

**SECTION 28 23 00: VIDEO SURVEILLANCE REMOTE MONITORING DEVICES AND SENSORS**

---

**I. GENERAL****1.1 SUMMARY OF WORK**

- A. This specification outlines the requirements for a Video Management System (VMS). All information herein is intended to present minimum standards of performance, quality and construction.
- B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Divisions 01, 27, and 28 Specification Sections, apply to this Section.

**1.2 REFERENCE CERTIFICATIONS AND STANDARDS**

- A. The camera shall carry the following EMC approvals:
  - 1. FCC Part 15 - Subpart B
- B. The camera shall meet/exceed relevant parts of the following video standards:
  - 1. SMPTE 274M HDTV 1080p (1920 X 1080)
- C. The camera shall meet the following video compression standards:
  - 1. MPEG-4:
    - a. ISO/IEC 14496-10 AVC (H.264)
- D. The camera shall meet the following networking standards:
  - 1. IEEE 802.3af (Power over Ethernet)
  - 2. IEEE 802.1X (Authentication)
  - 3. IPv4 (RFC 791)

**1.3 COORDINATION/RELATED WORK PERFORMED BY OTHERS**

- A. Contractor will install and aim cameras, power up, and verify video signal locally. Port staff will program the cameras remotely. Port Security will review camera fields of view. Contractor will then make adjustments as required by Port Security.

**1.4 QUALITY ASSURANCE**

- A. All camera installation, configuration, setup, program and related Work shall be performed by electronic technicians thoroughly trained by the manufacturer in the installation and service of the equipment provided.
- B. All equipment provided shall be backed by a minimum of three years manufacturer warranty, and shall have manufacturer support through end of warranty date. Warranty shall go into effect at substantial completion of project.
- C. The specified unit shall be manufactured in accordance with ISO 9001.

**II. PRODUCTS****2.1 GENERAL**

- A. Acceptable Manufacturers:

Note: For each application listed below; confirm model numbers with Aviation Maintenance Electronic Technicians. If Axis does not manufacture a model acceptable for the application, coordinate appropriate substitute.

---

**SECTION 28 23 00: VIDEO SURVEILLANCE REMOTE MONITORING DEVICES AND SENSORS**

---

1. Cameras:
    - a. Axis
    - b. No Equal
  - B. Web server
    1. The camera shall contain a built-in web server making video and configuration available to multiple clients in a standard operating system and browser environment using HTTP, without the need for additional software.
- 2.2 MOUNTING DEVICES AND COMPONENTS
- A. Provide and integrate all necessary cameras, lenses, mounting equipment, enclosures, power supplies for each specified location to include, but not limited to:
    1. Pole mounts
    2. Corner mounts
    3. Wall brackets
    4. Goosenecks
    5. Surface mounts
    6. Pendants
    7. Camera enclosure
    8. Enclosure with heating and cooling as appropriate for interior and exterior installations.
- 2.3 SURGE PROTECTIVE DEVICES
- A. Bussman DIN Surge Protector
  - B. SurgeGate CAT6-75
  - C. Or Approved Equal
- 2.4 ANCILLARY EQUIPMENT
- A. Bird spikes
    1. Manufacturers:
      - a. Bird-X
      - b. Bird-B-Gone
      - c. Or Approved Equal
    2. Description:
      - a. Stainless steel construction, 5-3/4" tall x 7" spread at the top.
      - b. Provide manufacturer's recommended attachment method.

**III. EXECUTION****3.1 INSTALLATION**

---

**SECTION 28 23 00: VIDEO SURVEILLANCE REMOTE MONITORING DEVICES AND SENSORS**

---

- A. Prior to installation contractor shall coordinate walkthrough with POS AV-ET to determine exact location of Camera Back Box before installation.
- B. Work will be performed as shown on the contract drawings. Work includes installing surveillance cameras, housing, lenses, mounting equipment, back boxes, cabling, and equipment as well as removing existing equipment and replacing as shown on the Contract Drawings. The Work includes, but is not limited to, the following activities:
  - 1. Provide pathways, including seismic restraint and restoration of penetrations through fire-rated construction, and paint selected pathways to match surrounding area.
  - 2. Provide equipment enclosures, fiber demarcation panels, and other required equipment.
  - 3. Patch and repair work areas.
  - 4. Test, configure, and adjust all installed equipment and systems.
  - 5. Prepare and maintain red-line drawings and record documents during the duration of the Contract.
  - 6. The quality assurance, site inspection, equipment coordination and installation, testing, and warranty requirements described in this section apply to all Division 27 and Division 28 sections. Refer to specific system's specifications for additional requirements.
- C. Install bird spikes on exterior cameras and boxes.
- D. Provide Cat-6 compatible transient voltage surge suppression demarks for exterior cameras.
- E. Contractor will purchase, install, and do initial video test of cameras. Port will program cameras remotely, and Port Security will then review fields of view. Contractor is responsible for re-aiming/focusing/adjusting all cameras to the satisfaction of Port Security.

**3.2 TESTING**

- A. Provide all personnel, equipment, instrumentation, and supplies necessary to perform all testing.
- B. Port of Seattle AVM ET and Port representatives may witness all field tests.
- C. Verify the surveillance cameras have power.
- D. Verify the surveillance cameras have image.
- E. For fixed cameras, provide proper alignment and adjustment of lens to satisfy the Port for accurate field of view.
- F. Verify the new camera system equipment is fully functional and correctly controlled within the Video Management System (VMS).
- G. Provide report showing all equipment addresses, passwords, usernames, equipment models, locations, and firmware installed.

**3.3 ADJUSTING**

- A. Adjust camera field of view (FOV), to satisfy the Port.

**SECTION 28 23 00: VIDEO SURVEILLANCE REMOTE MONITORING DEVICES AND SENSORS**

---

- B. Set all camera and lens parameters to manufacturer's recommendations.
- 3.4 QUALITY ASSURANCE
- A. Perform Work in accordance with federal, state, and local standards and regulations including Occupational Safety and Health Administration (OSHA), Division of Labor Standards Enforcement (DLSE), regulations.
  - B. Unapproved Materials: The Contractor, at no cost to the Port, shall remove and replace any unapproved equipment, materials, or system components with approved equipment, materials, or system components.

End of Section
----------------