FIRELANDS REGIONAL MEDICAL CENTER SANDUSKY, OHIO

KEY PARAMETERS

- Type of Facility – Existing (EB)
- Function – Healthcare
- Area – 4-story patient care tower
- Project Completed – 2010

Challenge: As part of a $150 million expansion project which included replacing three 24 year-old critical AHUs, the owner had the following goals:

- Exceed the U.S. Department of Health & Human Services minimum MERV rating for final filtration in patient areas.
- Minimize noticeable odors and harmful particulate typically introduced as ventilation from ambient sources including helicopter fumes and idling ambulances.
- Create a highly effective level of indoor air quality and healing environment.
- Improve upon alternative electronic filtration which was proven to be unreliable.
- Extend media life and minimize the burdens from having to replace media.
- Reduce energy and operating costs.

FIRELANDS
Regional Medical Center

Solution: Dynamic V8 Air Cleaning Systems and Dynamic Sterile Sweep Germicidal UVC Systems were installed in the AHUs.

Results: Dynamic surpassed expectations. The system exceeded MERV 15, rivaling that of HEPA filters. According to the director of plant operations at the facility," The air quality has been outstanding."

Due to the exceptionally high dust-loading capacity of the Dynamic V8, the original air cleaner media pads, installed in 2008, did not require replacement until late 2012, which translated to substantial savings in time, labor, and replacement filters.

The air cleaners have also delivered on fan energy savings which can be illustrated by comparing the system static pressure to that of standard 95% cartridge filters and pre-filter media which typically run at 1-1/4" w.g. static after six months. At Firelands, the total static from final filtration was .38" w.g. after one year and .5" w.g. after 2-1/2 years on the original set of media.

Firelands views IAQ as a contributing factor to overall patient safety. The medical center was recognized as one of the top 5% of all U.S. hospitals when they received the 2010 HealthGrades Patient Safety Excellence Award™.

TEAM

- Owner – Firelands RMC
- Architects – Harley Ellis Devereaux
- Engineers – Harley Ellis Devereaux
- Consultants – KLMK Group LLC
- General Contractor – Gilbane Building Company
- In-house Facility Manager – Darrell Boling, Director of Plant Operations

MECHANICAL SYSTEMS

- HVAC – Trane
- Ventilation – Trane, Govenair, York
- Building Controls – Siemens USA
- Energy Monitoring – Siemens USA