CLINICALLY SPEAKING

CELLIANT BY DESIGNTEX
PAGE 12

CARE GIVERS
More than ever, waiting area furnishings are patient-centered
PAGE 12

SOUTHERN LULL
Manufacturing activity is spotty, but improving for Mid-Southern states
PAGE 52
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IN BRIEF

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Whitney Young, Jr.’s 1968 call for diversity in architecture is revisited in an exhibit by AIA’s New York chapter. Euphoric cityscapes of the late Congolese artist Bodys Isek Kingelez are on view at New York’s Museum of Modern Art, OPEN’s award-winning research center, and more.

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Clockwise from top left: DesignTex’s thermo-reactive fabric; the Centre for Overweight Adolescent and Children’s Healthcare; Designer Ini Archibong.
On a Healthy Note

**DOCTORS’ VISITS** can cause fear, uncertainty, and uncomfortable periods of waiting. So it was heartening to find, as we put together this issue of SNAP, that now more than ever environments and materials are being designed to address those patient issues.

The best projects are conceived with a floor plan and products that align with the services offered in them—and take your mind off the wait. Take for instance **Brandon Haw Architecture’s** design for a Manhattan dermatology office (page 18). BHA enveloped the treatment rooms in a pearlescent lozenge at the center, designating the serenely day-lit areas around it—and the soft residential-style seating—for waiting. And in the Netherlands, **Tinker Imagineers** built re-usable walls and privacy pods that function as a life-size gameboard (page 23) for a children’s obesity clinic. The design encourages patients to stay active while waiting and, now that it has been tested, can be installed in the clinic’s permanent location later.

Meanwhile, a spate of manufacturers claims their products are not just healthy, but healing for patients to be around. Find out which companies are processing furnishings and finishes with medicinal components built right into them, starting on page 12.

We also interviewed three pros who are specifying the new healthcare design landscape. **Brandon Haw, HOK Chief Medical Officer–Healthcare, Dr. Andrew Ibrahim, and Design Studio’s** Rebecca Donner herald targeted use of graphics, acoustics, and active design elements as having the capacity to improve settings for patients and caregivers. See their collective forecast for change on page 15.

Don’t forget to review the product sections for additional innovative materials. You’ll find exactly what the doctor ordered.

**KELLY L. BEAMON**
Editor
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50 Years and Counting

ON THE HEELS OF #MeToo accusations and reactionary protests by women architects, members of the New York chapter of the American Institute of Architects are remembering an earlier call to action. This year marks the 50th anniversary of a momentous speech by activist Whitney Young, Jr. at the 1968 AIA National Convention to address the exclusion of African-Americans by the profession.

In July, the New York chapter’s Diversity and Inclusion committee (created in response to Young’s speech) opened the exhibit A Call to Act(ivism): Echoing Whitney Young, 50 Years Later, at the Center for Architecture. The show displays socioeconomic statistics about architects by gender, race, and age. The number of licensed black architects in the U.S. has hovered around 2 percent for years. The graphics on display by the Manuel Miranda Practice also present local AIA members’ responses to recent survey questions, which suggest a lack of awareness may still be a problem. One question asks if architects believe their firms support licensure through mentorship; another asks about salaries. Trackable data has been scarce, so the exhibit aims to paint a picture of how much progress has been made, especially in New York, where candidate pools are seen as diverse.

“New York is this melting pot where you get everyone from all walks of life. But the demographics of architecture have a long way to go to reflect that,” says curator Dania Cesario. “If this is how it looks in New York City, how bad is it elsewhere?”

A Call to Act(ivism): Echoing Whitney Young, 50 Years Later will be on view at the Center for Architecture through September 15.

— Brooke Henderson

LIVING COLOR

Ville Fantôme from Bodys Isek Kingelez: City Dreams at New York’s Museum of Modern Art.

God of Small Things

Euphoric architectural models and cityscapes by late Congolese artist Bodys Isek Kingelez are on view at New York’s Museum of Modern Art in the show Bodys Isek Kingelez: City Dreams, curated by Sarah Suzuki. It features his colorful, tabletop sculptures made using everything from ornamental papers and plastic sheeting to soda cans and discarded packaging. The exhibit’s centerpiece, a work titled Ville Fantôme, includes 40 individual buildings. Born in an agricultural village, Kingelez grew up fantasizing about a futuristic urban utopia. He moved to the capital, Zaire, to study after the country gained its independence, and worked briefly as a teacher before his prolific sculpting earned him a position restoring traditional objects in the collection at the National Museum Institute of Zaire. He became a full-time artist in the early 1980s and debuted his work on the world stage in 1989, when he participated in Magiciens de la Terre at the Centre Pompidou in Paris. For anyone seeking inspiration to plan and build with enthusiasm, the Kingelez show is a must-see. On view at MoMA through January 1, 2019.
Civic Pride

The design of the Tsinghua Ocean Center has won a 2018 Civic Trust Award. The building by the Beijing firm OPEN for the Tsinghua University Graduate School in Shenzhen, brings an abundance of social spaces to the town, which previously had very few. Completed in 2016 and named for the research tank beneath its plaza, the structure amounts to a vertical campus with semi-outdoor spaces in which students and staff can socialize, and a rooftop garden with an open-air theater and panoramic views of the area. Past architects whose work has won the Civic Trust award include Foster + Partners and Danish architect Henning Larsen. — Julian Lim

Next in Nigeria

Elsie Owusu Architects (EOA) was chosen to build a live-work arts center in Lagos for Yinka Shonibare, the British artist who installed Wind Sculpture in Central Park (on view there through October 2018).

Shonibare, who spent part of his childhood in Lagos, plans to extend operations of his London-based artist-in-residency program to the space and live there when he is in town. Because he uses a wheelchair, EOA’s design will be barrier-free, making use of ramps inspired by those in Le Corbusier’s modernist Villa Savoye.

Owusu, principal of her eponymous firm, is known for leading the renovation of London’s Supreme Court building and the design of transit hub Green Park Station when she worked for Feilden+Mawson. Now she favors a nimble, virtual team approach to projects. Shonibare’s building, which breaks ground in September, will rely on a team of consultants in London, Lagos, and Tirana, Albania.
“The PAC-CLAD® panels were economical yet offered a nice blend of systems and profiles that could create the contemporary, industrial aesthetic we were going for.”

-Mary Beth Branham, Principal, LS3P
Patient-centered design is trending for waiting areas.

1. **CELLIANT BY DESIGNTEX**

**MANUFACTURER:** Designtex  
**PERFORMANCE:** With its lab-tested, high-tech backing that contains 13 thermo-reactive minerals, this upholstery fabric is said to help patients improve their circulation, energy and muscle recovery. The innovative non-woven fiber was developed as a wellness product and is categorized as a medical device according to the FDA.  
**PRICE RANGE:** $$  
**APPLICATIONS:** Celliant’s non-woven fiber backing is offered on both Designtex’s woven and coated commercial fabrics. Available Spring 2019.  
[DESIGNTEX.COM](http://DESIGNTEX.COM)  
(SNAP #249)

2. **PANORAMA**

**MANUFACTURER:** Carnegie  
**PERFORMANCE:** Developed to offer patients the soothing effects of gazing at art and nature, Panorama privacy textiles feature patterns created with the nature photography of Dr. Henry Domke and designs by Louise Russell.  
**PRICE RANGE:** $$  
**APPLICATIONS:** The collection’s three digitally printed patterns—Menagerie, Mulberry Leaves (shown), and Prairie—continue on its integrated mesh and can be seen on both sides of the curtain. Each pattern is available in up to five colors.  
[CARNegieFABRICS.COM](http://CARNegieFABRICS.COM)  
(SNAP #250)

3. **EMBOLD COLLECTION**

**MANUFACTURER:** Steelcase Health  
**PERFORMANCE:** This new collection from Steelcase’s partner Embold is built to accommodate a range of weight classes and age groups. Tables offer integrated power, while seating features arm and leg profiles designed for safe, stable support.  
**PRICE RANGE:** $$  
**APPLICATIONS:** Designers can specify the contract-grade upholstery from a wide variety of manufacturers. Occasional tables come in three sizes, and seating configurations range from a single seat, 21”-wide, to a large 88”-wide multiseat unit. Individual chairs can be specified in bariatric widths with optimal high backs and moisture barriers. Available in Fall 2018.  
[STEELCASEHEALTH.COM](http://STEELCASEHEALTH.COM)  
(SNAP #251)
4. REMEDI

**MANUFACTURER:** Hubbell Healthcare Solutions

**PERFORMANCE:** This LED bed light uses convenient three-way switches at both ends to toggle between functions of an ambient-reading lamp, an examination tasklight and a night-light for a more comfortable patient room. One fixture contains four optical compartments to cut down on manipulation of the light source and to help reduce instances of contamination and patients’ disturbances linked to care providers’ duties.

**PRICE RANGE:** $$$

**APPLICATIONS:** The housing features an antimicrobial finish and contains a white-tunable LED available with a high color-rendering index of 90.

[HUBBELLHEALTH.COM](http://hubbellhealth.com) (SNAP #252)

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5. INSIDE SHAPES

**MANUFACTURER:** Shaw Contract

**PERFORMANCE:** In collaboration with the Stockholm-based design studio Form Us With Love, this customizable flooring from Shaw Contract was designed to showcase simultaneous expressions for a dynamic interior landscape. Different combinations can be used to establish energy and mood and to zone areas.

**PRICE RANGE:** $$$

**APPLICATIONS:** Designers can choose from 17 premixed pattern options or create their own. Each 24” square tile is available with four shapes (square, curve, point, and diagonal) and in 12 colors.

[INSIDESHAPES.COM](http://insideshapes.com) (SNAP #253)

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6. RUCKUS LECTERN

**MANUFACTURER:** Ki

**PERFORMANCE:** Options for this height-adjustable lectern include casters, a modesty panel, cup holder, book basket, and hook. The surface measures 30” by 20” and can be adjusted pneumatically.

**PRICE RANGE:** $

**APPLICATIONS:** The mobile version is recommended for use in healthcare administrative and meeting areas and for bedside patient consultations.

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Dr. Andrew Ibrahim
Chief Medical Officer-Healthcare, HOK
Ann Arbor, Michigan

**AS HOK’S FIRST CHIEF MEDICAL OFFICER, WHAT’S YOUR ROLE?**

ANDREW: Initially, to help make research a standard part of client relationships. Evidence-based design is an important trend toward improving healthcare facilities. My vision is for HOK to focus on solutions that can improve outcomes for patients and hospitals, in addition to addressing areas architects already focus on, such as better aesthetics. We’re launching a three-year plan to do so.

**WHEN YOU STUDIED AT LONDON’S BARTLETT SCHOOL OF ARCHITECTURE AND PLANNING, YOU FOUND PROBLEMS WITH OPERATING ROOMS.**

ANDREW: Yes. Mainly that the design has not advanced in decades. As a surgeon, I worked in three different ORs built five, 10, and 30 years ago. All look the same, and complaints from staff who work in them have been consistent: size constraints, given newer equipment; safety hazards; and poor communication among staff.

---

Rebecca Donner
Principal, Inner Design Studio
Nashville, Tennessee

**WAITING AREAS SEEM TO BE CHANGING THE MOST.**

REBECCA: Agreed. Our main priority is for the facility to be a welcoming environment—from the artwork to the VOCs in the paint to waiting room chairs.

**AND WHAT ABOUT PEDIATRIC PATIENTS? IS THERE A SINGLE BIG IDEA FOR IMPROVING THEIR EXPERIENCES?**

REBECCA: Interactivity is key. The space should be a positive distraction. Something that captures the imagination and makes them curious. Interactive art and play areas with a lot of natural light help keep stress levels down. Acoustics can also affect stress levels, so some of my favorite products are from BuzziSpace. They absorb sound and still look nice.

Brandon Haw
Principal, Brandon Haw Architecture
New York City

**ARE ANY MATERIAL SOLUTIONS TRENDING?**

BRANDON: In areas outside of treatment rooms, we see a greater demand for natural materials. Wood and stone, good natural light, and access to fresh air are all known to lift the spirit and improve recovery periods. There’s a greater appreciation for psychological benefits, which good design can deliver.

**HOW DO YOU LET PATIENT NEEDS DRIVE A DESIGN?**

BRANDON: Apart from specifying products that are aesthetically pleasing, we look at functionality and longevity. Products must be robust and appropriate to the tasks they perform.
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NEW YORK DERMATOLOGY GROUP, MANHATTAN

PROBLEM: Divvy up a beautiful loft-like space into a warren of medical treatment rooms and admin functions.

SOLUTION: Arrange them at the center of the space and wrap them in a luminous curved wall to inform the look of retail and waiting areas.

BEAUTY MAY BE SKIN DEEP, but New York Dermatology Group (NYDG) Integral Health & Wellness goes beyond the surface, treating its patients with a range of holistic services and remedies. This approach extends to its serene newly renovated facility on Fifth Avenue, designed by architect Brandon Haw’s eponymous firm (BHA).

When Haw first visited the raw 7,000-square-foot space on the second floor of a landmarked 1906 John H. Duncan building in the

Prefabricated in Italy with yacht-like precision, the central pod is made of interlocking 8.5”-wide by 12’-high MDF-backed fiberglass planks with an opalescent finish. The hospitality-style reception counter carved out of the pod’s north side greets visitors as they exit the elevator and directs them toward the window-lined waiting area.
Flatiron District of Manhattan, he was enthusiastic about its corner location, 10 large windows, and 16-foot-high ceilings. He quickly realized, however, that its loftlike expanse would be compromised by the client’s programmatic requirements: a dozen treatment, therapy, and bodywork rooms, and space for a nutritionist, reception, administrative work, a waiting room, and retail.

To avoid the dark and cluttered hallmarks of a typical medical office, Haw created a lozenge-shaped pod—developed with Italian fabricators Paolo Cassina Custom Interiors, a furniture maker, and Sailing, known for its precise yacht interiors—for the core of the space. This element houses most of NYDG’s clinical components, freeing up the daylight-filled perimeter for circulation, waiting patients, doctor’s stations, and retail.

**Pod Cast**

Designed by Haw, the waiting room furniture was made by Paolo Cassina Custom Interiors. Warm LED downlights poke out between the ceiling’s walnut slats, illuminating the pod.
and the sale of skin care products.

Inspired by flowing curtains, the pod is clad with rippled, interlocking MDF-backed fiberglass planks in a creamy, opalescent finish that appears as though glowing from within. For contrast, BHA and the fabrication team used bronze as trim along the edges of the freestanding structure, as well as for the hardware, carrying the metal’s rich hue to the recycled-oak floor, existing radiators, and walnut ceiling slats.

NYDG’s aura is more spa than health-care facility, with gracious waiting room furniture designed by the architect and a warm illumination scheme throughout by Fisher Marantz Stone that blends imperceptibly with the sunlight that filters into the space from the south- and west-facing windows. “It is glorious,” says Haw.

**ROOM TO GLOW**

Within the pod, treatment rooms feature poured-quartz flooring and stretch-textile ceiling inserts that softly diffuse overhead lighting.

---

**IN THIS PROJECT**

**GLACIER WHITE CORIAN**

**MANUFACTURER:** DuPont  
**PERFORMANCE:** Corian is a durable composite surfacing material made of 33% acrylic resin and 66% natural minerals.  
**PRICE RANGE:** $$$  
**APPLICATIONS:** Easy-to-maintain Corian is ideal in healthcare settings because it is non-porous, stain-resistant, and anti-bacterial. It can also stand up to harsh chemical cleaners without deteriorating.  
[CORIAN.COM](https://corian.com)  
(SNAP #258)

**MINIMAX LED W**

**MANUFACTURER:** Edison Price Lighting  
**PERFORMANCE:** Mounted on an optional 120-volt or 277-volt track, Minimax LED W is available in color temperatures of 2,700K, 3,000K, 3,500K, and 4,000K, with a high CRI of 98.  
**PRICE RANGE:** $$$  
**APPLICATIONS:** This track-mounted wallwasher features a precise aluminum reflector, kicker reflector, and a 40°-by-70° spread lens to help it offer uniform illumination.  
[EPL.COM](https://eplighting.com)  
(SNAP #259)

**TRENDY 1000 LE**

**MANUFACTURER:** Stern  
**PERFORMANCE:** The solid brass body of this electronic, deck-mounted faucet is available in oiled bronze, matte black, stainless steel, and custom finishes.  
**PRICE RANGE:** $-$$$$  
**APPLICATIONS:** To prevent cross contamination, this faucet is hands-free and activated via a sensor instead of a handle. For added convenience, it is equipped with an integral mixing valve and an auto-stop safety function.  
[STERNFAUCETS.COM](https://sternfaucets.com)  
(SNAP #260)

**OAK-FUMED EDGE GRAIN**

**MANUFACTURER:** Kaswell Flooring Systems  
**PERFORMANCE:** White oak is fumed in a process that soaks the wood in ammonia to produce a consistent dark color. The wood can also be used in products such as walls, tables, and other surfaces.  
**PRICE RANGE:** $$  
**APPLICATIONS:** Ideal for healthcare, this flooring is eco-friendly and sourced from post-industrial waste from other products including parquet, solid plank, and engineered floors.  
[KASWELL.COM](https://kaswell.com)  
(SNAP #261)
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**CENTRE FOR OVERWEIGHT ADOLESCENT AND CHILDREN’S HEALTHCARE, MAASTRICHT, NETHERLANDS**

**PROBLEM:** Dreary visits for pediatric outpatients.

**SOLUTION:** Redesign the clinic as a fantasy village, using interactive graphics and pod-shaped privacy booths to encourage play.

**READY, SET, GO**

Unlike its old space in a hospital, COACH’s temporary clinic invites kids to explore (above), swing, and play with touch-sensitive gameboard graphics on the walls (right). Pods (inset) provide privacy for weighing-in.

**UTRECHT-BASED FIRM Tinker Imagin**

neers’ approach to pediatric healthcare settings is part pop-up store, and part museum installation. That novel thinking is why the Centre for Overweight Adolescent and Children’s Healthcare (COACH) at Maastricht UMC+ hospital picked the firm for an experimental temporary clinic it intends to permanently relocate inside the hospital when its new facility is finished.

Before the 2016 completion of its concept clinic, COACH conducted exams and consultations inside the main hospital, scheduling appointments around its functions and hours. Visits took place toward the end of each day when regular patient traffic was winding down. But rather than continue this practice in a new facility, Tinker con-
vinced practitioners the regular hospital setting was counter-intuitive to its mission to get kids moving.

“It was giving the children the wrong signal from the beginning,” says Ralf Lambie, the industrial designer who serves as Tinker’s art director and helms its healthcare practice. “It was imperative to get out of the hospital environment where all design cues communicated sick care instead of wellness.”

With a project budget of roughly $525,000, Lambie and his team proposed a trial run of their solution in an administrative building that COACH would lease during the construction. The plan was to build the project so that it could be easily disassembled and installed in the new building when it was ready.

With modular furniture by FEEK Coated Foam, which uses layers of a polyurethane-based lacquer to coat custom-shaped foam, and a series of pavilions and booths built with brightly painted plywood, Tinker created an inviting playscape that incorporates a gaming system in the interior walls.

The first grand gesture: The waiting room, explains Lambie, became “an open square where children are allowed to walk around and start playing straight away.” Engineers wrote software for an interactive game of identifying healthy foods, then built it into the physical space by connecting it to lighting and a series of sensor-activated birch Pedalo Balance Top 50 boards and buttons. The center of the floor plan became the gameboard.

Painted pavilions with doors provide privacy for appointments, weigh-ins, and consultations. Children seem more attentive in conversations with doctors after playing, compared with their energy after sitting in a traditional waiting room, according to Dr. Anita Vreugdenhil, the founder of COACH. Staff also seem more enlivened. “People get inspired by the environment,” says Dr. Vreugdenhil, noting staff have begun hosting meetings with policymakers, CEOs from private companies, and other healthcare professionals at the center. “The effect on the children was more or less to be expected, but the effect on the professionals is a huge additional yield,” she says.
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ON THE COASTAL SAN DIEGO CAMPUS of Point Loma Nazarene University, the minimalist profile of the Lyle and Grace Prescott Memorial Prayer Chapel by Carrier Johnson + Culture, is an unlikely study in daylighting. The 450-square-foot concrete and wood building both filters the Southern California sunlight and harnesses it to illuminate the interior, which is devoid of conventional windows. Architects BIM-modeled the structure to study how natural light could affect the interior during critical times of the day and throughout the year. In the completed building, light penetrates the lofty volume only through two 48-foot-long rows of skylights. Simulated acid etching on the glass softens the light for an ethereal effect indoors.

Just below the skylights, the team suspended a filigree of crisscrossed, two- and four-foot-long redwood and cedar beams below the ceiling to further screen sunlight. The screen’s nestlike construction is a reference to Christ’s crown of thorns. A trio of prayer niches that radiate from the center of the northwest elevation are another timber element with biblical connotations: They allude to the Holy Trinity. Even here, there is no artificial light; instead, daylight is controlled by hickory-slat baffle screens that add privacy. Additional diffused illumination emanates from 17-foot-tall, southwest-facing light wells covered in the same glass as the skylights. Opposite this wall is a second “trinity” of nooks, minus the seating and baffles, that serve as light wells with fins. Angled to face northeast, they’re glazed to their full height of just over 21 feet, reaching up to the skylights.

In addition to glass and timber, Carrier Johnson chose concrete as a main construction material for the exterior—not only to resist the site’s salt-water vapor, but also to symbolize a humble permanence and steadfastness, according to the architects. “The space should extend an invitation to a spiritual experience in prayer,” says design principal Gordon Carrier, FAIA, NCARB. “So, the ‘noise’ of architecture must be kept to a minimum.” By implementing a minimal palette, practicing restraint in ornamentation, and using architectural elements to diffuse and direct natural light, Carrier Johnson has succeeded in instilling the desired level of serenity.—Sheila Kim
Shedding Light

NOTORIOUS FOR ITS TRAFFIC AND SMOG, Los Angeles is the perfect testing ground for clean, bicycle-friendly solutions such as this new bike hub at Union Station, the city’s main railway terminal. Asked to design a space for safe, convenient bike parking to make cycling more attractive, Architectural Resources Group installed this 2,900-square-foot structure in an underused parking lot behind a breezeway. With its design, the architects addressed a number of LA Metro directives: the hub needed to complement the historic 1939 train station, and also be energy-efficient, open, and contain bike storage, restrooms, and a bike-repair shop.

The style inspiration came from designs of early 20th century European steel and iron train sheds. Architects also took cues from the adjacent north breezeway, ultimately creating a low-profile steel structure that aligns with the corridor’s elements. For instance, the hub’s roof ridge and eaves sit at the same height as those of the breezeway and its rafters and purlins mimic the passage’s roof construction. Even the shed’s walls echo the breezeway structure: Solid standing-seam siding aligns with the corridor’s columns, while McNichols metal-mesh panels align with the voids.

The material choices facilitate disassembly and moving in the event that the site’s master plan changes, and contribute to energy efficiency because the solid panels provide shade, while the perforated panels filter sunlight and enable cross ventilation (ceiling fans from the Modern Fan Company supplement the latter function). Although there are utilitarian warehouse pendants inside the shed, skylights constructed with CPI Daylighting’s translucent polycarbonate panels flood the space with enough diffused sunlight to reduce the need for artificial lighting until nightfall. Architects situated this feature above the perforated-wall sections to ensure that any solar heat gain is mitigated by cross ventilation; other areas of the roof are finished in standing-seam metal panels.

Daylighting elements are simple but significantly reduce energy use: “Because the building would be operational 24/7, we wanted it to glow at night and provide a safe, bright location that could be easily found by bicyclists,” explains Julia Ausloos, associate architect. Bonus: The building itself serves as a beacon in what was once a dark area of the station. —SK

### SKYSHADE 8000
**MANUFACTURER:** Exterior Technologies  
**PERFORMANCE:** The system’s aluminum construction and continuous Mullion securely clamp translucent, structural cellular polycarbonate panels that span up to 54’ and are engineered to withstand high winds and snow loads.  
**PRICE RANGE:** $-$ $$  
**APPLICATIONS:** This standing-seam canopy system is suited to commercial and industrial projects, as well as pavilion and walkway covers. Panels are matte-finished and available in a range of colors.  
**EXTECHINC.COM**  
(SNAP #210)

### AMAZON ECHO—INTEGRATED SAGEGLASS
**MANUFACTURER:** SageGlass  
**PERFORMANCE:** This electrochromic glass has become even more cutting-edge, with the integration of Amazon Echo voice control capabilities for easier daylighting management.  
**PRICE RANGE:** $-$ $$  
**APPLICATIONS:** The new voice-command feature can be integrated into larger building automation systems to optimize daylight and views or reduce glare and heat gain.  
**SAGEGLASS.COM**  
(SNAP #211)

### VELUX ACTIVE
**MANUFACTURER:** Velux  
**PERFORMANCE:** This residential skylight system pairs new or existing Velux skylights with automation to control light levels and the physical opening and closing of skylights. A CO2-monitoring smart sensor aids the latter feature.  
**PRICE RANGE:** $  
**APPLICATIONS:** Developed for use in homes with Velux-operable skylights and controlled via Apple HomeKit smartphone app or voice commands.  
**VELUXUSA.COM**  
(SNAP #212)

### BALANCE
**MANUFACTURER:** Cambridge Architectural Mesh  
**PERFORMANCE:** With an opacity of 52%, this mesh offers just enough porosity to afford views and light, while providing privacy. The stainless-steel material is durable and 100% recyclable after use.  
**PRICE RANGE:** $  
**APPLICATIONS:** Ideal for custom applications. The mesh provides a balance of light and shade, views, and privacy.  
**CAMBRIDGEOARCHITECTURAL.COM**  
(SNAP #213)
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All that Glitters

**CHIC, SHIMMERING, JEWEL-LIKE:** All of these terms apply when describing the latest generation of hospitality textiles from such companies as **Wolf-Gordon**, whose three-pattern Matter collection from Dutch designer Mae Engelgeer combines metallic yarns for a glamorous look. Tested at 100,000 double rubs and made from a blend of cotton, wool, nylon, and polyester with metallic filaments in 20 colorways, the result is a warm, upscale complement to workplace and hospitality interiors. **Enduratex**’s Alchemy collection is a metallic faux-leather collection inspired by semi-precious stones and metals developed specifically for conference and hospitality seating, offices spaces, and senior living facilities. Available in 18 colorways – from Copper Penny to Posh Peridot, it comes equipped with a topcoat called FORBID SRT, which increases stain resistance while preserving the fabric’s luster. The Atelier collection by **Pallas Textiles** (made from a blend of nylon, rayon, cotton, and wool and tested to withstand 51,000 – 102,000 double rubs) boasts a residential feel and commercial durability with Glitz, a geometric design with metallic sheen and a hand-drawn stitch effect. And Roma, from **Appian Textiles**, is another faux-leather design on PVC (that’s also low-VOC and stain-resistant) with a rich metallic sheen available in 11 colors.

—Ashleigh VanHouten

**LET IT SHINE**

Clockwise, from top: High glamour meets high performance with these metallic contract textiles: Matter, from Wolf-Gordon; Alchemy, from Enduratex; and Roma, from Appian Textiles.
Art on Display

Art—or at least, art-inspired design—is everywhere you look, even in contract settings. Take the Felderman Keatinge collection from Momentum Textiles, a collaboration with the award-winning designers Stanley Felderman and Nancy Keatinge. Felderman, an accomplished artist as well as architect and interior designer, uses his own original paintings and sketches to inform his textile designs. His pattern Cityscape is inspired by a large-scale mural he created for a Los Angeles restaurant, and uses bright color and textural changes to evoke a sense of movement and energy. For something a little more abstract, Fil Doux Textiles has launched the Collective, a new line of collaborative textiles crafted by an eclectic group of designers. Smile, the collection’s debut pattern from Liubasha Rose of hospitality interiors firm Rose Ink Workshop, is a bold upholstery textile inspired by the artwork of Henri Matisse—best known for his fluid and colorful paintings and sculptures. The vibrant design offers up a simple geometry that maximizes color, resulting in durable, functional art that you can enjoy outside of a museum. —AVH

Key

$ = Value
$$ = Mid-range
$$ = High-end
Determined by Nature
Visionary by Nature
Designed by Nature
Committed by Nature
Essential by Nature
Improved by Nature
Amplified by Nature
Organized by Nature
Protected by Nature
Human x Nature
the intersection of humanity and the built environment
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EVOLUTION is a custom architectural metal wall and roof system without raised battens for a smooth contemporary design. It features concealed fasteners and a continuous internal drain channel. It can be used on straight and both concave and convex curved surfaces as well as complex surfaces with unique geometry.

WARRANTY

Manufacturer’s 20 Years Leak-Proof Performance

INSTALLATION

Overly provides a “complete” system package to include hardware, flashings, closures, etc. Custom shop drawings are standard and “Overly On-Site” mechanics assist with initial layout and start-up.

- Install starter base materials and continuous internal drain channels to a suitable substrate.
- HD Infill Board is set in place between drain channels prior to the metal roof panel.
- Install the panels between drain channel extrusions and anchor to substrate as required.
- Install the gasket to the compression cover and secure the assembly to the drain channel.
- Install & seal the cover cap securely over the compression plate to complete standard installation.
- Complete installation by installing perimeter covers and flashings.
- Can anchor to 3/4 plywood and a minimum 18GA metal substrate.

TEST DATA

- UL-580 Class 90 (Uplift Resistance)
- ASTM E 330 (Structural Performance)
- ASTM E 283 (Air Infiltration)
- ASTM E 331 (Water Penetration)

Testing is not applicable to all substrates, materials, and dimensions. Additional testing and analysis is available upon request.

COVER CAP

The width of the cover cap is 2 ¾ inches.

PANEL SIZE

Width: Maximum extrusion center is 4 feet in select materials and gauges
Length: Maximum panel length is 30 feet in select materials and gauges

MATERIALS & FINISHES

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>PANEL THICKNESS / WEIGHT</th>
<th>FINISHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>18 GA (0.040&quot;) / 16 GA (.050&quot;)</td>
<td>Painted (PVDF) finishes include: Standard, Custom Metallic, Mica, Exotic, Weathered Patina Prints, Woodgrain Prints, Embossed</td>
</tr>
<tr>
<td>Stainless</td>
<td>24 GA (0.024&quot;) / 22 GA (0.029&quot;)</td>
<td>2B, 2D, Matte, Custom Directional &amp; Non-directional</td>
</tr>
<tr>
<td>Titanium</td>
<td>26 GA (0.018&quot;) / 24 GA (.024&quot;)</td>
<td>(Grade 1) Mill and Matte</td>
</tr>
<tr>
<td>Zinc</td>
<td>0.7 mm / 0.8 mm / 1.0 mm</td>
<td>Back Coated Natural, Pre-Weathered, Colored</td>
</tr>
</tbody>
</table>

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We provide free cost estimates and detailed quotations. Our engineering deliverables include shop drawings, anchor details, and wind load calculations. We can fully engineer our materials to local codes with an engineer registered and licensed in your state.

Contact Overly for more information on how this system can be applied to a vertical surface.

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An Open and Shut Case

**DOORS ARE ALL ABOUT ACCESSIBILITY.** Architects and designers know, however, that there are varying degrees of accessibility in entryway design. **Tubelite’s TerraPorte 7600 terrace doors,** ideal for hotels, can extend up to 12 feet tall and can be installed as a standalone or integrated with ribbon window and storefront systems. The inswing doors offer an optional accessABLE sill low-profile threshold, which minimizes potential obstructions for individuals requiring wheelchairs or other walking assistance. The 900 Terrace Doors from **C.R. Laurence** also feature a half-inch, low-profile threshold exclusively for their single outswing terrace doors, meeting Fair Housing Act accessibility standards and virtually eliminating floor-level obstructions for ease of passage, including for individuals using a cane, crutch, walker, or wheelchair. An optional 10-inch bottom door rail is available for enhanced accessibility, ensuring a smooth surface on the push side of the door and extending the full width of the door. The 900 Terrace Doors are custom-built to a maximum size of 48 x 96 inches and are ideally suited for mixed-used developments, hotels, and resorts; the doors have one-inch insulating glass to minimize heat transfer and a four-point stainless steel locking device for single doors to maximize security and meet AAM 1304 forced-entry requirements.—**Ashleigh VanHouten**

**SMOOTH TRANSITIONS**
Both Tubelite’s TerraPorte 7600 Terrace Door (top and above) and the 900 Terrace Door from C.R. Laurence (right) feature low-profile thresholds to minimize trip hazards and accommodate wheelchairs.
**Altitude A8**

**Manufacturer:** AllSteel  
**Performance:** A collaboration with MNML, this height-adjustable system allows for privacy and easy cable management for all desk heights.  
**Price Range:** $$$-$$$$  
**Applications:** A privacy screen tucks between desks and is designed to move with the height-adjustable table as the user(s) changes positions. These features result in a versatile, modifiable desk space that can be reconfigured depending on the needs of the user.  
*allsteeloffice.com* (SNAP #218)

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**Cube**

**Manufacturer:** WETSTYLE  
**Performance:** The Cube Wall-Mounted Seat is made of water-resistant, soft polyurethane foam — available in white or grey — with a stainless-steel base finish.  
**Price Range:** $$$  
**Applications:** This 24” ADA-compliant foldable bench for the shower can support up to 400 lbs.  
*Wetstyle.ca* (SNAP #219)

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**Obsidian**

**Manufacturer:** Kwikset  
**Performance:** This entry door lock system projects less than 1” off the door for a slimmer look, and is available in a range of finishes and complementary hardware designs.  
**Price Range:** $$  
**Applications:** Eliminating traditional keyways, Obsidian provides a more accessible, secure, and easy-to-use design; users can generate specific code for easy access to individuals like employees or assistants. The door can be programmed to lock after 30 seconds for maximum security.  
*Kwikset.com* (SNAP #220)

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**Kubic**

**Manufacturer:** Ginger  
**Performance:** The contemporary Kubic collection of grab bars are ADA-compliant and available in three unique finishes and five lengths.  
**Price Range:** $$  
**Applications:** Suitable for hotel guest baths and public restroom environments, these sturdy solid-brass grab bars meet assisted living requirements as well as safety and confidence for users.  
*Gingerco.com* (SNAP #221)

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**Easy Does It**

**Building in an Easy, Tactile Grip** or sensors is key to accessible lavatory hardware. Among the manufacturers stepping up their offerings in that respect: American Standard, with its NextGen Selectronic ADA-Compliant and hands-free commercial faucet. The fitting also features SmarTherm technology that incorporates an ASSE 1070-certified thermostatic hot-water temperature limiter directly into the faucet, protecting the user from scalding in case of a surge or interruption in the cold water supply. Likewise, Hastings Tile & Bath offers the sleek VOLA electronic faucet, a hands-free feature for accessibility and general ease of use. Another standout is the Lollipop Single Hole Lever from Franz Viegener: It has a slim design available in a range of brushed, matte, and polished finishes; its good looks are combined with an anti-slip diamond knurling on the handle. The ADA-compliant handle moves forward and back for a comfortable user experience. — AVH
The City of Stuttgart sits in a broad, basin-shaped valley. This vista-friendly topography gave Behnisch Architekten the opportunity to treat the roofs of its new Dorotheen Quartier complex as a “fifth façade” of the three buildings. It’s an approach that has deep historic precedent in the city, where distinctive roof treatments have long served as a navigating device.

Shading and sun exposure studies informed the architectural design process, contributing to the development of the roof forms, glazing ratios, and material selection to optimize interior and exterior comfort. Sheathed in blue sun-shading glass manufactured by Roschmann, the planes seem to merge with the sky.

To avoid interrupting the continuous quality of the buildings’ skins, the glass roofs have been designed to eliminate any need for additional exterior shading mechanisms like fins, canopies, or brise-soleils. The roofs’ reflective white fritting continues the homogenous surface treatments. By carefully orchestrating the density of the frit pattern, several benefits are achieved: Maximum daylight reaches into the office spaces at ceiling height, thermal comfort is assured, and occupants of the buildings enjoy clear, glare-free views out to the city from both sitting and standing positions.—Leslie Clagett

Looking glass
Operable windows are placed throughout the high-performance glass roofs of a trio of buildings by Behnisch Architekten (above). Strategic frit patterns (inset and right) are both aesthetic and functional.
in its design of 606 broadway, s9 architecture allows this landmark corner’s past and present to coexist simultaneously. as navid maqami, co-founding principal of the new york-based firm, explains, “the widening of east houston street in the 1930s shaved off a portion of the original lot and disrupted the urban fabric. our design intent is to heal that tear, while recalling the slicing that occurred.”

this is accomplished by two very different façade and fenestration treatments. a contextually correct brick and punched-window façade fronts the crosby street side of the building. the openings on this wall use energy-efficient, reflective glazing to comply with overall performance standards.

along the wider east houston street façade, a glass curtain wall exposes the building’s inner members, cells, and functions, as if the original exterior wall had been cut away. the curtain wall units are composed of low-iron glass for maximum clarity while achieving the required thermal and acoustic performance of a low-e igu. each recessed portion of glazing has a ceramic-applied frit pattern that varies in density according to its location.

manufacturer aluprof fabricated the curtain wall system in poland, shipping the completed components to the united states for assembly by lexington maintenance. glazing is sunguard sn 70/41 by guardian glass. —lc

windows on history

key $ = value, $$ = mid-range, $$$ = high-end
Room with a Hue

THE BOAT-SHAPED RECEPTION DESK that greets visitors to this Vancouver office is just the beginning of the nautical motif that reflects the business and branding of the tenant, travel-tech giant Expedia. Porthole windows, a large sliding door inspired by the look of a shipping container, rigging-rope light fixtures, and signage fashioned from deck cleats continue the theme.

“Our ultimate goal is to try and inspire people,” says interior designer Gracie Andraos, associate at Gensler in Dallas and team lead for the project. “This isn’t just about creating a pretty space; it needs to go deeper than that. Companies want to create a culture where people feel comfortable.”

The 28,497-square-foot space called for a color scheme designed to spark creativity; a variety of Sherwin-Williams paints were specified for the interior.

ArmorSeal 8100 was used for the brightly colored floors. With less than 50g of VOCs per liter, the water-based polyamine epoxy offers excellent chemical and abrasion resistance.

Walls were coated with Opulence Interior Acrylic Latex. (Note: Opulence is known as Cashmere Interior Latex in the U.S.). Its silky, low-stipple surface is also scrubbable for easy cleaning and maintenance.

Doors and trim were painted with All Surface Enamel, which provides exceptional durability, perfect for areas that get hard wear. Offering exceptional adhesion, even to bare metal, it dries to a hard, scratch-resistant finish. —Leslie Clagett

BRIGHT IDEA

The color palette used in Expedia’s new British Columbia offices invokes its waterfront setting on Burrard Inlet.
Surface Effective

E Ink, a leader in the electronic paper technology used in e-readers, recently developed Prism color-changing film for the architecture and design market. The surface does not emit light, but reflects it, providing a print or paint-like appearance and a natural visual experience. The flexible material is durable and easily cut, allowing it to be integrated with a wide variety of substrates. Its low power consumption reduces or eliminates the need for electrical outlets and enables alternative options such as batteries or photovoltaic cells. E Ink Prism is available in seven colors.

In the first large-scale application of the Prism technology, a team of artists called Ueberall turned a 1,600-foot-long façade into a solar-powered canvas displaying wirelessly transmitted, low-resolution patterns. Installed at the San Diego International Airport, the piece was inspired by Norman Wilkinson’s “razzle dazzle” perception-altering camouflage design used during WWI. More than 2,000 tiles are programmed to produce custom, dynamic animations across the exterior of the building. The project has transformed the once-blank wall into an interactive landmark mural that is viewed daily by thousands of airport visitors, motorists, and public transit users.—LC
Beyond Sun Block

Innovative shading solutions not only provide protection but further architectural expression.

BY KATHARINE LOGAN

BY THE TIME solar radiation hits an interior blind, the fight to save energy has been lost. The great advantage of exterior shading devices is that they block the heat outside, before it can penetrate the building envelope. Depending on their design, they can also improve daylighting by reducing glare and bouncing indirect light deep into interior spaces. They can even strengthen a building’s identity. But North American construction culture has been slower than that of many other countries to embrace exterior shades.

From the 1990s until quite recently, architects on this continent often envied the textured and articulated building envelopes their international counterparts were creating, while their own shade designs were regularly stripped in cost-cutting rounds. As energy conservation has become a top priority, however, and integrated design teams with access to increasingly sophisticated modeling tools are able to quantify the benefits of shade, those sad old days are receding. Building envelopes in North America are now incorporating shading that is as inventive and expressive as anything architects here might once have envied.

Exterior shades’ best chance of surviving the process euphemistically known as value engineering is to serve more than one goal. The Jackman Law Building, by Toronto-based Hariri Pontarini Architects (HPA) and B+H Architects; the John A. Paulson School of Engineering and Applied Sciences, by the Boston office of Behnisch Architekten; and the Kendeda Building for Innovative Sustainable Design, by the Miller Hull Partnership (Seattle) in collaboration with Lord Aeck Sargent (Atlanta), exemplify a new generation of shading-integrated exterior envelopes that do more than keep their cool.

For the Jackman Law Building, a 2016 renovation and addition to the University Beyond Sun Block

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For the Jackman Law Building, a 2016 renovation and addition to the University
of Toronto’s Faculty of Law, the challenge was to unify the school’s disparate and organizationally disjointed pieces, built over a span of nine decades, and to give it a physical expression commensurate with its institutional significance. The brief included recladding and renovating a library, and creating new classrooms, offices, and gathering space. Says Siamak Hariri, principal at HPA, “The need for shading gave us a way in, to do something that gives an order and a presence to the entire building.”

Located on a prominent site with five major frontages, the irregular building’s new and renovated parts are wrapped in a simple rhythm of vertical shade fins. (Because the building has almost no exposure due south, vertical shades are an effective solution.) Executed in local limestone, the fins make multiple references, from the columns supporting the portico of the school’s neoclassical main facade, built in 1902, to similar fins on the courthouse a few blocks south, and, metaphorically, to the pillars of justice.

In response to client concerns about whether the fins would block too much light, HPA conducted comprehensive daylight studies. The architect relied primarily on physical models, supplementing them with digital simulations, to prove the concept to their clients and to themselves. The fins’ 2-foot depth and 5-foot-on-center spacing is informed by these analyses—and by the need for an office-friendly module—as is the 18-inch depth of white-painted pilasters on the library interior. The latter act as vertical light shelves, mitig-
ing glare and reflecting light more deeply into the space.

The choice of stone for the shade fins stems from an aspiration to counter a look of mindless mediocrity that Hariri sees being inflicted on cities by the widespread use of ersatz materials. Imitations lack the dignity, patina, and subtle variety of natural materials, he says, and he advocates for beauty as a value in its own right, as well as for its contribution to durability. “A really good building is one that people will not let be taken down.”

There’s still the immediate reality of cost, however, and the project budget of $42 million had no room for extras. Working closely with the supplier, HPA designed a shop-fabricated assembly that brought stone into the price range of its precast-concrete competitor. The fins are built up with straight sections of limestone clipped to a steel armature that is suspended from the slab edge (with careful detailing to mitigate thermal bridging). Rather than appearing as solid, which the natural variety of the panels precludes anyway, the fins are designed to express their assembly, with reveals at panel joints. The underside of the armature is closed with a bronze metal plate, and the section of the stone cladding is visible from the street below.

Within the shade fins’ uniform rhythm, the thermal envelope syncopates in response to the programmatic requirements and the facade’s different exposures. A play of glass and metal cladding balances the wall-to-window ratio for energy performance, and the double-glazed units incorporate their own type of shade with a spectrally selective coating. (SCC reflects the infrared, or heat, segment of the solar spectrum while admitting a higher portion of visible light.) The SCC on the interior surface of the outboard lite has a bronze tint to complement the stone, while a low-E coating on the exterior surface of the clear inboard lite further improves the glazing’s ability to shield against solar gains.

Where the Jackman project leverages a shading requirement to bring identity and gravitas to what was previously a motley cluster of volumes, the six-story, 457,000-square-foot Paulson School of Engineering and Applied Science (SEAS), a teaching and research complex under construction at Harvard University’s Allston campus, uses a shade structure to dissolve a single large building’s apparent mass. “The challenge of the SEAS was its sheer size,” says Matt Noblett, a partner at Behnisch. “We were looking for ways to disguise typical visual clues to scale, and shading helped us achieve that.”

Building on the firm’s recent work with fixed-shade wraps on the AGORA Cancer Research Center in Lausanne, Switzerland, and the Adidas headquarters expansion in Herzogenaurach, Germany—and bearing in mind what Noblett characterizes as the U.S. market’s “skittish” response to operable shading devices—the architect focused on developing a system of fixed ele-
CONTINUING EDUCATION: BUILDING-INTEGRATED SHADING
FROM ARCHITECTURAL RECORD

The 48,000 shades are fabricated in Germany using hydroforming technology, a process common in automobile manufacture but rare in architecture. For each of the 14 unique shade shapes, a 3-foot-3-inch-square stainless-steel block is milled with a CNC (computer numerically controlled) machine to create a negative. A 1/16-inch thick sheet of steel is placed between the negative and a top mold, with water injected to press the sheet precisely into the form. A five-axis laser then trims the excess and perforates the edges. Advantages of the technology include the brackets’ fluid forms, their geometric precision, and their light weight—with consequent cost savings in the support structure compared to welded options.

The effectiveness of the SEAS’s shade veil enables the project to rely on low-energy environmental controls, including passive ventilation, chilled beams, and radiant slabs, with more intensive cooling, dehumidification, and ventilation in areas, such as labs, where these are specifically required.

The ability to rely on low-energy environmental controls is even more crucial for Georgia Tech’s Kendeda Building for Innovative Sustainable Design, which is targeting Living Building Challenge (LBC) certification. In order to attain this status, the two-story, hybrid mass-timber structure, scheduled for completion in 2019, will have to satisfy a number of stringent requirements. One of the more difficult will be keeping occupants comfortable in Atlanta’s heat and humidity while using no more electricity than the project itself can generate.

“Like a perfect world, an east–west orientation would help control heat gain, harvest daylight, and create a high-performance building,” says Joshua Gassman, sustainable-design director at Lord Aeck Sargent. But other siting factors, such as connecting to campus open space and circulation paths, took priority. “We ended up with a design strategy where the building is oriented the ‘wrong’ way,” says Gassman, “with a large west-facing facade.”

To maintain occupant comfort within the capacity of Kendeda’s super-low-energy systems, the design team began with the notion of comfort itself, using the on-line Thermal Comfort Tool from the Center for the Built Environment at the University of California, Berkeley, to play with variables, and Georgia Tech’s environmental testing chamber to understand the role of humidity. Working with the parameters from these investigations, the team performed extensive modeling to optimize the window-to-wall ratio, the glazing specifications, and shading to keep cooling loads within the energy that the building’s photovoltaic (PV) array could supply.

Kendeda’s big shading move draws on the architects’ studies of regional and international vernacular examples for hot, humid climates. Reinterpreting the traditional front porch, which creates both shade and a connective social space, the 455,000-kWh-per-year rooftop PV grid is shifted west to create a 5,900-square-foot west overhang. This porch completely solves the west shading for the second story (with additional overhang helping on the south facade), expands the water-collection surface to meet the LBC’s net-positive water requirement, and creates sheltered teaching and gathering spaces adjacent to the building.

On the ground floor, however, the porch leaves some of the west façade exposed to summer insolation. (Not to be confused with insulation, insolation is the amount of...
solar radiation reaching a given area in a given unit of time.) In the long term, a row of trees will provide seasonal shade and contribute to the vitality of the gathering spaces. For the shorter term, until the new trees fill out, the design team evaluated options for fixed exterior shading around the porch, but issues such as head clearance, lack of visual openness, loss of daylight, and increased wind loads made these options less than ideal for the circumstance. Instead, the west facade—and the east, where there’s no room for overhead shade—will use motorized and automated exterior blinds of clear anodized aluminum.

The clients did not immediately warm to the active-shade proposal. In fact, “they were adamantly against it,” says Gassman. But the energy analysis, combined with reassurance from the building manager at the LBC-certified Bullitt Center, which Miller Hull designed in Seattle, and which now has several years’ trouble-free experience with active shading, convinced them in the end.

Gassman describes the quest to integrate the Kendeda Building’s conservation strategies into a balanced whole—shading among them—as a four-dimensional puzzle, with the element of time as the fourth dimension. He quotes naturalist and conservationist John Muir: “When we try to pick out anything by itself, we find it hitched to everything else.” For this project, as for the SEAS and the Jackman Building, a holistic approach to shade design—hitching it to multiple priorities—generated vigorous, multifaceted solutions that are integral to their projects’ architecture.

KATHERINE LOGAN IS A DESIGNER AND WRITER FOCUSING ON ARCHITECTURE, SUSTAINABILITY, AND WELL-BEING.

**PHOTOVOLTAIC PARASOL**

A rooftop PV array will shade Kendeda’s second story. Motorized exterior blinds will protect the first floor until trees grow in (left). The PVs will also help shade the south facade (opposite page).

Leaving one AIA learning unit (LU), including one hour of health, safety, and welfare (HSW) credit, read “Beyond Sun Block,” review the supplemental material found at architecturalrecord.com, and complete the quiz at continuingeducation.bnpmedia.com or by using the Architectural Record CE Center app available in the iTunes Store. 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 at continuingeducation.bnpmedia.com.

**Learning Objectives**

1. Discuss shading strategies that can strengthen a building’s architectural identity.
2. Explain how the shading schemes discussed in the article help save energy while maintaining occupant comfort.
3. Describe the modeling, simulation, and analyses that helped produce each of these shading schemes.
4. Define technical terms relevant to shading, such as “SCC” and “insolation.”

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Pilgrim’s Progress

Mid-Southern states are experiencing gradual improvement.

BY J. MICHAEL WELTON

WITH THE EXCEPTION OF West Virginia, manufacturing across the mid-southern United States appears to be growing steadily.

Kentucky’s physical location—between a region with many traditional auto producers in Detroit and Ohio and both well-established and newly opened plants farther south—has helped make it an export gateway between those areas. “That’s useful for any company, whether it makes auto and aerospace parts or building supplies,” says Jack Mavurak, spokesman for the Kentucky Cabinet for Economic Development. “Additionally, forestry is huge here,” he says.

Meanwhile, in Tennessee, “It’s going well, and we’re just halfway through the year,” says Matt Moore, sales manager for Precision Ladders. “We’re at the level of 2011 already.” The Morristown manufacturer began its recovery from the Great Recession in 2013.

In Midland, Virginia, Smith-Midland’s sales of exterior panel systems have been steadily rising for five years. “Our product is sought-after because it provides an alternative to steel,” says Chris Grogan, business development manager. A driver of the demand is the company’s ability to prefabricate some components: “That’s an advantage for projects, because it reduces the need for weather-dependent operations on the job site.”

Reports from West Virginia are less encouraging. From 2013 to 2018, the number of manufacturing jobs dropped from 48,346 to 46,467. The forecast isn’t promising either. According to the research division of the West Virginia Development Office, the state will lose six percent of its manufacturing jobs over the next 10 years.

One bright spot? Manufacturer Rockwool broke ground in Ranson, West Virginia, in June, for its second U.S.-based, stone-wool insulation plant. That means a $150-million investment and 150 new jobs for the Mountain State.
**Kentucky**

The state has more than 4,500 manufacturing-related facilities.

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**Tennessee**

For the past five years, Tennessee has ranked in the top 10 states with the largest percentage increases in manufacturing GDP, recording $53.2 billion in 2016.

Tennessee exports more than $30 billion in manufactured goods annually.

**Virginia**

Forest products are the third largest manufacturing industry in Virginia today.

The state’s role in the aerospace manufacturing industry dates back to 1917, when the nation’s first aeronautics laboratory was established in Hampton—now the NASA Langley Research Center.

**West Virginia**

West Virginia’s workforce has the nation’s third lowest turnover.

West Virginia has a pro-business tax climate, with no new corporate taxes in the last 20 years.
**Amsterdam Magical Centre: Art and Counterculture 1967–1970**  
**AMSTERDAM**  
**Through January 6, 2019**  
Featuring artwork from the museum’s permanent collection, this exhibition displays conceptual art work that was installed or shown in Amsterdam from 1967 onward, as well as tracking historical civic actions such as the city’s squatter movement. Participating artists include Robert Morris, Dennis Oppenheim, and Lawrence Weiner. At the Stedelijk Museum Amsterdam. More at stedelijk.nl/en.

**Toward a Concrete Utopia: Architecture in Yugoslavia, 1948–1980**  
**NEW YORK CITY**  
**Through January 13, 2019**  
This exhibition looks at the architecture of the former Yugoslavia through a survey of more than 400 drawings, models, photographs, and films that were sourced from regional archives held both by governmental entities and private collections. Work by architects such as Bogdan Bogdanović, Juraj Neidhardt, Svjetlana Kana Radević, Edward Ravnikar, Vjenčelj Richter, and Milica Sterić will be included in the show, the first of its kind to be staged in the U.S. At The Museum of Modern Art. For more information, visit moma.org.

**Treasures from the White City: Chicago World’s Fair of 1893**  
**CHICAGO**  
**September 8, 2018–January 6, 2019**  
Held within a gallery that once hosted a reception for the World’s Fair of 1893, this exhibit showcases original objects and memorabilia that were designed for and displayed at that international event. Highlighted objects include items from the respective pavilions of Tiffany & Company and Gorham Manufacturing Company, which were seen as groundbreaking for their use of silver production at the time of the fair. At the Richard H. Driehaus Museum. Visit driehausmuseum.org.

**ON GOING EXHIBITIONS**

**Now What?! Advocacy, Activism & Alliances in American Architecture Since 1968**  
**LOS ANGELES**  
**Through August 28, 2018**  
This exhibit examines how architects and designers participated in and responded to major social and political movements over the last 50 years, including those for civil, women’s, and LGBTQ rights, beginning in 1968. At the A+D Museum. The exhibit will travel to other unconfirmed venues across the country following the Los Angeles exhibition. More at nowwhat-architexc.org.

**Charles White: A Retrospective**  
**CHICAGO**  
**Through September 3, 2018**  
Presented on the 100th anniversary of Charles White’s birth, this exhibition unites a selection of White’s finest paintings, drawings, and prints, presenting the full breadth of his work and demonstrating his artistic development. The realism that is a trademark of his aesthetic makes his work both powerfully expressive and uniquely accessible. More at artic.edu.

**DesignDC**  
**WASHINGTON, D.C.**  
**October 2–October 4, 2018**  
The annual three-day regional conference focused on unique challenges posed by working in the D.C. Metro area will be at Walter E. Washington Convention Center. Educational sessions and trade shows exhibited targeted at architects, interior designers, and engineers will analyze the role of designers in creating work, play, and living spaces that are open to all regardless of ability, income, or age. More at aia dc.org.

**International Garden Festival**  
**GRAND-MÈTIS, QUEBEC**  
**Through October 7, 2018**  
This annual event showcases conceptual gardens by more than 70 landscape architects, architects, artists, and designers. The 19th edition features seven site-specific installations created around the theme “Go Outside and Play!” At Retof Gardens/Jardins de Mètis. More at internationalgardenfestival.com.

**LECTURES, CONFERENCES, AND SYMPOSIAS**

**São Paulo Design Weekend**  
**SÃO PAULO**  
**August 29–September 2, 2018**  
The largest design festival in Latin America, the five-day event includes over 300 planned activities and exhibitions organized by local galleries, museums, and schools. Programming includes lectures, installations, and seminars. Visit designdweekend.com.br.

**London Design Fair**  
**LONDON**  
**September 20–23, 2018**  
Launched in 2007, the London Design Fair is a trade show that features 550 exhibitors from 36 countries. The event showcases new work from both independent and established brands of materials, furniture, lighting, and textile design. See londondesignfair.co.uk.

**2018 American Society of Landscape Architects Annual Meeting and EXPO**  
**PHILADELPHIA**  
**October 19–22, 2018**  
The four-day event is the largest global gathering of landscape architects and students, with over 6,000 attendees expected. The program will include more than 150 educational sessions, lectures, and tours, along with a trade show featuring 350 exhibitors. At the Pennsylvania Convention Center. More information at alsameeting.com.

**COMPETITIONS**

**M+Design Trust Research Fellowship 2019**  
**Deadline: August 13, 2018**  
Visual-art, design, and architecture museum M+ and charity Design Trust seek two fellows to relocate to Hong Kong for up to six months to conduct research into topics related to the city, the Pearl River Delta area, and the Asian region. More at westkowloon.hk/en.

**International Graduation Projects Award**  
**Deadline: August 15, 2018**  
Organized by the Tamayouz Excellence Award, this competition assesses graduation projects by any architecture or urban-planning student from any school worldwide. The winner will receive a two- year scholarship to the University Politecnico of Milan, while second and third prizes include scholarships to travel to Jordan for a design workshop. See more at tamayouz.com.

**Dewan Award for Architecture 2018**  
**Deadline: August 25, 2018**  
This annual international competition invites proposals for a six-classroom primary school in Iraq’s historic marshlands, at which students would arrive by car or boat. More information at dewan-award.com.

**Switch: Guggenheim Museum**  
**Deadline: August 31, 2018**  
The jury asks participants to design a museum for the same site as the Solomon R. Guggenheim Museum’s that would achieve a response similar to the one from the public in 1959 upon first seeing Frank Lloyd Wright’s building. Visit switchcompetition.com.

**2018 Designer Dream Bath Competition**  
**Deadline: September 7, 2018**  
Duravit USA is seeking submissions for its annual bathroom competition. Projects completed in the last five years are eligible. In the unbuilt category, a sketch or rendering of the proposed design will be reviewed by the jury. Winners receive Duravit products. More at duravit.us.

**The Rifat Chadirji Prize 2018: Baghdad Design Centre**  
**Deadline: September 9, 2018**  
This annual competition, named for Iraqi architect Rifat Chadirji, seeks proposals for the renovation of a partially demolished vacant building in Baghdad. What remains of the structure’s damaged façades should be incorporated into the new structure, which will become a center dedicated to design. Organized by Tamayouz Excellence Award. More information at rifatchadirji.com.

**Bruno Zevi Prize 2018**  
**Deadline: September 10, 2018**  
This 12th annual essay competition seeks entries following Bruno Zevi’s methodology of critical and historical inquiry to examine an architectural work, theme, or architect. The competition is open to any Ph.D. researcher studying topics related to architecture. More information at fondazionebrunozevi.it/en.

**Shaking Up Havana’s Malecón**  
**Deadline: September 11, 2018**  
This competition asks participants to create a scheme for the adaptive reuse of the Malecón, a seawall, roadway, and celebrated promenade along the edge of the city of Havana. Entries should incorporate resilient design principles as well as facilitate various kinds of cultural activities in the space. More information at www.eleven-magazine.com.
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Visitors and vendors made their annual trip to Chicago’s Merchandise Mart for NeoCon. Celebrating its 50th anniversary this year, the must-see event for the contract furnishings industry attracted more than 50,000 attendees. And as the incubator of big ideas, the show highlighted three workplace trends: social hubs, privacy booths, and the color pink.

“I saw a range of products implementing unexpected, thought-provoking uses of color, pattern, and texture,” said Angie Lee, AIA, IIDA, principal and design director–interiors at FXCollaborative.

Among highlights—which help put all the trendspotting in context—was a kick-off discussion between Cheryl Durst, executive vice president and CEO of the International Interior Design Association, and Gensler’s founder, Art Gensler, about his impact on the industry. Meanwhile, several contract-to-residential manufacturing partnerships were announced, including Herman Miller’s purchase of Hay and Steelcase’s partnership with West Elm, underscoring a trend at contract companies to beef up their residential-style product lines.
“NeoCon this year seemed to me to be a solid verification of the growing focus on ancillary offerings,” said Tim Bell, director of global customer experience at Herman Miller. “Work settings were surrounded by colorful, textural, shapely, comfy furnishings helping create a more residential ‘I want to work there’ vibe. Exciting times,” he added.

This year also saw the addition of 10 new permanent showrooms and nearly 100 new exhibitors to the 7th floor, including Scandinavian Spaces.

Many exhibitors targeted what they perceive as a flexible, portable, reconfigure-on-demand office. For example, Room One, a new entrant in the privacy booth space, distinguished itself with an affordable version of heftier models flooding the market from Framery and Jabbrbox. Meanwhile, RT London, a maker of dorm furniture, rolled out its version of the moveable, upholstered social-hub seating highlighted at Steelcase (by partner Turnstone) and Darran.

Promoters of pink—in upholstery and flooring materials—ranged from office furniture veteran Herman Miller to textile company Maharam to flooring manufacturers Shaw Contract and Patcraft.
According to NeoCon officials, when the first show was launched in 1968, the U.S. contract furniture industry was worth around $830 million. Today, reports estimate the industry has grown to around $13.4 billion.

“For 50 years, it has been so much more than a show,” said Byron Morton, vice president of leasing for the Merchandise Mart. “It has been the industry’s best opportunity to showcase and discover the newest offerings.”

Clockwise from top left: Furnishings that blushed included an upholstered version of the Charles and Ray Eames plywood lounge chair (LCW) at Herman Miller; Darran’s Bota ottoman; Maharam’s classic Checker by Alexander Girard; and Shaw’s Inside Shapes carpet tiles.
Furniture and Objects by Switzerland-based American designer Ini Archibong are steeped in his unique background. The son of Nigerian emigrants—an engineer and a computer scientist—Archibong grew up in Pasadena, California, in a household where mathematical minds also meditated on West African totems, masks, and antiquities.

In the two years since he debuted his ideas at the Milan Furniture Fair, the 35-year-old has gained a reputation for coaxing an otherworldliness from materials such as hand-blown glass, computer-cut Carrera, and honed black granite.

Below the Heavens, his 22-piece collection of luxe seating, tables, and lighting for British manufacturer Sé, is in that vein: The cantilevered top and gold leaf pattern of the Eos Dawn table (shown) convey geometry and movement; Archibong says the decal is an algorithm he generated in the CAD software he became accustomed to using while apprenticing at an architecture firm. At a glance, high-backed, low-seated profiles of the collection's Circe armchairs and sofas bring to mind both a cloud and an African tribal chair. And true to his L.A.-area roots in the underground music scene, Archibong's creative process involves selecting songs to sketch by, before he sets pencil to paper. He either curates a playlist or composes one himself.

While introducing Sé to his heady process, Archibong, who holds a Master's in Luxury and Craftsmanship from École cantonale d'art de Lausanne (ÉCAL), also helped the company embrace glass as a high-end luxury material. "There's a special quality to it that lends itself to fantasy," he says. "You're not working with the material as much as you're working with the light it can filter and reflect."

All the materials chosen for Below the Heavens—combinations of marble, ceramic, bronze, brass, and glass—serve a purpose unrelated to function: eliciting emotion. "To see glass on top of stone, something heavy on top of something fragile," he says, "evokes a feeling." —Brooke Henderson (SNAP #270)
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- No sealants, gaskets or butyl tape means no streaking and no maintenance for owners.
- Not laminated or a composite material, so panels will never delaminate.
- At Dri-Design, we have a strict policy of recycling and creating products that the world can live with.
- Fully tested to exceed ASTM standards and the latest AAFA 508-07.
- Available in a variety of materials and colors.
- Non-combustible and NFPA-285 compliant. UL Listed.