

## **SCOPE OF WORK**

**Name of Work:** Installation of Wi-Fi Network with Access Points and CCTV Surveillance System

### **1. Introduction**

The objective of this project is to establish a reliable and secure wireless network infrastructure and CCTV surveillance system across the designated locations. The selected bidder shall be responsible for the **supply, installation, configuration, testing, and commissioning** of all required active and passive components to ensure end-to-end functionality.

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### **2. Wi-Fi Network Infrastructure**

The bidder shall undertake the following activities related to Wi-Fi network deployment:

#### **a. Site Survey & Network Planning**

- Conduct a comprehensive site survey to identify suitable mounting locations for Access Points (APs).
- Propose structured cabling routes and network layouts based on site conditions.

#### **b. Supply & Installation**

- Supply and install enterprise-grade indoor/outdoor Access Points with necessary mounting accessories.
- Supply and install required network switches, racks, patch panels, and passive cabling (Cat 6 / OFC) including conduits, casing-capping, and accessories.
- Provide and install PoE switches for powering APs & IP Camera.

#### **c. Configuration & Integration**

- Configure APs with secure SSIDs, VLAN tagging, and controller integration.
- Implement centralized management using cloud or on-premise controller.
- Configure authentication methods such as captive portal, WPA2/WPA3, MAC filtering, etc.
- Integrate the network with the existing IT infrastructure, ensuring secure segregation of networks.

#### **d. Testing & Commissioning**

- Conduct thorough performance, coverage, and throughput testing.
  - Validate coverage against planned heat maps.
  - Submit as-built network documentation including diagrams and configuration details.
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### **3. CCTV Surveillance System**

The bidder shall be responsible for design, supply, installation, configuration, and commissioning of IP-based CCTV systems:

#### **a. Survey & Planning**

- Conduct a site survey to finalize camera locations covering entry/exit points, corridors, and other strategic areas.
- Recommend appropriate camera types (Bullet/Dome/PTZ) based on site conditions (indoor/outdoor).

#### **b. Supply & Installation**

- Supply and install IP cameras with mounting accessories, weatherproof housings, poles, and junction boxes where required.
- Supply and install NVR (Network Video Recorder) with sufficient storage capacity for retaining recordings as per organizational policy.
- Lay Cat 6 / OFC cabling from cameras to network switches/NVR with proper casing, labelling, and termination.
- Ensure clean and secure installation of all passive components.

#### **c. Configuration & Integration**

- Configure cameras for IP addressing, recording schedules, motion detection, and remote access.
- Integrate all cameras with centralized Video Management Software (VMS) for monitoring and playback.
- Configure control room displays and remote access facilities as required.

#### **d. Testing & Commissioning**

- Verify camera feeds, playback, storage, and alert functionalities.
  - Ensure time synchronization between NVR and all cameras.
  - Submit detailed as-built documentation including camera layouts, IP schemes, and configuration backups.
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#### 4. Passive Cabling Infrastructure

- Supply and install structured cabling (Cat 6 / OFC) including termination, labelling, patching, and testing.
  - Install conduits, cable trays, and accessories neatly as per site conditions.
  - Number and tag all CCTV points clearly for future maintenance.
  - Ensure compliance with relevant industry standards (TIA/EIA, ISO/IEC).
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#### 5. Documentation & Handover

The successful bidder shall provide the following:

- Network topology diagrams, camera layout drawings, IP addressing schemes, and configuration backups.
  - OEM warranty certificates and support details for all active components.
  - Operation & Maintenance manuals for Wi-Fi and CCTV systems.
  - Conduct training sessions for the client's IT and security personnel on system operation and basic troubleshooting.
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#### 6. Warranty and Post-Installation Support

- Minimum **three (3) year on-site comprehensive warranty for Aps & Switch and one (1) year on site comprehensive warranty for IP Camera & NVR** shall be provided for all supplied equipment from the date of successful commissioning.
  - The bidder shall provide prompt support for any breakdown or malfunction during the warranty period.
  - Post-warranty AMC (Annual Maintenance Contract) terms, if applicable, shall be indicated separately.
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#### 7. Compliance

- All equipment shall be new, genuine, and from reputed OEMs with valid certifications.
- All installation work shall comply with relevant national/international standards and safety norms.
- The bidder shall ensure minimal disruption to ongoing operations during installation.