

# KENYA MEDICAL SUPPLIES AUTHORITY

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*All Correspondence should be addressed to Chief Executive Officer*

When replying please quote our ref:

**Ref: GF-KEMSA- CONST-1- 7/OIT6 /17 (2)**

**Date: 4<sup>th</sup> December, 2017**

## ADDENDUM 2:

**Attn.: All Prospective Bidders**

**RE: TENDERS NO'S GF-KEMSA- CONST-1- 7/OIT6 /2017-2018 - FOR PROPOSED CONSTRUCTION OF MODERN WAREHOUSE AND OFFICE BLOCK.**

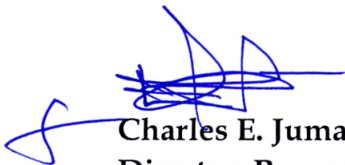
## BACKGROUND

Further to additional clarifications sought by bidders, we respond as follows;

1. Clause 33.1 item (d) on Termination as per the Conditions of Contract amended to read:  
**"a payment certified by the Project Manager is not paid by Kenya Medical Supplies Authority to the Contractor within 90 days (for Interim Certificate).**
2. Power of attorney shall be on company's letter head and must be an original. Photocopies shall not be allowed.
3. Bidders shall be required to provide original Bid bonds. Photocopies shall not be allowed.
4. Schematic drawings for Electrical installations are here with attached as part of this addendum.
5. In regard to structured cabling, PABX and Security Installation tender No. GF-KEMSA-CONST-3/OIT6/2017- 2018 registration with National Construction Authority NCA1 is mandatory in addition to registration with Communication Authority (CA).
6. Bidders participating in this tender as a joint venture are required to nominate one lead partner to sign and stamp the tender document on behalf of the joint venture partners. Refer to clause 1.6 of the Instruction to Tenderers (ITT).

7. General and particular Preliminaries for the Main Works tender documents which were initially missing were provided in addendum 1.
8. **CORRECTION FOR TENDER NO. GF-KEMSA-CONST-5/OIT 6/2017-2018- PLUMBING, DRAINAGE & FIRE FIGHTING- SPRINKLER HEAD SPECIFICATION:** The particular specification for sprinkler head on page 46 of 73 the K factor is indicated 80%. The correct K factor is 8.0. The dot is missing between 8 and 0, also the % sign should be omitted. This also applies on page 21 and 57 of the schedules for the dot is missing between 8 and 0.
9. Find attached **annextures 2(a), (2b) and 2(c)** being responses to request for clarifications for tender GF-KEMSA-CONST-2/OIT6/2017-2018, GF-KEMSA-CONST-3/OIT6/2017-2018 and GF-KEMSA-CONST-5/OIT6/2017-2018 respectively.
10. Further, please find attached **annexture 2(d)** FOR TENDER NO. GF-KEMSA-CONST-5/OIT 6/2017-2018- PLUMBING, DRAINAGE & FIRE FIGHTING being Bills of Quantities that are MISSING in the tender document.
11. TENDER NO. GF-KEMSA-CONST-6/OIT 6/2017-2018- mechanical Ventilation smoke vent and air conditioning Headers on pages 45 to 59 are corrected to read – Proposed KEMSA ware house and Office – Mechanical, Ventilation, Smoke Vent And Air Conditioning particular specifications.

Yours faithfully,



**Charles E. Juma**

**Director, Procurement**

**FOR: Ag. CHIEF EXECUTIVE OFFICER**



Annex  
2(a)

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Ref: NI/1705/KG-171204/DC-01

04<sup>th</sup> December 2017

## **PROPOSED CONSTRUCTION OF KEMSA MODERN WAREHOUSE & OFFICE BLOCK**

### **BIDDERS PREBID QUERIES & CLARIFICATIONS**

The following are responses to the prebid queries & clarifications as raised by bidders:

ITEM	QUERY / CLARIFICATION	RESPONSE
<b>A</b>	<b>ELECTRICAL INSTALLATION WORKS SPECIFICATIONS AND BILLS OF QUANTITIES</b>	
A1	<b>Standards:</b> Item no. 2 Standards and Regulation. Page no. 2 of 69 in Electrical & FA Specs.  We request to approve International Electrotechnical Commission (IEC) as IEC is one of globally accepted standard.	<ul style="list-style-type: none"> <li>All standards used must conform to the IEEE standards mentioned and if IEC standards are to be used then they must conform to the same.</li> </ul>
A2	<b>Socket:</b> Item no. ii. Socket Page no. 25 of 69 in Electrical & FA Specs.  Kindly confirm weather ring main wiring is of 6 X 2.5 mm sq. PVC / XLPE S/ C CU Cable or 3 X 2.5 mm. sq. PVC CU cable	<ul style="list-style-type: none"> <li>Wiring of Ring Main sockets is done in 3x2.5mm sq. PVC SC Cu Cables. However, at the source, then the cables wired to the MCB at the Distribution boards shall be 6x2.5mm sq. PVC SC Cu Cables.</li> </ul>
A3	<b>Light Fixture:</b> Item no. F. Lighting Page no. 4 of 157 in Electrical Installation Works BOQ  Philips provides LED chips of Philips Lumileds and LG Innotek makes. Hence, we request to approve Philips Lumileds and LG Innotek along with Cree as Philips is one of approved makes.	<ul style="list-style-type: none"> <li>Equivalents are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications, which shall be to engineer's approval.</li> </ul>
A4	<b>Cable ladders, cable trays, trunking:</b> BOQ item no. A4 and F4. Cable ladders, cable trays, trunking and conduit installation.  Kindly provide thickness and coating thickness galvanization of Cable ladders, cable trays, trunking. Also, confirm whether cable trays require covers. If yes, request to specify item no, under A4 and F4.	<ul style="list-style-type: none"> <li>Cable ladders &amp; cable trays shall conform to BS7671 : 2008 and its subsequent amendments.</li> <li>Trunking shall conform to BS4678 and its subsequent amendments.</li> <li>The cable Trays do not require covers. If covers are needed they would be put under a separate item.</li> </ul>
A5	<b>Trunking Faceplates:</b> BOQ item no. A4.12, A4.13 and F4.12, F4.13.  Please provide catalogue no. / Model no. / brand for faceplate.	<ul style="list-style-type: none"> <li>The trunking faceplates should match the particular trunking specified.</li> </ul>
A6	<b>Power Supply:</b> BOQ item no. A5, F5 and K4 Power Supply  Kindly provide drawings / SLD or else request to provide length in linear meter for following items; A5.01, A5.03, A5.05, A5.10, A5.12, A5.13, A5.14, A5.16, A5.17, A5.19, A5.20, A5.21, A5.23, A5.25, F5.01, F5.03, F5.05, F5.10, F5.12, F5.13, F5.14, F5.16, F5.17, F5.19, F5.20, F5.21, F5.23, F5.25, K5.01, K5.04, K5.06, K5.07, K5.08, K5.09, K5.11, K5.12, K5.13.	<ul style="list-style-type: none"> <li>Drawings can be viewed at the client offices</li> </ul>
A7	<b>Distribution Boards:</b> BOQ item no. A7, F7 and K4  We request to approve Legrand / ABB / Hager branded distribution boards as these brands are one of the globally accepted brand.	<ul style="list-style-type: none"> <li>Equivalents are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications, which shall be to engineer's approval.</li> </ul>

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ITEM	QUERY / CLARIFICATION	RESPONSE
A8	<b>Distribution Boards:</b> BOQ item no. A7, F7 and K4 Power distribution and cabling. Kindly provide ingress protection rating for distribution boards.	<ul style="list-style-type: none"><li>• They are IP31 Rated</li></ul>
A9	<b>LV Switchgears:</b> BOQ item no. B and G, Warehouse and Office Block LV Switchgears  Please provide Single line diagram as the meters and relays are indicated with unit 'ITEM'.	<ul style="list-style-type: none"><li>• Drawings can be viewed at the client offices</li></ul>
A10	<b>Rising Mains:</b> BOQ item no. G2, Rising Mains for Raw Power  Kindly provide SLD and Rating for rising Mains.	<ul style="list-style-type: none"><li>• The rating of the rising mains is mentioned in the first item under the section of rising mains</li></ul>
A11	<b>LV Switchgears:</b> BOQ item no. L1, External Lighting Accessories under External Lighting Installation  The IP rating for outdoor control pillar is not available with tender documents. Kindly provide the same.	<ul style="list-style-type: none"><li>• They are IP67 Rated</li></ul>
A12	<b>Rising Mains Unit:</b> BOQ item no. P1  Kindly provide schematic drawing for Rising mains unit.	<ul style="list-style-type: none"><li>• Rising mains are standard and they differ from one manufacturer to another. This is normally provided as a shop drawing as it is custom made as per the specifications</li></ul>
A13	<b>HV Cabling:</b> BOQ item no. R1  Is the 3C 95 mm. sq. 11 kV XLPE cable is an earthed cable or an unearthed cable. Kindly confirm.	<ul style="list-style-type: none"><li>• Cable is 3C Armored.</li></ul>



Annex  
2 (b)

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ITEM	QUERY / CLARIFICATION	RESPONSE
<b>B</b>	<b>STRUCTURED CABLING, PABX &amp; SECURITY INSTALLATIONS SPECIFICATIONS AND BILLS OF QUANTITIES</b>	
<b>B1</b>	<p><b>Structured Cabling Installations:</b> BOQ A) Warehouse, Item A2.01 &amp; A2.02</p> <p>BOQ mentions Data Points &amp; Voice Points Horizontal Cabling, 4 Pair UTP CAT6A CU cables drawing in existing trunking in nos 112 each.</p> <p>We do not have schematic and layout drawings to calculate the length of CAT6A cable required. Please provide the details. Also, let us know the details / size of existing trunking if it exists.</p>	<ul style="list-style-type: none"> <li>• Drawings can be viewed at the client offices</li> <li>• There is also a limit to UTP cables for ICT installations, which can be used as a guide.</li> <li>• There is no existing trunking. Trunking will be installed by the electrical contractor under their scope</li> </ul>
<b>B2</b>	<p><b>Structured Cabling Installations:</b> BOQ A) Warehouse, Item A3 Network Switches</p> <p>BOQ asks for CISCO Make Network switches &amp; Core Switch. Can we propose any alternate make switches e.g.: HP / Brocade?</p>	<ul style="list-style-type: none"> <li>• Equivalentents are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications, which shall be to engineer's approval.</li> </ul>
<b>B3</b>	<p><b>Structured Cabling Installations:</b> BOQ A) Warehouse, Item A13, A14 &amp; A15 Provisional Sums</p> <p>BOQ shows provisional sums for WIFI Installations, Fiber Connection Sum &amp; Contingency. Should we follow the same numbers or do we need to calculate separately? In that case, we would need the details of WIFI installations &amp; Fiber connection scope.</p>	<ul style="list-style-type: none"> <li>• Provisional sums are to be included in the sum price as specified. The design will be done at a later stage and the sums must be left as is.</li> </ul>
<b>B4</b>	<p><b>Structured Cabling Installations:</b> BOQ B) Office Block</p> <p>We have similar queries as above for Office Block BOQ.</p>	<ul style="list-style-type: none"> <li>• Same response as in Warehouse</li> </ul>
<b>B5</b>	<p><b>IP PABX Installations:</b> BOQ D) Warehouse</p> <p>The IP_PABX &amp; Telephony system BOQ shows line items for different types of IP Phones total count 126nos. However, the Main PABX Headend Equipment is missing from the BOQ. Please advice on the requirements of Main PABX system.</p>	<ul style="list-style-type: none"> <li>• Headend equipment shall be advised further in future. The system designed is a backbone system.</li> </ul>
<b>B6</b>	<p><b>Security System:</b> BOQ CCTV Installations J) Warehouse Item J1.08</p> <p>The CCTV BOQ for Warehouse shows total Camera quantities # 165 however, the BOQ line Items J1.08 for cabling shows quantity as # 57 only. Please clarify. In addition, to calculate the length of CAT6A cables we would need the layout drawings with proper locations of Cameras &amp; Switches / Hub Room.</p>	<ul style="list-style-type: none"> <li>• Drawings can be viewed at the client offices</li> <li>• Price as is with the quantities specified. The corrections will be done using the rate specified in the bid</li> </ul>
<b>B7</b>	<p><b>Security System:</b> BOQ CCTV Installations J) Warehouse Item J1.09</p> <p>The CCTV BOQ for Warehouse shows total Camera quantities # 165 however, the BOQ line Items J1.09 for Camera Licenses shows quantity as # 57 only. Please clarify.</p>	<ul style="list-style-type: none"> <li>• Price as is with the quantities specified. The corrections will be done using the rate specified in the bid</li> </ul>
<b>B8</b>	<p><b>Security System:</b> BOQ CCTV Installations J) Warehouse Item J1.20</p> <p>The CCTV BOQ for Warehouse shows total Camera quantities # 165 however, the BOQ line Items J1.20 for Network Switches 24 Port shows quantity as # 4 only. Please clarify.</p>	<ul style="list-style-type: none"> <li>• Price as is with the quantities specified. The corrections will be done using the rate specified in the bid</li> </ul>
<b>B9</b>	<p><b>Page 2 of ICT Schedules:</b> All Fiber Installations and Cabling to be as SIEMON end to end. Using strictly SIEMON for all installation items.</p>	<ul style="list-style-type: none"> <li>• Equivalentents are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications, which shall be to engineer's approval.</li> </ul>

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	<p>Due to this we have no any other choice and we are also not getting support from SIEMON as they only provide support on MAF to their channel partner.</p> <p>Please change to Siemon/Molex/Commscope/Excel /Equivalent</p>	
B10	<p><b>Page 81 of 122 of ICT &amp; Sec. Specs:</b> Bollards (Retracting) - Bollard Diameter - 200mm</p> <p>Bollard comes in 220mm Diameter (the same has been asked for Bollards (Fixed) in Page 80 of 122 of ICT &amp; Sec. Specs.</p> <p>Please revised to 220mm Diameter</p>	<ul style="list-style-type: none"> <li>The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures.</li> </ul>
B11	<p><b>Page 89 of 122 of ICT &amp; Sec. Specs:</b> Under Vehicle Scanner (UVSS) - 4 camera Video based system</p> <p>The mentioned specifications are of Mediatronix make UVS-4C and they have discontinued manufacturing UVSS. Most of UVSS manufacturer comes with 2 camera video-based system.</p> <p>Please revised to 2 camera video based system</p>	<ul style="list-style-type: none"> <li>Kindly quote as specified. There are various suppliers who do 4 Camera systems.</li> </ul>
B12	<p><b>Page 90 of 122 of ICT &amp; Sec. Specs:</b></p> <ul style="list-style-type: none"> <li>Under Vehicle Scanner (UVSS) - Galvanized Steel C- frame, with Ramps frame, with Ramps <ul style="list-style-type: none"> <li>Under Vehicle Scanner (UVSS) - Galvanized Steel C- frame, with Ramps frame, with Ramps,</li> <li>Camera Unit dimensions 145 cm (L) x 19.5 cm (W) x 15 cm (H)</li> <li>C-Frame Dimension 197 cm (L) x 50cm (W) x 11 cm (H)</li> <li>Ramp size - 193 cm (L) x 46cm (W) x 4 cm (H)</li> </ul> </li> </ul> <p>The mentioned specifications are of Mediatronix make UVS-4C and they have discontinued manufacturing UVSS.</p> <p>Most of Under Vehicle Scanner Manufacture their scanner system in such a way that it does not require Ramp for maintenance purpose.</p> <p>Every Under Vehicle Scanner Manufacturer have their own dimensions of camera unit, c-frame and Ramp</p> <p>Please omit these specifications</p>	<ul style="list-style-type: none"> <li>Kindly quote as is.</li> <li>Equivalents are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications which shall be to engineers approval</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B13	<p><b>Page 72 of 122 of ICT &amp; Sec. Specs:</b> Walk Through Metal Detectors - VISUAL ZONE INDICATION: 2, 4, 8 or 20 independent zones selectable</p> <p>Most of Walk Through Metal Detectors comes in 2, 4 &amp; 8 independent zones selectable.</p> <p>The mentioned specifications are of CEIA make HI-PE Plus model and they provide support to their channel partner only.</p> <p>Please revised it to 2, 4 &amp; 8 independent zones selectable.</p>	<ul style="list-style-type: none"> <li>Kindly quote as is.</li> <li>There are quite a number of Walk through metal detectors that can cover this.</li> </ul>
B14	<p><b>Page 30 of 122 of ICT &amp; Sec. Specs:</b> Specifications of Video Wall is mentioned</p> <p>But there is no quantity specified for that in Bill of Quantities</p> <p>Please clarify</p>	<ul style="list-style-type: none"> <li>This are general specifications for all security systems. Kindly quote what is in the schedules.</li> </ul>
B15	<p><b>Page 19 of 122 of ICT &amp; Sec. Specs:</b> US Patents 5,931,432; 6,793,415 B2; 6,802,656 B2; 6,821,222 B2 These US patents are ONLY with PELCO company/make. Due to this, we have no any other choice and we are also not getting support from Pelco as they only provide support to their channel partner.</p>	<ul style="list-style-type: none"> <li>There are other patents mentioned from Page 18 of 122 of ICT &amp; Sec. Specs, which you can conform to. This is dependent on various manufacturers</li> <li>Equivalents are acceptable so long as they meet the minimum thresholds outlined in the model specified</li> </ul>



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	Please omit these specifications	and the technical specifications which shall be to engineers approval • Attach catalogues of the specified project for evaluation
B16	<b>Page 21 of 122 of ICT &amp; Sec. Specs and Page 23 of 122 of ICT &amp; Sec. Specs:</b> Panoramic IP Dome Camera (180° View) - Indoor / Outdoor Binning Mode for Strong Low Light Performance  ONLY Arecont Vision company/make use this Binning Mode language & feature. Due to this, we have no any other choice and we are also not getting support from Arecont Vision as they only provide support to their channel partner.  True Day/Night Functionality	• Equivalent concepts are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications which shall be to engineers approval • Attach catalogues of the specified project for evaluation
B17	<b>Page 21 of 122 of ICT &amp; Sec. Specs and Page 23 of 122 of ICT &amp; Sec. Specs:</b> Panoramic IP Dome Camera (1800 View) - Indoor / Outdoor - 5.2 fps Frames per second  ONLY Arecont Vision company/make have 5.2 fps. Due to this, we have no any other choice and we are not getting support from Arecont Vision as they only provide support to their channel partner. 7 fps Frames per second	• The fps stated is the minimum. Therefore, you can quote what the next level above as per your manufacturers design / spec. • Attach catalogues of the specified project for evaluation
B18	<b>Page 22 of 122 of ICT &amp; Sec. Specs and Page 23 of 122 of ICT &amp; Sec. Specs:</b> Panoramic IP Dome Camera (180° View) - Indoor / Outdoor - 8 non-identical streams (2 per sensor) ONLY Arecont Vision company/make using 8 non-identical streams. Due to this, we have no any other choice and we are also not getting support from Arecont Vision as they only provide support to their channel partner.  4 non-identical streams	• Equivalent concepts are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications which shall be to engineers approval • Attach catalogues of the specified project for evaluation
B19	<b>Page 22 of 122 of ICT &amp; Sec. Specs:</b> Panoramic IP Dome Camera (180° View) - Indoor / Outdoor - IR 8 mm, F/1.6', H-FOV = 33° ONLY Arecont Vision company/make have IR 8 mm, F/1.6', H-FOV = 33°  IR 6mm-8 mm, F/1.6', H-FOV = 30° to 40°	• The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures. • Attach catalogues of the specified project for evaluation
B20	<b>Page 23 of 122 of ICT &amp; Sec. Specs:</b> Panoramic IP Dome Camera (3600 View) - Indoor / Outdoor. 0.15 lux for Color in Binning mode & 0.5 Lux for Color mode ONLY Arecont Vision company/make use Binning mode language & feature. Due to this, we have no any other choice and we are also not getting support from Arecont Vision as they only provide support to their channel partner. 0.23 Lux @ F1.6 (Color)	• The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures. • Attach catalogues of the specified project for evaluation
B21	<b>Page 25 of 122 of ICT &amp; Sec. Specs:</b> Outdoor PTZ (Pan, Tilt & Zoom) Camera (360 Degree View) - 1/2.8-inch Type Exmor CMOS  Only few companies use 1/2.8-inch Type Exmor CMOS  1/3-inch Type CMOS Sensor	• The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures. • Attach catalogues of the specified project for evaluation
B22	<b>Page 26 of 122 of ICT &amp; Sec. Specs:</b> Outdoor PTZ (Pan, Tilt & Zoom) Camera (360 Degree View) - Sensitivity in lux for 90% reflectance, f/1.6 (wide-angle), 28 dB	• The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures.



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	gain at 30 IRE (30% of signal level) with sensitivity boost OFF; 4X improvement to sensitivity with sensitivity boost ON 0.65 lux for Color (33ms) & 0.07 Lux for Color (250ms) This sensitivity comes ONLY in PELCO company/make. Due to this we have no any other choice and we are also not getting support from Pelco as they only provide support to their channel partner. 0.26 Lux @ F1.6 (Color)	<ul style="list-style-type: none"> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B23	<b>Page 26 of 122 of ICT &amp; Sec. Specs:</b> Outdoor PTZ (Pan, Tilt & Zoom) Camera (360 Degree View) - 55.4° (wide) ~ 2.9° (tele) This view angle comes ONLY in PELCO make.  3° ~ 55° (Horizontal)	<ul style="list-style-type: none"> <li>The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures.</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B24	<b>Page 26 of 122 of ICT &amp; Sec. Specs:</b> Outdoor PTZ (Pan, Tilt & Zoom) Camera (360 Degree View) - 15W Maximum 15W is not possible with Outdoor PTZ camera with heater. Most of manufacturers have equal or more than 25W.  Please confirm and clarify	<ul style="list-style-type: none"> <li>The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures.</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B25	<b>Page 27 of 122 of ICT &amp; Sec. Specs:</b> NETWORK VIDEO RECORDER (NVR) - Optimized to Support Pre-Installed DS NVs Software & Integrated into the NVR Hardware DS NVs Software is Pelco Standard & Model. Due to this, we have no any other choice and we are also not getting support from Arecont Vision as they only provide support to their channel partner.  Please omit these specifications	<ul style="list-style-type: none"> <li>Equivalents are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications which shall be to engineers approval</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B26	<b>Page 27 of 122 of ICT &amp; Sec. Specs:</b> NETWORK VIDEO RECORDER (NVR) - Compatible with Third-Party IP Cameras & Network Encoders Compatible with DS Control Point for Simultaneous Monitoring of All DS Series and DX Series Products in a Single Client Interface Compatible with the DS Archive Utility DS Control Point and DS Series is Pelco Standard & Model. Due to this, we have no any other choice and we are also not getting support from Pelco as they only provide support to their channel partner. Support 3rd party camera though ONVIF	<ul style="list-style-type: none"> <li>Equivalents are acceptable so long as they meet the minimum thresholds outlined in the model specified and the technical specifications which shall be to engineers approval</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B27	<b>Page 28 &amp; 38 of 122 of ICT &amp; Sec. Specs:</b> NETWORK VIDEO RECORDER (NVR) - 2 DVI-D connectors DVI-D is old technology  HDMI x1, Display Port x1, DVI x1	<ul style="list-style-type: none"> <li>If the equipment being supplied is of a higher version then it is acceptable.</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B28	<b>Page 28 &amp; 38 of 122 of ICT &amp; Sec. Specs:</b> NETWORK VIDEO RECORDER (NVR) - 2nd Generation Intel® Core™ i7 and Windows 7 Ultimate 64-bit SP1 Windows 7 ultimate is old OS  Intel Core i5/i7 and Windows Embedded	<ul style="list-style-type: none"> <li>The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures.</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B29	<b>Page 37 &amp; 38 of 122 of ICT &amp; Sec. Specs:</b> IP VIDEO MANAGEMENT SOFTWARE 2nd Generation Intel® Core™ i7 processor and 8 GB of RAM and Windows® 7 Ultimate 64-bit operating system Windows 7 ultimate is old OS Intel Core i5/i7 and Windows Embedded	<ul style="list-style-type: none"> <li>The specifications stated are the minimum. This varies from one manufacturer to the other. Kindly quote whichever your supplier manufactures.</li> <li>Attach catalogues of the specified project for evaluation</li> </ul>
B30	<b>Page 38 of 122 of ICT &amp; Sec. Specs:</b> IP VIDEO MANAGEMENT SOFTWARE The IP video management system shall support and have an option for an internal DVD+/-RW Software does not support internal DVD+/-RW Please confirm and clarify	<ul style="list-style-type: none"> <li>The software specified in the bid should support internal DVD+/-RW</li> </ul>



Amhar  
2(C)

# Norkun Intakes Ltd

Electrical & Mechanical Consulting Engineers


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ITEM	QUERY / CLARIFICATION	RESPONSE
<b>C</b>	<b>PLUMBING, DRAINAGE &amp; FIRE FIGHTING, SPECIFICATIONS AND BILLS OF QUANTITIES</b>	
C1	<b>FIRE FIGHTING:</b> E2 SPRINKLER PUMP ,EQUIPMENTS & INSTALLATIONS E2.01 Please refer to BOQ E2.01 wherein BOQ clearly indicates 56 lps at 25 bar system. However, NFPA limits the maximum pressure up to 24 bar per zone. Hence, UL/FM approval may not be possible for that range of pressure. Please confirm the same the same whether to go with 25 bar system.	<ul style="list-style-type: none"> <li>The UL/FM approvals are mandatory. The Quote shall be as per the specification Please share with us the particular clause</li> </ul>
C2	<b>FIRE FIGHTING:</b> E2 SPRINKLER PUMP ,EQUIPMENTS & INSTALLATIONS E2.01 CONTROL VALVE Please refer to BOQ E2.01 wherein BOQ does not indicates the size of the valve. Please confirm the same.	<ul style="list-style-type: none"> <li>The valve size is 200mm</li> </ul>
C3	<b>FIRE FIGHTING:</b> BILL 1 WARE HOUSE PIPE WORK, E2.06-E2.14 Please refer to specification pg.no: 34-73 wherein it is clearly indicates the pipework to be G.I 'C' confirming to BS 1387 but BOQ calls for "65 mm dia and above as Black or Galvanized shall be either ASTM A53 seamless, while 50 mm dia and below to be electric welded grade A & B. The Pipe Shall be Sch.40 and above". Please confirm whether to go with G.I 'C' confirming to BS 1387 or with ERW/Seamless confirming to ASTM A53 GR.B Sch 40	<ul style="list-style-type: none"> <li>What you are referring to is the section for hose reel which is ok with GI C pipes But Wet risers and sprinkler application has been clearly specified on page 47 of 73 and on the pricing schedules "above as Black or Galvanized shall be either ASTM A53 seamless, while 50 mm dia and below to be electric welded grade A &amp; B"</li> </ul>
C4	<b>PLUMBING, DRAINAGE:</b> B1) Plumbing Works - WAREHOUSE, G) Plumbing Works - OFFICE BLOCK As per the BOQ we have to consider Upvc pipes for cold water system and cpvc pipes for hot water system. But the quantities have not been bifurcated for both. Hence please provide the same. OR Please specify a single type of pipe for both the system.	<ul style="list-style-type: none"> <li>Replace UPVC with PPRC-PN 20 or CPVC as specified since cold and hot water is not separated.</li> </ul>
C5	<b>PLUMBING, DRAINAGE:</b> B1) Plumbing Works - WAREHOUSE, G) Plumbing Works - OFFICE BLOCK As per the BOQ only upvc pipes have been mentioned however, please confirm wether Sch 40 or Sch 80 pipes are to be used.	<ul style="list-style-type: none"> <li>See C4 Above</li> </ul>
C6	<b>PLUMBING, DRAINAGE:</b> B1) Plumbing Works - WAREHOUSE, G) Plumbing Works - OFFICE BLOCK As per the BOQ only cpvc pipes have been mentioned however, please confirm wether SDR 11 or SDR 13.5 pipes are to be used (for 15mm dia to 50 mm dia), and wether Sch 40 or Sch80 pipes are to be used (for 65mm dia and above).	<ul style="list-style-type: none"> <li>See C4 Above</li> </ul>
C7	<b>PLUMBING, DRAINAGE:</b> K) Basement Sump pumps drainage. Upvc piping As per the BOQ uPVC conventional system for soil waste & rain water "(ASTRAL Ultradrain)" for pressure drainage & application. "(ASTRAL Ultradrain)" pipes are meant for non pressure drainage application only. We propose to use upvc schedule 40 pipes.	<ul style="list-style-type: none"> <li>Quote as per the BQ</li> </ul>

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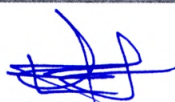
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ITEM	QUERY / CLARIFICATION	RESPONSE
<b>D</b>	<b>MECHANICAL VENTILATION, SMOKE VENTS AND AIR CONDITIONING SPECIFICATIONS AND BILLS OF QUANTITIES</b>	
<b>D1</b>	<b>Mech vent BQ:</b> 2.17, Associated Electrical works  Please provide the technical details and quantity of all the items includes in electrical work such as panel, cables, trays.	<ul style="list-style-type: none"> <li>Electrical Subcontractor shall provide power up to the isolator approximately 2metre from the Equipment. All other associated Electrical works from the isolator to the panel then to the equipment shall depend on the manufacturer's requirement and is only the bidders who can determine the scope depending on their equipment supplier.</li> </ul>
<b>D2</b>	<b>Page 40 of 59 of HVAC Specs:</b> Performance test for fan at site  Fans shall be AMCA certified, and statically and dynamically balance in factory. All fans shall have test certificate stating the same. After installation air quantity will be tested on site.	<ul style="list-style-type: none"> <li>If the Fans are AMCA certified you just need to provide the certificate and you do the air quantity test on site</li> </ul>
<b>D3</b>	<b>BILL 3 Office block HVAC fit out BOQ:</b> Multisplit Condensing unit model number mentioned in BOQ is of Toshiba and indoor units mentioned in are of Daikin, Samsung, Toshiba or equal  For better synchronization, we will select all the VRF/VRV equipments i.e. indoor and outdoor units are of same make. We select the make out of Daikin, Samsung, Toshiba or LG. Please confirm.	<ul style="list-style-type: none"> <li>All other brands mentioned are ok except LG.</li> </ul>
<b>D4</b>	<b>BILL 3 Office block HVAC fit out BOQ:</b> 5.1, Allow for the Refrigeration pipework complete with pipe insulation, connection kits, Headers, and T-connections anchored firmly as per schedule below(refer also to the attach analysis sheet using Toshiba program if there are discrepancies due other models analysis program or any other reason, please attached a corrected appendix otherwise any cost which may arise due to this shall be borne by the contractor )  Please provide the Toshiba analysis sheet. We have not received HVAC drawings so we will consider BOQ quantity. Please confirm.	<ul style="list-style-type: none"> <li>The drawings and the Toshiba analysis sheet has been provided herein.</li> </ul>
<b>D5</b>	<b>Mech vent BQ:</b> 2.03, Control Panel: Carbon Monoxide detection and exhaust fan control shall be provided as Macurco SS103-10A system. This System shall use CS102A or SS102HC-1 carbon monoxide (CO) to voltage transducers that measure the level of CO and provide this information to the SS103- 10A in an analog mode: voltage. This SS103-10A control panel shall provide three levels of fan or alarm control relays. These relays (N.O.) shall be for pilot duty only and capable of switching 10 A loads up to 240 VAC. (Same applicable for BOQ line item 2.04)  Please provide the single line diagram for same. Is it mandatory to provide the make as Macurco?	<ul style="list-style-type: none"> <li>It is not mandatory to provide the Macurco model any other equivalent is acceptable.</li> <li>The Control panel single line diagram is to be provided by the manufacturer.</li> </ul>
<b>D6</b>	<b>HVAC Bill of Quantity:</b> GI ducting  External and internal ducting not segregated. Please confirm the quantity.	<ul style="list-style-type: none"> <li>In Kenya we do not have different duct for indoor or outdoor they are all uniform. Therefore quote as per the specification</li> </ul>

ISSUED BY: **NORKUN INTAKES LTD**

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**BILL 4**

**EXTERNAL  
WATER  
RETICULATION**



**L EXTERNAL WATER RETICULATION****PIPEWORK**

Supply and install the following in PPR-C (Polypropylene Random Copolymer) PN 20 internal water pipework systems with fittings fixed and welding to be in accordance to the manufacturer's printed instructions as described. All PPR-C bends, Tees, reducing Tees, reducers etc. are to be formed in accordance to the manufacturer's printed instructions. The installations to have the various sizes of connectors, adaptors, sockets, reducers holdbats, clips, covers, gratings etc. as required for satisfactory functions. (**All the Pipe Diameters are INTERNAL DIAMETERS**)

Item	Description	Units	Qty	Rates (Kshs.)	Costs (Kshs)
L1.01	<b>Water booster pump:</b> The pumpset should be capable of delivering water at 10m <sup>3</sup> /h against a positive head of 55metres. The pumps shall be supplied complete with pressure vessel, Control Panel c/w all electrical and signal connection accessories and cabling installations, 2No.float switch and any other necessary fittings .	Item	1		
L1.02	100mm bore water pipes	Lm	200		
L1.03	50mm ditto	Lm	50		
L1.04	100mm bends and elbows	No	20		
L1.05	50mm ditto	No	8		
L1.06	100mm Tee	No	10		
L1.07	100gate valve as Pegler	No.	3		
L1.08	50mm gate valve as Pegler	No.	10		
L1.09	32mm ditto	No.	1		



Item	Description	Units	Qty	Rates (Kshs.)	Costs (Kshs)
L1.10	32mm water meter as Kent or equal and equivalent	No.	1		
L1.11	100mm non-return valve as Pegler	No.	3		
L1.12	100mm isolation valve as Pegler	No.	9		
L1.13	100mm butterfly valve as Pegler	No.	0		
L1.14	50mm non-return valve as Pegler	No.	3		
L1.15	50mm x 100mm saddle connectors	No.	4		
L1.16	100mm pipe union/sockets	No.	100		
L1.17	50mm pipe sockets	No.	25		
L1.18	Precast Valve Chambers	No	15		
L1.19	50mm Ball Valve	No	1		
L1.20	Pressure guages	No	2		
L1.21	50mm Water Meter including water connection charges	No	1		
L1.22	Contingency	Item			181,720.00
L1.23	<b>TOTAL C/F TO SANITARY FITTING PLUMBING DRAINAGE AND FIRE FIGHTING FOR WAREHOUSE AND OFFICE BLOCK GRAND PRICE SUMMARY PAGE</b>				



**SANITARY FITTING PLUMBING DRAINAGE AND FIRE FIGHTING FOR WAREHOUSE AND  
OFFICE BLOCK GRAND PRICE SUMMARY PAGE**

ITEM	DESCRIPTION	Cost (KShs)
0	Preliminaries and General conditions	
1	Warehouse Sanitary Plumbing, drainage solar water heating,site reticulation and fire Installation core and shell	
2	Office Block Sanitary Plumbing, drainage and fire Installation core and shell	
3	Office Block Sanitary Plumbing and drainage Installation fit out	
4	External Water reticulation	
5	Allow for the factory material inspection and approvals (the Fire Pumps Equipment and the Insulation panel ) for 2No Project managers 2No Client and 2No Engineers. The cost shall cover Air Flight, accommodation and meal and subsistence allowance as per SRC guidelines	
6	Sum for Completion documents: Comprising workshop drawings, manufacturer's technical product catalogues, users manuals, maintenance manuals, as installed drawings, test certificates, user training signed off chart etc. { <b>NOTE: Penultimate Valuation will not be paid until these are fully availed &amp; signed off by the engineer</b> }	
7	Sum for training of client / user (At least 5 No. Users). The trained personnel must sign against the items they were trained on and this submitted to the engineer as part of completion document	2,000,000
8	Sum for testing, system configuration & commissioning of the entire installations set complete with all accessories, interconnections, controls & activation and the necessary programing.	
9	12 months comprehensive maintenance from date of practical completion. (Covering parts and services)	
10	Total Without VAT	
11	Add: 16% VAT including all PC sums & Contingencies	
12	<b>Total for Mechanical Installations c/f to form of tender</b>	





Total amount in words: Kenya shillings \_\_\_\_\_

Name of firm / company \_\_\_\_\_

Official rubber-stamp \_\_\_\_\_

P.I.N. No.: \_\_\_\_\_ V.A.T. Reg. No. : \_\_\_\_\_

Signed by: \_\_\_\_\_ Date \_\_\_\_\_

