



At the Lab. In the Field.
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EGLESTON CHILDRENS HOSPITAL

Atlanta, Georgia, USA

Fall 2005

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QUESTIONS: 1-800-267-8280 or www.kryton.com



CONCRETE
WATERPROOFING

CHALLENGE

For many years, Atlanta's Egleston Children's Hospital has provided quality pediatric care for Georgia families. According to recent projections, however, the local pediatric population will increase dramatically by 2009. To meet anticipated demand, Children's Healthcare of Atlanta is expanding and renovating several local children's hospitals, including the Egleston facility.

As part of the upgrades, a new three-level, attached parking garage is being constructed, using a new and innovative method of building shoring walls, designed by Atlanta's ABE Enterprises. Rather than digging down to the required depth and installing shoring walls from the bottom up, the ABE wall is built from the top down.

First, H-beams are punched deep into the ground around the perimeter of the structure to the required depth - in this case, 80 feet (24 metres). Five to six feet of dirt are removed, forms are created on the H-beams, and concrete tiles measuring 7' x 4' by 9" (2.1m by 1.2m by 22.5cm) are poured. Once the concrete sets, the forms are removed, a further six feet of dirt is removed and the process is repeated until the shoring wall is complete.

Paul Mandall, president of Middle Georgia Concrete Construction, says the project team chose the ABE shoring wall design for several reasons. "It costs a lot less than other types of shoring walls," he says, "and it expedites the construction process." Because it doesn't leave room outside of the wall for installing conventional waterproofing membranes, however, ABE's innovative shoring wall design requires an equally innovative concrete waterproofing system.



"the Krystol system is doing exactly what it was meant to do" - Paul Mandall, President of Middle Georgia Concrete Construction.



PROJECT CASE STUDY

The Kryton Group of Companies.

8280 Ross Street, Vancouver B.C. Canada V5X 4C6 Tel.: 1-604-324-8280 Toll Free: 1-800-267-8280 Fax: 1-604-324-8899 E-mail: info@kryton.com Web: www.kryton.com

SOLUTION

ABE Enterprises suggested that the general contractor, Brasfield & Gorrie, meet with local Kryton International distributor, the Crystal Group, to learn more about the Krystol™ concrete waterproofing system.

Based on Kryton's proprietary crystalline waterproofing technology, the Krystol system turns concrete into a permanent, waterproof barrier. When added or applied to concrete, Krystol causes millions of needle-like crystals to form, filling the spaces between concrete particles, blocking the penetration of water and corrosive elements and resisting hydrostatic pressure. Over time, incoming water causes additional crystals to form, self-sealing small concrete cracks.

Because it eliminates the need for external membranes, the Krystol system is ideal for blind wall applications like the ABE wall. The system is easy to install and significantly less expensive than other waterproofing systems. And unlike waterproofing membranes, Krystol lasts the lifetime of the structure, reducing the need for future maintenance and repairs.

The Krystol system is the world's only complete crystalline concrete waterproofing system. It includes Krystol Internal Membrane™ (or KIM™), an admixture for new concrete construction, Krystol T1/T2, a cementitious system for waterproofing existing concrete, the Krystol Waterstop System, an advanced joint design system that offers two levels of waterproofing protection, and the Krystol crack repair system, which repairs concrete cracks and protects structures against future leaks.



Shoring walls are installed from the bottom up.

"The Krystol system worked great. We were really impressed with it. It saved money for the owners, shortened the construction time line and resulted in stronger, better concrete." - Rick Anderson, president of ABE Enterprises.



An Auger places tie-back deeply into stable ground.

After preliminary tests proved successful, Brasfield & Gorrie chose the Krystol system to waterproof the Egleston parkades' shoring wall. A total of 39,500 pounds (17,917.2 kg) of KIM and 3,500 cubic yards (2,676 m³) of KIM-treated concrete were used in the project. To protect the joints between the wall's concrete tiles, they opted to use Krystol Waterstop System.

"The Krystol system worked great," says Rick Anderson, president of ABE Enterprises. "We were really impressed with it. It saved money for the owners, shortened the construction time line and resulted in stronger, better concrete." And when a few minor cracks appeared in the finished concrete, he says, "they self-sealed exactly as promised."

He says the ABE wall is growing in popularity and KIM is the most efficient and cost-effective way to waterproof it. "We've now used KIM in three of these walls," Mandall says. "In every case, the product performed just as Kryton said it would and the company stood behind the product one hundred percent."

The Egleston parkade should be completed in late 2005 and the entire Egleston Children's Hospital Upgrade will be finished by 2008. Daily progress at the site can be viewed at www.oxblue.com/client/choa.



LOCATION

Atlanta Gerogia, USA

ARCHITECT

HKS, Inc. (Dallas, TX)

KRYTON DISTRIBUTOR

The Crystal Group LLP

CONCRETE SUPPLIER

Thomas Concrete (Atlanta, GA)

GENERAL CONTRACTOR

Brasfield & Gorrie (Birmingham, AL/Atlanta, GA)

SHORING WALL CONTRACTOR

ABE Enterprises (Atlanta, GA)

SUB CONTRACTOR TO ABE ENTERPRISES

Middle Georgia Concrete Constructors (Atlanta, GA)

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