

## Bryan LGH West Hospital Lincoln, Nebraska



Farris Engineering provided mechanical, electrical and plumbing engineering services for the construction of the Central Energy Plant at Bryan-Lincoln General Hospital. Additional services provided include equipment pre-purchase packages for three (3) 1,000 ton R-123 refrigerant chillers, water circulating pumps, additional cooling tower capacity as well as emergency standby diesel electrical generators in support of critical space cooling electrical power for the Hospital and Administrative Office Complex. The Central Energy Plant houses chilled water production and ancillary equipment for the purpose of providing chilled water to the healthcare campus.

Significant characteristics of the project included:

- Investigation of multiple building sites to aid in determining the location best suited for the facility. Investigation included evaluation of the renovation of existing facilities for use as a thermal plant as well as the evaluation of other parcels of land.
- Blending of the facility with the surrounding buildings due to its proximity to the hospital and high rise buildings. The design was sensitive to aesthetic, sound and emissions issues associated with the Central Energy Plant and with backup cooling tower cells.
- Accommodation of an initial installation of 3,000 tons of chiller capacity at 36°F delivery temperature with space for a fourth chiller.
- Auxiliary equipment, including variable primary flow for emergency chiller operation, pumping systems, chemical feed systems, controls, exhaust systems, refrigerant handling, refrigerant monitoring and exhaust systems, and supporting electrical power supply systems.
- Electrical generation equipment capable of providing power to support the generation and distribution of 1,000 tons of chilled water with allowance for future power expansion.
- Instrumentation and controls necessary for operation and monitoring of the plant, including the ability of the control systems to communicate with the main campus energy management system.
- New steam and chilled water distribution pipe lines between the new chiller plant and new MOB building and hospital expansion via walk-thru concrete utility tunnel system.