

Structures Unlimited, Inc.

Energy-Efficient Skylights & Pool Enclosures

The Ultimate Daylighting Building Technology

Pre-engineered, aluminum space-frame technology and Kalwall® translucent panels combine to create ultra energy-efficient, large clearspan composite structures.

Project Profile: Edward T. Hall Aquatic Center, Prince Frederick, MD

The complex had been the dream of many for years, as the community was without such a facility. School swim teams were forced to leave Calvert County just to practice, let alone compete. Today, the Edward T. Hall Aquatic Center fills that void and also serves as an overdue memorial to a well-liked, 20-year veteran of the Maryland Senate. Until his death in 1978, Edward Hall made a practice of awarding scholarships to high-achieving students and was also a tireless advocate for the physically challenged. In that spirit, all 41,000 square feet of the center were designed in cooperation with the Calvert Memorial Hospital's wellness programs. There are three pools, a spa/hot tub, locker rooms, fitness and conference rooms, and even a pool-level space perfect for birthday parties.

The Prince Frederick, Maryland, aquatic center includes three massive, translucent, ridge-style enclosures. The largest of these pre-engineered structural aluminum composite systems is a 103-foot by 203-foot enclosure, with offset ridge to accommodate the steeply sloping site, housing a 10-lane, 50-meter lap pool complete with a diving well and spectator seating. Smolen Emr Ilkovitch and Associates Architects has a 30-year track record of highly successful projects, including a

number of aquatic facilities, and Structures Unlimited, was their choice for the Hall Aquatic Center.

The other two enclosures join the lap pool at 90-degree angles and are each 77 feet wide by 83 feet long. One covers a therapy/exercise pool with handrails and walking bars, the other a family leisure pool with kiddie slides and other small-scale water park features. Corrosion-resistant aluminum structural framing forms a total composite system with Kalwall® translucent panels and



fills the aquatic areas with glare-free daylight. The highly insulating systems also include motorized sections that can open and close as weather permits.

According to David Almy, Architect, of Smolen Emr Ilkovitch and Associates, "The use of non-ferrous metals over a large expanse was just one reason we specified a Structures Unlimited system for the 103-foot span across the lap pool. We also wanted a system that could deliver daylighting and still insulate against heat and cold." The Structures Unlimited system incorporates a translucent, highly insulating, composite structural sandwich panel system manufactured by strategic partner Kalwall Corporation. Kalwall transmits controlled, natural daylight and still delivers insulation values as high as R-20. "The Structures Unlimited enclosure was the perfect solution for our situation."

Safety is clearly a concern in pool environments, but includes one perhaps less-than-obvious hazard: glare. Sunlight glancing off the water surface has the potential to blind and disorient a swimmer or diver, but Kalwall's diffuse daylighting properties eliminate glare. The system is also virtually maintenance-free and meets local and national building codes as well as OSHA fall-through



standards. "Durability was another factor in our selection of Structures Unlimited," Almy adds. "Their pre-engineered aluminum structural framing system reduces the use of rust-prone metals in humid, chlorine-laden pool environments." Additionally, Kalwall's non-conductive, structural thermal break composite sandwich panel system eliminates condensation and corrosion. The systems are shatterproof, and offer a long life cycle and proven performance in every climate.

Originally estimated to cost \$20 million, the structure's final cost came in under budget at \$13.9 million, owing in part to the fast construction time made possible by Structures Unlimited's pre-engineering and pre-assembly. And the savings over time will continue, as the translucent yet highly insulating panels significantly reduce both artificial lighting and HVAC operating expenses for the facility. The long-awaited Edward T. Hall Aquatic Center is an affordable addition to the Calvert County Division of Parks and Recreation.

Since 1968, Structures Unlimited, Inc., has been a single-source manufacturer of translucent skylight systems and freestanding pool enclosures providing total responsibility from design through installation. Swimming pools and natatoriums around the world have discovered the significant advantages of Structures Unlimited, Inc.



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