



## Jeremy R. Bartell, P.E., QCP

Jeremy Bartell started his career at Iconica, a local design and construction firm, where he designed retail, commercial, and indoor water park HVAC systems. Soon he brought his talent and experience to Pearson Engineering, becoming an invaluable member of our staff.

Jeremy hit the ground running at Pearson Engineering, since he was immediately thrust into a series of complex challenges in the HVAC systems at St. Joseph Hospital in Milwaukee. Since then, he has managed complicated multi-phased projects for an Illinois school district, as well as various healthcare systems throughout Wisconsin. Jeremy's creative designs take advantage of today's technology, and they result in extraordinary cost savings during installation and for the life of the system.

Taking on increasingly complex and challenging projects, Jeremy gained considerable experience with new-system and retrofit-system design. He developed special expertise on code compliance in a wide range of facilities, from healthcare to education, becoming a pivotal member of the Pearson Engineering creative team and a knowledgeable, eager partner to our clients.

### EDUCATION

University of Wisconsin: BSME degree

University of Wisconsin: College of Engineering & Department of Engineering Professional Development Certification as Accredited Qualified Commissioning Process Provider

### PROFESSIONAL AFFILIATIONS

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

American Society for Healthcare Engineering (ASHE)

Wisconsin Healthcare Engineering Association (WHEA), Chapter I and Chapter II

National Society of Professional Engineers (NSPE)

Wisconsin Society of Professional Engineers (WSPE)

National Fire Protection Association (NFPA)

### WORK HISTORY

2008 Principal, Pearson Engineering

2005 Project Engineer, Pearson Engineering

2004 HVAC Project Engineer, PLANNING Design Build, Inc. (now Iconica)

2002 HVAC Co-Op, Pearson Engineering

REGISTRATION: Wisconsin No. 39377  
Illinois No. 062.063377  
Minnesota No. 48911

## SIGNIFICANT PROJECTS

DN Greenwald Clinic Expansion, Mukwonago WI. Pearson Engineering was engaged to design mechanical systems for a 70,000 ft<sup>2</sup> healthcare clinic expansion. The project included connecting a new water-cooled chiller into the existing air-cooled chiller plant and adding a cooling tower, two additional condensing hot water boilers, variable volume air-handling systems, steam boiler and humidification system, snow melt system, makeup air unit, and terminal devices. The design was completed using 3D building modeling software, which included surveying all mechanical components in the existing 145,000 ft<sup>2</sup> clinic. We created control schematics, sequences of operations, and points lists for all new mechanical systems, and replaced controls on all existing systems. Pearson Engineering also performed functional testing on all mechanical equipment once the project was completed.

Waukesha Memorial Hospital, Waukesha, WI. Designed mechanical systems for the large renovation of approximately 27,500 square feet of retail, office, dining, and kitchen space. The renovation was intended to streamline patient entry to specific areas of the hospital and modernize/enlarge the adjacent spaces. Portions of six different air systems were affected by the renovation. A new 3,500 square foot Bistro area was designed with a dedicated air handler with variable frequency drives and a single exhaust fan with an integrated energy management system connected to four grease hoods. Existing systems had to be carefully measured and coordinated, as the entire project was drafted in 3-D, with the aid of AutoCAD Revit.

Wisconsin Heart Hospital, Milwaukee, WI. Managed the project to solve air mixing issues in the building's four existing air handling units. Original design and sizing of the mixing box sections created stratification in the airstream, which resulted in continuous freeze/alarms during the heating season. After careful inspection of the air handlers, including temperature and airflow measurements, the air control dampers were relocated to the exterior of the air handler. This created a smaller mixing section within the duct work, which increased airstream velocities of the outside air and return air. The increased air velocity created more uniform mixing and eliminated the airflow stratification, thus eliminating the majority of freeze/alarms for maintenance staff.

St. Mary's Duluth Clinic, Duluth, MN. Designed mechanical systems for the relocation and enlargement of the pharmacy, to a location previously used as office space. An existing multi-zone AHU was replaced with a larger, VAV multi-zone AHU to allow for the increase in required airflows per AIA Guidelines. The space was designed per USP-797 requirements for pressure relationships and cleanliness. Controls were incorporated into the existing BAS. Existing systems had to be carefully measured and coordinated, as the entire project was drafted in 3-D, with the aid of AutoCAD Revit.

Wheaton Franciscan, Wauwatosa, WI. Designed MEP systems for multiple suites of doctor's offices. One significant project of note was the remodel and expansion of the pharmacy to accommodate onsite compounding of chemotherapy drugs. Existing HVAC systems were expanded and re-designed to allow for the increase in required airflows per AIA Guidelines. The space was designed per USP-797 requirements for pressure relationships and cleanliness. Controls were incorporated in the existing BAS, which allowed for local alarms to the pharmacy staff, as well as network alarms to the maintenance staff.

St. Joseph Regional Medical Center, Milwaukee, WI. Managed the MEP team for the remodel of the kitchen space. Designed mechanical systems for the complete replacement of supply and exhaust ductwork serving the kitchen space. Exhaust ductwork that was not code-compliant, and was positively-pressured in a six-story chase, was replaced with welded ductwork that penetrated the roof directly above. An energy management system was integrated into the exhaust system and connected to three grease hoods. The exhaust system utilized a Greenheck Vektor-H exhaust fan to propel grease exhaust above the height of the adjacent six-story building. The AHU system was renovated to include variable frequency drives and better humidity control.

School District 25, Arlington Heights, IL. Managed the project to add air conditioning to seven existing elementary schools and two middle schools serving 5,000 students. In this unique project, a two-pipe heating-only system was converted to a two-pipe changeover heating and air conditioning system. Energy saving features in the design prevented utility consumption from rising, even as air conditioning is added to the schools.