

Host of sustainable features found in Sumner Regional Medical Center's new patient tower

Immediately upon entering Premier member Sumner Regional Medical Center's (SRMC) patient tower in Gallatin, TN, visitors stand in a lobby bathed in natural light, surrounded by a massive expanse of glass and outdoor scenery.

It is an exhilarating visual moment, achieving just the right effect Sumner officials intended when they sat down with architects and engineers several years ago to map out the new \$87 million state-of-the-art tower that opened in the summer of 2008.



Sumner Regional Medical Center seized upon virtually every opportunity to incorporate “green” sustainable elements in the 200,000 square foot structure to create a healthier, more environmentally friendly building.

As a pop-up window on Sumner's Web site states, “You feel better the moment you walk in. Every inch of the new patient tower was designed with one thing in mind: help the body and mind feel better.” In the past few years, an extensive amount of research has been done to study the effect of healing environments on patient outcomes. Experts say sustainable design solutions can provide a host of beneficial effects on patients' health and well being.

Indeed, Sumner Regional Medical Center seized upon virtually every opportunity to incorporate “green” sustainable elements in the 200,000 square foot structure to create a healthier, more environmentally friendly building.

“When we began the planning phase of Sumner Regional Medical Center's new patient tower, we insisted that our architects and engineers research all possible ‘green’ options that worked within our budget,” said William Sugg, president and chief executive officer. “As an innovative regional health system, we not only strive to be progressive in the provision of healthcare services, but also in our business practices. We feel that we have designed a state-of-the-art regional medical center that is environmentally conscious and keeps the best interest of our future generations in mind.”

As stunning as the new tower lobby is, one of the most eye-popping experiences awaits guests in the 90 new patient rooms of the six-story structure – modular “wellness” rooms that incorporate everything from a host of energy-conserving features such as patient-allowed lighting and climate control to environmentally friendly construction materials designed to dramatically reduce the risk of bacterial infections.

Today, every patient room at Sumner is now private, thanks to the additional tower rooms (72 general medical/surgical and 18 critical care) in the new structure. The new tower also houses an expanded emergency department, a new medical imaging area, six new surgical suites and a renovated women and children's center.

Features

Sumner's environmentally friendly vision for the new tower literally began in the ground surrounding the existing facility. "Early in the process, the hospital made it very clear they didn't want to disturb undeveloped farmland in the community and so they made a conscious decision to undertake a phased replacement on their existing site," said Travis Pigott of Gresham, Smith & Partners, the architectural firm that designed the tower. Pigott is principal in charge of the Sumner project.

"One example of evidence based design we employed in the tower is the ability of the patient to control the entire environment in each room," Pigott added. "It's been shown that the use of natural lighting has healing benefits and saves energy."

Here's a look at some of the key environmentally friendly elements of the project:

- *Sourcing local materials* – Up to 75 percent of the materials used to build the tower and its adjoining elements and landscaping were sourced from or manufactured by companies within 500 miles, keeping transportation costs, fuel use, and emissions down to regionally accepted EPA levels.
- *Community connectivity* – The tower's site design incorporates a network of sidewalks and cross walks that connect the campus to the downtown community on a pedestrian scale, allowing easier access.
- *Landscaping* – Approximately half of the plants used in surrounding landscapes are native species, which are more water efficient and environmentally friendly.
- *Energy conservation measures* – Effective and generous use of double-insulated, low-e, energy-efficient glass allows a profusion of natural light into interior spaces. Airside economizers were installed for air handlers to reduce chiller use when the outside air temperature is low enough to provide suitable cooling. The tower also incorporates high efficiency electrical and natural gas equipment and variable frequency drives on air handlers, pumps, chillers, and cooling towers to allow for reduction in electrical demand during off-peak load operation. The hospital uses a limited number of incandescent fixtures in areas that need full dimming capabilities, and uses more efficient metal halide lighting in high ceilings and energy-efficient fluorescents elsewhere.
- *Environmentally friendly building materials* –Low-VOC (volatile organic compound) paints were used throughout the building for a healthier workplace.
- *Water conservation* –Auto sensors are installed on all public water closets, lavatories and urinals for increased water efficiency.
- *Demolition debris recycling* – The hospital also recycled copper scraps and piping, sheet metal scrap and structural steel during demolition.

‘Wellness rooms’

One of the most unique features of Sumner’s new patient tower is its use of modular patient rooms designed to be environmentally and patient friendly. Easily movable wall panels allow the hospital to change room and floor configurations in the future, minimizing the need for new construction and disruption of the patient population.

Manufactured by Nashville-based Wellness Environments, Inc., the next-generation rooms create a unique healing environment to reduce patient stress and improve recovery. These next generation rooms promote patient safety while reducing the risk of *aspergillosis* and other fungal infections linked to renovation dust and debris, according to the company.

The modular units employ an advanced non-load bearing wall system that contains a high level (88 percent) of post-consumer recycled content, is formaldehyde free, uses water based adhesives and is insulated with material made from recycled PET. Each room uses compact fluorescent lighting, water saving showerheads and faucets, and features patient controlled window shades that reduce solar heat gain.

‘Outside the box’

“We feel like we actively went outside the box in making choices for our energy and utility systems and did everything we could within our budget to make the building environmentally friendly and energy-efficient,” said Mike Messer, SRMC’s director of facility support and engineering.

Messer said Sumner anticipates a significant long-term financial savings with the automated system the hospital installed to monitor heating and air and lighting loads. “Some of the energy-efficient choices we made have positive ripple effects,” he said. “The large expanse of double-insulated glass windows, for example, helps provide natural light throughout the building and adds to the healing atmosphere of the private patient wellness rooms and the overall patient experience.”

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