



Rockbridge Regional Jail – HVAC, Security System and Roof Replacements

General contractor on multi-phased project



Project Description

The Rockbridge, VA County Jail, located in Lexington, VA is a 30,000 sf building constructed in 1988. It has a population of nearly 100. The facility needed an upgrade of the security system to more modern technology, and sought to improve operating efficiencies by installing a fuel efficient HVAC system. Additionally, after many years of serving the County, it was time to replace the roof. Wiley|Wilson engineering firm created the project specifications.

Waco Inc. was awarded the prime contract, which was valued at just under \$2,000,000. The security system upgrade and roof replacement were sub-contracted, and Waco managed these upgrades. Waco self-performed the HVAC system upgrade; which included boiler, chiller, pumps, VAV box and air handler replacements. New system ductwork was fabricated and installed to connect to the existing duct. Due to the round-the-clock operation of a jail, all operations within the facility had to remain in full force during the entire upgrade project.

Unique Project Challenges

- 1 The combination of security procedures and round-the-clock operations presented unique challenges. The facility remained in full operation, housing and feeding the inmate population through the duration of the project. Several temporary systems had to be put in place to support ongoing facility operations. Boiler piping modifications were fabricated and installed to accommodate the heating requirements, while two additional boilers were installed. In order to avoid extreme cold temperatures within the facility during the project, weather conditions had to be factored into the scheduling process. All this required very precise project planning and adherence to schedules, regardless of the challenges that arose.
- 2 The security system upgrade also brought unique challenges. The new system was far more sophisticated than the existing one, requiring broad system changes throughout the facility. Additionally, due to the criticality of a security system in a jail environment, the efforts necessary to ensure no interruptions during the installation and cut-over stages were demanding. Experienced project management and scheduling methods were implemented to make this happen.
- 3 Replacing the entire roof in a fully operational facility was a challenging task. Each activity had to be precisely scheduled and accomplished within the scheduled time frame. Extra measures had to be implemented to avoid migration of debris.
- 4 The construction of this project was performed under high security conditions. All materials, equipment and tooling were inventoried on a daily schedule.

Project Scale

- Replaced 30,000 sf roof
- Replaced 37 VAV boxes
- Removed six air handlers and replaced with four new Cook air handling units
- Replaced two existing boilers with three new 700MBH Lochinvar gas-fired boilers
- Replaced existing chilled water pump with hot water pumps
- New security system included control console with monitors and computers, camera and intercom systems, and door controls

Why Waco Inc. was Chosen for the Project – Economics and Reputation

Due to its project management methods and cost structure, Waco was the lowest bidder on the project. After the County considered all the competing bids and reviewed Waco’s qualifications, it was a clear choice.

Summary of Results

Lee Waldeck was Waco’s project manager and Mike Williams was the superintendent. The entire project was completed on the County’s timeline and change orders remained within 1%. There were no security problems or disruptions to facility operations during the project, and no workplace injuries.

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