



**b) Schedule of Sites to be serviced and maintained.**

**NB:** All CCTV systems are managed or are intended to be managed via Existing GENETIC Unified Security Management Software. Bidders Must Demonstrate ability, authorization and certification on **GENETIC as well as Regional NAS where applicable.**

A1 (b) Schedule of Sites to be serviced and maintained Category 1: CCTV and Access Control  
As tabulated in *C (a) Existing Faults) Category 1: CCTV*

**B) SCHEDULE OF MAINTENANCE ROUTINES CATEGORY 1: CCTV AND ACCESS CONTROL**

This schedule has been prepared to indicate the minimum requirements for the preventative maintenance of the CCTV system. The Contractor shall be responsible for all of the maintenance necessary to ensure that the complete CCTV system as specified in this Maintenance Agreement achieves a constant high quality operation.

The schedule indicates the maintenance tasks required but does not state how they will be carried out. All maintenance activities will be completed in accordance with the equipment manufacturer's guidelines, recommendations and good working practices.

The following symbols are used:-

M Monthly (calendar)  
3M Quarterly (3 monthly)  
6M Semi-annually (6 monthly)  
Y Annually

In all instances where preventative maintenance work has identified the need to replace equipment, items or components, this work shall be carried out under the maintenance function as defined within the Contract.

**B (i) Schedule of maintenance routines category 1: CCTV**

No	Code	Description	Service description	Frequency	Remarks
	<b>Cameras</b>				
	C1	<i>Camera External</i>	<ul style="list-style-type: none"> <li>• <i>Visual inspect, check weatherproof gasket for seal, rectify where necessary.</i></li> <li>• <i>Check internal of housing for moisture rectify where necessary.</i></li> </ul>	6months	

			<ul style="list-style-type: none"> <li>• Check external joints, glands, make off and re-seal where necessary</li> <li>• Clean housing glass. Replace where necessary.</li> </ul>		
	C2	<i>Pan Tilt Mechanism</i>	<ul style="list-style-type: none"> <li>• Check operation of pan tilt mechanism Reset limits where necessary.</li> <li>• Check gearbox, bearings, etc. Adjust or replace where necessary</li> <li>• Check pan tilt controller for ingress of moisture. Replace seal where necessary</li> <li>• Check pan tilt operation. Re-set to manufacturer's specification. Replace electronics where necessary</li> </ul>	3 months	
	C3	<i>Camera Bracket</i>	<p>Check bracket mounts/poles for corrosion or Mounts/Poles failure and damage to paint Rub down, repaint or replace where necessary</p> <p>Check operation of access door locks, lubricate as necessary</p> <p>Check securing of fixings and fastenings tighten/adjust as necessary</p>	3 months	
	C4	<i>Camera Lens</i>	<ul style="list-style-type: none"> <li>• Remove optical lens. Inspect for moisture seal failure. Rectify or replace where necessary</li> <li>• Clean optical lens with proprietary soft lens cloth and refit.</li> <li>• Check operation of iris and zoom.</li> <li>• Adjust where necessary</li> </ul>	3 months	
	C5	<i>Camera Performance</i>	<ul style="list-style-type: none"> <li>• Measure and record camera's performance.</li> <li>• Provide hard /soft copy of waveform trace</li> </ul>	3 months	
	C6	<i>Telemetry Unit(where applicable)</i>	<ul style="list-style-type: none"> <li>• Check all functions operate correctly</li> <li>• Recalibrate where necessary</li> <li>• Check video loop through</li> </ul>	3 months	

			<ul style="list-style-type: none"> <li>• Check video loop through</li> <li>• Check data stream</li> <li>• Check button operation</li> <li>• Check BNC or other connections</li> <li>• Rectify or replace where necessary.</li> </ul>		
	C7	Cables and ducting	<ul style="list-style-type: none"> <li>• Check cable protection ducts, conduits, mini-trucking etc to ensure proper physical conditions.</li> <li>• Check all cables for damage, continuity, etc. Replace where necessary</li> </ul>	3 months	
	C8	Connections	Check all connections, plugs for damage continuity, moisture ingress Check BNC, RG 45 and other connectors. Replace where necessary	3 months	
	D1	DVR /NVR performance/functionality	<ul style="list-style-type: none"> <li>• Check all functions operate correctly(Recording, time, playbacks, Event logs, voltages, resolution, software, drives, streaming, network, data base, etc</li> <li>• Check all control functions</li> <li>• Reconfigure to right performance specifications/factory resets where necessary.</li> </ul>	3 months	
	D2	DVR/NVR /Video Encoder Storage and recording status	<ul style="list-style-type: none"> <li>• Check and service recording drives and hardisks</li> <li>• Check capacity and advice or rectify storage capacity issues.</li> </ul>	3 months	
	D3	DVR/NVR /Video encoder Connections and buttons	<ul style="list-style-type: none"> <li>• Check BNC/RG 45 and other connections.</li> <li>• Check button operation including remote buttons.</li> <li>• Check Network connectivity and communication.</li> <li>• Cleaning and blowing as per</li> <li>• Rectify where necessary.</li> </ul>	3 months	
	D4	DVR/NVR /Video encoder moveable parts	Check all moveable parts e.g. drives, control knobs, Fans, Motors and others) of DVR or NVR and provide necessary	6 months	

			<i>service to the parts according to IEE standards.</i>		
	M1	<i>Monitors</i>	<ul style="list-style-type: none"> <li>• <i>Check video signal for level.</i></li> <li>• <i>Check BNC/RJ and other connections. Remake or</i></li> <li>• <i>Inspect display tube. Replace where necessary</i></li> <li>• <i>Check condition of cables.</i></li> <li>• <i>Inspect display tube.</i></li> <li>• <i>Adjust, rectify or Replace where necessary</i></li> <li>• <i>Perform any factory resets if need be.</i></li> </ul>	3 months	
	PC1	<i>Control System and PC</i>	<p><i>Clean PC.</i></p> <p><i>Clean filters to PC fans.</i></p> <p><i>Check security of cable connections</i></p> <p><i>Check hard disks</i></p> <p><i>Software checks and upgrades.</i></p> <p><i>Check antivirus and malware protection.</i></p>	3 months	
	E1	<i>Electrical Power Supplies</i>	<ul style="list-style-type: none"> <li>• <i>Check all input and output parameters (Voltage, current, power, frequency etc.) and ensure its within accepted nominal values as per IEE standards.</i></li> <li>• <i>Check all surge/overvoltage protection units to ensure correct functionality.</i></li> <li>• <i>Check operation of Fuses and circuit breakers</i></li> <li>• <i>Check for ingress of moisture at distribution boards, plugs and sockets</i></li> <li>• <i>Check all cables for damage, continuity, etc</i></li> <li>• <i>Check earthing connections</i></li> <li>• <i>Fixed wiring inspection and test to BS 7671 standards.-(after 2 years)</i></li> <li>• <i>Rectify where necessary.</i></li> </ul>	3 months	

	All CCTV equipment	<ul style="list-style-type: none"> <li>• Clean or blow to prevent dust, dirt or any form of corrosion.</li> <li>• Cleaning material and process shall be as per IEE standards of cleaning electrical equipment and in accordance with safety regulations.</li> </ul>	3 months	
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**B(a)** Schedule of Service and Maintenance Routines category 1: CCTV

**B (ii)** Schedule of maintenance routines category 1: Access Control System

No	Code	Description	Service description	Frequency	Remarks
	<b>Equipment</b>				
	ACH	External housings	<ul style="list-style-type: none"> <li>• Visual inspect, check weatherproof gasket for seal, rectify where necessary.</li> <li>• Check internal of housing for moisture rectify where necessary/applicable.</li> <li>• Check external joints, glands, make off and re-seal where necessary</li> <li>• Clean housing and Replace where necessary.</li> </ul>	6months	
	AMP	Moveable Access control Parts/mechanism	<ul style="list-style-type: none"> <li>• Check operation of all moveable mechanisms. Make adjustments where necessary.</li> <li>• Check gearbox, bearings, etc. for all moveable parts for the doors/ gates, barriers, Bollards, door/gate control, turnstiles, speed gates etc. Adjust, service/grease or replace where necessary</li> <li>• Check Door Closures against leakages and loose connection Replace l where necessary</li> <li>• Check and advise on door/Gate/Barrier/Speed gate open/close mechanism(functionality of door hinges, locks, handles etc.)</li> </ul>	3 months	

ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE

	AMB	<i>Mounting Bracket and poles</i>	<i>Check bracket mounts/poles for corrosion or Mounts/Poles failure and damage to paint Rub down, repaint or replace where necessary Check securing of fixings and fastenings tighten/adjust as necessary</i>	3 months	
	ACP	<i>Access Control Performance</i>	<ul style="list-style-type: none"> <li>• <i>Measure and record Access control equipment performance Parameters (Voltages, Power, Current etc. for readers, controllers, Power supplies/UPS,</i></li> <li>• <i>Provide hard /soft copy of waveform trace where necessary/applicable.</i></li> </ul>	3 months	
	ADC	<i>Door Controllers and readers</i>	<ul style="list-style-type: none"> <li>• <i>Check all functions operate correctly</i></li> <li>• <i>Check network /communication with readers, servers and other related devices</i></li> <li>• <i>Check all terminations/ other connections</i></li> <li>• <i>Rectify or replace where necessary.</i></li> </ul>	3 months	
	AC1	<i>Cables and ducting</i>	<ul style="list-style-type: none"> <li>• <i>Check cable protection ducts, conduits, mini-trucking etc to ensure proper physical conditions.</i></li> <li>• <i>Check all cables for damage, continuity, etc. Replace where necessary</i></li> </ul>	3 months	
	AC2	<i>Connections</i>	<i>Check all connections, plugs for damage continuity, moisture ingress Check and Replace where necessary</i>	3 months	
	ACS	<i>Server performance /functionality</i>	<ul style="list-style-type: none"> <li>• <i>Check all functions operate correctly (Storage/database, time, Events logs, voltages, resolution, software, drives, streaming, network, database, etc</i></li> <li>• <i>Check all control functions</i></li> <li>• <i>Reconfigure to right performance specifications/factory resets where necessary.</i></li> </ul>	3 months	

			<ul style="list-style-type: none"> <li>• Check and perform necessary software upgrades.</li> <li>• Check Health condition of database-functionality, being up-to date, back-ups and replication/redundancy.</li> <li>• Check antivirus and malware protection</li> </ul>		
	ACM	Monitors	<ul style="list-style-type: none"> <li>• Check connections and quality signal level/connection.</li> <li>• Inspect display tube. Replace where necessary</li> <li>• Check condition of cables.</li> <li>• Adjust, rectify or Replace where necessary</li> <li>• Perform any factory resets if need be.</li> </ul>	3 months	
	APC	Access Control Management Computer/server/Workstations	<p>Clean PC. Clean filters to PC fans. Check security of cable connections Check hard disks Software checks and upgrades. Check antivirus and malware protection.</p>	3 months	
	APS	Electrical Power Supplies	<ul style="list-style-type: none"> <li>• Check all input and output parameters (Voltage, current, power, frequency etc.) and ensure its within accepted nominal values as per IEE standards.</li> <li>• Check all surge/overvoltage protection units to ensure correct functionality.</li> <li>• Check operation of Fuses and circuit breakers</li> <li>• Check for ingress of moisture at distribution boards, plugs and sockets</li> <li>• Check all cables for damage, continuity, etc</li> <li>• Check earthing connections</li> <li>• Fixed wiring inspection and test to BS 7671 standards. -(after 2 years)</li> </ul>	3 months	



			<ul style="list-style-type: none"> <li>• Rectify where necessary.</li> </ul>		
	AC	All Access Control System Equipment	<ul style="list-style-type: none"> <li>• Clean or blow to prevent dust, dirt or any form of corrosion.</li> <li>• Cleaning material and process shall be as per IEE standards of cleaning electrical equipment and in accordance with safety regulations.</li> </ul>	3 months	

*B(ii) Schedule of Service and Maintenance Routines category 1: ACCESS CONTROL*

Item No.	Description	Unit Of Measure	Quantity	*Performance Period OR Performance Start Date	*Performance End Date
1	<b>Repair of faulty CCTV as per schedule or requirement</b>	LOT	1	Contract signing date	3 months after award
2	2 Year service and maintenance contract done quarterly in all sites	NO.	8	Date on completion of repairs above	2 years after repairs
3	2 Years GENETIC security management Support and maintenance	LOT	1	Date on completion of repairs above	2 years after initial upgrade and training.

**C. Schedule of Repair of Defects.**

Site Visit to all sites by contractor shall be mandatory.

*C (a) Existing Faults) Category 1: CCTV*

Item No.	Description	Location	Nature of Fault	Proposed Remedy
	<b>Nairobi Region</b>			
1.	Electricity house Nairobi	Harambee Avenue-Nairobi	➤ Out of market ACTi NVR	➤ Replace 1no ACTi NVR as per specs

			<ul style="list-style-type: none"> <li>➤ Slow workstation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Install relevant Licenses including Failover.</li> <li>➤ Install 1no Server</li> <li>➤ Replace 1no Workstation</li> <li>➤ Integrate the NVR to Genetec at NCC and allow viewing at Stima Plaza control room.</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Security systems network Sub-netting and Reassignment of New IP addresses to all Security devices.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in AutoCad</li> </ul>
2.	Isiolo Road bulk stores and workshop	Isiolo road-Nairobi	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of all Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

3.	Jogoo Road Pay office	Jogoo road- Nairobi	Unstable analogue cameras	<ul style="list-style-type: none"> <li>➤ Replace 2no analogue cameras with IP and link to Genetic at NCC and Stima control.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
4.	Dandora S/S	Kangundo road- Nairobi	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
5.	Kiboko S/S	Makindu	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
6.	National Control Centre Juja	Dandora-Nairobi	None.	<ul style="list-style-type: none"> <li>➤ Upgrade and Maintain Genetec Servers, workstations and associated network equipment to the current software version.</li> <li>➤ Provide additional Licenses (GENETEC Video license <b>150no</b>, Access control <b>100no</b>, federation <b>30no</b>)</li> <li>➤ Upgrade System by providing 2no network Switch/router Cisco 3850 as described in specifications</li> <li>➤ Network reconfigurations subnetting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Install and configure GENETEC Mission Control and relevant licenses.</li> <li>➤ Draw and submit structural/building/fence</li> </ul>

				drawings and equipment layout with locations off security equipment in Autocad
7.	Cathedral sub station	Harambee Avenue-Nairobi	To be checked	<ul style="list-style-type: none"> <li>➤ System ok. Provide for Maintenance</li> <li>➤ Provide Genetec license and integrate both CCTV comprising of 14no PTZ and Access control to Genetic server at NCC and Stima both of DAHUA make.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
8.	City Centre Substation	CBD	To be checked	<ul style="list-style-type: none"> <li>➤ Repair 3No. faulty Cameras</li> <li>➤ Provide Genetec license and integrate both CCTV comprising of 26no PTZ cameras and Access control to Genetic server at NCC and Stima both of DAHUA make</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
9.	Kiu River Substation		To be checked	<ul style="list-style-type: none"> <li>➤ Repair 1No. faulty Cameras</li> <li>➤ Repair 1No. Local Client workstation (SMART PSS make)</li> <li>➤ Provide Genetec license and integrate both CCTV comprising of 19no PTZ cameras and Access control to Genetic server at NCC and Stima both of DAHUA make</li> <li>➤ Network reconfigurations subnetting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
10.	Likoni Substation	Likoni Road Nairobi	To be checked	<ul style="list-style-type: none"> <li>➤ Provide Genetec license and integrate both CCTV comprising of 17no PTZ cameras and Access control to Genetic server at NCC and Stima both of DAHUA make</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
	<b>Rift valley :central and North Rift</b>			
11.	Lanet depot	Lanet- Nakuru	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
12.	Naivasha sub-station and yard	Naivasha	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
13.	Electricity House Nakuru	Nakuru town	None	<ul style="list-style-type: none"> <li>➤ Repair 1no.Servers, UPS and 3no. Cameras.</li> <li>➤ Cable and install 5no cameras.</li> <li>➤ Upgrade Genetec for the servers and workstations to current software version to Match NCC current GENETEC software version.</li> <li>➤ the upgraded version at NCC.</li> <li>➤ Federation License and integrate to NCC Server and Stima.</li> <li>➤ Install GENETEC Mission control and relevant licenses and configurations.</li> <li>➤ Increase/Establishment of Regional local by supplying and installing/Configuring Network attached storage (NAS) with Embebed NVR,with GENETEC video movement application and licensing to increase storage to 98TB and with specs as described under</li> </ul>



				<p>Specifications(Regional Network attached Storage – NAS). Provide for Technical training cost for 4No Technical staff in security with a detailed technical training program.</p> <ul style="list-style-type: none"> <li>➤ Upgrade network by providing 1no network Switch/router Cisco 3850 as described in specifications</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
14.	Makutano	Nakuru- Eldoret Road	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

15.	Kericho Banking Hall	Kericho	Check System	<ul style="list-style-type: none"> <li>➤ Federation license and link/ integration to Genetic Server at NCC, Nakuru and Stima</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
16.	Chemosit Substation	Eldoret	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
17.	Eldoret banking hall	Eldoret	None	<ul style="list-style-type: none"> <li>➤ Replace 3No. cameras</li> <li>➤ Install 6U CCTV cabinet as per specs</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
18.	Lessos Control Station	Eldoret	Faulty WorkStation and Monitor	<ul style="list-style-type: none"> <li>➤ Network reconfigurations subnetting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install 1no Workstation loaded with all applications and including Genetec and necessary licenses to allow integration as per specifications.</li> <li>➤ Install 1no 40 Inch Monitor and configure to monitor regional stations as guided by Kplc</li> </ul>
19.	Rivatex Sub Station	Eldoret	None	<ul style="list-style-type: none"> <li>➤ Repair/Replace CCTV cabinet Fan</li> <li>➤ Network reconfigurations subnetting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
	<b>West Kenya Region</b>			
20.	Mamboleo substation	Kisumu	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations subnetting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
21.	Muhoroni Substation	Kisumu	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations subnetting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout</li> </ul>

				with locations off security equipment in Autocad
22.	Musaga substation	Kakamega	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install 1no Workstation loaded with all applications and including Genetec and necessary licenses to allow integration as per specifications.</li> <li>➤ Install 1no 40 Inch Monitor and configure to monitor regional stations as guided by Kplc.</li> </ul>
23.	Mumias substation	Mumias-Kisumu	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

24.	Kegati Substation	Kisii	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
25.	Kisii Banking hall	Kisii	None	<ul style="list-style-type: none"> <li>➤ Reinstall CCTV equipment decommissioned in Likoni stores as follows:2no Bullet Cameras,10no Domes Cameras and related equipment providing for cabling and supply of new 1no 16 Channel NVR with 12TB Storage compatible and integrated to existing Genetec Server at Stima</li> <li>➤ Federation license and link/integration to Genetic Server at NCC and Stima</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> </ul>

				<ul style="list-style-type: none"><li>➤ Assigning New IP addresses to all Network Equipment</li><li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li></ul>
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	<b>Mt Kenya Region</b>			
26.	Thika Office	Nyeri Stima-Nyeri town	Blurred analogue Cameras Uncovered zones	<ul style="list-style-type: none"> <li>➤ Replace 8no Analogue with existing IP dome cameras decommissioned from Likoni Stores .</li> <li>➤ Cable and install Additional 10no cameras and associated equipment in the reorganized offices.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
27.	Ruiru Stores/substation			<ul style="list-style-type: none"> <li>➤ Reinstall CCTV equipment decommissioned in Likoni stores as follows:18no Bullet Cameras,4no Ptz,8no Domes.</li> <li>➤ Supply and install 2no 180 Omnidirectional Cameras asper specifications.</li> <li>➤ Federation license and link/ integration to Genetic Server at NCC and Stima</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> </ul>



				<ul style="list-style-type: none"> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
28.	Kiganjo Substation		Faulty WorkStation and Monitor	<ul style="list-style-type: none"> <li>➤ Upgrade network by providing 1no network Switch/router Cisco 3850 as described in specifications</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install 1no Workstation loaded with all applications and including Genetec and necessary licenses to allow integration as per specifications.</li> <li>➤ Install 1no 40 Inch Monitor and configure to monitor regional stations as guided by Kplc</li> </ul>
29.	Nyeri Office	Nyeri Stima-Nyeri town	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

30.	Nanyuki Substation	Nanyuki	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
31.	Meru office	Meru Town	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
32.	Embu office	Embu town	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
33.	Kutus Substation	Kutus-Embu	None	<ul style="list-style-type: none"> <li>➤ Re-cable and install 6no Cameras. Network reconfigurations sub-netting of entire Security network and</li> </ul>

				<p>configuration of Network devices. Change of all network Devices Network</p> <ul style="list-style-type: none"> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
34.	Kamburu Substation	Kamburu	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
<b>Coast region</b>				
35.	Voi substation & stores	Voi	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Provide necessary licenses, configure and integrate HIKVISION CCTV system at the new substation building with GENETEC system at Electricity House Mombasa and NCC</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>

				equipment layout with locations off security equipment in Autocad
36.	Voi Office	Voi	Under installation.	<ul style="list-style-type: none"> <li>➤ Integrate to Genetec Mombasa ,NCC and Stima controls and Provide for one year maintenance.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Establishment of local storage by supplying and installing/Configuring Embebed NVR compatible with GENETEC video movement application complete with necessary licensing and with storage of 12TB and with specs as described under Specifications</li> </ul>
37.	Mariakani Substation	Voi	None	<ul style="list-style-type: none"> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

38.	Rabai Substation		Faulty WorkStation and Monitor	<ul style="list-style-type: none"> <li>➤ Supply 1no workstation and install and configure Genetec as per user instructions.</li> <li>➤ Supply 1no 40'' Monitor as per specs.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install 1no Workstation loaded with all applications and including Genetec and necessary licenses to allow integration as per specifications.</li> <li>➤ Install 1no 40 Inch Monitor and configure to monitor regional stations as guided by Kplc</li> </ul>
39.	Electricity House Mombasa	Mombasa CBD	Faulty 2no Servers ,UPS and 10no.Cameras	<ul style="list-style-type: none"> <li>➤ Repair 1no.Servers,</li> <li>➤ Replace 1no UPS</li> <li>➤ Check/Repair 10no. Cameras.</li> <li>➤ Replace 2No. Faulty Cisco SG300 POE Switch.</li> <li>➤ Upgrade servers and workstations with current Genetec version to Match Genetec current version at NCC.</li> <li>➤ Federation License and integrate to NCC Server and Stima.</li> <li>➤ Increase/Establishment of Regional local by supplying and installing/Configuring Network attached</li> </ul>

				<p>storage (NAS) with Embebed NVR,with GENETEC video movement application and licensing to increase storage to 98TB and with specs as described under Specifications(<b>Regional Network attached Storage – NAS</b>).Provide for Technical training for 4no Technical staff with a detailed technical training program.</p> <ul style="list-style-type: none"> <li>➤ Install GENETEC Mission control and relevant licenses and configurations</li> <li>➤ Upgrade network by providing 1no network Switch/router Cisco 3850 as described in specifications</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
40.	Mbaraki Depot	Mbaraki	Faulty 2no Servers ,UPS and 12no.Cameras	<ul style="list-style-type: none"> <li>➤ Repair 2no.Servers</li> <li>➤ Repair/replace 1no UPS</li> <li>➤ Check/repair 12no. Cameras.</li> <li>➤ Replace 1No. Faulty Cisco SG300 POE Switch.</li> <li>➤ Upgrade Genetec for the servers and workstations to Match that at NCC.</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Supply 2no access control enroller reader unit, configure /integrate the system and users to NCC Genetec server and Stima.</li> <li>➤ Federation License and integrate to NCC Server and Stima.</li> <li>➤ Increase local storage by 10TB</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>
41.	Nyali Pay office	Nyali town	Blurred analogue cameras	<ul style="list-style-type: none"> <li>➤ Replace 8no. analogue cameras with IP.</li> <li>➤ Replace the standalone access control system complete network based access as to be compatible and integrate with NCC Genetec server.</li> <li>➤ Supply 1No. Cisco SG300 POE Switch.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>

				equipment layout with locations off security equipment in Autocad
42.	Diani office	Ukunda/ Diani	Under installation.	<ul style="list-style-type: none"> <li>➤ Integrate to Genetec Mombasa ,NCC and Stima controls and Provide for one year maintenance.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Establishment of local storage by supplying and installing/Configuring Embebed NVR compatible with GENETEC video movement application complete with necessary licensing and with storage of 12TB and with specs as described under Specifications</li> </ul>
43.	Malindi Office	Malindi Town	Under installation.	<ul style="list-style-type: none"> <li>➤ Integrate to Genetec Mombasa ,NCC and Stima controls and Provide for one year maintenance.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices. Change of all network Devices Network</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>



				<p>equipment layout with locations off security equipment in Autocad</p> <ul style="list-style-type: none"> <li>➤ Establishment of local storage by supplying and installing/Configuring Embebed NVR compatible with GENETEC video movement application complete with necessary licensing and with storage of 12TB and with specs as described under Specifications</li> </ul>
44.	Malindi Depot			<ul style="list-style-type: none"> <li>➤ Replace Existing DVR with 16 channel Hybrid DVR compatible with Genetec and integrate the system to Existing Genetec system in Electricity house Mombasa and NCC.</li> <li>➤ Install 4no,5MPX dome/bullet IP cameras and 3no 180 Omni cameras and relocate/distribute cameras to cover the depot adequately.</li> <li>➤ Supply and install 1no SG 300 network switch.</li> <li>➤ Install 1 No. CCTV 6U cabinet and INo. 1.5KVA UPS as per specs.</li> <li>➤ Network reconfigurations sub-netting of entire Security network and configuration of Network devices.</li> <li>➤ Change of security features i.e. passwords in all equipment.</li> <li>➤ Reassigning New IP addresses to all Network Equipment</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in AutoCad</li> </ul>


**ACCESS CONTROL SYSTEMS: LOT 1(NAIROBI REGION)**  
***(THE CURRENCY MUST BE IN KENYA SHILLINGS)***

<b>CATEGORY 1 LOT 1 (NAIROBI REGION ) CCTV BILL OF QUANTITIES PAGE 1</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b>  Prices should include activities as described in details of service for both CCTV and Access control where applicable for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
1	Electricity house Nairobi	No	8		
2	Isiolo Road bulk stores and workshop	No	8		
3	Jogoo Road Pay office	No	8		
4	Dandora Substation	No	8		
5	Kiboko Substation	No	8		
6	National Control Centre Juja	No	8		
7	Cathedral sub station	No	8		
8	City Centre Substation	No	8		
9	Kiu River Substation	No	8		
10	Likoni Substation	No	8		
<b>Total Carried to collection Category 1 Lot 1 CCTV BQ Page 1</b>					
<b>CATEGORY 1 LOT 1 SLA CCTV BILL OF QUATITIES PAGE 1</b>					

<b>CATEGORY 1 LOT 1 (NAIROBI REGION ) CCTV BILL OF QUANTITIES PAGE 2</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>B</b>	<b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults for both CCTV and Access control where applicable for each as described under <b>Appendix (VII)</b> - Existing faults. Indicate NONE where no faults exist</li> </ul>				
1	Electricity house Nairobi	Item	1		
2	Isiolo Road bulk stores and workshop	Item	1		
3	Jogoo Road Pay office	Item	1		
4	Dandora S/S	Item	1		
5	Kiboko S/S	Item	1		
6	National Control Centre Juja	Item	1		
7	Cathedral sub station	Item	1		
8	City Centre Substation	Item	1		
9	Kiu River Substation	Item	1		
10	Likoni Substation	Item	1		
<b>Total Carried to collection Category 1 Lot 1 CCTV BQ Page 2</b>					
<b>CATEGORY 1 LOT 1 (NAIROBI REGION ) CCTV BILL OF QUANTITIES PAGE 2</b>					

<b>CATEGORY 1 LOT 1 (NAIROBI REGION ) CCTV BILL OF QUANTITIES PAGE 3</b>					
<b>Item Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price VAT Exclusive</b>	<b>Total Price VAT Exclusive</b>	
<p><b>Maintenance of GENETIC Unified Security Management software Platform and video/storage servers.</b> Submit a detailed separate SLA Proposal which Must include but not limited to:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly serving.(Drive Test and Optimization, Performance Reports (PMR).for all GENETIC servers and related equipment.</li> <li>• Daily System Support to KPLC users as need arise.</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer to Security control room operators and technical team.</li> <li>• Detailed and thorough Training for 4no KPLC Technical Support team in Security department on the new GENETEC version (Omni cast Video management, Synergy's access control and AUTOVU License plate recognition, Mission Control and any newly released module.</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades. Upgrade of existing software and subsequent software update released including anti-viruses.</li> <li>• Management of the Video Server at NCC and other application PC where GENETIC is installed.</li> <li>• Installation of Mission Control, configurations and related and relevant licenses as per client needs.</li> <li>• Integration of future systems as well as third party systems as need arise.</li> </ul>	LOT				
<b>Total Carried to collection Category 1 Lot 1 CCTV BQ Page 3</b>					
<b>CATEGORY 1 LOT 1 (NAIROBI REGION ) CCTV BILL OF QUANTITIES PAGE 3</b>					

<b>CATEGORY 1 LOT 1 (NAIROBI REGION ) CCTV BILL OF QUANTITIES PAGE 4</b>					
	<b>Item Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price VAT Exclusive</b>	<b>Total Price VAT Exclusive</b>
<b>A</b>	Maintenance Laptop loaded with all applications/software's as described in the specifications	No	2		
<b>B</b>	Maintenance Toolkit as per the specifications	No	2		
<b>Total Carried to collection Category 1 Lot 1 CCTV BQ Page 4</b>					
<b>CATEGORY 1 LOT 1 (NAIROBI REGION ) CCTV BILL OF QUANTITIES PAGE 4</b>					

<b>SUMMARY PAGE LOT 1(NAIROBI REGION):CCTV AND ACCESS CONTROL</b>				<b>TOTAL KSHS VAT EXLCUSIVE</b>	
Total Carried to collection BQ Page 1					
Total Carried to collection BQ Page 2					
Total Carried to collection BQ Page 3					
Total Carried to collection BQ Page 4					
<b>SUB TOTAL</b>					
<b>Add 16% VAT</b>					
<b>GRAND TOTAL</b>					

**SECTION V –CATEGORY 1 LOT 2(WEST KENYA REGION) : PRICE SCHEDULE**  
**FOR SERVICES CCTV AND ACCESS CONTROL SYSTEMS:**  
***(THE CURRENCY MUST BE IN KENYA SHILLINGS)***

<b>CATEGORY 1 LOT 2 (WEST KENYA REGION ) CCTV BILL OF QUANTITIES PAGE 1</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b>  Prices should include activities as described in details of service for both CCTV and Access control where applicable for each each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
	<b>Rift valley :central and North Rift</b>				
1	Lanet depot	No	8		
2	Naivasha sub-station and yard	No	8		
3	Electricity House Nakuru	No	8		
4	Makutano Substation	No	8		
5	Kericho Banking Hall	No	8		
6	Chemosit Substation	No	8		
7	Eldoret banking hall	No	8		
8	Lessos Control Station	No	8		
9	Rivatex Sub Station	No	8		
<b>Total Carried to collection Category 1 Lot 2 CCTV BQ Page 1</b>					
<b>CATEGORY 1 LOT 2 SLA CCTV BILL OF QUANTITIES PAGE 1</b>					

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*



<b>CATEGORY 1 LOT 2 (WEST KENYA REGION ) CCTV BILL OF QUANTITIES PAGE 2</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b></p> <p>Prices should include activities as described in details of service for both CCTV and Access control where applicable for each each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR))</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
	<b>West Kenya</b>				
10	Mamboleo substation	No	8		
11	Muhoroni Substation	No	8		
12	Musaga substation	No	8		
13	Mumias substation	No	8		
14	Kegati Substation	No	8		
15	Kisii banking hall	No	8		
<b>Total Carried to collection Category 1 Lot 2 CCTV BQ Page 2</b>					
<b>CATEGORY 1 LOT 2 SLA CCTV BILL OF QUANTITIES PAGE 2</b>					

<b>CATEGORY 1 LOT 2 (WEST KENYA REGION ) CCTV BILL OF QUANTITIES PAGE 3</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>B</b>	<b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults for both CCTV and Access control where applicable for each as described under <b>Appendix (VII)</b> - Existing faults. Indicate NONE where no faults exist</li> </ul>				
	<b>Rift valley :central and North Rift</b>				
1	Lanet depot	Item	1		
2	Naivasha sub-station and yard	Item	1		
3	Electricity House Nakuru	Item	1		
4	Makutano Substation	Item	1		
5	Kericho Banking Hall	Item	1		
6	Chemosit Substation	Item	1		
7	Eldoret banking hall	Item	1		
8	Lessos Control Station	Item	1		
9	Rivatex Sub Station	Item	1		
	<b>West Kenya</b>				
10	Mamboleo substation	Item	1		
11	Muhoroni Substation	Item	1		
12	Musaga substation	Item	1		
13	Mumias substation	Item	1		
14	Kegati Substation	Item	1		
15	Kisii Banking hall	Item	1		
	<b>Total Carried to collection Category 1 Lot 2 CCTV BQ Page 3</b>				
	<b>CATEGORY 1 LOT 2 (WEST KENYA REGION ) CCTV BILL OF QUANTITIES PAGE 3</b>				

<b>SUMMARY PAGE CATEGORY 1 LOT 2(WEST KENYA REGION):CCTV AND ACCESS CONTROL</b>				<b>TOTAL KSHS VAT EXLCLUSIVE</b>	
	Total Carried to collection BQ Page 1				
	Total Carried to collection BQ Page 2				
	Total Carried to collection BQ Page 3				
	<b>SUB TOTAL</b>				
	<b>Add 16% VAT</b>				
<b>GRAND TOTAL CATEGORY 1 LOT 2(WEST KENYA REGION):CCTV AND ACCESS CONTROL</b>					

**SECTION V –CATEGORY 1 LOT 3(MT KENYA REGION) : PRICE SCHEDULE FOR SERVICES CCTV AND ACCESS CONTROL SYSTEMS:**  
***(THE CURRENCY MUST BE IN KENYA SHILLINGS)***

<b>CATEGORY 1 LOT 3 (MT. KENYA REGION ) CCTV BILL OF QUANTITIES PAGE 1</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b>  Prices should include activities as described in details of service for both CCTV and Access control where applicable for each each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
	<b>Mt. Kenya</b>				
1	Thika Office	No	8		
2	Kiganjo Substation	No	8		
3	Nyeri Office	No	8		
4	Nanyuki Substation	No	8		
5	Meru office	No	8		
6	Embu office	No	8		
7	Kutus Substation	No	8		
8	Kamburu Substation	No	8		
9	Ruiru Stores	No	8		
<b>Total Carried to collection Category 1 Lot 3 CCTV BQ Page 1</b>					
<b>CATEGORY 1 LOT 3 SLA CCTV BILL OF QUANTITIES PAGE 1</b>					

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*



<b>SUMMARY PAGE CATEGORY 1 LOT 3(MT. KENYA REGION):CCTV AND ACCESS CONTROL</b>				<b>TOTAL KSHS VAT EXCLUSIVE</b>	
	Total Carried to collection BQ Page 1				
	Total Carried to collection BQ Page 2				
	<b>SUB TOTAL</b>				
	<b>Add 16% VAT</b>				
<b>GRAND TOTAL CATEGORY 1 LOT 3(MT. KENYA REGION):CCTV AND ACCESS CONTROL</b>					

**SECTION V –CATEGORY 1 LOT 4(COAST REGION) : PRICE SCHEDULE FOR SERVICES CCTV AND ACCESS CONTROL SYSTEMS:**

***(THE CURRENCY MUST BE IN KENYA SHILLINGS)***

<b>CATEGORY 1 LOT 4 (COAST REGION ) CCTV BILL OF QUANTITIES PAGE 1</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b> Prices should include activities as described in details of service for both CCTV and Access control where applicable for each each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system with all consumables as described in detail of service</li> </ul>				
	<b>Coast Region</b>				
1	Voi substation & stores	No	8		
2	Voi Office	No	4		
3	Mariakani Substation	No	8		
4	Rabai Substation	No	8		
5	Electricity House Mombasa	No	8		
6	Mbaraki Depot	No	8		
7	Nyali Pay office	No	8		
8	Diani office	No	4		
9	Malindi Office	No	4		
10	Malindi Depot	No	8		
<b>Total Carried to collection Category 1 Lot 4 CCTV BQ Page 1</b>					
<b>CATEGORY 1 LOT 4 SLA CCTV BILL OF QUATITIES PAGE 1</b>					

<b>CATEGORY 1 LOT 4 (COAST REGION ) CCTV BILL OF QUANTITIES PAGE 2</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Cost exclusive of Taxes</b>	<b>Cost Inclusive of Taxes</b>
<b>B</b>	<b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults for both CCTV and Access control where applicable for each as described under <b>Appendix (VII)</b> - Existing faults. Indicate NONE where no faults exist</li> </ul>				
	<b>Coast Region</b>				
1	Voi substation & stores	Item	1		
2	Voi Office	Item	1		
3	Mariakani Substation	Item	1		
4	Rabai Substation	Item	1		
5	Electricity House Mombasa	Item	1		
6	Mbaraki Depot	Item	1		
7	Nyali Pay office	Item	1		
8	Diani office	Item	1		
9	Malindi Office	Item	1		
10	Malindi Depot	Item	1		
<b>Total Carried to collection Category 1 Lot 4 CCTV BQ Page 2</b>					
<b>CATEGORY 1 LOT 4 (COAST REGION ) CCTV BILL OF QUANTITIES PAGE 2</b>					



<b>SUMMARY PAGE CATEGORY 1 LOT 4(COAST REGION):CCTV AND ACCESS CONTROL</b>				<b>TOTAL KSHS VAT EXCLUSIVE</b>	
	Total Carried to collection BQ Page 1				
	Total Carried to collection BQ Page 2				
	<b>SUB TOTAL</b>				
	<b>Add 16% VAT</b>				
	<b>GRAND TOTAL CATEGORY 1 LOT 4(COAST REGION):CCTV AND ACCESS CONTROL</b>				

**\*Notes**

**CALL OUT RATES AND DAYWORK CHARGES**

Please note that the Contractor shall complete the price schedule above noting that hourly rates and charges are fixed and uniform subject to the region. There shall be no difference in pricing in relation to the night and daytime hours, more so on weekends/public holidays.

**(PART B) PRICED LIST OF SPARES CATEGORY 1: CCTV SYSTEMS**

<b>NO.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT OF MEASURE</b>	<b>UNIT PRICE</b>
1)	8-Channel DVR	1No	
2)	16-Channel DVR	1No	
3)	4-Channel DVR	1No	
4)	NVR 8 Channel	1No	
5)	NVR 16 Channel	1No	
6)	NVR 32 Channel	1No	
7)	Video Encoder	1No	
8)	IP outdoor /indoor Camera Bullet/Box-3MPX	1No	
9)	IP indoor /outdoor Camera Bullet/Box-3MPX	1No	
10)	IP indoor/outdoor Camera Bullet/Box-5MPX	1No	
11)	IP indoor/ outdoor Camera Bullet/Box-8MPX	1No	
12)	IP indoor/ outdoor Camera Bullet/Box-12MPX	1No	
13)	IP indoor/Outdoor Cameras PTZ	1No	
14)	Analogue/HD indoor/ Outdoor Cameras Bullet/Box/Dome	1No	
15)	Analogue/HD indoor/ Outdoor PTZ Camera	1No	
16)	1A,12V Power supplies	1No	
17)	3A ,12V Power supplies	1No	
18)	8A ,12V Power supplies	1No	
19)	12-15 A ,12V Power supplies	1No	
20)	UPS 1.5KVA	1No	
21)	UPS 3KVA	1No	
22)	UPS 6KVA	1No	
23)	Power supply transformer 12v	1No	
24)	Core Network Switch-24port	1No	
25)	Edge Network Switch-24port	1No	
26)	Network switch 24-48 Port	1No	
27)	Surge and Voltage protector	1No	
28)	1M Coaxial Cable	1No	
29)	1M UTP Cable	1No	
30)	1M Fibre cable	1no	
31)	1M Power cable	1No	
32)	Video monitor 21''	1No	
33)	Video monitor 32''	1No	

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

34)	Video monitor 42''	1No	
35)	Video monitor 40''	1No	
36)	1TB Hard Disk	1No	
37)	2TB Hard Disk	1No	
38)	3TB Hard Disk	1No	
39)	4TB Hard Disk	1No	
40)	8TB Hard Disk	1No	
41)	Conduits 25mm	1No	
42)	Conduits 32mm	1No	
43)	Mini-trukin 25mm	1No	
44)	Mini-trukin 32mm	1No	
	List others if omitted. (don't include consumables like BNC, Fuses, Remote batteries etc.)		
45)	1no IP Camera License (general price)	1No	
46)	1no Access control License (general price)	1No	
47)	1no Genetec Federation License (general price)	1No	
48)	1no CCTV server as per specifications including all relevant licenses	1No	
49)	8-Channel Hybrid DVR	1No	
50)	16-Channel Hybrid DVR	1No	
51)	4-Channel Hybrid DVR	1No	
52)	8-Channel video encoder	1No	
53)	16-Channel video encoder	1No	
54)	4-Channel video encoder	1No	
55)	Client workstation as per the specifications	1No	
56)	Access door controller unit	1No	
57)	Access control card/pin reader	1No	
58)	Access control card/biometric reader	1No	
59)	Access control enroller reader	1No	
60)	Door Closure	1No	
61)	Network access storage (NAS) complete with relevant applications and licencing	1no	
	List others if omitted		
62)			
63)			
64)			
65)			
66)			
67)			
68)			

**NB: Indicate unit price. List other items omitted as per the site visit (mandatory)**

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

Date:

Tender Number and Name:

**To:**

The Kenya Power & Lighting Company Limited,  
Stima Plaza,  
Kolobot Road, Parklands,  
P.O Box 30099 – 00100,  
Nairobi, Kenya.

Dear Sirs and Madams,

Having read, examined and understood the Tender Document including all Addenda, receipt of which we hereby acknowledge, we, the undersigned Tenderer, offer to provide .....(*insert services description*) for the sum of.....(*total tender price in words and figures*) or such other sums as may be ascertained in accordance with the schedule of prices inserted by me/ us above.

Name of Tenderer

  

---

Name and Designation of authorised person signing the Tender

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

---

Signature of authorised person signing the Tender

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Stamp of Tenderer

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**SECTION IV-CATEGORY 2-SCHEDULE OF REQUIREMENTS: INTRUDER ALARM, ELECTRIC FENCES SYSTEMS AND RESPONSE SERVICES**

**A) SCHEDULE OF EQUIPMENT AND SITES TO BE MAINTAINED CATEGORY 2: INTRUDER ALARMS, ELECTRIC FENCES AND RESPONSE SERVICES**

**a) SCHEDULE OF EQUIPMENT TO BE MAINTAINED**

The Schedule of Equipment has been prepared in general terms to identify the equipment covered by the Service and Maintenance Agreement (SLA). Those items not identified but which are clearly required for the operation of the INTRUDER ALARM, ELECTRIC FENCE AND RADIO RESPONSE SERVICES shall be included within the Service and Maintenance Agreement.

**\* All support shall be provided directly by the Contractor and shall be subject to a back-to-back agreement with the various Manufacturers involved (NEMTEK for electric fence and PROSYS (RISCO) panel for the intruder alarm) where the Contractor is not the Manufacturer.**

*A (a) Schedule of Equipment to be serviced and Maintained Category 2(i) Intruder Alarms*

<b>NO.</b>	<b>ITEM DESCRIPTION</b>
<b>1</b>	Alarm control panel - PROSYS(RISCO)
<b>2</b>	Magnetic contact-HD
<b>3</b>	Magnetic contact-LD
<b>4</b>	Back up Batery 12v,7AH
<b>5</b>	Siren box,Strobe and siren
<b>6</b>	Vibration sensors
<b>7</b>	Cables( Alarm cable, power etc)
<b>8</b>	Panic Button

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

9	4-channel remote Kit
10	Single channel remote Kit
11	Zone expander
12	Keypad
13	Surge protector
14	Power Supplies (1A,3A,9A,12 etc)
15	GSM Module
16	GSM Transmitter unit(GTX)
17	SMS Module
18	SMS tablet/Phone
19	Door buzzer unit
	List others
20	
21	
22	
23	

*A (a) Schedule of Equipment to be serviced and Maintained Category 2(ii) Electric Fences Intruder Alarms*

No	Item
1.	Electric Fence Energizers(NEMTEK and Hammer)
2.	Back up Battery 12v,7AH
3.	Siren box
4.	Strobe
5.	Siren
6.	Alarm cable
7.	Power cable
8.	Switching Button/remotes/Keyswitches
9.	Keypads
10.	Surge protector
11.	power supply units
12.	HT wires
13.	Fence Poles
14.	Razor Wires
15.	Insulators
16.	Under gate Cables
17.	Earthing Rods and Earthing System
18.	Warning Signs
19.	Cable ducts, trays and routing pipes and conduits/mini-trunkin
20.	Electric Fence Energizers(NEMTEK and Hammer)
21.	GSM Module

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

22.	GSM Transmitter unit(GTX)
23.	SMS Module
	List others if omitted
24.	
25.	
26.	
27.	
28.	
29.	
30.	
31.	

**b) (i) Schedule of sites to be Serviced and Maintained Category 2 Intruder Alarms Systems**

	Station	Location	Type of systems	Status/nature of faults
	<b>Nairobi Region: LOT 1</b>			
1.	Stima Plaza	Parklands	Process	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 30 Guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply 2no Mobile Phones and install necessary APP for alarm system maintenance and system administration/management as per specs.</li> </ul>

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

2.	Electricity house Nairobi	Harambee Avenue -NRB	Network-based	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 50 Guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
3.	Isiolo road Stores and workshop	Isiolo road- NRB	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 20 Guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
4.	Jogoo road pay office	Jogoo road- NRB	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 2 Guard clocking points and relevant licensing and link to central Alarm</li> </ul>



				management system at Stima Plaza as per specs
	<b>Mt Kenya Region: LOT 2</b>			
5.	Ruiru Stores			<ul style="list-style-type: none"> <li>➤ Re-installation of decommissioned system from Likoni Stores (Equipment with KPLC as follows: 6no Ceiling Mount detector,3no HD MC,4no PSU with batteries,6no Panic buttons, Siren Kit,8no Motion detectors) Supply 1no Long Range remote kit with 4 extra buttons.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
6.	Thika banking Hall	Thika town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
7.	Muranga Office	Muranga town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 6no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
8.	Nyeri Stima Banking hall	Nyeri town	Network-based	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
9.	Meru Banking Hall	Meru town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
10.	Embu office	Embu town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs.</li> </ul>
	<b>WEST KENYA:LOT 3</b>			
11.	Kisii Banking hall	Kisii town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with</li> </ul>

				5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs
12.	Electricity house Kisumu Banking hall	Kisumu city	Network-based	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system with 15no clocking points and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
13.	Kakamega Banking hall	Kakamega town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system and relevant licensing with 5no clocking points and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
<b>Central Rift</b>				
14.	Naivasha banking hall	Naivasha town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Overhaul Existing Alarm system and install new system with the following: 1no control panel with extra 1no keypad, 6no motion detectors, 4no Magnetic</li> </ul>

				<p>contact,7no panic buttons,1no remote kit,1no siren kit ,1no Vibration sensor including all cabling and installation cost.</p> <ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
15.	Electricity house Nakuru Banking hall	Nakuru town	Network-based	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in AutoCAD</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
16.	Nyahururu banking hall		Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with</li> </ul>

				4no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs
17.	Kericho Banking hall	Kericho town	Stand-alone	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>

	<b>North Rift</b>			
18.	<b>Eldoret Banking hall</b>	Eldoret Town		<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 4no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
19.	<b>Kitale Banking hall</b>	Kitale town		<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 4no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>

	<b>COAST REGION: LOT 4</b>			
20.	Nyali Pay point			<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 2no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
21.	Electricity House Mombasa			<ul style="list-style-type: none"> <li>➤ Provide for maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 15no clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
22.	Malindi Commercial office			<ul style="list-style-type: none"> <li>➤ Provide for 1-year maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no clocking points and relevant licensing and</li> </ul>



				link to central Alarm management system at Stima Plaza as per specs
23.	Ukunda Commercial office			<ul style="list-style-type: none"> <li>➤ Ongoing. Provide for 1-year maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply and install IP/GSM</li> </ul>
24.	Voi Commercial office			<ul style="list-style-type: none"> <li>➤ Ongoing. Provide for 1-year maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>

**b (ii) Schedule of sites to be Serviced and Maintained Existing Faults Category 2 Electric Fences**

	<b>SUBSTATION</b>	<b>LOCATION</b>	<b>COVERAGE IN LINEAR METERS</b>	<b>STATUS/SCOPE OF WORKS.</b>
	<b>NAIOBI REGION:LOT 1</b>			
	<b>NAIROBI</b>			
1.	Limuru Substation	Limuru Town	<b>640</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
2.	Dandora Substation	Off Kangundo road Nrb	<b>450</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 15no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
3.	Doonholm Substation	Nairobi-City Stadium roundabout	<b>94</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
4.	Nairobi West Substation	Nairobi Area	<b>453</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 15no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
5.	Nairobi South Offices	Donholm along Lungalunga road	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 20no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
6.	Nairobi South Staff Quarters	Nairobi Area	<b>750</b>	<ul style="list-style-type: none"> <li>➤ Repair damaged sections of fence by Overhauling 300m fence sections, Repair 50m fallen Section, Repair fallen poles and making good the entire fence structure.</li> <li>➤ Install 4 mid span poles</li> <li>➤ Repair/Replace 2 No. Energizer.</li> <li>➤ Install 2 No. AVS</li> <li>➤ Install 8-lines fence atop the Sliding gate and relocate energizer to guard house</li> <li>➤ Provide locks for Energizer cabinets.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 15 guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply and install IP/GSM module</li> </ul>
7.	Likoni Road substation	Railways bridge	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Check,Repair/ replace equipment and maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 15no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply and install IP/GSM module</li> </ul>
8.	Tala Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Replace Siren kit.</li> <li>➤ Repair/replace faulty energizer</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Check,Repair/ replace equipment and maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply and install IP/GSM module</li> </ul>
9.	Roysambu Substation	Tala Nairobi Area	<b>1,600</b>	<ul style="list-style-type: none"> <li>➤ Repair 20M damaged fence section once the fallen wall has been repaired.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system with 30no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply additional Dual zone energizer and Design and install transmission mechanism to link all partitions of the fence to response services.</li> </ul>

10.	Isiolo Road – E-Plant & Bulk Stores	Nairobi Area	<b>500</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system with 20no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Additional Transmitter.</li> </ul>
11.	Athi River Substation	Athi - River	<b>350</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
12.	Athi River Triumph substation	Athi - River	<b>320</b>	<ul style="list-style-type: none"> <li>➤ Install new 128M section of fence including a top the gate section.</li> <li>➤ Repair damaged sections of the fence 140M.</li> <li>➤ Install AVS 30.</li> <li>➤ Replace all equipment, re-cabling(Energizer,Siren/strobe)and isolate the fence from Triumph Company.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
13.	New Industrial Area Substation	Nairobi Area	<b>400</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>

				<p>equipment layout with locations off security equipment in Autocad</p> <ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 7no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Paint Razor (alluminium)</li> </ul>
14.	Training School (Ruaraka)	Nairobi Area	<b>730</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install AVS 30 surge protector</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 30no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
15.	Dara Substation	Nairobi Area	<b>45</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 3no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
16.	City Centre Substation	CBD Nairobi	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair 80m electric fence</li> <li>➤ Change 2no energizer cabinet locks</li> <li>➤ Relocate 2no energizer to guard house.</li> <li>➤ Install 2No. AVS</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system and link to central Alarm management system at Stima Plaza.</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio Response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
17.	High Ridge Staff Quarters	Nairobi Area	<b>400</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 15no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
18.	Forest road Plot	Nairobi Area	<b>380</b>	<ul style="list-style-type: none"> <li>➤ Replace 1no Faulty energizer and Connect Electric fence to the energizer</li> <li>➤ Repair 50m electric fence including 8m gate section.</li> <li>➤ Install AVS</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
19.	Ngong road substation	Ngong road	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Paint razor wire(aluminum)</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing</li> </ul>

				and relevant licensing and link to central Alarm management system at Stima Plaza as per specs
20.	Karen Substation	Karen	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 8no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> </ul>
21.	Dagoreti/Ndunyu substation	Dagoreti near bypass.	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Replace Energizer complete with cabinet</li> <li>➤ Replace Siren Kit</li> <li>➤ Treat and Paint poles with 3no coat of paint(Aluminum).</li> <li>➤ Install AVS 30</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
22.	Ruai Substation	Kangundo road Nairobi	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair energizer</li> <li>➤ Install AVS 30</li> <li>➤ Repair Siren Kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>



				<ul style="list-style-type: none"> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
23.	Komarock Substation	Kangundo road Nairobi	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Replace razor wire for entire fence</li> <li>➤ Repair energizer</li> <li>➤ Install AVS 30 and a Spur socket</li> <li>➤ Repair Energizer lock</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
24.	Karuri Substation	Nairobi	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install Spur socket and AVS 30</li> <li>➤ Repair energizer cabinet lock</li> <li>➤ Repair energizer</li> <li>➤ Repair 2M masonry wall and fence atop</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
25.	Lukenya Substation	Lukenya- Off Mombasa road	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair faulty energizer and replace battery.</li> <li>➤ Install AVS 30</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central</li> </ul>

				<p>Alarm management system at Stima Plaza as per specs</p> <ul style="list-style-type: none"> <li>➤ Install Radio Response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
26.	Rironi Substation	Rironi	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair Energizer and Siren kit</li> <li>➤ Install AVS 30</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
27.	New Githunguri Substation	Githunguri	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair faulty energizer.</li> <li>➤ Clear fault in the electric fence.</li> <li>➤ Install AVS 30</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio Response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
28.	Villa Franca Substation	Imara Daima	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Rectify fault on the Electric fence</li> <li>➤ Install Energizer cabinet</li> <li>➤ Install AVS 30 and single phase power from the closet consumer unit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and relevant licensing and link to central</li> </ul>

				<p>Alarm management system at Stima Plaza as per specs</p> <ul style="list-style-type: none"> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
29.	Uplands Substation	Uplands	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair/Replace siren Kit.</li> <li>➤ Replace Energizer cabinet and relocate the energizer to the cabinet.</li> <li>➤ Install AVS 30</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
30.	Magumu Substation	Under construction	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation.</li> </ul>
31.	Magadi Substation	Magadi	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair 100m damaged Electric Fence section</li> <li>➤ Install Energizer Cabinet</li> <li>➤ Repair/Replace Energizer</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
32.	Mamlaka Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Clear fault on electric Fence.</li> <li>➤ Repair Energizer.</li> <li>➤ Install Energizer cabinet and AVS 30</li> <li>➤ Repair Siren Kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
33.	Miwihoko Substation	Under construction	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation.</p>
34.	Umoja Substation	Umoja	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard</li> </ul>

				<p>clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</p> <ul style="list-style-type: none"> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation.</p>
35.	Kitengela Substation	Kitengela	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Check, Repair/ replace equipment and maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
36.	Gachie substation	Gachie	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair 100m Electric fence and fallen pole and clear fault on the electric fence</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
37.	Kiu River Substation	Kiambu		<ul style="list-style-type: none"> <li>➤ Check, Repair/ replace equipment and maintenance</li> <li>➤ Relocate energizer to guard house</li> <li>➤ Install Energizer cabinet and AVS 30</li> <li>➤ Clear fault on the electric fence.</li> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>

				<p>equipment layout with locations off security equipment in AutoCad</p> <ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio Response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
	<b><u>MT KENYA LOT</u></b> <b><u>2</u></b>			
38.	White Sisters Substation	Thika Town	<b>260</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system and relevant licensing and link to central Alarm management with 5no guard clocking points and relevant licensing system at Stima Plaza as per specs</li> <li>➤ Install Radio Response Transmitter</li> </ul>
39.	Thika East/Industrial Substation	Thika	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Replace energizer</li> <li>➤ Install Avs 30</li> <li>➤ Repair Damaged fence sections</li> <li>➤ Treat and repaint all poles</li> <li>➤ Replace Razor</li> <li>➤ Install 6no Earthing point as per standards</li> <li>➤ Replace Siren kit</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Change Fence loops using standards</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>

40.	JKUAT Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 6no Earthing points as per standards</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Change Fence loops using standards</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
		Juja		
41.				<ul style="list-style-type: none"> <li>➤ Replace energizer.</li> <li>➤ Repair damaged sections.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install 6no Earthing points as per standards</li> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio Response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
	Ruiru office	Ruiru	<b>Check and record</b>	
42.				<ul style="list-style-type: none"> <li>➤ Re-install fence Equipment/system decommissioned from Likoni stores and new 8-lines fence structure to cover the entire perimeter and utilizing existing Razor and other recovered items.</li> <li>➤ Re-install Alarm Equipment/system decommissioned from Likoni stores and in custody of KPLC as follows: 6no panic button three being in the three guard houses 4no 3A Psu with batteries.</li> </ul>
	Ruiru Stores			

				<p>Control Panel 8no Motion detectors 3no HD Magnetic contacts Remote kit Siren Kit Other related items</p> <ul style="list-style-type: none"> <li>➤ Install Avs 30</li> <li>➤ Install additional long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> </ul>
43.	Kingongo Substation	Nyeri Town	350	<ul style="list-style-type: none"> <li>➤ Reinforce weak fence structure with the right support poles/mechanism</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
44.	Kiganjo substation	Nyeri Town	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 15no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install long range remote kit</li> </ul>
45.	Karatina Substation	Karatina	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>



				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
46.	Ruring'u Substation	Nyeri Town	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
47.	Kinoru Substation	Meru Town	<b>180</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Replace entire razor wire</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply and install IP/GSM module</li> </ul>
48.	Meru store yard	Meru Town	<b>165</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Supply and install IP/GSM module</li> </ul>
49.	Embu/Muthatari Substation	Embu	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard</li> </ul>

				clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs
50.	Mwea Substation	Mwea	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Replace energizer</li> <li>➤ Install Avs 30</li> <li>➤ Repair Damaged fence sections</li> <li>➤ Install 6no Earthing point as per standards</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Change Fence loops using standards</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
51.	Mukurweini Substation	Mukurweini	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Fix pole caps</li> <li>➤ Install 7no Earthing points as per standards ensuring completeness up to energizer</li> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
52.	Kagumo Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad.</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio Response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation.</p>
53.	Muirungi Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Provide for 1-year maintenance.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>
54.	Gatakaini Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>
55.	Kiamatugu Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>

				<p>equipment layout with locations off security equipment in Autocad.</p> <ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>
56.	Nkuene Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>
57.	Mikinduri Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>

58.	Kahurura Substation	Laikipia Road Nanyuki	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>
59.	Kangema Substation	Kangema	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 6no Earthing points as per standards and check connection up to the energizer</li> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
	<b>WEST KENYA:LOT 3</b>			
60.	Kakamega office	Kakamega Town	<b>350</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
61.	Kakamega Substation	Kakamega Town	<b>260</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> </ul>

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

				<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
62.	Mamboleo stores	Kisumu		<ul style="list-style-type: none"> <li>➤ Maintain already reinstalled equipment from Kisumu depot</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 25no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
63.	Milimani Staff Quarters	Milimani	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
64.	Ondiek Staff Quarters		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 8no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
65.	Maseno Substation	Luanda maseno	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
66.	Kibos Substation	Kisumu town	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair energizer</li> <li>➤ Tension wire at the gate</li> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> <li>➤ Retreat and repaint all poles with 3no coat of paint to match existing.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
67.	Majengo Substation	Vihiga	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Change support poles with the right pole</li> <li>➤ Check and repair short circuit</li> <li>➤ Install AVS</li> <li>➤ Check energizer</li> <li>➤ Replace loops with the right wire</li> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing</li> </ul>

				<p>and link to central Alarm management system at Stima Plaza as per specs</p> <ul style="list-style-type: none"> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
68.	Sirisia Substation	Bukembe/Bungoma	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
	<b>South Nyanza</b>			
69.	Oyugis Substation	Oyugis	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
70.	Nyamira Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install Avs 30</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>



				<p>equipment layout with locations off security equipment in Autocad</p> <ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
<b>CENTRAL RIFT</b>				
71.	<b>Nakuru Depot</b>	Nakuru Town	<b>800M</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Install Energizer Cabinet and an AVS 30</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 8no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
72.	<b>Nyahururu Depot</b>	Nyahururu Town	<b>550</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 15no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
73.	<b>Kericho Depot</b>	Kericho Town	<b>500</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 20no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
74.	Chepseon substation	Chepsoen-Kericho		<ul style="list-style-type: none"> <li>➤ Install AVS 30.</li> <li>➤ Install 1no panic button</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install long range remote kit</li> <li>➤ Treat and repaint Rusted Poles with 3no coat of paint to match existing</li> <li>➤ Generally make good the fence</li> <li>➤ Replace flasher</li> <li>➤ Replace energizer and cabinet complete with Mc for anti- tampering connected as part of alarm</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
75.	Kabarak Substation	Kabarak	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install AVS 30.</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
76.	Sosiat Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install AVS 30.</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
77.	Molo Substation	Molo	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>
<b>NORTH RIFT</b>				
78.	<b>Eldoret Depot</b>	Eldoret Town	<b>635</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
79.	<b>Kitale Substation</b>	Kitale Town	<b>382</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
80.	Elgon View Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair faulty energizer(NEMTEK) and install Energizer cabinet</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install AVS 30</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Clear Faulty on the electric fence.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
81.	Kipsaraman Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair faulty energizer</li> <li>➤ Install AVS 30</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Clear Faulty on the electric fence.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
82.	Endebess Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Fence structure OK.</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>

				<ul style="list-style-type: none"> <li>➤ NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</li> </ul>
83.	Moiben Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
84.	Kapsowar Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
85.	Ortum Substation	Ortum	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
86.	Kebebetiet/Kabyet Substation	Kabyet	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
	<b>COAST REGION:LOT 4</b>			
87.	Mbaraki Depot	Mombasa Town	<b>940</b>	<ul style="list-style-type: none"> <li>➤ Fence overhaul</li> <li>➤ Provide for 1-year maintenance.</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 30no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
88.	Kilifi Substation	Kilifi Town	<b>462</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Treat and repaint the poles</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
89.	Malindi Depot	Malindi Town	<b>460</b>	<ul style="list-style-type: none"> <li>➤ Fence overhaul complete with all relevant equipment</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 10no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
90.	Likoni Substation	Mombasa Town	<b>320</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
91.	Nyali Substation	Mombasa Town	<b>250</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
92.	New Bamburi Substation	Bamburi Town	<b>395</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Overhaul old 250m Electric Fence Faulty section together with the razor wire.</li> <li>➤ Draw and submit structural/building/fence drawings and</li> </ul>

				<p>equipment layout with locations off security equipment in Autocad</p> <ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 25no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
93.	Makande Substation	Mombasa Town	<b>180</b>	<ul style="list-style-type: none"> <li>➤ Working. Maintenance</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> </ul>
94.	Jomvu Substation	Mombasa	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair 50m Electric fence section</li> <li>➤ Replace 100M Razor wire.</li> <li>➤ Treat and repaint Electric fence poles with 3no coats of paint.</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Install AVS 30 Surge protector</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
95.	Lamu Substation	Lamu Town	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Repair energizer and siren Kit.</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Install AVS 30 Surge protector</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard</li> </ul>



				<p>clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</p> <ul style="list-style-type: none"> <li>➤ Install Radio Response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>
96.	Kaloleni Substation	Mombasa Town	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour monitoring system with 5no guard clocking points and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
97.	Kokotoni Substation	Mombasa	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in AutoCAD</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
98.	Mtondia Substation	Mombasa	<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> </ul>

				<ul style="list-style-type: none"> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
99.	Wundanyi Substation		<b>Check and record</b>	<ul style="list-style-type: none"> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul> <p>NB: Repairs and replacement of the Fence structure and equipment to be done by installers for the first one year upon commissioning of the substation</p>
		Mombasa Town		
100.	Diani Substation			<ul style="list-style-type: none"> <li>➤ Install electric HT wires on existing Electric fence poles.</li> <li>➤ Install energizer, Energizer cabinet and AVS.</li> <li>➤ Install 1no panic button</li> <li>➤ Install long range remote kit</li> <li>➤ Draw and submit structural/building/fence drawings and equipment layout with locations off security equipment in Autocad</li> <li>➤ Install and configure Guard tour/patrol monitoring system with 5no guard clocking points and relevant licensing and link to central Alarm management system at Stima Plaza as per specs</li> <li>➤ Install Radio response Transmitter</li> <li>➤ Supply and install IP/GSM module</li> </ul>

	<b>SUMMARY</b> Total Number of fences: 101	

## **B. SCHEDULE OF MAINTENANCE ROUTINES CATEGORY 2: INTRUDER ALARMS, ELECTRIC FENCES AND RADIO BACK UP RESPONSE SERVICES**

This schedule has been prepared to indicate the minimum requirements for the preventative maintenance of **the Intruder Alarm, Electric Fence and Radio Response services**. The Contractor shall be responsible for all of the maintenance necessary to ensure that the complete Intruder Alarm, Electric Fence and Radio Response services as specified in this Service and Maintenance Agreements achieves a constant high quality operation.

The schedule indicates the maintenance tasks required but does not state how they will be carried out. All maintenance activities will be completed in accordance with the equipment manufacturer's guidelines, recommendations and good working practices.

The following symbols are used: -

M Monthly (calendar)  
3M Quarterly (3 monthly)  
6M Semi-annually (6 monthly)  
Y Annually

In all instances where preventative maintenance work has identified the need to replace equipment, items or components, this work shall be carried out under the maintenance function as defined within the Contract.

### ***B (i) schedule of maintenance routines Intruder Alarm Systems***

No.	Code	Description	Service description	Frequency	Remarks
	<b>Intruder Alarms</b>				

C1	<i>External Housings(siren boxes, sensors etc)</i>	<ul style="list-style-type: none"> <li>• <i>Visual inspect, check weatherproof gasket for seal, rectify where necessary.</i></li> <li>• <i>Check internal of housing for moisture rectify where necessary.</i></li> <li>• <i>Check external joints, glands, make off and re-seal where necessary</i></li> <li>• <i>Clean housing glass. Replace where necessary.</i></li> </ul>	6months	
C5	<i>PIR /Magnetic contacts, Vibration sensors, Panic buttons Performance</i>	<ul style="list-style-type: none"> <li>• <i>Measure and record device performance.</i></li> <li>• <i>Provide hard /soft copy of report of the tests.</i></li> </ul>		
C7	<i>Cables and ducting</i>	<ul style="list-style-type: none"> <li>• <i>Check cable protection ducts, conduits, mini-trucking etc to ensure proper physical conditions.</i></li> <li>• <i>Check all cables for damage, continuity, etc. Replace where necessary</i></li> </ul>	3 months	
C8	<i>Connections</i>	<i>Check all connections, plugs for damage continuity, moisture ingress Replace where necessary</i>		
D1	<i>Control Panel performance/functionality</i>	<ul style="list-style-type: none"> <li>• <i>Check all functions operate correctly(Recording, time, playbacks, Event logs,voltages,resolution,software,d rives,streaming,network,database,etc</i></li> <li>• <i>Check all control functions</i></li> <li>• <i>Reconfigure to right performance specifications/factory resets where necessary.</i></li> </ul>		

M1	Monitors	<ul style="list-style-type: none"> <li>• Check signal for level.</li> <li>• Check all connections. Repair or replace accordingly.</li> <li>• Inspect display tube. Replace where necessary</li> <li>• Check condition of cables.</li> <li>• Inspect display tube.</li> <li>• Adjust, rectify or Replace where necessary</li> <li>• Perform any factory resets if need be.</li> </ul>		
PC1	Control System and PC	<p>Clean PC. Clean filters to PC fans. Check security of cable connections Clean hard disks Software checks and upgrades. Check antivirus and malware protection.</p>		
E1	Electrical Power Supplies	<ul style="list-style-type: none"> <li>• Check all input and output parameters (Voltage, current, power, frequency etc.) and ensure its within accepted nominal values as per IEE standards.</li> <li>• Check all surge/overvoltage protection units to ensure correct functionality.</li> <li>• Check operation of Fuses and circuit breakers</li> <li>• Check for ingress of moisture at distribution boards, plugs and sockets</li> <li>• Check all cables for damage, continuity, etc</li> <li>• Check earthing connections</li> <li>• Fixed wiring inspection and test to BS 7671 standards.-(after 2 years)</li> <li>• Rectify where necessary.</li> </ul>		
	All INTRUDER ALARM equipment	<ul style="list-style-type: none"> <li>• Clean or blow to prevent dust, dirt or any form of corrosion.</li> <li>• Cleaning material and process shall be as per IEE standards of cleaning electrical equipment and in accordance with safety regulations.</li> </ul>		

*B.(i) Schedule of Maintenance Routines Category 2: Intruder Alarms*

***B (ii) Schedule of maintenance routines Electric Fence***

The following items shall be checked **quarterly**.

1. Check all the wiring and connections, fixing any loose connections and discontinuity to ensure electrical continuity of both the voltage, current and earthing.
2. Check and record operational voltage and current parameters to ensure that they are within the expected range.
3. Check the electric fence energizer and other electrical devices against dust, loose connections, short circuit, overheating and other malfunctioning, checking all input and outputs parameters to ensure proper operations.
4. Check electric fence against any environmental hazards like vegetation growths, fallen tree branches, leaves and other objects, leakages, corrosive materials, chemicals and others.
5. Check and ensure proper electrical insulation.
6. Prepare and submit a maintenance report with a check list of all the above checks properly detailing operations/action taken and recommendations where necessary.
7. Test and ensure the entire fence is working properly.
8. Check and rectify any other item that may hinder efficient operation of the entire electric fence.
9. Allow for replacement of faulty parts as per the attached list of spares.
10. Prepare and submit Service and Maintenance quarterly report within first week of servicing.

**Daily**

Contractor shall check with Security Control room fault Logs and attend accordingly.

The contractor shall prepare and submit reports of faults attended to.

***C. BRIEF SCHEDULE OF SERVICES REQUIRED CATEGORY 2 INTRUDER ALARM, ELECTRIC FENCES AND RADIO RESPONSE SERVICES***

- i) Repair of Faulty Alarm System, electric fences and Radio Response Services shall be as per the schedule below and should commence upon contract signing.
- ii) The contract duration for the Repairs should not exceed 3 months from commencement of contract.
- iii) Service and maintenance **period** will be two years after repairs as per the schedule.

Item No.	Description	Unit Of Measure	Quantity	*Performance OR Performance Date	Period Start	*Performance End Date
1	<b>Repair of faulty electric fence and alarms in all Lots.</b>	LOT	1	Contract signing date		3 months after award
2	2-Years' service and maintenance contract done quarterly in all sites	NO.	8	Date on completion of repairs above		2 years after repairs
3	2 Years Radio Alarm response Services	LOT	1	Date on completion of repairs above		2 years after repairs

***D: Schedule of Repair of Defects Category 2 Intruder Alarm System and Electric Fence***

*D (i) Existing Faults Category 2: Intruder Alarm Systems*

**(i) Schedule of sites to be Serviced and Maintained Category 2 Intruder Alarm systems**

*D (ii) Existing Faults Category 2: Electric Fences Systems-*

**As per (ii) Schedule of sites to be Serviced and Maintained Category 2 Electric Fences**

***Note.***

The Contractor will be required to carry out any defect repairs and undertake a full preventative maintenance service at the commencement of the Maintenance Contract, such that all defects are repaired and the system returned to optimum operating performance within **12 weeks** of the award of the contract.





**ALARM SYSTEMS AND ELECTRIC FENCES LOT 1(NAIROBI REGION)**  
***(THE CURRENCY MUST BE IN KENYA SHILLINGS)***

<b>CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 1</b>					
<b>PART 1: INTRUDER ALARMS</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<b>Preventive and Curative 1 Maintenance</b> Prices should include activities as described in details of service for each the sites below: <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
<b>Nairobi Region: Category 2 LOT 1</b>					
1	Stima Plaza				
2	Electricity house Nairobi				
3	Isiolo road Stores and workshop				
4	Jogoo road pay office				
<b>Total Carried to collection Category 2 -Lot 1 BQ Page 1</b>					
<b>CATEGORY 2 LOT 1 INTRUDER ALARMS BILL OF QUATITIES PAGE 1</b>					



**CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 3**  
**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b>  Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>Nairobi Region: Category 2 LOT 1</b>				
1.	Limuru Substation	No	8		
2.	Dandora Substation	No	8		
3.	Doonholm Substation	No	8		
4.	Nairobi West Substation	No	8		
5.	Nairobi South Offices	No	8		
6.	Nairobi South Staff Quarters	No	8		
7.	Likoni Road substation	No	8		
8.	Tala Substation	No	8		
9.	Roysambu Substation	No	8		
10.	Isiolo Road – E-Plant & Bulk Stores	No	8		
	<b>Total Carried to collection Category 2-Lot 1 BQ Page 3</b>				
	<b>CATEGORY 2 LOT 1 INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 3</b>				

<b>CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 4</b>					
<b><u>PART 2: ELECTRIC FENCES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b></p> <p>Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
<b>Nairobi Region: Category 2 LOT 1</b>					
11.	Athi River Substation	No	8		
12.	Athi River Triumph Substation	No	8		
13.	New Industrial Area Substation	No	8		
14.	Training School (Ruaraka)	No	8		
15.	Dara Substation	No	8		
16.	City Centre Substation	No	8		
17.	High Ridge Staff Quarters	No	8		
18.	Forest road Plot	No	8		
19.	Ngong road substation	No	8		
20.	Karen Substation	No	8		
21.	Dagoreti/Ndunyu substation	No	8		
<b>Total Carried to collection Lot 1 BQ Page 4</b>					
<b>CATEGORY 2 LOT 1 INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 4</b>					

<b>CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 5</b>					
<b><u>PART 2: ELECTRIC FENCES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b></p> <p>Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
<b>Nairobi Region: Category 2 LOT 1</b>					
22.	Ruai Substation	No	8		
23.	Komarock Substation	No	8		
24.	Karuri Substation	No	8		
25.	Lukenya Substation	No	8		
26.	Rironi Substation	No	8		
27.	Githunguri Substation	No	8		
28.	Villa Franca Substation	No	8		
29.	Uplands Substation	No	8		
30.	Magumu Substation	No	8		
<b>Total Carried to collection Category 2-Lot 1 BQ Page 5</b>					
<b>CATEGORY 2 LOT 1 INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 5</b>					

**CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 6**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>Nairobi Region: Category 2 LOT 1</b>				
31.	Magadi Substation	No	8		
32.	Mamlaka Substation	No	8		
33.	Miwihoko Substation	No	8		
34.	Umoja Substation	No	8		
35.	Kitengela Substation	No	8		
36.	Kiu River substation	No	8		
	<b>Total Carried to collection Category 2-Lot 1 BQ Page 6</b>				
	<b>CATEGORY 2 LOT 1 INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 6</b>				

**CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 7**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<p><b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b></p> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
	<b>Nairobi Region: LOT 1</b>				
1.	Limuru Substation				
2.	Dandora Substation				
3.	Doonholm Substation				
4.	Nairobi West Substation				
5.	Nairobi South Offices				
6.	Nairobi South Staff Quarters				
7.	Likoni Road substation				
8.	Tala Substation				
9.	Roysambu Substation				
10.	Isiolo Road – E-Plant & Bulk Stores				
11.	Athi River Substation				
12.	New Industrial Area Substation				
13.	Athi River Triumph Substation				
14.	Training School (Ruaraka)				
15.	Dara Substation				
16.	City Centre Substation				
17.	High Ridge Staff Quarters				
18.	Forest road Plot				
19.	Ngong road substation				
20.	Karen Substation				
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 7</b>				
	<b>CATEGORY 2 LOT 1 INTRUDER ALARMS BILL OF QUANTITIES PAGE 7</b>				

**CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 8**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<p><b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b></p> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
	<b>Nairobi Region: LOT 1</b>				
21.	Dagoreti/Ndunyu substation				
22.	Ruai Substation				
23.	Komarock Substation				
24.	Karuri Substation				
25.	Lukenya Substation				
26.	Rironi Substation				
27.	Githunguri Substation				
28.	Villa Franca Substation				
29.	Uplands Substation				
30.	Magumu Substation				
31.	Magadi Substation				
32.	Mamlaka Substation				
33.	Miwihoko Substation				
34.	Umoja Substation				
35.	Kitengela Substation				
36.	Kiu River substation				
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 8</b>				
	<b>CATEGORY 2 LOT 1 INTRUDER ALARMS BILL OF QUATITIES PAGE 8</b>				



<b>CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 9</b>					
<b><u>PART 3: RADIO BACK UP RESPONSE SERVICES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price DDP, VAT Exclusive</b>	<b>Total Price DDP, VAT Exclusive</b>
D	Response Services as described in details of services and which shall include loading of sufficient airtime and subscription of SMS bundles				
<b>Nairobi Region: LOT 1</b>					
1.	Stima Plaza	No.	8		
2.	Electricity house Nairobi	No.	8		
3.	Isiolo road Stores	No.	8		
4.	Isiolo road Workshop	No.	8		
5.	Jogoo road pay office	No.	8		
6.	Limuru Substation	No.	8		
7.	Dandora Substation	No.	8		
8.	Doonholm Substation	No.	8		
9.	Nairobi West Substation	No.	8		
10.	Nairobi South Offices	No.	8		
11.	Nairobi South Staff Quarters	No.	8		
12.	Likoni Road substation	No.	8		
13.	Tala Substation	No.	8		
14.	Roysambu Substation	No.	8		
15.	Athi River Substation	No.	8		
16.	Athi River Triumph Substation	No.	8		
17.	New Industrial Area Substation	No.	8		
18.	Training School (Ruaraka)	No.	8		
19.	Dara Substation	No.	8		
20.	City Centre Substation	No.	8		
21.	High Ridge Staff Quarters	No.	8		
22.	Forest road Plot	No.	8		
23.	Ngong road substation	No.	8		
24.	Karen Substation	No.	8		
25.	Dagoreti/Ndunyu substation	No.	8		
<b>Total Carried to collection Category 2 Lot 1 BQ Page 9</b>					
<b>CATEGORY 2 LOT 1 INTRUDER ALARMS BILL OF QUANTITIES PAGE 9</b>					

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

<b>CATEGORY 2: LOT 1 (NAIROBI REGION) BILL OF QUANTITIES PAGE 10</b>					
<b><u>PART 3: RADIO BACK UP RESPONSE SERVICES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price DDP, VAT Exclusive</b>	<b>Total Price DDP, VAT Exclusive</b>
D	<b>Response Services as described in details of services and which shall include loading of sufficient airtime and subscription of SMS bundles</b>				
<b>Nairobi Region: LOT 1</b>					
26.	Ruai Substation	No.	8		
27.	Komarock Substation	No.	8		
28.	Karuri Substation	No.	8		
29.	Lukenya Substation	No.	8		
30.	Rironi Substation	No.	8		
31.	Githunguri Substation	No.	8		
32.	Villa Franca Substation	No.	8		
33.	Uplands Substation	No.	8		
34.	Magumu Substation	No.	8		
35.	Magadi Substation	No.	8		
36.	Mamlaka Substation	No.	8		
37.	Miwihoko Substation	No.	8		
38.	Umoja Substation	No.	8		
39.	Kitengela Substation	No.	8		
<b>Total Carried to collection Category 2 Lot 1 BQ Page 10</b>					
<b>CATEGORY 2 LOT 1 INTRUDER ALARMS BILL OF QUATITIES PAGE 10</b>					

	<b>SUMMARY PAGE CATEGORY 2-LOT 1: INTRUDER ALARMS &amp; ELECTRIC FENCES/RESPONSE</b>	<b>KSHS VAT EXCLUSIVE</b>	
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 1</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 2</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 3</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 4</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 5</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 6</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 7</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 8</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 9</b>		
	<b>Total Carried to collection Category 2 Lot 1 BQ Page 10</b>		
	<b>SUB TOTAL</b>		
	<b>Add 16% VAT</b>		
	<b>GRAND TOTAL CATEGORY 2 LOT 1</b>		

**SECTION VI –CATEGORY 2: LOT 2(MT KENYA REGION) PRICE SCHEDULE FOR  
SERVICES INTRUDER ALARM SYSTEMS AND ELECTRIC FENCES**  
*(THE CURRENCY MUST BE IN KENYA SHILLINGS)*

<b>CATEGORY 2: LOT 2 (MT KENYA REGION) BILL OF QUANTITIES PAGE 1 PART 1: INTRUDER ALARMS</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
<b>Mt Kenya Region: Category 2 LOT 2</b>					
1	Thika banking Hall	No	8		
2	Muranga Office	No	8		
3	Nyeri Stima Baking hall	No	8		
4	Meru Banking Hall	No	8		
5	Embu office	No	8		
6	Ruiru Stores	No	8		
<b>Total Carried to collection Category 2 -Lot 2 BQ Page 1</b>					
<b>CATEGORY 2 LOT 2 INTRUDER ALARMS BILL OF QUANTITIES PAGE 1</b>					

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*



**CATEGORY 2: LOT 2 (MT KENYA REGION) BILL OF QUANTITIES PAGE 3**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>Mt. Kenya Region: Category 2 LOT 2</b>				
1.	White Sisters Substation	No	8		
2.	Thika East/Industrial Substation	No	8		
3.	JKUAT Substation	No	8		
4.	Ruiru Stores/Substation	No	8		
5.	Ruiru office	No	8		
6.	Kingongo Substation	No	8		
7.	Kiganjo substation	No	8		
8.	Karatina Substation	No	8		
9.	Ruring'u Substation	No	8		
	<b>Total Carried to collection Category 2-Lot 2 BQ Page 3</b>				
	<b>CATEGORY 2 LOT 2 INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 3</b>				

**CATEGORY 2: LOT 2 (MT. KENYA REGION) BILL OF QUANTITIES PAGE 4**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR))</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>Mt. Kenya Region: Category 2 LOT 2</b>				
10.	Kinoru Substation	No	8		
11.	Meru store yard	No	8		
12.	Embu /Muthatari Substation	No	8		
13.	Mwea Substation	No	8		
14.	Mukurweini Substation	No	8		
15.	Kagumo Substation	No	8		
16.	Muirungi Substation	No	8		
17.	Gatakaini Substation	No	8		
	<b>Total Carried to collection Category 2-Lot 2 BQ Page 4</b>				
	<b>CATEGORY 2 LOT 2 INTRUDER ALARMS &amp; FENCES BILL OF QUANTITIES PAGE 4</b>				

<b>CATEGORY 2: LOT 2 (MT. KENYA REGION) BILL OF QUANTITIES PAGE 5</b>					
<b><u>PART 2: ELECTRIC FENCES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>Mt. Kenya Region: Category 2 LOT 2</b>				
18.	Kiamatugu Substation	No	8		
19.	Nkuene Substation	No	8		
20.	Mikinduri Substation	No	8		
21.	Kahurura Substation	No	8		
22.	Kangema Substation	No	8		
	<b>Total Carried to collection Category 2-Lot 2 BQ Page 5</b>				
	<b>CATEGORY 2 LOT 2 INTRUDER ALARMS &amp; FENCES BILL OF QUANTITIES PAGE 5</b>				



**CATEGORY 2: LOT 2 (MT. KENYA REGION) BILL OF QUANTITIES PAGE 6**  
**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<b>CURATIVE MAINTENANCE(II):  REPAIR OF FAULTY SYSTEMS</b> <ul style="list-style-type: none"> <li>• Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
	<b>Mt. Kenya Region: LOT 2</b>				
1.	White Sisters Substation				
2.	Thika East/Industrial Substation				
3.	JKUAT Substation				
4.	Ruiru Stores/Substation				
5.	Ruiru office				
6.	Kingongo Substation				
7.	Kiganjo substation				
8.	Karatina Substation				
9.	Ruring'u Substation				
10.	Kinoru Substation				
11.	Meru store yard				
12.	Embu/Muthatari Substation				
13.	Mwea Substation				
14.	Mukurweini Substation				
15.	Kagumo Substation				
<b>Total Carried to collection Category 2 Lot 2 BQ Page 6</b>					
<b>CATEGORY 2 LOT 2 INTRUDER ALARMS BILL OF QUANTITIES PAGE 6</b>					



<b>CATEGORY 2: LOT 2 (MT. KENYA REGION) BILL OF QUANTITIES PAGE 8</b>					
<b><u>PART 3: RADIO BACK UP RESPONSE SERVICES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price DDP, VAT Exclusive</b>	<b>Total Price DDP, VAT Exclusive</b>
D	Response Services as described in details of services and which shall include loading of sufficient airtime and subscription of SMS bundles				
<b>Mt. Kenya Region: LOT 2</b>					
1.	Thika banking Hall	No.	8		
2.	Muranga Office	No.	8		
3.	Nyeri Stima Banking hall	No.	8		
4.	Meru Banking Hall	No.	8		
5.	Embu office	No.	8		
6.	Ruiru office	No.	8		
7.	Ruiru Stores/substation	No.	8		
8.	White Sisters Substation	No.	8		
9.	Thika East/Industrial Substation	No.	8		
10.	JKUAT Substation	No.	8		
11.	Kingongo Substation	No.	8		
12.	Kiganjo substation	No.	8		
13.	Karatina Substation	No.	8		
14.	Ruring'u Substation	No.	8		
15.	Kinoru Substation	No.	8		
16.	Meru store yard	No.	8		
17.	Embu /Muthatari Substation	No.	8		
18.	Mwea Substation	No.	8		
19.	Mukurweini Substation	No.	8		
20.	Kagumo Substation	No.	8		
21.	Muirungi Substation	No.	8		
22.	Gatakaini Substation	No.	8		
<b>Total Carried to collection Category 2 Lot 2 BQ Page 8</b>					
<b>CATEGORY 2 LOT 2 INTRUDER ALARMS BILL OF QUATITIES PAGE 8</b>					



	<b>SUMMARY PAGE CATEGORY 2-LOT 2: INTRUDER ALARMS &amp; ELECTRIC FENCES/RESPONSE</b>	<b>KSHS VAT EXCLUSIVE</b>	
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 1</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 2</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 3</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 4</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 5</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 6</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 7</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 8</b>		
	<b>Total Carried to collection Category 2 Lot 2 BQ Page 9</b>		
	<b>SUB TOTAL</b>		
	<b>Add 16% VAT</b>		
	<b>GRAND TOTAL CATEGORY 2 LOT 2</b>		

**SECTION VI –CATEGORY 2: LOT 3(WEST KENYA REGION) PRICE SCHEDULE  
FOR SERVICES INTRUDER ALARM SYSTEMS AND ELECTRIC FENCES  
(THE CURRENCY MUST BE IN KENYA SHILLINGS)**

<b>CATEGORY 2: LOT 3 (WEST KENYA REGION) BILL OF QUANTITIES PAGE 1 PART 1: INTRUDER ALARMS</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
	<b>West Kenya Region: Category 2 LOT 3</b>				
1.	Naivasha banking hall	No	8		
2.	Electricity house Nakuru Banking hall	No	8		
3.	Nyahururu banking hall	No	8		
4.	Kericho Banking hall	No	8		
5.	Eldoret Banking hall	No	8		
6.	Kitale Banking hall	No	8		
7.	Kisii Banking hall	No	8		
8.	Electricity house Kisumu Banking hall	No	8		
9.	Kakamega Banking hall	No	8		
	<b>Total Carried to collection Category 2 -Lot 3 BQ Page 1</b>				
	<b>CATEGORY 2 LOT 3 INTRUDER ALARMS BILL OF QUANTITIES PAGE 1</b>				

<b>CATEGORY 2:LOT 3 (WEST KENYA REGION )BILL OF QUANTITIES PAGE 2</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
<b>West Kenya Region: LOT 3</b>					
1	Naivasha banking hall	Item	1		
2	Electricity house Nakuru Banking hall	Item	1		
3	Nyahururu banking hall	Item	1		
4	Kericho Banking hall	Item	1		
5	Eldoret Banking hall	Item	1		
6	Kitale Banking hall	Item	1		
7	Kisii Banking hall	Item	1		
8	Electricity house Kisumu Banking hall	Item	1		
9	Kakamega Banking hall	Item	1		
<b>Total Carried to collection Category 2 Lot 3 BQ Page 2</b>					
<b>CATEGORY 2 LOT3 INTRUDER ALARMS BILL OF QUATITIES PAGE 2</b>					

**CATEGORY 2: LOT 3 (WEST KENYA REGION) BILL OF QUANTITIES PAGE 3**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR))</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>West Kenya Region: Category 2 LOT 3</b>				
	<b>Central Rift</b>				
1.	Nakuru Depot	No	8		
2.	Nyahururu Depot	No	8		
3.	Suswa substation	No	8		
4.	Kericho Depot	No	8		
5.	Chepsoen Substation	No	8		
6.	Kabarak Substation	No	8		
7.	Sosiat Substation	No	8		
8.	Molo Substation	No	8		
	<b>Total Carried to collection Category 2-Lot 3 BQ Page 3</b>				
	<b>CATEGORY 2 LOT 3:INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 3</b>				



**CATEGORY 2: LOT 3 (WEST KENYA REGION) BILL OF QUANTITIES PAGE 4**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>West Kenya Region: Category 2 LOT 3</b>				
	<b>South Nyanza</b>				
9.	Oyugis Substation	No	8		
10.	Nyamira Substation	No	8		
	<b>West Kenya</b>	<b>No</b>	<b>8</b>		
11.	Kakamega office	No	8		
12.	Kakamega Substation	No	8		
13.	Mamboleo Substation	No	8		
14.	Milimani Staff Quarters	No	8		
15.	Ondiek Staff Quarters	No	8		
	<b>Total Carried to collection Category 2-Lot 3 BQ Page 4</b>				
	<b>CATEGORY 2 LOT 3:INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 4</b>				

CATEGORY 2: LOT 3 (WEST KENYA REGION) BILL OF QUANTITIES PAGE 5					
<u>PART 2: ELECTRIC FENCES</u>					
Item No.	Description	Unit Of measure	QTY	Unit Cost exclusive of Taxes	Total Cost Exclusive of Taxes
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair&amp; Return to operations faulty parts /system/ consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
<b>West Kenya Region: Category 2 LOT 3</b>					
16.	Maseno Substation	No	8		
17.	Kibos Substation	No	8		
18.	Majengo Substation	No	8		
19.	Sirisia Substation	No	8		
20.	Eldoret Depot	No	8		
<b>North Rift</b>		<b>No</b>	<b>8</b>		
21.	Eldoret Depot	No	8		
22.	Kitale Substation	No	8		
23.	Elgon View Substation	No	8		
24.	Kipsaraman Substation	No	8		
25.	Endebess Substation	No	8		
26.	Moiben Substation	No	8		
27.	Kapsowar Substation	No	8		
28.	Ortum Substation	No	8		
29.	Kebebetiet /Kybet Substation	No	8		
<b>Total Carried to collection Category 2-Lot 3 BQ Page 5</b>					
<b>CATEGORY 2 LOT 3:INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 5</b>					

<b>CATEGORY 2: LOT 3 (WEST KENYA REGION) BILL OF QUANTITIES PAGE 6</b>					
<b><u>PART 2: ELECTRIC FENCES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
	<b>West Kenya Region: LOT 3</b>				
	<b>Central Rift</b>				
1.	Nakuru Depot	Item	1		
2.	Nyahururu Depot	Item	1		
3.	Suswa substation	Item	1		
4.	Kericho Depot	Item	1		
5.	Chepsoen Substation	Item	1		
6.	Kabarak Substation	Item	1		
7.	Sosiat Substation	Item	1		
8.	Molo Substation	Item	1		
	<b>South Nyanza</b>				
9.	Oyugis Substation	Item	1		
10.	Nyamira Substation	Item	1		
	<b>West Kenya</b>				
11.	Kakamega office	Item	1		
12.	Kakamega Substation	Item	1		
13.	Mamboleo Substation	Item	1		
14.	Milimani Staff Quarters	Item	1		
15.	Ondiek Staff Quarters	Item	1		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 6</b>				
<b>CATEGORY 2 LOT 3-INTRUDER ALARMS BILL OF QUANTITIES PAGE 6</b>					

**CATEGORY 2: LOT 3 (WEST KENYA REGION) BILL OF QUANTITIES PAGE 7**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<p><b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b></p> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
	<b>West Kenya Region: LOT 3</b>				
16.	Maseno Substation	Item	1		
17.	Kibos Substation	Item	1		
18.	Majengo Substation	Item	1		
	<b>North Rift</b>	Item	1		
19.	Eldoret Depot	Item	1		
20.	Kitale Substation	Item	1		
21.	Elgon View Substation	Item	1		
22.	Kipsaraman Substation	Item	1		
23.	Endebess Substation	Item	1		
24.	Moiben Substation	Item	1		
25.	Kapsowar Substation	Item	1		
26.	Sirisia Substation	Item	1		
27.	Ortum Substation	Item	1		
28.	Kebebetiet/Kabyet Substation	Item	1		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 7</b>				
	<b>CATEGORY 2 LOT 3-INTRUDER ALARMS BILL OF QUANTITIES PAGE 7</b>				

<b>CATEGORY 2: LOT 3 (WEST KENYA REGION) BILL OF QUANTITIES PAGE 8</b>					
<b><i>PART 3: RADIO BACK UP RESPONSE SERVICES</i></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price DDP, VAT Exclusive</b>	<b>Total Price DDP, VAT Exclusive</b>
D	Response Services as described in details of services and which shall include loading of sufficient airtime and subscription of SMS bundles				
	<b>West Kenya Region: LOT 3</b>				
1.	Naivasha banking hall	No.	8		
2.	Electricity house Nakuru Banking hall	No.	8		
3.	Nyahururu banking hall	No.	8		
4.	Kericho Banking hall	No.	8		
5.	Kisii Banking hall	No.	8		
6.	Electricity house Kisumu Banking hall	No.	8		
7.	Kakamega Banking hall	No.	8		
	<b>Central Rift</b>	No.	8		
8.	Nakuru Depot	No.	8		
9.	Nyahururu Depot	No.	8		
10.	Kericho Depot	No.	8		
11.	Chepseon Substation	No.	8		
12.	Kabarak Substation	No.	8		
13.	Sosiat Substation	No.	8		
14.	Molo Substation	No.	8		
	<b>South Nyanza</b>	No.	8		
15.	Oyugis Substation	No.	8		
16.	Nyamira Substation	No.	8		
	<b>West Kenya</b>	No.	8		
17.	Kakamega office	No.	8		
18.	Kakamega Substation	No.	8		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 8</b>				
<b>CATEGORY 2 LOT 3:INTRUDER ALARMS BILL OF QUATITIES PAGE 8</b>					



	<b>SUMMARY PAGE CATEGORY 2-LOT 3: INTRUDER ALARMS &amp; ELECTRIC FENCES/RESPONSE</b>	<b>KSHS VAT EXCLUSIVE</b>	
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 1</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 2</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 3</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 4</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 5</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 6</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 7</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 8</b>		
	<b>Total Carried to collection Category 2 Lot 3 BQ Page 9</b>		
	<b>SUB TOTAL</b>		
	<b>Add 16% VAT</b>		
	<b>GRAND TOTAL CATERGORY 2 LOT 3</b>		

**SECTION VI –CATEGORY 2: LOT 4(COAST REGION) PRICE SCHEDULE FOR  
SERVICES INTRUDER ALARM SYSTEMS AND ELECTRIC FENCES**  
*(THE CURRENCY MUST BE IN KENYA SHILLINGS)*

<b>CATEGORY 2: LOT 4 (COAST REGION) BILL OF QUANTITIES PAGE 1 PART 1: INTRUDER ALARMS</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>Coast Region: Category 2 LOT 4</b>				
1.	Nyali Pay point	No	8		
2.	Electricity House Mombasa	No	8		
3.	Malindi Commercial office	No	8		
4.	Ukunda Commercial office	No	8		
5.	Voi Commercial office	No	8		
	<b>Total Carried to collection Category 2 -Lot 4 BQ Page 1</b>				
	<b>CATEGORY 2 LOT 4 INTRUDER ALARMS BILL OF QUATITIES PAGE 1</b>				

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*





<b>CATEGORY 2: LOT 4 (COAST REGION) BILL OF QUANTITIES PAGE 3</b>					
<b><u>PART 2: ELECTRIC FENCES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b></p> <p>Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
<b>Coast Region: Category 2 LOT 4</b>					
1.	Mbaraki Depot	No	8		
2.	Kilifi Substation	No	8		
3.	Malindi Depot	No	8		
4.	Likoni Substation	No	8		
5.	Nyali Substation	No	8		
6.	New Bamburi Substation	No	8		
7.	Makande Substation	No	8		
8.	Jomvu Substation	No	8		
9.	Lamu Substation	No	8		
10.	Kaloleni Substation	No	8		
<b>Total Carried to collection Category 2-Lot 4 BQ Page 3</b>					
<b>CATEGORY 2 LOT 4:INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 3</b>					

**CATEGORY 2: LOT 4 (COAST REGION) BILL OF QUANTITIES PAGE 4**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance Fences</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> <li>• Clearance of vegetation</li> </ul>				
	<b>Coast Region: Category 2 LOT 4</b>				
11.	Kokotoni Substation	No	8		
12.	Mtondia Substation	No	8		
13.	Wundanyi Substation	No	8		
14.	Diani Substation	No	8		
	<b>Total Carried to collection Category 2-Lot 4 BQ Page 4</b>				
	<b>CATEGORY 2 LOT 4:INTRUDER ALARMS &amp; FENCES BILL OF QUATITIES PAGE 4</b>				

**CATEGORY 2: LOT 4 (COAST REGION) BILL OF QUANTITIES PAGE 5**

**PART 2: ELECTRIC FENCES**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<p><b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b></p> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
	<b>Coast Region: LOT 4</b>				
1.	Mbaraki Depot	Item	1		
2.	Kilifi Substation	Item	1		
3.	Malindi Depot	Item	1		
4.	Likoni Substation	Item	1		
5.	Nyali Substation	Item	1		
6.	New Bamburi Substation	Item	1		
7.	Makande Substation	Item	1		
8.	Jomvu Substation	Item	1		
9.	Lamu Substation	Item	1		
10.	Kaloleni Substation	Item	1		
11.	Kokotoni Substation	Item	1		
12.	Mtondia Substation	Item	1		
13.	Wundanyi Substation	Item	1		
14.	Diani Substation	Item	1		
	<b>Total Carried to collection Category 2 Lot 4 BQ Page 5</b>				
	<b>CATEGORY 2 LOT 4-INTRUDER ALARMS BILL OF QUANTITIES PAGE 5</b>				

<b>CATEGORY 2: LOT 4 (COAST REGION) BILL OF QUANTITIES PAGE 6</b>					
<b><u>PART 3: RADIO BACK UP RESPONSE SERVICES</u></b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price DDP, VAT Exclusive</b>	<b>Total Price DDP, VAT Exclusive</b>
D	<b>Response Services as described in details of services and which shall include loading of sufficient airtime and subscription of SMS bundles</b>				
<b>Coast Region: LOT 4</b>					
1.	Nyali Pay point	No.	8		
2.	Electricity House Mombasa	No.	8		
3.	Malindi Commercial office	No.	8		
4.	Ukunda Commercial office	No.	8		
5.	Voi Commercial office	No.	8		
6.	Mbaraki Depot	No.	8		
7.	Kilifi Substation	No.	8		
8.	Malindi Depot	No.	8		
9.	Likoni Substation	No.	8		
10.	Nyali Substation	No.	8		
11.	New Bamburi Substation	No.	8		
12.	Makande Substation	No.	8		
13.	Jomvu Substation	No.	8		
14.	Lamu Substation	No.	8		
15.	Kaloleni Substation	No.	8		
16.	Kokotoni Substation	No.	8		
17.	Mtondia Substation	No.	8		
18.	Diani Substation	No.	8		
<b>Total Carried to collection Category 2 Lot 4 BQ Page 6</b>					
<b>CATEGORY 2 LOT 4:INTRUDER ALARMS BILL OF QUATITIES PAGE 6</b>					

	<b>SUMMARY PAGE CATEGORY 2-LOT 4: INTRUDER ALARMS &amp; ELECTRIC FENCES/RESPONSE</b>	<b>KSHS VAT EXCLUSIVE</b>	
	<b>Total Carried to collection Category 2 Lot 4 BQ Page 1</b>		
	<b>Total Carried to collection Category 2 Lot 4 BQ Page 2</b>		
	<b>Total Carried to collection Category 2 Lot 4 BQ Page 3</b>		
	<b>Total Carried to collection Category 2 Lot 4 BQ Page 4</b>		
	<b>Total Carried to collection Category 2 Lot 4 BQ Page 5</b>		
	<b>Total Carried to collection Category 2 Lot 4 BQ Page 6</b>		
	<b>SUB TOTAL</b>		
	<b>Add 16% VAT</b>		
	<b>GRAND TOTAL CATERGORY 2 LOT 4</b>		

**PART (E) PRICED LIST OF SPARES CATEGORY 2: INTRUDER ALARMS SYSTEMS**

NO.	ITEM DESCRIPTION	UNIT OF MEASURE	UNIT PRICE(KSHS) VAT EXCLUSIVE
1	Alarm control panel	NO	
2	Magnetic contact-HD	NO	
3	Magnetic contact-LD	NO	
4	Back up Battery 12v,7AH	NO	
5	Siren box	NO	
6	Strobe	NO	
7	Siren	NO	
8	Motion detector(PIR)	NO	
9	Vibration sensors	NO	
10	Alarm cable 1M	M	
11	Power cable 1M	M	
12	Panic Button	NO	
13	4-channel remote Kit long range	NO	
14	Single channel remote Kit long range	NO	
15	Zone expander	NO	
16	Keypad	NO	
17	Surge protector	NO	
18	1A power supply unit	NO	
19	3A Power supply unit	NO	
20	9A Power supply unit	NO	
21	12A Power supply unit	NO	
22	On call escort of clients staff on demand(Per call).	NO	
23	GSM/IP Module	NO	
24	GSM Module	NO	
25	GSM Transmitter unit(GTX)	NO	
26	SMS Module	NO	
27	SMS tablet/Phone	NO	
28	Door buzzer unit	NO	
29	Guard Monitoring unit as per specifications	NO	
	Guard Clocking device	NO	
	List others		
31			
32			
33			
34			
35			

**SECTION VI: ELECTRIC FENCE SLA PRICED LIST OF SPARE PARTS: ELECTRIC FENCES**

NO.	ITEM	UNIT	UNIT PRICE
A	Fence Energizer with Specification as described in Specifications	NO	
B	Lead out under gate cable	LM	
C	High tensile fence wire ( HT ) Galvanized per meter	LM	
D	25 x 25mm Hollow Square Tube 18 Gauge for W and Strainers fully painted with 3no coat of paint to client satisfaction.	NO	
E	12V, 7AH Batteries.	NO	
F	12 Volts D.C. siren	NO	
G	12 Volts D.C. strobe	NO	
H	AVS 30 Voltage protector as sollatek or equal and approved	NO	
I	W Insulators	NO	
J	Strain insulators STF Black.	NO	
K	Earth Rod	NO	
L	Hatari signs	NO	
M	4 core Alarm cable	LM	
N	Steel Box Energizer Cabinet size 500 x 500 x 250 mm	NO	
P	25mm conduits	NO	
Q	Energizer Capacitor	NO.	
R	Energizer Transistor	NO.	
S	Energizer Key Switch	NO.	
T	Energizer ON/OFF Key	NO.	
U	Energizer Transformer	NO.	
V	Energizer Power supply board section	NO.	
W	Painting one liner meter section of fence	LM.	
X	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)		
Y		LM	
Z	GSM/IP Module		
	Complete repair of one Linear meter length of fence with all necessary items i.e. hollow square tube Pole, insulators, Ht Wire, and any other necessary item to restore the damaged section, with 3-coat relevant paint to client satisfaction.	NO	
		LM	

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*



**NOTES ON PRICE SCHEDULE OF PRICE**

**The prices shall be DDP and varied for one year from Contract effective date**

**\*Notes**

**CALL OUT RATES AND DAYWORK CHARGES**

Please note that the Contractor shall complete the price schedule above noting that hourly rates and charges are fixed and uniform subject to the region. There shall be no difference in pricing in relation to the night and daytime hours, more so on weekends/public holidays.

Date:

Tender Number and Name:

**To:**

The Kenya Power & Lighting Company Limited,  
Stima Plaza,  
Kolobot Road, Parklands,  
P.O Box 30099 – 00100,  
Nairobi, Kenya.

Dear Sirs and Madams,

Having read, examined and understood the Tender Document including all Addenda, receipt of which we hereby acknowledge, we, the undersigned Tenderer, offer to provide .....(*insert services description*) for the sum of.....(*total tender price in words and figures*) or such other sums as may be ascertained in accordance with the schedule of prices inserted by me/ us above.

Name of Tenderer

\_\_\_\_\_

Name and Designation of authorised person signing the Tender

\_\_\_\_\_

Signature of authorised person signing the Tender

\_\_\_\_\_

Stamp of Tenderer

---

**SECTION IV-CATEGORY 3-SCHEDULE OF REQUIREMENTS: WALKTHROUGH METAL DETECTORS**

**A) SCHEDULE OF EQUIPMENT AND SITES TO BE MAINTAINED CATEGORY 3: WALKTHROUGH METAL DETECTORS**

i) Schedule of Equipment to be maintained Category 3: Walkthrough Metal Detectors

The Schedule of Equipment has been prepared in general terms to identify the equipment covered by the Service and Maintenance Agreement.(SLA) Those items not identified but which are clearly required for the operation of the Walkthrough Metal Detector system shall be included within the Service and Maintenance Agreement.

*These items should be listed here individually.*

A(i) Schedule of Equipment to be maintained Category 3: Walkthrough Metal Detectors

<b>NO.</b>	<b>ITEM DESCRIPTION</b>
<b>1.</b>	<b>Central Control panel</b>
<b>2.</b>	<b>Back up Battery</b>
<b>3.</b>	<b>Audio devices</b>
<b>4.</b>	<b>Visual indicators e.g LED and other warnings</b>
<b>5.</b>	<b>All cabling and connections</b>
<b>6.</b>	<b>Walkthrough Keypads/board</b>
<b>7.</b>	<b>Detection Zones</b>
<b>8.</b>	<b>Surge protector</b>
<b>9.</b>	<b>Power supply unit</b>
<b>10.</b>	<b>Mechanical and physical strength of the walkthrough.</b>
<b>11.</b>	<b>Programming features and parameters</b>
<b>12.</b>	<b>List others</b>

A.(i) Schedule of Equipment Category 3 Walkthrough Metal Detectors

## A(ii) Schedule of Equipment Category 3 Walkthrough Metal Detectors

	Station	Location	Model	Nature of Faults	Quantity
1	Electricity house Nairobi	Harambee Avenue	Check Point	Faulty	3
2	Electricity house Mombasa	Nkuruma Road-Mombasa	Check Point	Faulty	1
3	Electricity house Nakuru	Near County office-Nakuru	Check Point	Faulty	1
4	Electricity house Kisumu	Kisumu CBD	Check Point	Faulty	1
5	Kisii Banking Hall	Kisii	Check Point	Non-existent(reinstall 1no from Stima	1
6	Kakamega Banking hall	Kakamega	Check Point	Non-existent(reinstall 1no from Stima	1
7	Eldoret Banking Hall	Eldoret	Check Point	Non-existent(reinstall 1no from Stima	1
8	Thika Banking hall	Thika Town	Check Point	Non-existent(reinstall 1no from NCC	1
					<b>10</b>

## B. SCHEDULE OF SERVICE AND MAINTENANCE ROUTINE CATEGORY 3: WALKTHROUGH METAL DETECTORS

This schedule has been prepared to indicate the minimum requirements for the preventative maintenance of the WALKTHROUGH METAL DETECTOR system. The Contractor shall be responsible for all of the maintenance necessary to ensure that the complete WALKTHROUGH METAL DETECTOR system as specified in this Maintenance Agreement achieves a constant high quality operation.

The schedule indicates the maintenance tasks required but does not state how they will be carried out. All maintenance activities will be completed in accordance with the equipment manufacturer's guidelines, recommendations and good working practices.

The following symbols are used:-

M	Monthly (calendar)
3M	Quarterly (3 monthly)
6M	Semi-annually (6 monthly)
Y	Annually

In all instances where preventative maintenance work has identified the need to replace equipment, items or components, this work shall be carried out under the maintenance function as defined within the Contract.

### *B(i) schedule of service and maintenance routines category 3: walkthrough detectors*

No	Code	Description	Service description	Frequency
<b>WALKTHROUGH METAL DETECTORS</b>				
	C1	External Housings	<ul style="list-style-type: none"> <li>• Visual inspect, check weatherproof gasket for seal, rectify where necessary.</li> <li>• Check internal of housing for moisture rectify where necessary.</li> <li>• Check external joints, glands, make off and re-seal where necessary</li> <li>• Clean housing covers.</li> <li>• Replace where necessary.</li> </ul>	3months

C2	Cables and ducting	<ul style="list-style-type: none"> <li>• Check cable protection ducts, conduits, mini-trucking etc to ensure proper physical conditions.</li> <li>• Check all cables for damage, continuity, etc.</li> <li>• Replace where necessary</li> </ul>	3 months
C3	Connections	<ul style="list-style-type: none"> <li>• Check all connections, plugs for damage continuity, moisture ingress</li> <li>• Check all connectors.</li> <li>• Replace where necessary</li> </ul>	3months
C4	Central Control Panel performance/functionality	<ul style="list-style-type: none"> <li>• Check all functions operate correctly(Recording, time, playbacks, Event logs,voltages, resolution,software,drives,network,database,etc</li> <li>• Check all control functions</li> <li>• Reconfigure to right performance specifications/factory resets where necessary.</li> </ul>	3months
C5	Monitors	<ul style="list-style-type: none"> <li>• Check all visual indicators for correct performance and clarity..</li> <li>• Check all connections.</li> <li>• Inspect display tube. Replace where necessary</li> <li>• Check condition of cables.</li> <li>• Adjust, rectify or Replace where necessary</li> <li>• Perform any factory resets if need be.</li> </ul>	3months
C6	Control System and PC-where applicable	<p>Clean PC. Clean filters to PC fans. Check security of cable connections Clean hard disks Software checks and upgrades. Check antivirus and malware protection.</p>	3months
C7	Electrical Power Supplies	<ul style="list-style-type: none"> <li>• Check all input and output parameters (Voltage, current, power, frequency)</li> </ul>	3months

			<p><i>etc.) and ensure its within accepted nominal values as per IEE standards.</i></p> <ul style="list-style-type: none"> <li>• <i>Check all surge/overvoltage protection units to ensure correct functionality.</i></li> <li>• <i>Check operation of Fuses and circuit breakers</i></li> <li>• <i>Check for ingress of moisture at distribution boards, plugs and sockets</i></li> <li>• <i>Check all cables for damage, continuity, etc</i></li> <li>• <i>Check earthing connections</i></li> <li>• <i>Fixed wiring inspection and test to BS 7671standards.- (after 2 years)</i></li> <li>• <i>Rectify where necessary.</i></li> </ul>	
	C8	<b>Cleaning</b>	<ul style="list-style-type: none"> <li>• <i>Clean or blow to prevent dust, dirt or any form of corrosion.</i></li> <li>• <i>Cleaning material and process shall be as per IEE standards of cleaning electrical equipment and in accordance with safety regulations.</i></li> </ul>	3months

*B(i) Schedule of Service and Maintenance Routines Category 3: Walkthrough Detectors*





**DETECTORS****Existing faults (Fill any additional noticed during the mandatory site survey)**

	Station	Location	Model	Nature of Faults	Proposed remedy
1	Electricity house Nairobi	Harambee Avenue	Check Point	Faulty	<ul style="list-style-type: none"> <li>➤ Repair/Replace 3no Walkthrough Detector with 2no power supply one as standby and provide sufficient surge protection.</li> <li>➤ Replace 10no Handheld metal detectors</li> </ul>
2	Electricity house Mombasa	Nkuruma Road-Mombasa	Check Point	Faulty	<ul style="list-style-type: none"> <li>➤ Repair/Replace 1no Walkthrough Detector with 2no power supply one as standby and provide sufficient surge protection.</li> <li>➤ Replace 6no Handheld metal detectors</li> </ul>
3	Electricity house Nakuru	Near County office-Nakuru	Check Point	Faulty	<ul style="list-style-type: none"> <li>➤ Repair/Replace 1no Walkthrough Detector. Install 1no additional Walkthrough detector in the banking hall with 2no power supply one as standby and provide sufficient surge protection</li> <li>➤ Replace 6no Handheld metal detectors complete with charger unit</li> </ul>
4	Electricity house Kisumu	Kisumu CBD	Check Point	Faulty	<ul style="list-style-type: none"> <li>➤ Repair/Replace 1no Walkthrough Detector with 2no power supply one as standby and provide sufficient surge protection</li> <li>➤ Replace 4no Handheld metal detectors complete with charger unit</li> </ul>
5	Kisii Banking Hall	Kisii	Check Point	Non-existent	<ul style="list-style-type: none"> <li>➤ Decommission and reinstall 1no Walkthrough detector from Stima Plaza with 2no power supply one as standby and provide sufficient surge protection</li> <li>➤ Replace 4no Handheld metal detectors complete with charger unit</li> </ul>
6	Kakamega Banking hall	Kakamega	Check Point	Non-existent	<ul style="list-style-type: none"> <li>➤ Decommission and reinstall 1no Walkthrough detector from Stima Plaza with 2no power</li> </ul>

					<p>supply one as standby and provide sufficient surge protection</p> <ul style="list-style-type: none"> <li>➤ Replace 4no Handheld metal detector complete with charger unit</li> </ul>
7	Eldoret Banking Hall	Eldoret	Check Point	Non-existent	<ul style="list-style-type: none"> <li>➤ Decommission and reinstall 1no Walkthrough detector from Stima Plaza with 2no power supply one as standby and provide sufficient surge protection</li> <li>➤ Replace 4no Handheld metal detectors complete with charger unit</li> </ul>
8	Thika Banking hall	Thika Town	Check Point	Non-existent	<ul style="list-style-type: none"> <li>➤ Decommission and reinstall 1no additional Walkthrough detector from NCC with 2no power supply one as standby and provide sufficient surge protection</li> <li>➤ Replace 4no Handheld metal detectors complete with charger unit</li> </ul>

**SECTION V – PRICE SCHEDULE FOR GOOD AND SERVICES -CATEGORY 3  
FOR PROVISION OF SERVICE AND MANTENANCE CONTRACT (SLA) FOR  
WALKTHROUGH METAL DETECTOR SYSTEMS IN THE COMPANY**

*(THE CURRENCY MUST BE IN KENYA SHILLINGS)*

<b>CATEGORY 3: WALKTHROUGH METAL DETECTORS BILL OF QUANTITIES PAGE 1</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system</li> <li>• All consumables as described in detail of service</li> </ul>				
1	Electricity house Nairobi	No	8		
2	Electricity house Mombasa	No	8		
3	Electricity house Nakuru	No	8		
4	Electricity house Kisumu	No	8		
5	Kisii Banking Hall	No	8		
6	Kakamega Banking hall	No	8		
7	Eldoret Banking Hall	No	8		
8	Thika Banking hall	No	8		
<b>Total Carried to collection Category 3 BQ Page 1</b>					
<b>CATEGORY 3 WALKTHROUGH METAL DETECTORS BILL OF QUATITIES PAGE 1</b>					

**CATEGORY 3: WALKTHROUGH METAL DETECTORS BILL OF QUANTITIES PAGE 2**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<p><b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b></p> <ul style="list-style-type: none"> <li>Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b>. Indicate NONE where no faults exist</li> </ul>				
1	Electricity house Nairobi	Item	1		
2	Electricity house Mombasa	Item	1		
3	Electricity house Nakuru	Item	1		
4	Electricity house Kisumu	Item	1		
5	Kisii Banking Hall	Item	1		
6	Kakamega Banking hall	Item	1		
7	Eldoret Banking Hall	Item	1		
8	Thika Banking hall	Item	1		
<b>Total Carried to collection Category 3 BQ Page 2</b>					
<b>CATEGORY 3-WALKTHROUGH METAL DETECTORS BILL OF QUATITIES PAGE 2</b>					

<b>SUMMARY PAGE CATEGORY 3-WALKTHROUGH METAL DETECTORS</b>	<b>KSHS VAT EXCLUSIVE</b>
<b>Total Carried to collection Category 2 Lot 3 BQ Page 1</b>	
<b>Total Carried to collection Category 2 Lot 3 BQ Page 2</b>	
<b>SUB TOTAL</b>	
<b>Add 16% VAT</b>	
<b>GRAND TOTAL CATERGORY 3</b>	

**PART(C) PRICED LIST OF SPARES CATEGORY 3: WALKTHROUGH METAL DETECTORS**

NO.	ITEM DESCRIPTION	UNIT OF MEASURE	UNIT PRICE VAT EXCLUSIVE
1	Central Control panel	NO	
2	Back up Battery	NO	
3	Audio device	NO	
4	Visual indicators panel	NO	
5	1M Power cable	M	
6	Walkthrough Keypads/board	NO	
7	Detection Zone sensors	NO	
8	Surge protector	NO	
9	Power supply unit	NO	
10	Power supply transformer	NO	
11	New Walkthrough metal detector	NO	
	List Others(not consumables like connectors,Screws)		

**NOTES ON PRICE SCHEDULE OF PRICE**

The prices shall be DDP and varied for two years from Contract effective date

**Brief description on service delivery schedule**

Item No.	Description	Unit Of Measure	Quantity	*Performance Period OR Performance Start Date	*Performance End Date
1	Repair of faulty Walkthrough detectors	LOT	1	Contract signing date	3 months after award
2	2 Year service and maintenance contract done quarterly in all sites	NO.	8	Date on completion of repairs above	2 years after repairs

## **CONTRACT PRICE –GENERAL SUMMARY CATEGORY 3: WALKTHROUGH METAL DETECTOR**

### **1.1 CONTRACTOR’S PRICE**

This will be the Contractor’s price inclusive of labour, transport, Communication, accommodations, replacement, to carry out planned preventative maintenance and fault repair of the WALKTHROUGH METAL DETECTOR system in accordance with the terms and conditions of this maintenance agreement is as per the schedule or prices and Bills of quantities.

The Contractor’s price shall also include cost for all hoists, scaffolding, barriers, signage, lighting and the like to enable him to properly and safely carry out the maintenance works

**Note: The Contractor’s price must be broken down under the separate headings provided and all costs stated under Section 2 shall be net of V A T.**

**The Contractor’s price shall be transferred to the Form of Tender.**

### **2.2 CALL OUT RATES AND DAYWORK CHARGES**

The Contractor shall complete the schedule below noting his hourly rates and charges. These rates and charges will only be used for the rectification of faults and problems not covered by the terms and conditions of the Maintenance Agreement.eg work over holidays, off office works etc.

#### **2.2.1 Call Out Rates and Charges for Service Engineers/team**

<b>No.</b>	<b>Call out description</b>	<b>Call Out Charge Amount per hour (Kshs)</b>
a)	0800 -1800 Monday to Friday	
b)	1800 -0000 Monday to Friday	
c)	0000 -0800 Monday to Friday	
d)	0000 -0800 Monday to Friday	
e)	Resolved by Telephone	
f)	Other: (Contractor to State)	

Hourly rates shall include all overheads and profits.

Contractor to state any minimum charges.

**Note:** The completed call out rates and day work charges are to be returned with the Form of Tender.

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

Date:

Tender Number and Name:

**To:**

The Kenya Power & Lighting Company Limited,  
Stima Plaza,  
Kolobot Road, Parklands,  
P.O Box 30099 – 00100,  
Nairobi, Kenya.

Dear Sirs and Madams,

Having read, examined and understood the Tender Document including all Addenda, receipt of which we hereby acknowledge, we, the undersigned Tenderer, offer to provide .....(*insert services description*) for the sum of.....(*total tender price in words and figures*) or such other sums as may be ascertained in accordance with the schedule of prices inserted by me/ us above.

Name of Tenderer

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Name and Designation of 159authorized person signing the Tender

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Signature of 159authorized person signing the Tender

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Stamp of Tenderer

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**SECTION VI: SCHEDULE OF REQUIREMENT FIRE DETECTION/ALARM SYSTEM AND FIRE FIGHTING EQUIPMENT ELECTRICITY HOUSE NAIROBI**

**A) SCHEDULE OF EQUIPMENT TO BE MAINTAINED CATEGORY 4: FIRE ALARMS SYSTEM AND FIRE FIGHTING EQUIPMENT-ELECTRICITY HOUSE NAIROBI**

The Schedule of Equipment has been prepared in general terms to identify the equipment covered by the Maintenance Agreement. Those items not identified but which are clearly required for the operation of the FIRE ALARM system shall be included within the Maintenance Agreement.

The Existing Equipment is from HONEYWELL and all **support shall be provided directly by the Contractor and shall be subject to a back-to-back agreement with the HONEYWELL Manufacturers where the Contractor is not the Manufacturer.**

A (i) Schedule of Equipment to be maintained Category 4: Fire Alarms System Electricity House Nairobi

NO.	ITEM DESCRIPTION		
1	Fire Alarm control panel and related software's and equipment.		
2	Fire loop /zone Module		
3	Repeater Module		
4	Fire exit door system		
5	UPS and Batteries		
6	Public Address system		
7	Sounders and Strobe		
8	Fire Alarm cable 1M		
9	All Fire alarm cabling		
10	Break glasses		
11	Detector Call point		
12	Keypads		
13	Surge protectors		
14	Safety Signage's		
15	Dot Matrix Printer		
16	Fire detectors(Heat and smoke)		
17	Application management computer and related software's and accessories		
	List others if omitted during the mandatory site visit		
20			
21			



**B SCHEDULE OF MAINTENANCE ROUTINES CATEGORY 4: FIRE ALARMS SYSTEM ELECTRICITY HOUSE NAIROBI**

This schedule has been prepared to indicate the minimum requirements for the preventative maintenance of the FIRE ALARM system and Fire Fighting Equipment . The Contractor shall be responsible for all of the maintenance necessary to ensure that the complete FIRE ALARM system as specified in this Maintenance Agreement achieves a constant high quality operation.

The schedule indicates the maintenance tasks required but does not state how they will be carried out. All maintenance activities will be completed in accordance with the equipment manufacturer's guidelines, recommendations and good working practices.

The following symbols are used:-

M	Monthly (calendar)
3M	Quarterly (3 monthly)
6M	Semi-annually (6 monthly)
Y	Annually

In all instances where preventative maintenance work has identified the need to replace equipment, items or components, this work shall be carried out under the maintenance function as defined within the Contract.

***B (i) Schedule of Maintenance Routines Category 4: Fire Alarms System and Fire Fighting Equipment Electricity House Nairobi***

No	Code	Description	Service description	Frequency	Remarks
<b>Fire Alarms</b>					
	C1	<i>External Housings(siren boxes, strobes etc)</i>	<ul style="list-style-type: none"> <li>• <i>Visual inspect, check weatherproof gasket for seal, rectify where necessary.</i></li> <li>• <i>Check internal of housing for moisture rectify where necessary.</i></li> <li>• <i>Check external joints, glands, make off and re-seal where necessary</i></li> <li>• <i>Clean housing glass. Replace where necessary.</i></li> </ul>	6months	
	C5	<i>Detectors Performance</i>	<ul style="list-style-type: none"> <li>• <i>Measure and record device performance.</i></li> <li>• <i>Provide hard /soft copy of report of the tests.</i></li> </ul>		
	C7	<i>Cables and ducting</i>	<ul style="list-style-type: none"> <li>• <i>Check cable protection ducts, conduits, mini-trucking etc. to ensure proper physical conditions.</i></li> <li>• <i>Check all cables for damage, continuity, etc. Replace where necessary</i></li> </ul>	3 months	
	C8	<i>Connections</i>	<i>Check all connections, plugs for damage continuity, moisture ingress Check BNC, RG 45 and other connectors. Replace where necessary</i>		
	D1	<i>Control Panel performance/functionality</i>	<ul style="list-style-type: none"> <li>• <i>Check all functions operate correctly(Recording, time, playbacks, Event logs,voltages,resolution,software,drives,streaming,network,data base,etc</i></li> <li>• <i>Check all control functions</i></li> <li>• <i>Reconfigure to right performance specifications/factory resets where necessary.</i></li> </ul>		

M1	Monitors	<ul style="list-style-type: none"> <li>• Check video signal for level.</li> <li>• Check BNC/RJ and other connections. Remake or</li> <li>• Inspect display tube. Replace where necessary</li> <li>• Check condition of cables.</li> <li>• Inspect display tube.</li> <li>• Adjust, rectify or Replace where necessary</li> <li>• Perform any factory resets if need be.</li> </ul>		
PC1	Control System and PC	<p>Clean PC, Clean filters to PC fans.  Check security of cable connections  Clean hard disks  Software checks and upgrades.  Check antivirus and malware protection.</p>		
E1	Electrical Power Supplies	<ul style="list-style-type: none"> <li>• Check all input and output parameters (Voltage, current, power, frequency etc.) and ensure its within accepted nominal values as per IEE standards.</li> <li>• Check all surge/overvoltage protection units to ensure correct functionality.</li> <li>• Check operation of Fuses and circuit breakers</li> <li>• Check for ingress of moisture at distribution boards, plugs and sockets</li> <li>• Check all cables for damage, continuity, e.t.c</li> <li>• Check earthing connections</li> <li>• Fixed wiring inspection and test to BS 7671 standards.-(after 2 years)</li> <li>• Rectify where necessary.</li> </ul>		

		All Fire alarm Equipment	<ul style="list-style-type: none"> <li>• <i>Clean or blow to prevent dust, dirt or any form of corrosion.</i></li> <li>• <i>Cleaning material and process shall be as per IEE standards of cleaning electrical equipment and in accordance with safety regulations.</i></li> </ul>		
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Additional information

The following items shall be inspected by the Contractor at the agreed upon intervals:

- a) Safety Signage
- b) Operational Check
- c) control panel
- d) detector call point
- e) Cable plant (zone & loop).
- f) backup batteries
- g) Computers
- h) printers and toners
- i) mains changeover
- j) log book entries
- k) alarm functions
- l) environmental
- m) All Fire Fighting Equipment as described in Schedule of Requirement

***B (ii) Schedule of Maintenance Routines Category 4: Fire Alarms System Electricity House Nairobi***

<b>Table 1: Fire Alarm System Maintenance Work Classification</b>		
<b>Category</b>	<b>Sub-Category</b>	<b>Description</b>
Planned maintenance	Time-based /Scheduled Maintenance	Detects system deterioration and prevents failure by systematic inspection and monitoring undertaken at predetermined time intervals
	Condition-based Maintenance	Corrective maintenance work performed, as a result of significant deterioration or failure, to restore the system to full functionality.
	Statutory Maintenance	Actions performed to provide the minimum level of maintenance to meet mandatory requirements of <b>International Code of Practice such as BS5839 Part 1. As well as Kenya Standards and County Government Bi-laws on Safety, Health and occupation.</b> (Often includes some of the Time-based and Condition-based maintenance tasks).
Unplanned Maintenance	Routine & Breakdown Maintenance	Unplanned and reactive maintenance actions performed to restore the system to full functionality, as a result of an unforeseen failure.
	Incident Maintenance	Unplanned maintenance actions to restore the system to full functionality as a result of damage resulting from a lightning strike, vandalism, fire or other accidents.

<b>Table 2: Time-based preventive maintenance according to BS5839 part 1</b>	
Daily	<ol style="list-style-type: none"> <li>1. Attend to failures recorded in the daily logs by Security Control room operators on the control panel to ascertain that it shows normal operation.</li> <li>2. Replacement of any broken break glass.</li> </ol>
Monthly	<ol style="list-style-type: none"> <li>3. Ensure that Check any printers to ensure that reserves of consumables are adequate for 2 weeks' normal usage (KPLC Control Room Operators in Liaison with Contractor.)</li> </ol>
Quarterly	<ol style="list-style-type: none"> <li>4. Check entries to Security Control room log book and ensure that necessary actions are taken</li> <li>5. Examine batteries and their connections and test them as specified by supplier to ensure that it is not likely to fail before the next quarterly inspection.</li> <li>6. Check Alarm functions of the panel by operating a detector /call point in each zone</li> <li>7. Check Alarm sounders and automatic link to remote centers, if any.</li> <li>8. Check all ancillary functions of the control panel, where possible.</li> <li>9. Check all fault indicators and circuits by simulating a fault condition.</li> <li>10. Visually inspect the control panel for signs of moisture ingress or other deterioration.</li> <li>11. Visually inspect whether structural or occupancy changes have affected the requirements for the siting of call points, detectors and sounders.</li> <li>12. Visually inspect to confirm that a clear space of at least 750mm is preserved in all directions below each detector, that detectors are sited in accordance with code of practice clauses 12 &amp;/or 13 and that all call points remain unobstructed and conspicuous.</li> <li>13. These tests should be done by a competent person, and upon completion, a certificate of testing is issued to the responsible person.</li> <li>14. Check the management computer and application software and take any necessary corrective measure including any software updates and also the anti-virus upgrades.</li> <li>15. Simulate mains failure to automatically start standby generator to power the fire alarm system for at least 1 hour. Check for malfunctions. Restore to normal supply and advise /Inform of any need to check the generator to the client ie need to check generator startup battery &amp; charger, fill up of the fuel tanks, top up oil and coolant if necessary by the client.</li> <li>16. Ensure that the system is capable of operating under alarm conditions by operating at least one detector or call point on one circuit (zone or loop). For systems with 13 circuits or less, each circuit should be tested in turn. For systems with more than 13 circuits, then more than one circuit must be tested each week so that the interval between tests on one circuit does not exceed 13 weeks</li> </ol>
Annually (4 <sup>th</sup> )	<ol style="list-style-type: none"> <li>17. Check each detector for correct operation in accordance to manufacturer's recommendation.</li> </ol>

quarter service)	<p>18. Visually check all cable fittings and equipment are secure, undamaged and adequately protected.</p> <p>19. Record any defects in a logbook and upon completion, a certificate of testing is issued to the responsible person.</p> <p>20. Replace all UPS/Power back up batteries.</p>
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***C) Schedule of Repairs of Existing Faults Category 4-Fire Alarm System Electricity House Nairobi***

<b>ELECTRICITY HOUSE NAIROBI: HARAMBEE AVENUE EXISTING SYSTEM TYPE: HONEYWELL</b>				
	<b>Station</b>	<b>Location</b>	<b>Nature of fault</b>	<b>Proposed Remedy</b>
1	Break glasses	Check Entire Building	Broken	Replace accordingly
2	Software upgrade to allow local and remote Viewing and system Back-up at Stima Plaza and NCC. This should include in necessary network modules/interfaces. Existing Software-Honeywell	Control room	Software version out of date	Upgrade
3	Isolated detectors on 2 <sup>nd</sup> Floor ICT	2 <sup>nd</sup> Floor	Isolated due to renovation works	Re-cable/Manage cable as well as remount 5no detectors, test and confirm working ok.
4	UPS and Batteries	Basement	Drained batteries.	Replace all batteries and confirm UPS working ok. Ensure UPS is monitored via network.
5	Fire Exit door system	Both wings	Maglock not connected and no MC to monitor the door	Re-mount 35no Maglock to the newly installed door and install magnetic contacts monitoring system to be monitored via application software at the Security Control room. This should include all necessary cabling.

	List Others as noticed during mandatory Site Visit.			
6				
7				
8				



**FOR PROVISION OF SERVICE AND MAINTENANCE CONTRACT (SLA) FOR FIRE  
ALARM SYSTEMS ELECTRICITY HOUSE NAIROBI**  
*(THE CURRENCY MUST BE IN KENYA SHILLINGS)*

**CATEGORY 4: FIRE ALARM SYSTEM ELECTRICITY HOUSE NAIROBI BILL OF  
QUANTITIES PAGE 1**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>A</b>	<p><b>Preventive and Curative 1 Maintenance</b> Prices should include activities as described in details of service for each the sites below:</p> <ul style="list-style-type: none"> <li>• Scheduled quarterly servicing. (Drive Test and Optimization, Performance Reports (PMR)</li> <li>• Frequent inspections and monitoring of the systems (spot checks-control room data).</li> <li>• Training/Knowledge Transfer</li> <li>• 24x7 remote technical support.</li> <li>• Software and firmware upgrades.</li> <li>• Emergency on-site intervention</li> <li>• Repair &amp; Return to operations faulty parts or system with all consumables as described in detail of services. This will include daily check and replacement of any faulty/broken break glasses.</li> </ul>	<b>No.</b>	<b>8</b>		
<b>Total Carried to collection Category 4 BQ Page 1</b>					
<b>CATEGORY 4 FIRE ALARM SYSTEM ELCTRICITY HOUSE NAIROBI BILL OF QUATITIES PAGE 1</b>					

**CATEGORY 4: FIRE ALARM SYSTEM ELECTRICITY HOUSE NAIROBI BILL OF QUANTITIES PAGE 2**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Cost exclusive of Taxes</b>	<b>Total Cost Exclusive of Taxes</b>
<b>B</b>	<p><b>CURATIVE MAINTENANCE(II): REPAIR OF FAULTY SYSTEMS</b></p> <ul style="list-style-type: none"> <li>• Prices should include Repair and return to normalcy all existing faults as described under <b>section (IV) – Schedule of requirement/Existing faults</b> as well as the following training:               <ul style="list-style-type: none"> <li>a) Local user training for 8no Security Controllers and 2no.Technical team.</li> <li>b) Technical training for the newly upgraded software application and support/administration training for 4no Technical support team.Note.The cost shall shall only entail training costs and NOT perdiems.</li> </ul> </li> </ul>	Item	1		
		Item	1		
<b>Total Carried to collection Category 4 BQ Page 2</b>					
<b>CATEGORY 4: FIRE ALARM SYSTEM ELECTRICITY HOUSE NAIROBI BILL OF QUANTITIES PAGE 2</b>					

**PART C: FIRE EMERGENCY RESPONSE SERVICES****CATEGORY 4: FIRE ALARM SYSTEM ELECTRICITY HOUSE NAIROBI BILL OF QUANTITIES PAGE 3**

<b>Item No.</b>	<b>Description</b>	<b>Unit Of measure</b>	<b>QTY</b>	<b>Unit Price DDP, VAT Exclusive</b>	<b>Total Price DDP, VAT Exclusive</b>
<b>A</b>	<p><b>Response services</b></p> <p>Prices should include quarterly charges for the following:</p> <ul style="list-style-type: none"> <li>• Emergency on-site intervention.</li> <li>• Liaison with emergency fire response providers to ensure that fire response takes less than 5 minutes on occurrence.</li> <li>• 24x7 remote technical support.</li> <li>• Repair &amp; Return to operations faulty Equipment.</li> <li>• Clients impromptu system response tests</li> <li>• Submission on response report on demand both in hard and soft copies through E-mail and other medium as preferred by the client.</li> <li>• System Resets (Panel and detectors/modules)</li> <li>• Response to Security Control Room Fault logs.</li> <li>• 1no Fire Drills Per Year for 2 years</li> </ul>	No.	8		
<b>Total Carried to collection Category 4 BQ Page 3</b>					
<b>CATEGORY 4: FIRE ALARM SYSTEM ELECTRICITY HOUSE NAIROBI BILL OF QUANTITIES PAGE 3</b>					

	<b>SUMMARY PAGE CATEGORY 4- FIRE ALARM SYSTEM ELECTRICITY HOUSE NAIROBI</b>	<b>KSHS VAT EXCLUSIVE</b>	
	<b>Total Carried to collection Category 4 BQ Page 1</b>		
	<b>Total Carried to collection Category 4 BQ Page 2</b>		
	<b>Total Carried to collection Category 4 BQ Page 3</b>		
	<b>SUB TOTAL</b>		
	<b>Add 16% VAT</b>		
	<b>GRAND TOTAL CATERGORY 4</b>		



## NOTES ON PRICE SCHEDULE OF PRICE CATEGORY 4: FIRE ALARMS

The prices shall be DDP and varied for one year from Contract effective date

### CONTRACT PRICE -GENERAL SUMMARY

#### 1.2 CONTRACTOR'S PRICE

This will be the Contractor's price inclusive of labour, transport, Communication, accommodations, replacement, to carry out planned preventative maintenance and fault repair of the FIRE ALARM system in accordance with the terms and conditions of this maintenance agreement is as per the schedule or prices and Bills of quantities.

The Contractor's price shall also include cost for all hoists, scaffolding, barriers, signage, lighting and the like to enable him to properly and safely carry out the maintenance works

**Note: The Contractor's price must be broken down under the separate headings provided and all costs stated under Section 2 shall be nett of V A T.**

**The Contractor's price shall be transferred to the Form of Tender .**

#### 2.2 CALL OUT RATES AND DAYWORK CHARGES

The Contractor shall complete the schedule below noting his hourly rates and charges. These rates and charges will only be used for the rectification of faults and problems not covered by the terms and conditions of the Maintenance Agreement.eg work over holidays, off office works etc.

##### 2.2.1 Call Out Rates and Charges for Service Engineers/team

No.	Call out description	Call Out Charge Amount per hour (Kshs)
a)	0800 -1800 Monday to Friday	
b)	1800 -0000 Monday to Friday	
c)	0000 -0800 Monday to Friday	
d)	0000 -0800 Monday to Friday	
e)	Resolved by Telephone	
f)	Other: (Contractor to State)	

Hourly rates shall include all overheads and profits.

Contractor to state any minimum charges.

**Note:** The completed call out rates and day work charges are to be returned with the Form of Tender.

Item No.	Description	Unit Of Measure	Quantity	*Performance Period OR Performance Start Date	*Performance End Date
1	<b>Repair of faulty Fire Alarm system</b>	LOT	1	Contract signing date	3 months after award
2	1 Year service and maintenance contract done quarterly in all sites	NO.	8	Date on completion of repairs above	1 year after repairs

**TECHNICAL SPECIFICATIONS  
CATEGORY 1: CCTV EQUIPMENT SPECIFICATIONS**

**IP MEGAPIXEL CAMERAS**

<b>Feature</b>	<b>Technical Specification</b>	<b>Bidder's Response</b>
<b>5 MEGAPIXEL ENVIRONMENTAL IP OUTDOOR/INDOOR FIXED MINI DOME IR CAMERAS WITH WDR</b>		
Max Resolution	2048x1536	
Image Sensor	1/3.2-inch CMOS	
Lens	3-9 mm, varifocal	
IR Illumination	Integrated Adaptive IR Illumination	
Focus /Zoom	Auto focus, remote zoom	
Day/Night	Day/Night Capability	
Wide Dynamic Range	65 dB	
Illumination	0.03 lux @ f/1.2	
Max IPS at Max Resolution	12 IPS	
Video Streams	2 configurable streams	
Audio	Bidirectional	
Analytics	Simple motion detection/ camera sabotage	
Local Storage	Up to 32 GB with microSDHC or SDXC, record video	
Power Input	PoE (IEEE 802.3af, Class 3), 24 Vac	
Warranty	3-Year Warranty and Support	
ONVIF	ONVIF Profile S Conformant	



Feature	Technical Specification	Bidder's Response
<b>5 MEGAPIXEL IP ENVIRONMENTAL BULLET OUTDOOR/INDOOR FIXED CAMERAS C/W INTEGRATED LENS AND IR WITH WDR</b>		
Max Resolution	Up to 5 Megapixel (MPx) 2592 x 1944 (5.0 MPx) Resolution	
Image sensor	1/3.2-inch CMOS	
Lens	3-9 mm, Varifocal	
IR Illumination	Integrated Adaptive IR Illumination	
Local Storage	Accessible Edge Storage with Micro SD Card	
Frames per second	Up to 30 Images per Second (IPS) at 1080p	
Focus	Autofocus Motorized Remote Zoom Lens	
Compression	H.264 and MJPEG Compression Capability	
Day/Night	Day/Night Capability	
Illumination	0.03 lux @ f/1.2	
PoE	Power over Ethernet (IEEE 802.3af) or 24 VAC	
Video Streams	Up to 2 Simultaneous Video Streams	
Video Analytics	Motion Detection and Camera Sabotage Analytics	
Warranty	3-Year Warranty and Support	
ONVIF	ONVIF Profile S Conformant	

Feature	Technical Specification	Bidder's Response
<b>12-MEGAPIXEL H.264 WDR 180° PANORAMIC DAY/NIGHT INDOOR/OUTDOOR DOME IP CAMERAS</b>		
Image Sensor	4 x 3MP CMOS WDR	
Optical Format	1/3.2" Progressive Scan	
Pixel Pitch	2.2µm	
Minimum Illumination	Day/Night 0.025 Lux, IR sensitive	
Full Field of View (FOV) Resolution	Per Sensor 2048 H x 1536 V; Total = 4096 H x 768 V	
Dynamic Range	Up to 100dB at Full Resolution	
Lens	M12 small size lens, true 3MP lens	
Video Frame Rates	Max 5.2fps (8192 x 1536); 16.7fps (4096 x 768)	
Compression Type	H.264 (MPEG-4, Part 10)	
Multi-Streaming	8 non-identical streams (2 per sensor)	
Electrical	Power Over Ethernet; PoE 802.3af, Class 3 Auxiliary Power; 12–48V DC and 24V AC	
Programmability	Auto adjustment between WDR and LDR modes	
	Binning Mode; Privacy mask	
	Flexible Cropping (resolution windowing down to 1x1 pixel for JPEG and 2x2 pixels for H.264)	
	+/-5° Digital Vertical Alignment to adjust images; Electronic pan, tilt, zoom (PTZ)	
	On-camera real-time motion detection with up to 1024 detection zones (per sensor)	
	Bandwidth and storage savings by running at 1/4 resolution; Bit rate and bandwidth limit control	
Compliance	Industry Standard; ONVIF Conformant	
	Listings; UL (CB)	
	FCC Compliance; 47 CFR 15 Class A	
	Environmental; RoHS, REACH, WEEE	
	Markings; (CE) EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3, EN60950-1	
Mechanical	Protection Ratings; IK-10 vandal-resistant polycarbonate dome; IP66 water/dust protection rating	

Feature	Technical Specification	Bidder's Response
<b>20-MEGAPIXEL H.264 WDR ALL-IN ONE OMNI DIRECTIONAL USER-CONFIGURABLE MULTI-SENSOR TRUE DAY/NIGHT INDOOR/OUTDOOR DOME IP CAMERAS</b>		
<b>Image Sensor</b>	4 x 5MP CMOS	
<b>Optical Format</b>	1/2.5"	
<b>Pixel Pitch</b>	2.2µm	
<b>Minimum Illumination</b>	Color-0.3 Lux	
	Color Binning -0.15 Lux	
	Day/Night -0.03 Lux, IR sensitive	
<b>Full Field of View (FOV) Resolution</b>	Total:10240 H x 1920 V	
	Per Sensor:2560 H x 1920 V	
<b>1/4 Resolution</b>	Total:5120 H x 960 V	
	Per Sensor:1280 H x 960 V	
<b>Lens</b>	2.8-8mm, F/1.6", H-FOV =114°-43°	
<b>Video Frame Rates</b>	5.2fps (8192 x 1536)	
<b>Power Over Ethernet</b>	PoE 802.3af, Class 3	
<b>Gimbal</b>	Easily adjustable, 2-axis w/360° pan and 90° tilt	
	Up to 4 Individual Camera Gimbals can be Independently Placed in Any Orientation Around a 360° Track with Extra Positions for Looking Straight Down	
<b>Streaming</b>	Multi-streams of at least 8no non-identical streams.	
<b>WDR</b>	Auto switch control adjustment between WDR and LDR modes .70.1dB at Full Resolution	
<b>Network Interface</b>	100BT-Ethernet	
<b>Network protocols</b>	RTSP, RTP/TCP, RTP/UDP, HTTP, DHCP, TFTP, IPv4, IPv6, QoS	
<b>Day/Night</b>	True Day/Night Functionality with Mechanical IR cut filter	
<b>Binning Mode</b>	Binning mode for strong low light performance(24fps-5120x960)	
<b>Casing</b>	Die-cast aluminum chassis with polycarbonate dome bubble	
<b>Data Transmission</b>	Compression Type:H.264 (MPEG-4, Part 10)/Motion JPEG 21 levels of quality	
<b>Warranty</b>	3-Year Warranty and Support	
<b>Motion Detection</b>	Real-time, 1024 detection zones	
<b>Moonlighting Mode</b>	Extended exposure and noise cancellation	

ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE

<b>Picture-in-Picture</b>	Simultaneous delivery of full field-of-view and zoomed images	
<b>Backlight Compensation</b>	Auto multi-matrix white balance	
<b>Privacy Masking</b>	Unlimited	
<b>Other additional programming features</b>	Programmable resolution, brightness, saturation, gamma, tint Simultaneous delivery of full field-of-view and zoomed images Electronic pan, tilt, zoom (PTZ) Auto Exposure (AE) and Gain Control (AGC) > 120dB Programmable shutter speed to help control motion blur Selectable flicker control 50/60 Hz	
<b>Environmental</b>	Protection Ratings: IP66 water/duct protection rating; IK-10 impact-resistant polycarbonate dome	
<b>Operating temperature</b>	-40°C (-40°F) to +50°C (122°F)	
<b>Humidity</b>	0% to 90% (non-condensing)	
<b>Stable image temperature</b>	0°C (32°F) to +50°C (122°F)	
<b>Storage temperature</b>	-40°C (-40°F) to +60°C (140°F)	

## PTZ CAMERA SPECIFICATIONS

Feature	Technical Specification	Bidder's Response
<b>AUTO DOME IP FULL HD PTZ CAMERA</b>		
<b>Image Sensor</b>	The HD PTZ camera shall offer a 1/2.8-inch type Exmor CMOS imager	
<b>Resolution</b>	High-resolution, full HD PTZ camera with 1080p 25/30 resolution and 720p50/60 resolution using H.264 compression ,high-performance 30x zoom lens for capturing fine details in scenes with limited or non-uniform illumination The HD PTZ camera shall offer an effective number of pixels of 1944 x 1224 (2.38 megapixels).	
<b>Lens</b>	The HD PTZ camera shall have an autofocus lens with 360x zoom (30x optical/12x digital). The HD PTZ camera shall have 2.3° to 65° field of view (4.3 to 129 mm) The HD PTZ camera shall offer automatic focus and iris control with manual override.	
<b>Zoom</b>	The HD PTZ camera shall offer a 30x optical zoom lens (4.3 to 129 mm)	
<b>Video Analytics</b>	Intelligent Tracking and alarm rules engine with on-board Intelligent Video Analytics. <ol style="list-style-type: none"> <li>1. Shall be capable of processing and analyzing video within the camera itself, with no extra hardware required.</li> <li>2. Shall be capable of detecting and sending alarms for abnormal events.</li> <li>3. Shall be configurable to analyze up to 10 different scenes for one or more of the following events: Line Crossing, Loitering, Idle Object, Removed Object, Conditional Change, Trajectory Tracking, and Filters</li> <li>4. PTZ camera shall support Bird's Eye View (BEV) people counting</li> <li>5. Support scene tours that automatically reposition the camera to each scene for a specified duration.</li> <li>6. shall incorporate an Alarm Rule Engine, enabling abnormal events that IVA detects to prompt the camera to take one or more actions such as:</li> </ol>	

	<ol style="list-style-type: none"> <li>a. Trigger a relay connected to an alarm siren and/or strobe</li> <li>b. Trigger a visual alert to be displayed on the operator's screen</li> <li>c. Go to a specified preset position/scene.</li> </ol> <ol style="list-style-type: none"> <li>7. Go to a specified scene (preset position)</li> </ol>	
<b>Recording</b>	<p>Enhanced system flexibility with dual recording options (Video server/NVR and SD card-supply with 2TB)</p> <p>Full duplex Continuous recording of video and audio, alarm/events/schedule recording</p>	
<b>Defog feature.</b>	To improve visibility on foggy and other low contrast moments, shall offer an anti-fog image feature that assists the camera in registering a usable image through the heaviest fog	
<b>Input/output alarms</b>	<p><b>Input(7):</b> 2 supervised, 5 non-supervised Programmable for “normally open” or “normally closed”</p> <p><b>Output (4):</b> 1 dry contact relay, 3 open collector/transistor outputs 32 VDC @ 150 ma max.</p>	
<b>Minimum Illumination</b>	0.066 lux and a monochrome image, when in the night mode, with a minimum illumination of 0.033 lux at 30 IRE	
<b>Software control</b>	Camera set up to be done via Web, Video management client or video management system	
<b>Power Option</b>	<p>Dual power source options (High Power over Ethernet (High PoE) / 24 VAC)</p> <p>RJ-45 10/100 Base-TX Ethernet (High Power-over-Ethernet (High PoE)) or PoE+ (IEEE 802.3at, class 4 standard) 21-30 VAC, 50/60 Hz</p>	
<b>Streaming</b>	Fully configurable quad streaming with individually configurable streams	
<b>Integration</b>	The HD PTZ camera shall conform to the ONVIF standard to provide interoperability with other conformant systems	
<b>WDR</b>	Wide Dynamic Range (WDR) / High Dynamic Range (HDR): 90 dB (720p/30 = 120 dB)	
<b>Motion Detection and tracking</b>	<ol style="list-style-type: none"> <li>1. Camera shall offer Intelligent Tracking to continuously track an</li> </ol>	

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	<p>object using pan, tilt, and zoom actions.</p> <ol style="list-style-type: none"> <li>2. Camera shall have the ability to follow an object continually when passing behind a privacy mask.</li> <li>3. Camera shall provide automatic motion tracking using intelligent video analytics.</li> <li>4. Camera shall allow a user to define virtual masks for a scene so certain objects are not considered for flow analysis and will not trigger Intelligent Tracking.</li> <li>5. Camera shall offer the following control options for the Intelligent Tracking feature:             <ol style="list-style-type: none"> <li>a. Off – the HD PTZ camera does not track moving object.</li> <li>b. Auto – the HD PTZ camera actively analyzes the video to detect moving objects.</li> <li>c. One Click – the HD PTZ camera allows a user to click a moving object in the live video image to activate Intelligent Tracking.</li> <li>d. IVA-triggered – the HD PTZ camera continuously analyzes the scene for IVA alarms or an IVA rule violation. If an alarm or rule violation is detected, the camera activates Intelligent Tracking to track the object that triggered the alarm or rule violation.</li> </ol> </li> <li>6. The HD PTZ camera shall have the ability to restart tracking if a target starts moving in the same area where the initial target stopped moving or if the camera detects an object moving along the last known trajectory.</li> </ol>	
<p><b>Network Interface</b></p>	<p>10-Base T/100 Base-TX, auto-sensing, half/full duplex, RJ45</p>	
<p><b>Network protocols</b></p>	<p>IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, SNTP, SNMP (v1, MIB-II), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selftHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, Dropbox, CHAP, digest authentication</p>	

<b>Day/Night</b>	True Day/Night Functionality with Mechanical IR cut filter	
<b>Casing</b>	Die-cast aluminum chassis with polycarbonate dome bubble	
<b>Data Transmission</b>	The HD PTZ camera shall provide direct network connection using H.264 and –M-JPEG compression and bandwidth throttling to efficiently manage bandwidth and storage requirements while delivering outstanding image quality.	
<b>Warranty</b>	3-Year Warranty on replacement, repair and Support	
<b>Backlight Compensation</b>	Auto multi-matrix Sodium Vapor White Balance mode that automatically compensate for light from a sodium vapor lamp to restore objects to their true color 2000 K to 10,000 K; ATW, Indoor, Outdoor, AWB Hold, Extended ATW, Manual, Outdoor	
<b>Preset Positions</b>	256 user defined presets , each with a 20-character title	
<b>Privacy Masking</b>	24 individually configurable privacy with up to 8 masks per scene that prohibit areas of the field of view from being seen even if the camera is panned, tilted, or zoomed	
<b>Optical Fiber Compatibility, SMF/MMF</b>	8–10/125 $\mu\text{m}$ SMF. Must meet or exceed fiber standard ITU-T G.652. 50/125 $\mu\text{m}$ MMF. For 50/125 $\mu\text{m}$ fiber, subtract 4 dB from the specified optical budget value. Must meet or exceed fiber standard ITU-T G.651.	
<b>Other miscellaneous items</b>	Supply with the following: Fiber Optic Ethernet Media Converter kit with a small form-factor pluggable (SFP) module -camera shall allow an optional fiber optic media converter module designed to accept a wide-range of 10/100 Mbps SFP modules for use with Multimode or Singlemode optical fiber with LC or SC connectors. Corner Mounting Plate Pole Mounting Plate Pipe Mount Kit Pendant Roof Mounts Optional Mounting Plates for Roof Mounts	
<b>PTZ Features</b>		
<b>Sectors</b>	Shall divide the cameras 360° rotation into 16 independent sectors with 20-character titles per sector.	



	Any or all of the 16 sectors can be blanked from the operator's view	
<b>Tracking</b>	shall provide a feature that automatically rotates, or pivots, the camera to simplify tracking of a person walking directly under the camera	
<b>Accuracy</b>	Shall provide pan and tilt preset repeatability accurate to within $\pm 0.1$ degrees.	
<b>Speeds and modes</b>	Shall offer the two variable modes of speed: <b>Turbo Mode (manual control):</b> Pan: 0.1°/s to 400°/s Tilt: 0.1°/s to 300°/s <b>Normal Mode:</b> Pan: 0.1°/s to 120°/s Tilt: 0.1°/s to 120°/s <b>Preposition speed</b> Pan: 0.1°/s to 400°/s Tilt: 0.1°/s to 300°/s  <b>Electronic Shutter Speed (AES):</b> 1/1 sec to 1/0000 sec (22 steps)	
<b>Pre programmable modes</b>	<ol style="list-style-type: none"> <li>1. The HD PTZ camera shall offer five (5) pre-programmed but configurable user modes.</li> <li>2. The pre-programmed modes shall be optimized with the best settings for the following environments: <ol style="list-style-type: none"> <li>a. Outdoor</li> <li>b. Indoor</li> <li>c. Low Light</li> <li>d. Motion</li> <li>e. Vibrant</li> </ol> </li> <li>3. The HD PTZ camera shall allow users to customize these modes for the specific requirements of the camera site.</li> </ol>	
<b>Tilt Angle</b>	[18° above the horizon for pendant housings.] [1° above the horizon for in-ceiling housings.]	
<b>Touring</b>	Two (2) types of tours: Recorded tours – two (2) Preset tour – one (1), consisting of up to 256 scenes, consecutively	
<b>Environmental</b>	Protection Ratings: IP66 water/duct protection rating; IK-10 impact-resistant polycarbonate dome Conform to the NEMA 4X standard for the following:	

	<ul style="list-style-type: none"> <li>a) Access to Hazardous parts</li> <li>b) Ingress of solid foreign objects (falling dirt, circulating dust, settling dust)</li> <li>c) Ingress of water (dripping and light splashing, hosedown and splashing)</li> <li>d) Corrosive agents</li> </ul>	
<p><b>Heating and temperatures</b></p>	<p><b>Operating Temperature without heater wired)</b>10 to +55 °C(+14 to +131 °F)(continuous operation)</p> <p><b>Operating Temperature (with heater wired:</b> -10 to +40 °C(+14 to +104 °F) , -34 to +74 °C(-30 to +165 °F)(in accordance with NEMA TS 2-2003 (R2008), section 2.1.5.1) -40 to +55 °C(-40 to +131 °F)(continuous operation)</p> <p><b>Storage Temperature:</b> -40 to +60 °C(-40 to +140 °F) , -40 to +60 °C(-40 to +140 °F)</p> <p><b>Operating Humidity:</b> 0% to 90% RH, non-condensing , 0% to 100% RH, condensing 7</p>	

## CLIENT WORKSTATIONS SPECIFICATIONS

Feature	Technical Specification	Bidder's Response
<b>Client Workstation Computer</b>		
<b>Storage Devices</b>	<b>Up to two optional optical drives: DVD-ROM; DVD+/-RW; Optional 19-in-1 media card reader (installed in 5.25" bay)</b>	
<b>Environmental and Regulatory</b>	<b>ENERGY STAR® 5.2 configurations available including optional 80 PLUS® registered Gold power supplies; EPEAT® registered (see <a href="http://epeat.net">epeat.net</a> for specific registration rating/status by country); China CECP; GS Mark. For a complete listing of declarations and certifications, see Dell's regulatory and compliance homepage at <a href="http://dell.com/regulatory">dell.com/regulatory</a> compliance</b>	
<b>Security Options<sup>6</sup></b>	<b>Trusted Platform Module 1.2 (TPM 1.2); Intrusion switch; Setup/BIOS Password; I/O Interface Security; Kensington® lock slot, Padlock ring, lockable power supply; Dell Data Protection (DDP): DDP   Security Tools for advanced authentication; DDP   Protected Workspace for malware; DDP   Encryption for data protection</b>	
<b>Chassis</b>	<b>HxWxD: 14.17" x 6.89" x 17.13" / 360mm x 175mm x 435mm Bays: Two internal 3.5" bays; two external 5.25" optical bays Slots: One PCIe x16 Gen 3; one PCIe x16 Gen 2 wired x4; one PCIe x1; One PCI 32bit/33MHz Power Supply: 365W 90% efficient (80 Plus® Gold Certified); 290W 65% efficient</b>	
<b>Monitor Compatibility</b>	<b>UltraSharp series - high-performance monitors with PremierColor (on select models) and ultrawide viewing: 21.5"-30";</b>	
<b>Keyboard; Mouse; Speakers</b>	<b>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</b>	
<b>Warranty and Support Services</b>	<b>1-year.</b>	

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**LCD MONITORS 32/40/42 INCHES**

<b>Feature</b>	<b>Technical Specification</b>	<b>Bidder's Response</b>
<b>High Definition LCD Monitors</b>		
Resolution	Minimum 1920 x 1080p full HD native resolution.	
LED Backlight Technology	Must use energy saving LED backlighting rather than cold cathode fluorescent lights (CCFL)	
PIP	Must provide picture-in-picture (PIP) for any combination of 2 inputs.	
Energy Star certified	Must be energy Star certified, ensuring reliability in a 24/7 security installation environment	
Design	Must be constructed of a lightweight aluminum frame composition for desktop or wall-mount installations.	

## NETWORK MEDIA CONVERTORS

Feature	Technical Specification	Bidder's Response
<b>MEDIA CONVERTERS SPECIFICATIONS</b>		
General	<ul style="list-style-type: none"> <li>• Industrial Gigabit and Supports 1000Base-SX/LX with SC connector, or SFP slot</li> <li>• Link Fault Pass-through (LFP)</li> <li>• 10K jumbo frame ›Redundant power input</li> <li>• -40 to 75°C operating temperature range (T models)</li> <li>• Supports Energy Efficient Ethernet (IEEE 802.3az)</li> </ul>	
<b>Interface</b>	RJ45 Ports: 10/100/1000BaseT(X) Fiber Ports: 100/1000Base-SX/LX or 100/1000BaseSFP slot	
<b>Physical Characteristics Housing:</b>	Metal, IP30 protection Dimensions: 30 x 125 x 79 mm (1.19 x 4.92 x 3.11 in) Weight: 170 g (0.37 lb)	
<b>Power Requirement</b>	<b>Input Voltage:</b> 12 to 48 VDC, redundant inputs <b>Input Current:</b> 285 mA @ 48 VDC max. <b>Connection:</b> Removable terminal block <b>Overload Current Protection:</b> 1.5 A <b>Reverse Polarity Protection:</b> Present	
<b>Warranty:</b>	5-Years	
LED Indicators	PWR1, PWR2, G1 (copper port 10M/100M/1000M), G2 (fiber port 100M/1000M)	
<b>DIP Switches</b>	Fiber speed 100M/1000M, Link Fault Pass-through, Energy Efficient Ethernet	
<b>Optical Fiber</b>	<b>Multi-mode Transmission Distance:</b> 1000BaseSX: 0 to 500 m, 850 nm (50/125 μm, 400 MHz*km) <b>Single-mode Transmission Distance:</b> 1000BaseLX: 0 to 10 km, 1310 nm (9/125 μm, 3.5 PS/(nm*km))	

Feature	Technical Specification	Bidder's Response
<b>EMBEDDED HYBRID DVR SPECIFICATIONS COMPLETE WITH VIDEO MANAGEMENT SOFTWARE</b>		
<b>Video Playback mode</b>	<ul style="list-style-type: none"> <li>8/16-ch synchronous playback</li> </ul>	
<b>Analogue video input</b>	<ul style="list-style-type: none"> <li>8/16-ch, BNC(1.0Vp-p, 75Ω), PAL/NTSC adaptive</li> </ul>	
<b>IP Video Input</b>	<ul style="list-style-type: none"> <li>8/16 channel</li> </ul>	
<b>Composite Video Input</b>	<ul style="list-style-type: none"> <li>Up to 8/32-ch (Analog video + IP video )</li> </ul>	
<b>Video Compression</b>	<ul style="list-style-type: none"> <li>H.264 video compression</li> </ul>	
<b>Frame rate</b>	<ul style="list-style-type: none"> <li>Main stream: 25 fps (P) / 30 fps (N)</li> <li>Sub-stream: 25 fps (P) / 30 fps (N)</li> </ul>	
<b>Resolution</b>	<ul style="list-style-type: none"> <li>Up to 5 Megapixels resolution recording</li> <li>HDMI and VGA output at up to 1920×1080P resolution</li> </ul>	
<b>Playback resolution</b>	<ul style="list-style-type: none"> <li>5MP/3MP/1080p/UXGA/720P/WD1/4CIF/VGA/DCIF/2CIF/CIF/QCIF</li> </ul>	
<b>Recording Resolution</b>	<ul style="list-style-type: none"> <li>Main stream: 4CIF / 2CIF / CIF / QCIF</li> <li>Sub-stream: CIF / QCIF</li> </ul>	
<b>VGA Output</b>	<ul style="list-style-type: none"> <li>1920 × 1080 / 60 Hz (1080P), 1600 × 1200 / 60 Hz, 1280 × 1024 / 60 Hz, 1280 × 720 / 60 Hz, 1024 × 768 / 60 Hz</li> </ul>	
<b>HDMI</b>	<ul style="list-style-type: none"> <li>1920 × 1080 / 60 Hz (1080P), 1920 × 1080 / 50 Hz (1080P), 1600 × 1200 / 60 Hz, 1280 × 1024 / 60 Hz, 1280 × 720 / 60 Hz, 1024 × 768 / 60 Hz</li> </ul>	
<b>CVBS Output</b>	<ul style="list-style-type: none"> <li>5-ch (1 Main output + 4 Spot outputs) BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480</li> </ul>	
<b>Storage</b>	<ul style="list-style-type: none"> <li>HDD quota and group management</li> <li>RAID 0,1,5,10 supported(DS-9004/08/16HFI-RT)</li> <li>8 SATA interfaces for 4 HDDs + 1 DVD-R/W (default), or 8HDDs; 1 eSATA interface each of 4TB</li> <li>Disk Array 8no and Virtual Array 8no.</li> </ul>	
<b>Warranty:</b>	3-Years	

*ADDENDUM NO2: AMMENDED SCHEDULE OF REQUIREMENTS, BILL OF QUANTITIES AND SPECIFICATIONS FOR TENDER NO.KP1/9A.2/OT/013/CA/19-20 FOR TWO YEAR SERVICE AND MAINTENANCE CONTRACTS FOR ELECTRONIC SECURITY SYSTEMS COMPANYWIDE*

<b>Interfaces</b>	<ul style="list-style-type: none"> <li>• Network: Dual Gigabit network interfaces</li> <li>• 2; 10M/100M/1000M self-adaptive Ethernet interface</li> <li>• RS-232, RS-485, Keyboard</li> <li>• USB:2, USB2.0</li> <li>• Alarm IN/OUT:   16 / 4</li> </ul>	
<b>Cameras supported</b>	<ul style="list-style-type: none"> <li>• Third-party network cameras supported</li> </ul>	
<b>Optical Fiber</b>	<p><b>Multi-mode Transmission Distance:</b> 1000BaseSX: 0 to 500 m, 850 nm (50/125 <math>\mu</math>m, 400 MHz*km)</p> <p><b>Single-mode Transmission Distance:</b> 1000BaseLX: 0 to 10 km, 1310 nm (9/125 <math>\mu</math>m, 3.5 PS/(nm*km))</p>	
<b>Software</b>	<p><b>General</b></p> <ul style="list-style-type: none"> <li>○ Application in local area network and wide area network</li> <li>○ E-map function</li> <li>○ Remote configuration for EZVIZ devices</li> <li>○ User permission management</li> <li>○ Embedded web server supporting web browsing function Create a password to activate the device</li> <li>○ Support Counting, Road Traffic and VCA Search for Picture</li> </ul> <p><b>Live view</b></p> <ul style="list-style-type: none"> <li>○ View settings and instant playback</li> <li>○ Support up to 64-window division for standard screen, and48-window division for the wide screen</li> <li>○ Set shortcuts for PC keyboard to conveniently access the commonly used actions</li> <li>○ Disconnect background videos in single live view</li> </ul> <p><b>PTZ Control</b></p> <ul style="list-style-type: none"> <li>○ Remote PTZ control, preset, patrol and pattern settings</li> <li>○ 3D positioning, auxiliary focus and wiper function</li> <li>○ Display analog speed dome’s local menu via PTZ control panel</li> </ul> <p><b>Alarm Management</b></p>	

	<ul style="list-style-type: none"> <li>○ Alarm configuration for camera event, alarm input and device Exception</li> <li>○ Camera Linkage and multiple linkage actions supported Search and export the linked pictures of alarm logs</li> <li>○ Device arming and alarm output control</li> </ul> <p><b>Recording</b></p> <ul style="list-style-type: none"> <li>○ Remote manual recording supported</li> <li>○ Quota ratio of record, picture and additional information Configurable for the storage server</li> </ul> <p><b>Play back</b></p> <ul style="list-style-type: none"> <li>○ Local and remote playback</li> <li>○ Instant playback, normal playback, event playback, ATM playback and VCA playback</li> </ul> <p><b>Back up</b></p> <ul style="list-style-type: none"> <li>○ Download record files to PC</li> <li>○ Export record files via remote configuration</li> <li>○ Import and export the configuration file</li> <li>○ log search and backup</li> </ul> <p><b>Network</b></p> <ul style="list-style-type: none"> <li>○ Encoding devices, decoding devices, EZVIZ devices, storage server, stream media server, third-party encoding devices, video wall controller, transcoder, cascading server, super NVR connectable</li> <li>○ Adding devices by HiDDNS and IP Server; batch importing encoding Devices</li> <li>○ Search the active online devices</li> </ul>	
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**EMBEDDED NVR COMPLETE WITH VIDEO MANAGEMENT SOFTWARE SPECIFICATIONS**

Feature	Technical Specification	Bidder's Response
<b>EMBEDDED NVR SPECIFICATIONS COMPLETE WITH VIDEO MANAGEMENT SOFTWARE</b>		
<b>IP Video Input</b>	<ul style="list-style-type: none"> <li>• 32+ pre-licensed and 128+ maximum</li> </ul>	
<b>Video Compression</b>	<ul style="list-style-type: none"> <li>• H.264 video compression</li> </ul>	
<b>OS</b>	<ul style="list-style-type: none"> <li>• 2 x 120 GB SSD RAID-1 configuration</li> <li>• Installed on windows server</li> </ul>	
<b>Installation</b>	<ul style="list-style-type: none"> <li>• Wizard-based set-up and centralized configuration.</li> <li>• All components to be pre-installed and pre-licensed</li> <li>• Pre-configured in a RAID 5 standard configuration with iSCSI LUNs (Logical Unit Numbers).</li> </ul>	
<b>Resolution</b>	<ul style="list-style-type: none"> <li>• The built-in transcoder supports up to 4 x</li> <li>• UHD resolution video streams in parallel</li> </ul>	
<b>Integration/Compatibility /operability with other systems</b>	<ul style="list-style-type: none"> <li>• ONVIV enabled to allow integration and especially with KPLC existing system(GENETIC)</li> <li>• Shall allow third party systems operations.</li> </ul>	
<b>Viewing/Monitoring</b>	<ul style="list-style-type: none"> <li>• Remote monitoring via desktop application, browser or SNMP</li> <li>• View high quality HD and even UHD video despite low or limited bandwidth connections. Dynamic Transcoding technology to ensure viewing video immediately - anytime, anywhere.</li> <li>• Allow use of Video Security Client for viewing video from a separate workstation or mobile device.</li> <li>• Increased reliability of high-availability hardware, embedded design as well as system-wide monitoring and management ensure maximum uptime.</li> <li>• Robust, secure operation - instant real time access to video</li> </ul>	

	<ul style="list-style-type: none"> <li>Instantly find what you are looking for</li> </ul>	
<b>Storage</b>	<ul style="list-style-type: none"> <li>Pre-installed, pre-configured IP storage solution with up to 64 TB storage capacity</li> <li>need for separate NVR (Network Video Recorder) server and storage hardware</li> <li>HDD quota and group management</li> <li>Hot-swappable hard drives</li> <li>SATA-3, 7200 RPM, 64 MB, 3.5", RAID-5 configuration DIP-6183-4HD: 4 x 3 TB DIP-6183-8HD: 8 x 3 TB DIP-6184-4HD: 4 x 4 TB DIP-6184-8HD: 8 x 4 TB DIP-6186-8HD: 8 x 6 TB DIP-6188-8HD: 8 x 8 TB DIP-6180-00N: w/o HDD</li> <li>Disk Array 8no</li> </ul>	
<b>Warranty:</b>	3-Years	
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>Network: Dual Intel i210AT Gigabit LAN (teamed) 1 IPMI BMC port</li> <li>RS-232, RS-485, Keyboard</li> <li>USB: Front: 2 USB 2.0 ports Rear: 2 USB 2.0 ports, 2 USB 3.0 ports</li> <li>Advanced user and alarm management</li> <li>Graphics card: AMD FirePro W4100 4 x Mini Display Port</li> <li>Optical: DVD-RW</li> <li>SAS RAID Card: 8 ports LSI 3108 SAS3 controller</li> <li>HDMI</li> <li>VGA</li> </ul>	
<b>Processor</b>	<ul style="list-style-type: none"> <li>Intel Xeon Processor E3-1275 V3 (8 MB Cache, 3.5 GHz)</li> </ul>	
<b>Memory</b>	<ul style="list-style-type: none"> <li>8 GB, DDR3-1666 ECC UNB (1 x 8 GB)</li> </ul>	
<b>Cameras supported</b>	<ul style="list-style-type: none"> <li>Third-party network cameras supported</li> </ul>	
<b>Software</b>	<ul style="list-style-type: none"> <li>Web, Video management client or video management system</li> <li>Once booted up the system shall offer immediate access to the VMS management application via a customized GUI with ability to use one central GUI for configuration and operation.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Advanced monitoring and management options using the Intelligent Platform Management Interface (IPMI).</li> <li>• Shall have the following installed:             <ul style="list-style-type: none"> <li>○ Microsoft Operating System and Video application pre-installed:</li> <li>○ Windows Storage Server 2012 R2, 64-bit</li> <li>○ Video Management System</li> <li>○ Video Recording Manager including Video Streaming Gateway</li> <li>○ Dynamic Transcoding</li> </ul> </li> </ul>	
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**REGIONAL NETWORK ATTACHED STORAGE (NAS)**

Feature	Technical Specification	Bidder's Response
<b>NETWORK-BASED BACK-UP STORAGE</b>		
<b>General/Physical description</b>	45- Bay ,4U network attached storage with Embedded NVR and preloaded with GENETEC software and video movement application complete with licensing	
<b>Storage Architecture</b>	Networked Based storage system using L.A.I.D(Linear Array of Idle Disks) or equivalent RAID technology and S.F.S.(Sequential Disk Filing System) technology for high disk reliability, extended lifetime, Long file retention and simple system management.	
<b>Power consumption</b>	Low power consumption operating at 110-240V with automatic sensing. Dual Hot-swap PSU rated not more than 300WTo protect disk failure due to high temperatures Availability of Software-controlled temperature fans.	
<b>Disk Management</b>	MUST use any make, model and capacity of 3.5" SATA disk drives including any mix of drives and MUST allow use of high capacity disks. Allow Disks to be added "on the fly" shall automatically be incorporated into the Array. Must allow specific identification of time spans in the physical location Shall allow disks to be extracted at any time. Disk Status shall be displayed through the disk status LEDs indicating writing, selection, fault and removal readiness etc.	

	Allow for both mirrored overlapping-pair mode, As well as operate in full mirrored pair mode if desired	
<b>Integration</b>	Must integrate DIRECTLY and seamlessly with other Video Management System (VMS) like GENETIC, Aricont Vision, ACTI, Bosch and others. Must provide a comprehensive SDK for VMS manufacturers who wish to develop support for the storage.	
<b>Configurations and Management</b>	simple to configure, manage and monitor through universal site configuration tool, Windows application allowing automatic device discovery, configuration of settings, analysis of disks and a basic level of diagnostics	
<b>Interface</b>	Dual Gigabit Ethernet	
<b>Disk Capacity</b>	98TB(14TBX7x3.5” Disk array.)with future expansion of upto 500TB Array capacity considering both mirrored overlapping-pair mode and full mirroring.	
<b>Alarms input and Alarm relays</b>	Inputs:Atleast 4 software configurable inputs e.g. disk fail, disk inserted, disk extracted, etc. Relays: atleast 4 software configurable e.g. UPS active, power down, etc.	
<b>OS</b>	Embedded Linux on solid state memory or equivalent	
<b>scalability</b>	Provide unlimited scalability with throughput of 400Mbit/sec	
<b>Embedded NVR</b>	The NAS shall have Embedded NVR Option which shall allow continuous recording of all RTSP and ONVIF Profile S compatible and open platform IP Cameras while recording directly onto the hardware using direct-to-storage architecture. The Embebed NVR shall use a simple media player application for Windows and shall be fully compatible with and already installed GENETEC video movement software complete with all licensing. It shall also be compatible and integrate seamlessly with other third-party client applications using SDK to support the NVR system directly.	

## CORE SWITCH

### Cisco 3850 12x 24u-s

#### 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)

Feature	Technical Specification	Bidder's Response
<b>Cisco Catalyst 3850</b>		
<b>Description</b>	Cisco 3850 12X 24U-S	
<b>Security</b>	<ul style="list-style-type: none"> <li>• Secure Shell (SSH) Protocol</li> <li>• Secure Sockets Layer</li> <li>• IEEE 802.1X (Authenticator role)</li> <li>• Layer 3 isolation</li> <li>• Port security: Locks MAC addresses to ports, and limits the number of learned MAC addresses</li> </ul>	

<b>Cabling Type</b>	<ul style="list-style-type: none"> <li>Unshielded twisted pair (UTP) Category 5 or better for 10BASE-T/100BASE-TX; UTP Category 5 Ethernet or better for 1000BASE-T</li> </ul>	
<b>Certification</b>	<ul style="list-style-type: none"> <li>UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A</li> </ul>	
<b>Switching capacity</b>	640 Gbps on 24-port Multigigabit Ethernet model* 640 Gbps on 24-port 10 Gigabit Ethernet SFP+ model*	
<b>Stacking bandwidth</b>	480 Gbps	
<b>Total number of MAC addresses</b>	32,000	
<b>Total number of IPv4 routes (ARP plus learned routes)</b>	24,000	
<b>DRAM</b>	4 GB (8 GB on 48-port SFP+ model)	
<b>Flash</b>	2 GB (4 GB on 12-port and 24-port SFP+ models, 8 GB on 48-port SFP+ model)	
<b>VLAN IDs</b>	4,000	
<b>Forwarding rate</b>	500 Mpps (80B packets)	
<b>MTBF hours</b>	203,150	
<b>Power (Input Voltage)</b>	100-240VAC, 50-60 Hz	
<b>Operating temperature</b>	23 to 113°F (-5 to 45°C)	

## Edge Switches

The Cisco SG300-28P 26-Port Gigabit PoE Switch is part of the Cisco Small Business line of network solutions, a portfolio of affordable managed PoE switches that provides a reliable foundation for your business network. These Cisco SG300-28P switches deliver the features you need to improve the availability of your critical business applications, protect your sensitive information, and optimise your network bandwidth to deliver information and applications more effectively. Easy to set up and use, the Cisco SG300-28P 26-Port Gigabit Switch provides the ideal combination of affordability and capabilities for small businesses, and helps you create a more efficient, better-connected workforce.

## Key Features

- Twenty-six 10/100/1000 switched RJ-45 ports with auto medium dependent interface (MDI) and MDI crossover (MDI-X) cable detection

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- Twenty-four Power over Ethernet (PoE) ports offering up to 180W output
- 2 mini Gigabit Interface Converter (mini-GBIC) slots for fiber and copper Gigabit Ethernet expansion (shared)
- Nonblocking, store-and-forward switching mechanism
- Simplified QoS management enabled by advanced queuing techniques using 802.1p, differentiated services (DiffServ), or type of service (ToS) prioritisation schemes enhances the performance of real-time applications such as voice and video
- Configuration and monitoring from a standard web browser with WebView management
- Secure remote management of the switch via Secure Shell (SSH) and SSL secure channel network protocols
- 802.1Q-based VLANs enable segmentation of networks for improved performance and security
- Private VLAN Edge (PVE) for simplified network isolation of guest connections or autonomous networks
- Automatic configuration of VLANs across multiple switches through Generic VLAN Registration Protocol (GVRP) and Generic Attribute Registration Protocol (GARP)
- Automatic port configuration through auto MDI/MDIX and 802.1ab with Link Layer Discovery Protocol (LLDP) and Universal Plug and Play (UPnP) support
- User/network port-level security via 802.1X authentication and MAC-based filtering
- Increased bandwidth (up to 8x) and added link redundancy with Link Aggregation Control Protocol (LACP)
- Enhanced rate-limiting capabilities provide control, including back pressure to control the rate at which data can flow into and out of a port
- Multicasting, broadcasting, and flooding control
- Port mirroring for noninvasive monitoring of switch traffic
- Simple Network Management Protocol (SNMP) versions 1, 2c, and 3 and Remote Monitoring (RMON) support
- Fully rack mountable using the included rack-mounting hardware

Feature	Technical Specification	Bidder's Response
<b>Edge Switches</b>		
<b>Description</b>	Cisco SG 300-28 Gigabit Switch	
<b>General</b>	<ul style="list-style-type: none"> <li>• Jumbo frames Frame sizes up to 10 KB supported on 10/100 and Gigabit interfaces</li> <li>• MAC table Up to 8000 MAC addresses</li> </ul>	
<b>Ports</b>	<ul style="list-style-type: none"> <li>• 26 Gigabit Ethernet RJ45</li> <li>• 2x RJ45/SFP Combo Ports</li> </ul>	

<b>Power over Ethernet (PoE)</b>	<ul style="list-style-type: none"> <li>Maximum power of 15.4W to any Gigabit Ethernet base port. Total power 180W</li> </ul>	
<b>Security</b>	<ul style="list-style-type: none"> <li>Secure Shell (SSH) Protocol</li> <li>Secure Sockets Layer</li> <li>IEEE 802.1X (Authenticator role)</li> <li>Layer 3 isolation</li> <li>Port security: Locks MAC addresses to ports, and limits the number of learned MAC addresses</li> </ul>	
<b>Flash; CPU memory; Packet Buffer</b>	16 MB; 128 MB; 4MB	
<b>Cabling Type</b>	<ul style="list-style-type: none"> <li>Unshielded twisted pair (UTP) Category 5 or better for 10BASE-T/100BASE-TX; UTP Category 5 Ethernet or better for 1000BASE-T</li> </ul>	
<b>Power</b>	<ul style="list-style-type: none"> <li>Power saving mode: Energy Detect, Short Reach Maximum Consumption 110V = 30.1W / 220V = 30.3W</li> <li>Heat Dissipation (BTU/hr) 103.4</li> <li>Power Supply: 100–240V 47–63 Hz, internal, universal</li> </ul>	
<b>Certification</b>	<ul style="list-style-type: none"> <li>UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A</li> </ul>	



**SOFTWARE MAINTENANCE KIT-LAPTOP**

<b>Feature</b>	<b>Technical Specification</b>	<b>Bidder's Response</b>
<b>Software Maintenance Kit-Laptop</b>		
Processor	8th Generation Intel® Core™ i7-8550U Processor (8MB Cache, up to 4.0GHz)	
Operating System	Windows 10 Home (64bit) English	
Memory	RAM 16 GB	
Ports	1x HDMI™ 1.4a, 2x USB 3.1 gen 1, 1x USB 2.0, 1x 10/100 RJ-45 Ethernet network, 1x SD Card Reader (SD, SDHC, SDXC), RS232 USB to Serial Converter.	
Display	14.0-inch HD (1366 x 768) Anti-Glare LED-Backlit Display	
Hard Drive:	500 GB SSD	
Preloaded software's	GENETEC 5.8, MS OFFICE 2016 PRO, MS VISIO 2016, MS PROJECT 2016 Samsung CCTV configuration tool, Arecont CCTV Configuration tool, Pelco CCTV Configuration tool	

<b>Feature</b>	<b>Technical Specification</b>	<b>Bidder's Response</b>
<b>Maintenance Tool Kit</b>		
<b>Contents</b>	Should include but not limited to: <ol style="list-style-type: none"> <li>1. Long Nose Plier (136mm)</li> <li>2. Diagonal Cutting Plier (110mm)</li> <li>3. Dual Color Lineman's Plier (205mm)</li> <li>4. Dual Color Side Cutting Plier (165mm)</li> <li>5. Dual Color Long Nose Plier (165mm)</li> <li>6. 23 pcs 1/4" driver socket set</li> <li>7. 3M Auto Stop Measuring Tape</li> <li>8. PVC Insulated Tape</li> <li>9. Screwdriver (-3.0 3.0x75mm)</li> <li>10. Screwdriver (#0 3.0x75mm)</li> <li>11. Screwdriver (-5 5x75mm)</li> <li>12. Screwdriver (#1 5x75mm)</li> <li>13. Screwdriver (-6 6x100mm)</li> <li>14. Screwdriver (#2 6x100mm)</li> <li>15. Screwdriver (-6 6x40mm)</li> <li>16. Screwdriver (#2 6x40mm)</li> <li>17. Screwdriver (-8 8x150mm)</li> <li>18. Screwdriver (#3 8x150mm)</li> <li>19. Precision Screwdriver 2.0x50mm</li> <li>20. Precision Screwdriver 2.4x75mm</li> <li>21. Precision Screwdriver 3.0x100mm</li> <li>22. Precision Screwdriver #00x50mm</li> <li>23. Precision Screwdriver #0x75mm</li> <li>24. Precision Screwdriver #1x150m</li> <li>25. Heavy Duty Wire Strippers/Crimpers (8.5")</li> <li>26. Auto Loading Utility Knife</li> <li>27. LED Flashlight</li> <li>28. Adjustable Wrenches - 10"</li> </ol>	

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	<ol style="list-style-type: none"> <li>29. 9PCS Extra Long Arm Ball Point Hex Key Set (1.5,2,2.5,3,4,5,6,8,10mm</li> <li>30. 14Pcs Combination Wrench (Metric)MS-323</li> <li>31. Telescopic Magnetic Pick-Up Tool</li> <li>32. 3/4 Autorange Digital Multimeter</li> <li>33. Non-Contact Voltage Tester</li> <li>34. Heavy Duty Curved-Claw Hammer W/Fiberglass Handle</li> <li>35. Slip Joint Plier 10" (254mm)</li> <li>36. Slip-Channel Pump Plier 10" (254mm)</li> <li>37. 9 in 1 Aluminum Handle Precision Screwdriver Set</li> <li>38. All Purpose Snip (165mm)</li> <li>39. Ceramic soldering iron110V or 240VAC</li> <li>40. Wire stripper tool</li> <li>41. Modular crimping tool</li> <li>42. UTP/STP cable stripper</li> <li>43. 6-position 4 contact flat stranded (50 pcs/bag)</li> <li>44. 8-Position 8 contact round stranded (25 pcs/bag)</li> <li>45. RJ-45 protection cap (20 pcs/bag)903-015</li> <li>46. RJ45, RJ-11/RJ-12, BNC cable tester, Voltage detector</li> </ol>	
<p><b>Case</b></p>	<ul style="list-style-type: none"> <li>• Expert &amp; Elegant Aluminum Frame Tool Case</li> </ul>	

**1.5KVA DOUBLE CONVERSION UPS SPECIFICATIONS**

<b>Feature</b>	<b>Technical Specification</b>	<b>Bidder's Response</b>
<b>Input</b>		
<b>Nominal Voltage</b>	230/220V	
<b>Voltage range</b>	10% - 15%	
<b>Frequency</b>	50/60Hz $\pm$ 3Hz	
<b>Power walk-in</b>	5 sec	
<b>Protection</b>	Circuit breaker; RFI filter	
<b>Output</b>		
<b>Voltage</b>	230/220V	
<b>Regulation (at normal input)</b>	$\pm$ 2Hz	
<b>LCD panel</b>	UPS status, load level, battery level, Import/Output voltage, discharge and fault conditions	
<b>Charging Parameters</b>	Built in super smart charger, shorten 50% of charging time	
<b>Slew Rate</b>	1Hz	
<b>Overload</b>	125% 10 min	
<b>Load PF</b>	0.99	
<b>Waveform</b>	Puresine wave	
<b>THD</b>	Less than 2%	
<b>Crest factor</b>	3:1	
<b>Power output</b>	1.5 kVA	
<b>Efficiency AC-AC 100% load</b>	85%	
<b>Battery charging current</b>	20A capable of charging 16No. 9Ah batteries	
<b>Battery cabinet</b>	Separate external	
<b>Form factor</b>	Rack Mount	
<b>Output isolation transformer</b>	Standard in built	

**6KVA DOUBLE CONVERSION UPS SPECIFICATIONS**

<b>Feature</b>	<b>Technical Specification</b>	<b>Bidder's Response</b>
<b>Input</b>		
<b>Nominal Voltage</b>	230/220V	
<b>Voltage range</b>	10% - 15%	
<b>Frequency</b>	50/60Hz±3Hz	
<b>Power walk-in</b>	5 sec	
<b>Protection</b>	Circuit breaker; RFI filter	
<b>Output</b>		
<b>Voltage</b>	230/220V	
<b>Regulation (at normal input)</b>	±2Hz	
<b>Slew Rate</b>	1Hz	
<b>Overload</b>	125% 10 min	
<b>Load PF</b>	0.7	
<b>Waveform</b>	Puresine wave	
<b>THD</b>	Less than 2%	
<b>Crest factor</b>	3:1	
<b>Power output</b>	6kVA	
<b>Efficiency AC-AC 100% load</b>	85%	
<b>Battery charging current</b>	20A capable of charging 16No. 200Ah batteries	
<b>Battery cabinet</b>	Separate external	
<b>Form factor</b>	Tower	
<b>Output isolation transformer</b>	Standard in built	

**CATEGORY 2: ALARM, ELECTRIC FENCE AND RADIO RESPONSE BACK UP EQUIPMENT SPECIFICATIONS**

**ALARM SYSTEM SPECIFICATIONS**

<b>ITEM</b>	<b>DESCRIPTION</b>
<b>A</b>	<p><b>CONTROL PANEL WITH SOFTWARE AND PROGRAMMING</b>            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)            Dialer compatible and GSM interactions            Allow for IP Module connection to interface with computers, printer and other computer networks.            GSM connectivity to allow events communication via mobile</p>
<b>B</b>	<p><b>MOTION DETECTORS (PIR)</b>            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.            PET immunity especially for areas prone to PET in stores and go-downs</p>
<b>C</b>	<p><b>POWER SUPPLY UNIT(P.S.U.)</b>            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.</p>
<b>D</b>	<p><b>ALARM REMOTE RECEIVER KIT</b>            Operating voltage 12vdc.            Operating range 200m.            Dip-switch coding facility            Momentary/latching relay contacts</p>
<b>F</b>	<p><b>SIREN</b>            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.</p>

ITEM	DESCRIPTION
<b>A</b>	<b>PANIC BUTTONS</b> Strong mechanical composition.
<b>B</b>	<b>HEAVY DUTY MAGNETIC CONTACTS</b> Strong Mechanical Composition robust to interferences.
<b>C</b>	<b>CEILING MOUNT MOTION DETECTOR</b> 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
<b>D</b>	<b>EXPANDER MODULE</b> Compatible with supplied alarm control panel and related modules and accessories.
<b>F</b>	<b>ADVANCED ALARM IP-NETWORK COMMUNICATION MODULE</b> Secure IP communications with SSL,256Bit,AES256 encryption Compatible with 10BaseT, full duplex. Simultaneous multiple channel IP Communications event reporting and download at the same time. Report notification to E-mail addresses. Supports static and dynamic IP Addressing(DHCP) Project integration with 3 <sup>rd</sup> party applications using Modbus and XML protocols and others.
<b>G</b>	<b>ADVANCED GSM/GPRS MODULE</b> 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.
<b>H</b>	<b>SMARTPHONE</b> Apple or equivalent latest iPhone features an A9 chip, 3D Touch, ultrafast LTE Advanced wireless, Touch ID, a 12MP iSight camera, and iOS 9. 128GB 5.5-inch (diagonal) LED-backlit widescreen next-generation Multi-Touch display with IPS technology and Taptic Engine 1920-by-1080-pixel resolution at 401 ppi Fingerprint-resistant oleophobic coating
<b>I</b>	<b>GUARD PATROL UNIT</b> Multi-point Guard Monitoring unit with the following: <ul style="list-style-type: none"> <li>• Up to 15 wireless patrol points</li> <li>• Supports up to 20 guards and supervisors with Supervisor configurable patrol parameters</li> <li>• Wireless/Baton free operation</li> <li>• Real-time monitoring.</li> <li>• SMS message to 10 selected contacts</li> <li>• Reporting via GSM and / or radio (GPRS / SMS)</li> <li>• Configure shifts and patrol start / end times</li> <li>• Event buffer download via serial port</li> <li>• Allow for Viewing / downloading and printing event logs</li> <li>• Internal charger and battery backup</li> </ul>

	<ul style="list-style-type: none"> <li>• On-board 433 MHz remote receiver</li> <li>• (panic and guard assistance) with both single or four button remote</li> <li>• Tamper and weather proof steel housing</li> <li>• Programmable Features including but not limited to; Patrol configuration ie duration, intervals, route, rest time, Duration intervals, shift intervals, Lead and grace time, Point to point intervals, Loading of patrol points, Time and date setup.</li> <li>• Allow Reporting eg Patrol complete / fail, Patrol too fast / slow, Patrol points missed, Patrol failed to start, Guard on / off duty etc.</li> <li>• Several key options e.g guard/supervisor on/off duty</li> <li>• Remote site control and management fully integratable to Orxy Alarm Control software in remote control room at Stima and regional offices via GSM networks, Long Range Radio and Via SMS.</li> </ul>

#### ELECTRIC FENCE SPECIFICATIONS

ITEM	DESCRIPTION
<b>A</b>	<p><b>ENERGIZER</b> Nemtek output/Specs as existing or equal and approved</p> <ul style="list-style-type: none"> <li>•Built-in alarm monitors tampering or faults on the high voltage and earth fence wires</li> <li>•Connectable to armed response radio or GSM module</li> <li>•Lightning and power surge protection</li> <li>•Intelligent power saving to extend battery life</li> <li>•Easy-to-use tag included for controlling the energizer</li> <li>•Walk test mode for easy fence testing</li> <li>•The LCD background color changes to easily identify the fence condition</li> <li>•Powered by 230V mains and includes built-in battery for backup power</li> <li>•Built-in gate alarm inputs to monitor if the gate is open or closed</li> <li>•Optional keypad for controlling and programming the energizer. This allows the user to control the energizer remotely, with up to two keypads</li> </ul>
<b>B</b>	<p><b>HT GALVANIZED HT FENCE WIRE</b> High Tensile 1.6mm Double galvanized</p>
<b>C</b>	<p><b>FENCE POLES</b> 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.</p>

<b>D</b>	<b>RAZOR WIRE</b> (Double Galvanised)Coil size - 450mm diameter, Blade profile - Ripper Razor Wire, Stretch factor - coil and secured with steel plates at 1M centres
<b>E</b>	<b>SIREN KIT (BOX, SIREN AND STROBE)</b> 12V,DC Security sounder and strobe with a range of 1 km Galvanized box and mountain to avoid rusting/corrosion. Well protected from environmental hazards like rain water leakages, hostile/extreme weather conditions like temperatures, strong winds etc.
<b>F</b>	<b>EARTHING</b> Earthing of the Electric fence as per the IEE regulations and to be done at intervals of 30M
<b>G</b>	<b>INSULATION</b> W and S insulators - High density porcelain insulators UV stabilised plastic polythene insulators for fastening the HT wire to the posts.
<b>H</b>	<b>ENERGIZER CABINET</b> Energizer steel cabinet 500x500x250mm fabricated from 25x25x3mm angle angle line framing and 3mm thick m.s plain sheet with lockable door including painting and mounting to Clients approval.