

Project Overview



US Penitentiary - Atlanta



United States Penitentiary, Atlanta is a medium security federal prison for men in Atlanta, Georgia. It also has a detention center for pre-trial and holdover inmates and an adjacent camp for minimum security male inmates. USP Atlanta was opened in 1902 and has had many renovations over the past 109 years. The facility and camp house approximately 2,400 inmates



What Were the Issues?

Funding constraints had led to deferred mechanical systems maintenance at the site. USP Atlanta needed to get on board with the Federal Bureau of Prisons energy savings initiatives and deal with infrastructure needs.

The Impact on the USP - Atlanta

The steam leaks from the steam plant created a safety issue throughout the site. The existing showers allowed inmates to easily hide contraband and were difficult to maintain, due to the lack of access behind them.

What was Needed?

- Repair of steam distribution system
- New showers with maintenance access
- Repair plumbing fixture leaks
- Reduce areas for inmate contraband storage
- Energy saving projects to get on board with national BOP initiative

Special Project Requirements

Our project had to be completed using a minimum of security escorts, and not disrupt site security procedures. Frequent counting of tools and equipment were required.

About the Project

The first phase consists of water conservation and energy efficient lighting. The majority of the water conservation work includes full replacement of existing porcelain water closets and lavatories in secure areas with stainless steel fixtures and electronic controls.

In addition, the showers in cell blocks A, B, and D will be retrofitted with stainless steel enclosures. Other retrofits include food service equipment and cooling tower water metering. Design of a water storage tank and pump system is included as part of the water conservation ECM.

As a hybrid geothermal central plant is intended for Phase 2, this storage tank and pump system will be designed for geothermal use. Additionally, preliminary design of an onsite wastewater treatment plant is included with this ECM.

Project Impact Areas:

Water Conservation

- Replacement of existing porcelain water closets and lavatories in secure areas with stainless steel fixtures and electronic controls.
- The showers in cell blocks A, B, and D were retrofitted with stainless steel enclosures
- Food service equipment was retrofitted and cooling tower water metering was implemented.

Heating

New hot water plant with high efficiency hot water boilers

Distribution

New hot water distribution system

Cooling

- New, centralized chilled water plant.
- Primary/secondary pumping
- New storage tank used for geothermal cooling

Controls

- New, site wide energy management control system

Laundry

- New, Ozone Laundry System

Project Results:

Performance Contract: 18 years

- \$50 million in infrastructure improvements
- \$3.2 million in energy and water savings
- Hybrid geothermal chiller plant achieves progress toward renewable goals
- New, stainless steel showers that are more secure and allow access for maintenance

43% reduction in energy consumption post-project