



# Mississippi Army Reserve Center

## Investment Grade Audit and Commissioning Services

### About the Facility:

The U.S. Army Reserve Center located in Greenville, MS is a single-story building with approximately 13,000 square feet. The building is a multi-use facility housing administrative space, classrooms, an assembly hall, library, vault and storage. It also includes restrooms, shower facilities and locker rooms.

The existing HVAC control system was not operational. Piping insulation was suspected of containing asbestos fiber and required an environmental assessment. The age of the equipment and configuration of the CHW/HW piping were hindering performance issues requiring the audit to be performed. Additionally, there was no existing building data or documentation to benchmark, monitor or measure current conditions.

### SEA Performs HVAC Assessment

Sain Engineering Associates, Inc. (SEA) was contracted to perform an HVAC equipment assessment and develop design parameters for upgrading the HVAC system and controls using a four phased approach.

- **Phase 1:** Preliminary feasibility audit evaluated site conditions identifying equipment deficiencies, repairs and replacements; developed HVAC system configurations and upgrade options, initial controls recommendations and strategies; provided ECM table showing conservation measures and potential savings
- **Phase 2:** Documented and refined the Owner's Project Requirements, verified initial design assumptions, refined some design details; prepared the final design for the upgraded HVAC system and controls
- **Phase 3:** Prepared construction documents and resolved ACM issues; monitored construction closely
- **Phase 4:** Commissioned the new system, validating installation and performance; remotely monitoring the buildings to assure correct operation

As a result of these actions, the facility has a new, state-of-the-art HVAC and control system, providing excellent space temperature and humidity control to all areas with conditioned outdoor air for required ventilation.

SEA performed HVAC Assessment and Retro-Commissioning Services for Replacement for Optimized System Reliability and Comfort.



Reduced Energy Consumption



Annual Reduced Energy Costs



Square Feet



Preliminary results from a seven month benchmark indicate electrical energy savings of 15% and gas savings of 44% with a total cost savings of \$2,873.