



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

**STATEMENT OF WORK
FUJI COMPUTED RADIOGRAPHY SYSTEM**

This is a Statement of Work (SOW), which includes the equipment and service requirements for the procurement of Fuji Computed Radiography (FCR 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 FCR System requirements: a) Imaging Plates (IP) with cassettes; b) IP multi-reader; c) Quality Assurance (QA) Technologist workstation; and d) DICOM laser printer.

This FCR System shall utilize electronic imaging plates (IP) to acquire attenuated image(s) of the anatomy of interest and process the image via IP reader to deliver a digital image available for manipulation via QA workstation. This FCR System shall be operated by a Registered Technologist (RT) in Radiography to support the image-processing segment of diagnostic imaging. RT's shall have option to send the digital image to a connected laser printer for hard copy film development and/or ability to transfer the image to a permanent archive destination.

Information, archiving and image management systems are not in the scope of this Request for Quotation (RFQ). Technical specifications shall include, but are not limited to, the minimum requirements listed as follows:

Make and Model of FCR System:

1. Fuji XG5000 (multi-plate image reader);
2. Fuji IIP (QA workstation); and
3. Fuji Dry Pix 5000 (DICOM laser printer).

Technical Requirements:

- A. QA workstation and software (IIP workstation):
 - a. IHE compliant – scheduled workflow;
 - b. Modality Performed Procedure Step (MPPS) Compliant:
 - i. Ability to send User ID or code in message, technical factors, Images taken, Images deleted; and
 - ii. Ability to send AE Title in place of Station Name or computer name.
 - c. FDA Compliant;
 - d. DICOM Compliant, with Modality Worklist (MWL) suite;
 - e. Suppression software for Grids;
 - f. Enhancement algorithms;
 - g. Auto Black masking background;
 - h. QC options/adjustments;
 - i. Sensitivity, latitude, density, contrast, reprocessing adjustments.
 - i. DICOM Functions:
 - i. DICOM send (C-Store, C-Find);
 - ii. DICOM Query/Retrieve (C-Find, C-Move);
 - iii. DICOM Modality Worklist;

- iv. Storage Commit (C-Store);
- v. DICOM Print;
- vi. Basic Gray Scale Print management;
- vii. Ability to set custom AE Title;
- viii. Ability to set 10 outbound DICOM connections;
- ix. Ability to hold 3 outbound DICOM connections for C-Store along with 1 connection to MWL and 1 connection to Printer for a total of 5 simultaneous connections; and
- x. Ability to perform a C-Echo.
- j. Body part assigned protocols;
 - i. AP/ Lat / Oblique / Decubitus settings.
- k. Ability to print full size or magnified view;
- l. Ability to edit patient demographic information prior to DICOM send/store;
- m. Ability to move images from one patient to another;
- n. Ability to annotate on image (free text);
- o. Ability to move annotation markers;
- p. Ability to reset image as acquired;
- q. Ability to window level image;
- r. Ability to magnify the image;
- s. Ability to crop the image;
- t. Ability to export the image in JPEG format locally;
- u. Ability to place measurements on image;
- v. Ability to invert the image;
- w. Ability to send raw data or pre-processed data via a DICOM connection;
- x. Ability to adjust diagnostic values;
- y. Ability to resubmit item in queue;
- z. Ability for queue to skip failed item;
- aa. Ability to work with touch screen monitor; and
- bb. QA workstation:
 - i. Wall-mounting or free standing options available; and
 - ii. Barcode option for RIS/PACS.

B. Image Plate Multi-Reader (XG5000):

- a. DICOM 3.0 compliant;
- b. Acquisition should be 16 bits per pixel;
- c. 110 V power requirement;
- d. Fit in space approximately 60" high x 30" deep x 30" wide;
- e. Ability to perform a full erasure and quick erasure on the imaging screen;
- f. Auto calibrate;
- g. Self QA process;
- h. Simple utilities module;
- i. Ability to reset reader;
- j. Undisturbed Power Supply (UPS) backup for emergency shutdown;
- k. Isolated network router for isolated integration; and
- l. Ability to process the following cassettes per hour:
 - i. 8x10 : 100/hr;
 - ii. 10x12 : 75/hr; and
 - iii. 14x17: 50/hr.

C. Cassettes:

- a. Quantities: six (6) - 14"x17", four (4) - 10"x12", and four (4) - 08"x10";
- b. Light weight cassettes;
- c. Durable design to protect imaging plate; and

- d. Available grids for non-Bucky radiographs.
- D. Imaging Plates:
 - a. Quantities: six (6) - 14"x17", four (4) - 10"x12", and four (4) - 08"x10";
 - b. Replaceable without purchase of new cassette.
- E. Portable Grid Caps:
 - a. Quantities: one (1) - 14"x17" and one (1) - 10"x12".
- F. QC/QA Accessories:
 - a. One (1) one-shot phantom for QC/QA programs.
- G. DICOM Printer (DryPix 5000):
 - a. Seismically installed;
 - b. Touch-screen operation panel;
 - c. Accept photosensitive film;
 - d. Built in DICOM Print server;
 - e. Ability to print three film sizes. 14x17, 10x12, 8x10;
 - f. Print ~ 100 14x17 films/hr | ~150 10x12 or 8x10 films/hr;
 - g. ≥4,096 shades of Gray scale;
 - h. ≥650 dpi images;
 - i. ≥100 Mega pixel output;
 - j. Self-calibrating and self density correction;
 - k. Operates on ≈110VAC, 60Hz;
 - l. Initial warm up ≤20 minutes;
 - m. Interface to DICOM and Non-DICOM devices;
 - n. ≥256 MB frame buffer memory for mammography use;
 - o. ≥20GB HD;
 - p. ~200 film prints per hour;
 - q. Daylight film loading;
 - r. Ability to print portrait and landscape;
 - s. Optional Seismic Bracket Kit;
 - t. Automatic density calibration;
 - u. Ability to print standard resolution and High Resolution;
 - v. Ability to fit into ~ size of 50"high X 50" Wide X 32" Deep;
 - w. Minimum number of simultaneous connections ~ 10;
 - x. Simple end-user access to basic configuration options; and
 - y. DICOM SOP Classes supported:
 - i. Verification;
 - ii. Basic Gray Scale Print Management Meta SOP Class (SCP);
 - iii. Print Job SOP Class (SCP);
 - iv. Annotation SOP Class; and
 - v. Queue Management SOP Class.

Installation and Implementation:

The purpose of this section is to request service costs for installation and implementation of the FCR System in a specified area at ASP. Contractor services shall include project management, functional and technical expertise, and any supplies/parts necessary to ensure the operational state of the FCR System and its components.

Bidders must delineate the role for each employee project function including the proposed service(s) and itemized cost(s) in response to the Scope of Work. Bidder will also include

in their cost response whether the services are provided by Contractor's personnel or outsourced to third party vendors.

Installation and implementation services shall include, but are not limited to, the following minimum requirements:

- A. Specific number of Fuji-certified service representatives trained to install and repair the make and model of FCR System (i.e., equipment) as specified above.
 - a. Bidder must use Fuji-certified service representatives for installation of FCR System to ensure: 1) safety to staff and inmate-patients; 2) access to local power, Local Area Network (LAN) or network router integration; and 3) initial end-user configuration of FCR System.
- B. Timeline for install and configuration to date of acceptance testing of FCR System and all components signed-off by CPHCS representative and Contractor; and
- C. Following initial install, a minimum one (1) year warranty of equipment (including all parts), which covers all hardware and software components and service maintenance.
 - a. Contractor is required to provide five (5) year service and maintenance of the System following installation warranty period (i.e., see page 5, item A).

Training:

The purpose of this section is to specify minimum training requirements provided by Contractor to ASP staff on the FCR System, and to request quote for rendering of services.¹ 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 install, the supplemental training required during major equipment component upgrades, and Information and Image Management/Storage Systems integrations. Other training options that may be considered include, but are not limited to, distance learning, Computer-Based Training, and/or web meetings.

Training programs shall include, but are not limited to, the following minimum requirements:

- A. Two eight-hour days of onsite training to ASP imaging staff on FCR System and all components following initial install and acceptance testing; and
- B. One eight-hour day of onsite training to ASP imaging staff on FCR System and all components following integration of Radiology Information System (RIS) and Picture Archival Communication System (PACS).

Service and Support:

Along with all hardware and software system requirements listed above, the bidder's quote shall also include all service repairs, replacement parts (hardware & software), and preventive maintenance for the FCR System. The service and maintenance requirements listed below shall apply to all core and peripheral components of the FCR System (e.g. software, hardware, etc.).

¹ Bidders must include an itemized description and quote for training service(s) to equal a total price.

Services shall include, but are not limited to, the minimum following requirements:

- A. Five (5) year term for Service and Maintenance of the FCR System;
 - a. Common replacement parts (hardware and software) are to be stocked by Contractor for a period of five-years with a minimum of 90-day warranty on all replacement parts.
- B. Scheduled maintenance for all components of FCR System (e.g. software, hardware, etc.) according to the requirements listed by the Original Equipment Manufacturer (OEM);
- C. Installation of FCR System software upgrades as new Versions become available;
- D. For all equipment and peripheral devices that are offline or down, Service Repair (SR) examinations shall be provided by Contractor within 24 hours of the initial SR call request. This service shall require an on-site visit by Contractor to the institution;
- E. 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;
- F. Contractor shall have a permanent service team located in the state of California;
- G. Contractor shall be responsible for all travel related expenses; and
- H. Contractor shall provide proof of a Quality Assurance (QA) system for tracking and auditing of all SR calls initiated by CDCR staff. This system shall generate a tracking number to ensure that the services are identified for future auditing.