

Cardinal Health reduces heating costs through innovative wall paneling

It's easier for Cardinal Health to control temperatures and reduce HVAC costs thanks to ground-breaking precast concrete technology from AltusGroup.

The exterior walls of the new 332,000-square-foot Cardinal Health office-warehouse uses CarbonCast, an innovative precast concrete technology that replaces conventional reinforcement with a non-corrosive, high-strength carbon fiber grid. The 51-foot panels have a four-inch outer wythe and a four-inch inner wythe enclosing four inches of foam insulation to deliver a healthy R-16.

The high R value—provided at the same cost as conventional precast with R-12 or lower—significantly reduces Cardinal Health's costs to heat and cool the warehouse. The panels feature 1/2-inch horizontal reveals throughout the facade, while the office exterior also incorporates several colors and articulations for stunning visual appeal. The load-bearing panels also support the structure's roof.

In the Cardinal Health project's insulated wall panels, carbon fiber grid was used for shear transfer, connecting the inner and outer wythes to yield a 100 percent structurally composite panel. And because carbon fiber is virtually non-conductive, the panels provide an even insulation profile; they do not have problems with hot spots or cold spots that can plague other wythe connection options. The added insulation value can lead to performance up to R-37. They can be considered as an alternative to conventional precast, tilt-up or masonry construction. In addition, CarbonCast technology can also be used in architectural panels, double tees and a variety of multi-family residential uses.

The CarbonCast panels were fabricated and installed by AltusGroup founding member Oldcastle Precast, Building Systems Division.



Quick Facts

Project: Cardinal Health Office/Warehouse

Location: Baltimore, Md.

Footprint: 332,000 sq. ft.

Type of CarbonCast: Insulated Wall Panels

CarbonCast surface area: 124,500 sq. ft.

Architectural Firm: Randall-Paulson Architects Inc., Roswell, Ga.

Lead GC/CM Firm: Conlan Construction, Marietta, Ga.

Precast Company: Oldcastle Precast, Building Systems Division, Edgewood, Md.

About Altus Group

The first-ever national partnership of precast companies, AltusGroup was founded to develop, manufacture and market precast innovations such as the breakthrough CarbonCast™ line of products. With more than 20 structural and architectural locations in the United States, AltusGroup companies have an unparalleled national network of manufacturing plants, technical staff and sales personnel to ensure architects, engineers and contractors that they will get the help they need—and the quality and performance they expect—when they select C-GRID reinforced CarbonCast products.

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