1000mm x250mm thick), Ground and Ring Beams(200x300)	CM	36		
	High yield mild steel reinforcement from including cutting, bending, spacers, tying wire and fixing to BS 4449 in, strip foundation, column bases, footing and cable trenches.				
G	Y8-12	KG	2196		
	Insecticide.				
H	Prepare and apply "Premise 200 SC " or equal and approved insecticide to surfaces of blinding as per manufacturer's written instructions.	SM	31		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Substructure natural stone walling in cement sand mortar (1:3) including and reinforced with 20 SWG Hoop iron in every alternative course				
I	200mm thick wall.	SM	34		
	Damp Proofing.				
J	1000 gauge polythene DPM laid on top of blinding including 200mm side and end laps.	SM	31		
	Mild steel bar to BS 4449;				
K	BRC mesh reference No. A142 weighing 2.22kg per square meter including 150mm minimum end and side laps,bends, tying wires and spacer blocks.	SM	31		
	Vibrated reinforced concrete class 20/20 (1:2:4/25) as described in				
L	150mm thick ground floor slab.	SM	31		
	Superstructure Works				
	Damp Proof Course.				
M	200mm wide dump proof course (DPC) laid with 1:3 mix (cement sand mortar.)	LM	45		
	walling in cement sand mortar (1:3) including and reinforced with 20 SWG hoop iron in every two alternating course.				
N	200mm thick smooth dressed natural stone wall/approved concrete blocks/Machine cut including making horizontal keys on external wall surface.	SM	160		
	Sawn formwork to;				
O	Vertical sides of columns	SM	24		
P	Edges of beams, colum bases and floor slab	LM	270		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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Q	Allow for fitting of 2nos. windows and 1door to match existing	ITEM	1		
ROOF WORK					
R	Allow for new roofing to match existing including fabricating, delivering and hoisting and fixing into position half - steel trusses spanning 7.7m, and any other related fittings and roofing sheets and any related rain water goods	SM	57		
FINISHES					
S	Allow for internal plastering and external rendering including panting both internally and externally the new control room walls, colours to match existing.	SM	132		
SECTION 4					
<u>PIT LATRINE & GUARD HOUSE COMBINED 3.5 M X 5 M PLAN</u>					
<u>Excavation</u>					
A	Oversite excavation to reduce levels commencing from existing ground level averagely 150mm deep	SM	40		
B	Excavate from reduced level strip foundation and not exceeding 1.5 m deep	CM	23		
C	Excavate from reduced level strip foundation and not exceeding 3.0m deep	CM	23		
D	Excavate from reduced level strip foundation and not exceeding 4.5m deep	CM	23		
E	Excavate from reduced level strip foundation and not exceeding 6.0m deep	CM	23		
F	Extra over excavation in rock	CM	2		
G	Remove surplus soil from site to a place approved by local authority	CM	94		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	Mass concrete mix(1:4:8)in				
H	50mm thick blinding in strip foundations	SM	15		
	<u>Vibrated reinforcement insitu concrete class 20/20:</u>				
	<u>with minimum cube crushing strength of 20N/mm at</u>				
	<u>at 28 days:in</u>				
I	150mm thick ground floor slab	SM	18		
J	strip foundations and footings 200mm	CM	5		
	<u>Supply and fix steel bar structural concrete work</u>				
	<u>including cutting,bending,hoisting,tving,wire, spacer</u>				
	<u>blocks and supporting all in position</u>				
A	Y8-12mm bars	KG	400		
	<u>Mesh fabric reinforcement</u>				
B	Mesh reinforcement No.A142 size 200x200 mm weighing 2.22kg per square meter; in floor slab; including all necessary supports	SM	18		
	<u>Sawn formwork to:</u>				
C	Edges: slabs 75-150mm girth	M	16		
D	Vertical sides; strip footing;200mm high	M	60		
	<u>Walls</u>				
E	200mm thick natural stone foundation walls; machine dressed square; bedded and jointed in cement and sand(1:4) mortar; reinforced with 20SWG Hoop iron in every alternate course	SM	70		
	<u>Anti-terminate treatment</u>				
F	Approved anti-termite chemical treatment; applied by approved professional pest control specialist; applied strictly in accordance with the manufacturers' instructions; ten (10) year guarantee	SM	18		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	DPM				
G	Gauge 1000 polythene damp proof membrane	SM	18		
	<u>25mm thick cement/sand(1:4) rendering on concrete or</u>				
	<u>stonework: wood float finished to plinths: externally</u>				
G	Plinths; externally	SM	5		
	<u>Prepare surfaces and apply undercoat and two</u> <u>finishing coats black bitumastic or othe equal</u> <u>approved water resistant paint on rendered surface</u>				
A	Plinths; externally	SM	6		
	<u>Sawn formwork to</u>				
B	sides and soffits beams	SM	10		
	<u>Supply and fix square twisted steel bars in structural</u>				
	<u>concrete including cutting,bending,hoisting,tiewire,</u>				
	<u>spacer blocks and supporting all in position</u>				
C	8mm bars	KG	300		
D	12mm bars	KG	250		
	<u>Vibrated reinforcement insitu concrete class 20/20:</u> <u>with minimum cube crushing strength of 20N/mm at</u> <u>at 28 days:in</u>				
E	Ring beams	CM	2		
	<u>External walls</u> <u>Machine dressed natural stone walling bedded in</u> <u>cement/sand mortar 1:4) with minimum stone crushing</u> <u>strength of 7N/mm2; reinforced with 20SWG Hoop</u> <u>Iron in every alternate course</u>				
F	200mm thick walls	SM	40		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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E	Extra over external walling for horizontal key pointing	SM	40		
	<u>Bituminous felt or other equal approved damp proof course</u>				
	<u>: in cement/sand(1:3) mortar</u>				
F	200mm wide	SM	6		
	<u>SUNDRIES</u>				
G	Make holes on 100mm thick concrete slab for 150mm diameter PVC pipe	NO	1		
H	Provide and fix 100mm thick PVC vent with cap.	M	3		
I	Allow for roof slab 150mm thick with 10mm and 8mm steel with ring beam 300mm deep at all walls complete with all concrete, formwork, propping and the like as unit	SM	15		
	<u>The following in 3 No: Steel Structural roof spanning 3.2m ; hoisted to a height of approximately 2.4m from ground level.</u>				
A	150 x 150 x 2mm Z purlins bedded in masonry wall with cement sand mortar	M	15		
B	Drill holes in steel members for 12mm bolts in Z purlins	NO	23		
C	12mm bolts	NO	23		
D	Supply and fix 26gauge troughed roofing sheets type LT5; factory prepainted to approved standard colour; laid with 150mm end lap and 94mm side laps; fixed to metal purlins including hook bolts, washers and nuts at 1000mm centres including perimeter cladding with 450mm eaves	SM	35		
	<u>Wrot Cypress: Prime grade</u>				
E	200x 25mm fascia board; chamfered one edge	M	15		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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	<u>Prepare surfaces: apply three coats first grade gloss paint</u>				
	<u>to approval: on timber surfaces to</u>				
F	200mm girth; on fascia board	SM	3		
	<u>OPENINGS</u>				
	<u>Concrete Louvres</u>				
G	150x150x150mm concrete louvre blocks fixed with cement/mortar	SM	2		
	<u>Window cill</u>				
H	Supply and fix 200mm clay window cill; bedded and jointed in cement/sand (1:3) mortat; pointed in matching coloured cement to windows	M	6		
	<u>DOORS</u>				
I	Mild steel light door size 965 x 2100mm complete with all iron mongery as per drawing SK.No.06249	NO	4		
	<u>Iron mongery</u>				
	<u>Supply and fix 'Assa Abloy' or equal approved iron mongery; matching screws; locks to include a set of 3 keys; available from their authorised local dealers to APPROVAL</u>				
J	100mm mild steel butt hinges	NO	12		
K	3 lever steel casement rebated door lock with handles	No	4		
	<u>Prepare surfaces, three coats gloss oil paint to metal SURFACES</u>				
L	Doors internally and externally	SM	10		
	<u>FINISHES</u>				
	<u>FLOOR FINISHES</u>				
	<u>screed: cement/sand (1:3) on concrete</u>				
M	30mm thick to receive floor tiles	SM	18		
	<u>Supply and fix approved ceramic floor tiles on screed; joints pointed in matching cement grout to approval</u>				
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
N	300x300x10mm thick approved ceramic tiles	SM	18		
	WALLING				
	Backing: 10mm cement/sand (1:4); on masonry or concrete: wood float finished to				
O	walls to receive Ceramic tiles	SM	75		
	Supply and fix coloured glazed ceramic wall tiles; on backing: joints pointed in matching cement grout				
P	300x300x10mm thick tiles	SM	60		
Q	300x50x10mm thick bordertile	LM	26		
R	Supply and fix matching pvc tile strip to tile edges	LM	100		
	Plaster; 13mm cement/lime putty/sand;wood float on				
	masonry and concrete to				
S	Walls and concrete surfaces; externally	SM	50		
	Prepare surfaces: apply three coats First grade vinyl emulsion paint or other equal approved: on wood float plaster				
T	Walls and concrete surfaces	SM	100		
U	Allow for supply and fixing european type WC Complete with 9litre cisternen .to include all connections and plumbing works-see approval from client	NO	3		
V	allow connection of water from 800lm away with 3/4 inch pipe to OHT and full commision ing of water system to toilets	ITEM	1		
W	Supply and fix water tank 3000 lts to heights not existing 4m high including all connection ,overflow valves and level indicator(ABOVE building)	ITEM	1		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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X	allow provision for shower complete with shower tray ,water input point,and 1/2 inch tap complete with all plumbing works including gulley trap and drain	ITEM	1		
Y	2.4m high x 10 gauge chainlink fence, complete with 4mm diameter5 strands of galvanized plain wire pass through 3.0m high 50x50X3mm cranked SHS posts placed at 3.0m centers, 12 gauge barbed wire on 450mm cranks, including, excavation and erection works, 1:3:6 mix mass concrete surround at 600mm deep.	LM	15		
SECTION 8					
1	GALVANIZED FOUNDATION HOLDING MILD STEEL BOLTS				
A	Supply, fix and grout Mild steel foundation holding bolts, size (600mm long, 25mm diameter, with 125mm long hook bend on one end, 100mm long barrel threads, 2No. M25 nuts, 1No. spring washer and 1No. ring washer) in reinforced concrete stubs columns including precision setting and securing the bolts in place when pouring concrete.	NO	70		
2	GALVANIZED MILD STEEL STRUCTURES				
	<u>Fabricate, deliver and erect Lattice steel Structures complete with all necessary bolts, nuts and double washers as described for equipments to match existing including production design and production of drawings for all the various structures to approval, hot dip galvanizing to 85 microns to all structures Viz:</u>				
A	33kv Busbar structure	SET	1		
B	33kv Air Break Switch structure	SET	2		
C	33kv Current Transformer structure	SET	1		
D	33kv surge diverter structure	SET	1		
E	11kv Transition structure	No.	1		
F	33kv Post Insulators	SET	2		
G	Transformer Neutral CT Structure	No.	1		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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H	Supply and fix 150mm class 41 PVC underground pipes/ducts complete with bends for all the foundations, to receive cable from the equipmen to the cable trenches, including 100mm thick class 15 mass concrete haunching.	LM	26		
SECTION 9					
REHABILITATION WORKS					
A	Bag wash existing perimeter walling internally and externally including painting to approval	SM	492		
B	Supply and fix to existing perimeter walling 350mm wide pre-cast concrete coping twice weathered and throated	LM	109		
Razor Wire					
Supply and fix Razor Wire at the top of existing boundary wall conforming to the following specifications:					
C	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 (1"x1"x3mm thick and 600mm high galvanised SHS fixed on each column to secure the razor wire also.	LM	109		
D	Remove the existing existing dilapidated substation gate and replace with a standard double-leaf gate with diamond shaped panels incuding two supporting R.C columns and securing to position, painting with kplc coporate colors to approval and making good disturbed surfaces; see attached drawing	ITEM	1		
E	Rehabilitate the existing 60m long cable trenches approx. 60m long by replacing the worn-out and damaged covers by 300mm wide x75mm thick reinforced precast concrete covers, at various locations within the swithch-yard including cable trays and cleaning/removing any debris within the trench	ITEM	1		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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SECTION 10: - AIR CONDITIONING					
	Supply and fix air conditioners complete with all fixing accessories to control room temperatures from approved suppliers				
A	24000 BTU split type	NO	2		
SECTION 11: AUTOCHANGEOVER PANNEL					
A	Supply and install 420V AC Autochangeover distribution pannel As per Document No. KP1/6AC.1/13/TSP/09/092 attached	ITEM	1		
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	TOTAL CARRIED TO FORM OF TENDER				
Amount in words:.....					
Company Stamp					
Signed:					
Name:					
Address:					
Contract Period: Weeks					

