

PROPOSED CIVIL WORKS & STRUCTURES FOR KINANEI 66/11KV, 1X23 MVA TX.					
Item	Description	Unit	Quantity	Unit Rate(Ksh.)	Amount (Kshs)
ELEMENT No.1: PRELIMINARIES AND ENABLING WORKS					
A	Allow for Temporary hoarding approximately 2.5m high for the proposed site including gates, security sentries and the like and cart away on completion of the project	ITEM	1		
B	Allow for material storage, working sheds, workmen shelter against adverse weather, changing rooms & Temporary wash facilities	ITEM	1		
C	Allow for a temporary site office (approx 100sqm)with provision for site office meeting room complete with portable seats,table ,white board,washroom for Project team,including all works and fittings	ITEM	1		
D	Allow for a qualified safety Officer with OSHA and conversant with Kenya Power safety rules for the entire contract period	ITEM	1		
E	Allow for security and insurance for the proposed works, materials and personel for the entire contract period	ITEM	1		
F	Allow for clean water suitable for drinking for the works	ITEM	1		
G	Allow for temporary sign post for the proposed works	ITEM	1		
H	Allow for temporary power supply including adequate stand-by generator for lighting the works and equipment testing	ITEM	1		
I	Allow for all the necessary statutory approvals for the works by relevant county departments, replication of drawings to required formats, Endorsement by relevant professional persons; and submit a set of approved drawings before commencement to the client, including site and project registration with NCA.- provisional 400,000	ITEM	1		
K	Allow for entire site surveying including spot-heights and contour profiles for establishing working levels and substation drainage level system	ITEM	1		
L	Allow for GeoTechnical Services-Provisional sum-ksh.350,000	ITEM	1		
N	Allow attendance for Kenya power personnel to Check earthing prior to blinding & backfilling all the excavated bases & earth grids including tests for resistivity to acceptable levels as per KPLC standards	ITEM	1		
O	Allow for AS ABUILT DRAWINGS including stamped hard copies and Soft copies and submit the same to the Client after project commisioning	ITEM	1		
P	Allow for NEMA/EIA/ including EMCA (Cap. 387) enforcement implementation	ITEM	1		
Q	Allow for materials samples testing from time to time including mill Certificates for all reinforcements and structural steel works delivered for the works. Copies to be attached at every stage of inspection for paymement and as may be requested by the Client	ITEM	1		
R	Allow for visitors book and site diary. The same should be well maintained and safely kept with names of all persons who vist the site for the purpose of the project. Site activites and occurances shall be recorded in the site diary on a daily basis. Both records shall be handed over to the client after completion of the project.	ITEM	1		
TOTAL CARRIED TO SUMMARY PAGE					

A handwritten signature in blue ink, consisting of a stylized name with a flourish at the end, is written across several rows of the table.

Item	Description	Unit	Quantity	Rate	Amount
ELEMENT No 2: GENERAL SITE CLEARNCE					
A	Clear site of all trees, bushes, shrubs, grass and the like to accommodate the substation, Site Offices, material storage, plant and other machinery ,working sheds for the workmen etc. Grab up their roots and burn the arising including fumigation against harmful crawling animals, snakes and the like	SM	5000		
ELEMENT No 3: 66KV LILO BAYS					
SWITCH - GEAR FOUNDATION PLINTHS(Substructure Works -All provisional) 66KV SWITCH-GEAR PLINTHS: (The following in 51 No. CT/CVT/SD/PI/NCT/CABLE SUPPOT/LIGHTENING MASTS & ISOLATORS Foundations type F1. 6Nos. CB Foundation Type F2 and 10No Foundation Type F3 GANTRY-Total 92Nos.					
A	Strip the top vegetable soil averagely 200mm deep and cart-away	SM	3600		
B	Excavate foundation pits commencing from stripped level and not exceeding 1.5m deep	CM	400		
C	Ditto Exceeding 1.5m but not exceeding 3.0m	CM	50		
D	Extra -Over for excavating in all classes of rocks at any depth	CM	15		
E	Allow for all necessary plunking and strutting	ITEM	1		
F	Allow for disposal of general water by pumping, bailing or otherwise	ITEM	1		
G	Return, Fill and Ram Selected Excavated materials around the foundations	CM	50		
H	Load and Cart-Away surplus excavated materials from site to County Government Approved damping site	CM	160		
I	Level and Compact bases of pits to receive blinding.	SM	200		
<u>Blinding(Plain Concrete Class 15)</u>					
J	50mm thick (1:3:6) Concrete blinding to pit bottoms	SM	200		
<u>Vibrated Reinforced Concrete Class 25/20 mm Aggregates In:</u>					
K	Bases	CM	60		
L	Stub columns	CM	70		
<u>High yielded steel reinforcement bars including cutting,bending, tying and fixing in place, spacer blocks and tying wires to BS 4449.</u>					
M	D8-16mm	KG	13000		
<u>Fair - Face FormWork to:</u>					
N	To vertical sides of bases (225-300mm)	LM	460		
O	To vertical sides of stub-Columns	SM	450		
<u>Rendering & finishes</u>					
P	Rendering to Plinth top surface and any other suffeces exposed to weatherelements finished smooth trowelled including 50mm chamfer all round on all plinths.	SM	310		
<u>Substation and Foundations Earthing:</u>					
Q	Excavate earth grids 300mm wide x 600mm deep average and cart-away including red-soil backfilling after laying the earthing materials within entire subststion yard ,including design of earthing system as per geotechnical report,seek kplc approval, supply and install all earthing materials.	SM	2400		
<u>Chain-Link Fence (securiy area):</u>					
R	2.4m high x10A gauge chainlink fence, complete with 4mm diameter 5 strands of galvanized plain wire pass through 3.0m high 150x150x5mm thick, cranked reinforced concrete posts placed at 2.5m centers, 12 gauge barbed wire on 450mm cranks, including, excavation and erection works, 1:3:6 mix mass concrete surround at 600mm deep.	LM	35		
S	Allow for 600mm masonry wall above ground including all Material, labour,builders works and plaster finishes with 2 coats of black bituminous paint including pcc coping	LM	35		
J	Allow for kplc PM,PE and Project Supervisor on communication and updates facilitation including data processing and print a provisional Sum of Ksh. 1,200,000 Within entire project period	ITEM	1		
TOTAL CARRIED TO SUMMARY PAGE					

Item	Description	Unit	Quantity	Rate	Amount
ELEMENT NO.4: CABLE TRENCHES					
	Trench (600mm-1200mm wide)x(600mm-900mm deep) - length Approx. 200IM				
A	Excavate for cable trench 1.2m wide from ground level not exceeding 1.0m metres deep.	CM	230		
B	Load and cart- away excess excavated materials from site to County Government Approved damping site	CM	185		
C	Backfill and ram selected excavated materials around trench walls.	CM	45		
D	50mm plain concrete(1:4:8) blinding on cable trench base	SM	250		
E	Allow for all necessary plunking and stritting	ITEM	1		
F	Allow for disposal of general water by pumping. Bailing or otherwise.	ITEM	1		
	<i>Vibrated reinforced concrete class 20/20 1:2:4 as described in;</i>				
G	150mm thick trench base.	CM	40		
H	150mm thick trench walls with fair face finish internally and external rendering	CM	50		
	<i>High yielded steel reinforcement bars including cutting, tying, bending and fixing in place, spacer blocks and tying wires to BS 4449.</i>				
I	D 8 in cable trench @ 150mm C/C Both ways	KG	4000		
	<i>Fair Face - Form work to:</i>				
J	Vertical sides of trench walls.(Internally and Externally)	SM	600		
K	Vertical side of trench base-(75-150mm)	LM	400		
L	Allow screeding/sloping and water drainage including all outlet pipes at cable trench ends	ITEM	1		
M	Provide and put in place (900x400x50mm) thick precast concrete trench covers reinforced with Y8 bars spaced at 100mm both ways with fair face finish on both sides, inside a 50x50 angle framing including priming and corrosion protective coat	No.	260		
N	Ditto But 1500mm x 400mm x50mm	No.	260		
O	Supply and fix for 600x600mm cable trench, galvanized 300-400mm wide x50mm deep x 2mm thick galvanized perforated steel cable trays(samples subject to kplc approval) for control cables including mounting on the trench and all joints and bends on galvanized mild steel support brackets 40mm wide x 5mm thick with a mean girth of 1200mm as supports to detail, secured to the trench walls using 100mm long x14mm dia. rawl bolts spaced at 1.0m center to center (Contractor to submit details of cable tray support bracket for approval by kplc before fabrication and galvanizing including samples of rawl bolts)	LM	150		
P	Allow concrete for bedding and thickenings (class 25 /20 mm aggregates) along the full length of trench bases	CM	60		
Q	Supply and install 150mm diameter medium duty PVC pipes as ducts. with and including 150mm thick concrete class 20 surround and murrum compaction underlying pipe bases as per as per engineer's instructions at various places	LM	120		
R	Ditto but terminatiing at all equipments with lengths not exceeding 3.0m per equipment	LM	60		
S	Allow for 150mm diameter, 90 degrees medium duty PVC bends, Tees and the like not exceeding 50 nos. including all bulders work and connection from equipment to trenches and the like.	LOT	1		
	<i>Cable trays for 1200x900mm power Cable trench</i>				
T	Fabricate, galvanize to not less than 95microns and fix cable trays,in 50x50x5mm thick RHS main frame with 50x50x5mm RHS ties at 300mm c/c welded in the main frame and raised 200mm above the cable trench floor with same size supports. Allow for 6mm thick mild steel plates welded to all the bases of the cable tray support legs	LM	120		
	TOTAL CARRIED TO SUMMARY PAGE				

Item	Description	Unit	Quantity	Rate	Amount
ELEMENT No. 7: SWITCHYARD EXCAVATION, LEVELLING & BALLASTING					
A	Oversite general excavation to Reduce levels averagely 200mm deep and Cart Away all loose soil	SM	3600		
B	Bulk excavation averagely 400mm deep and Cart Away from site to approved dumping site, unsuitable soil commencing from stripped level but not exceeding 1.5m deep at the proposed substation area	CM	1440		
C	Fill in with approved imported marrum to make up levels and compact to 95% MDD (AASHTO T99) in layers of 150mm in the entire proposed substation area	CM	1440		
D	Allow for oversite grading to make up levels averagely 300mm using redsoil compacted in layers not exceeding 150mm thick	SM	3600		
E	Apply suitable weed killer, herbicide to surfaces of blinding as per the Manufacture's written instructions with a guarantee of more than 5 years	SM	2540		
F	1000 gauge polythene or other equal and approved membrane laid on compacted and treated quarry dust with weltd laps of 200mm wide.	SM	2540		
G	Supply and spread uniformly 150mm thick, 1" - 2.5", singly graded and approved ballast in the switch - yard	SM	2540		
H	Allow for stablization of unstable areas prior to murrum backfill with averagely 300mm thick hardcore boulders	CM	760		
ELEMENT 8: ACCESS ROAD, DRIVEWAY & PARKING(Concrete Paving Blocks)					
A	Mass excavation to reduce levels not exceeding 1.50m deep commencing from stripped level average 750mm deep.	CM	360		
B	Load and cart away excavated material from site.	CM	360		
C	Ram and compact sub-grade ready to receive sub-base	SM	480		
Filling					
D	Imported filling material to make up levels	CM	330		
E	300mm Thick handpacked hardcore, filling leveled, well rammed and consolidated in 150mm thick layers	CM	138		
F	50mm Thick quarry dust blinding	SM	480		
G	250 x 125mm High pre-cast concrete kerb bedded and jointed in cement and sand (1:4) mortar including 325x100mm thick mass concrete class 20/20 in foundation and haunching at the back, including all necessary formwork and excavations.	LM	450		
H	Extra-over ditto but curved on plan to various radii	LM	60		
I	250 x 125mm High pre-cast concrete channels	LM	450		
	Extra-over ditto for curved on plan to various radii	LM	60		
J	Heavy duty industrial concrete paving blocks size (210x105x80mm) minimum strength 49N/mm square laid in herringbone pattern to slope on quarry dust (m.s) and compacted to Engineer's approval	SM	480		
K	Extra over for junction between straight and curved kerbs.	NO	8		
L	Prepare surfaces and apply three coats of approved road marking paint: to Kerb stones and parking 75-150mm girth.	LM	450		
M	Supply and install as shall be directed by client, 150mm diameter medium gauge PVC pipes as ducts for cables crossing the access road including all necessary excavations, concrete bedding, haunching and surround to ducts including self-soaking access manholes minimum size 900x900x1000mm deep in masonry wall plastered internally and externally, and pcc covers.	LOT	1		
<u>External Access Road (Murrum)</u>					
N	Allow for standard 5m wide external access murrum road approx. 20m long, including all necessary excavations, base stabilization, filling, compaction, elevating and connecting to the internal paved road and external main roads.	LOT	1		
TOTAL CARRIED TO SUMMARY PAGE					

Item	Description	Unit	Quantity	Rate	Amount
ELEMENT NO. 9: EXTERNAL CULVERTS					
A	Provide, lay and joint 450mm diameter precast concrete pipes (culverts) for service ducts as directed by the Engineer. The rate to include backfilling and compaction to drain formation level.	LM	30		
B	Provide, place and compact 150mm class 15 (1:3:6) concrete bed and surround to 450mm diameter pipes.	CM	3		
ELEMENT NO. 10: INTERNAL DRAINAGE WORKS					
OPEN PERIMETER DRAIN					
A	Excavate on site drain trench not exceeding 1.5m deep including plunking and strutting, disposal of soil to receive drainage channels and forming sloping sides in well compacted murrum bed. (hydraulic depth 1m ,Trapezoidal area 0.9sm)	LM	250		
B	Provide, lay and joint 600mmx450mmx225mm (300mm diameter half-round) Invert Block Drain(IBD), including 600mmx225mmx80mm PCC side slabs(m.s) with two (2) courses laid on both sloping sides on a 100mm thick well compacted murrum fill	LM	250		
C	Supply and lay on sides of sloped trench 600mmx225mmx80mm precast concrete side slabs jointed in 1:3 cement sand mortar,including proper joint treatment with waterproof Mortar	SM	300		
D	Extra over for allowing inlet openings from collection chambers 150mm with PVC pipe;all including surface treatment and joint sealant max 40 inlet ponts	ITEM	1		
Drop Manholes					
E	Drop Manholes 600 x 600 x 450mm average deep (Internal) comprising :1000 x1000 x 150 mm thick mass concrete Class 20 base : 150mm Solid concrete block walls : 150mm Thick VRC Class 20 top slab/or cover; with heavy duty meshed/grilled manhole cover : 12mm internal render to base and walls : including step irons : all necessary excavation, disposal and formwork. with outlet PVC pipes as per type A or B across the sitchyard terminating to the open drain max 10 no chambers;	ITEM	1		
BILL NO. 11: WELFARE ,ABOLUTION & SECURITY					
A	Construct Guard House & toilet block (Non executive)within the subsation plot entrance area including plumbing works, foul water drainage to the septic tank,all electrical works and all the necessary manholes (Location to be shown by client).- Max area 12 Sq.metres - To include 2 washrooms and a urinal potion,Guard sentry)-draft proposal by contractor to client for approval-unit rate per sq meter to apply as per IQSK Handbook	SM	15		
B	Supply and fix polysynthetic manhole cover and frame size 600 x 450mm and : frame set into cement and sand (1:4) mortar: cover set in grease	NO	3		
Septic Tank					
C	Excavate, construct in the new location as directed and dispose surplus excavated material, septic tank size 3500x2000mm; including inlet and outlet manholes as per drawing. Allow for all builders work,plumbing and like for above works and base stabilization with boulders including blinding - Bidder quote lumpsum	ITEM	1		
D	Allow to supply substation with water from municipal water provider,AND provide traditional well min. 15m deep 1.8m dia with masonry protection at 2m from top cover slab and a provision for sump pump as standby Provisional Sum of Ksh.300,000.00	ITEM	1		
TOTAL CARRIED TO SUMMARY PAGE					

Item	Description	Unit	Quantity	Rate	Amount
BILL NO.12: CONTROL BUILDING					
ELEMENT NO 1: SUBSTRUCTURES					
Excavations					
General excavations to include excavating in loam, clay. Black cotton soil, red soil or any soil which does not require ripping or use of compressor tools					
A	Excavate trenches for wall foundations: commencing from reduced level and not exceeding 1.5 metres deep.	CM	55		
B	Ditto over 1.5m deep but not exceeding 3.0m deep	CM	13		
C	Excavate pits for column bases	CM	38		
D	Ditto over 1.5m deep but not exceeding 3.0m deep	CM	15		
E	Ditto but cable trenches	CM	77		
F	Extra over excavation for excavating in hardrock all classes.	CM	5		
G	Allow for stabilization of all bases using hardcore	CM	5		
Backfilling around Foundations					
H	Backfill around foundation : selected excavated material : placed 'n 200mm thick layers : well watered and compacted to 98% MDD	CM	59		
Disposal of Excavated Material					
I	Surplus excavated material : remove and deposit in spoil heaps on site	CM	203		
Disposal of water					
J	Keep excavations free from all water by baling, pumping or otherwise	ITEM	1		
Planking and strutting					
K	Planking and strutting to sides of all excavations : keep excavation free from all fallen materials	ITEM	1		
Imported Hardcore					
L	Approved quarry stone hardcore : 450mm thick (overall) : hand packed and well compacted in 150mm thick layers	CM	93		
Murram Blinding					
M	50mm Murram blinding to surface of hardcore	SM	185		
Antitermite Treatment					
N	Chemical antitermite treatment to murram filling ; Dragnet 30% EC or equal and approved : provide 10 year guarantee	SM	185		
In situ Concrete : Class 15/25mm					
O	50 mm Blinding layer: under wall foundations.	SM	40		
P	Ditto : under column bases.	SM	25		
Q	Ditto : under cable trenches/channel;	SM	62		
In situ concrete : class 25/20 : vibrated : reinforced					
R	Strip foundations trenches .	CM	8		
S	Column bases.	CM	8		
T	Column stubs.	CM	3		
U	Cable trenches	CM	15		
V	Bed to cable channel/trenches ; laid to falls	CM	7		
W	150mm thick floor bed	CM	45		
X	Ramp	CM	2		
Y	11kv switchboard panel pad supports	CM	2		
Mesh fabric reinforcement to BS 4483 : 200mm laps					
Z	Fabric mesh reference A142 weighing 2.22kg per square metre : in floor beds	M2	185		
High yield steel bar reinforcement to BS 44461					
A1	D 8	KG	1198		
B1	D 10	KG	202		
C1	D 12	KG	261		
D1	D 16	KG	1207		
TOTAL CARRIED TO SUMMARY PAGE					

Item	Description	Unit	Quantity	Rate	Amount
	Wrot formwork : to				
A	Vertical sides : column bases	M2	40		
B	Vertical sides : column stubs	M2	65		
C	Ditto : strip foundations	M2	21		
D	Ditto : sides of channel/trench walls	M2	191		
E	Vertical edge of floor bed	LM	65		
F	Extra-over for boxing size 400 x 400x600mm deep to form control panel grooves on 150mm thick concrete slab.	No	8		
G	Vertical sides of ground beam	M2	40		
H	Allow for water Proofing for floor and trench areas provisional-ksh.1,000,000	ITEM	1		
	Quarry /natural stone bedded and jointed in cement and sand (1:3)mortar : 20 gauge x 25mm hoop iron in every alternate course				
H	200mm thick Walling	M2	120		
I	One layer 1000 gauge polythene sheet damp proof membrane : under beds : 300mm laps.	M2	185		
J	Makes 200mm diameter holes on walling	No	30		
K	Ditto but concrete 200mm on cable trench	No	30		
L	Supply and lay 200mm diameter heavy duty PVC ducts as cable sleeves	LM	90		
M	100mm Thick concrete (1:3:6) bed and surround to; 200mm diameter pipes, including all necessary formwork.	LM	90		
N	6mm thick Chequered plate trench cover to 600x600mm trench of average size 700x800mm : comprising 25 x 25 x 3mm RHS cross members : welded to and including 25 x 25 x 3mm RHS as edge frame : in 750mm lengths, and allow for collapsible handles	SM	40		
O	Ditto but 1000x1200mm trench of average size, 700x800mm	SM	9		
P	Ditto but 1000x1200mm trench of average size,400x800mm	SM	5		
Q	Ditto but 400x400mm control panel groove of average size,450x400mm	SM	2		
R	40x40x 3mm Angle frame set in fillet in concrete sides of open channel : 50x3mm lugs at 1000mm centres with fish tail ends cast into concrete	LM	144		
S	Prepare and apply undercoat of zinc chromate primer to all general metal surfaces.	SM	160		
T	Ditto but two coats of gloss aluminium paint.	SM	160		
	Cable trays				
U	Fabricate and fix steel cable trays frame for 900 x900mm cable trench, comprising of 50x50x4mm thick SHS frame, weld together with 900mm wide 50x50x4mm struts, spaced at 400mm C/C to horizontal ; to form cable tray and rised 200mm above the trench floor.	LM	15		
V	Ditto but for 600 x 600mm cable trench.	LM	53		
W	Supply and fix 150x50x6mm thick RHS anchored on concrete pads (measured separately) to client satisfactory	LM	15		
	ELEMENT NO.2: CONCRETE SUPERSTRUCTURE				
	Insitu concrete: class 25/20 : vibrated reinforced in;				
X	Columns	CM	6		
Y	Ring beams	CM	5		
Z	Ditto : intermediate beams	CM	8		
A1	Ditto : Lintels	CM	1		
B1	Ditto but 150 mm thick suspended slab	SM	229		
	High yield deformed bar reinforcement in beams and suspended slab to BS 44461, including, cutting, bending,tying wire and spacer blocks;				
C1	D 8	KG	429		
D1	D 10	KG	2451		
E1	D 12	KG	270		
F1	D 16	KG	501		
	TOTAL CARRIED TO SUMMARY PAGE				

Item	Description	Unit	Quantity	Rate	Amount
	<u>ELEMENT NO.5: DOORS</u>				
	<u>Steel Doors</u>				
	<u>Supply and fix the following purpose -made steel doors, including fixing lugs, once shop primed with one coat red oxide primer before delivery to site, complete with frames and including all ironmongery to Client approval and as per Door drawing: SK NO. 06449</u>				
	<u>BAT AND INSECT PROOFING</u>				
	<u>Mild steel Bat and insect proofing screens panels in louver opening, including 13 x13 x 3mm flat frame in panels; welded one face with and including coffee tray gauge wire mesh: one shop coat red oxide primer : to</u>				
Q	Double leaf door overall size 2000 x 3000mm high	NO	2		
R	Ditto but Single leaf door overall size, 1500 x 2500mm high	NO	6		
A	Medium duty aluminium door overall size 1000 x 2500mm high complete with locking devices and housing on top all to Client's approval.	No	7		
B	Supply and fix first grade emergency panic lock on the 1500mm wide doors to client approval.	NO	3		
C	Prepare and apply gloss paint to general surfaces ; steel doors; both sides measured	M2	66		
	<u>ELEMENT NO.6: FLOOR FINISHES</u>				
	<u>Cement and sand (1:4) trowelled screeds : on concrete : to</u>				
D	25mm Floor screed to receive terazzo including plastic diving strips	M2	185		
	<u>Polished Terrazzo Floor Finishes on concrete</u>				
E	30mm thick terrazzo floor finish	SM	185		
F	Ditto 25mm thick Skirting 150mm high:	LM	115		
	<u>Non-Slip Ceramic Tiles</u>				
G	300 x 300 x 6mm thick ceramic floor tiles approved bedded and jointed in cement and sand (1:4) mortar and pointed with neat coloured cement.	SM	8		
H	100 x 6mm thick ceramic tiles skirting bedded and jointed in cement and sand mortar (1:4) and pointed with neat coloured cement	LM	12		
	<u>Skirting</u>				
I	20 x 100mm High cement and sand skirting with rounded top and curved junction with floor finish	LM	12		
	<u>ELEMENT NO.7: WALL FINISHES</u>				
	<u>12mm thick lime plaster in two coats : steel trowelled finish : on concrete or blockwork : to</u>				
J	Walls and columns	SM	510		
	Ditto but to soffit of suspended slab	SM	220		
	<u>Prepare and apply three coats PVA matt vinyl emulsion paint : on</u>				
K	Plastered walls, columns and beams, External wall faces	SM	1000		
L	Ditto but soffit of suspended slab	SM	220		
M	200 x 300 x 4mm Thick glazed ceramic wall tiles : fixed with approved quality adhesive in accordance with the manufacturers instructions : on and including 12mm thick cement and sand screed backing : jointed, pointed and grouted in matching colour coloured cement grout and Plastic corner strips to edges of tiled surfaces	SM	15		
N	Key pointing in cement sand (1:3) in horizontal joints.	SM	171		
O	Plinth walls and edges of floor bed	SM	26		
	<u>Prepare and apply three coats first grade external quality paint : to</u>				
P	Columns and beams	SM	128		
	<u>Prepare and apply three coats bituminous paint : to</u>				
Q	Plinth area and edges of floor bed	SM	26		
	<u>TOTAL CARRIED TO SUMMARY PAGE</u>				

Item	Description	Unit	Quantity	Rate	Amount
	ELEMENT NO.8: KITCHEN				
R	100mm thick 1:2:4 concrete in kitchen work top	SM	2		
S	Y 10 reinforcement bars at 150 centres	KG	17		
T	150mm block wall	SM	2		
U	12mm thick mix 1:3 cement sand plaster	SM	5		
V	Single drain single bowl stainless approved kitchen sink	NO	1		
W	Bricon or any approved kitchen mixer tap	NO	1		
X	900x600mm wide 20mm thick MDF board bottom cabinets comprising of 2No. Cabinets, 4No. Drawers including fixing, mouver hinges, rails, handles and approved finishes.	ITEM	1		
Y	Ditto in locable overhead cabinets but with 3No. open shelves	ITEM	1		
Z	10mm thick granito tiles finishes on the kitchen work top fixed with approved quality adhesive in accordance with the manufacturers instructions : on and including 12mm thick cement and sand screed backing : jointed, pointed and grouted in matching colour, coloured cement grout and alluminium corner strips to edges of tiled surfaces	SM	2		
	ELEMENT NO.9: INTERNAL DRAINAGE AND PLUMBING WORKS				
	To supply and install the following Sanitary fittings including all the necessary joints to service overflow and waste pipes, jointings and mortices, plugs, screws bolts and making good. Sanitary Fittings will be to Client's approval of the relevant samples				
A	Approved Standard white countertop wash hand basin size: 585x430mm on with one center tap hole and a 2 nd RHS tap hole for Basin top mounted under counter soap dispenser .Cobra single lever mixer tap with pop up waste: and plastic bottle trap 32mm dia with seal.	NO	2		
B	Approved standard WC white wall concealed cistern white seat & cover unit to have short siphon internal overflow and wide mouth WC P-trap waste outlet.	NO	2		
C	Stainless steel toilet roll holder with top flap cover.	NO	2		
D	Stainless Steel basket soap dish size 200x150mm.	NO	1		
E	Approved standard hand drier with infrared sensor and DP Switch with wiring	NO	1		
F	Aluminium coat/towel hook complete with screw to wall fixtures and rubber door stopper	NO	2		
G	Approved standard basin mounted push action stainless steel liquid soap dispenser with 0.5 litre under counter soap holder.	NO	2		
H	"Bevelled" Mirror to Client's approval fixed on wall with chrome plated dome headed screws. Mirror size 600 x 800mm high	NO	1		
	ELEMENT NO.8: PAVING SLABS				
K	150mm thick Hardcore bed : deposited, spread, levelled and compacted : to receive sand bed	SM	82		
L	50mm Sand bed : levelled and compacted to receive paving	SM	82		
M	50x 600 x 600mm precast concrete (class 20) paving slabs : laid on sand bed (measured separately) : jointed and pointed in cement mortar (1:4)	SM	82		
	ELEMENT NO. 9: FIRE FIGHTING EQUIPMENT				
	Supply and fix controlled 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, Brass hot stamping and Operating valve as described				
N	9 litre carbon dioxide fire extinguisher complete with re-fills, discharge horn and fittings to wall bracket, as manufactured by Angus or equal and approved.	No.	4		
O	9Kg dry powder multi-purposed fire class A'B and C as manufactured by Angus Fire Armour ABC multi purpose model AP 9 K or equal and approved.	No.	4		
P	1200x1200mm woven glass fire blanket with 0.025 wick thermal conductivity.	No.	2		
Q	4.5Kg Co2 Powder Fire Extinguisher as Angus Fire Armour.	No.	4		
	TOTAL CARRIED TO SUMMARY PAGE				

Item	Description	Unit	Quantity	Rate	Amount
ELEMENT NO. 10: SMOKE DETECTORS					
A	Allow for Hardwired Smoke detectors installations; including a battery back up; to be carried out by a nominated sub-contractor	ITEM	1		
B	Allow for general attendance on specialist contractor	ITEM	1		
C	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.11: ELECTRICAL INSTALLATIONS WORKS					
D	Allow for electrical installations to be carried out by a nominated sub-contractor as per electrical Drawing No SK No. 08280/B Sheet 1C - lumpsum and comprising the following ,1No. 12 way 3-phase 415V distribution board rated 100Amps complete with 3-phase MCBS, 32Amps -2set and six 1-Phase way MCBS 16Amps	ITEM	1		
E	Ditto 1No. Consumer unit rated 60Amps , 6 ways each MCBS rated 32Amps and 16Amps.	ITEM	1		
ELEMENT NO.12: SUBSTATION LIGHTING					
F	Supply 10No. approved standard street light steel posts,100W, LED Floodlights fittings complete with control gear and lamps complete with wiring in twin with earth 1.5mm sq. wiring to each lamp including post foundations, 1No. 6 ways consumer unit, 1No. 1No. 40A doublr pole contactor, 3No.15A miniature circuit breakers, 1No, 40A current operated earth leakage circuit breaker with rated leakage current of 0.5A, 2No. dawn to dusk timer switch with manual overriding switch for the street lights	Item	1		
G	Earthing comprising of 6.0mm sq. earth lead and 1800mm long by 15mm diameter copper earth electrode with driving tip and clamp in a 300mm by 300mm concrete manhole with removable cover, 1No. 63A MCB with enclosure,	No.	2		
H	10.0mM2 x 2core PVC/SWA/PVC copper cable to connect power from the gate house to the respective lighting posts including cable glands to terminate the underground cable	LM	150		
I	Trenching, cable laying, ducting and back filling	LM	150		
J	Ditto but at the gate pillars approved standard.	NO	4		
K	Supply and fix emergency chargeable lights in the control room to client approval.	NO	4		
L	Allow for CCTV provision ,ethernet to controllers room- Wiring only	ITEM	1		
M	Allow for laserjet printer 3 in 1 complete with scanner blue tooth,A3 Printing and service warranty to DLP for PM/PE office-Provisional 150,000	Item	1		
Fumes Extractor Fan					
M	Supply and fix 600x600mm extractor fan in the battery room including the wiring accessories.for Not less than 50ubic meter volume	NO	1		
Door Bell					
N	Supply, install, test and commission door bell between the controller room and gate house including all the necessary wiring accessories.	ITEM	1		
TOTAL CARRIED TO SUMMARY PAGE					

Item	Description	Unit	Quantity	Rate	Amount
	EXTERNAL WORKS				
	BILL NO.13 GROUND MOUNTED TANK PLINTH				
A	Excavate Pit for water tank not exceeding 1.50 m deep	CM	8		
B	Remove surplus excavated material from site	CM	7		
C	Return fill and well ram selected excavated materials around foundations	CM	1		
	Concrete work:-				
	50mm thick plain blinding concrete mix (1:4:8) class 10-15mm aggregates in:-				
D	Foundations	SM	10		
	Guaranteed strength vibrated reinforced concrete mix (1:11/2:3) class 25-20mm aggregate in:-				
E	Base.	CM	3		
F	Ditto but curved 250mm thick walling	CM	2		
G	Ditto but curved 300mm thick top cover	CM	2		
	Reinforcements				
	High yield deformed bars to B.S. 4461				
H	D 8	KG.	31		
	D 12	KG.	635		
	Wrot Formwork to:-				
I	Curved base 225-300mm high	SM	11		
J	Curved edges of walling	SM	18		
	Fillings				
K	Approved hardcore of 100-200mm diameter fillings	CM	4		
	BILL NO.14 ELEVATED WATER STORAGE TANK STEEL TOWER				
A	Excavate for column pits 1.5m deep commencing from stripped level but not exceeding 1.5 m deep.	CM	6		
B	Extra over excavation in rock of all classes.	CM	2		
C	Remove surplus excavated material from site	CM	4		
D	Return fill and well ram selected excavated materials around foundations	CM	2		
E	50mm thick 1:4:8 blinding to column bases	SM	4		
	Vibrated reinforced concrete class 20/20 1:2:4 as described in;				
F	Colomm bases	CM	1		
G	Stubs	CM	1		
	High Steel reinforcement bars including tying bending spacer blocks tying wires and fixing high tensile bars to BS 44461				
H	D 12	KG	104		
I	D 8	KG	18		
J	Allow for accurately setting 16 No. 20mm diameter galvanised steel foundation bolts at 250mm centres on foundation column plinths.	ITEM	1		
K	Wrought formwork to sides of columns	SM	2		
L	Ditto but to Bases	SM	5		
M	Ditto but to Vertical sides of stub	SM	7		
N	10mm thick top finish of cement/sand screed	SM	4		
	The following in steel work tower 2000x2000mm wide x6000m high fixed 1500mm deep in ground including cutting and welding or bolting as necessary finished, with 3 coats of red oxide primer				
O	300 x 300 x 10mm thick base plate with 4no. 18mm diameter holes spaced at 250mm centres and welded to the bottom of tower column	NO	4		
P	100x100x6mm mild steel SHS in main framework, welded to base plates and reinforced with 32No. Cleats	LM	24		
Q	Ditto decking 100x50x6mm RHS	LM	11		
	TOTAL CARRIED TO SUMMARY PAGE				

Item	Description	Unit	Quantity	Rate	Amount
ELEMENT NO. 15: REINFORCED CONCRETE RETAINING WALL - 200MMWIDE X1200MM HIGH X 250M LONG					
A	Bulk excavation averagely 1.5m deep including carting away and backfilling	CM	720		
B	Allow for all necessary plunking and strutting	ITEM	1		
C	Allow for disposal of general water by pumping, bailing or otherwise	ITEM	1		
D	Vibrated Reinforced Concrete class 30/20mm aggregates in all locations	CM	215		
High yielded steel reinforcement bars including cutting,bending, tying and					
E	D8-10mm	KG	12000		
Fair - Face FormWork to:					
F	To vertical sides of bases	LM	500		
G	To vertical sides of retaining wall	SM	1000		
H	Allow for water proof cements on all concrete works	ITEM	1		
I	Apply 2 coats of black bituminous water-proof paint on the concrete surface internally and externally prior to backfilling to the plinth area	SM	1000		
J	Allow for slots/notches 250x250mm x 600mm deep at 2.5m intervals, during wall casting for grouting of galvanized steel posts (m.s with chainlink) tonclude making good after use	NO	510		
K	Provide all materials, prepare and construct minimum 200mm thick grouted stone pitching, maximum 600mm wide in 1:3 cement sand motar laid on 100mm well compacted murram bed to the full perimeter of the retaining wall externally	LOT	1		
L	Allow for stabilization of retaining wall base with hardcore boulders to satisfaction averagely 450mm deep	CM	150		
Expansion Joint					
M	20mm thick construction joint in flex cell or equall and approved expansion joint and (25x25)mm expedite sealer at 30m interval	SM	20		
Chainlink Fencing:					
O	2.4m high x10A gauge chainlink fence, complete with 4mm diameter 5 strands of galvanized plain wire passing through 3.0m high 150x150 - cranked reinforced concrete posts placed at 2.5m centers, 12 gauge barbed wire on 450mm cranks, including 600mm deep grouting on to R.C retaining wall(m.s), erection works. Allow for double concrete struts at all corners and gates and as shall be directed by the Engineer	LM	250		
Razor Wire					
P	Supply and fix Razor Wire at the cranked portion of the Chainlink fence, Coil size; 450mm diameter, Blade profile-ripper razor wire, Stretch factor-maximum of 10m per coil and secured to concrete posts with galvanised steel wire 600mm long anchored on the wall at 1.5m centers.	LM	250		
TOTAL CARRIED TO SUMMARY PAGE					



