

FOCUS ON HEALTHCARE BRANDON HAW'S DYNAMIC DESIGO PAGE 18 TINKER IMAGINEERS' PAGE 23

# 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





## ТМ ILEAR SOLU

## 60-120 MINUTE CLEAR BUTT-GLAZED WALLS



# SuperLite II XLM BY SAFTIFIRST

The only 2-hour fire resistive clear butt-glazed wall without vertical mullions or black spacers for truly transparent design.

Meets ASTM E-119 / UL 263 / ULC S101 up to 2 hours with hose stream and CPSC Cat. II impact safety requirements.

Can be used in *interior and exterior* applications.

For more information on **SuperLite**<sup>\*</sup>**II**<sup>\*XLM</sup> and our complete line of fire rated glass and framing products, visit www.safti.com or call us toll-free at 888.653.3333.

www.safti.com 888.653.3333







## VARIANT<sup>®</sup> the adjustable hinge system for commercial doors.

Common door problems, e.g. door sagging, foundation wall settling, warpage, require door assembly adjustments to maintain the functionality and meet life/safety requirements.

The VARIANT series hinge systems offer a simple three-way adjustability feature allowing the installer to meet precise installation and maintenance requirements with the turn of an Allen wrench.



Standard Commercial Hinges





SIMONSWERK North America, Inc. | 1171 Universal Boulevard | Whitewater | WI 53190 | 262-472-9500 | info@simonswerk.com | www.simonswerk-usa.com



# **TAKE DESIGN TO NEW HEIGHTS**

### With a new brand comes a new world of possibilities

The DOWSIL<sup>™</sup> brand – which represents the collective experience and power of Dow and Dow Corning - is the new name for high performance building. As the new brand name for long-trusted *Dow Corning*® brand products, DOWSIL<sup>™</sup> offers the same trusted silicone chemistries, features and product benefits you've come to expect.

With silicon-based specialty solutions that enable safe, durable and energy-efficient building designs, you can depend on Dow's 70-plus years of global industry experience to help you push your design aesthetics to the highest level – now more than ever.



Discover the new world of possibilities DOWSIL<sup>™</sup> delivers.

consumer.dow.com/construction



\*T Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow. The Corning portion of the Dow Corning trademark is a trademark of Corning Incorporated, used under license. © 2018 The Dow Chemical Company. All rights reserved. AGP15381. dow\_48056400699.

Den

# contents

## JULY/AUGUST 2018







### IN BRIEF

#### 9 NEWS

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.

#### **12** | TRENDING PRODUCTS

**15** | **Q+A: HEALTHCARE** *SNAP* interviews three pros about patient-centered design.

#### **DEPARTMENTS**

- 4 EDITOR'S LETTER
- 54 DATES + EVENTS

**56 | TRADE SHOW NEWS** A wrapup of trends from NeoCon 2018 in Chicago.

**59** | **PARTNERS IN DESIGN** Sé and Ini Archibong: A glimpse of the Switzerland-based American's mystical collection for the British luxury brand.

#### DESIGNING FOR HEALTH

Clockwise from top left: Designtex's thermo-reactive fabric; the Centre for Overweight Adolescent and Children's Healthcare; Designer Ini Archibong.

#### **CASE STUDIES**

**18** | **POSITIVELY GLOWING** Architect Brandon Haw builds an inviting dermatology office in New York.

#### 23 ACTION OFFICE

Tinker Imagineers creates a stimulating space in the Netherlands for treating childhood obesity.

**52** | **MADE IN THE U.S.A.** Focus on the Midsouth: KY, TN, VA, WV.

#### **PRODUCT SPECS**

- 28 | DAYLIGHTING + SUN CONTROL
- 32 CONTRACT TEXTILES
- 36 ACCESSIBLE DESIGN
- 38 GLASS + GLAZING
- 40 | PAINTS + FINISHES

#### CONTINUING EDUCATION

#### 42 | BUILDING-INTEGRATED SHADING

Finding new ways to shade from the sun and advance architectural expression.

## 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 residentialstyle 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 lbrahim, 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. Bearing

KELLY L. BEAMON Editor



 PUBLISHER
 ALEX BACHRACH

 EDITORIALDIRECTOR
 CATHLEEN MCGUIGAN

 EDITOR
 KELLY BEAMON

ART DIRECTOR CHRISTOPHER PIRRONE COPY EDITOR FRANNIE RUTHERFORD

#### CONTRIBUTORS

LESLIE CLAGETT SHEILA KIM BROOKE HENDERSON JUSTIN CHAN ERIN HUDSON JULIAN LIM KATHARINE LOGAN ASHLEIGH VAN HOUTEN LINDA LENTZ J.MICHAEL WELTON

#### AUDIENCE DEVELOPMENT

CORPORATE AUDIENCE ANNA SILVESTRI AUDIT MANAGER AUDIENCE MARKETING CASSANDRA KERBY

PROJECT MANAGER INTEGRATED MEDIA SPECIALIST

#### LIST RENTALS

SENIOR ACCOUNT MANAGER KEVIN COLLOPY (402) 836-6265 KEVIN.COLLOPY@INFOGROUP.COM SENIOR ACCOUNT MANAGER MICHAEL COSTANTINO (402) 836-6266

#### CORPORATE DIRECTORS

 PUBLISHING
 JOHNR.SCHREI

 CORPORATE STRATEGY DIRECTOR
 RITA M.FOUMIA

 INFORMATION TECHNOLOGY
 SCOTT KRYWKO

 PRODUCTION
 VINCENT M.MICONI

 FINANCE
 LISA L.PAULUS

 CREATIVE
 MICHAEL T.POWELL

 HUMAN RESOURCES
 MARLENE J. WITTHOFT

 EVENTS
 SCOTT WOLTERS

 CLEAR SEAS RESEARCH
 BETHA.SUROWIEC



BNP MEDIA HELPS PEOPLE SUCCEED IN BUSINESS WITH SUPERIOR INFORMATION

BNP CORPORATE TELEPHONE: (248) 244-6400

SNAP: (ISSN: Print 1947-2374 Digital 2470-1505) is published 6 times annually, bi-monthly by BNP Media II, L.L.C., 2401 W. Big Beaver Rd., Suite 700, Troy, MI 48084-333. Telephone: (248) 362-3700. Fax: (248) 362-037. No charge for subscriptions to qualified individuals.

Annual rate for subscriptions to nonqualified individuals in the U.S.A.: \$142.00 USD. Annual rate for subscriptions to nonqualified individuals in Canada: \$177.00 USD (includes GST & postage); all other countries: \$202.00 (int'l mail) payable in U.S. funds. Printed in the U.S.A. Copyright 2018, by BNP Media II, L.L.C. All rights reserved.

The contents of this publication may not be reproduced in whole or in part without the consent of the publisher. The publisher is not responsible for product claims and representations.

FOR SINGLE-COPY SALES OR BACK ISSUES: Contact Ann Kalbat (248) 244-6499 or KalbR@bnomedia.com

CHANGE OF ADDRESS: Sendold address label along with new address to SNAP, P.O. Box 2145, Skokie, IL 60076

CANADA POST: Publications Mail Agreement #40612608, GST account: 131263923, Sendreturns (Canada) to IMEX Global Solutions, P.O. Box 25524; London, ON, NéC 6B2. FOR SUBSCRIPTION INFORMATION OR SERVICE, PLEASE CONTACT CUSTOMER SERVICE AT: Phone: (800) 952-6643 Fax: (847) 765-9538. Fax: (847) 765-9538.

## SANITARY & SAFE

SEAMLESS FLOORS FOR HEALTHCARE FACILITI

**Stonres RTZ** 

Manufactured and installed, hygienic, stain-resistant, easy-to-clean floors keep patient and staff needs first. From operating rooms to kitchens, Stonhard delivers seamless, weldless floor solutions that support infection control programs, stand up to continuous traffic and are offered in a soothing color palette. Custom colors too.



AUTOMATIC CAUTION DOOR ACTIVATE SWITCH TO OPERATE

> 800.257.7953 | thestonhardgroup.com 1000 East Park Avenue, Maple Shade, NJ 08052 USA © 2018, The Stonhard Group

# LEARN & EARN Earn your continuing education credits free online or with Architectural Record's Continuing Education App!\*

ŝ

Photo



.....

#### NEW ON CE.BNPMEDIA.COM

ý

Joe Vaughr



**Resilience: Why Material** 

**Selection Matters** 

Credit: 1 AIA LU/HSW;

1 GBCI CE Hour

Credit: 1 AIA LU

Advancing Hospitality and **Education through Masonry** Design Sponsored by Echelon™ Masonry

Vichael



Design for the Public Realm Sponsored by B-K Lighting, Bison Innovative Products, and Western Red Cedar Lumber Association Credit: 1.25 AIA LU/HSW; 1 PDH, LACES/HSW;1IDCECCEU/HSW



Passive House Design for **Multifamily Buildings** Sponsored by Huber Engineered Woods Credit: 1 AIA LU/HSW

#### ALSO ONLINE AT CE.BNPMEDIA.COM

£

Innovative Approaches to Designing with Steel Sponsored by American Institute of Steel Construction

Sustainability and Structural Steel: A Closer Look Sponsored by American Institute of Steel Construction

Categorized by Design: Architecturally Categorized by Design: Architecturally Exposed Structural Steel Sponsored by American Institute of Steel Construction

Modern Masonry: Fire Protection and Enhanced Performance Sponsored by Echelon<sup>TM</sup> Masonry

Masonry Meets Modern Design Sponsored by Echelon™ Masonry

**Buildings of Steel** Sponsored by American Institute of Steel Construction Credit: 1 AIA LU



Two Reasons to Specify Experience on New and **Existing Health-Care Projects** Sponsored by INSTALL, International Standards & Training Alliance Credit: 1 AIA LU/HSW: 1 IDCEC CEU/HSW



**Building Design** Sponsored by American Institute of Steel Construction Credit: 2 AIA LU



Performance and Durability in Retail and Hospitality Design Sponsored by Construction Specialties, Inpro, Mitsubishi Electric Cooling & Heating, SIMONSWERK North America, and Special-Lite, Inc. Credit: 1.25 AIA LU

of Con

v of LEVER Architectur

leremv Bittermar

Photo:

of Ecore

Photo cou



The State of Masonry

Sponsored by Echelon<sup>TM</sup>

Credit: 1 AIA LU/HSW;

1 GBCI CE Hour

Masonry

Understanding Sustainable Insulation and LEED v4 Sponsored by Owens Corning Credit: 1 AIA LU/HSW; 1 GBCI CE Hour



Masonry and Modern Home

Sponsored by Echelon<sup>TM</sup>

Design

Masonry

Credit: 1 AIA LU

ADA, Building Codes, and Standards Relating to Handrails and Guards Sponsored by The Wagner Companies Credit: 1 AIA LU/HSW



**Control Moisture in Buildings** Sponsored by Inpro, Xypex Chemical Corporation, and ZIP System® R-sheathing Credit: 1 AIA LU/HSW



Achieving Healthy, Comfortable, Interior Environments through Sustainable, Performance-**Based Design** Sponsored by CertainTeed Gypsum Credit: 1 AIA LU/HSW

NSF/ANSI 347

The Architect's Guide to Specifying

Cutting-Edge Elevator Technology

Sponsored by Schindler Elevator Corporation

Sponsored by Technical Glass Products (TGP)

A Roadmap to Tall Timber Structures:

Design, Approval, Construction

The Future of Fire-Rated Glass and Framing

Sponsored by Duro-Last®, Inc.

Cool Roofs for a Hot Planet

Sponsored by Duro-Last®, Inc.

Sustainable Single-Ply Roofing Membranes:



Wood and Evolving Codes:

Wood Technologies

Sponsored by Think Wood

The 2018 IBC and Emerging

**Defining Performance** in Flooring Sponsored by Ecore International Credit: 1 AIA LU/HSW; 1 IDCEC CEU/HSW

**Metal Buildings** Sponsored by Metal Building Manufacturers Association (MBMA) Credit: 1 AIA LU/HSW

Designing with Concrete in

the 21st Century

Sponsored by Vectorworks

Philipp V

Specifying the Latest in

**Rapid Digital Prototyping** 

and Algorithmic Design

Sponsored by Vectorworks

Credit: 1 AIA LU/HSW

Student Health. Student Performance. Student Success. Sponsored by nora systems, Inc. Credit: 1.5 AIA LU/HSW; 1.5 GBCI CE Hour;

Vacuum Insulated Glazing for Historic Restoration Sponsored by Pilkington North America - NSG Group

1.5 IDCEC CEU/HSW

Glass Options for Enhanced Building Design Sponsored by Pilkington North America - NSG Group

Building Resilience: Expanding the Concept of Sustainability Sponsored by Think Wood

Innovation and Industry: Ceramic's Sustainable Story Sponsored by Tile of Spain

Linear Lighting Frenzy Sponsored by Prudential Lighting

To receive credit, you are required to read the entire course and pass the test. Go to ce.bnpmedia.com for complete text and to take the test for free.

This course is part of the Steel Academy.

📇 This course is part of the Masonry Academy.

Sponsored by Think Wood

Courses may qualify for learning hours through most Canadian architectural associations.



Opportunities For Wood in Low-Rise

Spray-Applied Glass Fiber Insulation

Sponsored by Monoglass® Incorporated

Sponsored by TerraCORE Panels, LLC

Life Cycle Assessment and Environmental Product

Sponsored by Armstrong Commercial Ceiling Systems

Declarations - The Next Level of Transparency

Less Is More with Lightweight Honeycomb

Daylighting and Comfort with Dynamic Glazing

**Reinforced Stone and Porcelain Panels** 

**Commercial Buildings** 

Sponsored by SageGlass

Sponsored by Think Wood





## Envirocoustic™ Wood Wool

Cementitious Wood-Fiber Acoustic Ceiling and Wall Panels





тм



### **STOP NOISE ACOUSTICAL** SURFACES, INC.

#### **Envirocoustic Wood Wool**

Wood Wool is now a leader in the eco-friendly, high-performance, cost-effective acoustical panel products category. Envirocoustic performs well by absorbing sound while thermally insulating; ecologically, it is simple to produce; and panels are available in many size and color variations that can be designed to fit nearly any décor.

These eco-friendly wood-fiber panels not only liven up a room with design variety, but they also reduce echo and reverberation by sound absorption. Wood-fiber panels can transform the aesthetics and acoustics of any interior space.

#### **FEATURES & BENEFITS:**

 High quality wood wool panels: Durable
 Consistent finish & color
 Consistent thickness (+/-.005")
 & dimensions
 Clean corners
 Square panels
 Less dust than competition

Cost-effective – lower cost than other solutions

- Class A Fire Rated Low VOC
- Manufactured from 3 simple ingredients: wood fiber, cement, & water
- Versatile ceiling or wall mount as a surface finish
- Paintable, with wide range of SonoKote<sup>™</sup> colors
- An effective sound absorber

#### **APPLICATIONS:**

Civic centers, offices, schools (gymnasiums, classrooms, auditoriums, music practice and band rooms), restaurants and bars, sports and entertainment venues, convention centers, houses of worship, shooting ranges, manufacturing and industrial facilities, parking garages, airports, and more.

**CELEBRATING 38 YEARS** – SOUNDPROOFING, ACOUSTICS, NOISE & VIBRATION SPECIALISTS! 952.448.5300 = 800.448.0121 = sales@acousticalsurfaces.com = www.acousticalsurfaces.com





## Transform Space.

Raydoor sliding wall and door solutions offer modern interior space division with no floor tracks. This gives your clients the opportunity to open, close, or simply change the flow of a room. Raydoor offers privacy, style and function in ways that bring flexibility to any project.



### RAYDOOR.COM | 212.421.0641

SNAP 39

# mbrief

## 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 Danei 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



#### TAKING STOCK

The show (above) commemorating activist Whitney Young, Jr.'s 1968 speech at the AIA National Convention prompted the AIA to begin administering an award in his name and funding its Diversity Advancement Scholarship. Right: A graphic depicting the activist and a quote from his AIA speech. "...you are not a profession that has distinguished itself by your social and civic contributions to the cause of civil rights, and I am sure this has not come to you as any shock. You are most distinguished by your thunderous silence and your complete irrelevance."

What Is Zer

— Whitney Young

## 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.



# Inbriefnews



## 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

#### ARCHITECTURE FOR ALL

OPEN's award-winning Tsinghua Ocean Center (left). Elsie Owusu Architects' plan for a live-work arts center in Lagos for artist Yinka Shonibare (below).

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 Brit-

ish 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.





# Incredible Metal

"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



#### Case study at PAC-CLAD.COM/RICHLAND

PAC-CLAD.COM | INFO@PAC-CLAD.COM

IL: 800 PAC CLADMD: 800 344 1400TX: 800 441 8661GA: 800 272 4482MN: 877 571 2025AZ: 833 750 1935



# Inbrefproducts

# Patient-centered design is trending for waiting areas.

#### 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

(SNAP #249)



#### 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

(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 (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 ambientreading 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: \$\$

6

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

HUBBELLHEALTH.COM (SNAP #252)



#### 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

(SNAP #253)

**KEY \$**=value, **\$\$**=mid-range, **\$\$\$**=high-end

#### 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.

KI.COM (SNAP #254)

# **INTERCEPT** *your* **Inspiration**

And tap into a higher level of design. High-performance INTERCEPT<sup>M</sup> metal

wall panels interrupt conventional thought on rainscreen systems to inspire spectacular visual results. Within every architect is an artist, and your palette is the Intercept Modular Metal Panel System.

CENTRIAperformance.com/Intercept

<u>C</u>ENTRIA

REIMAGINE METAL

**SNAP 35** 

# Indref snap asks the pros About Healthcare design



## 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. Evidencebased 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 LON-**DON'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.



## **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.

## 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.

Interviews by Julian Lim



# It's how you get to the TOP that matters



As the most specified aluminum ladder in the industry, you can count on **O'Keeffe's** to provide *light-weight*, *high-strength*, *maintenance-free* aluminum ladders for any application.

More options, finishes and custom products available at www.okeeffes.com

Proudly made in the USA www.okeeffes.com Toll Free: 888.653.3333









Introducing the 6002 Wheelchair Mirror, the latest addition to AAMSCO Lighting's collection of energy saving bath and vanity luminaires. Designed to meet the requirements of the Americans with Disabilities Act. Ideal for handicapped suites of hotels, nursing homes, hospitals and public restrooms, the 6002 Wheelchair Mirror offers a beautiful yet functional design that will compliment any facility.

Residential – Hospitality – Custom www.aamsco.com

## The intelligent alternative source <sup>sm</sup>



**SNAP 181** 

AAMSCO Lighting, Inc. 100 Lamp Light Circle | Summerville, SC 29483 | Phone 843-278-0000 | 1-800-221-9092 **CASE STUDY: HEALTHCARE** BY LINDA C. LENTZ





FLOOR PLAN

16<sub>.</sub>FT.

<u>5</u>М.

0

#### 1 RECEPTION 2 WAITING AREA

- 3 RETAIL
- 4 TREATMENT
- ROOM
- 5 ADMINISTRATION VIP ELEVATOR 6
  - STORAGE 7
- 8 RESTROOM
- PANTRY 9
- 10 STAIR
- 11 MECHANICALS

#### **NEW YORK DERMATOLOGY GROUP,** MANHATTAN

**PROBLEM:** Divvy up a beautiful loftlike 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

#### **MIND THE CURVES**

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,

#### 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.

### **CASE STUDY: HEALTHCARE**



#### 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 antibacterial. It can also stand up to harsh chemical cleaners without deteriorating. 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: \$\$\$

EPL.COM

(SNAP #259)

**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.



#### TRENDY 1000LE

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: \$-\$\$** 

#### PRICE RANGE. 9-94

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 (SNAP #260)



Inspired by flowing curtains, the pod is clad with rippled, interlocking MDFbacked 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 healthcare 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.



#### 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 (SNAP #261)

# ABOVE AND BEYOND REINVENT YOUR NEXT CEILING DESIGN

What if you could design a ceiling with any color and pattern you like? What if you could bring your vision to life in just a few weeks? Now there's no more "what if." Introducing DesignFlex" Ceiling Systems. Reinvent your ceiling at armstrongceilings.com/designflex

-

LIKE WHAT YOU SEE? VISIT OUR ONLINE PATTERN GALLERY AT ARMSTRONGCEILINGS.COM/PATTERNGALLERY TO SEE DOZENS OF PRE-DESIGNED LAYOUTS. PATTERN SHOWN: DESIGNFLEX" SHAPES PATTERN 10



Ulling

E

Inspiring Great Spaces®



**KEEP YOUR DOCK OPERATIONS ON THE LEVEL WITH AN ADVANCE DOCK** 

#### CASE STUDY: HEALTHCARE BY ERIN HUDSON



#### 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 touchsensitive gameboard graphics on the walls (right). Pods (inset) provide privacy for weighing-in.

#### UTRECHT-BASED FIRM Tinker Imagi-

**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-



### **CASE STUDY: HEALTHCARE**



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.

24 | SNAP | JULY/AUGUST 2018 | ARCHITECTURALRECORD.COM



#### ACTIVE DESIGN

Designers built a playful passageway to encourage kids to turn and stretch to touch graphics on its walls (above left) to activate overhead lights. Pavilions replace the old, staid exam rooms as a place for private consultations (above).

# Azon Saves Energy



Daylighting systems produced with Azon structural thermal barrier technologies—the MLP<sup>™</sup> or Dual Cavity—for aluminum windows and high performance glazing components for insulating glass, will yield a fenestration system capable of upholding the highest efficiency and sustainability standards.

- Polyurethane polymer with superior insulating properties for the best balance of energy efficiency and performance
- NEW: MLP<sup>™</sup> (mechanical lock profile) and dual cavity designs for fenestration products used in the most demanding climates and conditions
- High strength for larger spans—industry's strongest thermal barrier for aluminum storefront, curtain wall and windows
- AZO/Tec<sup>®</sup> technical services with expertise in window design



Extreme cold temperatures of -100°C (-148°F) will not transfer through an aluminum frame with a modern pour and debridge thermal barrier ( and *neither will high temperatures in very hot environments* )



Learn about the role of Azon thermal barriers in energy conservation.



1-800-788-5942 | www.azonintl.com

# ARCHITECTURAL R E C O R D

Earn up to 7 AIA LU/HSW

# INNOVATIONCONFERENCE NOVEMBER 1, 2018 | NYU LAW SCHOOL | NEW YORK, NEW YORK

## CREATIVITY + DESIGN + TECHNOLOGY URBAN FUTURES: ARCHITECTURE AT EVERY SCALE

**KEY CORPORATE SPONSOR** 



PRODUCT GALLERY SPONSORS



MICRODESK

SUPPORTING SPONSORS



**Č** CENTRIA



TNEW YORK

🔣 Ornamental Metal Institute of New York

**I** Steel Institute of New York

WWW.ARINNOVATIONCONFERENCE.COM

# Spoiled for choice.

# Our selection includes all varieties, thick and thin.

Different projects need different products and our vast selection leaves no one out. From ultra modern to historical styles, from full-bed to thin-clad stone, from custom blends to custom accessories, we have it all.



**SNAP 29** 

arriscraft.com | 🖤 🖓 🖬 🞯 in

### DAYLIGHTING + SUN CONTROL



# Humble Service

**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* 



#### SKYSHADE 8000

MANUFACTURER: Exterior Technologies PERFORMANCE: The system's aluminum construction and continuous mullions 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)

**KEY \$**=value, **\$\$**=mid-range, **\$\$\$**=high-end



#### 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 CO<sub>2</sub>-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.

CAMBRIDGEARCHITECTURAL.COM (SNAP #213)

## 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 energyefficient, 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



#### EASY RIDER

At Los Angeles Union Station's new bike hub, translucent polycarbonate panels in combination with perforated metal walls filter in natural light while mitigating solar heat gain with cross ventilation. In the evenings, these elements allow artificial lighting to glow for added safety and security for cyclists who use the shed, as well as passersby in general.

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* 

# Academy of Digital Learning

# Focus On: Steel

Become an expert on Steel through Architectural Record's Academy of Digital Learning.

Upon successful completion of the Steel Academy, you will earn 3 AIA LU/HSW + 5 AIA LU and a digital badge that demonstrates your mastery and achievement.



Earn your digital badge and showcase your expertise!

ce.architecturalrecord.com/academies/steel

ARCHITECTURAL R E C O R D

CONTINUING EDUCATION CENTER



Brought to you by

#### **CONTINUING EDUCATION** CENTER TECTUR S **R** U RCHI 0



**Promoting Sustainable Design Through Life-Cy...** Sponsored by Tally

LCA software, in conjunction with BIM, provides greater ease in creating high-quality, environmentally responsi...

1 AIA LU/HSW, 0.1 IACET CEU, 1 LFA CEU



**Actively Pursuing Passivhaus Enclosures** Sponsored by the Ornamental Metal Institute of New York With high-performance curtain walls and windows, thermal bridge-free

designs, and airtight buil...



**Wood Specialty Ceilings** and Walls: Art, Science,... Sponsored by Armstrong **Ceiling and Wall Solutions** 

### 0.1 IACET CEU



**Floating Buildings Architectural Record** 

Noah's Ark-itecture: Buoyant buildings offer one solution for sea-level rise, escalating property values, and the desire to be near the water.

ACADEMY of Digital Learning Start This Academy **Multifamily Housing** 

Brought to you by

# CONTINUING EDUCATION THAT'S AS **MOBILE AS** YOU ARE.



Google Play

## CONTRACT TEXTILES



## 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 threepattern 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.







#### **DESIGNTEX + COALESSE**

#### **MANUFACTURER:** Designtex

**PERFORMANCE:** Nine upholstery pattern designs meet or exceed ACT contract standards (ranging from 40,000 – 100,000 double rubs depending on the pattern) using materials like Designtex's own closed loop yarn, wool, and linen, and pre-consumer recycled cotton recovered from T-shirt manufacturing.

#### PRICE RANGE: \$\$

(SNAP #214)

APPLICATIONS: Coalesse Design Studios created this collection using small-batch weaving techniques. Available Nov 2018. DESIGNTEX.COM

**KEY \$**=value, **\$\$**=mid-range, **\$\$\$**=high-end

#### INTERTWINE

#### **MANUFACTURER:** Knoll textiles

**PERFORMANCE:** Tested at 100,000 double rubs and made with 100% post-consumer recycled material, Intertwine is also bleach cleanable.

#### PRICE RANGE: \$\$

APPLICATIONS: The collection contains five bright, geometric upholstery fabrics using a single 1960s vintage fashion swatch as inspiration. Plaidtastic, seen here, boasts an extra-large repeat and each of its six colorways contains 26 yarn colors. KNOLLTEXTILES.COM

(SNAP #215)



#### TACTILITY

MANUFACTURER: Luum Textiles PERFORMANCE: There are more than 40 colorway options across the collection and is tested at 75,000 – 120,000 double rubs. PRICE RANGE: \$\$

**APPLICATIONS:** The four patterns in the Tactility collection (Arc Angle, Equilux, Superspun, and Interstice) are made to be multi-purpose and multi-directional for

versatility and visual appeal.

(SNAP #216)



#### GLOW

MANUFACTURER: Kvadrat PERFORMANCE: A durable upholstery textile made from 90% new wool and 10% nylon is available in 23 colors developed by Italian color master Giulio Ridolfo. PRICE RANGE: \$\$\$

**APPLICATIONS:** Developed by the late weaving expert Frans Dijkmeijer and suitable for public spaces, it is made with unicolored yarns with an additional mélange yarn in every other weft for a deeply textured, striated pattern.

KVADRAT.DK (SNAP #217)

## 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





FROM THE SKETCHBOOK Architect, designer, and artist Stanley Felderman created Momentum's Cityscape pattern (left), while Smile, a new pattern from Fil Doux Textiles' Collective series, is inspired by the artwork of Henri Matisse (above).

### Determined By Nature

Visionary By Nature

Designed By Nature

Committed By Nature

Essential By Nature

# Human × Nature

the intersection of humanity and the built environment

Improved BY Nature

organized a

Organized By Nature

GREENBUILD

CHICAGO 2018 NOVEMBER 14-16

GREENBUILDEXPO.COM

Protected BY Nature

Amplified By Nature


# EVOLUTION

CUSTOM ARCHITECTURAL METAL ROOF SYSTEM

APPLICATIONS	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.								
	<ul> <li>Install starter base materials and continuous internal drain channels to a suitable substrate.</li> <li>HD Infill Board is set in place between drain channels prior to the metal roof panel.</li> <li>Install the panels between drain channel extrusions and anchor to substrate as required.</li> <li>Install the gasket to the compression cover and secure the assembly to the drain channel.</li> <li>Install &amp; seal the cover cap securely over the compression plate to complete standard installation.</li> <li>Complete installation by installing perimeter covers and flashings.</li> <li>Can anchor to 3/4 plywood and a minimum 18GA metal substrate.</li> </ul>									
TEST DATA	• UL-580 Class 90 (Uplift Resistance) • ASTM E 330 (Structural Performance) • ASTM E 283 (Air Infiltration) • ASTM E 331 (Water Penetration)									
	limensions. Additional testing and analysis is									
COVER CAP	The width of the cover cap is 2 <sup>3</sup> ⁄ <sub>4</sub> 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	MATERIAL	PANEL THICKNESS / WEIGHT	FINISHES							
	Aluminum	18 GA (0.040") / 16 GA (.050")	Painted (PVDF) finishes include: Standard, Custom Metallic, Mica, Exotic, Weathered Patina Prints, Woodgrain Prints, Embossed							
	Stainless	24 GA (0.024") / 22 GA (0.029") 20 GA (0.036")	2B, 2D, Matte, Custom Directional & Non-directi							
	Titanium Zinc	26 GA (.018") / 24 GA (.024") 0.7 mm / 0.8 mm / 1.0 mm	(Grade 1) Mill and Matte Back Coated Natural, Pre-Weathered, Colored							
	Posteled content varies upon material colocted. All matel companying are 100% regulable.									

Recycled content varies upon material selected. All metal components are 100% recyclable.



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 a engineer registered and licensed in your state.

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





U.S. Patent No. 9,181,692

**CUSTOM METAL SYSTEMS** 

**SINCE 1888** 

1-800-979-7300 overly.com

©Copyright 2017 Overly Manufacturing, Inc. All Rights Reserved. TI\_ES\_02-2017

## ACCESSIBLE DESIGN



# 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 halfinch, 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 fourpoint stainless steel locking device for single doors to maximize security and meet AAM 1304 forced-entry requirements.—Ashleigh VanHouten





#### 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)

KEY \$=value, \$\$=mid-range, \$\$\$=high-end



#### 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)





#### 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)



#### 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)

# 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 ADAcompliant handle moves forward and back for a comfortable user experience. - AVH







FREE AND CLEAR The new single-hole lever from Franz Viegener (above) features one knurled handle,while American Standard (top, left) and Hastings Tile & Bath (bottom, left) boast ADA-compliant hands-free technology.

## **GLASS + GLAZING**



# See and Be Seen

**THE CITY OF STUTTGART** sits in a broad, basinshaped valley. This vista-friendly topography gave **Behnisch Architeckten** 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, glarefree 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.





#### CLEARVISION

#### MANUFACTURER: AGC

**PERFORMANCE:** Visible Light Transmission (VLT) up to 92%, depending on thickness. Can be laminated, heat-treated, bent, silk-screened, or insulated. Cradle to Cradle-certified Silver.

#### PRICE RANGE: \$\$

APPLICATIONS: Suitable for commercial interior, residential, and specialty applications, the low-iron glass is virtually colorless. Offered in seven standard thickness, ranging from 3mm to 12mm; other thicknesses are available.

AGCGLASS.COM (SNAP #222)

**KEY** \$=value, \$\$=mid-range, \$\$\$=high-end



#### PIXA SCREEN

MANUFACTURER: Sensitile Systems PERFORMANCE: LEED eligible PRICE RANGE: \$\$

APPLICATIONS: Window-like channels of resin create pixilated patterns of light throughout the micro-concrete panels. Suitable for horizontal and vertical applications, such as feature walls, screening, and signage. In 50 standard colors, six perforation patterns. Available in custom sizes up to 48" x 96" and 34" and 11/4" thick. SENSITILE.COM

(SNAP #223)



#### SPINDRIFT

MANUFACTURER: Island Stone PERFORMANCE: Floor- and wall-rated. Suitable for interior and exterior use, including swimming pools.

#### PRICE RANGE: \$\$

**APPLICATIONS:** A bright white backing gives these 11<sup>3</sup>/4<sup>27</sup>-square glass tiles a clear, brilliant color. The smooth-surfaced tiles are available in six colors.

ISLANDSTONE.COM (SNAP #224)



#### VACUUM IG

MANUFACTURER: Guardian PERFORMANCE: Depending on thickness, thermal insulation as high as R-14; light transmission up to 70%.

#### PRICE RANGE: \$\$

**APPLICATIONS:** Tempered glass makes it suitable for use in commercial projects; also available as laminated glass. Retrofit or new construction applications.

VACUUMIG.COM (SNAP #225)

Windows on History

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* 





#### TWO-FACED DESIGN Featuring glazed punched openings, one side of this New York City building blends in with 19th century neighboring structures (left), while an expansive curtain wall (top) references past developments as well as present technologies.



# 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, traveltech 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.



#### LOXON SELF-CLEANING ACRYLIC COATING

MANUFACTURER: Sherwin-Williams PERFORMANCE: Durable, self-cleaning formula easily sheds dirt with rain or water contact. UV-resistant. Flat-sheen finish. Tintable. No primer required.

#### PRICE RANGE: \$\$

**APPLICATIONS:** Suitable for exterior, above-grade masonry, cement board, and stucco in residential and commercial projects.

**KEY \$**=value, **\$\$**=mid-range, **\$\$\$**=high-end

SHERWIN-WILLIAMS.COM (SNAP #226)



#### NOTABLE DRY ERASE PAINT

MANUFACTURER: Benjamin Moore **PERFORMANCE:** Four-hour pot life, seven-day cure time. No yellowing, cracking, or peeling. Isocyanate-free; LEED v4 eligible. **PRICE RANGE: \$\$** 

APPLICATIONS: For indoor use in commercial, academic, hospitality, and residential settings, this clear coating turns wood, glass, metal, laminate, and painted walls into dry-erase surfaces without compromising design elements. Also available in white.

BENJAMINMOORE.COM (SNAP #227)



#### WATCH DOG WIPE OUT POROUS SURFACE GRAFFITI REMOVER

MANUFACTURER: Dumond PERFORMANCE: This non-flammable, non-drip gel dissolves graffiti in 15–30 minutes. 5% VOC. Recommended for use on concrete, cement, stucco, brick, bare wood, and asphalt surfaces that are previously unpainted or stained.

#### PRICE RANGE: \$\$

**APPLICATIONS:** In historic stone and restoration applications, this formula salvages the substrate by avoiding damage typically caused by scraping, grinding, and blasting techniques.

DUMONDCHEMICALS.COM (SNAP #228)



#### BUILDER PERFORMANCE INTERIOR LATEX PAINT

MANUFACTURER: PPG Paints **PERFORMANCE:** This latex paint can be sprayed, brushed, or rolled onto walls and ceilings. Low-odor, LEED eligible. **PRICE RANGE: \$\$** 

APPLICATIONS: Suitable for large interior projects such as multi-family residential or office buildings, this paint has a uniform flat finish that hides tape joints and surface flaws. For field painting or touch-up work. Available in ten neutral colors.

PPGPAINTS.COM (SNAP #229)

# 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, lowresolution patterns. Installed at the San Diego International Airport, the piece was inspired by Norman Wilkinson's "razzle dazzle" perceptionaltering 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* 



## **CONTINUING EDUCATION:** BUILDING-INTEGRATED SHADING

FROM ARCHITECTURAL RECORD





# Beyond Sun Block

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

**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



JACKMAN LAW BUILDING - EXPLODED AXONOMETRIC DIAGRAM

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

#### ALL WRAPPED UP

The renovated Jackman Law Building (opposite) is animated by vertical shade fins. Within the reading room (above), the fins are continued as white-painted pilasters that act as vertical light shelves. FROM ARCHITECTURAL RECORD





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 officefriendly module—as is the 18-inch depth of white-painted pilasters on the library interior. The latter act as vertical light shelves, mitigat-



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-towindow ratio for energy performance, and the doubleglazed 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, 497,000-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-

#### LACE VEIL

At Harvard University's SEAS (above), a textured screen of 48,000 hydroformed stainless-steel brackets (opposite, top) will dissolve the large building's apparent mass. FROM ARCHITECTURAL RECORD



ments. The goal was to achieve the effective coverage of an active system, but without the maintenance associated with moving parts.

After breaking the program into three smaller (but still big) volumes, and perching them on a glassy base, the design team deployed a textured shade veil to prevent windows from telegraphing the upper volumes' scale while maintaining occupants' quality of daylight and views. The veil consists of a lattice of stainless-steel brackets shaped to optimize sun protection for each orientation. The modular brackets, 2½ feet square, affix to a laddered framework, which in turn fastens to the steel mullions of the curtain wall. Behind the lattice, a weather envelope of glass comprises clear and opaque units. The latter, which account for every third panel and include insulation, strengthen the building's thermal performance; staggered from floor to floor, they also contribute to the facade's pattern.

On south-facing elevations, cowl-shaped brackets block overhead summer sun and provide ancillary side protection against morning and afternoon sun angles. On east- and west-facing elevations, L-shaped shades protect against low sun angles. And on the nominal north (actually northwest), a slender, C-shaped visor provides protection on summer afternoons. In addition to these orientation-specific types, three or four variations within each facade add complexity to the texture.

To mitigate potential glare from a high contrast between the shades' undersides and a bright sky, the shades are perforated to create a zone of intermediate brightness. This dissolving of the bracket edges also reiterates at the aperture scale the idea of dematerialization that gave rise to the veil in the first place.

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 lowenergy 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 twostory, 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.

"In a perfect world, an east-west orientation would help control heat gain, harvest daylight, and create a high-performance building," says Joshua Gassman, sustainabledesign 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 facade exposed to summer insolation. (Not to be confused with insulation, insolation is the amount of





KENDEDA WEST FACADE - NO TREES





KENDEDA WEST FACADE - 30' TALL TREES



#### KENDEDA WEST FACADE - 40' TALL TREES

#### 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).

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 activeshade 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."

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

#### **Continuing Education**



To earn 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 architectural record.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 creditreporting 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."

AIA/CES COURSE #K1805A

# **MANUFACTURERS' SPOTLIGHT SECTION**

In these pages are products brought to you directly from manufacturers. You'll find price, application, performance data, and contact information—the facts needed to make the right decisions. Use the reader service card in the issue or go online at architecturalrecord.com to request further details.



Formica Group and ConvenientPower Systems have partnered to create Intentek<sup>™</sup>, a Formica<sup>®</sup> laminate surface that can wirelessly charge Qi-compatible mobile phones. Intentek<sup>™</sup> laminate is intended for horizontal applications in hospitality, retail, health care, education, and office settings. (SNAP #230)

WR

#### **AZON SAVES ENERGY**

#### GREEN

Azon

Structural thermal barrier technologies, energy efficiency and high strength for aluminum fenestration products.

#### **Product Application:** Storefront and curtain wall applications • Commercial aluminum, windows, doors and skylights

• Thermal barriers for framing

**Performance Data:** 

Intelligent technologies reduce overall U-factor
 Higher CRF (Condensation Resistance Factor)

www.azonintl.com 800.788.5942





#### LIFT-STRAP BIFOLD DOORS AND ONE-PIECE HYDRAULIC DESIGNER DOORS

#### Schweiss Doors, Moving Walls

Schweiss Doors manufactures unique custom designer doors, one-piece hydraulic doors and patented lift-strap opening/closing bifold doors.

#### **Product Application:**

Moving doors and walls
You think it, we build it

• Custom designed storefronts and more..

#### Performance Data:

Faster, safer operation
Zero lost headroom

Superior design that keeps working!

www.schweissdoors.com 507.426.8273 | schweiss@bifold.com



DOORS, WINDOWS

#### DOORS, WINDOWS

#### **TRANSFORM SPACE**

### WR I GREEN

#### **Raydoor®**

Sliding doors & walls that permit light into a room, while being a functional & flexible solution to divide interior space.

- **Product Application**
- Residential
- Hospitality Commercial
- Performance Data
- Lightweight, No Floor Track & FSC Certified
- Fully customizable solutions for any application

ravdoor.com | info@ravdoor.com 212.421.0641

#### LOW-E GLASS IS CLEARLY **EVOLVING**



Solarban® 90 maximizes solar control while preserving views.

**AAMSCO LIGHTING, INC.** 

with Disabilities Act.

design.

Performance Data

www.aamsco.com

**MIRRORLUX LED WHEELCHAIR MIRROR** 

The Mirror-Lux® LED Wheelchair Mirror is the latest

addition to Aamsco Lighting's mirror collection. It is

designed to meet the requirements of the Americans

• Ideal for handicapped suites of hotels, nursing homes,

hospitals and public restrooms. The Mirror-Lux® LED

Wheelchair Mirror offers a beautiful yet functional

Surface Mount; Dimmable: 0-10V; ETL listed; IP65

The latest evolution in solar control low-emissivity (low-e) glass, Solarban® 90 glass conveys a neutral appearance similar to that of clear glass, whether viewed from the interior or exterior of a building. Solarban® 90 glass is the world's first quad-silver-coated glass and was engineered to outperform even Solarban® 70XL glass, the most preferred high-performance solar control low-e glass in North America.

Solarban 90 glass has the versatility to be paired with Starphire Ultra-Clear® glass or an array of performancetinted glasses to provide a broad range of aesthetic and performance options.

Learn more and request samples at www.vitroglazings. com/sb90

SNAP 233

DOORS, WINDOWS

#### WINDOW WALL

#### **Graham Architectural Products**

Factory glazed window wall system provides aesthetics, ventilation, flexibility, cost-savings and speed for new construction applications.

- **Product Application** · Commercial and residential mid- and high-rise New construction
- Performance Data
- Architectural grade aluminum windows and doors
- AAMA and NFRC tested
- Glazing thicknesses: from 1" to 1-9/16" IG units

www.grahamwindows.com 800.755.6274 | jeisenbeis@grahamwindows.com



SNAP 234

DOORS, WINDOWS

Performance Data

- When paired with clear glass in a standard 1-inch
- insulating glass unit (IGU):
- 0.23 solar heat gain coefficient (SHGC) 51% visible light transmittance (VLT)
- 2.22 light-to-solar gain (LSG) ratio



www.vitroglazings.com/sb90 1.855.887.6457 | archservices@vitro.com

SILK METAL<sup>™</sup> ARCHITECTURAL CEILING & WALL PANELS

SNAP 246

#### **INTERIOR FINISHES, FURNISHINGS**



ELECTRICAL. LIGHTING

#### **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

- Residential, Commercial, Restaurants, Classrooms Pro Audio/Studios, Swimming Pools, Conference
- Hospitals, Auditoriums, Airports, Train Stations,
- Excellent NRC Rating 0.80 NRC (per ASTM C423) with



#### **LUXURY VINYL FLOORS WITH ALL THE PERKS OF CORK**

Voltage: 120-277 Color temp: 3000K

800.221.9092 | info@aamsco.com

#### **The Stonhard Group**

CorkCorelLVT is a unique combination of LVT and natural cork for a floor that delivers both performance and punch. FloorScore & GreenGuard certified, no finishes required, easy to install, offered in 12 extraordinary standard colors.

• Universities & Schools

Retail & Office Spaces

 Shock Absorbent • Thermally Insulated

Ouick and Easy Installation

#### **Product Application:**

- Hotels & Restaurants • Hospitals/Healthcare Facilities

#### **Performance Data:**

- Water Resistant • Easy-to-Maintain
- 100% Natural Cork Core
- Exceptional Sound Absorption

www.thestonhardgroup.com or expanko.com | 800.345.6202



#### INTERIOR FINISHES, FURNISHINGS

SNAP 237

Unilock.com/ucara | 1.800.UNILOCK | customerservice@unilock.com



LANDSCAPING, SITEWORK

SNAP 238

- and echo.
  - Rooms
    - Concert Halls

#### **Performance Data**

a 4 inch Airspace, No Liner Needed

www.acousticalsurfaces.com

800.448.0121 | sales@acousticalsurfaces.com

#### **U-CARA<sup>™</sup> MULTI-FACE WALL SYSTEM Unilock**<sup>®</sup> **Product Applications:** Planters Seatwalls Gardens

- Fire tablesCooking stations
- Retaining walls

#### **Performance Data:**

• Seamlessly coordinate with Unilock pavers

#### • Interchangeable fascia panels for creative flexibility • Site-specific engineering available

• Single or double-sided walls

MATERIALS

**SNAP 239** 

#### MECHANICAL SYSTEMS, HVAC, PLUMBING

JUST STAINLESS

#### WEAVING EXCELLENCE WITH INNOVATION WR I GREEN

#### Phifer

SheerWeave filters and diffuses light while reducing glare and solar heat gain, conserving energy and helping to create a more comfortable environment. **Product Application** 

- Commercial
- Residential
- **Performance Data**

• SheerWeave fabrics are available in a variety of openness factors ranging from one to 25 percent and wide widths to cover large window openings.

Phifer.com 800.221.5497 | bill.strickland@phifer.com

#### **16-GAUGE COMMERCIAL GRADE SINKS WITH IN-SINK DRAIN** \$\$ | GREEN | NEW

#### **Just Manufacturing**

ARMOR Series: 16-gauge type 304, seamlessly die drawn, true gauge commercial-grade stainless steel sinks with Integra Drain seamlessly welded to sink, creates an integral drain in-sink system.

- Product Application
- Commercial applications • Healthcare environments
- **Performance Data**
- 25% thicker compared to standard 18 gauge
- Made in USA from domestically milled stainless steel
- 90% recycled content
- Integral seamless sanitary drain system

www.justmfg.com/armor-integra-drain 847.678.5150 | specifierservices@justmfg.com IGGA TYPE 3045

ARMOR

**16 Gauge HEAVY-Duty Commercial Grade Sinks Integra Drain System** 

SNAP 240

# **INTERCEPT<sup>™</sup> Your Inspiration**

Tap into a higher level of rainscreen design with high performance INTERCEPT<sup>™</sup> modular metal wall panels.

- Entyre and V-Trac Panels offer smooth planes and clean sight lines
- LVLZ Panels come in varying depths, up to 2-1/2"
- RZR Panels provide dramatic sloped depth options
- Entyre, LVLZ and RZR panels integrate seamlessly

Learn more at CENTRIA.com/InterceptYourInspiration





FOR THOSE WHO SERVED

SNAP 242

SNAP 244

#### **ROOFING, SIDING, THERMAL & MOISTURE PROTECTION PERFORATED IMAGING ON VA PARKING STRUCTURE**

#### WR

#### **Dri-Design**

METAL ROOFING GREEN | \$\$

**Product Application** 

Star requirements

Performance Data

PAC-CLAD.com

800.722.2523

Lombard, IL

Petersen Aluminum Corporation

can be curved to a minimum radius of 20'

· 30-year non-prorated finish warranty

TITE-LOC Metal Roofing Panels provide excellent

structural performance with architectural aesthetics.

TITE-LOC panels are field-seamed to 90 degrees and

Metra Union Pacific/West Commuter Railroad Station,

TITE-LOC Aged Copper, meets Cool Roof and Energy

Available in 43 colors on steel and 39 on aluminum

Rob Heselbarth

Dri-Design's Perforated Imaging technology can reproduce virtually any image by varying the size, density and location of the perforations. **Product Application** 

- Carl T. Hayden VA Medical Center parking garage
- Phoenix, AZ
- Perforated and Perforated Imaging Panels
- **Performance Data**
- · Available in a variety of materials and colors. · Fully tested to exceed ASTM standards and the latest
- AMMA 508-07. • Not laminated or a composite material.
- www.dri-design.com
- 616.355.2970 | sales@dri-design.com

- Countless combinations, colors and finish options Easy to install
- Combine with CENTRIA's MetalWrap<sup>™</sup> insulated composite backup wall system for a weathertight building envelope



**ROOFING, SIDING, THERMAL & MOISTURE PROTECTION** 

#### **ARCHITECTURAL PRECAST CONCRETE CLADDING PANELS GREEN I WR**

#### **Easi-Set Worldwide Licensed Precasters**

SNAP 241

SlenderWall is an Ultra Hi-Performance 30 lb/sf award winning architectural precast concrete with integral heavy-gauge steel-stud frame building enve-lope panel system. Wind-load tested to 226 mph. **Product Application** 

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

• Factory-installed continuous closed-cell foam insulation - compliant with all IECC/ASHRE energy codes www.SlenderWall.com

800.547.4045 | info@easiset.com

#### **UNDERMOUNT DRAWER SLIDES** \$\$

#### Accuride International, Inc.

Accuride 3135EC and 3160EC undermount slides offer smooth and silent movement with commercial grade quality and soft-close action.

#### **Product Application:**

- Commercial casework
- Residential cabinetry Institutional millwork

#### **Performance Data:**

Handles loads up to 100 lbs.

- Easy-Close feature as standard
- 3160EC: Supports drawers up to 60" wide

Accuride.com/eclipse | marketing@accuride.com



SNAP 245



Fewer on-site trades • Faster installation

• Lower structural cost • Class "A" finishes

A COMPLETE BUILDING PANEL

**INSIDE AND OUT** 

# SPECIALTY PRODUCTS **STAIRMASTER®** ann and 1921; our brand names include, Supergrit®, Alumogrit®, WALK-A-SURED®

#### CUSTOM BUILT COMMERCIAL CLOCKS

**MAKE EVERY STEP A SAFE ONE...** 

Wooster Products is a USA Manufacturer of anti-slip

Meets all established codes for anti-slip safety

www.wooster-products.com • 800-321-4936 Tim Brennan, Tim@wooster-products.com

safety stair and walkway products. In operation since

WR

**Wooster Products** 

Spectra®, and NIGHTGLOW®.

New construction or Renovation

 Indoor/Outdoor stairs Photo luminescent stair safety

#### LUMICHRON Tower Clocks

Manufacture, Sales, and Service

- **Product Application**
- Las Palmas Emergency Centers, El Paso, TX
- St. David's Medical Centers, Austin, TX
- Scheurer Hospital, Pigeon, MI
- · The Arbors, Culpeper, VA
- · Touchmark, Portland, OR
- Performance Data

- LUMICHRON Clocks · Automatic Time Control via NTP, Impulse Signal, or
- Timecode
- US Distributor of MOBATIME Clocks and Equipment

www.lumichron.com 888,788,4838

Telephone

Signature



SNAP 248

# WITH GRIFFOLYN® VAPOR PROTECTION SYSTEMS **ROOF DECK** WALI **UNDER SLAB CRAWL SPACE** GRIFFOLYN<sup>®</sup> REINFORCED VAPOR RETARDERS

- HIGH STRENGTH SCRIM prevents punctures
- LOW PERMEABILITY controls moisture damage
- FIRE RETARDANT products to meet code requirements
- ASTM E-1745, Class A, B, C products
- ANTIMICROBIAL products that inhibit growth of fungi and mildew
- STOCK ROLLS ARE AVAILABLE for immediate shipment
  - GRIFFOLYN.COM 1.800.231.6074 **SNAP 205**

# FREE PRODUCT INFORMATION **TO RECEIVE INFORMATION, PLEASE ANSWER ALL QUESTIONS:**

#### 6. What building types do you specialize in? 1. What is your primary business/industry? 3. What is your firm's annual dollar volume? [select ONE only] (select ONE only) (check ALL that apply) C Architecture Firm **B1** □ More than \$10,000,000 01 Commercial 01 G1 Engineering Firm □ \$5,000,001 - \$10,000,000 □ \$1,000,001 - \$5,000,000 Educational 02 02 Δ1 Contracting Firm Healthcare 03 03 T1 Government □ \$500,001 - \$1,000,000 04 Industrial 04 D1 □ Facility Management/ 05 **\$250,001 - \$500,000** 05 C Residential Development D Up to \$250,000 06 Other (please specify) 06 X1 Other (please specify) 4. What is the total number of employees at your company? (select ONE only) 7. Do you specify or recommend products? 2. What is your primary job function? 01-4 AA Yes [select ONE only] BB CC DD 5 - 9 10 - 19 20 - 49 No Corporate/Executive A1 Management General Management Architecture 8. I wish to receive/continue to **B1 5**0 - 99 **1**00 - 249 EE FF receive SNAP. D1 Design Engineering Draftsperson/ M1 □ 250 - 499 □ 500 - 999 □ 1,000 - 2,499 GG Yes C1 L1 HH No Ш Technical Staff JJ 2.500 or More Contracting/Installation/ Technician/Maintenance 9. Please check your preferred format: G1 Print 5. Are you an AIA member? X1 Other (please specify) Digital Yes 🗖 No (Email required) Name Addres Company City/State/Zip

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
51	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
106	107	108	109	110	111	112	113	114	115	116	117	118	1 19	120
121	122	123	124	125	126	127	128	129	130	131	132	133	134	135
136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165
166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	2.20	221	222	223	224	225
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	2.49	250	251	252	253	254	255
256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285
286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
301	302	303	304	305	306	307	308	309	310	311	312	313	314	315

SNAP RAC807 Expires: 10/15/18

#### MAIL YOUR COMPLETED CARD TODAY: P.O. Box 5178 | Buffalo, NY 14205-9993 or fax this form to: 800-571-7730 or go online to www.snap.hotims.com

#### ARCHITECTURALRECORD.COM | JULY/AUGUST 2018 | SNAP | 51

# 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 weatherdependent 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, Tennessee, Virginia + West Virginia



MANUFACTURER: Powell Valley Millwork LOCATION: Clay City, KY PRODUCTS: Mouldings and millwork, residential trim, door and window jambs, plantation shutter components, shiplap and picture frame mouldings. FOUNDED: 1993 EMPLOYEES: 125 PRICE RANGE: \$-\$\$\$ PVMILLWORK.COM



MANUFACTURER: Lebanon Oak Flooring LOCATION: Lebanon, KY PRODUCTS: Tongue-and-groove flooring, strip flooring, plank flooring, stair treads, hand rails, and mouldings. FOUNDED: 1935 EMPLOYEES: 60 PRICE RANGE: \$-\$\$\$

PRICE RANGE: ୬-୬୬३ LEBANONOAK.COM



2 MANUFACTURER: Powell Glass LOCATION: Danville, KY PRODUCTS: Flat-glass free-standing panels, glass sculptures, glass vessels and large bowl forms. FOUNDED: 1988 EMPLOYEES: 2 PRICE RANGE: \$\$-\$\$\$ POWELLGLASS.COM



**4 MANUFACTURER:** Metal Sales Manufacturing **LOCATION:** Antioch, TN

**PRODUCTS:** Light commercial, agricultural, residential and architectural metal roof and wall panels, liner panels, soffit panels, secondary framing, flashings, and accessories. **FOUNDED:** 1963

EMPLOYEES: 20+ in Antioch (800+ companywide) PRICE RANGE: \$-\$\$ METALSALES.US.COM







7 MANUFACTURER: East Coast Metal Systems LOCATION: Triadelphia, WV PRODUCTS: Custom ACM/MCM and plate panel systems, custom architectural flashings, trims, and accessories. FOUNDED: 1990 EMPLOYEES: 105 PRICE RANGE: \$\$ ECMSINC.NET



MANUFACTURER: CertainTeed Gypsum LOCATION: Proctor, WV PRODUCTS: Drywall FOUNDED: Plant opened in 2008 EMPLOYEES: 85 PRICE RANGE: \$ CERTAINTEED.COM/GYPSUM

MANUFACTURER: Smith-Midland LOCATION: Midland, VA PRODUCTS: Precast architectural cladding system, traditional architectural precast, precast buildings. FOUNDED: 1960 EMPLOYEES: 160 in Virginia, 30 in North Carolina and 45 in South Carolina PRICE RANGE: \$\$ SMITHMIDLAND.COM





#### KENTUCKY

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



## 250,000+

Kentuckians work in manufacturing.

SOURCE: THE KENTUCKY CABINET FOR ECONOMIC DEVELOPMENT

#### 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

 $in\,manufactured\,goods\,annually.$ 

SOURCE: TENNESSEE DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT

#### 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



aeronautics laboratory was established in Hampton—now the NASA Langley Research Center.

> SOURCE: VIRGINIA ECONOMIC DEVELOPMENT PARTNERSHIP

#### **WEST VIRGINIA**

West Virginia's workforce has the nation's



West Virginia has a pro-business tax climate, with **no new corporate taxes** in the last 20 years.



SOURCE: WEST VIRGINIA DEPARTMENT OF COMMERCE



## NEW AND UPCOMING EXHIBITIONS

#### Investigating Where We Live WASHINGTON, D.C.

#### August 11–December 31, 2018

The annual exhibit is the product of a five-week program where teens explore and document their interpretation of the city's residents and built environment through photographs, artwork, and writing. The young participants also design and install the exhibit. At the National Building Museum. More at *nbm.org*.

# We Make Carpets: Crêpe Paper Carpet HOUSTON

#### Through September 8, 2018

The Dutch artist collective We Make Carpets is installing a site-specific exhibition of their large fabric works in the Moody Center for the Arts' Central Gallery. The artists will be using vibrantly dyed crêpe paper to create the Houston installation. At Rice University. Visit moody.rice.edu.

## Mario Bellini for Murano

September 9-December 2, 2018

Architect and industrial designer Mario Bellini's glasswork will be on display at the Fondazione Musei Civici di Venezia as part of Venice Glass Week. The exhibition will feature recent productions including his architecture for the Deutsche Bank headquarters in Frankfurt (2011) and the Louvre's Department of Islamic Art (2012). For more information, see *museo vetro.visitmuve.it*.

## **Renzo Piano: The Art of Making Buildings**

September 15, 2018–January 20, 2019 This exhibit examines the design process of the Pritzker Prize winner and his firm, Renzo Piano Building Workshop, through 16 projects. Each building case study consists of drawings, models, photography, and full-scale maquettes, as well as a new film by Thomas Riedelsheimer. At the Royal Academy of Arts. Visit *royalacademy.org.uk*.

## Ai Weiwei: Life Cycle

#### September 28, 2018–March 3, 2019 Chinese artist Ai Weiwei's first major institu-

tional solo exhibition in the city will feature new and previously unseen sculptural work in response to the global refugee crisis. The title installation, Life Cycle, depicts the inflatable boats refugees use to cross the Mediterranean Sea using the traditional Chinese medium of kitemaking. At the Marciano Art Foundation. Visit marcianoartfoundation.org.

## The Last Resort

September 29, 2018–January 27, 2019 This site-specific installation by Berlin-based artist Anri Sala features 38 snare drums suspended from the ceiling as a contemporary reinterpretation of Mozart's Clarinet Concerto in A Major. At the Garage Museum of Contemporary Art. For more information, visit garagemca.org/en.

#### 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 artwork 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

#### 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, Svetlana Kana Radević, Edvard Ravnikar, Vjenceslav Richter, and Milica Šterić 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.

#### **ONGOING EXHIBITIONS**

#### Now What?! Advocacy, Activism & Alliances in American Architecture Since 1968 LOS ANGELES

#### Thursday August a O

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 nowwhatarchitexx.org.

## Charles White: A Retrospective

#### 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 show exhibits 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 *aiadc.com*.

#### International Garden Festival GRAND-MÉTIS, 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 Reford Gardens/Jardins de Métis. More at *internationalgardenfestival.com*.

#### LECTURES, CONFERENCES, AND SYMPOSIA

## São Paulo Design Weekend

August 29-September 2, 2018 The largest design festival in Latin America, the five-day event includes over 300 planned activities and exhibits organized by local galleries, museums, and schools. Programming includes lectures, installations, and seminars. Visit designweekend.com.br.

## London Design Fair

#### 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 135 educational sessions, lectures, and tours, along with a trade show featuring 350 exhibitors. At the Pennsylvania Convention Center. More information at *aslameeting.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 twoyear scholarship to the University Polytechnic of Milan, while second and third prizes include scholarships to travel to Jordan for a design workshop. See more at *tamayouz-award.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*. Plumbing = HVAC/Mechanical Systems = Flooring = Building Envelope = Roofing

# CONFERENCE & EXPO

# NEW EVENT! April 30 - May 2, 2019 Donald E. Stephens Convention Center, Rosemont, IL

# REGISTRATION RATES ARE AT THEIR LOWEST — RESERVE YOUR SPOT NOW & SAVE

Why Attend?



**Discover new technologies,** applications, and policies affecting the entire build process for both residential and commercial projects.



**Earn CEU credits** during dedicated educational sessions spanning five separate tracks focused on plumbing, HVAC/ mechanical systems, flooring, building envelope, and roofing.



Network with leading companies introducing the latest products and technologies in building design, construction, and the implementation of new ideas.

in

# **REGISTER NOW AT: AECBuildTech.com**

FOLLOW US! @AECBuildTech 🄰 📑







SHOWSTOPPERS Art Gensler and Cheryl Durst (top) discuss his legacy; showgoers test-drive soft seating; and an attendee admires the Designtex display (left).

# NeoCon Wrap-Up: Hubs, Quiet Zones, and the Pink Office

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-ondemand 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 **Jabbrrbox**. Meanwhile, **RT London**, a maker of dorm furniture, rolled out its version of the moveable, upholstered socialhub 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**.

#### ROOST OR ROAM

Clockwise from top left: Pieces that are easily moved were trending, such as Room One's privacy booth; Boss Design's Mango personal workspace; SitOnlt Seating's nesting taskchair Movi; and RT London's Lotus seating.



## INDUSTRY SHOW NEWS





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."





#### IN THE PINK

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.

# Through the Looking Glass

FURNITURE AND OBJECTS by Switerland-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)

INI ARCHIBONG Industrial designer, founder of Design By Ini designbyini.com

# Advertisers in this issue

Α		_	Dri-Design	50, CV4	P			SNAP - Greenbuild	34
AAAMSCO	17, 49	E			-	Petersen Aluminum	11,50	SNAP – CE Mobile App	31
Accuride	50		Easi-Set Industries	50		Phifer	49	SNAP - CEU Academy	30
Acoustical Surfaces	7,49	G	i		_ R	2		SNAP - Construct	60
Advance Lifts Inc.	22		Graham Architectural Pro	ducts 49		Raydoor	8,49	SNAP - AEC BuildTech	55
Armstrong World Industrie	es 21					ReefIndustries	51	STO Corporation	CV3
Arriscraft Canada	27		lunt Manufacturin a		s —				-
Azon USA	25,48		Just Manufacturing	49		SAFTIFIRST	CV2	Stonhard	5,49
C		_   L			-	SAFTIFIRST O'Keefe's	16	U	
CENTRIA	14,50		Lumichron	51		Schweiss Doors	48	Unilock	49
D		- c	)		-	Simonswerk	1	W	
Dow Corning	2		Overly Manufacturing	35		SNAP - ARIC Innovation Co	onference 26	Wooster Products Inc.	51
		1			1			1	

#### **SNAP Advertising Sales**

#### **New England and PA**

Joseph Sosnowski 610-278-7829 Fax: 610-278-0936, sosnowskij@bnpmedia.com

## Southeast, Mid-Atlantic

Wesley Loon 859-414-3795 Fax: 248-502-9104 loonw@bnpmedia.com Midwest (IA, IL, MN, MO, WI) Bruce Smith 224-216-7836 smithb@bnpmedia.com

Midwest (IN, MI, OH), TX, OK, Eastern Canada Lisa Zurick 513-345-8210 Fax: 513-345-8250 zurickl@bnpmedia.com

#### West, Western Canada

Bill Madden 503-260-9679 Fax: 503-557-9002 bill@maddenandassociates.net

FL, KS, NE, ND, NY, SD, International Risa Serin 646-849-7130 Fax: 248-786-1393 serinr@bnpmedia.com

#### **Production Manager**

Kristen Carpenter 248-786-1222 Fax: 248-502-2051 carpenterk@bnpmedia.com

Publisher is not responsible for errors and omissions in advertiser index.

CONSTRUCT is the premier trade show dedicated to bringing commercial building teams together to procure real-world, practical knowledge for building success.

Meet industry leaders including Construction Specifiers, Architects, Designers, Project Managers, Engineers, Contractors, Construction Managers, and Estimators.

Join us for three days packed with:

- Education: Select from 50+ sessions featuring 17 hours of CEU's
- $\bullet$  Expo Floor: Explore the latest in products, services, and technology
- Demo Pavilion: Experience live product demos on the show floor
- $\bullet$  YP Day Program: Mentoring and Networking for Young Professionals
- Networking: Connect with industry peers and friends during the Welcome Reception, CSI Night Out and more!





Visit www.CONSTRUCTshow.com/SNPMAG to Register Today with Special Pricing.

Building a better foundation for commercial construction projects through Education, Collaboration, and Communication.

**CONSTRUCT Is The Official Trade Show Of CSI** 

Knowledge Today. Innovation Tomorrow.

Official AR

Long Beach Convention Center

EDUCATION:

**OCTOBER 3-5, 2018** 

EXHIBITS:

**OCTOBER 4 & 5, 2018** 

Long Beach, CA, USA

specifier

# Seal Every Exterior.

**Sto AirSeal™** is the only high-build, fluid-applied air and water-resistive barrier that can be sprayed or roller applied over virtually every substrate and can be used behind any cladding, including EIFS.

# Guard Every Opening.

**Sto RapidGuard**<sup>™</sup> is a single-component multiuse air barrier and waterproofing material that seals rough opening seams, sheathing joints, cracks, penetrations and transitions in above-grade wall construction.

# Protect Every Project.



**StoGuard® Air and Moisture Barriers** combine simple fluid application with seamless control, saving time and labor on the job site without sacrificing performance.

Available in a range of vapor permeable and impermeable products, StoGuard<sup>®</sup> systems are the perfect partners for code-compliant building envelope protection delivered on time, and on budget.

Find out more at: www.stocorp.com/AMBsolutions





Dri-Design Metal Wall Panels are manufactured from single-skin metal, making them a non-combustible component of any wall assembly. Furthermore, Dri-Design has been tested at UL, as part of a complete assembly, and is NFPA-285 compliant. Although fire is always a concern, it is especially important in high-rise building applications, such as the Aloft/Element Hotel, in downtown Austin, Texas. The 32 story hotel also employed a unitized building technique, allowing the project to be completed on a confined lot, in less time than conventional building techniques.

- 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 AAMA 508-07.
- Available in a variety of materials and colors.
- Non-combustible and NFPA-285 compliant. UL Listed.



616.355.2970 | dri-design.com