

APPENDIX 1

3.2 Part II – Technical Evaluation and Comparison of Tenders under Paragraph 3.30 of the ITT.

These are mandatory requirements.

3.2.1 Verification of the following information:

- a) *Submission of Relevant Manufacturer's or Principal's Authorization*
 - i. *CCTV Camera / NVR / NAS / Access Control (Must be compatible with Genetec System)*
 - ii. *Genetec Software*
 - iii. *Electric Fences Energizer*
 - iv. *Intruder alarm system*

SECTION VI - TECHNICAL SPECIFICATIONS

CLIENT WORKSTATIONS SPECIFICATIONS

Feature	Technical Specification	Bidder's Response
Client Workstation Computer		
Storage Devices	SF1/T3: 1 TB SATA drive	
Mechanical and Environmental	Power supply SF1: 260W (100-240 VAC) Operating temperature SF1: 41°F to 95°F (5°C to 35°C) Operating humidity SF1: 20 - 80% (non-condensing) Dimensions (W x D x H) SF1: 3.7" x 11.5" x 11.4" (97mm x 292mm x 290mm) Max Weight SF1: 11.42 lbs (5.14 kg) Certifications IEC 60950-1, European Norm EN 60950-1, CISPR 22/CISPR 24, EN55022/55024	
Security Options	Endpoint protection BlackBerry Protect machine learning	

	antivirus Hardened image 200+ security settings changed by default Maintenance Verified Windows updates Connected services for Genetec software and device firmware updates	
Monitor Compatibility	Connect up to 4 monitors, Connect up to 4 monitors	
Keyboard; Mouse; Speakers	Smartcard Keyboard; Multimedia Keyboard; USB Optical Mouse; Laser USB 6-Button Mouse; 2.0 and 2.1 stereo speaker systems available; sound bar for select flat-panel displays	
Warranty and Support Services	At least 3-years	

CORE SWITCH

The Cisco 3650 24 Port Gigabit PoE Switch OR Equivalent

Key Features

- Integrated wireless controller capability
- 24 Port 10/100/1000Mbps data PoE+ and Cisco UPOE models with Energy-Efficient Ethernet (EEE)
- 24 Port 100Mbps/1/2.5/5/10 Gbps Cisco UPOE models with Energy-Efficient Ethernet (EEE) 12- and 24-port 1 Gigabit Ethernet SFP-based models 12- and 24-port 1/10 Gigabit Ethernet SFP+-based models
- Cisco StackWise-480 technology provides scalability and resiliency with 480 Gbps of stack throughput
- Cisco Stack Power® technology provides power stacking among stack members for power redundancy
- Dual redundant, modular power supplies and three modular fans providing redundancy
- Full IEEE 802.3at (PoE+) with 30W power on all copper ports in 1 Rack Unit (RU) form factor
- Cisco UPOE with 60W power per port in 1 Rack Unit (RU) form factor
- IEEE 802.3bz (2.5/5 G/s BASE-T) to go beyond 1 Gb/s with existing Cat5e and Cat6
- IEEE 802.1ba AV Bridging (AVB) built-in to provide better AV experience for including improved time synchronization and QoS
- Software support for IPv4 and IPv6 routing, multicast routing, modular Quality of Service (QoS), Flexible NetFlow (FNF), and enhanced security features
- Single universal Cisco IOS® Software image across all license levels, providing an easy upgrade path for software features
- Enhanced Limited Lifetime Warranty (E-LLW)

CORE SWITCH

The Cisco 3650 24 Port Gigabit PoE Switch OR Equivalent

Feature	Technical Specification	Bidder's Response
Device Type	Switch - 24 ports - L3 - managed - stackable	
Enclosure Type	Desktop, rack-mountable 1U	
Subtype	Gigabit Ethernet	
Ports	16 x 10/100/1000 (UPOE) + 8 x 100/1000/2.5G/5G/10G (UPOE) + 4 x 10 Gigabit SFP+ (uplink)	
Power Over Ethernet (PoE)	UPOE	
PoE Budget	820 W	
Performance	Switching capacity: 272 Gbps Forwarding performance: 202.38 Mpps Stacking bandwidth: 160 Gbps	
Capacity	IPv4 routes: 24000 NetFlow entries: 24000 Virtual interfaces (VLANs): 4094 Switched virtual interfaces (SVIs): 1000 IPv4 routes: 24000	
MAC Address Table Size	32000 entries	
Jumbo Frame Support	9198 bytes	
Routing Protocol	BGP-4, IS-IS, RIP-1, RIP-2, PIM-SM, static IP routing, PIM-DM, EIGRP for IPv6, OSPFv3, PIM-SSM, policy-based routing (PBR), RIPng	
Remote Management Protocol	SNMP 1, RMON 1, RMON 2, RMON 3, RMON 9, Telnet, SNMP 3, SNMP 2c, SSH, CLI	
Authentication Method	Kerberos, Secure Shell (SSH), RADIUS, TACACS+	
Features	Full duplex capability, layer 2 switching, DHCP support, auto-negotiation, ARP support, trunking, VLAN support, auto-uplink	

	(auto MDI/MDI-X), IGMP snooping, Syslog support, IPv6 support, Spanning Tree Protocol (STP) support, Rapid Spanning Tree Protocol (RSTP) support, Multiple Spanning Tree Protocol (MSTP) support, DHCP snooping, Dynamic Trunking Protocol (DTP) support, Port Aggregation Protocol (PAgP) support, Trivial File Transfer Protocol (TFTP) support, Access Control List (ACL) support, Quality of Service (QoS), RADIUS support, Virtual Route Forwarding-Lite (VRF-Lite), MLD snooping, Dynamic ARP Inspection (DAI), Cisco StackWise Technology, Unicast Reverse Path Forwarding (URPF), Uni-Directional Link Detection (UDLD), Rapid Per-VLAN Spanning Tree Plus (PVRST+), Shaped Round Robin (SRR), LLDP support, Link Aggregation Control Protocol (LACP), MAC Address Notification, Remote Switch Port Analyzer (RSPAN), Hot Standby Router Protocol (HSRP) support, Energy Efficient Ethernet, Strict Priority Queuing (SPQ), Class of Service (CoS), Flexible NetFlow (FNF), DiffServ Code Point (DSCP) support	
Compliant Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3z, IEEE 802.1D, IEEE 802.1Q, IEEE 802.3ab, IEEE 802.1p, IEEE 802.3af, IEEE 802.3x, IEEE 802.3ad (LACP), IEEE 802.1w, IEEE 802.1x, IEEE 802.1s, IEEE 802.1ab (LLDP), IEEE 802.3at	
RAM	4 GB	
Flash Memory	4 GB	
Status Indicators	Port transmission speed, port duplex mode, system, active, status, PoE	
Expansion / Connectivity		
Interfaces	16 x 1000Base-T RJ-45 UPOE - 60 W 1 x USB Type A 1 x serial (console) RJ-45 management 1 x management (Gigabit LAN) RJ-45 management 1 x management (mini-USB) Type B management 8 x 100/1000/2.5G/5G/10GBase-T RJ-45 UPOE - 60 W 4 x 10GBase-X SFP+ uplink	
Expansion Slots	1 (total) / 1 (free) x Stacking Module slot	
Power		
Power Device	Internal power supply - hot-plug	
Installed Qty	1 (installed) / 2 (max)	

Power Redundancy	Optional	
Power Redundancy Scheme	1+1 (with optional power supply)	
Power Provided	1100 Watt	
Voltage Required	AC 120/230 V (50/60 Hz)	
Compliant Standards	CISPR 22 Class A, GOST, BSMI CNS 13438 Class A, CISPR 24, EN 61000-3-2, NOM, EN 61000-3-3, EN55024, EN55022 Class A, ICES-003 Class A, RoHS, UL 60950-1 Second Edition, KCC, FCC Part 15 A, ISO 7779, CSA C22.2 No. 60950-1 Second Edition, EN 60950-1 Second Edition, IEC 60950-1 Second Edition, VCCI Class A, KN24, KN22 Class A	
Software / System Requirements		
Software Included	Cisco IOS LAN Base	
Dimensions & Weight		
Min Operating Temperature	23 °F	
Max Operating Temperature	113 °F	
Humidity Range Operating	5 - 96% (non-condensing)	
Min Storage Temperature	-40 °F	
Max Storage Temperature	158 °F	

		Speed Gate Swing Turnstile	Bidder's Response	Quoted Brand
No	Feature	Specifications		
	Power	AC220V/110V, 50/60Hz, 24V DC		
	Communication	Dry contact, Relay signal, RS485		
	Power Consumption	90-100W		
	Framework Material	304 brushed stainless steel+ High end black painting		
	Arm Material	Plexiglas-transparency		
	Systems Integration	Integrate with any access control		
	Flow Rate	40 people per minute		
	Dimension	1600 * 150 * 980mm		
	Net Weight	75kg/pcs (single core), 95kg/pcs (double core)		
	Passage Width	650mm (standard), 1100mm (handicap)		
	Direction	Single directional / Bi-directional		
	Mcbf	9 million		
	Operating Temperature	-20 °C - 75 °C		
	Operating Humidity	0 ~ 95% (No freeze)		

		AUTOMATIC VEHICLE SPIKE BARRIER	Bidder's Response	Quoted Brand
NO	Feature	Specifications		
	Input Voltage	100V – 240V AC $\pm 10\%$ at 50Hz / 60Hz		
	Drive	SwiftDrive®		
	Motor Detail	Two SwiftDrive® brushless DC motors with planetary gearbox		
	Gearbox	Planetary		
	Duty Cycle	100% - rated for continuous non-stop operation		
	Opening Speed	2.8 seconds		
	Cabinet Weight	80kg		
	Power Supply	27.6 V DC, 4.5A, 120W		
	Collision Detection	Motor embedded hall sensors		
	Duty Cycle	100% duty cycle – suitable for high volume applications		
	Operating Temperature	-15°C to +60°C		
	Finish	3Cr12 stainless steel with UV resistant exterior grade powder coat		
	Led	Integrated OPTIC LED light strip for maximum visibility, safety and aesthetics		

		X-RAY BAGGAGE SCANNER	Bidder's Response	Quoted Brand
NO	Feature	Specifications		
	Tunnel Size: W x H	661 (W) ×509 (H)mm		
	Dimensions: (L x W x H)	1675(L)x985(W)x1380(H)		
	Wire Resolution:	Typical AWG40(top view); Typical AWG40(side view)		
	Spatial Resolution:	Vertical:1.0mm, horizontal:1.0mm(top view)		
	Steel Penetration:	37mm(top view); 37mm(side view)		
	X-Ray Generator	160kV		
	Cooling:	Sealed oil cooling		
	Duty Cycle:	100%,no warm-up procedure required		
	Operating System:	Windows®OS (standard)		
	Display:	Single 24" LCD color, resolution: 1980 x 1080		
	Storage:	1TB SSD (standard)		
	Film Safety:	Guarantee ISO 1600 (33 DIN)		
	Net Weight:	500 kgs		
	Operating Temp:	0°C - 40°C \ 32°F - 104°F		
	Power:	Max. 500W		
	Certifications:	CE, FCC,RoHS, FDA		

		Walk Through Metal Detector	Bidder's Response	Quoted Brand
NO	Feature	Specifications		
	Passage Dimension:	2031mm x 760mm		
	Dimensions: (L x W x H)	2180×906x467mm		
	Metal Sensitivity:	Maximum Sensitivity≥10g Metal		
	Sensitivity:	200 adjustable sensitivity levels for metal objects		
	Alarm Mode:	Supports multiple alarm tone selection mode		
	Zone Detection:	33 zones covering full height of walkthrough passage		
	Display:	LCD digital control panel with real-time statistics & alarm counts		
	Detection Level:	Uniform from top to bottom		
	Calibration:	Automatic		
	Password Protection:	Supported		
	Speed:	Ultra-fast detection with a throughput rate of up to 40 person per minute		
	Working Temperature:	-20°C ~ +65°C		
	Power:	AC90V~240V 50/60Hz, <12W		
	Construction Material:	High density ABS coated panel		
	Weight:	40 kg		

II) ACCESS CONTROL SPECIFICATIONS

Supply and Configuration of Biometric Access Systems Control and Card

		Biometric Access Cards	Bidder's Response	Quoted Brand
No	Items Name	Specifications		
1	Biometric Access control Cards	<p>The Access control cards must be able to seamless work with Facial Recognition Technology / Card Reader and should be compatible with the following technologies:</p> <ul style="list-style-type: none"> i. HID i-class, HID Prox, EM Prox & Mifare/Desfire/NFC Tag ii. MIFARE/DESFire/BLE: 50 mm, EM/Felica: 30 mm 		

		Biometric Card Reader	Bidder's Response	Quoted Brand
No	Feature	Technical Specification Must share brochure with Technical Bid & MAF		
1	Fully Integrated Biometric (Facial Recognition Print Technology) and card reader access control system	<p>The reader must serve as a controller, biometric reader and card reader as a single module in one device.</p> <p>The reader must be compatible and shall be integrated to Genetec Access Control System</p>		
2	Management	Embedded Web Management software		
3	User Capacity	The Reader should be able to host at least 50,000 registered users, with a capacity of at least 50,000 Face prints		
4	Event Logs	Event Logs 50,000		
5	Onboard Card reading	Support onboard card reading technologies for 125KHZ proximity		

		and 13.56MHZ Mifare, DESFire and dual technology		
6	Modes of Identification	Allow the following identification methods		
		· Proximity Reader		
		· Facial		
		The reader must be able to allow the following access configurations		
		· Card Only,		
		· Card and face		
		· Face Only		
7	Lock Interface	Door Lock Relay: Yes (30VDC @ 2A, Dry Contacts NO/NC/COM)		
		Door Lock Power: Internal PoE Power: 12VDC @ 0.250 A Internal Adapter Power 12VDC @ 0.5 A External Power 12VDC @ 2A		
8	Camera	2MP X 2EA (Visual, IR)		
9	Power	12VDC @ 2A (CE, FCC, UL, BIS)		
		POE		
10	Communications	TCP/IP, RS-485,USB		
		Onboard 10/100mps Ethernet using CAT5/6 cable.		
		Onboard RS 232 for communication between external access control module and terminal		
		Allow direct communication with Host server without a controller.		
		Allow other support to external technology using Wiegand connections.		
11	Enrollment	Allow fast facial enrollment using TCP/IP.		
		Enrolment Station		
		Upload Images		
		This shall be done directly through the access control system.		

12	Support Messages	The reader Must have Large graphical LCD screen to allow users messages to be legible eg access denied, card expired etc.		
		The messages must be editable into local language from the control software.		
13	Database	Structured database to Support at least 30,000 cardholders and support at least 50,000 transactions in offline operations.		
14	Configurations	Allow configuration through the Control computer and also via the keypad on the reader.		
15	Housing	Rating IP65		
		Rating IK06		
		Gorilla Glass		
		Tamper Detection Sensor		
		Wall Mount : Yes - Plastic Back Cover with Screws		
		Flush Mount: Yes - Metal Bracket with Screws		
		Must be small and light and approved by client.(attach brochure)		
16	Certificate	CE, FCC, BIS, UL, RoHS		
17	Operating Temperature	0°C to 50°C		
18	Storage Temperature	-20°C to 60°C		
19	Humidity	5% to 95 % RH Non-Condensing		

SECTION VII – SCHEDULE OF REQUIREMENT

I) ELECTRONIC SECURITY SYSTEMS TENDER CATEGORIES SUMMARY

Lot	Station/Description
Lot 1	Installation of CCTV Major Distribution/ Transmission Substation
Lot 2	Installation of CCTV For Key Offices
Lot 3	Installation of Access Control In Substations & Key Offices
Lot 4	Security Systems For Facilities And Infrastructure
Lot 5	Installation of Electric Fences For Key Substations
Lot 6	Installation of Intruder Alarms

Lot 1: INSTALLATION OF CCTV IN MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION

No	Station/Description	Systems	Location
Lot 1: Installation Of CCTV Major Distribution/ Transmission Substation			
1	Nairobi West Substation	CCTV	Nairobi West
2	Kitale depot Substation	CCTV	Kitale
3	Webuye Substation	CCTV	Webuye
4	New Bamburi Substation	CCTV	Bamburi
5	Embu Depot Substation	CCTV	Embu
6	Manufacturers Training-3no technical persons	CCTV	To be determined

Lot 2: INSTALLATION OF CCTV FOR KEY OFFICES

NO	Station/Description	Systems	Location
Lot 2: INSTALLATION OF CCTV FOR KEY OFFICES			
1	Kakamega Office	CCTV	Kakamega
2	Kericho Depot	CCTV	Kericho
3	Kisii Depot	CCTV	Kisii
4	Nakuru Depot	CCTV	Nakuru
5	Nairobi South	CCTV	Nairobi South
6	Lukenya Substation	CCTV	Lukenya
7	Manufacturers Training-3no technical persons	CCTV	To be determined

Lot 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES

No	Station/Description	Systems	Location
	Lot 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES		
1	Electricity House Kisumu	Access control & CCTV	Kisumu
2	Electricity House Mombasa	Access control	Mombasa
3	Electricity House Nakuru	Access control	Nakuru
4	Manufacturers Training-3no technical persons	Access control	To be determined

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE

No	Station/Description	Systems	Location
	Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE		
1	Machakos Substation	CCTV & Access Control	Machakos
2	New Industrial Substation	CCTV & Access Control	Enterprise Road Nairobi
3	Kikuyu Substation	CCTV & Access Control	Kikuyu
4	Nyahururu stores/ Substation	CCTV & Access Control	Nyahururu
5	Kilifi Substation	CCTV & Access Control	Kilifi
6	Homabay Stores	CCTV & Access Control	Homabay
8	Njoro Substation	CCTV & Access Control	Njoro ,Nakuru
9	Emali Stores	CCTV & Access Control	Emali
10	Garissa Office	CCTV & Access Control	Garissa
12	Athi River	CCTV & Access Control	Athi River
13	Manufacturers Training-3no technical persons	CCTV	To be determined

Lot 5: CATEGORY 5: INSTALLATION OF ELECTRIC FENCES FOR KEY SUBSTATIONS

No	Station/Description	Systems	Location
	Lot 5: INSTALLATION OF ELECTRIC FENCES FOR KEY SUBSTATIONS		
1.	Mamlaka Substation	CCTV	Mamlaka Substation
2.	Thika industrial SS	CCTV	Thika industrial SS
3.	Sarmat Substation	CCTV	sarmat Substation
4.	Villa Franka	CCTV	Villa Franka
5.	Westlands Substation	Electric Fence	Westlands Substation
6.	Nairobi North SS	Electric Fence	Nairobi North SS
7.	Kiboko Substation	Electric Fence	Kiboko Substation
8.	Kipevu SS Electric Fence	Electric Fence	Kipevu SS
9.	Kipevu SS	CCTV	Kipevu SS
10.	Makuyu SS	Electric Fence	Makuyu SS
11.	Mamlaka Substation CCTV	Electric Fence	Mamlaka Substation
12.	Webuye Substation	Electric Fence	Webuye
13.	Westlands Substation	CCTV	Westlands Substation
14.	Makuyu SS	Electric Fence	Makuyu
15.	Manufacturers Training-3no technical persons		Manufacturers Training-3no technical persons

Lot 6: INSTALLATION OF INTRUDER ALARMS

No	Station/Description	Systems	Location
	Lot 6: INSTALLATION OF INTRUDER ALARMS		
1	Eldoret depot	Intrusion detection/CCTV	Eldoret
2	Eldoret depot	Intrusion detection	Eldoret
3	Naivasha office	Intrusion detection	Naivasha
4	Ukunda Banking hall-Stores	Intrusion detection	Ukunda
5	Nairobi South Depot	Intrusion detection	Nairobi
6	Kisii Depot	Intrusion detection	Kisii
7	Manufacturers Training-3no technical persons	Intrusion detection	To be determined

SECTION VIII- BILLS OF QUANTITIES

1. Objectives

The objectives of the Bill of Quantities are:

- a) to provide sufficient information on the quantities of Works to be performed to enable tenders to be prepared efficiently and accurately; and
- b) when a Contract has been entered into, to provide a priced Bill of Quantities for use in the periodic valuation of Works executed.

In order to attain these objectives, Works are itemized in the Bill of Quantities in sufficient detail to distinguish between the different classes of Works, or between Works of the same nature carried out in different locations or in other circumstances which may give rise to different considerations of cost.

2. Day work Schedule

A Day work Schedule should be included only if the probability of unforeseen work, outside the items included in the Bill of Quantities, is high. To facilitate checking by the Procuring Entity of the realism of rates quoted by the Tenderers, the Day work Schedule should normally comprise the following:

- a) A list of the various classes of labor, materials, and Constructional Plant for which basic day work rates or prices are to be inserted by the Tenderer, together with a statement of the conditions under which the Contractor shall be paid for work executed on a day work basis.
- b) Nominal quantities for each item of day work, to be priced by each Tenderer at day work rates as Tender. The rate to be entered by the Tenderer against each basic day work item should include the Contractor's profit, overheads, supervision, and other charges.

3. Provisional Sums

A general provision for physical contingencies (quantity overruns) may be made by including a provisional sum in the Summary Bill of Quantities. Similarly, a contingency allowance for possible price increases should be provided as a provisional sum in the Summary priced Bill of Quantities. The inclusion of such provisional sums often facilitates budgetary approval by avoiding the need to request periodic supplementary approvals as the future need arises. Where such provisional sums or contingency allowances are used, the Special Conditions of Contract should state the manner in which they shall be used, and under whose authority (usually the Project Manager's).

The estimated cost of specialized work to be carried out, or of special goods to be supplied, by other contractors should be indicated in the relevant part of the Bill of Quantities as a particular provisional sum with an appropriate brief description. A separate procurement procedure is normally carried out by the Procuring Entity to select such specialized contractors. To provide an element of competition among the Tenderers in respect of any facilities, amenities, attendance, etc., to be provided by the successful Tenderer as prime Contractor for the use and convenience of the specialist contractors, each related provisional sum should be followed by an item in the Bill of Quantities inviting the Tenderer to

quote a sum for such amenities, facilities, attendance, etc.

These Notes for Preparing a Bill of Quantities are intended only as information for the Procuring Entity or the person drafting the tendering document. They should not be included in the final tendering document.

4. The Bills of Quantities

SECTION VIII (A): BILLS OF QUANTITIES

(See detailed specifications
SECTION VI – TECHNICAL SPECIFICATIONS)

Lot 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION

NAIROBI WEST DEPOT IP- CCTV & ACCESS CONTROL							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	37				
B.	2MPX PTZ Camera	No.	1				
C.	64-Channel NVR and storage Server upto 40TB	No.	1				
D.	Genetec Video License (per Camera).	No.	38				
E.	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	6				
F.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				

G.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
H.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Nairobi west depot page 1						

Bill of Quantities Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
I.	Allow for cabling, ducting and necessary accessories		1				
J.	Network Devices accessories&cabinets-3 Edge sitches,1 core switch	LOT	1				
K.	6 Kva true online UPS	NO	1				
L.	3 Kva true online UPS	NO	2				
M.	1.5 Kva true online UPS	NO	1				
N.	Allow for integration of the system to existing GENETIC server	LOT	1				
O.	Client Work station	LOT	1				
P.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
Q.	Biometric Access Control cards	No.	100				
Total Carried to Collection Nairobi west depot page 2							

	SUMMARY PAGE NAIROBI WEST DEPOT IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Nairobi west depot		
	Total Carried to collection Page 2 Nairobi west depot		
	SUB-TOTAL- NAIROBI WEST DEPOT IP- CCTV &ACCESS CONTROL		

Lot 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION

KITALE DEPOT IP- CCTV &ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	21				
B.	32-Channel NVR and storage Server upto 40TB	No.	1				
C.	Genetec Video License (per Camera).	No.	21				
D.	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	6				
E.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to collection Kitale depot Page 1						

Bill of Quantities Kitale depot Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
G.	Allow for cabling, ducting and necessary accessories	LOT	1				
H.	Network Devices accessories&cabinets-3 Edge sitches	LOT	1				
I.	3 Kva true online UPS	NO	2				
J.	Allow for integration of the system to existing GENETIC server	LOT	1				
K.	Client Work station	LOT	1				
L.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
N	Biometric Access Control cards	No.	200				
	Total Carried to collection Kitale depot Page 2						

	SUMMARY PAGE KITALE DEPOT IP- CCTV &ACCESS CONTROL IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Kitale depot Page 1		
	Total Carried to collection Kitale depot Page 2		
	SUB-TOTAL- KITALE DEPOT IP- CCTV &ACCESS CONTROL		

Lot 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**WEBUYE SUBSTATION IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	16				
B	2MPX PTZ Camera	No.	2				
C	32-Channel NVR and storage Server upto 40TB	No.	1				
D	Genetec Video License (per Camera).	No.	18				
E	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	No.	Doors				
F	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to collection Webuye Substation Page 1						

Bill of Quantities Webuye Substation Page 2							
N o	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H	Allow for cabling, ducting and necessary accessories	LOT	1				
I	Network Devices accessories&cabinets-3 Edge sitches,1 core switch	LOT	1				
K	3 Kva true online UPS	NO	1				
L	Allow for integration of the system to existing GENETIC server	LOT	1				
M	Client Work station	LOT	1				
N	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O	Biometric Access Control Cards	No.	200				
	Total Carried to collection Webuye Substation Page 2						

	SUMMARY PAGE WEBUYE SUBSTATION IP- CCTV &ACCESS CONTROL IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Webuye Substation Page 1		
	Total Carried to collection Webuye Substation Page 2		
	SUB-TOTAL-WEBUYE SUBSTATION IP- CCTV &ACCESS CONTROL		

Lot 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION

NEW BAMBURI SUBSTATION IP- CCTV & ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	29				
B.	2MPX PTZ Camera	No.	1				
C.	32-Channel NVR and storage Server upto 40TB	No.	1				
D.	Genetec Video License (per Camera).	No.	30				
E.	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	No.	Doors				
F.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to collection New Bamburi Substation Page 1						

Bill of Quantities New Bamburi Substation Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H.	Allow for cabling, ducting and necessary accessories	LOT	1				
I.	Network Devices accessories&cabinets-3 Edge sitches,1 core switch	LOT	1				
J.	3 Kva true online UPS	NO	2				
K.	1.5 Kva true online UPS	NO	1				
L.	Allow for integration of the system to existing GENETIC server	LOT	1				
M.	Client Work station	LOT	1				
N.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O.	Biometric Access Control cards	NO.	200				
	Total Carried to collection New Bamburi Substation Page 2						

	SUMMARY PAGE NEW BAMBURI SUBSTATION IP- CCTV &ACCESS CONTROL IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection New Bamburi Substation Page 1		
	Total Carried to collection New Bamburi Substation Page 2		
	SUB-TOTAL-NEW BAMBURI SUBSTATION IP- CCTV &ACCESS CONTROL		

Lot 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**EMBU DEPOT/SUBSTATION IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	18				
C	32-Channel NVR and storage Server upto 40TB	No.	1				
D	Genetec Video License (per Camera).	No.	18				
E	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
F	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to collection Embu Depot/ Substation Page 1						

Bill of Quantities Embu Depot/ Substation Page 2

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
I	Allow for cabling, ducting and necessary accessories	LOT	1				
J	Network Devices accessories&cabinets-3 Edge sitches,1 core switch	LOT	1				
L	3 Kva true online UPS	NO	2				
M	1.5 Kva true online UPS	NO	1				
N	Allow for integration of the system to existing GENETIC server	LOT	1				
P	Client Work station	LOT	1				
Q	Installation, Testing and Commissioning to client satisfaction	LOT	1				
R.	Biometric Access Control cards	No.	200				
Total Carried to collection Embu Depot/ Substation Page 2							

	SUMMARY PAGE EMBU DEPOT/ SUBSTATION IP- CCTV &ACCESS CONTROL IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Embu Depot/ Substation Page 1		
	Total Carried to collection Embu Depot/ Substation Page 2		
	SUB-TOTAL- EMBU DEPOT/SUBSTATION IP- CCTV &ACCESS CONTROL		

Lot 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION

TECHNICAL TRAINING

Bill of Quantities Category 1-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Manufacturers Training-3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
	Total Carried to collection Bill of Quantities Category 1-Technical Training Page 1						

	SUMMARY PAGE Lot 1: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION BILL OF QUANTITIES		
	Sub-total- Nairobi west depot Ip- Cctv &access control		
	Sub-total- Kitale depot/ Substation Ip- Cctv &access control		
	Sub-total- Webuye Substation Ip- Cctv &access control		
	Sub-total- New Bamburi Substation Ip- Cctv &access control		
	Sub-total- Embu Depot /Substation Ip- Cctv &access control		
	Sub-total- TECHNICAL TRAINING		
	SUB-TOTAL- CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION		
	Add 16% Vat		
	SUB-TOTAL		
	GRAND TOTAL SUB-TOTAL- CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION		

Lot 1 -RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

Name of Tenderer_____Signature & Official Stamp

SECTION VIII(B)– BILLS OF QUANTITIES

(See specifications in a separate section)

Lot 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES

KAKAMEGA OFFICE IP- CCTV & ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	18				
B	32-Channel NVR and storage Server upto 20TB	No.	1				
C	Genetec Video License (per Camera).	No.	16				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	6				
F	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Kakamega Office page 1							

Bill of Quantities Kakamega Office Page 2

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H	Allow for cabling, ducting and necessary accessories		1				
I	Network Devices accessories&cabinets-3 Edge sitches,1 core switch	LOT	1				
K	3 Kva true online UPS	NO	2				
M	Allow for integration of the system to existing GENETIC server	LOT	1				
O	Client Work station	LOT	1				
P	Installation, Testing and Commissioning to client satisfaction	LOT	1				
Q	Biometric Access Control cards	No.	200				
	Total Carried to Collection Kakamega Office page 2						

	SUMMARY PAGE KAKAMEGA OFFICE IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Kakamega Office		
	Total Carried to collection Page 2 Kakamega Office		
	SUB-TOTAL- KAKAMEGA OFFICE - CCTV &ACCESS CONTROL		

Lot 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES**KERICHO DEPOT IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	19				
B	32-Channel NVR and storage Server upto 20TB	No.	1				
C	Genetec Video License (per Camera).	No.	19				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	7				
E	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Kericho Depot page 1						

Bill of Quantities Kericho Depot Page 2

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H	Allow for cabling, ducting and necessary accessories		1				
I	Network Devices accessories&cabinets- 3 Edge sitches,1 core switch	LOT	1				
J	3 Kva true online UPS	NO	1				
K	1.5 Kva true online UPS	NO	2				
L	Allow for integration of the system to existing GENETIC server	LOT	1				
N	Client Work station	LOT	1				
O	Installation, Testing and Commissioning to client satisfaction	LOT	1				
P	Biometric Access Control cards	No.	200				
	Total Carried to Collection Kericho Depot page 2						

	SUMMARY PAGE KERICHO DEPOT IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Kericho Depot		
	Total Carried to collection Page 2 Kericho Depot		
	SUB-TOTAL- KERICHO DEPOT - CCTV &ACCESS CONTROL		

Lot 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES

KISII DEPOT IP- CCTV & ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	19				
B	32-Channel NVR and storage Server upto 20TB	No.	1				
C	Genetec Video License (per Camera).	No.	19				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	4				
E	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Kisii Depot page 1						

Bill of Quantities Kericho Depot Page 2

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
G	Allow for cabling, ducting and necessary accessories		1				
H	Network Devices accessories&cabinets-3 Edge sitches,1 core switch	LOT	1				
I	3 Kva true online UPS	NO	1				
J	1.5 Kva true online UPS	NO	2				
K	Allow for integration of the system to existing GENETIC server	LOT	1				
M	Client Work station	LOT	1				
N	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O	Biometric Access Control cards	No.	200				
Total Carried to Collection Kisii Depot page 2							

	SUMMARY PAGE KISII DEPOT IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Kisii Depot		
	Total Carried to collection Page 2 Kisii Depot		
	SUB-TOTAL- KISII DEPOT - CCTV &ACCESS CONTROL		

Lot 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES

NAKURU DEPOT IP- CCTV & ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	32				
B	64-Channel NVR and storage Server up to 24TB	No.	1				
C	Genetec Video License (per Camera).	No.	32				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure , Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	4				
E	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Nakuru Depot page 1							

Bill of Quantities Nakuru Depot Page 2

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
G	Allow for cabling, ducting and necessary accessories		1				
H	Network Devices accessories&cabinets-3 Edge sitches,1 core switch	LOT	1				
I	3 Kva true online UPS	NO	1				
J	1.5 Kva true online UPS	NO	2				
K	Allow for integration of the system to existing GENETIC server	LOT	1				
M	Client Work station	LOT	1				
N	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O	Biometric Access Control cards	No.	200				
Total Carried to Collection Nakuru Depot page 2							

	SUMMARY PAGE NAKURU DEPOT IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Nakuru Depot		
	Total Carried to collection Page 2 Nakuru Depot		
	SUB-TOTAL- NAKURU DEPOT - CCTV &ACCESS CONTROL		

Lot 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES

NAIROBI SOUTH DEPOT IP- CCTV &ACCESS CONTROL							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	48				
B	2MPX PTZ Camera	No.	4				
C	64-Channel NVR and storage Server upto 40TB	No.	1				
D	Genetec Video License (per Camera).	No.	52				

E	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	6				
F	40 Inch 1080P LED Monitor C/W mount accessories	No.	2				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Nairobi South Depot page 1							

Bill of Quantities Nairobi South Depot Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H	Allow for cabling, ducting, poles & necessary accessories		1				
I	Network Devices accessories & cabinets-6 Edge switches, 1 core switch	LOT	1				
J	6 Kva true online UPS	NO	1				

K	3 Kva true online UPS	NO	3				
L	1.5 Kva true online UPS	NO	3				
M	Allow for integration of the system to existing GENETIC server	LO T	1				
O	Client Work station	LO T	1				
P	Installation, Testing and Commissioning to client satisfaction	LO T	1				
Q	Biometric Access Control cards	N o.	20 0				
Total Carried to Collection Nairobi South Depot page 2							

	SUMMARY PAGE NAIROBI SOUTH DEPOT IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Nairobi South Depot		
	Total Carried to collection Page 2 Nairobi South Depot		
	SUB-TOTAL- NAIROBI SOUTH DEPOT - CCTV &ACCESS CONTROL		

Lot 2: INSTALLATION OF IP-CCTV FOR KEY OFFICES**LUKENYA SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	16				
B	32-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	16				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Door	1				
E	40 Inch 1080P LED Monitor C/W mount accessories	No.	0				
F	32 Inch 1080P LED Monitor C/W mount accessories	No.	0				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Lukenya Substation page 1						

Bill of Quantities Lukenya Substation Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H	Allow for cabling, ducting,poles& necessary accessories		1				
I	Network Devices accessories&cabinets-1 Edge switch	LOT	1				
K	3 Kva true online UPS	NO	1				
M	Allow for integration of the system to existing GENETIC server	LOT	1				
P	Client Work station	LOT	1				
Q	Installation, Testing and Commissioning to client satisfaction	LOT	1				
R	Biometric Access Control cards	No.	200				
	Total Carried to Collection Lukenya Substation page 2						

	SUMMARY PAGE LUKENYA SUBSTATION IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Lukenya Substation		
	Total Carried to collection Page 2 Lukenya Substation		
	SUB-TOTAL-LUKENYA SUBSTATION CCTV &ACCESS CONTROL		

Lot 2: INSTALLATION OF CCTV MAJOR DISTRIBUTION/ TRANSMISSION SUBSTATION**TECHNICAL TRAINING**

Bill of Quantities Category 2-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Manufacturers Training-3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
	Total Carried to collection Bill of Quantities Category 2-Technical Training Page 1						

	SUMMARY PAGE LOT 2 BILL OF QUANTITIES:INSTALLATION OF IP-CCTV FOR KEY OFFICES		
	Sub-total- Kakamega Office CCTV IP- CCTV & Access control		
	Sub-total- Kericho Depot CCTV IP- CCTV & Access control		
	Sub-total- Kisii Depot CCTV IP- CCTV & Access control		
	Sub-total- Nakuru Depot CCTV IP- CCTV & Access control		
	Sub-total- Nairobi South Depot CCTV IP- CCTV & Access control		
	Sub-total- Lukenya Substation CCTV IP- CCTV & Access control		
	Sub-total- Technical Training		
	SUB-TOTAL- INSTALLATION OF IP-CCTV FOR KEY OFFICES		
	Add 16% Vat		
	SUB-TOTAL		
	GRAND TOTAL- INSTALLATION OF IP- CCTV FOR KEY OFFICES		

Lot 2-RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

Name of Tenderer_____Signature & Official Stamp

SECTION VIII(C)– BILLS OF QUANTITIES

(See specifications in a separate section)

Lot 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES**ELECTRICITY HOUSE KISUMU IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	55				
B	64-Channel NVR and storage Server upto 40TB	No.	1				
C	Genetec Video License (per Camera).	No.	55				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	12				
E	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Electricity House Kisumu page 1							

Bill of Quantities Electricity House Kisumu Page 2

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H	Allow for cabling, ducting and necessary accessories		1				
I	Network Devices accessories&cabinets-6 Edge sitches,1 core switch	LOT	1				
J	6 Kva true online UPS	NO	1				
K	3 Kva true online UPS	NO	3				
L	1.5 Kva true online UPS	NO	2				
M	Allow for integration of the system to existing GENETIC server	LOT	1				
O	Client Work station	LOT	1				
P	Installation, Testing and Commissioning to client satisfaction	LOT	1				
Q	Establishment of regional Security Control Room	LOT	1		3,500,000		
R	Biometric Access Control cards	No.	1000				
	Total Carried to Collection Electricity House Kisumu page 2						

	SUMMARY PAGE ELECTRICITY HOUSE KISUMU-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Electricity House Kisumu		
	Total Carried to collection Page 2 Electricity House Kisumu		
	SUB-TOTAL- ELECTRICITY HOUSE KISUMU- IP- CCTV &ACCESS		

Lot 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES

ELECTRICITY HOUSE NAKURU ACCESS CONTROL SYSTEMS							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	10				
B	Visitor Management client and license	No.	1				
C	ACS enrollment Module		1				
D	Client Workstation	No.	1				
E	Speed gates as per specifications	No.	2				
F	Automatic Vehicle Spike Barrier as per specifications	No.	2				
G	Baggage scanner	NO	1				
H	Walkthrough detector as per specifications	NO.	2				
I	Sliding gate as per specifications	LOT	1				
J	Network Devices accessories&cabinets- 4no Edge switches	LOT	1				
K	3 Kva true online UPS	NO	3				
M	Installation, Testing, Training and	LOT	1				

	Commissioning to client satisfaction						
N	Biometric Access Control cards	No.	200				
	Total Carried to Collection Electricity House Nakuru page 1						

Lot 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES

ELECTRICITY HOUSE MOMBASA ACCESS CONTROL SYSTEMS

N o	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Number s
						KES(Vat Exc)	
A	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	18				
B	Visitor Management client and license	No.	1				
C	ACS enrollment Module		1				
D	Network Devices accessories&cabinets- 4no Edge switches	LOT	1				
E	3 Kva true online UPS	NO	3				
G	Installation, Testing, Training and Commissioning to client satisfaction	LOT	1				
H	Biometric Access Control cards	No.	200				
	Total Carried to Collection Electricity House Mombasa page 1						

Lot 3: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES**TECHNICAL TRAINING**

Bill of Quantities Category 3-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Manufacturers Training-3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
	Total Carried to collection Bill of Quantities Lot 2- Technical Training Page 1						

	SUMMARY PAGE: INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES BILL OF QUANTITIES		
	Total Carried to collection Page 1 Electricity House Kisumu		
	Total Carried to collection Page 1 Electricity House Nakuru		
	Total Carried to collection Page 1 Electricity House Mombasa		
	Total – Technical Training		
	SUB-TOTAL		
	Add 16% Vat		
	SUB-TOTAL 2		
	GRAND TOTAL- INSTALLATION OF ACCESS CONTROL IN SUBSTATIONS & KEY OFFICES		

Lot 3-RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

Name of Tenderer_____Signature & Official Stamp

SECTION VIII (D)–BILLS OF QUANTITIES

(See specifications in a separate section)

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**MACHAKOS SUBSTATION IP- CCTV &ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	16				
B	16-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	16				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Machakos Substation page 1						

Bill of Quantities Machakos Substation Page 2							
N o	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
F	Allow for cabling, ducting and necessary accessories	LOT	1				
G	Network Devices accessories&cabinets-1-Edge sitches,0 core switch	LOT	1				
M	3 Kva true online UPS	NO	1				
N	Allow for integration of the system to existing GENETIC server	LOT	1				
P	Client Work station	LOT	1				
Q	Installation, Intergration, Testing and Commissioning to client satisfaction (Proposed)	LOT	1				
R	Biometric Access Control cards	No.	200				
	Total Carried to Collection Machakos Substation page 2						

	SUMMARY PAGE MACHAKOS SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Machakos Substation		
	Total Carried to collection Page 2 Machakos Substation		
	SUB-TOTAL-MACHAKOS SUBSTATION-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**NEW INDUSTRIAL SUBSTATION IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	10				
B	16-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	10				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection New Industrial Substation page 1							

Bill of Quantities New Industrial Substation Page 2							
No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
F	Allow for cabling, ducting and necessary accessories	LOT	1				
G	Network Devices accessories&cabinets-1-Edge sitches,0 core switch	LOT	1				
H	3 Kva true online UPS	NO	1				
J	Allow for integration of the system to existing GENETIC server	LOT	1				
L	Client Work station	LOT	1				
M	Installation, Testing and Commissioning to client satisfaction	LOT	1				
N	Biometric Access Control cards	No.	200				
	Total Carried to Collection New Industrial Substation page 2						

	SUMMARY PAGE NEW INDUSTRIAL SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 New Industrial Substation		
	Total Carried to collection Page 2 New Industrial Substation		
	SUB-TOTAL-NEW INDUSTRIAL SUBSTATION-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE
KIKUYU SUBSTATION IP- CCTV &ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	10				
B	16-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	10				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Kikuyu Substation page 1						

Bill of Quantities Kikuyu Substation Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
G	Allow for cabling, ducting and necessary accessories	LOT	1				
H	Network Devices accessories&cabinets-1-Edge sitches,0 core switch	LOT	1				
I	3 Kva true online UPS	NO	1				
J	1.5 Kva true online UPS	NO					
K	Allow for integration of the system to existing GENETIC server	LOT	1				
M	Client Work station	LOT	1				
N	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O	Biometric Access Control cards	No.	200				
	Total Carried to Collection Kikuyu Substation page 2						

	SUMMARY PAGE NEW INDUSTRIAL SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Kikuyu Substation		
	Total Carried to collection Page 2 Kikuyu Substation		
	SUB-TOTAL-KIKUYU SUBSTATION-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE
NYAHURURU DEPOT/ SUBSTATION IP- CCTV & ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	16				
B	32-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	16				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	1				
E	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Nyahururu Depot/ Substation page 1							

Bill of Quantities Nyahururu Depot/ Substation Page 2							
No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
G	Allow for cabling, ducting and necessary accessories	LOT	1				
H	Network Devices accessories&cabinets-2- Edge sitches,0 core switch	LOT	1				
I	3 Kva true online UPS	NO	1				
J	1.5 Kva true online UPS	NO	1				
K	Allow for integration of the system to existing GENETIC server	LOT	1				
M	Client Work station	LOT	1				
N	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O	Biometric Access Control cards	No.	200				
Total Carried to Collection Nyahururu Depot/Substation page 2							

	SUMMARY PAGE NYAHURURU DEPOT/ SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Nyahururu Depot/Substation		
	Total Carried to collection Page 2 Nyahururu Depot/Substation		
	SUB-TOTAL-NYAHURURU DEPOT/ SUBSTATION-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE

KILIFI DEPOT/ SUBSTATION IP- CCTV &ACCESS CONTROL							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	5 MPX, WDR Fixed Dome Camera	No.	4				
B	2MPX PTZ Camera	No.	1				
C	5 MPX, WDR Fixed Bullet Camera	No.	14				
D	32-Channel NVR and storage Server upto 30TB	No.	1				
E	Genetec Video License (per Camera).	No.	19				
F	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	3				
G	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				

H	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Kilifi Depot/ Substation page 1						

Bill of Quantities Kilifi Depot/ Substation Page 2

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
I	Allow for cabling, ducting,Poles and necessary accessories	LOT	1				
J	Network Devices accessories&cabinet s-2-Edge sitches,0 core switch	LOT	1				
K	3 Kva true online UPS	NO	2				
L	Allow for integration of the system to existing GENETIC server	LOT	1				
M	Client Work station	LOT	1				
N	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O	Biometric Access Control cards	No.	200				
	Total Carried to Collection Kilifi Depot/Substation page 2						

	SUMMARY PAGE KILIFI DEPOT/ SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Kilifi Depot/Substation		
	Total Carried to collection Page 2 Kilifi Depot/Substation		
	SUB-TOTAL-KILIFI DEPOT/ SUBSTATION-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE

HOMABAY STORES IP- CCTV & ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	12				
B	24-Channel NVR and storage Server upto 30TB	No.	1				
C	Genetec Video License (per Camera).	No.	12				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Homabay Stores page 1							

Bill of Quantities Homabay Stores Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Number s
G	Allow for cabling, ducting, Poles and necessary accessories	LOT	1				
H	Network Devices accessories&cabinets-2-Edge sitches	LOT	1				
I	3 Kva true online UPS	NO	1				
J	Allow for integration of the system to existing GENETIC server	LOT	1				
L	Client Work station	LOT	1				
M	Installation, Testing and Commissioning to client satisfaction	LOT	1				
N	Biometric Access Control cards	No.	200				
	Total Carried to Collection Homabay Stores page 2						

	SUMMARY PAGE HOMABAY STORES-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Homabay Stores		
	Total Carried to collection Page 2 Homabay Stores		
	SUB-TOTAL-HOMABAY STORES-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE
HOMABAY STORES IP- CCTV & ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	12				
B	16-Channel NVR and storage Server upto 30TB	No.	1				
C	Genetec Video License (per Camera).	No.	12				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Homabay Stores page 1							

Bill of Quantities Homabay Stores Page 2

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
G	Allow for cabling, ducting,Poles and necessary accessories	LOT	1				
H	Network Devices accessories&cabinet s-2-Edge sitches,0 core switch	LOT	1				
I	3 Kva true online UPS	NO	1				
J	Allow for integration of the system to existing GENETIC server	LOT	1				
L	Client Work station	LOT	1				
M	Installation, Testing and Commissioning to client satisfaction	LOT	1				
N	Biometric Access Control cards	No.	200				
Total Carried to Collection Homabay Stores page 2							

	SUMMARY PAGE HOMABAY STORES-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Homabay Stores		
	Total Carried to collection Page 2 Homabay Stores		
	SUB-TOTAL-HOMABAY STORES-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE

NJORO SUBSTATION IP- CCTV & ACCESS CONTROL							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A	5 MPX, WDR Fixed Dome Camera	No.	10				
B	16-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	10				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Njoro Substation page 1						

Bill of Quantities Njoro Substation Page 2

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
G	Allow for cabling, ducting and necessary accessories	LOT	1				
H	Network Devices accessories&cabinet s-1-Edge sitches,0 core switch	LOT	1				
I	3 Kva true online UPS	NO	1				
J	Allow for integration of the system to existing GENETIC server	LOT	1				
L	Client Work station	LOT	1				
M	Installation, Testing and Commissioning to client satisfaction	LOT	1				
N	Biometric Access Control cards	No.	200				
	Total Carried to Collection Njoro Substation page 2						

	SUMMARY PAGE NJORO SUBSTATION SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Njoro Substation		
	Total Carried to collection Page 2 Njoro Substation		
	SUB-TOTAL-NJORO SUBSTATION-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE

EMALI OFFICE IP- CCTV &ACCESS CONTROL

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	5				
B	16-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	5				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
Total Carried to Collection Emali Office page 1							

Bill of Quantities Emali Office Page 2

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
G	Allow for cabling, ducting and necessary accessories	LOT	1				
H	Network Devices accessories&cabinets-1-Edge sitches,0 core switch	LOT	1				
J	1.5 Kva true online UPS	NO	1				
K	Allow for integration of the system to existing GENETIC server	LOT	1				
M	Client Work station	LOT	1				
N	Installation, Testing and Commissioning to client satisfaction	LOT	1				
O	Biometric Access Control cards	No.	200				
	Total Carried to Collection Emali Office page 2						

	SUMMARY PAGE EMALI OFFICE-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Emali Office		
	Total Carried to collection Page 2 Emali Office		
	SUB-TOTAL-EMALI OFFICE-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**GARRISA OFFICE IP- CCTV & ACCESS CONTROL**

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A	5 MPX, WDR Fixed Dome Camera	No.	10				
B	16-Channel NVR and storage Server upto 12TB	No.	1				
C	Genetec Video License (per Camera).	No.	10				
D	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Garrisa Office page 1						

Bill of Quantities Garrisa Office Page 2

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
G	Allow for cabling, ducting and necessary accessories	LOT	1				
H	Network Devices accessories&cabinets-1-Edge sitches,0 core switch	LOT	1				
I	3 Kva true online UPS	NO	1				
J	Allow for integration of the system to existing GENETIC server	LOT	1				
L	Client Work station	LOT	1				
M	Installation, Testing and Commissioning to client satisfaction	LOT	1				
N	Biometric Access Control cards	No.	200				
	Total Carried to Collection Garrisa Office page 2						

	SUMMARY PAGE GARRISA OFFICE-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Garrisa Office		
	Total Carried to collection Page 2 Garrisa Office		
	SUB-TOTAL-GARRISA OFFICE-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE**ATHI RIVER SUBSTATION CCTV**

Bill of Quantities Athi River Substation Page 1							
N o	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
B	5 MPX, WDR Fixed Dome Camera	No.	10				
	16-Channel NVR and storage Server upto 12TB	No.	1				
E	Genetec Video License (per Camera).	No.	10				
F	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
H	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Athi River page 1						

Bill of Quantities Athi River Page 2							
N o	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Number s
J	Allow for cabling, ducting and necessary accessories	LOT	1				
K	Network Devices accessories&cabinets- 1-Edge sitches,0 core switch	LOT	1				
M	3 Kva true online UPS	NO	1				
P	Allow for integration of the system to existing GENETIC server	LOT	1				
R	Client Work station	LOT	1				
S	Installation, Testing and Commissioning to client satisfaction	LOT	1				
T	Biometric Access Control cards	No.	200				
	Total Carried to Collection Athi River page 2						

	SUMMARY PAGE ATHI RIVER SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Athi River substation		
	Total Carried to collection Page 2 Athi River Substation		
	SUB-TOTAL-ATHI RIVER SUBSTATION-IP- CCTV &ACCESS		

Lot 4: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE

TECHNICAL TRAINING

Bill of Quantities Category 4-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Manufacturers Training-3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
	Total Carried to collection Bill of Quantities Lot 4- Technical Training Page 1						

	SUMMARY PAGE CATEGORY 4 BILL OF QUANTITIES: SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE		
	Sub-total- Machakos Substation CCTV IP- CCTV & Access control		
	Sub-total- New Industrial Substation CCTV IP- CCTV & Access control		
	Sub-total- kikuyu Substation CCTV IP- CCTV & Access control		
	Sub-total- Nyahururu stores/ Substation CCTV IP- CCTV & Access control		
	Sub-total- Kilifi Substation CCTV IP- CCTV & Access control		
	Sub-total- Homabay Stores CCTV IP- CCTV & Access control		
	Sub-total- Njoro Substation CCTV IP- CCTV & Access control		
	Sub-total- Emali Stores CCTV IP- CCTV & Access control		
	Sub-total- Garissa Office CCTV IP- CCTV & Access control		
	Sub-total- Athi River Substation CCTV IP- CCTV & Access control		
	Total Carried to collection Bill of Quantities Category 4-Technical Training Page 1		
	SUB-TOTAL- SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE		
	Add 16% Vat		
	SUB-TOTAL		
	GRAND TOTAL- SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE		

Lot 4-RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

Name of Tenderer_____Signature & Official Stamp

SECTION VIII (E)– BILLS OF QUANTITIES

(See specifications in a separate section)

Lot 5: CATEGORY 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:WESTLANDS SUBSTATION

Bill of Quantities Westlands Substation Page 1							
N o	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	ELECTRIC FENCE ABOVE MASONRY WALLING The following in electric fence to cover 224m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID 15 Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good	M	200				
	Total Carried to Collection Westlands Substation page 1						

Bill of Quantities Westlands Substation Page 2

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	High tensile 1.6mm fence wire (HT)	M	2500				
B	Fence Poles Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	130				
C	Siren Kit complete with box, sounder and strobe 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	W-Insulators High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
Total Carried to Collection Westlands Substation page 2							

Bill of Quantities Westlands Substation Page 3

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Strain –S-insulators STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	30				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	291				
F	Allow for maintenance of the electric fence for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4				
Total Carried to Collection Westlands Substation page 3							

Bill of Quantities Westlands Substation Page 4

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	Energizer Cabinet with following specs: Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
Total Carried to Collection Westlands Substation page 4							

	SUMMARY PAGE WESTLANDS SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES		
	Total Carried to Collection Westlands Substation page 1		
	Total Carried to Collection Westlands Substation page 2		
	Total Carried to Collection Westlands Substation page 3		
	Total Carried to Collection Westlands Substation page 4		
	SUB-TOTAL- WESTLANDS SUBSTATION ELECTRIC FENCE		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:

NAIROBI NORTH SUBSTATION ELECTRIC FENCE

Bill of Quantities Nairobi North Substation Page 1							
N o	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	ELECTRIC FENCE ABOVE MASONRY WALLING The following in electric fence to cover 922m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID Nemtek 8J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	2				
B	GSM/IP Module as per detailed specifications.	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good No.	M	800				
	Total Carried to Collection Nairobi North Substation page 1						

Bill of Quantities Nairobi North Substation Page 2

No	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	High tensile 1.6mm fence wire (HT)	M	36,666				
B	Fence Poles Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	430				
C	Siren Kit complete with box, sounder and strobe 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	W-Insulators High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
Total Carried to Collection Nairobi North Substation page 2							

Bill of Quantities Nairobi North Substation Page 3

No	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	Strain –S-insulators STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	40				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	430				
F	Allow for maintenance of the electric fence for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4				
Total Carried to Collection Nairobi North Substation page 3							

Bill of Quantities Nairobi North Substation Page 4

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Energizer Cabinet with following specs: Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
Total Carried to Collection Nairobi North Substation page 4							

	SUMMARY PAGE NAIROBI NORTH SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES		
	Total Carried to Collection Nairobi North Substation page 1		
	Total Carried to Collection Nairobi North Substation page 2		
	Total Carried to Collection Nairobi North Substation page 3		
	Total Carried to Collection Nairobi North Substation page 4		
	SUB-TOTAL- NAIROBI NORTH SUBSTATION ELECTRIC FENCE		

Lot 5: INSTALLATION OF ELECTRIC FENCES & INTRUSION SYSTEM FOR KEY SUBSTATIONS:**KIBOKO SUBSTATION ELECTRIC FENCE**

Bill of Quantities Kiboko Substation Page 1							
N o	Item Description	U ni t	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	FREE-STANDING 16 -Lines elephant protection Electric Fence to cover 423m Perimeter comprising 16 strands spaced 100mm comprising of Well treated Wooden Poles and with necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer Nemtek minimum 10J Output or equivalent and approved complete with back-up battery and Keypad as per the specifications.	N o.	2				
B	GSM/IP Module as per detailed specifications.	N o	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good No.	M	500				
D	Allow for redesigning while repairing and replacing damaged Concrete Poles upto 30% of existing Poles						
	Total Carried to Collection Kiboko Substation page 1						

Bill of Quantities Kiboko Substation Page 2

No	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	High tensile 2.5mm fence wire (HT)	M	6598				
B	Fence Poles Allow for well treated Elephant wooden poles as per Elephant protection Electric fence standards	No.	183				
C	Siren Kit complete with box, sounder and strobe 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	W-Insulators High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
E	Allow for redesigning and reconstructing existing Chain Link with new one while utilizing upto 50% of existing .						
	Total Carried to Collection Kiboko Substation page 2						

Bill of Quantities Kiboko Substation Page 3

No	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	Strain –S-insulators STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	40				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire along the free- stranding electric fence, conforming to the following specifications:- 980mm diameter coil size Double Galvanized Razor wire ; Blade profile - Ripper Razor Wire; Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers and with two coatings to prevent rust.	M	550				
F	Allow for maintenance of the electric fence for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4				
Total Carried to Collection Kiboko Substation page 3							

Bill of Quantities Kiboko Substation Page 4							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	Energizer Cabinet with following specs: Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
Total Carried to Collection Kiboko Substation page 4							

	SUMMARY PAGE KIBOKO SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES		
	Total Carried to Collection Kiboko Substation page 1		
	Total Carried to Collection Kiboko Substation page 2		
	Total Carried to Collection Kiboko Substation page 3		
	Total Carried to Collection Kiboko Substation page 4		
	SUB-TOTAL- KIBOKO SUBSTATION ELECTRIC FENCE		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**KIPEVU SUBSTATION ELECTRIC FENCE**

Bill of Quantities Kipevu Substation Page 1							
N o	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	ELECTRIC FENCE ABOVE MASONRY WALLING The following in electric fence to cover 262m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID 15Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications.	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good No.	M	300				
	Total Carried to Collection Kipevu Substation page 1						

Bill of Quantities Kipevu Substation Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	High tensile 1.6mm fence wire (HT)	M	2550				
B	Fence Poles Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	100				
C	Siren Kit complete with box, sounder and strobe 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	W-Insulators High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
	Total Carried to Collection Kipevu Substation page 2						

Bill of Quantities Kipevu Substation Page 3

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Strain –S-insulators STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	30				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	301				
F	Allow for maintenance of the electric fence for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4				
Total Carried to Collection Kipevu Substation page 3							

Bill of Quantities Kipevu Substation Page 4

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Energizer Cabinet with following specs: Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
Total Carried to Collection Kipevu Substation page 4							

	SUMMARY PAGE KIPEVU SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES		
	Total Carried to Collection Kipevu Substation page 1		
	Total Carried to Collection Kipevu Substation page 2		
	Total Carried to Collection Kipevu Substation page 3		
	Total Carried to Collection Kipevu Substation page 4		
	SUB-TOTAL- KIPEVU SUBSTATION ELECTRIC FENCE		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:

WEBUYE SUBSTATION ELECTRIC FENCE

Bill of Quantities Webuye Substation Page 1							
N o	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	ELECTRIC FENCE ABOVE MASONRY WALLING The following in electric fence to cover 417m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID 15 Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good	M	200				
	Total Carried to Collection Webuye Substation page 1						

Bill of Quantities Webuye Substation Page 2

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	High tensile 1.6mm fence wire (HT)	M	7000				
B	Fence Poles Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No.	181				
C	Siren Kit complete with box, sounder and strobe 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No.	1				
D	W-Insulators High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
Total Carried to Collection Webuye Substation page 2							

Bill of Quantities Webuye Substation Page 3

No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Strain –S-insulators STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	45				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire along the free- stranding electric fence, conforming to the following specifications:- 980mm diameter coil size Double Galvanized Razor wire ; Blade profile - Ripper Razor Wire; Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers and with two coatings to prevent rust.	M	417				
F	Allow for maintenance of the electric fence for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4				
Total Carried to Collection Webuye Substation page 3							

Bill of Quantities Webuye Substation Page 4

No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Number s
A	Energizer Cabinet with following specs: Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
Total Carried to Collection Webuye Substation page 4							

	SUMMARY PAGE WEBUYE SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES		
	Total Carried to Collection Webuye Substation page 1		
	Total Carried to Collection Webuye Substation page 2		
	Total Carried to Collection Webuye Substation page 3		
	Total Carried to Collection Webuye Substation page 4		
	SUB-TOTAL- WEBUYE SUBSTATION ELECTRIC FENCE		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:

MAKUYU SUBSTATION ELECTRIC FENCE

Bill of Quantities Makuyu Substation Page 1							
N o	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
	ELECTRIC FENCE ABOVE MASONRY WALLING The following in electric fence to cover 297m Perimeter comprising 8 strands spaced 100mm centers above the walling and comprising necessary accessories in conformity with relevant standards and general good practice and allow for works to be installed, tested and Commissioned to client's satisfaction with the following :						
A	Adequate mains energizer DRUID 15 Nemtek 4.6J Output or equal and approved complete with back-up battery and Keypad as per the specifications.	No.	1				
B	GSM/IP Module as per detailed specifications.	No	1				
C	Lead out under gate cable including excavating in road works with necessary ducting and making good No.	M	200				
	Total Carried to Collection Makuyu Substation page 1						

Bill of Quantities Makuyu Substation Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	High tensile 1.6mm fence wire (HT)	M	3088				
B	Fence Poles Double Galvanized Electroplated, double galvanized square tube 25 x 25 x 1.5mm thick steel Hollow Square Tube for W and S insulators posts with plastic top caps. Apply Metal primer before installing and 2 finishing coats of 1st quality gloss paint "Crown" including embedding 200mm deep in the reinforced columns and walls Complete with metal lugs and approved by the client.	No .	130				
C	Siren Kit complete with box, sounder and strobe 12V,DC Security sounder and strobe with a range of 1 km as per detailed specifications.	No .	1				
D	W-Insulators High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
Total Carried to Collection Makuyu Substation page 2							

Bill of Quantities Makuyu Substation Page 3							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Strain –S-insulators STF Black-High density porcelain UV stabilized plastic polythene insulators to adequately cover the installations as per IEE standards	Item	1				
B	Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M	Item	1				
C	Hatari signs	No	30				
D	Provide for power and Alarm cable as per IEE Standards	Item	1				
E	Supply and fix Razor wire at the top of the boundary wall conforming to the following specifications:- coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - maximum of 10M per coil and secured with steel plates at 1M centers (Galvanized)	M	386				
F	Allow for maintenance of the electric fence for a period of 1 (one) year done quarterly as per Kplc SLA.	No	4				
	Total Carried to Collection Makuyu Substation page 3						

Bill of Quantities Makuyu Substation Page 4							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Energizer Cabinet with following specs: Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle line framing and 3mm thick plain sheet with lockable door including painting and mounting to Clients approval.	No.	1				
B	AVS 30A voltage guard	No.	1				
C	Allow for installation, configurations, Training, Testing and Commissioning to clients satisfaction. Installation to include all necessary civil and electrical works. Contractor to submit 3no identical handover box files will all correspondences of works and including drawings, layouts, manuals. To be done in consultation with the client for more details and format.	Item	1				
Total Carried to Collection Makuyu Substation page 4							

	SUMMARY PAGE MAKUYU SUBSTATION ELECTRIC FENCE BILL OF QUANTITIES		
	Total Carried to Collection Makuyu Substation page 1		
	Total Carried to Collection Makuyu Substation page 2		
	Total Carried to Collection Makuyu Substation page 3		
	Total Carried to Collection Makuyu Substation page 4		
	SUB-TOTAL- MAKUYU SUBSTATION ELECTRIC FENCE		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:

MAMLAKA SUBSTATION CCTV

Bill of Quantities Mamlaka Substation Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	10				
B.	16-Channel NVR and storage Server upto 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	10				
D.	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Mamlaka page 1						

Bill of Quantities Mamlaka Page 2							
No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
G.	Allow for cabling, ducting and necessary accessories	LOT	1				
H.	Network Devices accessories&cabinets- 1-Edge sitches,0 core switch	LOT	1				
I.	3 Kva true online UPS	NO	1				
J.	Allow for integration of the system to existing GENETIC server	LOT	1				
K.	Client Work station	LOT	1				
L.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
M.	Biometric Access Control cards	No.	200				
	Total Carried to Collection Mamlaka page 2						

	SUMMARY PAGE MAMLAKA SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Mamlaka Substation		
	Total Carried to collection Page 2 Mamlaka Substation		
	SUB-TOTAL-MAMLAKA SUBSTATION-IP- CCTV &ACCESS		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:

THIKA INDUSTRIAL SUBSTATION CCTV

Bill of Quantities Thika Industrial Substation Page 1							
N o	Item Description	Unit	QT Y	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No.	10				
B.	16-Channel NVR and storage Server upto 12TB	No.	1				
C.	Genetec Video License (per Camera).	No.	10				
D.	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
E.	40 Inch 1080P LED Monitor C/W mount accessories	No.	0				
F.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
G.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Thika Industrial page 1						

Bill of Quantities Thika Industrial Page 2							
No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Number s
J	Allow for cabling, ducting and necessary accessories	LOT	1				
K	Network Devices accessories&cabinets- 1-Edge sitches,0 core switch	LOT	1				
M	3 Kva true online UPS	NO	1				
P	Allow for integration of the system to existing GENETIC server	LOT	1				
R	Client Work station	LOT	1				
S	Installation, Testing and Commissioning to client satisfaction	LOT	1				
T	Biometric Access Control cards	No.	200				
	Total Carried to Collection Thika Industrial page 2						

	SUMMARY PAGE THIKA INDUSTRIAL SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Thika Industrial Substation		
	Total Carried to collection Page 2 Thika Industrial Substation		
	SUB-TOTAL-THIKA INDUSTRIAL SUBSTATION-IP- CCTV &ACCESS		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:

SARMACH SUBSTATION CCTV

Bill of Quantities Sarmach Substation Page 1							
N o	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
A.	5 MPX, WDR Fixed Dome Camera	No .	10				
B.	16-Channel NVR and storage Server upto 12TB	No .	1				
C.	Genetec Video License (per Camera).	No .	10				
D.	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Do ors	2				
E.	32 Inch 1080P LED Monitor C/W mount accessories	No .	1				
F.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No .	2				
	Total Carried to Collection Sarmach page 1						

Bill of Quantities Sarmach Page 2							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
G.	Allow for cabling, ducting and necessary accessories	LOT	1				
H.	Network Devices accessories&cabinet s-1-Edge switches,0 core switch	LOT	1				
I.	3 Kva true online UPS	NO	1				
J.	Allow for integration of the system to existing GENETIC server	LOT	1				
K.	Client Work station	LOT	1				
L.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
M	Biometric Access Control cards	No.	200				
	Total Carried to Collection Sarmach page 2						

	SUMMARY PAGE SARMACH SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Sarmach Substation		
	Total Carried to collection Page 2 Sarmach Substation		
	SUB-TOTAL-SARMACH SUBSTATION-IP- CCTV &ACCESS		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:

VILLA FRANCA SUBSTATION CCTV

Bill of Quantities Villa Franca Substation Page 1							
N o	Item Description	Unit	QT Y	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
B	5 MPX, WDR Fixed Dome Camera	No.	10				
	16-Channel NVR and storage Server upto 12TB	No.	1				
E	Genetec Video License (per Camera).	No.	10				
F	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
H	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Villa Franca page 1						

Bill of Quantities Villa Franca Page 2							
No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
J	Allow for cabling, ducting and necessary accessories	LOT	1				
K	Network Devices accessories&cabinet s-1-Edge sitches,0 core switch	LOT	1				
M	3 Kva true online UPS	NO	1				
P	Allow for integration of the system to existing GENETIC server	LOT	1				
R	Client Work station	LOT	1				
S	Installation, Testing and Commissioning to client satisfaction	LOT	1				
T	Biometric Access Control cards	No.	200				
Total Carried to Collection Villa Franca page 2							

	SUMMARY PAGE VILLA FRANCA SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Villa Franca Substation		
	Total Carried to collection Page 2 Villa Franca Substation		
	SUB-TOTAL-VILLA FRANCA SUBSTATION-IP- CCTV &ACCESS		

Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS:**WESTLANDS SUBSTATION CCTV**

Bill of Quantities Westlands Substation Page 1							
N o	Item Description	Unit	QTY	Coun try of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
						KES(Vat Exc)	
B	5 MPX, WDR Fixed Dome Camera	No.	10				
	16-Channel NVR and storage Server upto 12TB	No.	1				
E	Genetec Video License (per Camera).	No.	10				
F	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	2				
	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				
H	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Westlands page 1						

Bill of Quantities Westlands Page 2							
No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numb ers
J	Allow for cabling, ducting and necessary accessories	LOT	1				
K	Network Devices accessories&cabinet s-1-Edge sitches,0 core switch	LOT	1				
M	3 Kva true online UPS	NO	1				
P	Allow for integration of the system to existing GENETIC server	LOT	1				
R	Client Work station	LOT	1				
S	Installation, Testing and Commissioning to client satisfaction	LOT	1				
T	Biometric Access Control cards	No.	200				
	Total Carried to Collection Westlands page 2						

	SUMMARY PAGE WESTLANDS SUBSTATION-IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Westlands substation		
	Total Carried to collection Page 2 Westlands Substation		
	SUB-TOTAL-WESTLANDS SUBSTATION-IP- CCTV &ACCESS		

**Lot 5: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS
TECHNICAL TRAINING**

Bill of Quantities Category 5-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Manufacturers Training-3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
	Total Carried to collection Bill of Quantities Lot 5- Technical Training Page 1						

	SUMMARY PAGE lot 5 BILL OF QUANTITIES: INSTALLATION OF ELECTRIC FENCES &INTRUSION SYSTEM FOR KEY SUBSTATIONS				
	Sub-Total Westlands Substation Electric Fence				
	Sub-Total Westlands Substation Electric Fence				
	Sub-Total Nairobi North Substation Electric Fence				
	Sub-Total Kiboko Substation Electric Fence				
	Sub-Total Kipevu Substation Electric Fence				
	Sub-Total Webuye Substation Electric Fence				
	Sub-Total Mamlaka Substation CCTV & Access				
	Sub-Total Kipevu Substation CCTV & Access				
	Sub-Total Mamlaka Substation CCTV & Access				
	Sub-Total Thika industrial Substation CCTV & Access				
	Sub-Total Sarmat Substation CCTV & Access				
	Sub-Total Villa Franka Substation CCTV & Access				
	Sub-Total Westlands Substation CCTV & Access				
	Sub-Total Makkuyu Substation Electric Fence				
	Sub-total Total Carried to collection Bill of Quantities Lot 5-Technical Training Page 1				
	SUB-TOTAL- SECURITY SYSTEMS FOR FACILITIES AND INFRASTRUCTURE				
	Add 16% Vat				
	SUB-TOTAL				
	GRAND TOTAL- CATEGORY 5: INSTALLATION OF ELECTRIC FENCES & INTRUSION SYSTEM FOR KEY SUBSTATIONS				

Lot 5-RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

Name of Tenderer_____Signature & Official Stamp

SECTION VIII (F)–BILLS OF QUANTITIES

(See specifications in a separate section)

Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES**ELDORET DEPOT STORES/OFFICE ALARMS BILL OF QUANTITIES PAGE 1**

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	CONTROL PANEL WITH SOFTWARE AND PROGRAMMING 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as Pro - Sys 128 or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
B	MOTION DETECTORS (PIR) Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	No	8		
C	POWER SUPPLY UNIT(P.S.U.) Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	No	2		
D	4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		
E	Extra Remotes Buttons	NO	2		

F	SIREN Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output- 11dBA@1M, standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	1		
	Total Carried to collection Page 1 Eldoret Depot Alarms				

ELDORET DEPOT STORES/OFFICE ALARMS BILL OF QUANTITIES PAGE 2

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	Extra Keypad	NO	1		
E	Cabling, cabinets and associated accessories	Lot	1		
G	PANIC BUTTONS Strong mechanical composition.	No.	4		
H	ADVANCED GSM/GPRS MODULE Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
J	Installation, Training testing and commissioning	Lot	1		
K	1 year maintenance of the Alarm systems	Quarter	4		
L	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
M	HD Magnetic Contacts	No	2		
	Total Carried to collection Page 2 Eldoret Depot Alarms				

No	Item Description	Amount
		KES
A	Total Carried to collection Page 1 Eldoret Depot Alarms	
B	Total Carried to collection Page 2 Eldoret Depot Alarms	
C	Sub-total-2 Intruder Alarms	
	TOTAL CARRIED TO COLLECTION ELDORET DEPOT STORES/OFFICE ALARMS	

Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES

NAIVASHA BANKING HALL ALARMS BILL OF QUANTITIES PAGE 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	CONTROL PANEL WITH SOFTWARE AND PROGRAMMING 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as Pro - Sys 128 or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
B	MOTION DETECTORS (PIR) Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	NO	8		
C	POWER SUPPLY UNIT(P.S.U.) Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	NO	1		
D	4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		

F	SIREN Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	1		
	Total Carried to collection Page 1 Naivasha Banking Hall Alarms				

NAIVASHA BANKING HALL ALARMS BILL OF QUANTITIES PAGE 2

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	Extra Keypad	NO	1		
E	Cabling, cabinets and associated accessories	Lot	1		
G	PANIC BUTTONS Strong mechanical composition.	No.	11		
H	ADVANCED GSM/GPRS MODULE Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
J	Installation, Training testing and commissioning	Lot	1		
K	1 year maintenance of the Alarm systems	Quarter	4		
L	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
M	HD Magnetic Contacts	No	2		
	Total Carried to collection Page 2 Naivasha Banking Hall Alarms				

SUMMARY PAGE NAIVASHA BANKING HALL ALARMS

No	Item Description	Amount
		KES
A	Total Carried to collection Page 1 Naivasha Banking Hall Alarms	
B	Total Carried to collection Page 2 Naivasha Banking Hall Alarms	
C	Sub-total-2 Naivasha Banking Hall Alarms	
	TOTAL CARRIED TO COLLECTION NAIVASHA BANKING HALL ALARMS	

Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES

UKUNDA STORES ALARMS BILL OF QUANTITIES PAGE 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	CONTROL PANEL WITH SOFTWARE AND PROGRAMMING 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as Pro - Sys 128 or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
B	MOTION DETECTORS (PIR) Indoor Dual element sensor.12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	No	6		
C	POWER SUPPLY UNIT(P.S.U.) Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	NO	1		
D	4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		
E	Extra Remotes Buttons	NO	1		

F	SIREN Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	1		
	Total Carried to collection Page 1 Ukunda Stores Alarms				

UKUNDA STORES ALARMS BILL OF QUANTITIES PAGE 2

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
E	Cabling, cabinets and associated accessories	Lot	1		
G	PANIC BUTTONS Strong mechanical composition.	No.	4		
H	ADVANCED GSM/GPRS MODULE Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
J	Installation, Training testing and commissioning	Lot	1		
K	1 year maintenance of the Alarm systems	Quarter	4		
L	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
M	HD Magnetic Contacts	No	2		
	Total Carried to collection Page 2 Ukunda Stores Alarms				

No	Item Description	Amount
		KES
A	Total Carried to collection Page 1 Ukunda Stores Alarms	
B	Total Carried to collection Page 2 Ukunda Stores Alarms	
C	Sub-total-2 Ukunda Stores Alarms	
	TOTAL CARRIED TO COLLECTION UKUNDA STORES ALARMS	

Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES

NAIROBI SOUTH STORES ALARMS BILL OF QUANTITIES PAGE 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	CONTROL PANEL WITH SOFTWARE AND PROGRAMMING 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as Pro - Sys 128 or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	3		
B	MOTION DETECTORS (PIR) Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	No	16		
C	POWER SUPPLY UNIT(P.S.U.) Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	No	4		
D	4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	2		
E	Extra Remotes Buttons	NO	2		
F	SIREN Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-11dBA@1M,standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	3		
	Total Carried to collection Page 1 Nairobi South Stores Alarms				

NAIROBI SOUTH STORES ALARMS BILL OF QUANTITIES PAGE 2

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A.	A GSM Monitoring Tablet	NO	1		
B.	ZONE EXPANDER MODULE Compatible with supplied alarm control panel and related modules and accessories.	NO	2		
C.	Cabling, cabinets and associated accessories	Lot	1		
D.	CEILING MOUNT MOTION DETECTOR detection range 12m(40ft) adjustable height (between 1.5m-5.1m) Dual MW + PIR technologies Microprocessor controlled Patented true temperature compensation Superior fluorescent interference rejection Superior RFI immunity LED walk test display Alternate polarity pulse count		3		
E.	PANIC BUTTONS Strong mechanical composition.	No.	6		
F.	ADVANCED GSM/GPRS MODULE Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	3		
	Installation, Training testing and commissioning	Lot	1		
G.	1 year maintenance of the Alarm systems	Quarter	4		
H.	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
I.	HD Magnetic Contacts	No	7		
	Total Carried to collection Page 2 Nairobi South Stores Alarms				

No	Item Description	Amount
		KES
A	Total Carried to collection Page 1 Nairobi South Stores Alarms	
B	Total Carried to collection Page 2 Nairobi South Stores Alarms	
C	Sub-total-2 Nairobi South Stores Alarms	
	TOTAL CARRIED TO COLLECTION NAIROBI SOUTH STORES ALARMS	

Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES

KISII STORES ALARMS BILL OF QUANTITIES PAGE 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A	CONTROL PANEL WITH SOFTWARE AND PROGRAMMING 16-zones input expandable to more than 40 zones and with Keypad zones LCD Keypad with infrared receiver and battery as Pro - Sys 128 or equal and approved. At least more than 4-zones partitioning Accommodate more than 50 user codes 4 or more PGM (programmable output) Allow for IP Module and GSM connection to interface with computers, printer and other computer networks. GSM connectivity to allow events communication via mobile	NO	1		
B	MOTION DETECTORS (PIR) Indoor Dual element sensor. 12m (40ft), 110 view angle. False alarms reduction facilities. Interlock sensor geometry. Automatic temperature compensation. Sensitivity adjustment. Protection from UV rays.	No	11		
C	POWER SUPPLY UNIT(P.S.U.) Complete with back-up battery (12v, 7AH). Output current 3A. Output voltage 13.6-14vdc on mains power. Load regulation 5% Battery recharges 13 hours.	No	11		
D	4-Channel LONG RANGE ALARM REMOTE RECEIVER KIT Operating voltage 12vdc. Operating range more than 200m radius. Dip-switch coding facility Momentary/latching relay contacts Complete with two remote buttons.	NO	1		
E	Extra Remotes Buttons	NO	0		
F	SIREN: Complete unit with built-in strobe Operating voltage 10-14.5vdc with reverse polarity protection. current(hold-off) siren-230mA(typical) Siren output-111dBA@1M, standby 108dBA@1M. Strobe flash rate-120/min,standby 30/min.	NO	1		
	Total Carried to collection Page 1 Kisii Stores Alarms				

KISII STORES ALARMS BILL OF QUANTITIES PAGE 2

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
A.	A GSM Monitoring Tablet	NO	1		
B.	Cabling, cabinets and associated accessories	Lot	1		
C.	CEILING MOUNT MOTION DETECTOR detection range 12m(40ft) adjustable height (between 1.5m-5.1m) Dual MW + PIR technologies Microprocessor controlled Patented true temperature compensation Superior fluorescent interference rejection Superior RFI immunity LED walk test display Alternate polarity pulse count		2		
D.	PANIC BUTTONS Strong mechanical composition.	No.	4		
E.	ADVANCED GSM/GPRS MODULE Central station events reporting Via Voice/sms/E-mail To transmit zone activations and other alarm events such as specific alarm activation zones, arm/disarm users plus time of arm/disarm, loss of power on the system, system failure/restore and others. Support both prepaid and post-paid SIM Cards. Support remote upload and download.	No.	1		
F.	1 year maintenance of the Alarm systems	Quarter	4		
G.	Guard Monitoring unit Complete with 10 Clocking Points as per the Specifications	Lot	1		
H.	HD Magnetic Contacts	No	1		
	Total Carried to collection Page 2 Kisii Stores Alarms				

No	Item Description	Amount
		KES
A	Total Carried to collection Page 1 Kisii Stores Alarms	
B	Total Carried to collection Page 2 Kisii Stores Alarms	
C	Sub-total Kisii Stores Alarms	
	TOTAL CARRIED TO COLLECTION KISII DEPOT STORES ALARMS	

No	Item Description	Amount
		KES
A	Total Carried to collection Page 1 Kisii Stores Alarms	
B	Total Carried to collection Page 2 Kisii Stores Alarms	
C	Sub-total Kisii Stores Alarms	
	TOTAL CARRIED TO COLLECTION KISII DEPOT STORES ALARMS	

Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES

ELDORET DEPOT IP- CCTV &ACCESS CONTROL							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount KES(Vat Exc)	Part Numbers
A.	5 MPX, WDR Fixed Dome Camera	No.	52				
B.	64-Channel NVR and storage Server upto 40TB	No.	1				
C.	Genetec Video License (per Camera).	No.	52				
D.	IP Access Control System at Entry (Facial Reader) and Exit (Proximity Reader) complete with IP readers with inbuilt controller module, Door Maglock, Door Closure and all necessary accessories to complete their installation and which must be compatible and shall be linked to existing GENETIC network.	Doors	4				
E.	40 Inch 1080P LED Monitor C/W mount accessories	No.	1				
F.	32 Inch 1080P LED Monitor C/W mount accessories	No.	1				

G.	Gig Ethernet To Gig rack-mount Fiber optic Media Converter 30km Range industrial type	No.	2				
	Total Carried to Collection Eldoret Depot Cctv page 1						

Bill of Quantities Eldoret Depot Cctv Page 2							
No	Item Description	Unit	QTY	Countr y of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
H.	Allow for cabling, ducting and necessary accessories		1				
I.	Network Devices accessories&cabinets- 5 Edge sitches,1 core switch	LOT	1				
J.	6 Kva true online UPS	NO	1				
K.	3 Kva true online UPS	NO	2				
L.	1.5 Kva true online UPS	NO	2				
M.	Allow for integration of the system to existing GENETIC server	LOT	1				
N.	Client Work station	LOT	1				
O.	Installation, Testing and Commissioning to client satisfaction	LOT	1				
	Total Carried to Collection Eldoret Depot Cctv page 2						

	SUMMARY PAGE ELDORET DEPOT IP- CCTV &ACCESS CONTROL CCTV BILL OF QUANTITIES		
	Total Carried to collection Page 1 Eldoret Depot Cctv		
	Total Carried to collection Page 2 Eldoret Depot Cctv		
	SUB-TOTAL- ELDORET DEPOT -IP- CCTV &ACCESS		

**Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES
TECHNICAL TRAINING**

Bill of Quantities Lot 6-Technical Training Page 1							
No	Item Description	Unit	QTY	Country of origin	Rate in KES(Vat Exc)	Amount	Part Numbers
A	Manufacturers Training-3no technical persons (Factor only the cost of training i.e venue ,trainers, transport to and from the training venue and certification)	LOT	1				
	Total Carried to collection Bill of Quantities Lot 6-Technical Training Page 1						

	SUMMARY PAGE Lot 6 BILL OF QUANTITIES: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES		
	Sub-Total Eldoret depot Intruder Alarms		
	Sub-Total Naivasha Intruder Alarms		
	Sub-Total Ukunda Banking hall-Stores Intruder Alarms		
	Sub-Total Nairobi South Depot Alarms Intruder Alarms		
	Sub-Total Kisii Depot Alarms Intruder Alarms		
	Sub-Total Eldoret depot CCTV		
	Sub-total Total Carried to collection Bill of Quantities Lot 6-Technical Training Page 1		
	sub-total- Installation of intruder alarms/intrusion detection systems commercial offices		
	Add 16% Vat		
	SUB-TOTAL		
	GRAND TOTAL- Lot 6: INSTALLATION OF INTRUDER ALARMS/INTRUSION DETECTION SYSTEMS COMMERCIAL OFFICES		

LOT 6-RECOMMENDED SCHEDULE OF SPARE PARTS

[illegible]

Name of Tenderer_____Signature & Official Stamp

5. **The Summary to the Bills of Quantities** will take this form or some other form but including these items.

Item	Description	Total Price Local Currency (Ksh.)
1	Sub-Total Lot 1-Installation of CCTV major Distribution/ Transmission substations	
2	Sub-Total Schedule Lot 2- Installation of CCTV for key offices	
3	Sub-Total Schedule Lot 3- Installation of Access Control in Substations & key offices	
4	Sub-Total Schedule Lot 4- Security systems for facilities and infrastructure	
5	Sub-Total Schedule Lot 5- Installation of Electric Fences for Key Substations	
6	Sub-Total Schedule Lot 6- Installation of Intruder alarms	
	TOTAL	
	16%VAT	
GRAND TOTAL Carried forward to Form of Tender in Kshs. VAT inclusive		