

Concord Hospital Infrastructure Upgrades

Increased Energy and Operating Efficiencies with a Tangible Reduction in Operating Costs



Project: Concord Hospital Infrastructure Upgrades
Facility Size: 600,000+ sq. ft.
Location: Concord, New Hampshire

The Facility

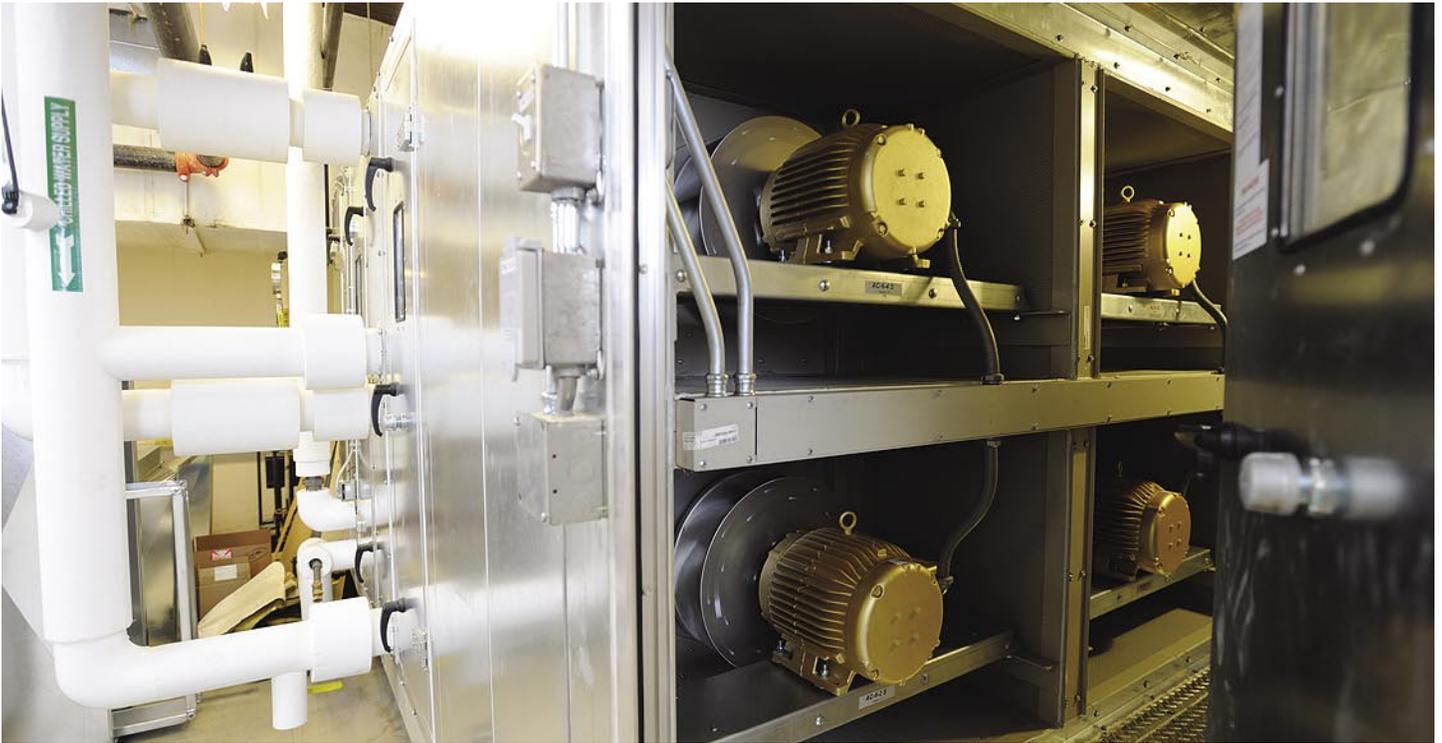
Concord Hospital, founded in 1884, is the second busiest acute care hospital in the State of New Hampshire. Located in Concord, New Hampshire, the campus consists of 114 acres and includes multiple healthcare facilities and buildings such as the Payson Center for Cancer Care, the Memorial Medical Office Building, and the Pillsbury Medical Office Building, to name a few. The Concord Hospital campus and infrastructure has expanded significantly through additions and renovations over the past 4 decades.

Project Scope

Concord Hospital engaged Yeaton Associates, Inc. to provide ongoing infrastructure improvement design services including the mapping of existing mechanical systems, development of energy conservation measures and implementation of system upgrades to achieve improved operating efficiencies.

Project Result

As part of this effort, Yeaton Associates, Inc. identified and implemented projects that converted constant volume air handling systems to variable air volume, replaced steam pre-heat with better controlled glycol/water solution pre-heat, and incorporated return air at existing 100% ventilation air handling systems where permissible by current healthcare ventilation codes. Yeaton Associates, Inc. has also assisted Concord Hospital with Infrastructure upgrade planning, including the replacement of 10 major air handling units with multiple-fan, high-efficiency units. The results of these measures include increased energy and operating efficiency, clarity around hospital infrastructure, and a tangible reduction in operating costs for the hospital.



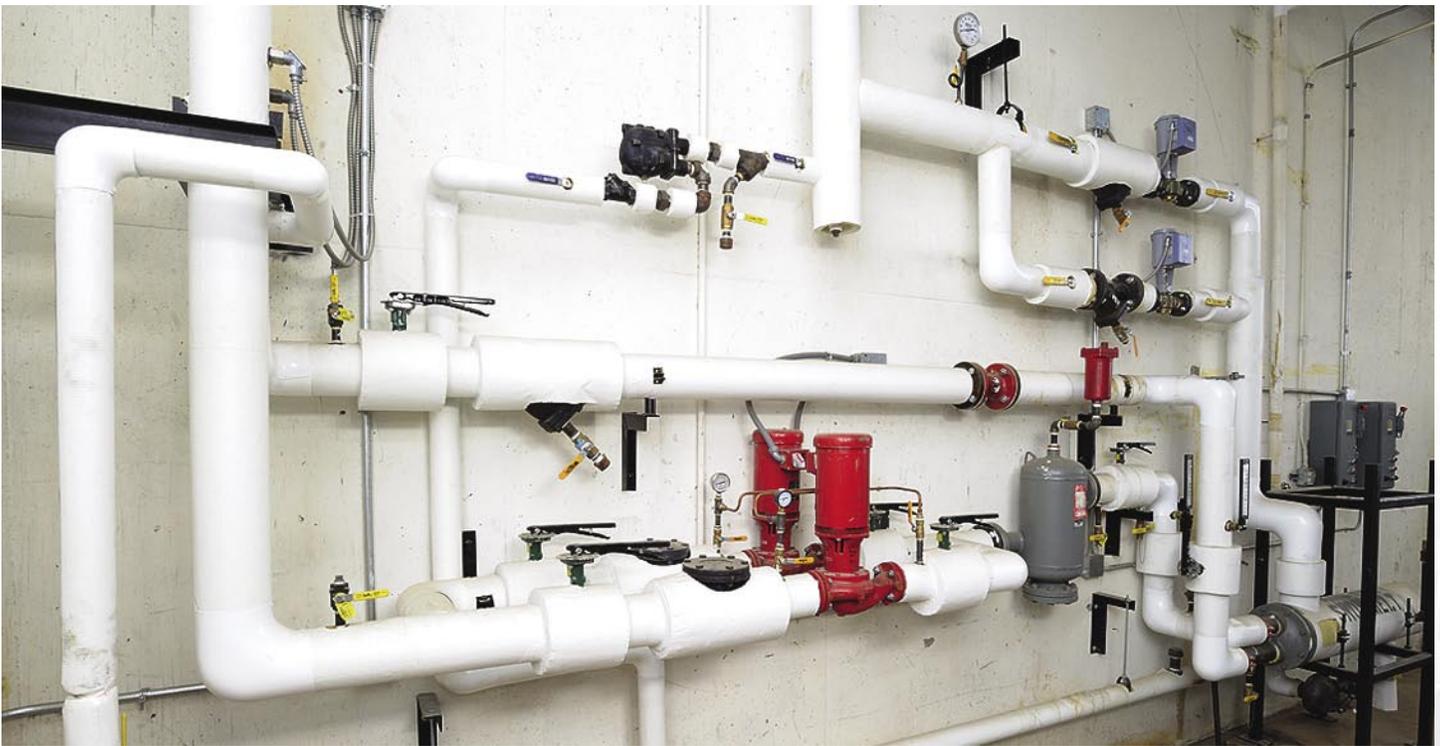
Air handling unit replacements at Concord Hospital, since 2007, have used variable speed multiple fan technology to provide redundancy and enhanced operating energy efficiency.



High efficiency double-wall construction, insulated air handling units with multiple fan technology, chilled water, low pressure steam coils, HEPA final filtration and UV light disinfection address HVAC needs throughout the majority of Concord Hospital.



A variable frequency drive and a state-of-the-art control panel serve a multiple fan air handling unit.



Steam-to-hot water/glycol solution heat exchange has been used to address snow melting needs at Concord Hospital.



A cross-flow cooling tower with variable speed fans, high performance film-fill and sturdy structure was used to reject heat from the centrifugal chiller plant.



To address odiferous exhaust, air-entrained impeller technology was used to achieve dispersion and dilution to prevent adjacent area contamination.

The Firm

Yeaton Associates, Inc. is a well-respected MEP consulting engineering firm with a commitment to quality and an assurance that the company will deliver well-engineered, efficient and sustainable design services. Founded in 1973, Yeaton Associates, Inc. has evolved its focus to provide Mechanical, Electrical, Plumbing and Sustainable Engineering Design Services as part of its integrated, multi-disciplinary approach to engineering.

For over 35 years, Yeaton Associates, Inc. has provided and continues to provide expert, comprehensive engineering consulting and design services for healthcare, academic, commercial and public facilities. A focus on innovation and emerging technologies has allowed the company to stay at the forefront of high-performance design, while a commitment to quality and service has made Yeaton Associates, Inc. a trusted partner for those in need of engineering design services. The company's extensive client base and diverse project resume has garnered recognition throughout New England, and its commitment to quality has allowed Yeaton Associates, Inc. to earn a reputation for excellence and excel as a well-respected design leader within the industry.

