Dell Children’s Medical Center

Austin, TX

Answers for infrastructure.
Siemens Assists Dell Children’s Medical Center in Becoming the World’s First LEED® Platinum Hospital

Medical Center relies on APOGEE® Building Automation System

Opened June 2007, Dell Children’s Medical Center of Central Texas is one of the largest children’s hospitals in the state. Part of the Seton Family of Hospitals, it is also the world’s first healthcare facility to achieve the coveted LEED (Leadership in Energy & Environmental Design) Platinum Certification for New Construction, the highest level of green certification a building can obtain.

At the heart of this 503,000-square-foot medical center is an APOGEE Building Automation System that efficiently integrates numerous facility systems and devices. From a single workstation, technicians can monitor and control indoor air quality, HVAC operation and utility distribution. The Siemens building and energy management system is also integrated into the fire alarm system and provides for emergency air handling system control.

Energy efficiency maximized, optimized and delivered

LEED certification standards are especially difficult for hospitals to meet, as they must operate around the clock while meeting stringent patient care requirements. Working in tandem with Seton Family of Hospitals management, Siemens provided technology and project management to help Dell Children’s Medical Center earn LEED points culminating in Platinum Certification from the U.S. Green Building Council.

Phil Risner, Network Engineer for the Seton Family of Hospitals, says “we wouldn’t trade our building automation system for anything, and use it all the time to make sure we’re optimized.” Alan Bell, Director of Design and Construction for the Seton Family of Hospitals, reports “with our building system we’ve been able to achieve about 17 percent better efficiency than ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) standards, which was the target for our LEED rating.”

The building automation system supports complex demand management strategies that produce energy efficiencies. For example, integration to variable frequency drives in combination with underfloor systems drives energy costs down. In addition, chilled water consumption is monitored, kW utilization is calculated and run time on all pumps is managed for ultimate cost savings. In all, the efficiency measures at Dell Children’s Medical Center save enough power to fuel the equivalent of about 1,800 homes in Austin.

Improving the environment in more ways than one

While energy efficiency is the cornerstone of green buildings, other noteworthy design elements contributed to Dell Children’s Medical Center’s success in achieving LEED Platinum status. Construction materials were sourced within 500 miles from the Medical
Center, including stone from a regional quarry and landscaping using native plants from 46 area counties. In addition, strategically-placed windows ensure sunlight reaches more than 80 percent of all interior spaces — while motion and natural light sensors turn off lights and adjust air conditioning when rooms are vacant.

While Sister Teresa George, Vice President and Chief Operating Officer of Dell Children’s Medical Center, appreciates that “the long-term benefits of having a green building are lower operating costs for our utilities,” she also notes the “short term benefits of reducing staff turnover…our staff loves being here around the building.” Seton estimates their productivity improvements, coupled with a dramatic improvement in personnel retention, are equivalent to saving enough money to pay the entire year’s energy bill.

Of course, one of the corollaries of being a trendsetter is that you make things easier for those who come after you. As Phil Risner states, “it will be easier for hospitals to achieve higher levels of certification in the future just because of the levels we’ve achieved and the manner in which we achieved them. We’ve set high standards that will help others across the nation set higher goals and do much better than what they’ve been doing.”

Siemens continues its extremely close collaboration with Dell Children’s as these highly advanced systems are evaluated and fine-tuned. The support provided includes Building Automation and Fire Alarm System service agreements, which Phil Risner notes “give us that piece-of-mind factor, knowing Siemens’ technical competence is always available to us.” Siemens is proud to have played a major role in bringing this medical center to life.

**Systems Integrated Into Dell Children’s Medical Center:**

- Siemens APOGEE System
- Siemens Firefinder XLS Fire System
- ABB Variable Frequency Drives
- York Underfloor Systems
- Liebert Computer Room Air Conditioning Units
- Aerco Hot Water Systems
- ASCO Automatic Transfer Switches
- Dectron Pool Monitoring Systems

**Siemens Industry — Building Technologies Division**

As a leading provider of energy and environmental solutions, building automation and control technologies and fire safety and security system solutions, Siemens makes hospitals comfortable, safe, productive and less costly to operate.

As part of an international corporation, we are able to provide world-class solutions in conjunction with local support. Each of our offices is a full-service branch staffed by sale professionals, onsite technical service specialists and project management teams that deliver complete building solutions.