

## EMORY OXFORD COLLEGE – Oxford, Georgia

### NEW RESIDENCE HALL COMPLEX

**SCOPE** Mechanical design and construction phase services for a new two-building housing complex with traditional-style double rooms and community bathrooms housing approximately 350 students. Total square footage is 113,000. Project facility has achieved a Gold rating under the LEED green building program.



**Owner**

Emory Oxford College

**Mechanical Contractor**

Tebarco Mechanical

**Prime Consultant**

Jova Daniels Busby

**Construction Cost**

\$25,000,000 (total)

\$6,300,000 (mechanical)

### SPECIAL CIRCUMSTANCES

- The complex utilizes a four pipe hydronic HVAC system comprised of two water cooled chillers with scroll compressors, a two cell open loop cooling tower with ultra low sound fan blades, two 94% efficient copper finned type natural gas boilers with sequencer panel, a plate heat exchanger for waterside economizer, and fan coil units. Each room or group space is served by one or more fan coil units controlled by a wall mounted thermostat located within that space.
- Tempered recovery ventilators located in internal mechanical rooms were used to directly provide outside air at room neutral temperature to all occupied spaces in the complex. These ventilators contain enthalpy wheels that are used to pretreat the outside air with building exhaust air to lower building heating and utility costs.
- The mechanical design and equipment specification assisted in optimizing the building's energy performance 32% over a code minimum building.
- The building automation system monitors both the quantity of outside air delivered to the building and the carbon dioxide concentration of densely occupied areas to ensure design IAQ requirements are achieved.
- Ultra low flow faucets and shower heads were utilized to achieve 34% water savings over the code minimum requirements set by 1992 EPACT standards.



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