



NORDSTROM FASHION PLACE

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CASE STUDY



GROUNDING IN STRENGTH.

Forterra Structural & Specialty Products

Multi-function Precast Wall Panels Do It All

Project Description

A major advantage of constructing with precast concrete walls is that the wall panels can be manufactured to serve multiple functions within a building design.

At the new Nordstrom Store at Fashion Place Mall in Murray, Utah, precast concrete wall panels from Forterra are structural, shear, insulated, and architecturally-finished with thin brick, acid-etched and sandblasted finishes. Some 20% of the panels are load-bearing. In short, these single concrete components do it all.

A large indoor shopping mall, Fashion Place provides more than 120 retail stores and restaurants surrounded by surface parking. Anchor stores include Nordstrom, Macy's, Dillard's, and Sears. The latest mall expansion added new shops and fine dining restaurants. It also relocated and doubled the size of the original Nordstrom facility. Fashion Place is owned and managed by General Growth Properties Inc., which has ownership interest in more than 180 regional shopping malls in 43 states.

The new 138,000 square-foot Nordstrom store offers a selection of clothing, shoes, accessories, and cosmetics. Amenities include an in-store alterations and tailor shop, complimentary wardrobe and shopping service, an espresso bar, and Café Bistro, a restaurant featuring bistro-style cuisine.

"As an anchor store in a regional shopping mall, the building is a standard, prototypical store for Nordstrom," says Brad Wilson, director, Callison LLC. "The two-story structure consists of a slab-on-grade foundation, structural steel frame, thin-brick-inlaid precast walls, and a built-up roof with rooftop, forced-air HVAC units."

Forterra provided the precast concrete components from its nearby Salt Lake City, Utah, facility, including 131 precast wall panels, totaling 42,000 square feet. These panels measure up to 12 feet wide and 46 feet tall and weigh over 55,000 pounds each. The panels have special "utility size," thin-brick cast into the face and feature acid-etched and sandblasted finishes in the remaining parts of the panel.



Project Type: Commercial
Location: Murray, Utah
Owner: Nordstrom
Architect: Callison LLC, Santa Monica, CA
Structural Engineer: Coffman Engineers, Encino, CA
General Contractor: Plant Construction Co. LP, San Francisco, CA
Precaster: Forterra Structural & Specialty Products, Mountain Region, Salt Lake City, Utah, facility
Precast Products: Walls and insulated wall panels

The wall panels are also insulated sandwich panels with 3¼ inches of concrete on either side of 2 inches of polyisocyanurate board insulation. The ISOCast system uses thermomass composite connections between the wythes. The insulating properties of the materials alone is about R-15, but the actual performance of the walls is much higher, above R-19, due to the mass of the wall.

All rebar and plates in the precast consist of recycled steel and the concrete mix contains between 10% and 15% recycled fly ash.



Keeping stains off the thin brick

“The use of thin brick exterior panels was an extension of the design model established by Nordstrom,” says Jim McGuire, sales manager for Forterra’s Salt Lake City, Utah, facility. “They had very specific requirements for the brick. It had to be the larger ‘utility size’ brick and the color specified was Savannah White. It’s a very particular color, with a little brown mixed in as well. The look was selected by the owners and was part of their parameters.”

Nordstrom was also interested in a very clean, precise look and especially wanted to avoid stained bricks in the final construction. “This was a big issue to the owner,” explains McGuire. “In the manufacturing process, if you’re not careful, oil and hydraulic fluid from the forming materials can get onto the panels. On a previous Nordstrom project, stains had been an issue. Savannah White is very susceptible to staining.”

In the plant, Forterra took special care so as not to stain the inlaid brick. “We used brick covered with a special wax,” says McGuire. “Then, in forming and casting the panels, we made sure that we poured the panels on beds that were not internally heated. When you heat the casting bed, the wax can melt prematurely and stain the brick. Rather than heating the casting bed itself, we covered the panels with tarps and heated the air between the tarps and the panels to keep them warm. We also were careful when we detailed and washed the brick to make sure we removed all over-pours where concrete got on the brick.”

At the time the building was completed, the owner's representative said that it was the best-looking Nordstrom building in North America.

The ability to prevent stains on the brick finish was the most rewarding part of the job according to McGuire. "Based on their previous experience, Nordstrom was very concerned," he says. "We did a lot of research and were extremely careful. We came through the project and did not leave them with stains. That was exciting. A couple more stores have been built since, so I don't know if we still have bragging rights. But, they were very pleased with the precast."

In addition to the thin-brick wall units, special precast panels were installed around the store entry to create a refined, stately look. "These consist of gigantic header panels," says McGuire. "The panels have a sizeable return and are not covered with brick. Instead, they have an acid-etch finish. The panels required special attention during manufacturing and construction because the finish had to not only be on the face but on the returns, and because the panels were very heavy. This required careful handling during erection so that we would not scratch or ding them and so that all the joints would line up."

Speed of construction a major plus

"Another advantage to using precast construction," says designer Wilson, "was its speed of construction. The project was completed on time and with no construction issues."

McGuire explains, "Nordstrom had a date that was not negotiable. They had to open the store on that date, and we provided the speed to do that. Construction was not constrained. The store was built onto the enclosed mall in an area that formerly was a parking lot and we simply spun around the perimeter erecting panels. And, there was good freeway access to the jobsite."

"We received a lot of comments. People were amazed at how fast the building went up. Overnight, we would have eight or 10 panels up covering 120 feet of wall. The walls looked like brick, but people knew no brick mason could lay that much brick in so short of a time span. Nordstrom was very happy with the schedule."