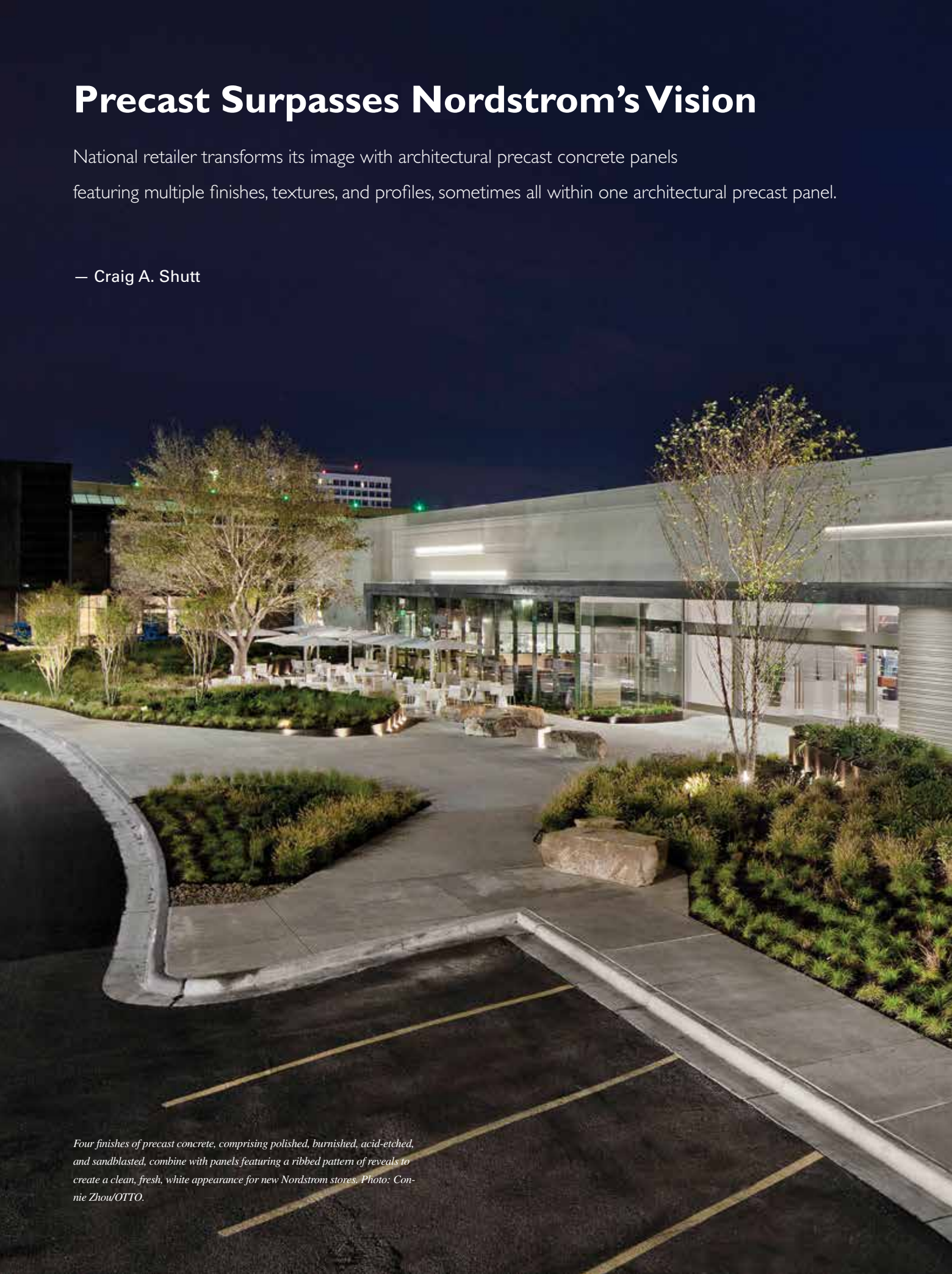
Precast Surpasses Nordstrom's Vision

National retailer transforms its image with architectural precast concrete panels featuring multiple finishes, textures, and profiles, sometimes all within one architectural precast panel.

— Craig A. Shutt



Four finishes of precast concrete, comprising polished, burnished, acid-etched, and sandblasted, combine with panels featuring a ribbed pattern of reveals to create a clean, fresh, white appearance for new Nordstrom stores. Photo: Connie Zhou/OTTO.


NORDSTROM

Designers for Nordstrom retail stores have long used insulated architectural precast concrete panels to clad their buildings. The upscale retailer has strategically projected an upscale image that blends with the traditional malls they occupy, and precast concrete has met those needs. Now, new stores are being constructed with a more contemporary look that uses four distinct finishes.

The store design circa 2000 used a precast concrete facade featuring 9-inch-thick sandwich panels with 2 inches of integral insulation. "The layer of rigid insulation created a thermal envelope that enhanced the energy performance of the store long before it was mandated," says Brad Nesset of Thermomass. The traditional look provided a two-tone appearance using a rusticated brick formliner to create a red-brick appearance on a "frame" that surrounded a projecting upper façade in a buff, limestone-like finish.

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The new façade incorporates a dimensional projection that features a clean, fresh, white appearance. The entry areas feature 1-inch-thick reveals, producing a ribbed pattern that provides color contrast and dimension while polishing the outer projections to simulate natural stones. The projecting feature wall façade incorporates horizontal bands with four finishes: polished, burnished, acid-etched, and sandblasted. These bands create subtle distinctions in the white concrete panels that project an image of sophistication and elegance while retaining the traditional durability offered by precast concrete.

The look was devised by a team at Callison Architecture, the design firm for Nordstrom, led by Min Cho, director. "The combination of horizontal reveals, layers of multiple finishes, and building proportions combined to form a natural warmth from a modern mass," he says.

The concept developed through a design-assist collaboration with Gate Precast Company, which by Summer 2015 will have cast panels for five stores. The panels (typically 32 feet by 12 feet, either oriented vertically or horizontally depending on the location on the envelope) feature 2 or 3 inches of rigid continuous insulation (depending on the climatic zone) sandwiched between 5,000- to 7,000-psi concrete. Welded-wire and thermally efficient e-glass resin connectors ensure zero thermal bridges across the wall plane, as the steel precast connections are behind the rigid insulation, ensuring Nordstrom loses less than 1% of energy through their walls.

Regardless of where a Nordstrom store is located, the wall panels will exceed the most stringent ASHRAE 90.1, International Energy Conservation Code (IECC), or local model energy code requirement with the same design criteria

A special white mix design features Texas limestone with a small amount of Georgia sand that provides a "sparkle" effect, according to Conrad Filo, quality control manager at Gate Precast.

"Min Cho wanted a superwhite panel, but our first try created a color so intensely white that it was difficult to distinguish the different finishes," he explains. "We found a balance that produced the white, shiny, color he sought, while also allowing the various finishes to stand out." Gate also consults with other precasters around the country as stores are built in ar-

eas outside of their fabrication areas. To date, that includes stores in Minnesota, California, and Hawaii.

Matching Original Finishes and Textures

"We understood that we couldn't vary color and finish from the original concept set by the design team and Gate," says Thomas Ketron, director of marketing at Clark Pacific in California. "They required a specific color and the capability to do four finishes, and they had very high expectations for the finished product. There was not a lot of flexibility in the look we could achieve."

The Wauwatosa, Wis., store panels, as with the other stores, were designed to be erected in a vertical position, although they were taller, measuring 50 feet tall and 10 feet wide, according to Bill Henderson, vice president and operations manager in Gate Precast's Ashland City, Tenn., plant. "They prefer vertical panels in some of their three-story stores, as it limits the additional structure to support the panels. This way the panels are self-supporting."

The Hawaii Nordstrom project faced a unique set of challenges, with its elevated steel structure above existing parking and limited capacity tower cranes. The precast elements were limited in weight to 75 psf due to seismic considerations and had to span horizontally 30 feet unbraced.

"Even with all these challenging parameters, we were able to brainstorm creative solutions due to the Nordstrom team's foresight to work with us early in the process," says Les Kempers, vice president for GPRM Prestress. "I was even more impressed with Nordstrom's ability to create an open synergy between the PCI producers to share their knowledge and thus ensure consistency in their new store signature. It's a pleasure to work with an owner and design team that thoroughly understand the product and the process."

Consistency across all stores and the specific finishes initially specified were critical to the brand. "The exceptional quality of the reveal patterning and finishes adds another design dimension of horizontal movement to animate the overall façade," explains Robert Filary, an associate at Callison who worked on the project. "The strategically placed finishes break down the building mass to create an inviting scale for the customer."

Polishing Vs. Burnishing

Acid-etching and sandblasting are traditional finishes, while polishing is a longstanding finish not provided by all precasters. Polishing and burnishing both are created with diamond-tipped pads used either by a handheld or machined polisher.

The amount of grinding determines the finished look and which term applies. A dull matte finish ("honed") is achieved with a small amount of grinding. A high luster ("polished') grinds off the most paste. A mid-range level creates an intermediate finish ("burnished"). (For more on these techniques, see the Spring 2014 issue of Ascent online at www.pci.org.)

The burnished finish was envisioned by Dawn Clark, vice president of store design, architecture and construction for Nordstrom, and Min Cho to create a signature finish for Nordstrom. "A 'burnished' finish was extremely rare, because it's the toughest finish to provide," says Gate's Jim Lewis, director of architectural systems.

Gate created the burnished finish for Nordstrom, but it has been polishing for much longer. The challenge comes in polishing without removing too much. "You have to pour the mix just right, because it's a polished as-cast finish, so any imperfections in the mix or form are permanently vis-

Strategic placement of each of the four finishes used on the feature wall helps to break down the mass of the building and create an inviting scale. Consistency across all stores was critical. Photo: Connie Zhou/ OTTO.

Providing a polished finish on the panels requires grinding off most of the top layer of paste to produce a shiny appearance. Photo: Gate Precast Co.

The panels feature 2 or 3 inches of rigid continuous insulation sandwiched between two wythes of precast concrete. Photo: Gage Brothers Concrete Products.

ible. Polishing exposes more of the aggregate, which is an easier level to achieve."

Gage Brothers hadn't produced burnished finishes, but it has offered polishing for more than 30 years, says Joel Bass, a project manager at Gage. "We visited Gate to see how they approached burnishing and learned their procedures. Our people got the opportunity to produce a few panels in their plant. Polishing is something we've done for a long time, so that level of grinding wasn't a concern." Adds Tom Kelley, president of Gage in Sioux Falls, SD, "Gate was very helpful in sharing their technique to ensure we all created the same finish without any problems."

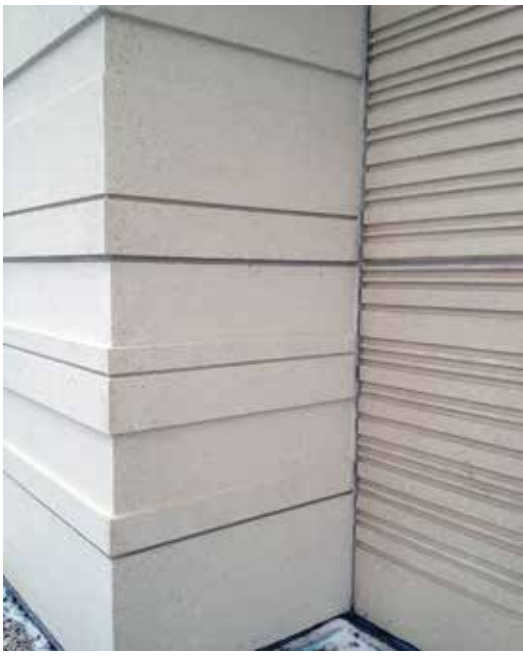
Providing these two finishes was an important part of the final look and achieving the design intent, says Filary. "Precast concrete's polished and burnished finishes elevate the design approach by blending high-end sophistication with a new modern expression for the Nordstrom brand."

Installation Move Smoothly

The installation of the panels at most of the stores has gone smoothly. Since most are anchor stores in larger shopping malls, the work must progress around existing retail centers and active shopping congestion. In Wisconsin, for instance, the store was built into an existing mall. "We have to minimize disruptions and get in and out quickly," says Henderson.

At the Wisconsin store, 122 pieces were delivered in 92 loads. Tri-axle trucks were used to transport the panels due to their weight and length, he says. Somewhat similar totals were required for other stores. A store completed in The Woodlands, Texas, by Gate's Hillsboro, Texas, plant, used 151 panels with each covering 212 square feet. Gage's 43-foot-tall project in Minnetonka, Minn., features 180 panels in two sizes (30 by 10 feet and 44 by 10 feet), along with some smaller tuck-under panels, Bass reports.

Nordstrom has opened three of these new stores: The Woodlands, Texas; St John's Town Center in Jacksonville, Fla., and The Mall of San Juan, Puerto Rico. New stores on the way include Ridgedale Center in Minnetonka, Minn. (opening Fall 2015 with precaster Gage Brothers); Del Amo Fashion Center in California (Fall 2015, Clark Pacific); Ala Moana Center in Hawaii (Spring 2016, Grace Pacific Rocky Mountain); and The Domain in Austin, Tex. (Fall 2016, Gate Precast).



Entries feature 1-inch-thick reveals, producing a ribbed pattern that provides color and dimensional contrast to the other finishes. Photo: Gage Brothers Concrete Products.

'It is one thing to have a vision but something else far greater when the reality exceeds all expectations.'

Cho has been pleased with the consistency the precasters can provide. "It is one thing to have a vision but something else far greater when the reality exceeds all expectations," he says. "Only through great partnership were we able to create unique mixes, finishes, and designs that surpassed all preconceived notions of concrete and supported the Nordstrom brand elements. The combination of horizontal reveals, layers of multiple finishes, and the building's proportions formed a natural warmth from a modern mass. Artistry truly blended with execution."

For more information on these or other projects, visit www.pci.org/ascent.