

Tucson United States Penitentiary and Federal Prison Camp

Tucson, AZ



Team

Owner:

Federal Bureau of Prisons, Washington, D.C.

Design Architect:

Arrington Watkins/HSMM, PLLC, Phoenix, AZ

Architect of Record:

Arrington Watkins, Phoenix, AZ

Engineer:

Hayes, Seay, Mattern & Mattern, Inc.
Virginia Beach, VA

Construction Management:

Luster National, Inc., Bakersfield, CA

Contractors:

Concrete (foundations, slabs):
Lithko Contracting, Inc., Avondale, AZ

Site-Cast Concrete Cell Unit:

Rotondo Weirich Enterprises, Lederach, PA

Site-Cast Tilt-Up Concrete Wall Panel:

Seretta Construction, Inc., Apopka, FL

Precast Concrete:

Coreslab Structures, Inc., Phoenix, AZ

Reinforcing Bar Fabricator:

Lithko Contracting, Inc., Avondale, AZ

Total Project Cost:

\$114 million (est.)

Total Project Size:

627,622 sq ft

STRUCTURAL FRAMING SYSTEM

- Cast-in-place concrete second floor,
- Site-cast concrete cell units,
- Precast double tees and planks,
- Site-cast tilt-up concrete walls (General Housing Units)

KEY PROJECT OBJECTIVES

The Federal Bureau of Prisons (FBOP) mandated design and construction of a penitentiary and federal prison camp in Tucson, Arizona, that would meet their Technical Design Guidelines for security while also meeting the facility needs for a hot, dry desert region, and responding as well to and blending architecturally with the Southwestern regional environment. Further, FBOP sought a solution that:

- Incorporated energy-reduction systems;
- Provided lower operating costs;
- Employed where practical “green” building materials and systems; and
- Featured a uniform and straightforward design.

The Owner also expected that the design-build team members (the General Contractor, Architect, Engineers, and the Owner) would be full partners in this project, and communicate regularly in a trusting and constructive manner that would eliminate hesitation or adoption of an oppositional attitude when situations arose on site.

The FBOP is responsible for the safe, humane and appropriately secure confinement of some 180,000 federal prisoners in more than 100 facilities across the entire nation – faces challenges to build newer, safer, more modern facilities that are economical to construct, operate and maintain. FBOP expects its new facilities to withstand many years of hard use.

The design-build team set out to incorporate a high level of collaborative value-added engineering/construction into the Tucson project. Fulfilling this intent was a major challenge due to the strict technical design guidelines. The design-build team carefully examined the client’s RFP together to identify and collaboratively work to take advantage of the limited available opportunities for enhancing and exceeding FBOP’s project expectations while reducing costs and delivery time. The team’s innovation and creativity was evident in designing, fabricating and installing in general housing units a concrete security enclosure with clear span double tee-beams that resulted in a column-free dayroom space with unobstructed visibility for guard personnel.

Photo Credit: Arrington Watkins/HSMM, PLLC

CRSI Concrete Reinforcing
Steel Institute

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