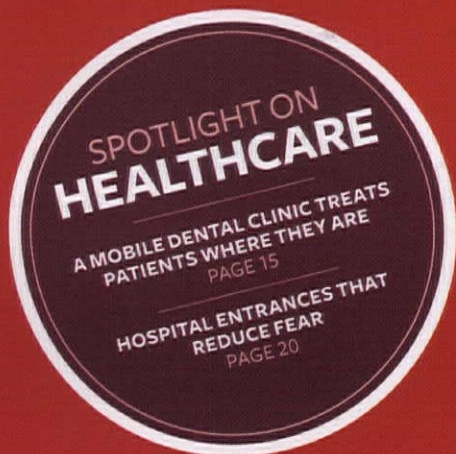


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ARCHITECTURAL NEWS + PRODUCTS

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A NEW LINE OF DANISH CLASSICS PAGE 8



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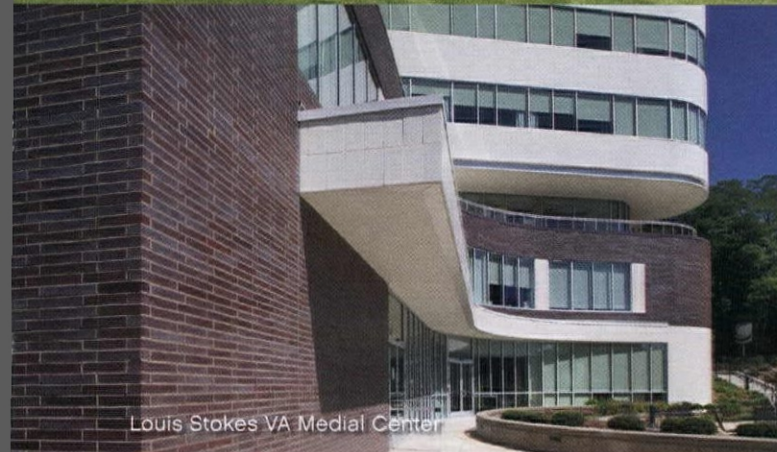
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PAGE 68

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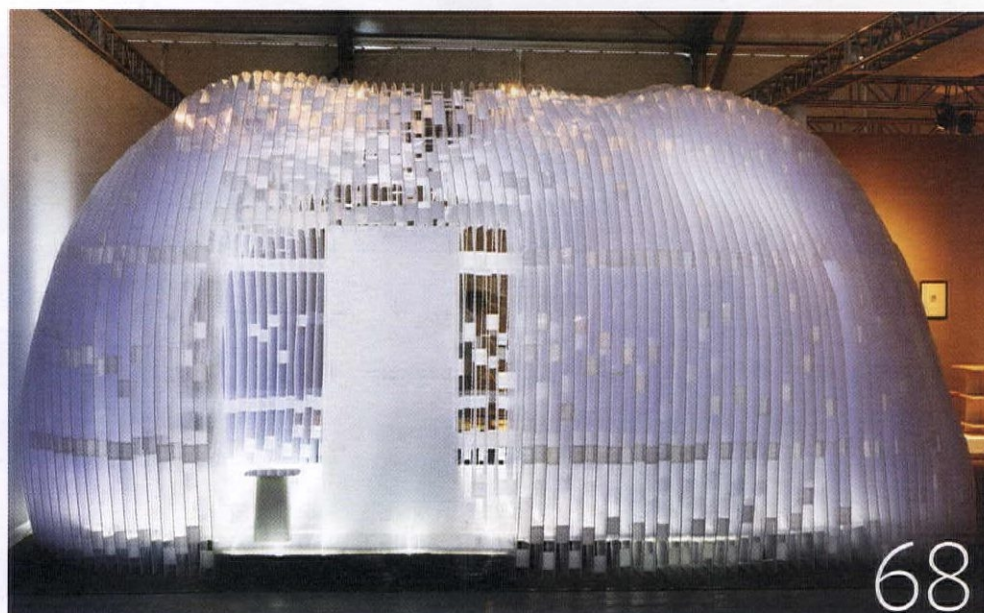
# contents

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38



68

10



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## NEWS

### 7 | IN BRIEF

Alejandro Aravena wins the Pritzker Prize. Kengo Kuma designs a toy block series. Physical objects are the focus of a major Allied Works exhibit. A Danish custom-lighting company debuts a line of fixtures.

### 62 | DATES + EVENTS

### 66 | TRADE SHOW NEWS

Prefab structures and architect-designed products dominated Design Miami.

## DEPARTMENTS

### 3 | EDITOR'S LETTER

### 10 | NEW PRODUCT ROUNDUP

### 12 | PROFILE

Architectural designer Coty Sandberg walks SNAP through SmithGroupJJR's expansion of Chicago's Center for Advanced Care.

### 72 | PARTNERS IN DESIGN

Swedish trio Front teams with Hansgrohe for two shower fixtures.

## ENVIRONMENTAL DESIGN

A prototype Responsive Street Furniture audiotation (top left) issues directions to sight-impaired users. Kengo Kuma's Oribe teahouse (top right) shimmered at Design Miami. The Fractal Emboss S fabric from Carnegie (left) adds an architectural element to wallcoverings and upholstery.

## FEATURES

### 15 | STREET CLEANING

Studio Dental takes its medical practice on the road in a custom-designed trailer.

### 20 | CURB APPEAL

Patient-centric entryways and thresholds create a more positive healthcare experience.

### 40 | MADE IN THE U.S.A.

International events affect manufacturers in the Rust Belt.

## PRODUCT SPECS

### 26 | HEALTHCARE

### 30 | RESILIENT FLOORING

### 34 | DAYLIGHTING

### 36 | PAINTS + COATINGS

### 38 | ACCESSIBLE DESIGN SOLUTIONS

## CONTINUING EDUCATION

### 42 | PUSHING THE (BRICK) ENVELOPE

Architects find new expression for an age-old material.



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## Feeling Groovy



**MY TODDLER** loves going to the doctor. And why wouldn't she? It's the place where she gets to play with a toy train set in the waiting room and take home a ton of stickers when she leaves.

But when she came down with pneumonia last month, it all changed. Suddenly, all things medical became, as she said, "scary." The X-ray machine that took images of her lungs? Scary. The ENT who peered down her throat? Scary. Even the beeps and bleeps of the hospital's intercom: Scary, scary, scary.

I can't say I blame her. When you're ill, it's the unfamiliar and institutional that sets your mind racing. It's a phenomenon that we examine in this issue of *SNAP*, looking at ways architects and healthcare providers can help put patients at ease.

We start with the design of hospital entrances and thresholds (page 20) and switch gears to **Studio Dental's** mobile practice (page 15). Our Product Specs on **Healthcare** (page 26) and **Accessible Design Solutions** (page 38) also cover wares that can lend comfort to the patient experience.

Elsewhere in the book, we examine the Great Recession's effects on Rust Belt manufacturers (page 40) and offer a bit of **Design Miami** eye candy in a wrap-up of the show and its architect-designed pavilions (page 68).

As always, send your thoughts to me at [taraskaj@bnpmedia.com](mailto:taraskaj@bnpmedia.com). In the meantime, my wishes for a happy and healthy winter.

*Julie Taraska*

**JULIE TARASKA** Editor



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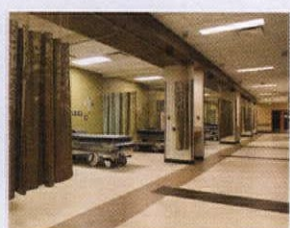
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### Connection Options for Wood-Frame and Heavy Timber Buildings

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### Creating Safer Spaces in Healthcare

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### Fenestration: Solving Renovation Issues

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### Optimized Steel Deck Design

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### Designing Adhered Masonry Veneer

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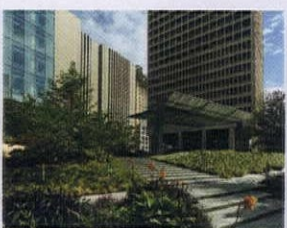
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### How to Design Playgrounds for Optimal Sensory Development

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### Landscape and the City

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### The Future of Collaborative File Sharing

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### Improving Concrete Durability and Aesthetics with High Reactivity Metakaolin

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### The Evolution of American Playgrounds From 1900 to the Present and Beyond

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### Thin, Large Format, Porcelain Tile

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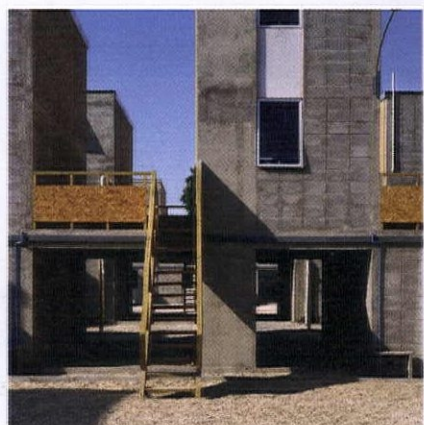
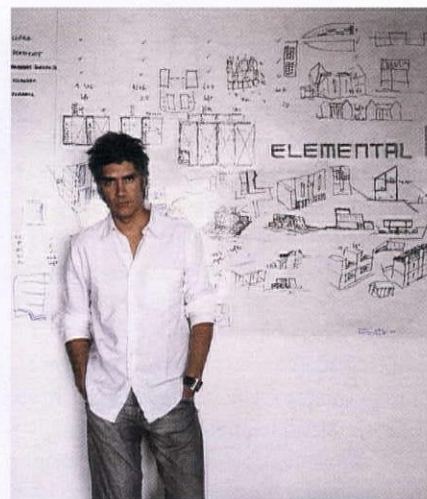
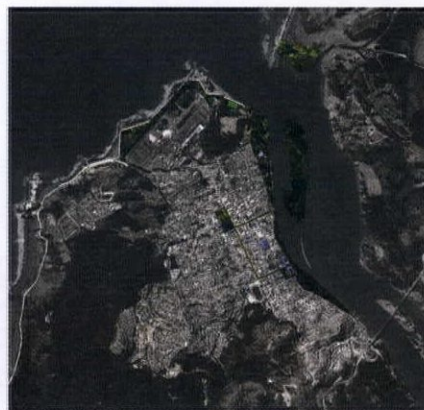
## Aravena Wins the 2016 Pritzker Prize

**BEST KNOWN FOR** designing housing projects that bring beauty and empowerment to disenfranchised populations, Chilean architect **Alejandro Aravena** received this year's Pritzker Architecture Prize, the profession's most prestigious honor.

"Few have risen to the demands of practicing architecture as an artful endeavor, as well as meeting today's social and economic challenges," the jury wrote. "[Aravena] has achieved both, and in doing so has meaningfully expanded the role of the architect."

### A RICH PORTFOLIO

ELEMENTAL's work includes the under-construction Novartis building in Shanghai (above) and an ongoing post-tsunami reconstruction plan for Constitución, Chile (top center). Aravena (top right) involves communities in solutions. For the Quinta Monroy social housing project (from left center), he built each resident half a home and let them customize the other portion. His Chairless strap for Vitra (right) leverages the wearer's weight for a comfier sit.

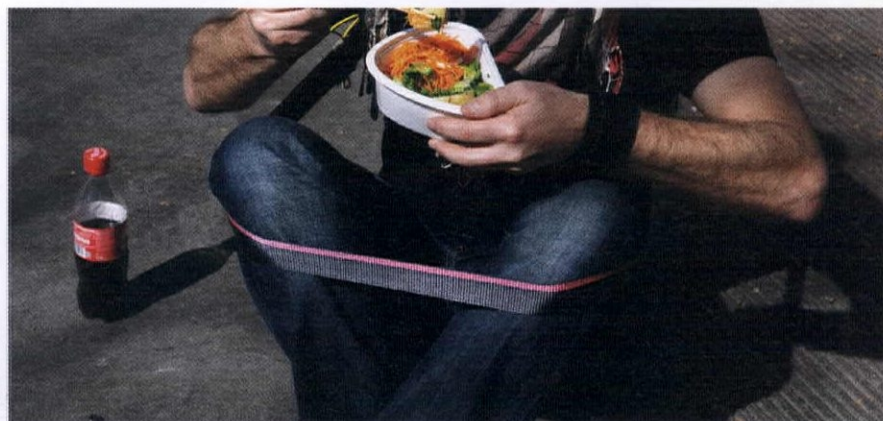


The first Chilean and fourth South American to receive the Pritzker Prize, Aravena uses simple solutions to address complex social challenges. Fittingly, he considers his Santiago-based firm, **ELEMENTAL**, cofounded in 2001, as a "do tank." "In a think tank, there is a lot of thinking but not a lot of doing," he says. "As architects, we felt it was natural to command reality by [just] doing projects [instead of] all the discussion and diagnosis."

Aravena's built work embodies that approach. His projects range from a sustain-

able reconstruction plan for Constitución, the Chilean city devastated by a 2010 earthquake and tsunami, to scores of institutional, civic, and cultural works spanning the globe.

"Quantity is easy to achieve," Aravena says. "We needed to guarantee quality in the next generation of solutions." Take Quinta Monroy, a social housing project in Iquique, Chile, where ELEMENTAL designed housing for nearly 100 families on a shoestring subsidy of \$7,500 per unit. Rather than seek cheaper property on the city's perimeter,





the architects provided exactly one half of a well-designed house that residents could eventually expand, as individual circumstances permitted. Since building Quinta Monroy, ELEMENTAL has delivered some 2,500 units of housing in urban slums.

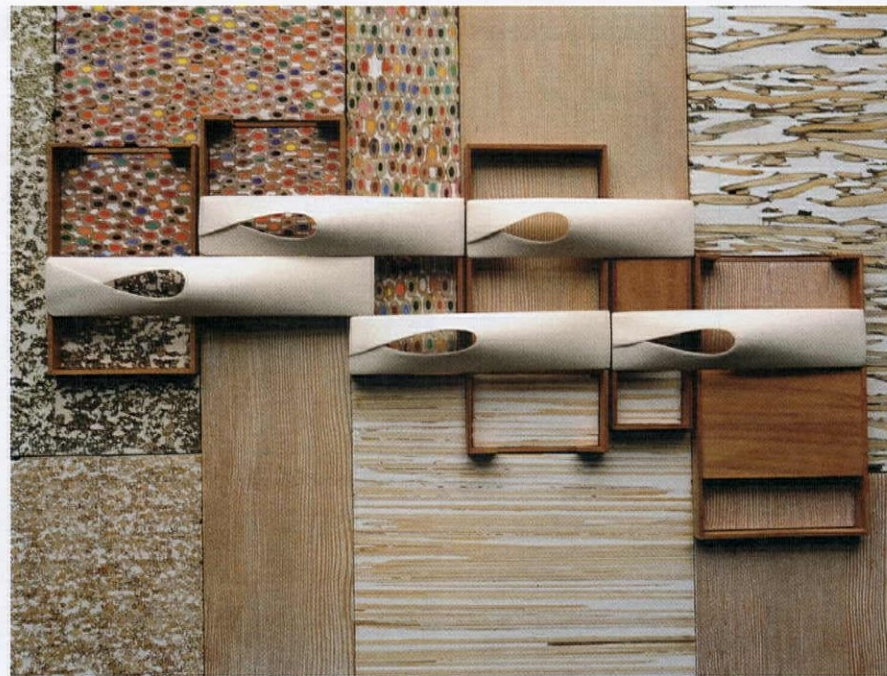
Aravena will receive his \$100,000 prize and the Pritzker's Louis Sullivan-inspired bronze medallion in an April 4 ceremony at the United Nation Headquarters.

Going forward, Aravena hopes to leverage the Pritzker and this year's Venice Architecture Biennale—for which he is chief curator—to address global concerns. For the latter event, Aravena wants to spur architects to dream up concrete design solutions to problems as varied as pollution, security, climate change, and migration. "The starting point for architecture should be as far from architecture as possible," he says. "By that I mean, problems that every single citizen in society understands, is affected by, and can have a say in."

—Anna Fixsen

## A Japanese Take on Lego Blocks

**KENGO KUMA** may be responsible for the redesign of Tokyo's massive 80,000-seat Olympic stadium—an airy timber scheme that replaced **Zaha Hadid's** ousted arena—but he has also been investigating play on a considerably smaller scale. In December, the architect revealed Tsumiki, a minimalist toy building-block system created in collaboration with the Japanese conservation group More Trees.



**WORKING IT OUT** Made of wood, Prismacolor pencils, plaster, and porcelain, this 2010 conceptual study for the Wisconsin Art Preserve is featured in Allied Works' exhibit about its design process.

Touted as the Japanese Lego, the 4-inch-high Tsumiki (the word translates as "wooden blocks") make a stylish alternative to their nubby Danish counterparts. The V-shaped pieces, fashioned from locally sourced FSC-certified cedar, feature interlocking notched legs that allow budding architects to create an infinite variety of geometric structures and forms.

Available in packages of 7, 13, and 22 pieces, Tsumiki support a good cause, too: A portion of the sales goes to protect local forests. [more-trees.org](http://more-trees.org). —AF



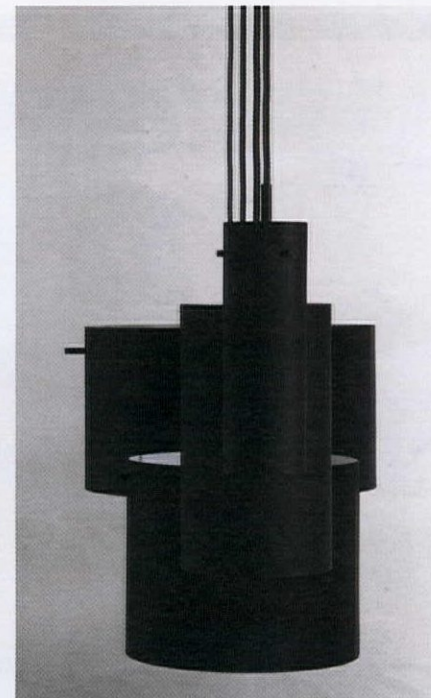
**SNAP IT UP** Kengo Kuma's V-shaped Tsumiki, fashioned from FSC-certified cedar, allow kids of all ages to build inventive geometric structures, such as animals (top) and collapsing fences (above right).

## Show of Objects

**CREATIVE EXPLORATION** meets material precision in *Case Work: Studies in Form, Space, and Construction*, the first major showcase of **Allied Works Architecture's** design process. The exhibit, which premiered at the Denver Art Museum on January 24, is slated to remain there until April 17—with a stint at Oregon's Portland Art Museum and a two-year international tour to follow.

According to **Brad Cloepfil**, who founded Allied Works in 1994, investigation lies at the core of the firm's practice: With each new project, a dialogue evolves around materiality and intention. These conversations often take the form of physical objects. *Case Work* highlights this approach, featuring 17 tactile sculptures and more than 40 drawings that push the margins of architectural modeling. The pieces are arranged in 10 handcrafted toolboxes held aloft on steel frames.

Based in New York and Portland, Oregon, Allied Works Architecture primarily designs cultural centers; noteworthy projects include the Museum of Arts and Design in New York, the Contemporary Art Museum St. Louis, and the Clyfford Still Museum in Denver. Dean Sobel, director of the Clyfford and curator of *Case Work*, collaborated with Cloepfil in both contexts. Struck by the range of objects that emerged from the museum's design, Sobel decided to present them together. "The entire exhibition calls to mind so many verbs," he says of *Case Work*. "It's very much a show about 'doing.'" —Rebecca Seidel



**MODERN LOVE** Frandsen Project's new ready-made lighting line includes the FM1954 Classic series of pendants, designed in the mid-1950s by Danish architects Friis & Moltke.

## Frandsen Project's Plug-and-Play Lights

**ONE OF THE** hospitality industry's go-to lighting sources, **Frandsen Project** has kept a low profile for the last 40 years. But that's about to change, as the Danish brand—which has designed, developed, and manufactured custom classic fixtures for boutique lodgings like CitizenM New York and Copenhagen's Tivoli Hotel—has launched a line of ready-made fixtures.

"Our goal is to produce quality lighting for both the contract and retail markets," says director Thomas Hansen of the Rewired collection, which will debut January 13 in Europe. (U.S.-compatible fixtures should be available in February.) Initial offerings comprise colorful aluminum pendants, Modernist sconces, and linear floor lamps.

The line's designers work with outside talent as well, such as the Danish duo **Friis & Moltke**. The architects not only created new lights for Rewired but also leased Frandsen the rights to their earliest works: the FM1954 Classic series, developed in the mid-1950s.

"We are proud to be among the few Danish design brands that actually produce our products in Denmark," adds Hansen of the collection. The fixtures will be available to the trade and public through select retail showrooms and stores, including Conran London. —Julie Taraska



# Durable Efficiency

## Vinita Health Center, Vinita, OK

Owner: Cherokee Nation

Architect: Childers Architect, Fort Smith, AR

General contractor: Flintco Constructive Solutions, Tulsa, OK

Installing contractor: Harness Roofing, Tulsa, OK

Profile: Snap-Clad

Color: Granite

"We added the metal roof because of its durability. We selected the lighter PAC-CLAD color to help us go after LEED Silver Certification."

Breck Childers, project architect, Childers Architects

## SNAP-CLAD

Granite - Energy Star - Cool Color

### CASE STUDY

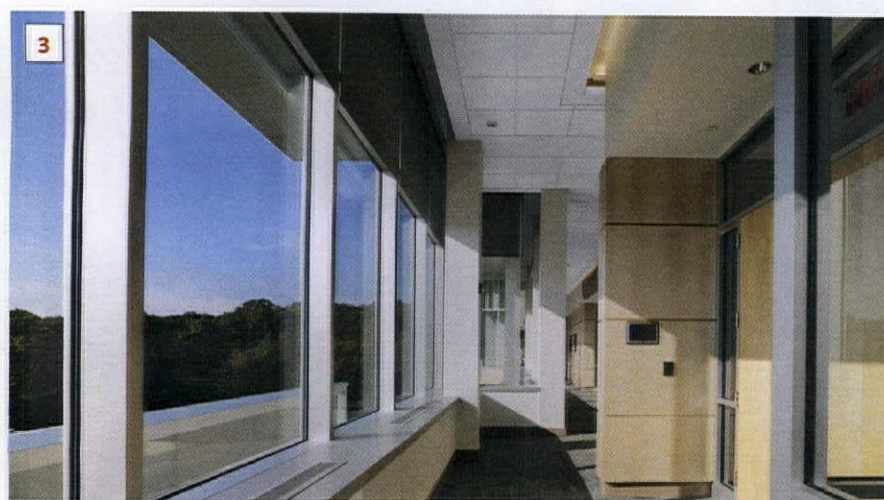


See us at the IRE - booth 1256

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## Spotlight on fresh contract and residential offerings

### 1. IOLITE

**MANUFACTURER:** Nora Lighting

**PERFORMANCE:** Suited to new installations and retrofits, these LED modules can be attached and adjusted without tools.

**PRICE RANGE:** \$

**APPLICATIONS:** The fixtures provide 600 to 800 lumens and may be used with over 100 square and round trims.

**NORALIGHTING.COM**

(SNAP #200)

### 2. FRACTAL EMOSS S

**MANUFACTURER:** Carnegie

**PERFORMANCE:** Part of the Between the Lines collection, this antibacterial, low-VOC fabric comes in roughly a dozen colors. It is Cradle to Cradle Silver certified.

**PRICE RANGE:** \$\$

**APPLICATIONS:** The embossed pattern adds an architectural element to wallcoverings, panels, and upholstery.

**CARNEGIEFABRICS.COM**

(SNAP #201)

### 3. AXIOM PERIMETER SHADE POCKETS

**MANUFACTURER:** Armstrong

**PERFORMANCE:** Compatible with Lutron's Sivoia QS roller shades, this solution works with drywall and acoustic systems to provide a seamless fit between ceiling and shade pockets.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** Installation is up to 12 times faster than it is with drywall pockets.

**ARMSTRONG.COM**

(SNAP #202)

### 4. ARCHITECTURAL PANELS

**MANUFACTURER:** Tekstur

**PERFORMANCE:** These low-VOC embossed panels come in cork, bamboo, and paper phenolic (a combination of recycled paper and plant-based resin).

**PRICE RANGE:** \$\$

**APPLICATIONS:** Suitable for interiors and some exteriors, the panels come in a dozen patterns.

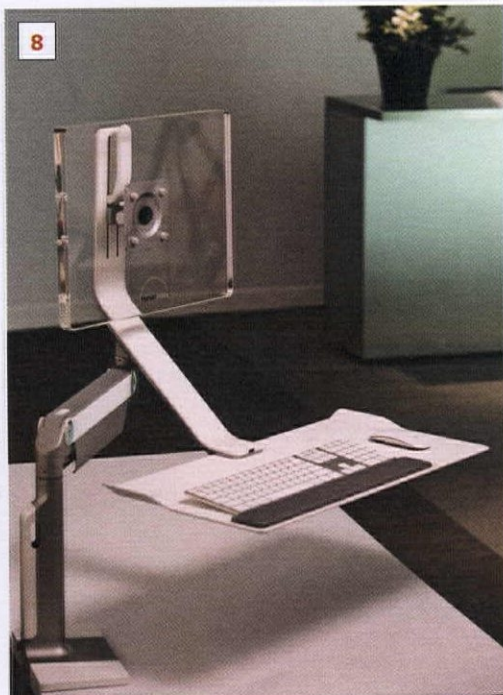
**TEKSTUR-SURFACES.COM**

(SNAP #203)

KEY \$=VALUE, \$\$=MID-RANGE, \$\$\$=HIGH-END

 = ECO-FRIENDLY ATTRIBUTES





##### 5. VINYL FOLDING DOORS

**MANUFACTURER:** La Cantina  
**PERFORMANCE:** These doors' narrow stile-and-rail profiles allow for sweeping views. Concealed multipoint locking and standard low-E glass improves the doors' security and energy efficiency.  
**PRICE RANGE:** \$\$-\$\$\$  
**APPLICATIONS:** Suited to residential and hospitality use, the doors come in white or tan.  
[LACANTINADOORS.COM](http://LACANTINADOORS.COM)  
 (SNAP #204)

##### 6. ISLAND

**MANUFACTURER:** Knoll Textiles  
**PERFORMANCE:** Woven with UV-resistant Sunbrella yarn, this indoor/outdoor textile features a large-scale pattern of interlocking circles.  
**PRICE RANGE:** \$\$  
**APPLICATIONS:** Antimicrobial and antifungal properties make this fabric—part of the Outbound collection—ideal for commercial use.  
[KNOLLTEXTILES.COM](http://KNOLLTEXTILES.COM)  
 (SNAP #205)

##### 7. KENSLEY THIN VENEER

**MANUFACTURER:** Oldcastle Architectural  
**PERFORMANCE:** These lightweight stone aggregates, which boast a traditional ashlar pattern and  $\frac{3}{8}$ -inch mortar joints, install without footings.  
**PRICE RANGE:** \$\$  
**APPLICATIONS:** Resistant to salt, water, and thaw damage, the veneers suit nonbearing indoor and outdoor uses.  
[ECHELONMASONRY.COM](http://ECHELONMASONRY.COM)  
 (SNAP #206)

##### 8. QUICKSTAND LITE

**MANUFACTURER:** Humanscale  
**PERFORMANCE:** This height-adjustable workstation with an articulating arm can be affixed to existing desks to support sitting and standing postures.  
**PRICE RANGE:** \$\$  
**APPLICATIONS:** The light, compact unit is designed for collaborative, healthcare, and hot-desking environments.  
[HUMANSCALE.COM](http://HUMANSCALE.COM)  
 (SNAP #207)





## PROFILE

INTERVIEW BY JULIE TARASKA

# Coty Sandberg: Healthcare Hero

Associate, SmithGroupJJR, Chicago

### HOW DID YOU HELP EXPAND CHICAGO'S AIMMC CENTER FOR ADVANCED CARE?

For the facility, which is part of the Advocate Illinois Masonic Medical Center [AIMMC], we at **SmithGroupJJR** integrated cancer care, digestive health services, and ambulatory surgery into a single location.

### TELL US ABOUT THE NEW ENTRYWAY.

We wanted the building to instill a bit of the confidence needed for each individual's journey to healing. Patients travel along a curving glass wall to the entry, where the architecture dissolves into glass planes that extend outward and upward into a three-story atrium. The atrium is drenched with daylight and has a purposely natural materials palette of stone and wood, including travertine tiles and Oberflex's perforated Obersound panels [right].



### HOW DOES THE CENTER CATER TO THE PHYSICALLY CHALLENGED?

Hospitals are notorious for being labyrinths, so intuitive wayfinding was of utmost importance. All the patient intakes and amenities are located along a naturally bright corridor. The flowing geometry and abundant glass allows patients to see their destinations immediately upon arrival instead of having to rely on signage to get them there.



### WHICH PRODUCTS DID YOU USE TO KEEP SPACES STERILE?

Rubber floors with integral bases [including Nora's Eco tile, left], five feet of solid surface on the walls, and

Armstrong clean room-grade ceiling tiles were among the options we chose for the operating rooms and other treatment areas of the hospital.

### WHAT IS THE NEXT BIG THING IN HEALTHCARE DESIGN?

Hospitals are becoming destinations to support wellness rather than just treat sickness. We're seeing hospitals trending toward community-centric programs that appeal to patients and families—from the inclusion of in-house yoga classes to a variety of waiting-room experiences.



Since joining SmithGroupJJR's Chicago office in 2008, **Coty Sandberg** has worked on projects in the healthcare, education, and technology sectors, including the University of Illinois Electrical and Computer Engineering Building. She received her master of architecture from Savannah College of Art and Design.

4

The types of chemotherapy rooms AIMMC offers, ranging from communal to private.

The architectural designer stands in a hallway of the Advocate Illinois Masonic Medical Center's Center for Advanced Care, in Chicago. The 156,000-square-foot facility houses six outpatient operating rooms, 18 prep and recovery rooms, 16 infusion bays, and a teaching area.

PHOTOGRAPHY: MARTA GARCIA



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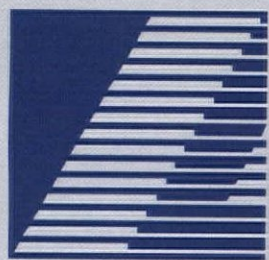
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SNAP 54

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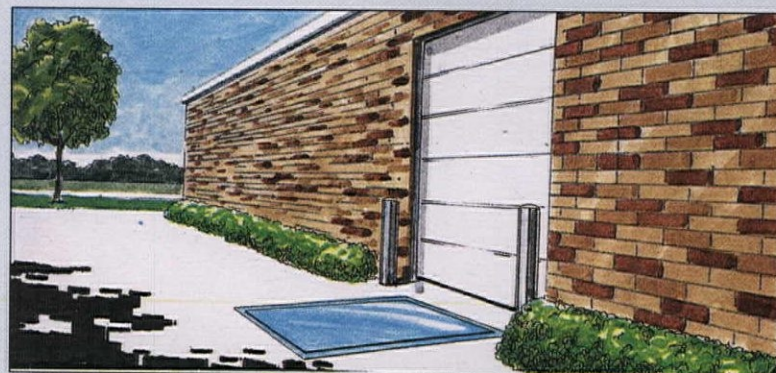


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## STUDIO DENTAL, SAN FRANCISCO

# Street Cleaning

**PROBLEM:** Fashion a mobile dental office from a truck trailer typically used to transport cargo.

**SOLUTION:** Open the space to daylight and employ a limited materials palette so the interior feels larger than its 230 square feet.

**MORE THAN 83 PERCENT** of American children visit the dentist annually, according to the Centers for Disease Control and Prevention. By adulthood, however, that laudable figure plummets by more than a quarter. While discussing the phenomenon with entrepreneur Lowell Caulder, Dr. Sara Creighton realized that more San Franciscans would probably take better care of

their pearly whites if the dentist came to them. Thus they hatched Studio Dental, a dental practice on wheels.

The pair tapped Montalba Architects to design the fleet's inaugural vehicle. Creighton had worked with the Los Angeles firm before, when its principals renovated her brick-and-mortar office. Montalba was involved in every phase of the project, from

**SMILES FOR MILES**  
Pictured here on the Pacific Coast Highway, Studio Dental, housed in a refashioned 30-foot-long cargo trailer, travels to its various appointment sites pulled by a Ford F-350 Super Duty.





## CASE STUDY: HEALTHCARE

creating the logo to finding the right truck trailer to serve as the facility. The partners' choice: ATC Trailers' Quest Cargo, whose 11-foot-high interior could easily accommodate the proposed 230-square-foot design.

"We wanted the office to feel as warm, relaxing, and open as possible," says Montalba associate principal Akiko Suzuki. Natural light was key to creating the desired atmosphere, so the design team instructed Anaheim-based fabricator Pacific Westline to cut skylights into the trailer's roof. The illumination enters the trailer through a custom aluminum-frame assembly of tempered glass and frosted vinyl; the light filters through CNC-milled perforations in the Corian ceiling.

The overhead surface also features two irregular polyhedron shapes enclosed in perforated Corian. They're more than mere design elements: Situated directly above the dental chairs in the two operatories, they contain screens on which doctors and patients can view X-rays.

Corian also clads the side of the corridor that runs alongside the operatories, while Richlite, a paper-based composite, lines the other. White oak flooring and millwork fill the space between them. In choosing these materials, Suzuki says, "We wanted to keep the office clean, sanitary, and very much contemporary."

All the studio's vertical surfaces feature perforations whose pattern was inspired by a tree canopy. While portions of the abstract design emit daylight, other holes have mirrored material mounted behind them. PEPP acoustical foam is tucked behind the finished surfaces.

Suzuki worked with the prescribed requirements of a dental setup, including specific plumbing and suction needs, as well as the size and angle of the dental chairs. To keep things roomy, she consolidated the plan whenever possible. The operatories share a sink installed in the oak-veneer millwork element separating them, for example, while a small seating area located directly off the office's sterilization room features a tablet that allows patients to check in and pay for visits with Studio Dental's remotely based receptionist. Of the tech touches, Suzuki says, "It's very Silicon Valley." ■



### ARCHITECTS

Montalba Architects

### TYPE

Healthcare

### PRODUCT

Rift-cut white oak

### MANUFACTURER

Contempo Floor Coverings

### PERFORMANCE

The 3/4-inch-thick, 8-foot-long planks from Contempo's Berkshire collection are in finished in Valencia Oak. Rift sawing produces a uniform figure and wears more evenly than plain-sawn lumber.

### APPLICATIONS

Commonly employed in hospitality and

residential environments, the flooring is increasingly sourced for healthcare uses in combination with low-VOC coatings and eco-friendly cleaning and maintenance regimens.

### PRICE RANGE

CONTEMPOFLOORCOVERINGS.COM (SNAP #208)

### BRIDGE WORK

The millwork separating Studio Dental's two stations—finished in a white oak veneer—also houses plumbing and a computer terminal.

## IN THIS PROJECT



### SOUND SILENCER

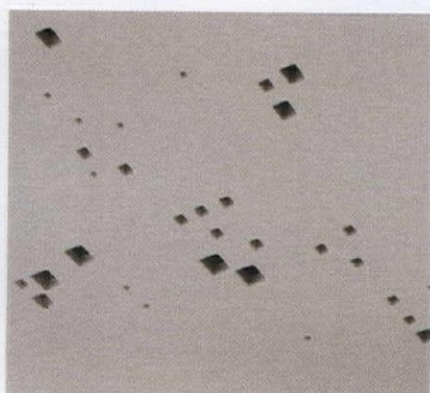
**MANUFACTURER:** Acoustical Surfaces

**PERFORMANCE:** Thermal-molded, this semirigid PEPP acoustical bead foam attaches to planks and ceilings via adhesive, T-bar grid, and mechanical fasteners. One- and two-inch thicknesses have STC ratings of 9 and 13.

### PRICE RANGE:

**APPLICATIONS:** Ideal for high-traffic commercial, institutional, and industrial settings that require impact- and moisture-resistant acoustical dampening.

ACOUSTICALSURFACES.COM (SNAP #209)



### CORIAN

**MANUFACTURER:** DuPont

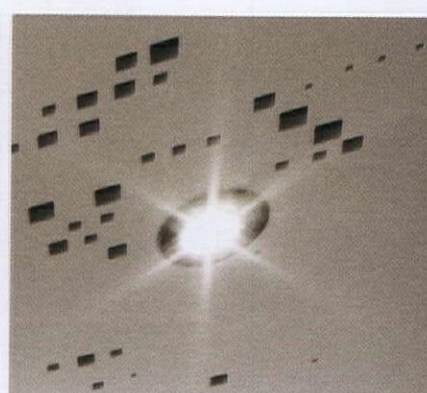
**PERFORMANCE:** The nonporous material is a frequent choice for seamless counters and vertical surfaces as it resists stains, mold, and mildew.

### PRICE RANGE:

**APPLICATIONS:** In healthcare settings, Corian is used to finish corridor hallways, operating-room walls, showers, and baseboards.

DUPONT.COM

(SNAP #210)



### FLANGED DOWNLIGHT

**MANUFACTURER:** Specialty Lighting

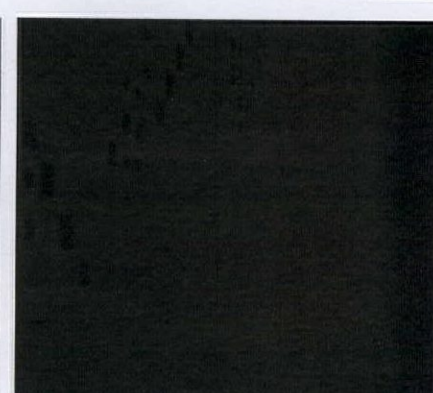
**PERFORMANCE:** Connectible LED recessed downlights supplement daylighting with task-oriented illumination. As many as six canisters may be linked.

### PRICE RANGE:

**APPLICATIONS:** Commonly specified for light bridges, curio cabinets, wall units, and theaters installations in residences and offices.

SPECIALTYLIGHTING.COM

(SNAP #211)



### RAINSHADOW

**MANUFACTURER:** Richlite

**PERFORMANCE:** This roughly quarter-inch-thick cladding material resists stains, heat, and scratches.

### PRICE RANGE:

**APPLICATIONS:** Made with certified kosher materials, the Class A fire-rated panels suit interior and exterior uses alike, including counters, tabletops, and rainscreens.

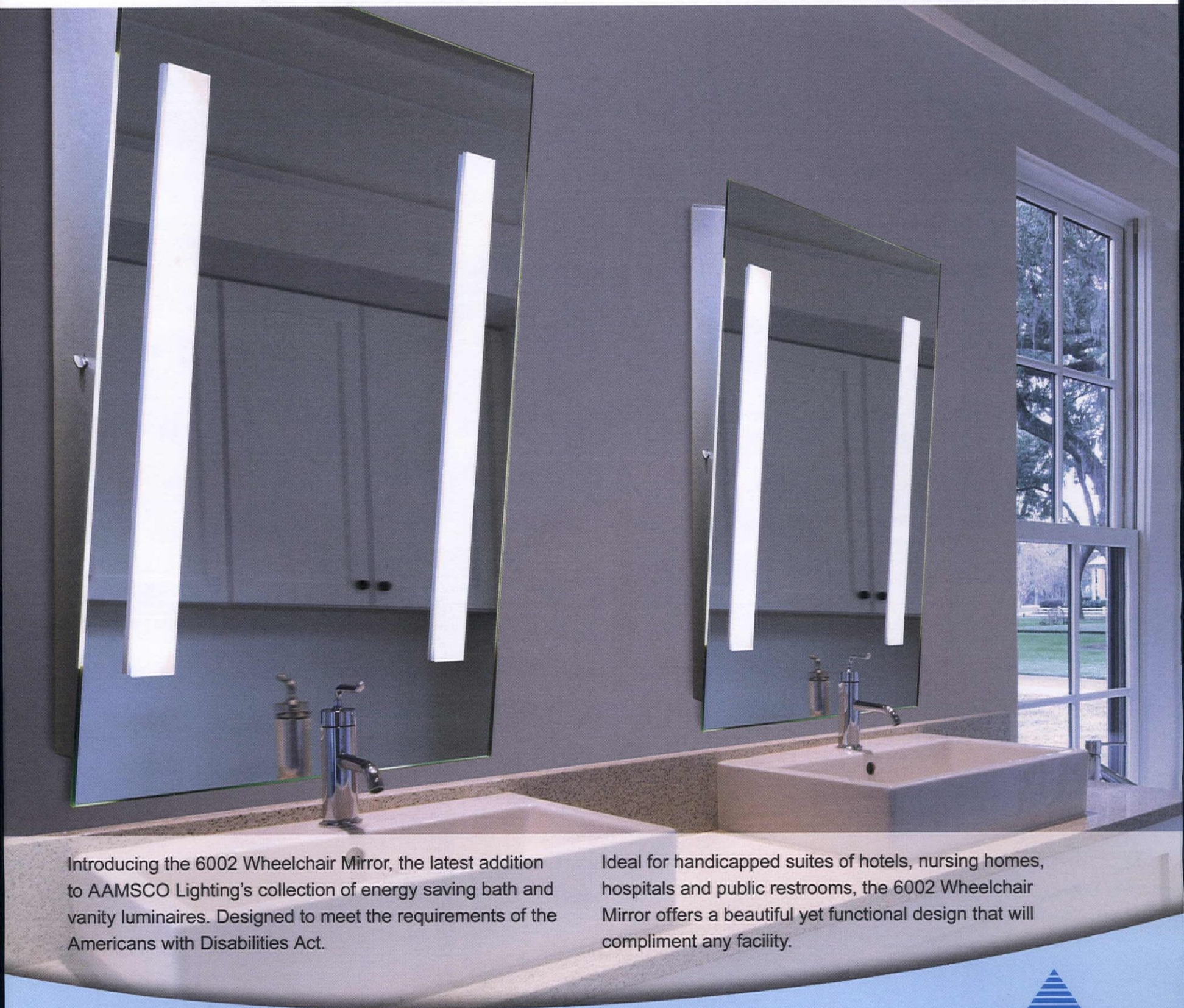
RICHLITE.COM

(SNAP #212)



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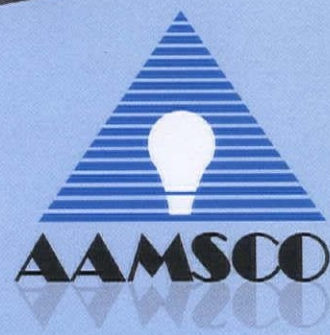
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**QUITE A LOOKER**

Eye-catching color and a light-filled interior help the Astoria Primary Care Clinic establish an upbeat presence on a bustling Queens, New York, street (top and far right). The clinic radiates a warm glow at night (right).

## Curb Appeal

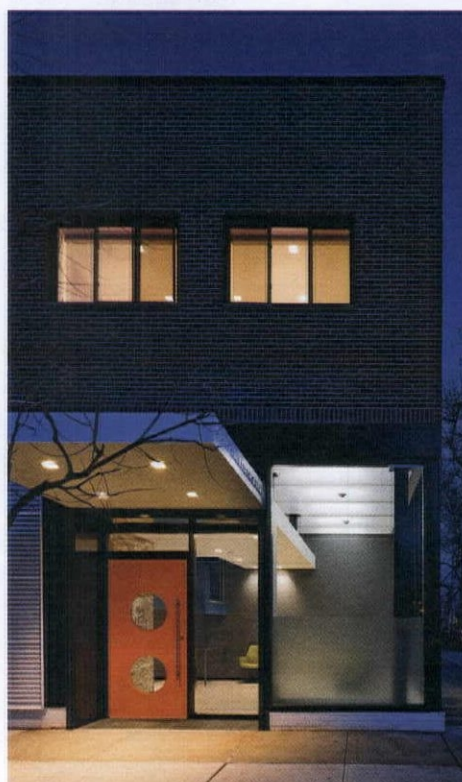
*Patient-centric entryways and thresholds make for a more positive healthcare experience.*

BY SAM LUBELL

**GOING TO THE DOCTOR'S** office—or worse yet, the hospital—is always stressful. Doing so in a foreboding building chockablock with meandering corridors, glaring klieg lights, and blaring intercoms certainly doesn't help any. Architects and designers who specialize in healthcare facilities are, of course, attuned to this reality.

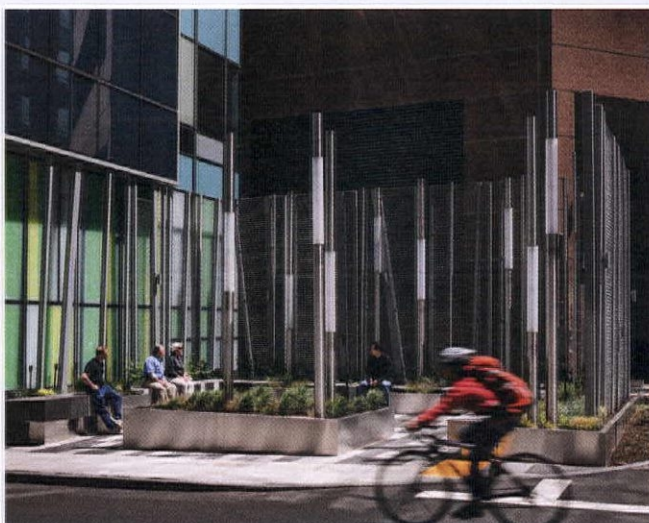
"A lot of what we're trying to do is take the sting out of being in a medical environment," says Ronald Reed, principal of **Westlake Reed Leskosky**. The New York firm has worked on more than a dozen hospitals, including the Cares Tower and hospital expansion at the Louis Stokes Veterans Administration Medical Center in Cleveland.

Key to the process is diffusing patient tension from the outset. This means creating facades, entryways, and



PHOTOGRAPHY: ALEXANDER SEVERIN





#### GOING WILD

Architects Payette used patterns, texture, and fiber optics to create a forest of sorts around the James Mandell Building's ambulance bay and base (above and far left). The colorful landscape extends up to a new pocket park at one end of the facility (left).

thresholds that attract the eye and calm the mind. Transparency in the facility's appearance and function can reduce anxiety, while waiting areas that take cues from hospitality help put users more at ease.

#### ASTORIA PRIMARY CARE CLINIC

Located on a busy thruway, Astoria Primary Care Clinic long suffered from an identity problem: It had none. "It was banal," says **Michielli + Wyetzner** principal Michael Wyetzner of the dilapidated brick building that housed the clinic, part of the New York Hospital Medical Center of Queens.

To call attention to the two-story facility, the New York-based architects transformed its anonymous facade. They masked a portion of its irregular brick patterns with a perforated steel rainscreen from **Centria**, added a seemingly floating custom aluminum entrance canopy, and installed an aluminum door enhanced with bright orange **Tiger Drylac** powder coating. A new **Kawneer** 1600 Wall System 2 storefront glazing system also gives visitors the chance to see what's going on inside the clinic.

The firm gutted the building's interior and installed a **Polygal** ceiling system backed by fluorescent lights; polycarbonate panels diffuse the illumination, creating a glow visible both inside and outside the building. Another interior focal point is a multihued enclosed sculptural staircase, which opens to the clinic's small lobby space via a peekaboo window formed from **Pilkington Pyrostop's** aluminum series framing.

#### BOSTON CHILDREN'S HOSPITAL, JAMES MANDELL BUILDING

You might not consider a hospital ambulance ramp an entrance. But for distressed patients and caregivers riding inside an emergency vehicle, it's an important entry point, giving a first impression of the facility.

The James Mandell Building at Boston Children's Hospital is a unique case. Because of security concerns, the emergency department does not have a pedestrian patient entrance; instead, ambulances bring passengers in need of urgent care to a protected sloped entryway off Binney Street.

The department also could not have windows facing the street, so local practice **Payette** created a special feature—what associate principal Ching-Hua Ho calls an urban forest—around the building's base. Mixing patterns and textures, the architects sandwiched bright graphics and **Panelite** ClearShade glass between two layers of **Bellwether Design Technologies** glazing, backing about 10 percent of the area with fiber-optic lights by **Visual Lighting Technologies**. The resulting playful, street-level landscape mitigates the concrete and asphalt that marks the industrial area, helping soften the approach to the hospital.

Above the ambulance entry ramp, Payette installed a **Hunter Douglas** Luxalon linear ceiling system imbedded with LED lighting, creating a vital, even futuristic, transition down to the drop-off point. Also, a covered walkway leads patients and staff up the hill to a new pocket park, which is enclosed by a vine-covered **Greenscreen** metal-mesh wall.



**WELCOME MAT**

Hospitality design inspired the look and feel of the double-height lobby at Gates Vascular Institute in Buffalo (top and bottom). The dedicated patient entrance is reached via a stone-paved courtyard (left).

**GATES VASCULAR INSTITUTE**

The 10-story Gates Vascular Institute in Buffalo combines clinical, educational, and research facilities for three entities: the University at Buffalo, Kaleida Health, and the Jacobs Research Institute. With this much programming, the building needed its entry sequences to be as clear as possible.

Reserved for patients, the main entrance takes cues from hospitality design. “The doctors said they wanted people to feel like they were coming into a hotel,” says Craig Booth, a senior designer at Los Angeles’s **Yazdani Studio**, which oversaw the project. To that end, the entryway—reached via a stone-paved courtyard—is grand in scale and rich in detail.

The high-gloss, **PPG** Corafan-clad ribbon that wraps around the building’s facade swoops down to form the entrance canopy. A **Kawneer** 600 series curtain wall allows patients and visitors to see into the Institute’s double-height lobby, which features precast terrazzo flooring and stylish linear lights. Additional high-quality finishes elevate the interior, including a **Formglas** lattice screen in the waiting area and, along the hallway, reinforced ribbed fiberglass wall panels by **Southside Precast Products**.

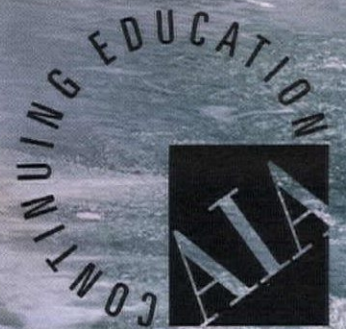
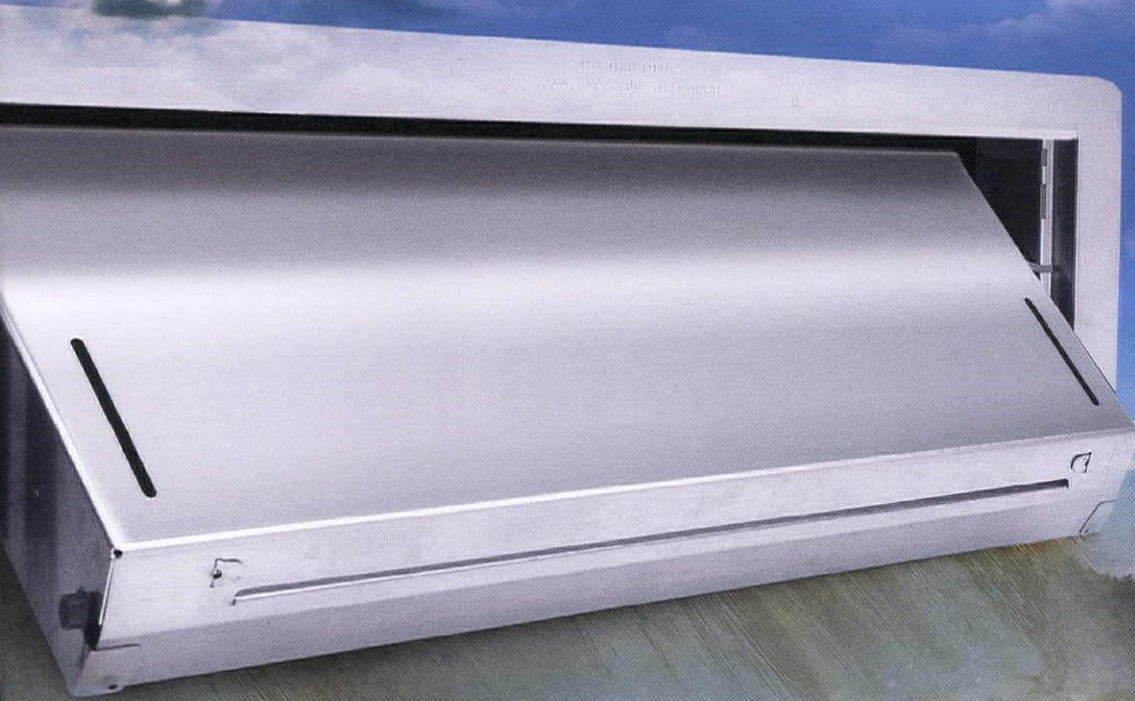
Just as important, the initial threshold also offers a variety of seating options to accommodate patients’ different moods. “If you want to be a recluse, there are places you can sit,” says Booth. “If you want to interact with people, there are places for that, too.”

By carefully coordinating space and materials, these designers put patients at ease. After all, you can only make one first impression. For forward-thinking hospitals and healthcare facilities, becoming more hospitable starts with reconsidering the experience from outside the doors to the initial steps inside. ■



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**SNAP 69**







## Feeding the Soul

**THE SKY FARM** at the **Sidney and Lois Eskenazi Hospital** is no ordinary rooftop garden. Spanning the entire 30,000-square-foot ambulatory-care building, the LEED Gold-certified project—on the Indiana University campus—offers more than farm-to-table ingredients for the facility's food services; it also provides educational and therapeutic opportunities for patients, staff, and the community at large.

Global design firm **HOK** enlisted Indianapolis-based landscape firms **Ratio Architects** and **NINebark**, among others, to put Eskenazi Health's commitment to the importance of

fresh food into practice. Thus the Farm, which is managed by urban agriculture organization **Growing Spaces Indy**, produces an edible bounty—such as carrots, beets, greens, and squash—in its custom-built planters.

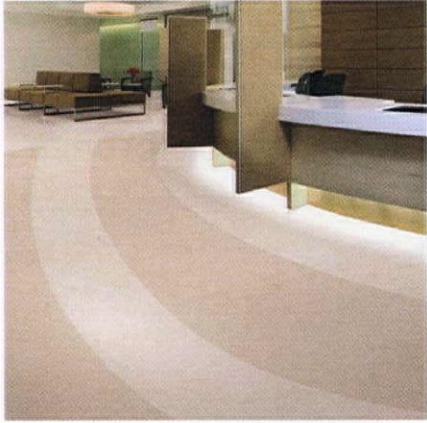
Benches placed alongside the greenery under a metal trellis provide “an area of respite” for visitors, says Ratio senior associate Ken Boyce. Hospital patients can attend free cooking and nutrition classes, while the public is invited to summertime Veggie Fridays, where dietitians and chefs demonstrate how to prepare healthy meal options. —*AnnMarie Martin*



### URBAN FARMING

Carrots, beets, and squash are among the fresh produce grown in the rooftop garden at the Sidney and Lois Eskenazi Hospital (top). Sheltered seating on the site allows patients and visitors to enjoy the sun and greenery (above).





#### BIOSPEC SR FLOORING

**MANUFACTURER:** Mannington Commercial

**PERFORMANCE:** This resilient vinyl flooring offers superior traction in 16 colorways. It features a commercial urethane finish that eliminates the need for polish.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** Available in 6-foot-by-6-inch sheets, the ADA-compliant flooring is ideal for areas that require slip resistance. It may be used in wet or dry conditions.

**MANNINGTONCOMMERCIAL.COM**  
(SNAP #213)



#### CASCADE TABLES

**MANUFACTURER:** Carolina

**PERFORMANCE:** These wooden occasional tables in organic playful shapes inject warmth and utility into waiting areas and patient lounges.

**PRICE RANGE:** \$\$

**APPLICATIONS:** The tables are offered in four styles and two heights. Available top options include veneer, paint, and solid surfacing; the European beechwood frame can be stained or painted.

**CAROLINABUSINESSFURNITURE.COM**  
(SNAP #214)



#### APEX TEXTILE

**MANUFACTURER:** CF Stinson

**PERFORMANCE:** A vinyl surface with a Crypton Revl coating and polyester/cotton backing, this Greenguard-certified textile repels pen marks, soil, liquids, and stains.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Available in 23 hues, the upholstery fabric contains an antimicrobial agent and is ideal for hospitality, healthcare, and retail seating.

**CFSTINSON.COM**  
(SNAP #215)



#### AVA CHAIR

**MANUFACTURER:** Nemschoff

**PERFORMANCE:** Available in wing- and arcade-back models, the recliner comes with standard casters or an optional central brake-and-steer wheel system.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** The open, pivoting arm design makes the chair easier for patients to use and caregivers to clean; the infinite back recline function adds comfort to patient and treatment rooms.

**NEMSCHOFF.COM**  
(SNAP #216)

**KEY** \$ = VALUE, \$\$ = MID-RANGE, \$\$\$ = HIGH-END



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## Come Together

**THE EMORY BRAIN HEALTH CENTER** in Atlanta is taking medical collaboration to new heights. To support the facility's efforts, local design firm **VCave Healthcare** revamped a building formerly occupied by the Centers for Disease Control and Prevention. Today the space gathers Emory's psychiatrists and neurologists—once spread across five structures—under one roof, allowing them to better attend to the needs of their mobility-challenged patients.

The configuration clusters clinics in the core of the building. Gone are the doors that previously separated the units, now all convenient to the elevators. Doctor touchdown stations sited in the middle of the clinics encourage cross-specialty collaborations that result in more holistic treatment plans. Practitioners are encouraged to interact with academics in spaces like the resident/fellow lounge. "It's one of the few Emory facilities where research and clinical are brought together," says VCave project director Mary Porter. The result? Both parties, she adds, "can work on innovative care models they didn't have the opportunity to work on before." —AM



#### GO WITH THE FLOW

A resident/fellow lounge (left) and bullpen-like touchdown stations (right) promote collaboration among researchers and medical professionals at Atlanta's Emory Brain Health Center.





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## DIVISION 10 INTERIORS

INTERIOR OFFICE PARTITIONS,  
FRAMELESS SHOWER DOORS,  
STACKING PARTITIONS,  
DEMOUNTABLE WALLS

Photo: Roy Oorns

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SNAP 6

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SNAP 41

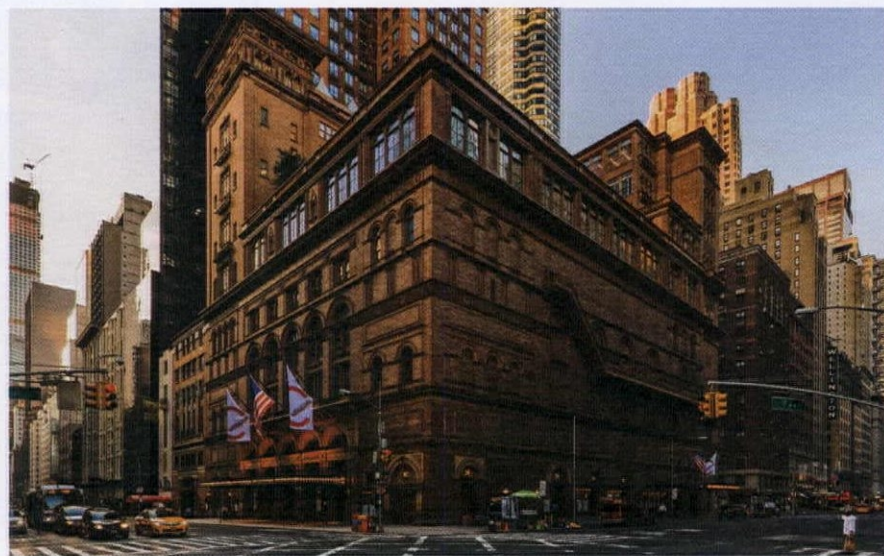
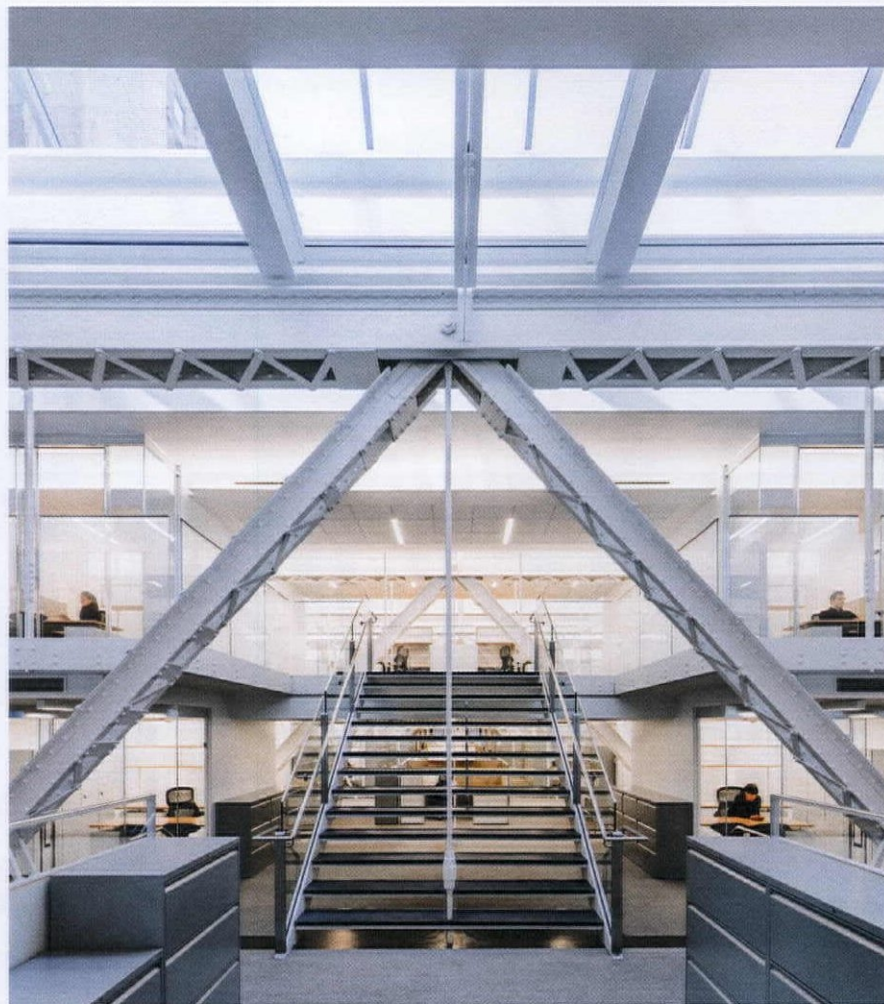


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\*Payback difference vs. traditional DOAS system. Payback time will vary. ©2015 Mitsubishi Electric US, Inc.





## Sounds Good

**DURING THEIR** renovation of Carnegie Hall's music studios, the architects at **Iu + Bibliowicz** expected that acoustics would be a primary concern. What the New York-based firm hadn't predicted, though, was how tricky it would be to manage the sound not only between rooms in the building but also between

the floors—some of which housed the venue's administrative offices.

For flooring, the firm initially utilized **ECOsurfaces** recycled rubber tiles over a floating floor system. But that solution emitted noxious smells instead of muffling sound. The problem was the flooring's adhesive: When it made

contact with the plywood, it off-gassed in unacceptable amounts. To mitigate this, the team placed cement board between the two layers. The resulting aesthetically and functionally pleasing design has been music to the ears of performers and office workers alike.  
—*Leslie Clagett*

**PRACTICE, PRACTICE**  
To keep sound from traveling from Carnegie Hall's music rooms (top left) to its administrative offices (top right), the architects placed cement board between the rubber tiles and flooring system. The famed venue (above) was erected in 1891.





## CREATION

**MANUFACTURER:** Gerflor USA  
**PERFORMANCE:** Well-suited to high-traffic areas, the 2.5-mm-thick vinyl tiles and planks are 100% recyclable.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Offered in 60 wood, stone, and textile patterns printed on tear-resistant film, the LEED-eligible tiles feature a click-lock installation system.

**GERFLORUSA.COM**

(SNAP #217)

## PATHWAYS

**MANUFACTURER:** Takiron by CBC Flooring

**PERFORMANCE:** When viewed from a distance, this indoor/outdoor sheet vinyl flooring appears linear; a closer look reveals its traditional herringbone texture.

**PRICE RANGE:** \$\$

**APPLICATIONS:** The exceptional slip-resistant flooring comes in 10 colors and is LEED-eligible.

**CBCFLOORING.COM**

(SNAP #218)

## SAFE-T-FIRST

**MANUFACTURER:** Tarkett

**PERFORMANCE:** This vinyl flooring uses photoluminescent technology to emit stored visible light and provide an illuminated escape path during a power outage.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Offered in 36 colorways, the nontoxic flooring is suitable for marking emergency egress in stairwells and hallways.

**TARKETT.COM**

(SNAP #219)

## TRENTA

**MANUFACTURER:** Mohawk

**PERFORMANCE:** The plank tile comes in a range of stone looks and wood patterns.

**PRICE RANGE:** \$\$

**APPLICATIONS:** A commercial-grade urethane finish and 30-mm wear layer make this luxury vinyl tile collection resilient enough to withstand heavy commercial loads and traffic.

**MOHAWKGROUP.COM**

(SNAP #220)

**KEY** \$=VALUE, \$\$=MID-RANGE, \$\$\$=HIGH-END

= ECO-FRIENDLY ATTRIBUTES

# Channeling Floor Style

**FOR THOSE** working with a low budget but high aesthetic standards, grouted luxury vinyl tile (LVT) offers an attractive—and comfortable—new flooring option. Not only is LVT a fraction of the cost of its ceramic counterparts, but it's also easier and faster to install. Plus, like other resilient surfaces, LVT muffles sound, cushions impact, and minimizes foot fatigue.

When the tiles are joined, their beveled edges form tiny troughs. Installers place a specially formulated, acrylic-based grout in the channels; the water-resistant grout dries quickly and needs no sealing.

The growing roster of groutable LVT collections includes **NovaFloor's** Birkdale, **Armstrong's** Alterna, and **Metroflor's** Modera. —LC

## STEP UP

Grouted luxury vinyl tile such as Alterna (right), by Armstrong, offers an affordable alternative to stone and ceramic—and gives underfoot, too.



## SNAP FACT

Globally, luxury vinyl tile (LVT) comprises

**40%**

of resilient flooring sales.

**SOURCE:** MARKET INSIGHTS

## SNAP FACT

Last year, LVT sales rose

**11.1%**

to \$849 million, over three times the rate of resilient sheet sales growth (3.5%) and over four times the rate of vinyl composition tile sales growth (2.6%).

**SOURCE:** FLOOR DAILY



# Frame Your Success



Photo: Robb Cohen Photography & Video

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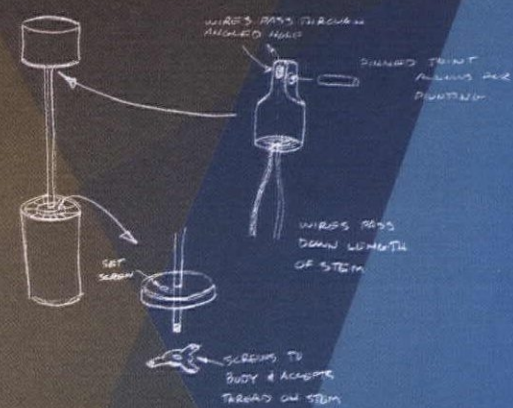
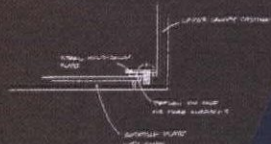
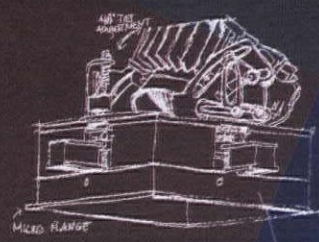
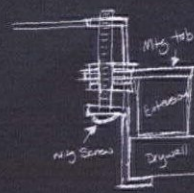
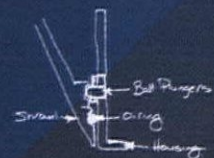
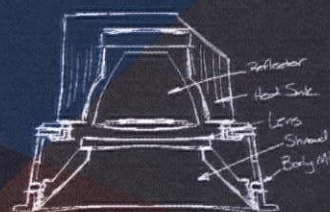
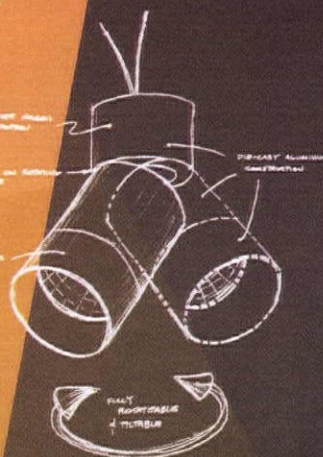
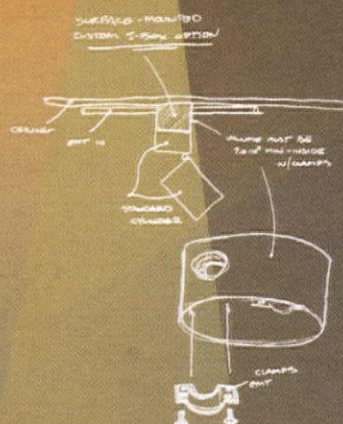
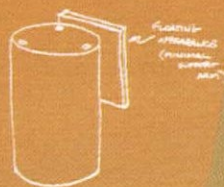
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SNAP 192



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## Illuminated Text

**IN THE FIRST YEAR** of operation, Berkeley, California's West Branch library produced 20 percent more energy than it used. The structure achieved net-zero status—a first for a California library—by harnessing solar energy and maximizing daylighting. Ten dozen 435-watt solar photovoltaic panels cover the building's roof, with each panel tilted south at an 18-degree angle.

Daylighting was also essential in reducing energy use, says Edward Dean, then lead architect for the San Francisco-based office of Harley Ellis Devereaux, which designed the 9,300-square-foot structure. He chose standard commercial-grade skylights by VELUX to let the sun shine in. Says Dean: "They're high-quality products that have venting and an automatic shading option built into them."

By modeling light levels, the design consultants confirmed that the standard lighting criteria for libraries (30 to 40 foot-candles for reading areas and 36 foot-candles in the stacks) were met without using any overhead light fixtures. As for the pleasure visitors feel by having unobstructed views of the sky when perusing books: That cannot be measured. —Allison Craig

### WELL LIT

Thanks to photovoltaic panels and generous skylights, the Berkeley Library's West Branch is a net-zero building that's flooded with natural illumination.





### SIVOIA QS TRIATHLON WIDR ROLLER SHADE

**MANUFACTURER:** Lutron Electronics

**PERFORMANCE:** These smooth-operating, battery-powered shades have the smallest roll-up diameter in the industry—no more than 3 inches for a 12-foot-square shade.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** Ideal for office and high-end residential use, the shade comes in most Lutron roller fabric colors and varieties, including sheer, dim-out, and blackout options.

**LUTRON.COM**

(SNAP #221)



### SOLARDEFENSE REFLECTIVE TECHNOLOGY SIDING

**MANUFACTURER:** Mastic Home Exterior by Ply Gem

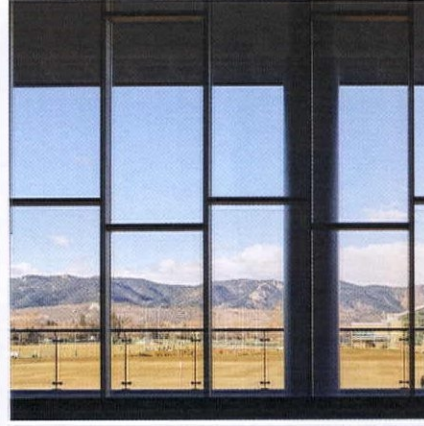
**PERFORMANCE:** Requiring no painting or caulking, this durable siding protects against fading and heat distortion.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Offered in five colors, this mahogany among them, SolarDefense siding is an option for residential projects in sunny areas.

**MASTIC.COM**

(SNAP #222)



### DYNAMIC GLASS

**MANUFACTURER:** View Inc.

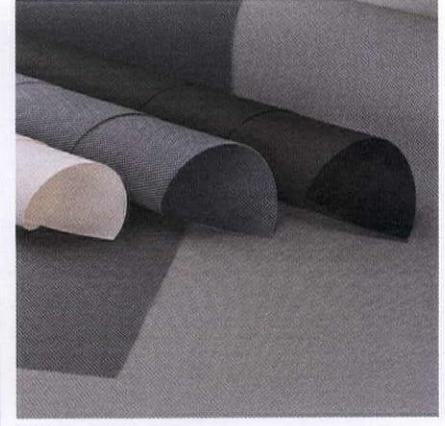
**PERFORMANCE:** The 6-by-10-foot dynamic glass panels tint automatically in response to sunlight or weather conditions; they may also be altered manually via a mobile device.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Common uses include in offices, where the panels let in natural illumination while decreasing glare on computer screens, and in hospitals, where increased daylight has been shown to accelerate patient recovery.

**VIEWGLASS.COM**

(SNAP #223)



### SOHO SHADECLOTH

**MANUFACTURER:** MechoSystems

**PERFORMANCE:** This see-through sunscreen collection allows for exterior views while providing optimal solar shading and heat reduction.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Available in 12 hues, the smooth, basket-weave cloth comes with a 1%, 3%, or 5% openness factor, making it a suitable solution for offices, libraries, schools, and hospitals.

**MECHOSYSTEMS.COM**

(SNAP #224)

KEY \$=VALUE, \$\$=MID-RANGE, \$\$\$=HIGH-END

## Schooled in Nature

**THE WILLOW SCHOOL** takes environmental stewardship very seriously. The elementary school already boasts two LEED-certified buildings on its Gladstone, New Jersey, campus. Now, its new Health, Wellness & Nutrition Center, designed by **Farewell Architects**, is the state's first building to pursue LEED for Schools 2009 Platinum Certification—as well as the even more eco-stringent Living Building Challenge 2.0.

Every metric indicates that the Center is on track to achieve those goals. "The solar array for the first six months of operation is providing more power than the building is requiring," says Michael Farewell, principal of the Princeton, New Jersey-based firm that bears his name. Of the design decisions made, Farewell adds that the building envelope was critical to the



school's "very high aspiration for energy efficiency." He chose **Kalwall's** Lumira structural sandwich panels for their 0.05 U-values and "rice paper-like translucency." Natural daylighting strategies, minimized plug loads, and a variable-refrigerant volume (VRV) mechanical

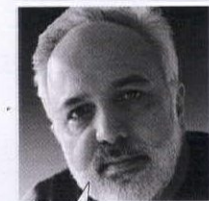
system also boosted the building's efficiency.

Most exciting to Farewell is that the students monitor the structure's performance as part of their curriculum. For this generation, an awareness of resource consumption is a lesson that extends beyond the school's walls. —AC

#### CLEAR VIEW

Kalwall's translucent panels allow natural light to stream into the lobby of the Willow School's Health, Wellness & Nutrition Center.

### SNAP BACK



**GEORGE LOISOS**  
Principal  
*Loisos + Ubbelohde*  
Alameda, California

"Daylight was formerly seen as part of a suite of energy-efficiency measures. We now have clients demanding it as part of a better environment. Similarly, sun control was a way to reduce HVAC loads. Now it is more about glare control."

#### SNAP FACT

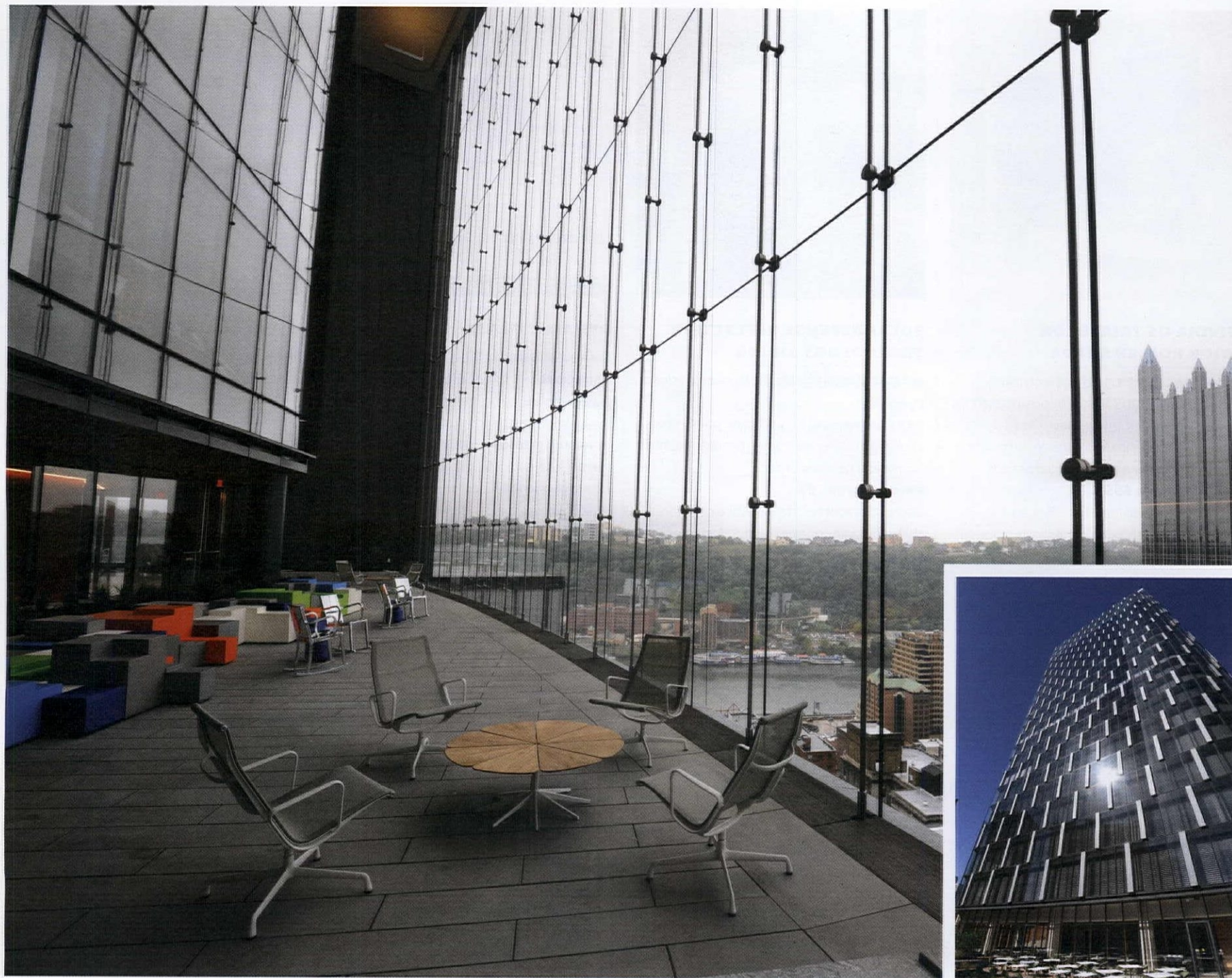
When asked to name the most desirable trait of an office space,

**63%**

of U.K. workers cited **natural sunlight**.

**SOURCE:** ROYAL INSTITUTE OF CHARTERED SURVEYORS





## Green Sheen

**GAZING UP AT** the tower at PNC Plaza in Pittsburgh, one might not notice the sustainable paints and coatings on the LEED Platinum building. But according to principal Ben Tranel of Gensler, which oversaw the project, these surface treatments played a role in creating “the world’s greenest high-rise.”

The architects selected the finishes based on not only aesthetics but also a variety of environmental concerns. Take the building’s double curtain wall, whose

aluminum panels are powder coated in PPG’s Corafon fluoropolymer. Solvent-free and low-VOC, the gray mica coating contributes to good indoor air quality. Additionally, its manufacture incorporates an in-line recycling process to capture powder that doesn’t adhere to the metal, thereby reducing waste and by-product.

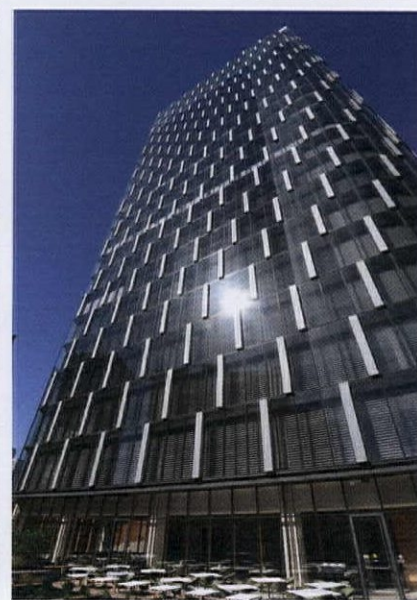
The architects chose PPG zero-VOC latex paint for all the corridors and common rooms. They also opted for a

clear, odorless sealer to protect interior wood mullions against scratches and UV damage.

Gensler used several other PPG products in the project, including Starphire and Sungate glass (for the curtain wall), both of which provide transparency while maximizing energy performance. PPG is just two blocks away from the PNC tower, adds Tranel, and Gensler wanted to use local products wherever it could. —Alice Liao

### BREATHE EASY

The tower at PNC Plaza features numerous eco-friendly PPG coatings on its curtain wall and interior surfaces, including Corafon fluoropolymer finishes and zero-VOC paint.







## ARISTOSHIELD

**MANUFACTURER:** Dunn-Edwards

**PERFORMANCE:** This interior/exterior water-based urethane alkyd paint has the look and durability of an oil-based enamel in a low-odor and -VOC formulation.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** The paint comes in a variety of tints in high-gloss, eggshell, and semigloss finishes.

**DUNNEDWARDS.COM**

(SNAP #225)



## SPECTRACRON 380 POLY-IOTHANE HS

**MANUFACTURER:** PPG

**PERFORMANCE:** These polyurethane enamel coatings boost metal surfaces' corrosion resistance, making them ideal for covering water and gas meters as well as commercial HVAC framing.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Offered in glosses and in standard and custom colors.

**PPGTRUEFINISH.COM**

(SNAP #226)



## LN-906

**MANUFACTURER:** Liquid Nails

**PERFORMANCE:** This mild, latex-based construction adhesive bonds brick, stone, and timber—even when it's applied in extreme temperatures.

**PRICE RANGE:** \$

**APPLICATIONS:** Low-VOC and Greenguard Gold-certified, it's suitable for exterior and interior applications, plus for use on wet and frozen materials.

**LIQUIDNAILS.COM**

(SNAP #227)



## PAINT SHIELD

**MANUFACTURER:** Sherwin-Williams

**PERFORMANCE:** After two hours of contact, this EPA-registered microbicidal paint kills infectious bacteria, including staph, MRSA, and E. coli.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** The paint can be used on ceilings, walls, doors, and trim in commercial and residential facilities.

**SWPAINTSHIELD.COM**

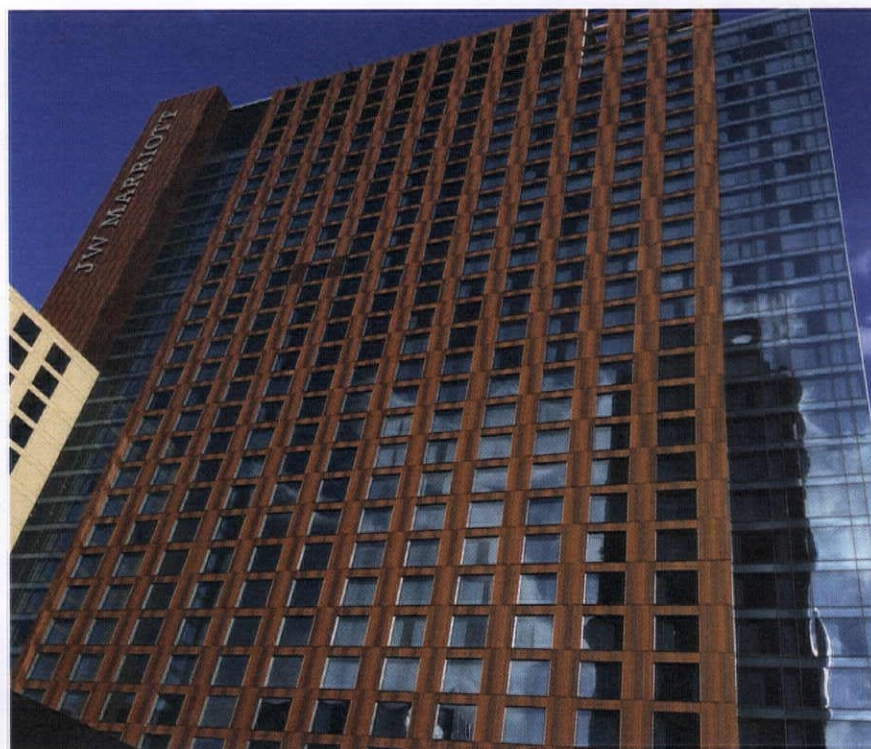
(SNAP #228)

**KEY** \$ = VALUE, \$\$ = MID-RANGE, \$\$\$ = HIGH-END

# Skin Deep

**CUSTOM COATINGS** can mimic the look of premium architectural finishes at a fraction of the cost—without compromising aesthetics. **HKS Hospitality Group** exemplified this at the new JW Marriott in Austin, Texas. The Dallas-based architecture firm initially wanted the facade of the hotel's 34-story primary tower to be clad in Cor-Ten steel. However, concerns over pricing, maintenance, and the staining of adjacent surfaces demanded an alternative that would achieve a similar effect. The solution? Painted metal.

In collaboration with **Hunt Construction** and **ProCLAD**, a metal wall design company, HKS designed a unitized curtain wall system of 18-gauge **Galvalume** steel panels in varying widths to create a random appearance. After conducting a series of mock-ups with **Valspar's** Classic II Fluoropon paint to re-create the subtle patina of weathered steel, the team went with a custom combination of three warm brown tones: barrel brown, fudge, and mustang. The project savings were "equal to at least a half of a million dollars," says HKS principal and design director Eddie Abeyta. Moreover, Fluoropon's durability ensures the panels will retain their color for years to come. —AL



## HEAVY METAL

The facade of Austin's new JW Marriott may resemble Cor-Ten, but it's made with painted steel, which costs far less.





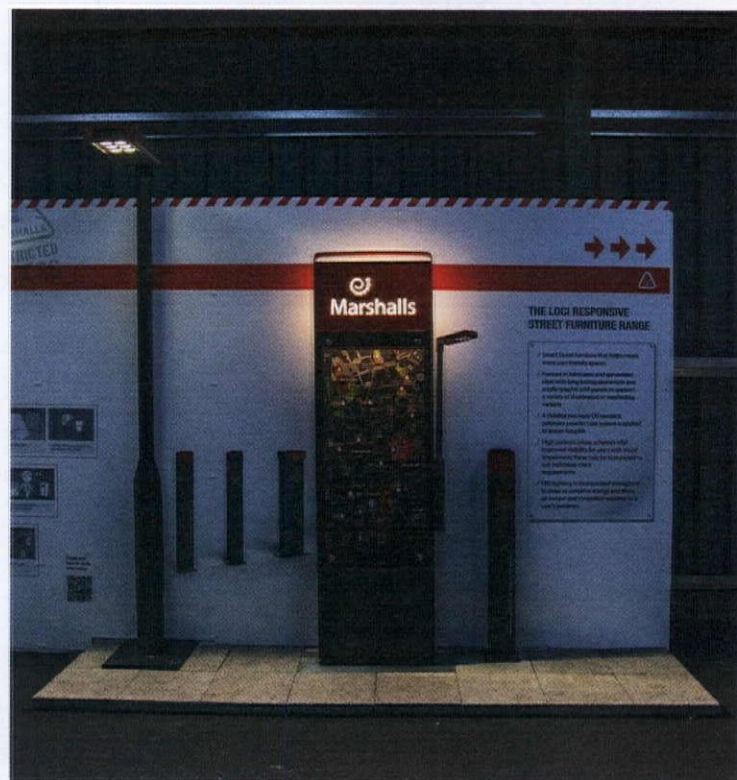
## Smart Streets

**ROSS ATKIN** IS the Holly Whyte of accessible design. Whereas his urbanist predecessor looked at how people move through public space, the London-based Atkin observes how the disabled community uses the city's infrastructure. His findings, sponsored by the U.K. government and various nonprofits, reveal "many of the tradeoffs we make between different people's needs when we design a street," Atkin says. Sidewalks with plentiful seating for older folks, for example, may prove a hindrance to wheelchair users. Atkin's Responsive Street Furniture corrects that imbalance by temporarily adapting to serve disabled folks.

Leveraging the network of devices known as the Internet of Things, the three-piece furniture collection reads

disabled users' website-authenticated smartphones via Bluetooth and responds by brightening streetlamps, issuing audio information, or having a bollard unfold into an extra seat. Municipal buyers will be individually responsible for registering and distributing compatible fobs (hardware with built-in authentication) to disabled citizens and visitors who don't have smartphones.

Atkin debuted prototypes of the furniture last summer, and his manufacturing partner, Marshalls, is now marketing the streetlight, information kiosk, and bollard under the Loci Intelligent brand. The designer says that talks about the first permanent installations, including two for Transport for London, may yield official announcements soon. —David Sokol



### DISCREET HELPERS

Activated via smartphone or fob, Ross Atkin's prototype Responsive Street Furniture includes audiostreams (top), as well as streetlamps and bollards that unfold into additional seating (above).





### TRACERY BRICK LIGHTS

**MANUFACTURER:** LBL Lighting  
**PERFORMANCE:** The LED fixture uses 8.5 watts to produce 300 lumens of light and extends 3/8 inch from the wall: a distance that complies with ADA standards for accessible approaches.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** This indoor/outdoor luminaire can be integrated into a masonry wall during construction.

**LBLIGHTING.COM**

(SNAP #229)



### GT6200 SL WINDOW

**MANUFACTURER:** Graham Architectural Products

**PERFORMANCE:** Thanks to its single-point handle, this ADA-compliant outswing casement for high-rise and commercial buildings can be locked, unlocked, opened, and closed with minimal force.

**PRICE RANGE:** \$\$\$

**APPLICATIONS:** The overall window's polyamide strut thermal break system achieves U-values between 0.29 and 0.38.

**GRAHAMWINDOWS.COM**

(SNAP #230)



### CONTROL SMART LOCKS

**MANUFACTURER:** Schlage

**PERFORMANCE:** Designed for multiunit buildings, these locks with Engage technology provide keyless access to residential entrances and common areas.

**PRICE RANGE:** \$\$

**APPLICATIONS:** Doors outfitted with this hardware—compatible with wireless control systems CBORD- and StratIS—can be locked and unlocked via app, keypad, or traditional key. The locks are BHMA Grade 2-certified, UL-rated for fire, and ADA compliant.

**SCHLAGE.COM**

(SNAP #231)



### ATHERTON UNDERCOUNTER LAVATORIES

**MANUFACTURER:** Toto

**PERFORMANCE:** These rimless, ADA-compliant vitreous-china basins feature concealed front overflows, vertical sides, and flat bottoms.

**PRICE RANGE:** \$

**APPLICATIONS:** Offered in standard white, the basin comes in a choice of three models—one rectangular and two oval.

**TOTOUSA.COM**

(SNAP #232)

**KEY** \$ = VALUE, \$\$ = MID-RANGE, \$\$\$ = HIGH-END

= ECO-FRIENDLY ATTRIBUTES

## Housing Stuck?



### CLEARING THE WAY

Rental housing with universal design features, such as ADA-compliant door clearances and barrier-free showers created by Pierce Lamb Architects, make up less than 1 percent of stock.

**ACCORDING TO A** recent report by Harvard's Joint Center for Housing Studies (JCHS), 43 million Americans rent: an increase of 9 million people over the past decade, with older residents accounting for the bulk of this growth. Yet according to the study, "America's Rental Housing: Expanding Options for Diverse and Growing Demand," less than 1 percent of these units include basic universal design features.

"With the aging of the baby-boom generation, the number of renters with disabilities is thus set to rise sharply in the years ahead," the report states. While certain accessibility retrofits require only a modest investment of time and money, says Deborah Pierce, a principal at **Pierce Lamb Architects** and the author of *The Accessible Home*, it will take "a deep commitment to inclusive design" to "make the housing industry competitive and relevant." Two systemic changes can help the market anticipate future needs, she points out: designing homes for visitability—say, for use by people who have trouble negotiating steps or who use wheelchairs—and zoning for accessory dwellings. —DS





# Winds of Change

International events affect manufacturers in the Midwest. BY J. MICHAEL WELTON



**FROM THE** glut of steel imports to the surge in cheap natural gas, global economic developments are having an impact on Midwestern companies.

In Indiana, manufacturing accounts for 30 percent of economic output. "We're the sixth-largest producer in the nation, by sheer numbers," says Andrew Berger, vice president, governmental affairs at the Indiana Manufacturers Association. The Hoosier State is bouncing back from the Great Recession, with the number of local manufacturing jobs returning to within 25,000 of its 2006 high of 550,000.

The two largest sectors in Indiana are automotive and steel, with the latter taking a big hit due to a worldwide surplus. For **ArcelorMittal**, a steel and mining company with four plants in the state, this means "drastically reduced domestic pricing," says Mary Beth Holdford, division manager, external communications at ArcelorMittal.

In Ohio, manufacturing is the largest contributing sector to the state's GDP. In September 2011, it comprised 16.7 percent of the economy. By September 2014, manufacturing had ticked up to 17.7 percent.

Ohio steel manufacturers continue to face woes similar to Indiana's, but for a different reason. With oil prices at their lowest since 2009, energy companies have less incentive to drill for new supply, thus reducing demand for steel products, according to Lisa Schaaf, managing director, marketing services at the Ohio Manufacturers' Association.

But in Canton, Ohio, **Belden Brick**—one of the largest brickmakers in the world—is finding cheaper natural gas a boon for its post-recession business. "Even though we were selling more brick in 2006, the cost of natural gas was eating into our bottom line," says Brad Belden, director of support services. "Now, even with smaller numbers, we're eking out a profit."

# Indiana, Michigan, Ohio, and Pennsylvania

## 1 MANUFACTURER:

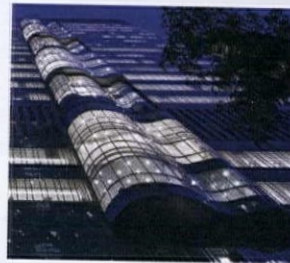
Guardian Industries Corp.

**LOCATION:** Auburn Hills, Michigan

**PRODUCTS:** Float glass and fabricated glass products for commercial, residential, and transportation applications.

**FOUNDED:** 1932 **EMPLOYEES:** 17,000

**PRICE RANGE:** \$-\$\$\$ **GUARDIAN.COM**



## 3 MANUFACTURER:

Draper, Inc.

**LOCATION:** Spiceland, Indiana

**PRODUCTS:** Window shades, solar control solutions, projection screens, and projector flat panels.

**FOUNDED:** 1902

**EMPLOYEES:** 550

**PRICE RANGE:** \$\$

**DRAPERINC.COM**

## 2

**MANUFACTURER:** Whirlpool Corporation

**LOCATION:** Benton Harbor, Michigan

**PRODUCTS:** Commercial and consumer laundry and kitchen appliances made under brand names including Whirlpool, KitchenAid, Maytag, Consul, Brastemp, Amana, Bauknecht, and Jenn-Air.

**FOUNDED:** 1911

**EMPLOYEES:** 100,000 worldwide

**PRICE RANGE:** \$\$

**WHIRLPOOLCORP.COM**



## 4 MANUFACTURER:

Firestone Building Products

**LOCATION:** Indianapolis, Indiana

**PRODUCTS:** Roofing and wall systems, profile panels, and geomembranes.

**FOUNDED:** 1980

**EMPLOYEES:** 55,000

**PRICE RANGE:** \$\$

**FIRESTONEBPCO.COM**



## 5 MANUFACTURER:

Formica Corporation

**LOCATION:** Cincinnati, Ohio

**PRODUCTS:** Surfacing materials and laminates for commercial and residential applications.

**FOUNDED:** 1913

**EMPLOYEES:** 450

**PRICE RANGE:** \$-\$\$\$

**FORMICA.COM**



## SNAPSHOTS

### INDIANA

Manufacturing represents **25% of the state's economy** and **97% of its exports**.



The sector contributes **\$64 billion** to Indiana's economy each year.

**SOURCES:** CONEXUS INDIANA, INDIANA MANUFACTURERS ASSOCIATION

### MICHIGAN

Manufacturing directly employs **590,000 people** in the Wolverine State.

More than

**150,000**

jobs have been added to Michigan's manufacturing sector since June 2009—**an increase of 34.1% in five years**.

**SOURCE:** MICHIGAN MANUFACTURERS ASSOCIATION

### OHIO



Ohio's manufacturing industry is **third in the nation** in total output and workforce.

Manufacturing accounts for nearly **18% of the state's output** (\$84 billion), almost double that of any other industry sector.

**SOURCE:** OHIO DEPARTMENT OF HIGHER EDUCATION

### PENNSYLVANIA

In 2013, the state manufactured

**\$77.37 BILLION**

worth of goods.

In 2012, the average Pennsylvania manufacturing employee earned **\$72,328 annually**.

**SOURCE:** NATIONAL ASSOCIATION OF MANUFACTURERS



#### 6 MANUFACTURER: Ecore

**LOCATION:** Lancaster, Pennsylvania  
**PRODUCTS:** Sound insulation and surfacing products, including athletic, industrial, and commercial flooring.  
**FOUNDED:** 1891  
**EMPLOYEES:** 400  
**PRICE RANGE:** \$-\$\$\$  
**ECOREINTL.COM**



#### 7 MANUFACTURER: Indoor Sky

**LOCATION:** Williamsport, Pennsylvania  
**PRODUCTS:** Daylitter shading and daylighting systems.  
**FOUNDED:** 2013  
**EMPLOYEES:** 6  
**PRICE RANGE:** \$\$-\$\$\$\$  
**INDOOR-SKY.COM**



**8 MANUFACTURER:** CornellCookson **LOCATION:** Mountain Top, Pennsylvania  
**PRODUCTS:** Coiling doors and grilles/gates, as well as fire, accordion, counter, and insulated doors.  
**FOUNDED:** 1828  
**EMPLOYEES:** 600  
**PRICE RANGE:** \$\$ **CORNELLCOOKSON.COM**





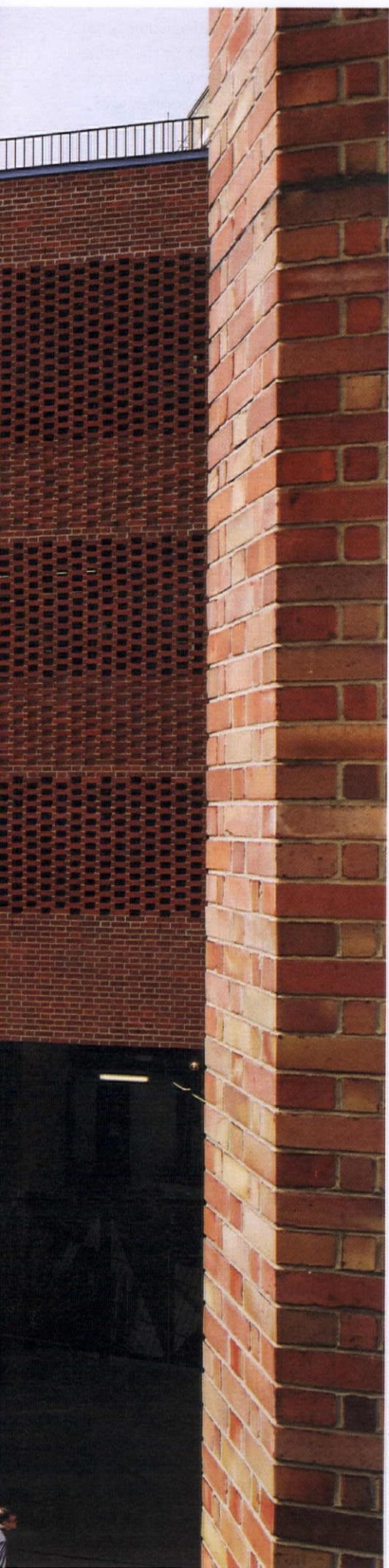


## CONTINUING EDUCATION: INNOVATION IN BRICK

FROM ARCHITECTURAL RECORD







IMAGES: © DENNIS GILBERT (LEFT), COURTESY O'DONNELL + TUOMEY (RIGHT)

# Pushing the (Brick) Envelope

*Architects find new forms of expression with an age-old material.*

BY KATHARINE LOGAN

**LEARNING AND** brick-building share a deep affinity: to build with brick is to join a conversation that's almost as old as civilization itself. Academic structures are often brick, so it's a common choice for new ones. Yet, despite all that's been said in brick in the last 9,000 to 10,000 years (including brick's own preference for an arch, as Louis Kahn famously told us), each new building has the potential to contribute something fresh, perhaps even astonishing.

In awarding a slew of honors last year to the Saw Swee Hock Student Centre at the London School of Economics, for example, jurors for Britain's Brick Awards declared themselves "blown away" by what the architects, O'Donnell + Tuomey, describe as "familiar materials made strange"—familiar in that each of the project's 175,000 bricks was individually cast in a wooden mold by hand, giving the building the same dappled and dimpled surfaces that make old brick walls lovable. They were made strange, said the jury, in that the way the project uses the material "creates a whole new language for brickwork."

Embedded within a complex network of streets in London's city center, the form of the Saw Swee Hock building, completed in 2014, responds to the rights-to-light easements of its neighbors, which define the buildable envelope, as well as to lines of sight along the narrow streets. The result is a faceted and canted volume that seems sliced from a larger rectilinear mass.

The planes that make up the building's complex form are built of long and short bricks, including 46 standard and 127 special shapes, in a pattern based on Flemish bond. Except in the places where glazing cuts through the brick envelope for major inflections—at the entrance, for example—windows do not interrupt. Instead, the brick envelope maintains the continuity of the building form by passing right over them, about 8 inches in front of the glass, supported by rectangular-

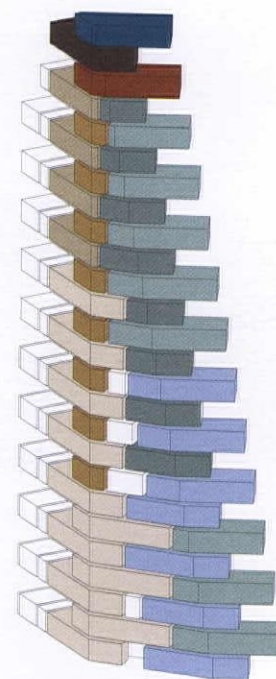
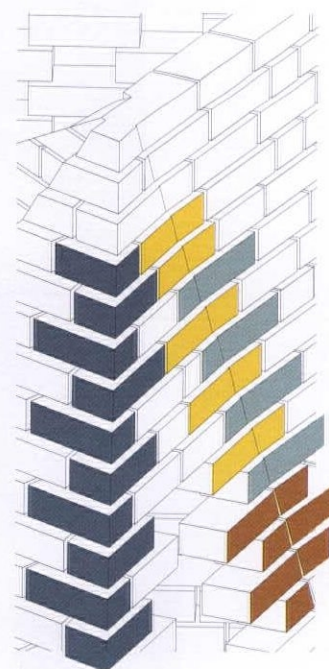
section steel posts aligned with mullions. Where that occurs, short bricks in the bond pattern are omitted to create a perforated screen and let in daylight and air. At night, the windows glow like lattice lanterns, their brick-size apertures expressing the building's handmade scale.

Extensive drawing and physical and digital modeling, as well as the use of the special shapes, achieved a design that required no brick cutting. Designing with the brick module helped speed the work on-site. It also eliminated waste, thereby improving brick's already strong environmental profile.

Conservatively warrantied at 100 years, with periodic inspection and repair of joints and flashing in the interim, brick is both durable and recyclable. It is made from clay and shale, some of the most abundant materials on earth. Manufacturing is typically located close to sources, and, in the United States, the average distance from plant to project site is about 175 miles.

Properly detailed and constructed, brick cladding presents a rugged face to the elements. However, the thermal performance of the envelope can be compromised if relieving angles are attached to a building's primary structure continuously. To mitigate this thermal bridging, intermittent attachment angles can be welded to the back of the relieving angle to create a gap through which insulation can pass. Proprietary two-part and thermally broken relieving angles are now available to achieve the same result.

Although brick's range of colors, shapes, and sizes is almost limitless, it's not uncommon for an academic client to require the use of a specific brick. New York's University of Rochester, for one, has mandated the same brick on some half-dozen projects in the last 10 years alone. But that's not necessarily a problem. "Once that decision is made, we can move on," says Frano Violich, principal at Kennedy and Violich Architecture (KVA),



## CUTTING EDGE

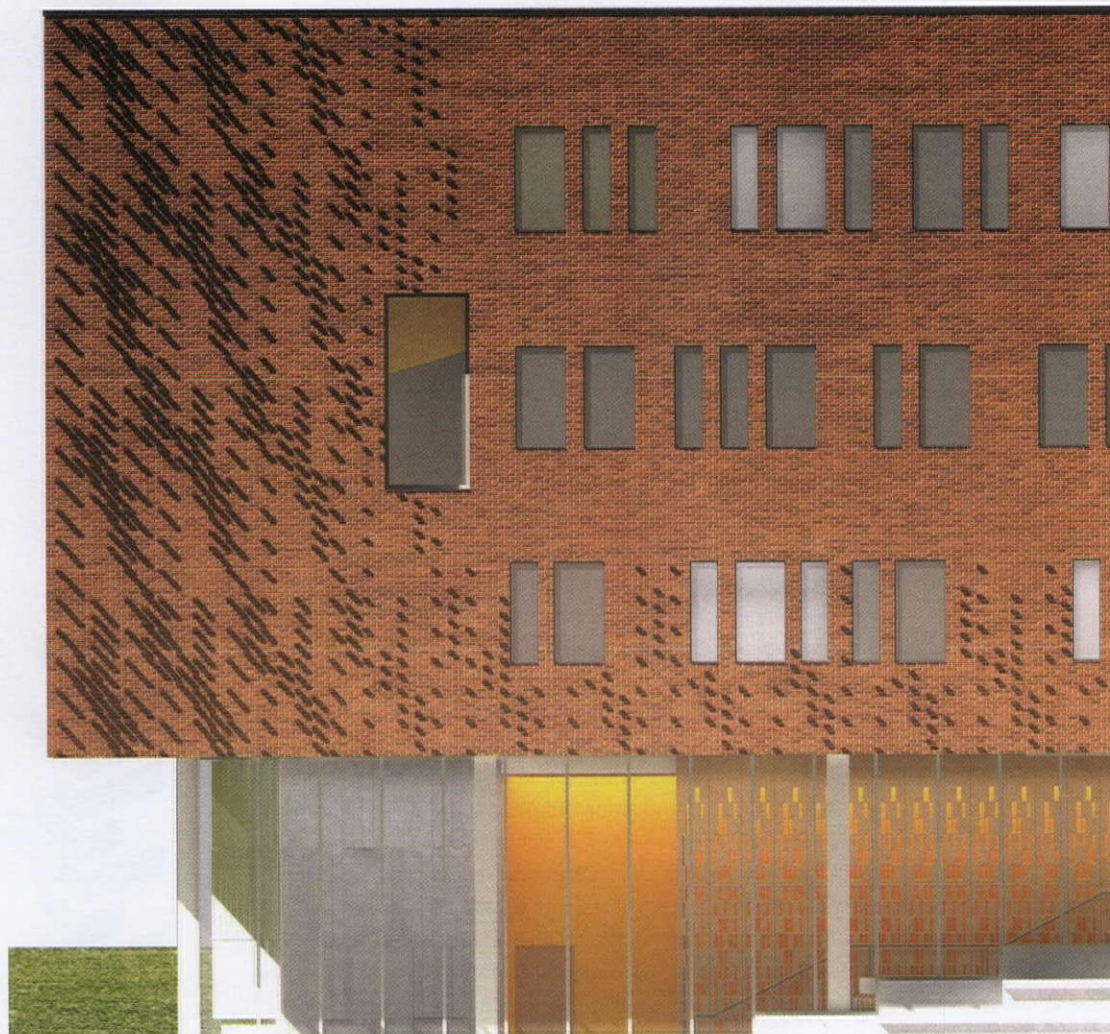
Architects O'Donnell + Tuomey used bricks in 46 standard shapes and 127 special shapes to create the faceted skin (above) enclosing the Saw Swee Hock Student Centre (opposite) at the London School of Economics.





# CONTINUING EDUCATION: INNOVATION IN BRICK

FROM ARCHITECTURAL RECORD



## BRICKS AND BYTES

For the facade of the Institute for Data Science at the University of Rochester (rendering above), KVA is turning bricks perpendicular to the wall and cantilevering them at various depths (bottom).

adding, “Sometimes it’s good to be limited.” Violich’s firm is designing the university’s Institute for Data Science, now under construction.

For KVA, the real focus of interest is the contrast between brick’s qualities of thick and thin—the dichotomy between historic multi-wythe, load-bearing walls and contemporary single-wythe suspended veneers. The firm has explored this theme in past academic projects such as Gorkin Hall, at the University of Pennsylvania Law School (RECORD, November 2012, page 109) and the recently completed Tozzer Anthropology Building, at Harvard University.

For the University of Rochester commission, KVA found its inspiration in the project’s program. The focus of study for the new institute is big data: looking for patterns in data streams and assembling them to make sense. “We were interested in working with brick in the same way,” says Violich, and so an analogy emerged between bricks and bits of data.

By turning bricks so they are perpendicular to the wall at computer-scripted intervals and cantilevering them at varying depths, patterns are generated in a field of bricks. The projecting bricks create a play of light

and shadow, as well as an impression of depth in the thin brick veneer. Overall, the bricks appear to flow by in a manner evocative of a data stream.

The challenge in translating this concept into reality was figuring out how to prop the cantilevered bricks so they wouldn’t drop out before the mortar set. Although brick ties or anchors are typically embedded in the mortar between courses of brick, they hold the brick veneer as a whole to the substrate once the mortar sets; they don’t

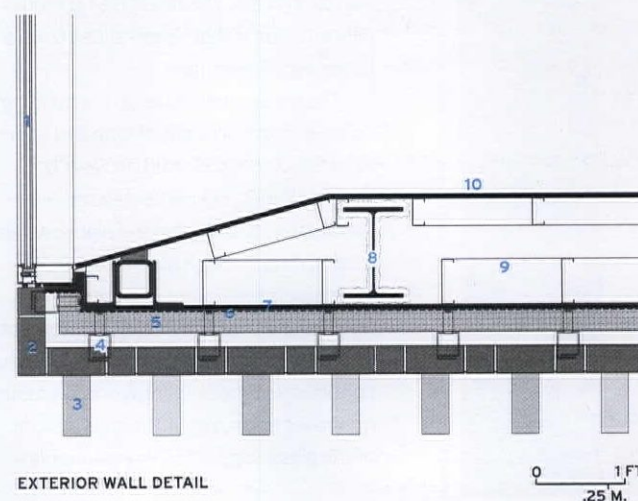
secure individual bricks that would tend to tip while the mortar is soft. So the cantilevered bricks needed additional support, either from the back, with some kind of restraint, or from the front, with a temporary scaffolding or falsework.

KVA’s solution is for the masons to lay the initial course of cantilevered bricks and, once those have set, to stand a temporary wood block on the cantilever to support the next protruding brick a few courses up. “It does require an understanding of the craft and tools used to make a brick wall, and the sequence of construction,” says Violich, “especially when you challenge traditional techniques.”

For Pelli Clarke Pelli’s recently completed Lanphier Center for Mathematics and Computer Science, at Choate Rosemary Hall, a prep school in Wallingford, Connecticut, scrupulous attention to the craft of building began with selecting the brick. The intention was for the building to look modern and yet fit into the campus as if it had always been there, says Victor Agran, a former Pelli Clarke Pelli senior associate who’s now a senior associate with Architectural Resources Cambridge.

After seven on-site mock-ups to test different types and various combinations of bricks, the architects selected, in close consultation with the client, a simple white brick. The white, which makes a pleasing counterpoint to the red brick of a Georgian-style building nearby, derives from a clay coat that is baked in with the brick. (The clay coat, unlike a glaze, provides a vapor-permeable surface.) Seen from a distance, the brick appears uniform—crisp and contemporary; a closer vantage point reveals subtle mottling where the buff tones of the base brick show through. “It got us everything we wanted,” says Agran. “It is monochromatic and abstract yet soft, with a lovely material quality.”

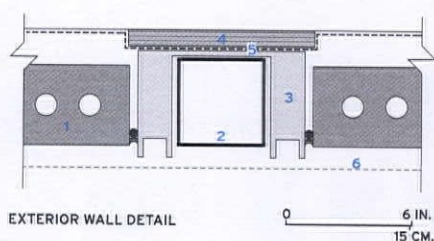
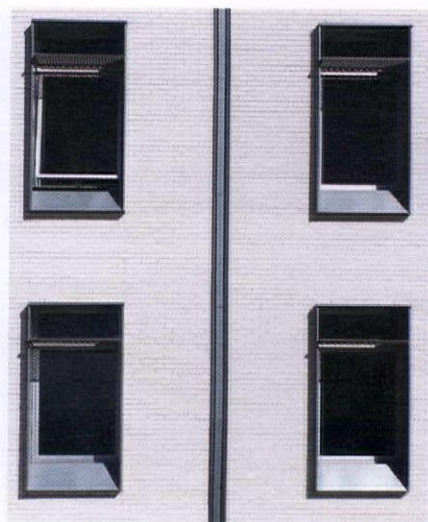
The Lanphier brick is an example of the FBX brick type—one of three ASTM classifi-



- 1 CURTAIN WALL
- 2 BRICK VENEER
- 3 PROTRUDING BRICK
- 4 MASONRY ANCHOR
- 5 INSULATION
- 6 AIR & VAPOR BARRIER
- 7 SHEATHING
- 8 STRUCTURAL STEEL
- 9 METAL STUDS
- 10 INTERIOR SHEATHING

IMAGES: COURTESY KVA





- 1 BRICK
- 2 TITANIUM-ZINC DOWNSPOUT
- 3 TITANIUM-ZINC CHANNEL
- 4 MARINE PLYWOOD
- 5 WATERPROOFING MEMBRANE
- 6 TITANIUM-ZINC FASCIA ABOVE

cations that specify manufacturing tolerances. “FB” stands for facing brick, and the “X” indicates extreme or extra control criteria: corners sharp, edges square, dimensions accurate, chippage tiny and rare. The FBS classification designates standard production bricks, while “FBA” indicates unusual architectural or aesthetic criteria that must be specified, such as handmade or nonuniform molded bricks.

Exactitude on the Lanphier Center didn’t stop with the selection of the bricks—it carried through development of the design and construction. “We did not want brick cut into odd sizes where the wall would begin to look messy,” says Agran, “so we were careful to make sure the brick and brick-joint layout worked precisely.”

For ornamentation, the architects emphasized a modern approach, to contrast with older buildings on campus, using titanium zinc to turn key aspects of the weather envelope—downspouts, gutters, and window frames—into expressive moments. Windows, for instance, are deeply inset, with prominent frames and raked sills in gray metal. Downspouts are recessed flush with the surface of the brick and double as expansion joints, thereby eliminating the sealant joints that often mar brick veneer envelopes.



Since a skin with such a high a level of abstraction succeeds or fails on the quality of the brickwork, the architects were on-site nearly every day, climbing the scaffolding to monitor progress and quality. Once expectations were clear, the masons began catching imperfections on their own initiative, winnowing 10 masons down to six who could reliably meet the project’s standards, which, of course, made the work slower.

Those masons might want to swap stories with the crew from the Chau Chak Wing

Building, designed by Frank Gehry for the business school at the University of Technology Sydney. On a typical project, a mason can lay 400 to 600 bricks a day, according to Gus Galati, supervisor with Favetti Bricklaying, masonry contractors for the project. Here each averaged 70 to 80—on a straighter run, maybe 100 to 120, Galati says. “At the beginning, it was embarrassing.”

Even so, the brickwork was finished ahead of schedule. “It helped that we had the most enthusiastic team of bricklayers I have

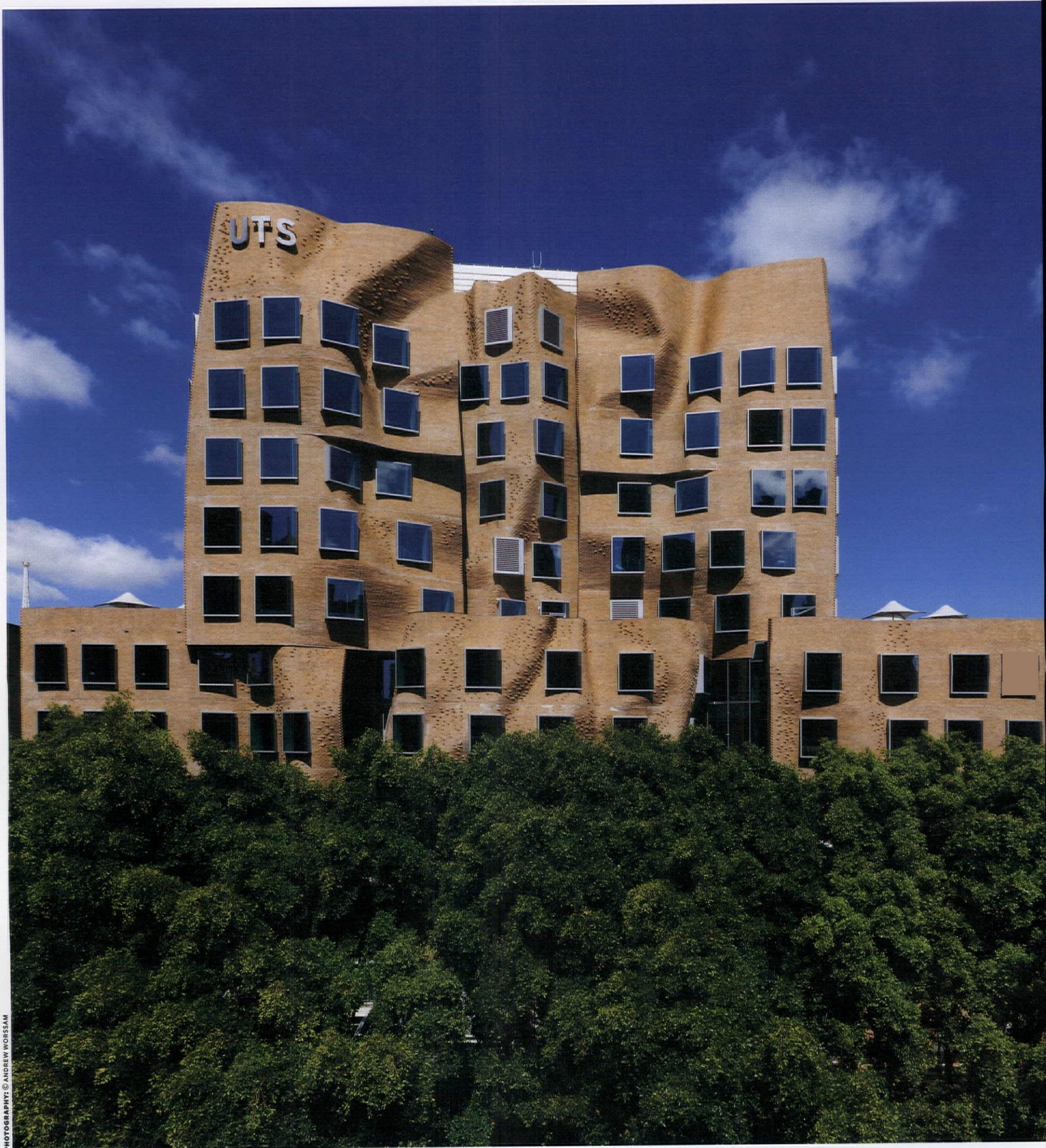
**DECISIVE DETAILS**  
Titanium zinc turns key elements of the building envelope (clockwise from top left) into expressive moments at the Lanphier Center for Mathematics and Computer Science at Choate Rosemary Hall.





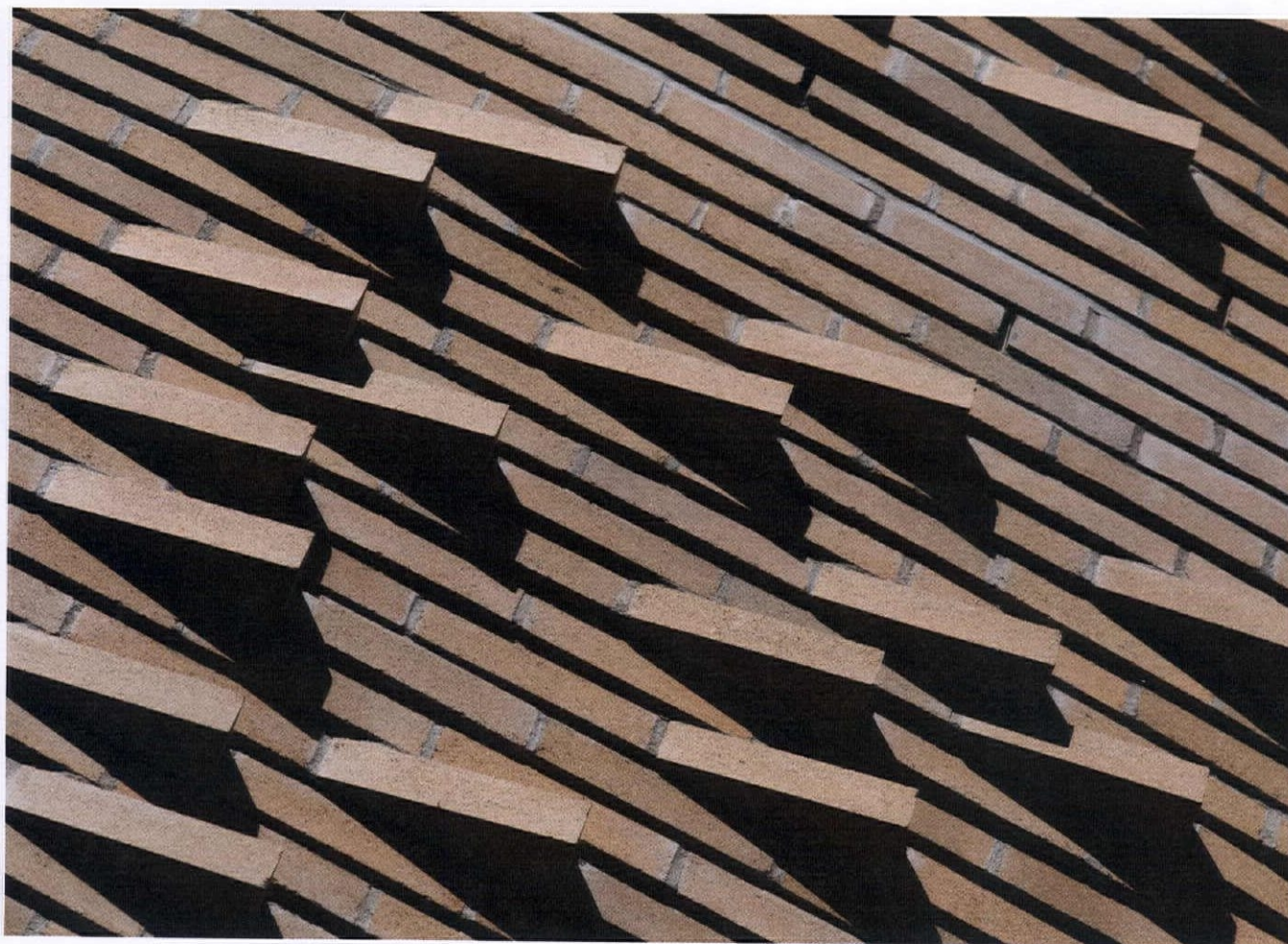
## CONTINUING EDUCATION: INNOVATION IN BRICK

FROM ARCHITECTURAL RECORD



PHOTOGRAPHY © ANDREW WORSAM





#### FROZEN FOLDS

Despite its visual complexity, the facade of Gehry Partners' Chau Chak Wing Building (opposite and left) at the University of Technology Sydney relies on only five types of bricks.

ever met," says Brad Winkeljohn, a senior associate at Gehry Partners and project architect for the building, which was finished in late 2014. Much of the team's enthusiasm arose from pitting their skill against the challenges of walls that were, to understate the case, not straight.

For more than 30 years, Gehry has been drawing inspiration from artwork that creates an impression of movement in stone—such as the flowing and folding of robes in the sculptures of Michelangelo, Bregno, and Bernini. But in this project, "he really wanted to push the envelope," says Winkeljohn. "The sheer mass of the brick swerving in and out over your head—it's amazing."

For all the visual complexity of the walls, only three main types of brick were needed in the end: a typical brick, a lipped brick to accommodate support angles, and a "K" brick to create the wall's roughened nap. Corner versions of the typical and lipped bricks brought the total number to five. All are solid dry-pressed bricks, a variation on molded bricks, which enabled the intricate shapes to be formed.

While panelizing the brickwork could have brought the bricklaying indoors, improving speed and accuracy, Gehry was adamant that the brick be laid on-site. He wanted it to be legible as a handmade process, with the softness and warmth human

touch imparts. So, for the design team, facilitating the work of the bricklayers became an important objective.

To free the bricklayers to do what they know best, the project team built the envelope's formal complexity into the supporting substrate, an egg-crate framework of mild steel fins generated using software and technology imported from the aeronautics and automobile industries. The panelized substrate was preassembled, complete with brick tie holders to eliminate the need for decisions on-site as to number and placement of ties.

The ties consist of a threaded rod with a washer that is set into a continuous groove in the top of the brick, and another, smaller, washer that tightens behind the brick to lock it into place. They support the weight of corbeled bricks so that the bricks don't tilt while the mortar is soft, and so the more dramatically undulating parts of the wall don't have to defy gravity on the strength of mortar alone.

While few projects are likely to confound convention to the extent Gehry has done with the Chau Chak Wing Building, many new directions still remain for the long conversation that is brick. "There's not a whole lot of people out there pushing its limits," says Winkeljohn. "Brick is a fabulous material, and it's underused." ■

KATHARINE LOGAN IS AN ARCHITECTURAL DESIGNER AND A WRITER FOCUSING ON DESIGN, SUSTAINABILITY, AND WELL-BEING.

#### Continuing Education



To earn one AIA learning unit (LU), including one hour of health, safety, and welfare (HSW) credit, read "Pushing the (Brick) Envelope," review the

supplemental material at [architecturalrecord.com](http://architecturalrecord.com) and complete the online test. Upon passing the test, you will receive a certificate of completion, and your credit will be automatically reported to the AIA. Additional information regarding credit-reporting and continuing-education requirements can be found online at [continuingeducation.bnppmedia.com](http://continuingeducation.bnppmedia.com).

#### Learning Objectives

- 1 Discuss some of the qualities that give brick a strong environmental profile.
- 2 Explain how thermal bridging can be avoided in brick veneer walls.
- 3 List the different ASTM classes of brick and describe their properties.
- 4 Describe several methods of achieving sculptural effects with brick veneer walls.

#### AIA/CES Course #K1511A

FOR CEU CREDIT, READ "PUSHING THE (BRICK) ENVELOPE" AND THEN TAKE THE ONLINE QUIZ AT [CONTINUINGEDUCATION.BNPPMEDIA.COM](http://CONTINUINGEDUCATION.BNPPMEDIA.COM), OR USE OUR ARCHITECTURAL RECORD CONTINUING-EDUCATION APP, AVAILABLE IN THE ITUNES STORE.



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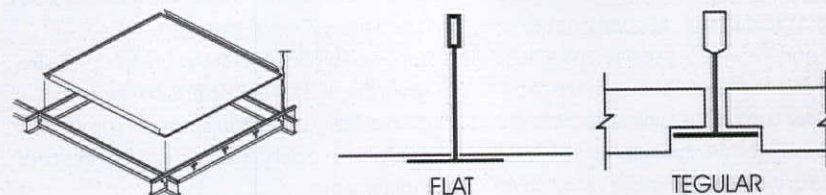
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# MANUFACTURERS' SPOTLIGHT SECTION

Look to these pages for products brought to you directly from manufacturers. You'll find the information you need to make SNAP decisions: price, performance data, product application, and contact information. Use the reader service card in the issue or go online at [architecturalrecord.com](http://architecturalrecord.com) to request further details.



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## TABLE OF CONTENTS

### Doors, Windows

Page 50

Doors, windows, storefronts, entrances, skylights, framing systems, glazed curtain walls, and translucent wall and roof assemblies.

### Electrical, Lighting

Page 50

Products for generating, transmitting, distributing, and transforming electrical energy, such as light fixtures and power supplies. Includes intercom equipment.

### Equipment

Page 52

Electrical and tech goods for a broad range of uses, including audiovisual, multimedia, and controller systems. Also covers elevators and appliances.

### Interior Finishes, Furnishings

Pages 52-54

Products for finishing and furnishing building interiors, such as flooring, wall coverings, ceilings, furniture, shelving systems, and window treatments.

### Landscaping, Sitework

Page 54

Exterior improvement products, such as site furniture, bollards, pavers, landscape edging, and exterior green walls. Also includes gazebos and other site structures.

### Materials

Page 54

Basic products used in construction, such as lumber, concrete, and masonry units. Includes paint, coatings, and structural materials and fittings.

### Mechanical Systems, HVAC, Plumbing

Page 56

Products for conditioning, moving, holding, and otherwise controlling air, water, and other fluids. Includes plumbing products, fans, ventilators, and boilers.

### Roofing, Siding, Thermal & Moisture Protection

Pages 56-57

Products for constructing the building envelope, such as exterior wall and roof panels, sheathing, thermal insulation, and waterproofing.

### Specialty Products

Pages 57-58

Products for special applications or that apply to more than one category, such as railing systems, gates, ladders, columns, signage, awnings, and canopies.



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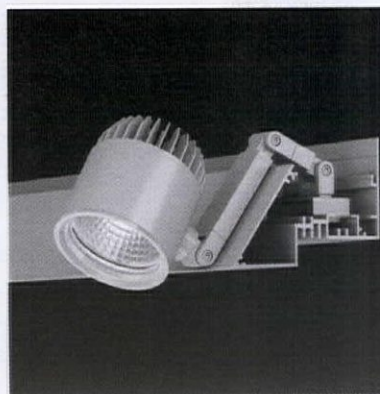
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## ELECTRICAL, LIGHTING

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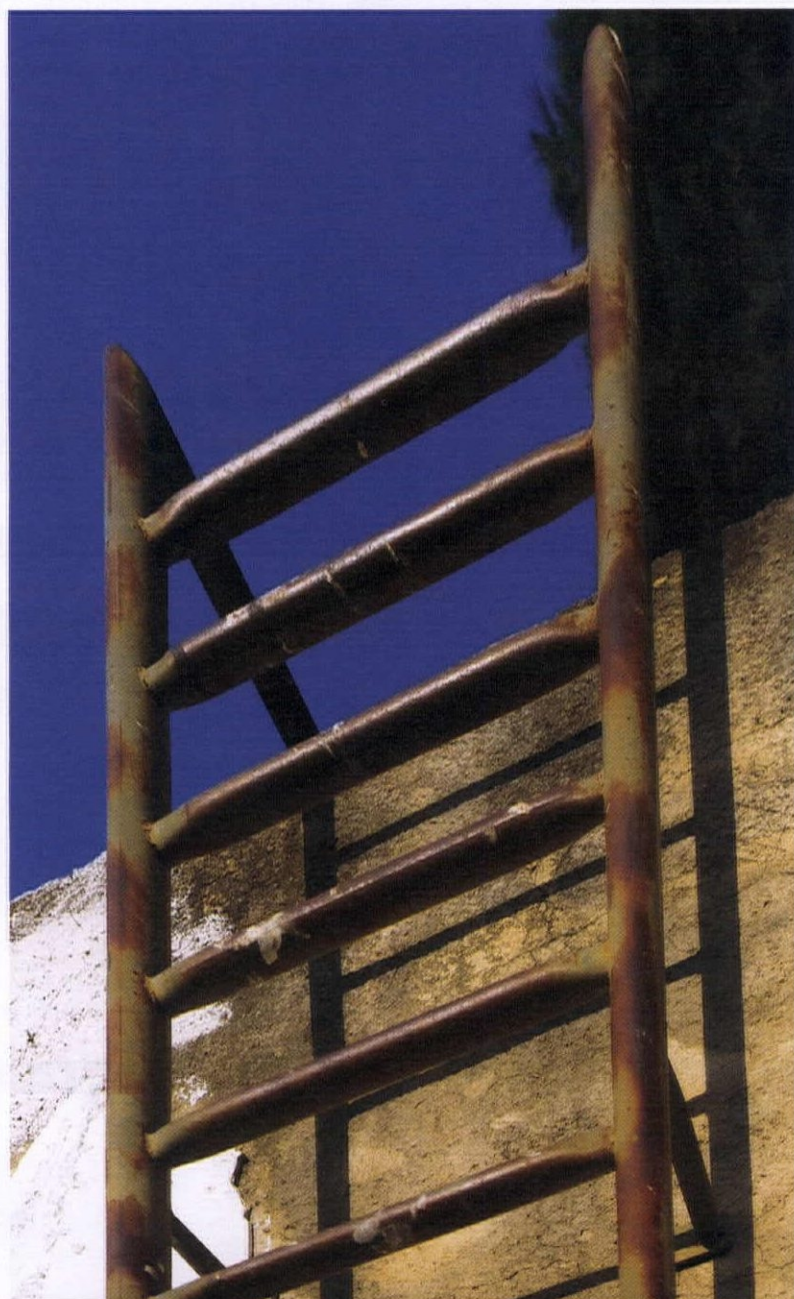


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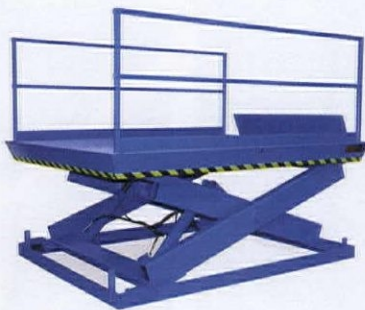
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## \$\$ | NEW

## Bendheim

A unique digital printing technology creates a superior fade effect. The glass features an ultra-dense, brilliant white privacy area, smoothly fading to clear glass at the top and/or bottom.

## Product Application

- Glass partitions
- Doors and windows

## Performance Data

- Can improve STC rating by 4 pt., to STC 35 or better
- Laminated safety glass meets building codes
- Made in USA

www.BendheimArchitectural.com  
800.221.7379 | info@bendheim.com



SNAP 244

## MIPOLAM MEDICAL

## WR | GREEN

## Gerflor USA

Available in 112 colors, Mipolam Medical is the only naturally antimicrobial resilient sheet flooring proven with ISO 22196 compliance and available in bio-based options.

## Product Application

- Wellstar Pediatric Center, Kennesaw, GA
- Edward Hospital, Naperville, IL
- King Abdullah University of Science & Technology, Thuwal, Saudi Arabia

## Performance Data

- ISO 22196 certified to inhibit the spread of bacteria
- Exclusive Evercare surface treatment for easy maintenance, no wax for life and best in industry stain resistance

www.gerflorusa.com  
877.437.3567 | info@gerflorusa.com



SNAP 245

## INTERIOR FINISHES, FURNISHINGS

## BENCHES, COAT HOOKS &amp; RACKS

## GOF Ltd./A.J. Binns

A.J. Binns manufactures a complete line of coat hooks, hangers, shelving and seating.

## Product Application

- Changing rooms and educational, medical and athletic facilities, etc.

## Performance Data

- Functional, adaptable and particularly durable
- Contemporary styling with no length restrictions
- Designed to eliminate potential injury



www.binnsogof.com  
802.655.7502

SNAP 246

## INTERIOR FINISHES, FURNISHINGS

## SILK METAL™ ARCHITECTURAL CEILING &amp; WALL PANELS

## Acoustical Surfaces, Inc.

The Silk Metal Architectural Ceiling & Wall Panel System is a state-of-the-art absorber that has an elegant smooth appearance while reducing sound reflections and echo.

- Residential, Commercial, Restaurants, Classrooms
- Pro Audio/Studios, Swimming Pools, Conference Rooms
- Hospitals, Auditoriums, Airports, Train Stations, Concert Halls

## Performance Data

- Excellent NRC Rating - 0.80 NRC (per ASTM C423) with a 4 inch Airspace, No Liner Needed

www.acousticalsurfaces.com  
800.448.0121 | sales@acousticalsurfaces.com



SNAP 247

**Clear Seas**  
RESEARCH  
*Making the complex clear*

## MAKING THE COMPLEX CLEAR

Clear Seas Research is an industry-focused market research company dedicated to providing clear insights to complex business questions. Capturing feedback via quantitative surveys (online, phone, mail or in-person) OR qualitative experiences (one-on-ones, focus groups or bulletin boards), we present results that are easily understood, insightful and actionable.

www.clearseasresearch.com



# WHAT THE BEST DRESSED HOSPITAL FLOORS ARE WEARING THIS SEASON.

Stonres™ RTZ in custom colors

Seamless, stain resistant, resilient and easy to clean floors provide infection control solutions and create healing environments for healthcare spaces. We manufacture and install floor systems for ORs, patient rooms, lobbies, corridors, kitchens and cafeterias. Stonhard brings long term floor protection to support evidence-based designs.



## INTERIOR FINISHES, FURNISHINGS

## MATERIAL INSPIRED BY NATURE

WR | GREEN

## Sensitile Systems, LLC

Thin, lightweight and versatile, SLANT™ panels reflect and refract light to create a dynamic space in any project. Etched with patterns inspired by natural phenomena, and made exclusively in the USA.

## Product Application

- L & T Law Offices, Chicago, IL (privacy panels)
- LMI, McLean, VA (illuminated light well)
- Private residence, MI (stair rail)

## Performance Data

- for use as feature walls, screens, bartops, lit panels and more
- available in 13 patterns such as Dew, Foam, Static

www.sensitile.com

313.872.6314 | info@sensitile.com



Booth: #5345 LIGHTFAIR SNAP 248

## LANDSCAPING, SITEWORK

## CUSTOM INVERTED GABLES PROVIDE DESERT SHADE

## ICON Shelter Systems Inc.

These inverted gable shelters at McCullough Vista Park in Henderson, Nevada measure 12' x 12'. Tubular steel frame is Ash Gray. Roof panels are Slate Gray.

## Product Application

- McCullough Vista Park, Henderson, NV
- Old Settler's Park, Round Rock, TX
- Barton Park, El Paso, TX

## Performance Data

- E-coated, powder coated frame to 8-12 Mils.
- Pre-Cut Galvalume roof panels with Kynar 500 finish
- Engineering services and footing design provided

www.iconshelters.com

800.748.0985 | Skip Stern



SNAP 249

## LANDSCAPING, SITEWORK

## STONPATH TPS FOR OUTDOOR APPLICATIONS

## Stonhard

A polymer-modified, UV-resistant, highly durable surface used to resurface outdoor areas that require an aesthetically appealing finish.

## Product Application

- Entrances and walkways.
- Outdoor dining areas.
- Paths for walking, running and biking.
- Quick installation.
- Long-term performance.
- Slip-resistant surface that holds up to heat, freezing temperatures and high traffic.

stonhard.com

800.257.7953



SNAP 250

## LANDSCAPING, SITEWORK

## LOFTY BENCH

NEW

## Thomas Steele Site Furnishings

The New! Lofty™ Series is elevated in its appearance, combining modern lines and charming character for a luxury feel.

## Product Application

- Streetscapes
- Schools and Universities
- Commercial Buildings

## Performance Data

- Five-year e-Steele™ finish warranty

www.thomas-steele.com

800.448.7931



SNAP 251



## INTERCEPT™ MODULAR METAL WALL PANELS

CENTRIA's Intercept Modular Metal Panel System combines superior performance and unlimited creativity. Custom fabricated based on the specific shapes and dimensions of the project, panels are offered in an extensive palette of colors and can be installed vertically, horizontally or in a variable running bond pattern.

To learn more visit [CENTRIAperformance.com/intercept](http://CENTRIAperformance.com/intercept) or call 1.800.250.8675

SNAP 252

## MATERIALS

## INSULATED CEILING PANELS

WR

## Arcoplast Sanitary Ceiling Systems

Resin molded insulated board with a uniform glass-fiber mat embedded in a permanent gel coated finish surface

## Performance Application

- Designed specifically for critical environments
- Life Sciences & Research Laboratories
- Food Processing & Bottling Facilities

## Performance Data

- Installs in all ceiling grid systems
- Compliance, specification and test certifications

www.arcoplast.com

888-736-2726 | Ghislain@arcoplast.com



SNAP 253

## MATERIALS

## ACOUSTICAL CLOUDS

Armstrong Ceiling Systems  
SoundScapes Shapes

Add quiet and make open space feel more intimate.

## Performance Data

- Enhance acoustics in open space
- Aesthetically define spaces
- Standard flat panels in multiple sizes and shapes
- Variety of standard and custom colors

armstrong.com/shapes

877.276.7876



SNAP 254



# Always be on the **SAFE SIDE**

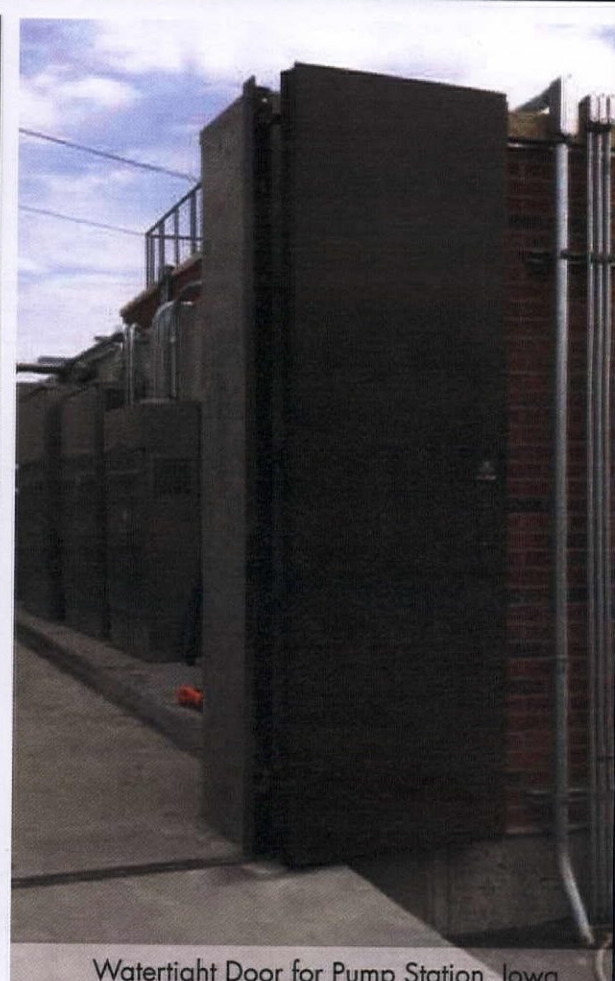
Flood Barriers and Watertight Doors since 1939



Watertight Hatches for MTA, New York City



QuickWall for Whitney Museum, New York City



Watertight Door for Pump Station, Iowa



Hinged Flood Gate, Iowa City

SNAP 27

Engineering Excellence, Innovation & Quality

**Fast Delivery  
Cost Effective**

**Customized for any Location  
Designed for any Pressure & Size**



**Walz & Krenzer, Inc.**

91 Willenbrock Rd., Unit B4, Oxford CT 06478

203.267.5712 | fax 203.267.5716

sales@wkdoors.com | www.floodbarriers.com



## MECHANICAL SYSTEMS, HVAC, PLUMBING

## ARCHITECTURAL ZERO-THRESHOLD SHOWER DRAINS

## Infinity Drain - Made in USA

Versatile linear drain systems for shower enclosures and outdoor applications. Systems for any waterproofing technique, any length, and any flooring material.

## Product Application

- Create a curbless shower
- Pitch the floor in one direction
- No limitation on tile size or slab material
- Meets ADA requirements for handicap showers

## Performance Data

- Visit [www.InfinityDrain.com](http://www.InfinityDrain.com) for technical info, CAD drawings, and installation videos

[www.InfinityDrain.com](http://www.InfinityDrain.com)

516.767.6786 | [Info@InfinityDrain.com](mailto:Info@InfinityDrain.com)



Booth: 10120

HD Expo

SNAP 255

## MECHANICAL SYSTEMS, HVAC, PLUMBING

## HIGHEST RESOLUTION TOUCHSCREEN

## NEW

## Price Critical Controls

The Touchscreen Pressure Monitor (PMT) provides pressure monitoring of critical spaces using the latest in microcontroller and sensor technologies.

## Product Application

- Isolation Rooms
- Operating Rooms
- Compounding Pharmacies

## Performance Data

- Industry first maintenance free pressure sensor
- BTL certified BACnet room pressure monitor

[www.pricecriticalcontrols.com](http://www.pricecriticalcontrols.com)



SNAP 256

## MECHANICAL SYSTEMS, HVAC, PLUMBING

## STAINLESS STEEL 16-GAUGE INDUSTRIAL SINKS

## \$\$ | GREEN | NEW

## Just Manufacturing

ARMOR Series: 16-gauge type 304, seamlessly die drawn, true gauge industrial-grade stainless steel drop-in and under-mount sinks.

## Product Application

- Commercial and industrial applications
- Full range of sizes; available in ADA-compliant and standard depths
- Max capacity straight sided bowl configuration

## Performance Data

- 25% thicker compared to standard 18 gauge
- Just Sinks are made in the USA from domestic stainless steel of 90% recycled content

[www.justmfg.com](http://www.justmfg.com)

847.678.5150 | Customer Service



16  
GAUGE

Seamlessly Die-Drawn,  
Heavy Duty, 16 Gauge,  
Type 304 Stainless Steel for  
use in commercial applications.



SNAP 257

## ROOFING, SIDING, THERMAL &amp; MOISTURE PROTECTION

## ALUMINUM COMPOSITE MATERIAL - ACM

## WR

## Alucoil North America

Manufactures aluminum & metal composite materials used for exterior wall cladding, corporate ID programs, column covers, interior wall panels & signage in South Carolina.

## Product Application

- Rental car center at Boston Logan International Airport

## Performance Data

- ICC-ES AC-25 product listing
- USA & Canadian Fire Testing
- 30-year warranty on Kynar finishes

[www.alucoilnorthamerica.com](http://www.alucoilnorthamerica.com)

803.505.6543 | Susan Rogers



SNAP 258

## ROOFING, SIDING, THERMAL &amp; MOISTURE PROTECTION

## ATAS ADDS ES-1 TESTED PERIMETER EDGE SYSTEMS

## NEW

## ATAS International, Inc.

Engineered and tested for performance, the new line of perimeter edge products make ATAS a true single source for metal building envelope products.

## Product Application

- Ease of installation
- Wide variety of materials
- Over 30 standard colors

## Performance Data

- ES-1 tested as required by International Building Code for low-slope perimeter edge systems.

[www.atas.com/perimeter-edge](http://www.atas.com/perimeter-edge)

610.395.8445



Booth: 2248

IRE

SNAP 259

## ROOFING, SIDING, THERMAL &amp; MOISTURE PROTECTION

## WALL PANELS

## \$\$ | GREEN | NEW

## Petersen Aluminum Corporation

PAC Exposed Fastener Panels offer unmatched design flexibility and versatility. They can be specified for a wide range of building envelope applications including roofs, walls and linear panels.

## Product Application

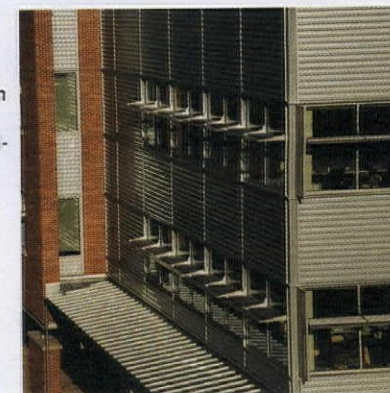
- Marist High School, Atlanta, GA

## Performance Data

- 30-year non-prorated finish warranty
- Florida building product approvals

[www.PAC-CLAD.com](http://www.PAC-CLAD.com)

800.PACCLAD | Rob Heselerbarth



Booth: 1256

IRE

SNAP 260

## ROOFING, SIDING, THERMAL &amp; MOISTURE PROTECTION

## ROOFTOP WALKWAY &amp; SAFETY RAILING

## GREEN

## Design Components, Inc.

METALWALK™ Rooftop Walkway along with the optional safety handrail provides safe roof access for any commercial or industrial application.

## Product Application

- Protection for both personnel and roof systems
- Non-penetrating attachment for standing seam roofs

## Performance Data

- Meets or exceeds OSHA & IBC 2006 specifications
- Available in galvanized, Galvalume™ or painted finish

[www.rooftopwalkway.com](http://www.rooftopwalkway.com)

800.868.9910



SNAP 261

## ROOFING, SIDING, THERMAL &amp; MOISTURE PROTECTION

## CLAD WITH UNLIMITED POSSIBILITIES

## WR

## Dri-Design

Dri-Design is an advanced and sophisticated metal wall panel system....made simple.

## Product Application

- Centennial College - Toronto Canada
- Tapered Series panels using Stainless Steel
- Fast, easy application

## Performance Data

- Tapered Series maintains Dri-Design's true dry joint rain-screen technology, sustainability and ease of installation.
- Exceeds performance specs of AAMA 508-07

[www.dri-design.com](http://www.dri-design.com)

616.355.2970 | [sales@dri-design.com](mailto:sales@dri-design.com)



SNAP 262



## ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

### ARCHITECTURAL PRECAST CONCRETE CLADDING PANELS

GREEN | WR

#### Easi-Set Worldwide

Ultra Hi-Performance Slenderwall is a 28 lb/sf award-winning architectural precast concrete and steel-stud exterior panel system wind-load tested to 226 mph.

#### Product Application

- BioInnovation Center, New Orleans, LA
- Johns Hopkins Hospital, Baltimore, MD
- Westin Luxury Hotel, Virginia Beach, VA
- US Army Legal Headquarters, Ft Belvoir, VA

#### Performance Data

- Factory-installed continuous closed-cell foam insulation – ASTM C-1363 hot box tested and compliant with all IECC/ASHRAE energy conservation codes

www.SlenderWall.com

800.547.4045 | info@easiset.com

## SLENDERWALL

A COMPLETE BUILDING PANEL  
INSIDE AND OUT



- Fewer on-site trades • Faster installation
- Lower structural cost • Class "A" finishes

SNAP 263

## SPECIALTY PRODUCTS

### FOLDING STAIRWAY

\$\$ | NEW

#### Precision Ladders, LLC

Automatic Super Simplex Folding Stairway opens and unfolds at the press of a button. New patent-pending stair can be operated from above or below for ceiling heights up to 16 ft.

#### Product Application

- University of Memphis Clock Tower, Memphis, TN
- I-78 Toll Plaza, Blackwood, NJ
- Fort Saskatchewan Hospital, Edmonton, Alberta

#### Performance Data

- 500-lb load rating with actual shear of rivets tested to 1,175 lb; steel frame, extruded aluminum treads

www.precisionladders.com

800.225.7814 | Steve Fugate



SNAP 264

## SPECIALTY PRODUCTS

### STAINLESS STEEL CABLE RAILING

WR | GREEN | NEW

#### Atlantis Rail Systems

Stainless steel cable railing systems for unobstructed indoor or outdoor, commercial or residential designs and pre-engineered for quick and easy installations.

#### Product Application

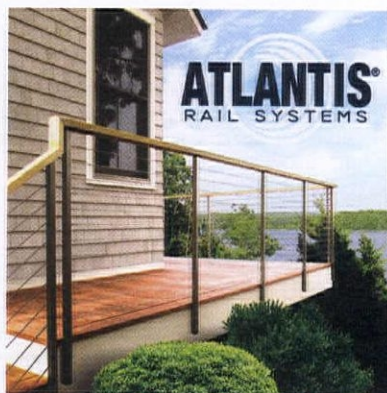
- Federal Jacks Restaurant & Brew Pub, Kennebunk, ME
- Gumbo Limbo Nature Center, Boca Raton, FL
- The Bluff Top Trail, Dana Point, CA

#### Performance Data

- Low maintenance, grade 316L stainless steel
- Variety of modular components for every design
- Commercial or residential; indoors or outdoors

www.atlantisrail.com

800.541.6829 | info@atlantisrail.com



Booth: 15

JLC LIVE

SNAP 265

## SPECIALTY PRODUCTS

### ICC-ES CERTIFIED FOUNDATION FLOOD VENTS

NEW | WR | GREEN

#### Smart Vent® Products, Inc. Flood Risk Evaluator (FRE)™

Visit the Architect section of our website to download AutoDesk® Revit® BIM files and CAD files on the SWEETS™ Network.

#### Product Application

- A complimentary project evaluation from FRE by request is also available by sending in your project details to plans@smartvent.com.

#### Performance Data

- Dual Function & Insulated Models
- Models for residential and commercial applications
- Made in the USA from Marine Grade 316 Stainless Steel

www.smartvent.com

877.441.8368 | info@smartvent.com

## Floods Happen. Vent Smart.

Keep homes structurally sound during a flood event.

CAD & BIM FILE DOWNLOADS



COMPLIMENTARY PROJECT EVALUATION

(877) 441-8368 • www.smartvent.com

Booth: S1453

IBS

SNAP 266

# The Best Pavements Are Invisible

## Grasspave<sup>2</sup>

grass porous paving



Invisible  
Structures, Inc.

invisiblestructures.com • 800-233-1510

## Gravelpave<sup>2</sup>

gravel porous paving





## SPECIALTY PRODUCTS

## SEPARATING PEOPLE FROM HAZARDS

**Kee Safety, Inc. –**  
**A Global Safety Solution Supplier Since 1934**

Safety railings and fall protection.

**Product Application**

- Hand railing
- Rooftop fall protection
- Horizontal lifeline
- Portable anchorpoints
- Safe access solutions
- Steel-to-steel connections

www.keesafety.com  
 800.851.5181 | info@keesafety.com



SNAP 267

## EXTRUDED FENCE SERIES

\$\$ | GREEN | NEW

**Ogi Architectural Metal Solutions - an Ohio Gratings Company**

Extruded Fence is manufactured from 6000 series aluminum and can be custom fabricated to meet privacy and security requirements by offering up to 100% visual block.

**Product Application**

- Multi-Family Complex – Boston, MA
- Tampa Premium Outlets – Tampa, FL

**Performance Data**

- Easily customized and most assemblies integrate channel or tube frames and mounted to posts
- Can be powder coated to match any color

www.ohiogratings.com  
 800.321.9800 | Alex Stuhldreher



SNAP 268

## SPECIALTY PRODUCTS

## DECK SYSTEM FOR BLEACHERS AND GRANDSTANDS

WR | NEW

**Sturdisteel**

Tongue & Groove “no through-bolt” decking systems feature a closed deck that provides increased rigidity, a reduction in deflection, and allows the aluminum boards to act as one, solid deck.

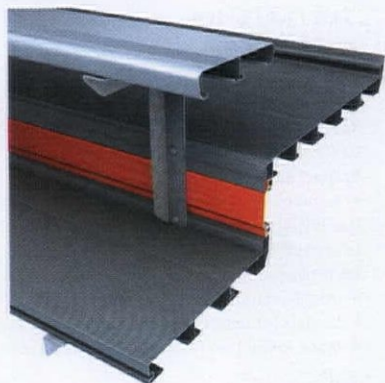
**Product Application**

- I-Beam permanent grandstands
- Leg truss permanent grandstands
- Angle frame bleachers

**Performance Data**

- Containment of trash & debris
- Accommodates various rise & tread spacing
- Accommodates stadium chair seating

www.sturdisteel.com  
 800.433.3116 | info@sturdisteel.com



SNAP 269

## SPECIALTY PRODUCTS

## ANTI-SLIP STAIR TREADS &amp; NOSINGS

\$

**Wooster Products, Inc.**

Anti-Slip Stair and Walkway Products for new construction and renovation. Brand names include Supergrit, Spectra, Alumogrit, Stairmaster and NITEGLOW.

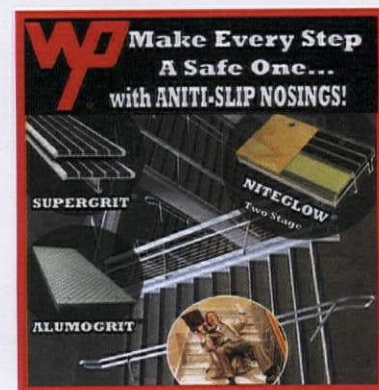
**Product Application**

- Commercial and residential buildings
- Transit systems
- Stadiums and ballparks

**Performance Data**

- Indoor and outdoor use
- ADA, New York MEA, IBC, and IFC compliant
- Available in a variety of profiles and colors

www.wooster-products.com  
 800.321.4936



SNAP 270

## NO WAX SHEET RUBBER FLOORING



## ADVANTAGES OF SHEET RUBBER FLOORING

- Longevity - retains new look for many years
- Smooth surface - easy cleaning
- Soft underfoot
- Good traction
- Many design possibilities

NEW  
SURFACE  
TREATMENTS

SPECKLED



FLECK



**MUSSON RUBBER CO.**

P.O. Box 7038 • Akron, Ohio 44306  
 800-321-2381 • Fax 330-773-3254  
 info@mussonrubber.com • www.mussonrubber.com



***OGI Extruded Sunshades:***  
An ideal solution for vertical or  
horizontal shading applications.

Florida Hospital Womens Center  
Orlando, FL  
SV8A Product

#### Product Features

- Manufactured from aluminum
- Custom fabrication
- Various finishes available:
  - anodized
  - powder coated
  - liquid PVDF
- Multiple configurations
- Eligible for LEED credits

# extruded sunshades

#### SNAP 20

Top & Bottom Photos:  
Verizon Headquarters  
Lake Mary, FL  
SH8AB Product



**OGi Architectural Metal Solutions**  
an Ohio Gratings Company

5299 Southway Street SW □ Canton, OH 44706 □ [www.ohiogratings.com](http://www.ohiogratings.com)

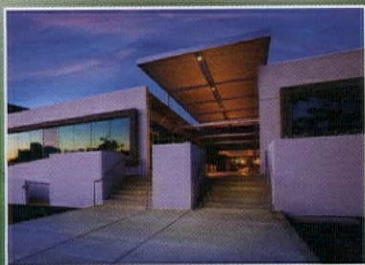
1-800-321-9800 □ Fax 330-477-7872







## SUN CONTROLS



### THE PROJECT

Koll Airport Professional  
Center Renovation  
Irvine, CA

### ARCHITECT

LPA, Inc., Irvine, CA

### THE LOOK...

Clear-anodized aluminum  
sun controls shade the plaza  
and reflect light to the interior.

### THAT WORKS

Cuts heat penetration and  
provides natural light to reduce  
energy costs, and contribute  
to LEED credits.

Whether for a new structure or a remodel, Airlite's sun control products integrate perfectly with your building design to deflect heat and glare, direct light to desired spaces, and add drama. Our custom capabilities will help your design take form, with components that deliver the aesthetics, energy efficiency and comfort your project requires.

View this case history at [airolite.com/4suncontrols](http://airolite.com/4suncontrols)

715.841.8757



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LOUVERS | **SUN CONTROLS** | GRILLES

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OF **SNAP**  
CONTENT, ALL  
THE TIME.



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SNAP/REGISTERTODAY](http://WWW.ARCHITECTURALRECORD.COM/SNAP/REGISTERTODAY)

**snap**

ARCHITECTURAL NEWS + PRODUCTS





Unitized Panel System

Internal Structure

Purlin Clip

Element LA Architect: Gensler Los Angeles, CA ©RMA Photography Inc.

## What's Your Next Bright Idea?

### UniQuad®

**UniQuad®** - a unitized translucent panel system developed for high-performance building envelopes. This comprehensive system offers superior thermal performance and exceptional design versatility. UniQuad enables you to redefine daylighting and highlight your creativity, without sacrificing performance. Explore what's possible when imagination meets innovation.

UniClip™

**SNAP 113**



**CPIDAYLIGHTING.COM**  
LAKE FOREST, ILLINOIS

847.816.1060  
800.759.6985





## NEW AND UPCOMING EXHIBITIONS

### Close Up

LOS ANGELES

March 11–May 29, 2016

An often overlooked condition of digital design technologies is the ability to design objects through continuous degrees of magnification. This exhibition at the SCI-Arc Gallery, curated by architects Hernan Diaz Alonso and David Ruy, proposes that technological advancements have transformed architectural thought and process. For more information, visit [sciarc.edu](http://sciarc.edu).

### A Japanese Constellation: Toyo Ito, SANAA, and Beyond

NEW YORK CITY

March 13–July 4, 2016

This exhibition at the Museum of Modern Art highlights the web of architects and designers around Pritzker Prize winners Toyo Ito and SANAA. The curators provide an overview of Ito's career and his influence as a mentor to a new generation of Japanese architects, as well as a retrospective of three generations of acclaimed designers, including Kazuyo Sejima, Ryue Nishizawa, Sou Fujimoto, Akihisa Hirata, and Junya Ishigami. For more information, visit [moma.org](http://moma.org).

## ONGOING EXHIBITIONS

### Chinese Style: Rediscovering the Architecture of Poy Gum Lee, 1923–1968

NEW YORK CITY

Through March 27, 2016

In this survey exhibition at the Museum of Chinese in America, architectural historian Kerri Culhane documents Poy Gum Lee's (1900–68) nearly 50-year-long career in both China and New York. Culhane focuses on Lee's influence in New York's post-1945 Chinatown, where he blended Chinese stylistic details with modern technologies and materials. For more information, visit [mocanyc.org](http://mocanyc.org).

### Architecture of Independence: African Modernism Chicago

CHICAGO

Through April 9, 2016

This exhibition at the Graham Foundation explores the history and legacy of Modernist architecture in sub-Saharan Africa during the 1960s and '70s. A combination of archival material and commissioned photographs by Iwan Baan and Alexia Webster tell the stories of 80 structures in Ghana, Senegal, Côte d'Ivoire, Kenya, and Zambia, offering a new perspective on the intersection of architecture and nation-building. For more information, visit [grahamfoundation.org](http://grahamfoundation.org).

### Peter Fischli David Weiss: How to Work Better

NEW YORK CITY

Through April 20, 2016

For more than three decades, collaborators Peter Fischli (b. 1952) and David Weiss (1946–2012) exploited humor and banality to celebrate the sheer triviality of everyday life. This exhibit, at the Guggenheim, offers a thorough investigation of the artists' joint production. For more information, visit [guggenheim.org](http://guggenheim.org).

### Creation from Catastrophe: How Architecture Rebuilds Communities

LONDON

Through April 24, 2016

Destruction and devastation offer unique opportunities to radically rethink our environment. *Creation from Catastrophe*, at the RIBA Architecture Gallery, explores the varying ways that cities and communities have been reimagined in the aftermath of natural or man-made disasters. From master plans to reconfigure London following the Great Fire of 1666 to contemporary responses to earthquakes and tsunamis, the exhibit poses questions about the fragility of architecture, our relationship to nature, and the power of architects to instigate change. For more information, visit [architecture.com/riba](http://architecture.com/riba).

### The New American Garden: The Landscape Architecture of Oehme, van Sweden

WASHINGTON, D.C.

Through May 1, 2016

Wolfgang Oehme (1930–2011) and James van Sweden (1935–2013) revolutionized American landscape architecture. Rejecting the well-manicured but perpetually thirsty lawns that had become icons of 20th-century suburban neighborhoods and corporate campuses, the duo used ornamental grasses and perennials to create living tapestries that required relatively little maintenance. These self-sustaining landscapes, on view at the National Building Museum, exemplified what came to be known as the New American Garden. For more information, visit [nbm.org](http://nbm.org).

### Bauhaus Twenty-21: An Ongoing Legacy

PALM SPRINGS, CALIFORNIA

Through May 1, 2016

This exhibition at the Palm Springs Art Museum showcases 12 of the most iconic achievements of Bauhaus architecture built before 1933, bringing the buildings into conversation with contemporary architectural visions. Each work, photographed by Gordon Watkinson, appears alongside a project built in this century. For more information, visit [psmuseum.org](http://psmuseum.org).

### HACLab Pittsburgh: Imagining the Modern

PITTSBURGH

Through May 2, 2016

The City of Pittsburgh underwent an ambitious program of urban revitalization during the 1950s and '60s. This exhibit untangles the city's complicated relationship with modern architecture and urban planning at that time. In this experimental presentation at Carnegie Museum of Art's Heinz Architectural Center, the architects in residence, the Boston-based studio over, under, unearth layers of history and a range of perspectives through archival materials, an on-site architecture studio, and a salon-style discussion space. For more information, visit [cmoa.org](http://cmoa.org).

### Pedagogy and Place

NEW HAVEN

Through May 7, 2016

Aiming to pinpoint the relationship between physical settings and the pedagogy of architectural education, *Pedagogy and Place*

traces the last 100 years of Yale's program through alumni work and the buildings designed to house the university's School of Architecture. An auxiliary installation presenting more than 20 other architecture schools from around the world further illuminates how spatial relationships and various modes of training have evolved over the last two centuries. For more information, visit [architecture.yale.edu](http://architecture.yale.edu).

### Architecture of Life

BERKELEY

Through May 29, 2016

The inaugural exhibition at BAMPFA's new Diller Scofidio + Renfro–designed building explores how architecture—as concept, metaphor, and practice—illustrates various aspects of life, including the nature of the self and the power of the imagination to reshape our world. The comprehensive show spans 2,000 years and comprises more than 200 works of art in a wide range of media. For more information, visit [bampfa.org](http://bampfa.org).

### Beauty

NEW YORK CITY

Through August 21, 2016

The fifth installment of the Cooper Hewitt's contemporary design exhibition series, *Beauty* celebrates design as a creative endeavor that engages the mind, body, and senses. The exhibition features more than 250 works by 62 designers organized around seven themes: extravagant, intricate, ethereal, transgressive, emergent, elemental, and transformative. For more information, visit [cooperhewitt.org](http://cooperhewitt.org).

### Design for Eternity: Architectural Models from the Ancient Americas

NEW YORK CITY

Through September 18, 2016

From the first millennium B.C. until the arrival of Europeans, artists from the ancient Americas created small-scale architectural models that were placed in the tombs of important individuals. This exhibit at the Metropolitan Museum of Art sheds light on the role these objects played in mediating relationships between the living, the dead, and the divine. It also provides a rare look at ancient American architecture—much of which did not survive to the present day. For more information, visit [metmuseum.org](http://metmuseum.org).

## LECTURES, CONFERENCES, AND SYMPOSIA

### SAH 2016 Annual International Conference

LOS ANGELES

April 6–10, 2016

This conference, held at the Pasadena Convention Center, will expose attendees to the evolving legacy of the Pasadena/Los Angeles region's built environment. With the scheduled completion of the Metro Expo Light-Rail Line west to Santa Monica in early 2016, Pasadena will be connected to downtown LA and the rest of Los Angeles County. This infrastructure, building on historic right-of-ways, will provide new ways to view the broad range of the region's architecture and urbanism. For more information, visit [sah.org](http://sah.org).

### AIA Convention 2016

PHILADELPHIA

May 19–21, 2016

The AIA Convention is one of the largest annual gatherings of architects and design professionals in the United States. This year, it will take place at the Pennsylvania Convention Center. For more information, visit [convention.aia.org](http://convention.aia.org).

### NeoCon 2016

CHICAGO

June 13–15, 2016

NeoCon, the largest commercial interiors show in North America, launches thousands of new products and covers a spectrum of markets: workplace, healthcare, hospitality, retail, education, public spaces, government. For more information, visit [neocon.com](http://neocon.com).

## COMPETITIONS

### Autism Speaks House to Home Prize

Submission deadline: March 1, 2016

Moving out of the family home always has its challenges. For those living with autism, however, the obstacles and fears surrounding this rite of passage can be overwhelming—not just for them but also for their families. Autism science and advocacy organization Autism Speaks hopes its competition will inspire support services and alternative housing solutions for its clients. For more information, visit [autismspeaks.org](http://autismspeaks.org).

### Charlie Hebdo Portable Pavilion

Registration deadline: March 9, 2016

Most of us regard freedom of speech as the most fundamental of human rights. Yet countries around the world deny people this liberty on a daily basis. This competition, named for the outspoken French publication, asks participants to design a traveling structure that will deconstruct the idea of free speech, reminding visitors that open expression is a right not all people enjoy. For more information, visit [charliehebdoportablepavilion.beebreeders.com](http://charliehebdoportablepavilion.beebreeders.com).

### NYC Aquarium and Public Waterfront

Submission deadline: April 1, 2016


New York City's waterfronts have largely been seized by private development; most ventures in these areas only address public value when there is a direct return on profit. This competition, launched by design instigators arch out loud, seeks proposals for a public aquarium and waterfront park that provides communal space for the surrounding city. Students and professionals are invited to redefine the aquarium typology, examining its relationship to the urban context and exterior realm. For more information, visit [archoutloud.com](http://archoutloud.com).

### Robert A.M. Stern Architects Fellowship

Submission deadline: April 8, 2016

This \$10,000 annual prize for travel and research promotes the perpetuation of tradition through invention—a philosophy that informs the work of Robert A.M. Stern Architects. The fellowship is open to a graduate student from one of 19 select schools who has proven insight and interest in the profession and its future, as well as the ability to conduct in-depth research. For more information, visit [ramsa.com](http://ramsa.com).





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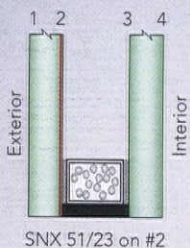
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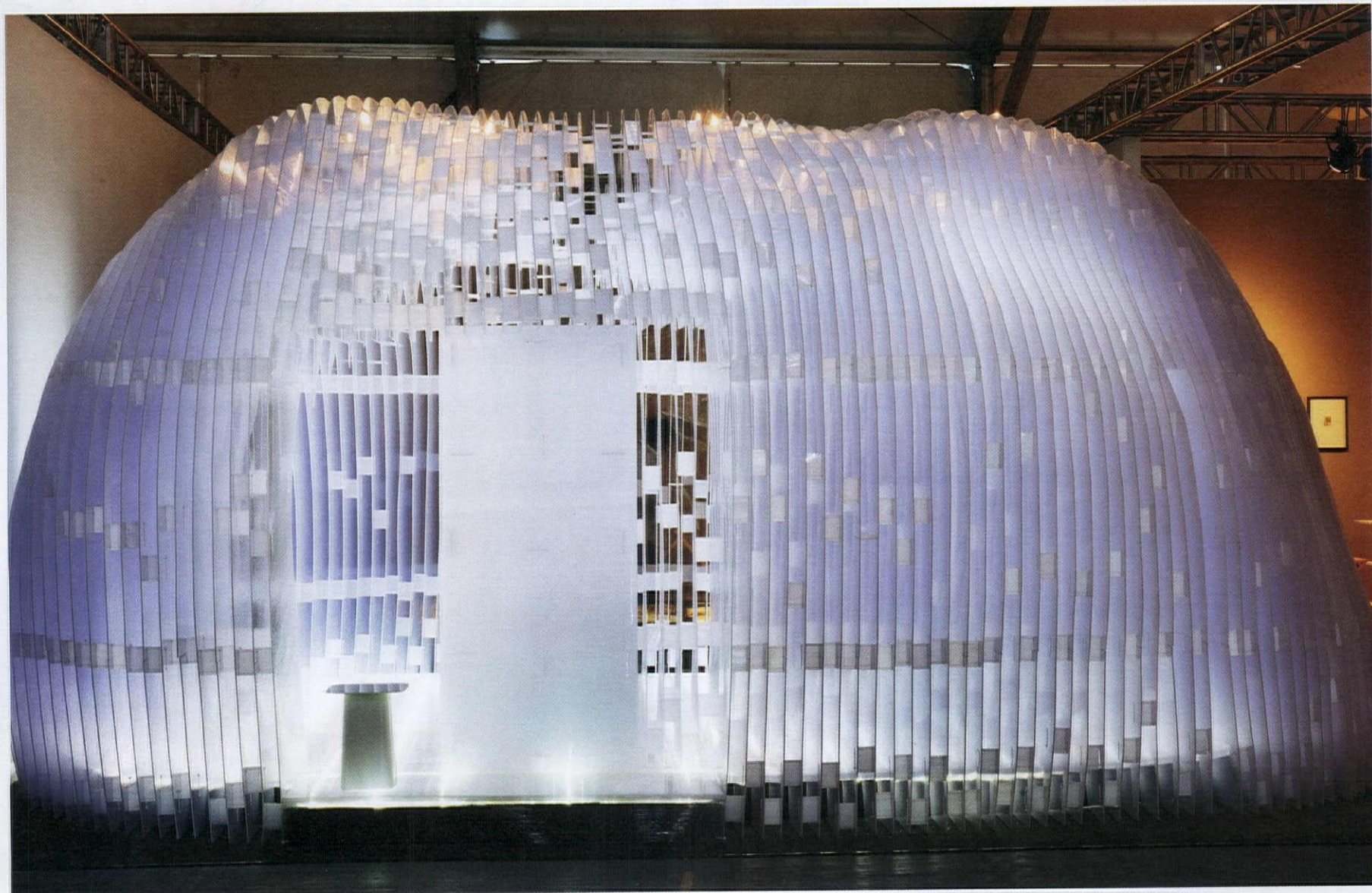
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#### WHITE OUT

Made from flexible translucent sheets, Kengo Kuma's *Oribe* teahouse boasts undulating walls (above) and a cloud-like interior (right).



## We Will Build It

*Prefab structures and architect-designed products dominate Design Miami.*

**NOW IN ITS 10TH YEAR**, Design Miami has grown from an adjunct to Art Basel Miami Beach to a full-fledged event unto itself, featuring everything from classic Modernist furniture to contemporary garden pavilions. In December, architects stole the show, both as product designers and builders of collectible structures.

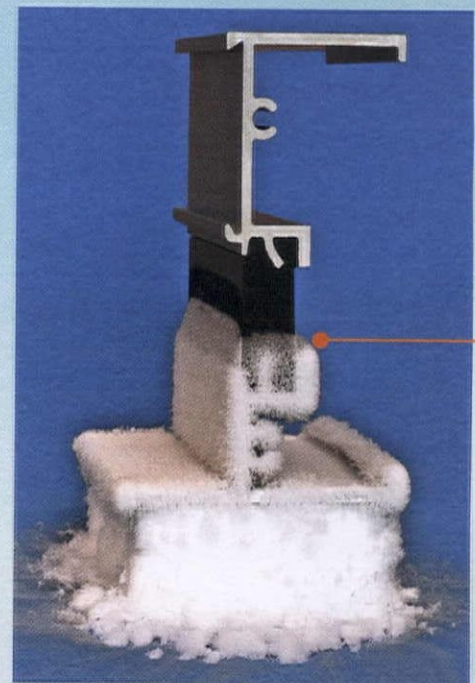
Vintage objects by pioneering early-20th-century architects remained in demand, with Rotterdam-based **Galerie VIVID** selling several exceptional pieces of 1930s furniture by **Gerrit Rietveld**. The rarest finds were his white desk and accompanying Zig-Zag chair, the latter of which the Dutchman once described as “a divider of space, like a



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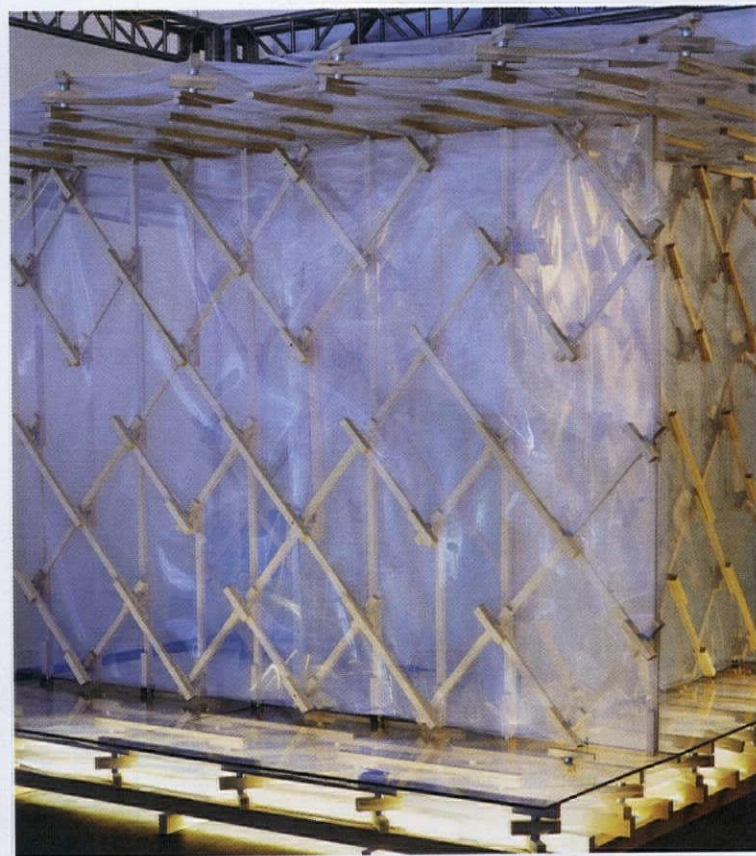


screen." Chicago's **Casati Gallery** displayed a 1947 unit by **Gio Ponti**. The sleek design, combining a low-slung bed and white-lacquered headboard with integrated shelving, lighting, and stereo system, looked as if it were straight out of *A Clockwork Orange*.

The showstopper, though, was **Jean Prouvé's** 4-square-meter demountable military hut. Adapted during World War II by the Prouvé studio—which originally envisioned the prefabricated structure as a recreational building—the wooden hut can be assembled by two men in three hours.

**Patrick Seguin**, whose Parisian gallery was selling the piece, said that of the few hundred produced, this was the sole survivor. It brought in \$2 million.

Contemporary structures were also in demand. Parisian gallerist **Philippe Gravier** mounted **Kengo Kuma's** *Oribe*, a



### STRUCTURALLY SOUND

Notable gallery pieces on offer at Design Miami included a white desk and Zig-Zag chair by Gerrit Reitveld (right), Kengo Kuma's *Hojo-An* portable cottage (far right), and Jean Prouvé's prefab military hut (below).







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# The Better Is In The Details!



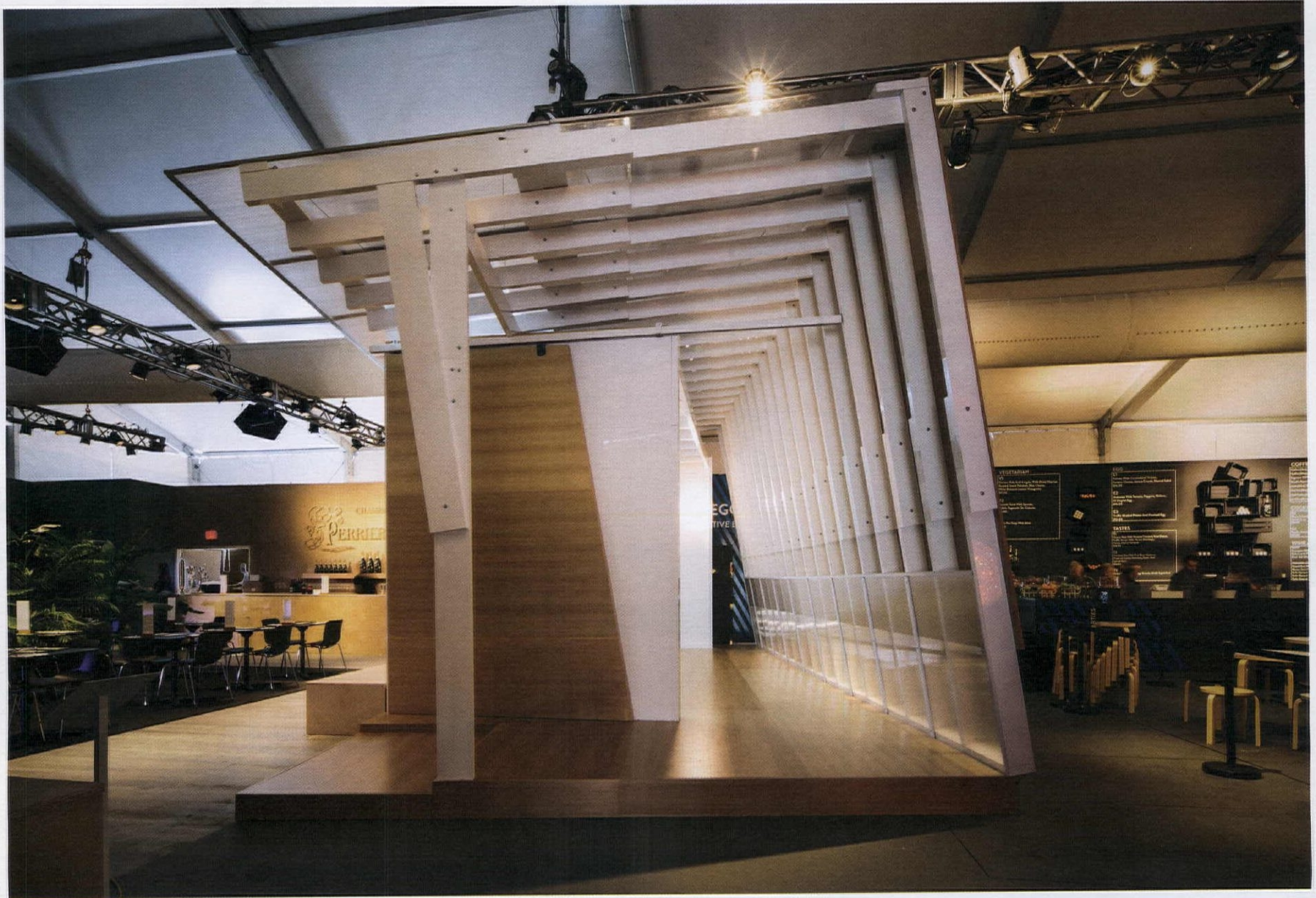
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#### DESIGN ART

At the fair, Revolution Prefabricated Properties introduced a pair of its 30 architect-designed limited-edition pavilions: Gluckman Tang's Model Art Pavilion (above) and Zaha Hadid and Patrik Schumacher's VOLU Pavilion (right).

400-square-foot teahouse constructed from translucent polycarbonate sheets. Entering the Japanese architect's structure felt like walking into a cloud, with the flexible, floating plastic floor surrounded by undulating corrugated walls. The gallery also exhibited Kuma's *Hojo-An* cottage, a roughly 9-by-10-foot structure made of 21 fluorine-based plastic (ETFE) sheets adhered via magnets to a cedar latticework frame.

In the Collectors' Lounge, **Revolution Prefabricated Properties**—a company founded by real estate developer Robbie Antonio and **ETN Design**, a new venture from gallerist Edward Tyler Nahem—debuted two of its 30 structures designed by superstar architects: **Gluckman Tang's** Model Art Pavilion and the VOLU Pavilion, by **Zaha Hadid** and her associate **Patrik Schumacher**.

**Richard Gluckman** describes the former as “a space to experience art in any location.” To that end, the enclosed pavilion features a polycarbonate skylight, viewing area, and slotted wooden wall that brings in natural light. The Hadid work, in contrast, suits outdoor entertaining. Shaped like a clamshell, the open-air shelter is made of a mix of stainless steel, aluminum, and wood.

Of his company's work, Robbie Antonio says, “Revolution creates a series of prefabricated properties that are transportable, accessible, and collectible.” He hopes people will amass the limited-edition pavilions like artworks. But it remains to be seen if Revolution's offerings will democratize high-end design, as claimed: These architectural twists on Design Art average \$450,000 apiece. —Wendy Moonan



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**SNAP 36**





## PARTNERS IN DESIGN

BY LESLIE CLAGETT



### FRONT

The Stockholm-based trio of Charlotte von der Lancken, Anna Lindgren, and Sofia Lagerkvist has created furnishings for Moroso, Moooi, and Porro, among others. [frontdesign.com](http://frontdesign.com)



### PHILIPPE GROHE

As the CEO of Hansgrohe's Axor brand, Grohe has spearheaded collaborations with designers such as Nendo, Jean-Marie Massaud, Antonio Citterio, and Patricia Urquiola. [hansgrohe-usa.com](http://hansgrohe-usa.com)

**FOR MORE THAN** two decades, Axor's WaterDream program has challenged designers to redefine the look and function of the bathroom. "The focus is not primarily on the products," says company head Philippe Grohe, "but on breaking down established behavior patterns." In 2013, Swedish atelier Front responded to that brief by turning the loo into a rambling assemblage of copper couplings, pipes, and valves.

"We wanted to draw attention to the hidden aesthetics of bathing technology in a particularly elegant way," explains Front's Charlotte von der Lancken of that conceptual design. For production versions of the fixtures, issued late last year, the trio replaced the original tangle of tubing with a funnel-shaped showerhead and hand shower, both boasting outside-the-wall pipe configurations. The elements come in polished chrome and have a sophisticated yet playful geometric appearance.

"Front showed us how a shower's purpose-specific components can be transformed into visually appealing design objects," says Grohe of the curvilinear results. (SNAP #272)





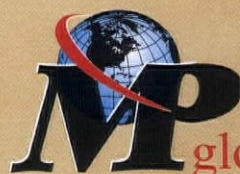
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