

Teamwork Pays Dividends for Today's Fast-Track Construction Projects

Challenge. The Bureau of Prisons is on a fast track. In 1980, the BOP had a budget of \$330 million supporting 24,000 inmates in 44 prisons. In 2002, that budget burgeoned to \$4.6 billion, supporting 102 prisons. Today, with over 200,000 inmates, federal prisons are a natural for design-build construction, a type of project-delivery system where the design and construction aspects are contracted with a single entity.

In contrast to traditional “design-bid-build,” design-build is used to minimize the project risk for an owner and to reduce the delivery schedule by overlapping the design phase and construction phase of a project. That takes extraordinary teamwork, especially when you are building prisons like the \$112 million U.S. Penitentiary and Federal Prison Camp (USP/FPC) in Tucson, AZ. Putting a project like that on a fast track required tight coordination, especially when it came to code compliance during design and construction.

Solution. Long recognized as the nation’s leading fire and security consultants, Rolf Jensen & Associates (RJA) also understands design-build as a method of project delivery and the need for fast, accurate information in that process. The company was tapped for this expertise and became part of the design-build team for the project, working with Dick Pacific Construction Company, Arrington Watkins architects and HSMM (Hayes, Seay, Mattern and Mattern, Inc.).

The U.S. Penitentiary in Tucson included six interconnected general inmate housing units and one special housing unit. It required particular expertise on codes and their potential conflicts, and being in a position to help the design-build team meet the requirements without overburdening efficiency of the process itself. RJA’s role was to provide design services, including certification that the design met the applicable FBOP (Federal Bureau of Prisons) code requirements of NFPA 101 and its referenced standards, such as NFPA 13, the sprinkler design and installation standard. The work was conducted by RJA’s Washington, D.C. office, working closely with the Phoenix office.

Collaboration between the RJA 20+ offices is often a comfort to clients and part of the firm’s design-build capability. It enables RJA to work closely with entire building teams – regardless of location – through issues of constructability from a fire and life safety code compliance point of view.

Result. RJA provided fire protection engineering consulting and design services during the design and construction of the U.S. Penitentiary and was honored, along with the entire building team, with the 2006 Marvin M. Black Excellence in Partnering Award for this construction project. The Marvin M. Black Excellence in Partnering Award was started in 1992 by the Associated General Contractors (AGC) of America. Named after the AGC’s 1991 president, Marvin M. Black, who advocated partnering, this award is now presented annually to the construction project that best epitomizes the principles of partnering.

With concern for safety, security, maintenance and energy efficiency always at the forefront with owners of today’s correctional facilities, design-build is often turned to in order to meet those needs. In the case of the U.S. Penitentiary and Federal Prison Camp in Tucson, those concerns were met.



- **Code Consulting**
- **Fire Protection Design**



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