



**DEVELOPMENT BANK OF THE PHILIPPINES
San Fernando, Pampanga Branch**

TERMS OF REFERENCE

PROJECT: SUPPLY, DELIVERY, INSTALLATION AND TESTING OF CCTV SURVEILLANCE SYSTEM FOR SAN FERNANDO, PAMPANGA BRANCH

I. APPROVED BUDGET FOR THE CONTRACT

THREE HUNDRED FIFTY THOUSAND PESOS (P350,000.00) inclusive of all applicable government taxes.

II. TECHNICAL SPECIFICATIONS

QUANTITY	ITEM
11 Units	Dome Type Camera
4 Units	Bullet Type Camera
1 Unit	Fisheye Camera
1 Unit	16 Channel NVR
2 Units	Hard Drive
1 Unit	Network Attached Storage (NAS)
1 Unit	16 Channel CCTV Camera Power Supply
2 Units	32" CCTV Monitor
1 Pc.	Reflectorized Sticker
1 Unit	Power Interface Switch for Power Over Ethernet
1 Lot	Installation, labor, wiring, piping, flexible, boxes, connectors, tapping termination, programming, testing, training, commissioning

ITEM TECHNICAL SPECIFICATION			
<p>DOME CAMERA</p> <ul style="list-style-type: none"> • 5MP Fix IP Dome Camera real time video recording • Lens: IRI Series – 3.6 mm • Angle View: 76' (3.6mm) • Housing: Weather Proof IP66 rated • Indoor/outdoor • IR Distance 10m-20m 	<p>NETWORK ATTACHED STORAGE (NAS)</p> <table border="1"> <tr> <td style="vertical-align: top;"> <p>Hardware</p> <ul style="list-style-type: none"> • Dual Core 700 MHz CPU • 512 MB DRAM • One (1) Serial ATA II Channel • Hot Swappable Trays • One (1) Ethernet Port • Two (2) USB 3.0 Ports • One (1) USM port • 256 MB flash memory for OS • Lock • LCD Display Panel with Buttons </td> <td style="vertical-align: top;"> <p>Physical</p> <ul style="list-style-type: none"> • Form Factor: Desktop 4-Bay <p>Electrical</p> <ul style="list-style-type: none"> • External Power Supply • 100-240 AC, 50/60Hz <p>Power</p> <ul style="list-style-type: none"> • Power Saving Mode • Without Storage Connected • HDD is off <p>Thermal</p> <ul style="list-style-type: none"> • 90 Cooling fan <p>Acoustics</p> <ul style="list-style-type: none"> • ≤ 4.2 BELS <p>Capacity</p> <ul style="list-style-type: none"> • 6TB - TO MEET THE 60-DAYS (REAL TIME) RETENTION PERIOD </td> </tr> </table>	<p>Hardware</p> <ul style="list-style-type: none"> • Dual Core 700 MHz CPU • 512 MB DRAM • One (1) Serial ATA II Channel • Hot Swappable Trays • One (1) Ethernet Port • Two (2) USB 3.0 Ports • One (1) USM port • 256 MB flash memory for OS • Lock • LCD Display Panel with Buttons 	<p>Physical</p> <ul style="list-style-type: none"> • Form Factor: Desktop 4-Bay <p>Electrical</p> <ul style="list-style-type: none"> • External Power Supply • 100-240 AC, 50/60Hz <p>Power</p> <ul style="list-style-type: none"> • Power Saving Mode • Without Storage Connected • HDD is off <p>Thermal</p> <ul style="list-style-type: none"> • 90 Cooling fan <p>Acoustics</p> <ul style="list-style-type: none"> • ≤ 4.2 BELS <p>Capacity</p> <ul style="list-style-type: none"> • 6TB - TO MEET THE 60-DAYS (REAL TIME) RETENTION PERIOD
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<p>BULLET CAMERA</p> <ul style="list-style-type: none"> • 5MP real time video recording • Lens: IRI Series – 3.6 mm • Angle View: 76' (3.6 mm) • Housing: Weather Proof IP66 rated • Indoor/outdoor • Distance 10m – 15m 			
<p>REFLECTORIZE STICKER</p> <ul style="list-style-type: none"> • Size: 210mm x 297mm 			

<p>FISHEYE CAMERA</p> <ul style="list-style-type: none"> • Fisheye 360 degree • ½ 7-in 5MP Progressive-scan CMOS Sensor • Triple-stream encoding • Smart H.256+ and Smart H.265 4+dual codec • 5MP (2592x1944) at 30fps Maximum resolution • 1.4 mm fixed Lens • True Wide Dynamic Range (120dB) • Analytic + Function – People Counting and Heat map • Built-in Microphone • IP 67 Ingress Protection and 1K 10 Vandal Resistance 	<p>NAS FEATURES</p> <p>Network Protocols</p> <ul style="list-style-type: none"> • Common Internet file server (CIFS)/Server Message Block (SMB) for Windows • Alpha-fetoprotein (AFP) 3.3 for MAC OS 9/X • Hypertext Transfer Protocol (HTTP/S) for web browser • File Transfer Protocol (FTP/S) • R sync • Internet Small Computer System Interface (iSCSI) target support for Windows, MAC and UNIX/LINUX initiator (available on 2-/4 bay) <p>Network Services</p> <ul style="list-style-type: none"> • Dynamic Host Configuration Protocol (DHCP) or static IP address assignment • Network Time Protocol (NTP) • IEEE 802.3ad Link Aggregation Control Protocol (LACP) support for load balancing and failover • Print Server <p>RAID – Redundant Array of Independent Disk</p> <ul style="list-style-type: none"> • Multiple volume support for RAID 0, 1, 5, 10 and JBOD for 4-bay, RAID 0, 1 and JBOD for 2-bay • Hot swappable disks (only on 4-bay) • Hot spare disk support • RAID volume expansion • RAID Migration <p>Volume Management</p> <ul style="list-style-type: none"> • EXT 4 journaled file system • iSCSI LUN support • User and group quotas <p>User Security and Data Access</p> <ul style="list-style-type: none"> • Local users and Active directory/Windows domain support • Secure Sockets Layer (SSL) • CHAP authentic for iSCSI LUN • Share-based access permission • Volume-and share-based data encryption • Seagate Global Access for Windows, MAC, Tablets, smartphone (iOS and Android) <p>System Management</p> <ul style="list-style-type: none"> • Dashboard and browser-based management UI • Device health status • Email alert <p>Media Streaming</p> <ul style="list-style-type: none"> • DLNA • Apple, iTunes server • Universal plug and play (UPnP) <p>Backup</p> <ul style="list-style-type: none"> • Integrated backup • Backup to/from Universal Serial Bus (USB)/Ultrasonic motor (USM) disks with programmable One Touch button • Backup software for Windows • NAS-to NAS backup with incremental or full backup • Time machine support • Support of 3rd party backup software <p>USB and USM Support</p> <ul style="list-style-type: none"> • USB device support (3.0 / 2.0) • USB HDD and flash drives <ul style="list-style-type: none"> ▪ EXT3 – Third extended file system ▪ EXT4 – Fourth extended file system ▪ FAT – File Allocation Table ▪ NTFS – New Technology File System • Hot swappable USM drive (USM-2-bay and 4-bay) • Printers • UPS monitoring and auto shutdown <p>Power Management and Power Saving</p> <ul style="list-style-type: none"> • Disk spin-down • Smart system cooling fan • Power on/off schedule • Wake-on-LAN (WOL) <p>Supported Web Browsers</p> <ul style="list-style-type: none"> • Internet Explorer 7.0+ • Opera 9.5+ • Safari 2.0+ • Mozilla Firefox 3.0+ • Google Chrome <p>Supported Network Client OS</p> <ul style="list-style-type: none"> • Microsoft Window 7, 8, Vista, XP • Windows Server 2008 R2, 2003 SBS R2 • Machintosh OS X 10 X • Linux, UNIX, Solaris <p>Language – Open Compliance</p> <ul style="list-style-type: none"> • FCC, CE, CCC, RoHS <p>Warranty</p> <p>Hard disk 3-years Limited warranty</p>
<p>16-CHANNEL NVR</p> <ul style="list-style-type: none"> • H.265 + Video Compression / Third part camera supported • 5 Megapixels resolution recording • HDMI and VGA output 2560*1920 P resolution • 8/16 ch synchronous playback • HDD quota and group management • Hard Drive capacity, to meet the 60 days (real time) retention period 	
<p>HARD DRIVE (10 TB HARD DISK DRIVE)</p> <p>Formatted NTFS for Windows 10, Windows 8, Windows 7. Requires reformatting for Mac OS X. Compatibility may vary depending on user's hardware configuration and operating system.</p> <ul style="list-style-type: none"> • Interface – USB 3.0, USB 2.0 • Operating System – Windows and MAC • Package Includes –WD Elements hard drive, USB Cable, AC Adapter, Quick Install Guide 	
<p>16-CHANNEL CCTV CAMERA POWER SUPPLY - 12 VDC – 10 AMPS</p> <p>Every channel is protected with Auto-reset PTC fuses, which means these fuses will not blow. This box can be mounted to any surface, plugged into AC outlet.</p> <ul style="list-style-type: none"> • 12VDC – 10Amp supply current • Multiple outputs (16-channel) • 16 – Auto-reset PTC fuse protected output • Power on/off switch • DC regulated, over current and voltage protected • Individual LED indicator for each output • Fuse Rating: 1. 1A 	
<p>POWER INTERFACE SWITCH FOR POWER OVER ETHERNET (PoE) POWERED DEVICES (IF REQUIRED BY THE CONTRACTOR/INSTALLER)</p> <ul style="list-style-type: none"> • Integrated Power Interface Switch for IEEE • Provide PD Detection Signature • Provides PD Classification Signature • Programmable Inrush Current Limit • Internal 0.3 - Ω Low – side FET • Interface to DC/DC Soft-start for DC/DC Enable • Internal Thermal Protection – Disconnects PD Load • Minimal External Parts Count • 8-Pin SOIC, 8-Pin TSSOP Packages 	
<p>32" MONITOR</p> <ul style="list-style-type: none"> • 32" BNC Monitor • Format Type: LED • HD-TVI, HD-CVI, AHD Compatible • Analog CCTV (CVBS) Compatible • Max Resolution: 1080p • (1) analog BNC Video Input (Composite) • (1) HD BNC Video Input • (1) HDMI Input • (1) VGA Input • (1) 3.5 mm audio Input • Built-in Audio Speaker 	

III. CONDITIONS

1. The Supplier shall ensure that the services performed are in accordance with the approved Specifications. DBP has the right to reject delivery if items delivered were found to be defective and not according to the required specifications.
2. The Supplier, in consideration of the payment to be made by DBP of the sum of money hereinafter specified, binds itself to pay, furnish and complete any and all necessary permits, materials, labor, tools, equipment, supplies, utilities, transportation, superintendence, supervision, and other facilities for the satisfactory performance for the supply, delivery, installation and testing at **San Fernando, Pampanga Branch**.
3. DBP shall be free from any kind of claims, damages, liabilities, or courses of action in the event the Supplier violates any terms and condition hereof, including any and all liabilities arising from the Supplier's non-compliance with the requirements of the Workmen's Compensation, Social Security and other labor laws.
4. DBP may terminate/cancel the PO/NTP when supplier fails to deliver, perform and comply with its obligation as required in the contract.

IV. DELIVERY/COMPLETION PERIOD

Within Thirty (30) calendar days upon receipt of **Purchase Order (PO)/Notice to Proceed (NTP)**.

If the Supplier fails to satisfactorily deliver any or all of the Goods and/or to perform the Services within the period(s) specified in the Contract inclusive of duly granted time extensions if any, the Procuring Entity shall, without prejudice to its other remedies under the Contract and under the applicable law, deduct from the Contract Price, as liquidated damages, the applicable rate of one tenth (1/10) of one (1) percent of the cost of the unperformed portion for every day of delay until actual delivery or performance. The maximum deduction shall be ten percent (10%) of the amount of contract. Once the maximum is reached amount of liquidated damages reaches ten percent (10%), the Procuring Entity may rescind or terminate the Contract, without prejudice to other courses of action and remedies open to it.

V. WARRANTY

One (1) year warranty against factory electrical and mechanical defects due to faulty materials and workmanship that would substantially affect the function of the product under normal use.

If ever the units developed trouble and/or malfunction within the warranty period, the same shall be subject to repairs/parts, replacement free of charge and its warranty will be extended until such time the supplier completed the repair.

VI. DOCUMENTARY REQUIREMENTS

1. Signed quotation
2. Valid and Current Business Permit
3. Proof of PhilGEPS Registration
4. Brochure of the exact brand/model being offered
5. Notarized Omnibus Sworn Statement signed by owner/authorized representative
6. Duly notarized Board Resolution / Secretary's Certificate (Corporation); or Duly notarized Special Power of Attorney (Sole Proprietorship)

VII. PAYMENT

One-time payment via Manager's Check or credit to DBP account upon completion provided required documents are completed.

Prepared by:

Signed
ALAN JOSEPH S. JULIANO
CSA - Teller

Recommended by:

Signed
GALE F. LINGAT
Branch Services Officer

Approved by:

Signed
FVP FRANCIS THADDEUS L. RIVERA
Head, BBG-CL / Head of Procuring Entity