



**DEPARTMENT OF CORRECTIONS AND REHABILITATION  
CALIFORNIA PRISON HEALTH CARE SERVICES  
STATE OF CALIFORNIA**

**STATEMENT OF WORK  
GENERAL RADIOGRAPHY SYSTEM**

This is a Statement of Work (SOW), which includes all hardware, software and service requirements for procurement of a General Radiography system ("System") for Avenal State Prison (ASP), a correctional institution within the enterprise of the California Department of Corrections and Rehabilitation (CDCR). Descriptions herein describe the minimum System requirements to be provided by Contractor, which if properly configured and installed, shall utilize the source of ionized radiation to obtain diagnostic radiographs in the medical treatment plan for the patient-inmate population at ASP. This System shall be utilized by a Registered Technologist in Radiography. Film processing equipment (e.g. chemical film processors and/or Computed Radiography) are not included in this SOW.

**Technical Requirements**

Technical specifications shall include, but are not limited to, the minimum requirements listed below:

A. Overhead Assembly:

- a. Floor-mounted anchoring;
- b. Tube angulations  $\pm 135$  degrees (detent 0 and 90 degrees);
- c. Tube rotations  $\pm 180$  degrees (detent 30 degrees);
- d. Vertical travel enough to perform weight-bearing knees using chest Bucky;
- e. X-ray Tube:
  - i. Small and Large focal spot;
  - ii. Cast rotating anode assembly; and
  - iii. High load capacity.
- f. Tube Collimator:
  - i. Manual and automatic collimator;
  - ii. Rectangular shutters;
  - iii. Laser center light;
  - iv. Metric and inch scale;
  - v. Customer changeable collimator bulb;
  - vi. Visible display of SID, angle, area of collimation;
  - vii. Lock release: free movement and restricted;
  - viii. Rotation  $\pm 180$  degrees or 360 degrees;
  - ix. Detent at 90 degrees;

- x. Cross hair centering light; and
- xi. Equipped with Positive Beam Limitation (PBL).

B. Table:

- a. Minimum 400lb weight limit;
- b. Oscillating Bucky with grid;
- c. Ability for motorized vertical travel;
- d. 4-way direction floating;
- e. Side control buttons or foot controls for movement;
- f. Anti-collision sensors;
- g. Automatic Exposure Control (AEC);
- h. Accept all film sizes in Bucky;
- i. Cassette size sensor for auto collimation;
- j. Automatic exposure termination;
- k. Minimum 10:1 grid;
- l. Emergency table stop;
- m. Longitudinal Travel of ~ 32"; and
- n. Transverse Travel of ~ 10".

C. Vertical Bucky (Chest Stand):

- a. Minimum 10:1 grid;
- b. Lock control – electromagnetic;
- c. Patient support grips;
- d. Motorized oscillating Bucky grid;
- e. Accepts all film sizes;
- f. Automatic collimation to film size;
- g. Automatic exposure termination;
- h. Automatic Exposure Control (AEC);
- i. Cross hair centering light;
- j. Free standing or wall mount;
- k. Rotation tilt of Bucky + 90 degrees; and
- l. Left side cassette insertion point.

D. Generator:

- a. 3-phase generator;
- b. Minimum 50kW power rating;

- c. Minimum kV Range (40kVp-150kVp);
- d. Minimum mA range (10 mA – 630 mA);
- e. Minimum mAs range (.5 mAs – 600 mAs);
- f. Minimum time range (.001 – 6 seconds); and
- g. Tube arch protection.

E. Control Panel:

- a. Anatomical control program with morphology settings;
  - i. PA, Lateral, Oblique, and Decubitus view settings
- b. Manual technique option for mA, time, and kVp;
- c. mA, kVp, time, mAs display;
- d. Wall or pedestal mountable;
- e. Focal spot size choice (manual override option);
- f. AEC settings – auto and manual override;
- g. Tube warm-up notification system;
- h. Receptor choice settings;
  - i. Wall Bucky, table top, table Bucky
- i. Program choices are available in plain English; and
- j. Error message display available in plain English.

F. Accessories:

- a. Cross table cassette and grid holder.

### **Installation and Implementation**

The purpose of this section is to understand the costs associated with services required for installation and implementation of the System. Please note that the ASP facility has adequate 480V power, all terminals to the electrical box in the room are live, and it has been determined that there is no asbestos on-site.

Elements of these services include, but are not limited to, Contractor project management, functional, and technical content expertise. Contractor shall be required to furnish any and all necessary tools to complete installation of the System.

Bidder shall delineate the role for each employee(s) project function including the service and itemized costs included within Bidder's quote. Bidders shall also indicate whether the services are provided by Contractor's staff or outsourced to third party vendors (i.e., subcontractor). Installation and implementation services shall include, but are not limited to, all of the following minimum requirements:

- A. Specific number of certified service representatives to ensure a turnkey installation, which includes physicist inspection/testing;

- B. Complete removal of existing General Radiography System and proper disposition of all components as required by State of California and Federal regulations;
  - Replacement of room's entire flooring shall be included in the install requirements; and
  - Any damage caused to the existing room's infrastructure shall be repaired by Contractor in accordance with CDCR requirements.
- C. Timeline and submission of pre-install report on the assessment of correctional facilities and infrastructure to identify the System location;
- D. Acceptance testing of the System and all components signed-off by ASP representative and Contractor; and
- E. Following initial installation, a minimum one (1) year warranty of equipment (including all parts), which covers all hardware and software components and service maintenance is required.
  - In addition, Bidder is required to provide five (5) year service and maintenance of the system following installation warranty period (i.e., see page 3, item A).

### **Training**

The purpose of this section is to understand the supplemental vendor Training Program fees throughout and after this procurement. The training audience shall include Radiographic Technologists and supporting imaging staff at ASP. CDCR seeks the costs of onsite training that follows the initial equipment installation, in addition to the supplemental training required during major equipment component upgrades. Other training options that may be considered include distance learning, Computer-Based Training, and/or web meetings. Propose quotes above the minimum requirements (i.e., training options) shall be at Bidder's expense.

Contractor training programs include the following minimum requirements:

- A. Imaging staff onsite training of the System and all components following the initial installation and acceptance testing; and
- B. Any training associated with proprietary Service Repair call systems, if applicable.

### **Service and Support**

Along with all hardware and software system requirements listed above, Bidder's quote must also include all service repairs and preventive maintenance to maintain the optimal level of performance for the System. The service and maintenance requirements listed within "Service and Support" shall apply to all core and peripheral components of the System (e.g. software, hardware, etc.). Contractor's Services shall include, but not limited to, all of the following:

- A. Five (5) year term for Service and Maintenance of the System;
- B. Scheduled maintenance for all components of the System (e.g. software, hardware, etc.) according to the requirements listed by the Original Equipment Manufacturer (OEM);
- C. CDCR requires that Contractor perform annual calibration of the x-ray tube in accordance to CDCR policy and California State regulations;

- D. For all equipment and peripheral devices that are offline or out of order, Service Repair (SR) examinations shall be required by Contractor within 24-hours of the initial SR call request. SR will require an on-site visit to the institution;
- E. Contractor shall have a permanent service team located in the State of California;
- F. Common replacements parts are to be stocked by Contractor to allow 24-hour response to common repairs;
- G. Contractor shall provide telephone number(s) that are active and staffed twenty-four (24) hours a day, 365 days per year for SR calls initiated by CDCR staff; and
- H. Contractor shall provide proof of a Quality Assurance (QA) program for tracking and auditing all SR calls initiated by CDCR staff.