

Modular Building: The Fast Track To Providing Quality Healthcare Environments

By Keven O'Brien

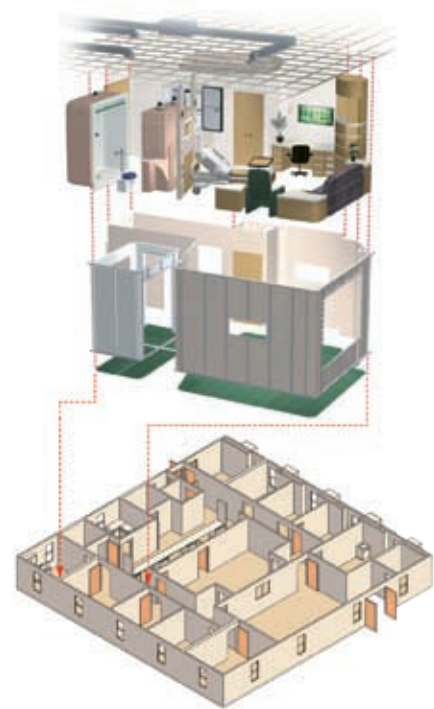
While most people in the design and construction business will say time to occupancy is an important consideration, it is arguably most critical in the healthcare arena. A nationwide hospital construction boom is being fed by the need for updated or new facilities, advancing technology innovation, workforce shifts and an aging population.

According to Architectural Record, accelerated construction methods have been employed since the 1960s and now account for an estimated 40 percent of all building projects. Accelerated or "fast-track" construction differs from traditional building methods because specific production tasks occur simultaneously rather than in sequence, reducing the time to completion.

Today, many healthcare facility planners are opting to take the accelerated construction route as it not only yields a faster time to occupancy, but offers significant financial benefits over the life of the building as well as unprecedented flexibility.

Modular, Inside and Out

An exciting new approach to healthcare facility design and construction combines accelerated building production methods by using modular exterior building components in parallel with prefabricated interiors. Using this method, the modular components for the building as well as the pre-engineered room interiors are both



Modular building outcomes:

Decreases design and construction time by up to 50 percent, with fewer change orders, earlier occupancy and improved cash flow.

Creates state-of-the-art facilities that integrate best practices in design and workflows.

Is appropriate for renovation or new construction projects.

Can be leased or purchased with accelerated depreciation tax and reimbursement benefits for eligible hospitals.

Provides for relocation and/or reconfiguration of facilities and components.

Provides the benefits of standardization and quality control of all product components and installation labor.

Can easily adapt to new technology as needed with minimal downtime.

manufactured off-site at the same time the location itself is being prepared. Compared to conventional construction, this process decreases the design and construction timeline by 30 to 50 percent, with fewer change orders, earlier occupancy and improved cash flow.

By employing an accelerated production method, the building exterior can be constructed in less time than most architectural drawings take to get approved. These modular buildings meet all the same stringent codes as site-built structures, but because site preparation, utility and foundation work occur simultaneously with actual construction of the building off-site, the time to occupancy is drastically reduced.

Modular rooms and buildings are flexible and easily reconfigured, so they can adapt to meet the changing needs of the healthcare facility. Their durable, secure and relocatable characteristics make them ideal for both temporary and permanent applications that will meet the requirements of healthcare institutions over the long term.

The room interiors, which incorporate modular and prefabricated components, can also be built in a factory setting and installed on-site to expedite installation time. Various room footprints are available, including exam rooms, surgical suites, diagnostic suites, in-patient rooms and nurses' stations.

Quicker occupancy guarantees improved cash flow for a building project from the start. Flexibility and relocatability of modular components add to the cost-effectiveness over time. Staff members appreciate the uniformity from room to room, as it eliminates distract-

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tions and increases efficiency.

In some cases, modular room interiors offer financial benefits. The products used are considered furniture and equipment for financial accounting and Medicare reimbursement purposes. That designation enables the products to be depreciated over a shorter useful life than traditional construction projects. Moreover, the cost of products can be charged directly to the hospital's routine cost centers where Medicare concentration is typically at its highest, thereby permanently increasing reimbursement over that afforded by conventional construction.

Case Study: South Cameron Memorial Hospital

Never was the need for an accelerated construction schedule and innovative, flexible building and room solutions more crucial than after Hurricane Rita destroyed South Cameron Memorial Hospital in September 2005.

A 25-bed acute care facility, South Cameron Memorial Hospital is the only healthcare facility serving the 10,000 residents of Cameron Parish, the largest parish in Louisiana.

Ever since Rita devastated the critical access hospital, rebuilding the 29,000-square-foot-facility and restoring healthcare services to area residents has been one of the parish's first priorities.

Pacer Health, the facility's management company, chose to

employ permanent modular construction and prefabricated patient rooms to enable greater flexibility and faster time to completion than conventional construction.

Official groundbreaking for the new facility took place on Dec. 20, 2006. Williams Scotsman is providing complete site preparation services upon which 38 modular components will be constructed. Wellness Environments, who partners with Williams Scotsman on this and other fast-track projects, will integrate 25 Wellness Environments inpatient rooms into the modular structure.

If Pacer had chosen conventional construction, the timeframe for completion would have been closer to 18 to 24 months, compared to seven months with modular construction.

Future Applications

As modular construction becomes more widely accepted for permanent building uses, these types of projects will push new boundaries, opening up broader applications in the healthcare sector. Modular design and building techniques are an excellent solution to meet the needs of hospitals and other healthcare facilities to deliver state-of-the-art, cost-effective medical services to their communities in a timely manner. ■

Keven O'Brien is director of healthcare modular buildings for Williams Scotsman.