



New Hospitals Building Costs Pushed Higher

by Shane Watts

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Green buildings, technology and changing demographics fueling the trend



Hospital design is going through more than a boom – it is going through a renaissance with the intersection of several advances and trends. Of course, the aging baby boom population is contributing to the need for more space, but in some instances hospitals need new, hotel-esque design and greater comforts to compete in their local market. Technology is transforming hospital facilities in a powerful way—the demands of modern equipment is making many spaces obsolete or driving the redesign from the inside-out.

Other trends are making an impact, too. Increasingly, new hospitals are implementing the popular ideas of sustainability into their design. It is hard to believe a program that started just over 10 years ago could expand as rapidly as the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification program has, but a growing sense of responsibility has driven its popularity to surprising heights. Since its inception in 1998, over 35,000 projects are currently participating in the LEED system, comprising of over 6.9 billion square feet of construction space in all 50 states and 114 countries.

Sustainability is taking hold just as the demand for healthcare construction is also skyrocketing. According to the U.S. Census Bureau, nearly \$30 billion worth of non-federal hospital construction is underway in the United States. Much more than paint and curtains, these renovations include new plumbing, electrical, HVAC and flexible utility ducts to meet the anticipated needs of powerful computer and medical equipment for the next 20 years. Growing demand, compliance with new codes and advancing technologies all contribute to the need for ongoing medical facility renovations.

Healthcare environments, particularly hospitals, simply cost more to construct than other facilities due to the sophistication and complexity of the technology. Also, the infrastructure needed to support state-of-the-art technologies and the specialization and more advanced processes required for construction within a working hospital is driving costs, along with efforts at reaching LEED designations. Upfront costs for green construction are often ten to fifteen percent higher than standard practices.

However, a return on portions of the investment can be seen in lower energy costs, and, in some cases, tax exemptions. Many healthcare facilities have also responded to the demand for sustainability in their facility because of incentive offerings, including additional tax credits that can be financially advantageous. For instance, Cincinnati, Ohio offers a 100 percent property tax

exemption for all newly constructed or renovated spaces that earn a LEED certification. Other potential savings, still being quantified for their bottom-line impact, include improved patient outcomes and more efficient staff.

Recently, our firm served as general contractor and construction manager for the expansion of a new intra-operative MRI suite at Dell Children's Medical Center of Central Texas, a LEED Platinum designated hospital based in Austin, Texas. The IMRISneuro is a fully integrated subterranean operating room that includes a one-of-a-kind movable MRI machine. It allows surgeons to safely image patients in the operating room during brain surgery. The construction of the MRI suite was part of a second phase of construction for the hospital.

Key elements of the green construction for the MRI suite included implementing and managing mechanical systems that support improved indoor air quality, locating suitable materials, applying finishes with nontoxic approaches, and recycling and disposing of construction materials in an eco-friendly way. In this more complex, technologically advanced environment, the process of remaining on target with LEED Platinum is only heightened.

New variables and a lack of time-tested solutions in LEED and sustainable construction, in general, remain barriers to overcome — and in hospitals, all risks are heightened. Hospitals with a long-term vision may also begin to find quantifiable benefits as a result of the wellness components to their patients.

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