

## Section VI. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item Number	Description	Quantity	Total	Delivered, Weeks/Months
1	Supply, Installation, Commissioning & Testing of Security Surveillance Camera System for CCTV Camera at the Water Treatment Plant			
	Minimum Specifications:			
	1. Network Video Recorder – 1 unit			
	Monitor: 23.6" LCD Monitor			
	SYSTEM UNIT			
	-Form Factor: 2U rack-mounted			
	-Processor: quad-core processor			
	-Operating System: Embedded LINUX			
	-Audio and Video IP Camera Input: 64 Channel Two-way Talk: 1 Channel Input, 1 Channel Output, RCA			
	-Display Interface: 2 HDMI, 1 VGA On Screen Display: Camera title, Time, Video loss, Camera lock, Motion detection, Recording			
	-Recording Compression: H.265, H.264, MJPEG Resolution: 12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P, 1.3MP, 720P Record Rate: 384 Mbps Bit Rate: 16Kbps ~ 20Mbps Per Channel Record Mode: Manual, Schedule (Regular, (Motion Detection), Alarm, Intelligent Video System), Record Interval: 1 ~ 120 min. (default: 60 min), Pre-record: 1 ~ 30 sec, Post-record: 10 ~ 300 sec			
	-Playback and Backup Playback: 128 Mbps in Raid 5 Mode; 64 Mbps in single HDD Mode Search Mode: Time/Date, Alarm and Exact Search (accurate to second) Playback Function: Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom Backup Mode: USB Device/Network/eSATA Device			
	-Network Interface: 2 RJ-45 Ports (10/100/1000Mbps) Ethernet Port: 2 Ethernet Ports Joint Working or 2 Independent 1000Mbps Ethernet Ports Network Function: HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, IP Search Max. User Access: 128 users Interoperability: ONVIF 2.4, CGI Conformant			
	-Storage Internal HDD: 8 SATA III Ports, Up to 8 TB capacity for each HDD HDD Mode: Single, Raid 0,1,5,6,10, Support Global HDD Hot-spare Capacity: 4TB 3.5" HDD Surveillance x 4 units			
	2. Monitoring PC Server – 1 unit			
	CPU			
	<ul style="list-style-type: none"> <li>• Frequency: 3.9GHz</li> <li>• Architecture: 64bit</li> </ul>			

	• Number of Cores: 2 Cores			
	RAM Size: 8GB			
	Hard Drive Size & Type: SATA III 120GB SSD x 1 SATA III 2TB 3.5" HDD x 1			
	Video Card (Separate from motherboard): 2GB RAM, 128 bit DVI HDMI, PCI-E			
	Optical Drive: Optical Disc Drive 24x CD/DVD/RW			
	Monitor: 43" LED UHD TV			
	Motherboard Back Panel Connectors: At least USB 2.0, Audio In & Out, Gigabit network adapter			
	Operating System: Windows 10 Licensed Professional (64-bit)			
	Power Supply: 600Watts, True Rated 80plus			
	Accessories: 10 Meters Ultra-High-Speed HDMI 2.0 Cable, USB Optical Mouse w/ scroll, USB Keyboard			
	3. 3000VA Inverter – 1 unit			
	Rated Power: 3000VA/2400W			
	INPUT			
	Nominal Voltage: 230VAC Frequency range: 50Hz/60Hz (auto sensing)			
	OUTPUT			
	AC Voltage Regulation (Batt. Mode): 230 VAC +/- 5% Waveform: Pure sine wave Surge Power: 6000VA Efficiency (Peak): 90%~93%			
	BATTERY			
	Battery Voltage: 24VDC Floating Charge Voltage: 27VDC Overcharge Protection: 32VDC Battery Type: 2 units of 12V 100AH			
	4. 1100VA UPS – 1 unit			
	Rated Power: 1100VA/605W			
	SYSTEM			
	UPS System: Line Interactive UPS with Stabilizer Control System: Microprocessor 8 bit			
	LOAD APPLICATION			
	Input Voltage: 220 VAC +/- 20% Voltage Battery Mode: 220 VAC Voltage AC mode: 220 VAC +/- 10%			
	OUTPUT OUTLET			
	Number of backup outlets: 5 Number of surge protected outlet: 1			
	BATTERY			
	Type: Sealed lead acid (Maintenance free) Capacity: 2 x 2V 7AH			
	5. Network Cables			
	Cat6 FTP Outdoor Cable 23AWG: 4 Rolls			
	Cat 6 UTP Cable 23AWG – 1 Roll			
	6. Connectors			
	Cat6 shielded RJ45 Connector: 66 pcs.			
	Rubber Boot: 66 pcs.			
	Patchcord Cat6 UTP Cable 1 meter: 24 pcs.			
	Terminal Box 1 Gang: 3 pcs.			
	Terminal Box 8 gang: 2 pcs.			
	Keystone Jack Cat5e Shielded: 18 pcs.			
	Keystone Jack Cat6: 19 pcs.			
	7. Ethernet Surge Protector – 14 pcs.			
	Interface Connections: 2 RJ45 female Connectors			
	ESD/EMP Protection: Absorbing Transient Current with Response to Surge Voltage from 100V/s to 1KV/μs			
	DC spark-over voltage: 90V @ 100V/s			
	Maximum Impulse Spark-Over Voltage: 700V @ 1KV/μs			

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	Discharge Current: 5kA (Maximum), 0.5kA (Normal)			
	Maximum Capacitance: 1.0 pF @ 1MHz			
	Data Line Protection: RJ45 10/100/1000 Ethernet			
	IEEE 802.3af Support			
	8. 3MP Bullet IP Camera – 13 units			
	<p>CAMERA</p> <p>Image Sensor: 1/2.8"3Megapixel progressive scan CMOS</p> <p>Effective Pixels: 2048(H)x1536(V)</p> <p>RAM/ROM: 1024MB/128MB</p> <p>Scanning System: Progressive</p> <p>Minimum Illumination:  0.005Lux/F1.4 (Color, 1/3s,30IRE)  0.03Lux/F1.4 (Color,1/30s,30IRE)  0Lux/F1.4(IR on)</p> <p>IR Distance: Distance up to 50m(164ft)  IR On/Off Control: Auto/Manual  IR LEDs: 4</p>			
	<p>LENS</p> <p>Lens Type: Motorized/Auto Iris</p> <p>Mount Type: Board-in</p> <p>Focal Length: 2.7~13.5mm motorized</p> <p>Max. Aperture: F1.4</p> <p>Angle of View: H: 101°~31°, V:54°~17°</p> <p>Optical Zoom: 5x</p> <p>Focus Control: Motorized</p> <p>Close Focus Distance: 0.3m(0.98ft)</p>			
	PAN/TILT/ROTATION: Pan:0°~360°; Tilt: 0°~90°; Rotation: 0°~360°			
	<p>INTELLIGENCE</p> <p>Intelligent Video System: Tripwire, Intrusion, Object Abandoned/Missing</p> <p>Advanced Intelligent Functions: Face Detection, People Counting, Heat Map</p>			
	<p>VIDEO</p> <p>Compression: H.265+,H.265,H.264+,H.264</p> <p>Streaming Capability: 3 Streams</p> <p>Frame Rate:  Main Stream: 3M(1~50/60fps)  Sub Stream: D1 (1~50/60fps)  Third Stream: 1080P(1~50/60fps)</p> <p>Day/Night: Auto(ICR), Color, B/W  BLC Mode: BLC,HLC,WDR(140dB)  White Balance: Auto/Natural/Street Lamp/Outdoor/Manual  Flip: 0°/90°/180°/270°  Privacy Masking: Off/ On (4 Area, Rectangle)</p>			
	NETWORK			
	<p>-Ethernet: RJ-45 (100/1000Base-T)</p> <p>Protocol:  HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP,SMTP;FTP;  DHCP;DNS;DDNS;PPPOE;IPv4/v6</p> <p>Interoperability: ONVIF, PSIA, CGI</p> <p>Streaming Method: Unicast/Multicast</p>			
	<p>-Interface</p> <p>Video Interface: 1 Port(For adjustment only)</p> <p>Audio Interface: 1/1 channel In/Out</p> <p>Alarm:  2 channel In: 5mA 5VDC  1 channel Out: 1A 30VDC / 0.5A 50VAC</p>			
	<p>STANDARDS</p> <p>Ingress Protection: IP67</p> <p>Vandal Resistance: IK10</p>			

9. 3MP Dome IP Camera – 1 unit			
<b>CAMERA</b> Image Sensor: 1/2.8"3Megapixel progressive scan CMOS Effective Pixels: 2048(H)x1536(V) RAM/ROM: 1024MB/128MB Scanning System: Progressive  Minimum Illumination: 0.005Lux/F1.4 (Color, 1/3s,30IRE) 0.03Lux/F1.4 (Color,1/30s,30IRE) 0Lux/F1.4(IR on)  IR Distance: Distance up to 50m(164ft) IR On/Off Control: Auto/Manual IR LEDs: 4			
<b>LENS</b> Lens Type: Motorized/Auto Iris Mount Type: Board-in Focal Length: 2.7~13.5mm motorized Max. Aperture: F1.4 Angle of View: H: 101°~31°, V:54°~17° Optical Zoom: 5x Focus Control: Motorized Close Focus Distance: 0.3m(0.98ft)			
<b>PAN/TILT/ROTATION:</b> Pan:0°~355°; Tilt: 0°~65°; Rotation: 0°~355°			
<b>INTELLIGENCE</b> IVS: Tripwire, Intrusion, Object Abandoned/ Missing Advanced Intelligent Functions: Face Detection, People Counting, Heat Map			
<b>VIDEO</b> Compression: H.265+,H.265,H.264+,H.264 Streaming Capability: 3 Streams  Frame Rate: Main Stream: 3M(1~50/60fps) Sub Stream: D1 (1~50/60fps) Third Stream: 1080P(1~50/60fps)  Day/Night: Auto(ICR), Color, B/W BLC Mode: BLC, HLC, WDR(140dB) White Balance: Auto/Natural/Street Lamp/ Outdoor/Manual Flip: 0° /90° /180° /270° Privacy Masking: Off/ On (4 Area, Rectangle)			
<b>NETWORK</b>			
-Ethernet: RJ-45 (100/1000Base-T) Protocol: HTTP;HTTPS;TCP;ARP;RTSP;RTP;UDP;SMTP;FTP; DHCP;DNS;DDNS;PPPOE;IPv4/v6 Interoperability: ONVIF, PSIA, CGI Streaming Method: Unicast/Multicast			
-Interface Video Interface: 1 Port(For adjustment only) Audio Interface: 1/1 channel In/Out  Alarm: 1 channel In: 5mA 5VDC 1 channel Out: 1A 30VDC / 0.5A 50VAC			
<b>STANDARDS</b> Ingress Protection: IP67 Vandal Resistance: IK10			
10. 4 Ports HPoE Switch with Gigabit Uplink – 4 units			
<b>POWER</b> Power Supply Type: Power Adapter Power Adapter Voltage: DC48V-57V			
<b>NETWORK CONNECTOR</b> Network Port:			

1~4 ports of PoE switch support IEEE802.3af/at Uplink port: 10/100/1000Mbps Ethernet port SFP:1000Mbps optical fiber SFP module port  Transmission Distance: 1-4 port: 100m Transmission Medium: Cat5/5e/6 standard network cable PoE protocol: IEEE802.3af/at			
NETWORK SWITCH Package Buffer: 1M MAC address list: 8k			
LED STATUS INDICATOR Power Indicator: 2 Optical port LED indicator: 2 fiber link green lights indicate fiber working status Uplink Ethernet port LED indicator: RJ45 port indicates network working status			
11. 5 ports Smart Gigabit switch – 1 unit			
CPU Nominal frequency: 880MHz			
10/100/1000 Ethernet ports: 5 ports			
Max Power consumption: 5W			
Number of USB ports: 1 port			
PoE in: 1 port			
Power Jack: 1 port			
Supported input voltage: 6V – 31V			
Storage type: Flash			
Storage size: 256MB			
12. 24 ports Smart Gigabit Switch – 1 unit			
CPU frequency: 600MHz			
CPU core count: 1 core			
Size of RAM: 128MB			
No. of Ethernet ports: 24 ports of 10/100/1000Mbps			
No. of USB ports: 1 port			
Supported input voltage: 8V – 28V			
No. of PoE in.: 1 port			
No. of SFP ports: 1 port			
Serial ports: RJ45			
Storage type: NAND			
Storage size: 128MB			
13. Server Data Cabinet (Floor Standing Cabinet 32U) – 1 set			
SPECIFICATIONS			
Material: cold rolled steel			
Loading Capacity: Static loading 800kg			
Degree of protection: IP20			
ACCESSORIES			
Horizontal Wire Management with cover 2U: 1unit			
Universal PDU 19 inches 1U 6 ways: 1 unit			
1U Cantilever Shelf: 1 unit			
Modular Patch Panel: 1 unit			
14. Outdoor Cabinet – 2 units			
Enclosure Type: Wallmount Outdoor Enclosure			
Dimension: 14" W x 8" D x 16" H			
Door Type: Swing-out front door with TEE Lock			
15. Installation and Other Materials			
Guy Wire ¼			
T.W. Solid Wire			
PDX wire			
2 Gang outlets 3 slots universal			
Ground Rod			
Galvanized Grounding Clamp			
Male Plug			
Electrical Tape			
GI Wire			
Turn Buckle			
Porcelain Wire Holder			

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Spaghetti tube			
Grab adhesive 100kg			
Ply board (3/4)			
PVC clamp Expansion seal with log screw			
Quantity is based on actual installation conditions			
NOTE:			
1. Refer to the attached camera assignment layout for the installation of camera.			
2. Installation shall include the setup, cabling, configuration and/or programming of the complete system.			
3. Schematic Diagram, Configurations, Full admin user account shall be turned over to the direct end user and all other accessories that come with the equipment.			
4. Installation and equipment shall come with one (1) year warranty.			
Testing Period: 7 days			
No training however an orientation will be required to be shouldered by the winning bidder			
Delivery including Installation Period: 60 Calendar Days from receipt of P.O.			
Point of Delivery: ZCWD Property Section, Motorpool, Pasonanca, Z.C.			

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