APPENDIX 7

PROPOSED OFFICE FIT OUTS AT K.R.A.

CBC, UPPERHILL

SECURITY SERVICES SPECIFICATIONS

EQUIPMENT SPECIFICATIONS SHEET

SECURITY SERVICES INSTALLATIONS

CORPORATE BUSINESS CENTRE,

ELGON ROAD, NAIROBI

Instructions to Bidders

1. Bidders are advised to carefully read through every specification in this document and respond accordingly.

2. Bidders **MUST** provide a substantive response for all features. This will include attaching all relevant technical documents/data sheets and any extra descriptive sheets alongside this document before bid submission. The use of *Yes, No, tick, compliant, OR copying and pasting of our technical specifications* etc. will be considered non responsive. The bidders response **SHALL** form part of the evaluation

3. Bidders **MUST** append official company stamp and/or authorized signature on all attached technical data sheets.

4. Except where a different period is specified within the document, all equipment specified herein **MUST** have a warranty period of at least 24 months (2 years) commencing on the date of handing over.

5. Bidders **MUST** pay careful attention to the specification given for every unit/equipment to guarantee system/brand interoperability and compatibility across any related systems specified for integration in the bills of quantities.

SECURITY SYSTEM

The Security System comprising ACS (Access Control Server) and CCTV (Closed Circuit Television) will be integrated with the ACS and CCTV system at CBC as the primary site.

The servers will be linked over the existing KRA wide area network (WAN) infrastructure.

The proposed access control software will have the following capabilities: -

- Access Control management
- Elevator Management
- Fire Alarm panel integration (relay contact)
- Map Interface with GIS live maps.
- Site threat level management.

The access control platform will control the following sub-systems: -

- Video Management (CCTV)
- Automatic Number plate recognition
- Building management system
- Ability to integrate to perimeter detection, UVSS (Under Vehicle Surveillance Solutions and luggage scanners
- Intrusion Detection System (Alarm system)
- Public Address System

The access control will include the following functional features;

- Badge design & printing (Card configuration and issuing cards to staff)
- Visitor management (To issue visitors with access cards at the main reception to enable them visit different floors depending on their need).
- Time and attendance
- Guard tour
- High Level Elevator Interface support,
- Automatic Number plate recognition.
- Threat level management.
- Map interface showing all components of CCTV, ACS, LPR (License Plate Recognition), intrusion.
- Federation (centralized monitoring and reporting across multiple sites)

Integration with Times Tower

The access control system solution to be installed MUST be integrated with the existing system in Times Tower and provide the following functionalities;

1) Centralized and onsite user registration,
2) Centralized and onsite access card activation,
3) Centralized and onsite access card deactivation,
4) Centralized and onsite user access level assignment,
5) Centralized change of user credentials from Times Tower,
6) Centralized generation of various user reports i.e. accessed areas, attendance, number of visitors in the building, visitors per floor, individual movement trails for staff/visitors etc.
7) One access card (Global cardholder management) will be used to access Times Tower, CBC, Fortis and Customs House Mombasa,

Training

The successful bidder will offer training for the management and unified platform at the factory

Support & Maintenance

A two years Annual Preventive Maintenance contract after the warranty period.

DOOR CONTROLLER

IP BASED SINGLE DOOR CONTROLLER		
Specifications		**Bidders Response**
Brand Model/Technology	Mature internationally recognized brand, in existence for at least 10years(bidder must specify brand, model and series)	
General Function	Controls readers, and door locks, and accepts inputs from door contacts and exit buttons, receives the entire configuration from the master controller via the intelligent Data Gathering Panel and is capable of stand-alone operation if the connection to the master controller fails.	
Reader Support	2 Reader configuration (Entry and Exit) Support Wiegand, proximity, magnetic, integrated keypad, smart card, RS-485 Support 3rd Party Readers from other manufacturer's	
Reader Input Protocols	Wiegand Data1/Data0, Magnetic Clock/Data, Custom Protocols Available	
Power Input	12VDC	
Power Output	12VDC, typical 250mA per reader	
Software Compatibility	Compatible with 3rd Party Security Management Software	
Facility Codes	Supports up to 8 Facility Codes	
Outputs	3 (2 Readers outputs and 1 Auxiliary)	
Relays	Supports 2 Relay Outputs (1 Door strike, 1 Auxiliary)	
Memory Backup	Capacitor based circuit, no battery required	
Access Levels	Supports 38 Access Levels Per Card	
Communication Interface	RS-485, RS-232 or Ethernet communication	
Number of Cards in Stand-Alone Mode	Full Stand Alone Operation with Local database of 20,000 cards or 7,000 events	
Inputs	3 Inputs (1 Door Contact, 2 Auxiliary) (Supervised or Unsupervised)	
Security	Support up to 4 high security external relays Inbuilt electronic tamper	
Additional Features	Additional capabilities include elevator control, hard antipassback, and offline input/output (IO) linking	

Operations Conditions	Operating Tem: -40 to 85° C Relative Humidity : 0 to 95%, non-condensing	
Compliant Standards	CE, RoHS	

INTELLIGENT 4-DOOR DATA GATHERING PANEL

INTELLIGENT 4-DOOR CONTROLLER		
Specifications		**Bidders Response**
Brand Model/Tech nology	Mature internationally recognized brand, in existence for at least 10years(bidder must specify brand, model and series)	
General Function	Collects information from Single door Access Controllers and sends to the Master Controller for process. 4-door controllers and the 4-lift controllers can operate off-line with no degradation in performances, should communication with the Advisor Master panel fail.	
Readers	Supports many reader formats including magnetic swipe, PIN code, proximity and Wiegand.	
Users	11500 cardholders (expandable to 65000 with IUM)	
Power Input	12VDC Lock power, 4A power supply	
Outputs	Real time alarm & access control on 4 doors 4 on-board relays (expandable to 52 with relay cards)	
Additional Features	Additional capabilities include elevator control, hard antipassback, and offline input/output (IO) linking	
Operations Conditions	Operating Tem: 0 to 50° C	
Compliant Standards	CE, RoHS	

MASTER CONTROLLER

IP BASED MASTER CONTROLLER		
Specifications		**Bidders Response**
Brand Model/Technology	Mature internationally recognized brand, in existence for at least 10 years(bidder must specify brand, model and series)	
General Function	A complete 96 Reader Intelligent System Controller ready for interfacing with field devices (4-door intelligent data gathering panel)	
On-Board Memory	Up to 1,240,000 Cardholders or 65,535 Events with 8 MB of RAM	
Ethernet connectivity	Full Ethernet Connectivity to host and devices	
Access Levels	38 Access Levels per Card/255 Access Levels/Precision Access	
Activation/Deactivation	Timed Card Activation/Deactivation	
Memory Backup	Supported by on board power	
Communication	2 Host Ports (RS-485 or Ethernet 100 BaseT 4 Device ports (RS-485, RS-232, Ethernet 100 BaseT	
Inputs	1 Cabinet Tamper; 1 Power Fault	
Devices Control	96 Device Control (Readers, Alarm Panels, Status Panels)	
Power Requirements	+12 to +28Vdc @ 400mA	
Operations Conditions	Operating Tem: -40 to 85° C Relative Humidity : 0 to 95%, non-condensing	
Compliant Standards	CE, RoHS	

ACCESS CONTROL CARD READER

HIGH SECURITY PROXIMITY CARD READER		
Specifications		**Bidders Response**
Brand Model/Technology	Mature internationally recognized brand, in existence for at least 10years (bidder must specify brand, model and series)	
Size/Form Factor	Single Gang Wall Proximity	
General Features	Architected for maximum security Support multiple card types Readers will also store time zones and access levels related to their part of the system The readers will have all inputs and outputs to support one additional door and an industry standard Wiegand output reader	
Typical Read Range	2.4" (6 cm) or 3.6" (9 cm)	
Powerfully Secure	Provides layered security beyond the card media for added protection to identity data using SIOs.	
Adaptable	Interoperable with a growing range of technologies and form factors including mobile devices utilizing Seos	
Interoperable	Open Supervised Device Protocol (OSDP) for secure, bidirectional communication.	
Versatile	Extended read range is available for applications such as parking and gate control solutions.	
Card Support	13.56MHz card compatibility 125kHz card compatibility	
Supported outputs in Wiegand Mode	40 bits; 64 bits;	
Operating Range	Temperature: -35° - 65° C Voltage: +5 – 16 VDC	
Certifications	UL294/cUL (US), FCC Certification SRRC (China), KCC (Korea), NCC (T Reader4, MIC (Japan)4	

ACCESS CONTROL BIOMETRIC READER

BIOMETRIC READER		
Specifications		**Bidders Response**
Model	Model and Technology: Mature internationally recognized brand, in existence for at least 10 years (bidder must specify brand, model and series)	
Frequency	RF Option: 125KHz EM, 13.56MHz Mifare/DesFire, 13.56MHz iClass Has the Multi-Controller capacity	
Fingerprints capacity	10,000 templates (5,000 users)	
Identification speed	2,000 match in 1 second	
Logs capacity	Max. Text Log: 50000	
Communication Interface	TCP/IP, RS485	
Wiegand	Configure up to 64 bits	
I/O interface	TTL input/output: 2 inputs for exit switch and door sensor	
Relay support	Internal relay: Deadbolt, Electro-magnetic (EM) lock Door strike, automatic door	
CPU:	400MHz DSP	
Memory:	8MB RAM + 4MB Flash	
LED Indicator:	Multi-Color	
Sound	Multi-tone Buzzer	
Operating Temperature	-20° to 50°C	
Tamper	Yes	
Power	12VDC	
Dimensions	50 x 160 x 37 (WxHxD mm)	
Warranty	2 years	

ACCESS CONTROL/DIRECTORY SERVER

ACS SERVER		
Specifications		**Bidders Response**
Model and Technology:	Mature internationally recognized brand, in existence for at least 10 years(bidder must specify brand, model and series)	
Remote Users:	Unlimited concurrent users	
OS:	Windows Server (64 bit) Server 2016 (64 bit)	
Mobile client:	Support for Android and iOS devices	
Password profile:	Multiple protection levels	
Encryption:	Up to 4096 bit encryption	
Remote Administration:	Remote Administration: Remote control via TCP/IP network including restart and rebooting	
Advanced events:	Shows a real time stream of incoming events and alarms on the main window	
Event notification:	Via client viewer, email or TCP/IP message	
CPU:	Intel® Xeon® E5-2600 v4 product family	
CPU Speed:	E5-2620 v4 (8 core, 2.1GHz, 85W)	
Processor cache	20MB L3	
Form factor :-	2U rack	
Memory:	64 GB	
Hard disk type:	SAS SFF hotplug drives	
Hard disk space:	4TB	
Raid Level:	0,1,5,6 –Optional	
Array	1 smart Array P44oar/2GB FBWC, iLO (Standard)	
Network	331i 4 ports -upgradable	
Network Port Speed	-1000 Mbps	
Power:	Input Voltage 240V ac , 50Hz	
Energy Smart-	Two hot plug high efficient 500w PSU	
Drives	3.5" Hot-plug hard drives	
Power	Hot-plug redundant power	
Cooling	Hot-plug redundant cooling	

Memory	Must have spare row for memory	
Warranty	3 years	

ACCESS CONTROL SOFTWARE

ACS SOFTWARE		
Specifications		**Bidders Response**
Model and Technology:	Mature internationally recognized brand, in existence for at least 10 years(bidder must specify brand, model and series)	
	The ACS will have the following functionalities:-	
	Time and Attendance,	
	Anti-pass back,	
	Visitors Management	
	Web Client (mainstream browsers supported),	
	Guard tour	
	Card holder Video Verification- Validate cardholder pictures against live or recorded video for every door within any monitoring or reporting task.	
	Badge printing & design	
	Encrypted communication with two-way authentication,	
	High Level Elevator Interface support,	
	Support for different types of readers	
	Federation (centralized monitoring and reporting across multiple sites),	
	Real time area presence tracking	
	Database: Licensed enterprise version	
	The access control system solution to be installed MUST be integrated with the existing system in Times Tower and provide the following functionalities; 1) Centralized and onsite user registration, 2) Centralized and onsite access card activation, 3) Centralized and onsite access card deactivation, 4) Centralized and onsite user access level assignment, 5) Centralized change of user credentials from Times Tower for both sites, 6) Centralized generation of various user reports i.e accessed areas, attendance, number of visitors in the building, visitors	

	per floor, individual movement trails for staff/visitors etc 7) The two sites should run on one database 8) One access card (Global cardholder management) will be used to access Times Tower and Customs House, 9) The access control system should support the anti passback (APB) to avoid tailgating,	
	The ACS system will provide the following licenced features: • Video Management (CCTV) • Automatic Number plate recognition • Building management system • Integrate to perimeter detection, equipment (4 turnstiles) • Intrusion Detection System (Alarm system) • Badge design & printing (Card configuration and issuing cards to staff) • Visitor management (To issue visitors with access cards at the main reception to enable them visit different floors depending on their need). • Time and attendance(First in and Last out) • Guard tour • High Level Elevator Interface support, • Automatic Number plate recognition. • Threat level management, • Map interface showing all components of CCTV, ACS, LPR, intrusion. • Federation (centralized monitoring and reporting across multiple sites)	
Database	Should be enterprise and one-off license shared between the existing system at CBC.	

CCTV SYSTEM EQUIPMENT

CAMERAS

BUILDING INTERIOR SURVEILLANCE (INDOOR AREAS)		
TYPE: 5MP NETWORK INDOOR DOME CAMERA		
Specifications		**Bidders Response**
Brand Model/Technology	Mature internationally recognized brand, in existence for at least 10 years (bidder must specify brand, model and series)	
Power	Power over Ethernet IEEE 802.3af/802.3at	
Connectors	RJ45 10BASE-T/100BASE-TX PoE	
Image Sensor	1/2.9" progressive scan CMOS	
Lens	Varifocal, IR corrected, CS-mount 2.8–10 mm, F1.3	
Focusing	Auto	
Light Sensitivity	- DayMode(Colorimage):0.24lux - B/W: 0.03lux - With IR Mode: 0.01lux	
IR Range	30 meters	
WDR	120 dB	
Video	- Compression: H.264,H.265MainProfile(MPEG-4Part 10∕AVC),MotionJPEG - Resolution: 3072 x 1728 (5 MP) to 320X240 Frame rate: 30 fps @ 5 MP - Video Streaming: Multiple, individually configurable streams in H.264andMotionJPEGControllableframe rate and bandwidth VBR/MBRH.264 - Image Settings: Compression, Color, Brightness, Sharpness, Contrast, White balance, Exposure control, Exposure zones, Fine tuning of behavior at lowlight, Text and	

	image overlay, Privacy mask,mirroringofimages ,0°,180°rotation,	
Internal recording	60 s pre alarm recording	
Memory	Supports up to 32 GB micro SDHC	
Audio line in	Must support	
Audio line out	Must support	
Operating Conditions	-20 °C to 50 °C with PoE	
Accessories	Proper mounting kit as will be determined on site	
Intelligent Analytics	Must support video analytics on the NVR side with the following capabilities; Object counting Target cropping scheme Object entering/leaving Facial recognition License Plate Recognition Smart search with Thumbnails Region entering/leaving Object identification Forensic search	

System Support	Onvif compliance	
Supported Protocols	802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ(QoS), LLDP,SOAP,Dropbox™,CH AP, digest authentication	
Casing	Rating: IK10 impact resistant aluminum enclosure	
Warranty	3 Years	

SERVER: CCTV & ACS

(2 to be configured for redundancy)

System Server		
Specifications		**Bidders Response**
Brand Model/Technology	Model and Technology: Mature internationally recognized brand, in existence for at least 10 years(bidder must specify brand, model and series)	
Server Software(Recording)	Video Standards: PAL, or NTSC standards, HD-SDI and IP	
	Video Resolution: QCIF, CIF, 2CIF, DCIF, D1, 720p,1080p, MP	
	Live view / Playback resolution 12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
	IP and HD rates: High image rate streams supported, camera dependent	
	Zoom: Unlimited zoom by mouse wheel	
	Record Type: Continuous, schedule, motion, alarm, event and digital input trigger	
	Record Tracks: 3 independents tracks assignable to different HDDs with different settings	
	Overwrite Modes: Configurable auto deletion and overwrite function by time or disk allocation	
	Operating System: Embedded Linux platform	
	The VMS will have the following licensed features embedded, Object counting Target cropping scheme Object entering/leaving Facial recognition License Plate Recognition Smart search with Thumbnails Region entering/leaving Object identification Forensic search	
Client Software	Remote Users: 2 to unlimited concurrent licensed users	
	Operating System: Microsoft Windows Server	

	Mobile client: Support for Android, iOS devices and licensed	
	Find and Display: Instantaneous and simultaneous display of live and recorded images	
Remote Users:	Unlimited concurrent users	
OS:	Windows Server (64 bit) Server 2016 (64 bit)	
Mobile client:	Support for Android and iOS devices	
Password profile:	Multiple protection levels	
Encryption:	Up to 4096 bit encryption	
Remote Administration:	Remote Administration: Remote control via TCP/IP network including restart and rebooting	
Advanced events:	Shows a real time stream of incoming events and alarms on the main window	
Event notification:	Via client viewer, email or TCP/IP message	
Licensed Features(one off license)	De-warping for any 360 degree cameras: Provides customizable linear views of live and archived images and the ability to recall a total old of view and follow subjects as if tracking with a PTZ camera, creating ad hoc video clips around the occurred events.	
	Multiple Interactive Maps: Configurable map screen for finding and interacting with cameras and devices	
	Virtual Matrix: Ability to display video from multiple cameras from different recorders on monitor walls	
	VMS should support Video Wall functionality to control multiple large monitors from single Client workstation	
	HTTP proxy server: Allows remote management of cameras and other equipment that is isolated on the local surveillance network	
	The Operating system, the VMS and the database (enterprise versions) will have a one off license	
	The client software with unlimited concurrent users (remote and mobile)	
	Automatic plate number recognition for unlimited number of cameras	

	Face recognition for unlimited cameras	
Camera Support	Compression formats: H.264, H.264+, H.265, MPEG-4, M-JPEG, JPEG2000, and MxPEG	
	PTZ devices: Full 3 axis control(PAN, TILT & ZOOM) using a 3-axis mouse or joystick controller	
	PTZ Mode: Preset and Tour	
	IP Camera setup: Drop down menu	
	IP camera discovery: Automatic for ONVIF cameras	
	IP camera web browser setup: Direct access	
	Camera and tracks: Multiple recording profiles	
	Compression formats: H.264, H.264+, H.265, MPEG-4, M-JPEG, JPEG2000, and MxPEG	
Events and Alarms	Advanced events: Shows a real time stream of incoming events and alarms on the main window	
	Event Detection: Any third party events and alarms, video loss, darkening, motion within image, camera movement, camera tamper, alarm input, login succeeded, login denied, faulty warning.	
	Event notification: Via client viewer, email or TCP/IP message	
	Events Actions: Record on alarm, text overlay, boost recording rate, trigger output, spot monitor and PTZ camera on preset	
Hardware Properties	Processor: Intel® Xeon® E5-2600 v4 product family E5-2620 v4 (8 core, 2.1GHz, 85W)	
	Memory: 64 GB	
	Hard disk space: 4TB	
	Safe and secure surveillance Hard Drives	
	Raid Level: 0,1,5,6 –Optional	
	IP video input Up to 12 MP resolution	
	Recording resolution **:**12 MP/8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA/720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
	Network: 2 ports –upgradable	
	Speed -1000 Mbps	
	Remote connection : 128	
	The server will be configured in the existing Local Area Network (LAN)	

	and the cameras will be on their own network (Behind the NVR)	
	Time Sync(NTP): Automatically synchronized to other compatible recorders	
	Privacy Mask: Configurable mask to avoid viewing sensitive areas within a camera view.	
	Time Zone: Regional setting available	
	Languages: Multiple languages support	
	Recorder per location: 1-255	
	Distributed locations: 1 to unlimited	
	Monitoring: Full system monitoring including SMART disk health monitoring	
	Power: Input Voltage 240V ac , 50Hz	
	1+1 redundant power supply unit	
	Watchdog function: Auto-reboot of system in case of system failure	
	Warranty: 2/2/2 - Server Warranty includes two years of parts, three years of labor, and three years of onsite support coverage.	
	Processor cache 20MB L3	
	Form factor :-2U rack	
	Hard disk type: SAS SFF hotplug drives	
	Array 1 smart Array P44oar/2GB FBWC, iLO (Standard)	
	Network 331i 4 ports -upgradable	
	Network Port Speed -1000 Mbps	
	Power:Input Voltage 240V ac , 50Hz	
	Energy Smart-Two hot plug high efficient 500w PSU	
	Drives 3.5" Hot-plug hard drives	
	Power Hot-plug redundant power	
	Cooling Hot-plug redundant cooling	
	Memory Must have spare row for memory	
CCTV Server	To be configured as a redundancy with the access control server	

SYSTEM STORAGE

IP BASED SYTEM STORAGE

System Storage

Specifications		Bidders Response
Brand Model/Technology	Model and Technology: Mature internationally recognized brand, in existence for at least 10 years(bidder must specify brand, model and series)	
Storage Capacity	90 Days for all cameras with supporting calculation from the manufacturer.	
CPU:	CPU Intel Atom C3538 quad-core 2.1GHz	
Hardware encryption engine	Yes (AES-NI)	
Memory	64 GB DDR4-2133 Non-ECC UDIMM (expandable up to 128 GB with 16 GB ECC UDIMM x 4)	
Hard disk type:	12 x 3.5" or 2.5" SATA SSD/HDD (drives not included)	
File system:	• Internal: Btrfs, ext4, • External: Btrfs, ext4, ext3, FAT, NTFS, HFS+, exFAT6	
External port	• 2 x USB 3.0 port , • 1 x Expansion port	
Hardware encryption engine	Yes (AES-NI)	
Networking protocol	SMB, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN ™, L2TP)	
Supported RAID	Hybrid RAID (SHR), Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10	
PCIe 3.0 slot	• x8 slot x 1 (4-lane) • High-performance network interface card support • M.2 SATA SSD adapter card support	
LAN:	4 x 1GbE (RJ-45)	
System fan	4 (80 x 80 x 25 mm)	
Power frequency	50/60Hz, single phase	
Warranty	3 years	