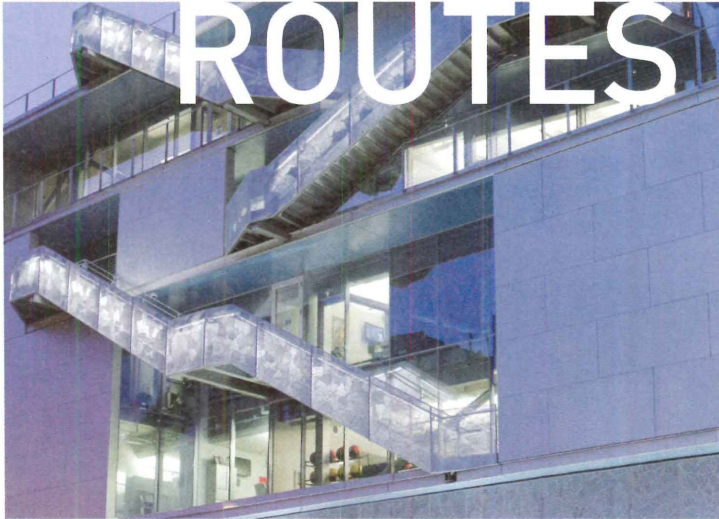


# ARCHITECTURAL RECORD

## Landscape and the City

31A\*\*C-017  
01DEC14  
0029  
0068

# SLANT ROUTES



Columbia University's new field house, the **Campbell Sports Center** by **Steven Holl Architects**, is designed to be a team player with facilities that foster balance between the minds and bodies of student athletes in a range of sports. Inspired by the slanting lines of field-play diagrams, the building's design relies on point foundations and a lightweight steel structure to achieve its diverse program on a sloped site. The university's first new athletics building since the mid-1970s, Campbell forms a gateway to the revitalized Baker Athletics Complex, and a new game plan for sports at Columbia.

## Structural Steel Right for any application

For help achieving the goals of your next project, contact the Steel Institute of New York.



Publisher of *Metals in Construction*

211 E 43 ST | NY, NY 10017 | 212-697-5553 | www.siny.org

CIRCLE 60

Architect: Steven Holl Architects  
Structural Engineer: Robert Silman Associates  
Photo: Iwan Baan

## ARCHITECTURAL RECORD

<b>EDITOR IN CHIEF</b>	Cathleen McGuigan, <a href="mailto:cathleen.mcguigan@mhfi.com">cathleen.mcguigan@mhfi.com</a>
<b>MANAGING EDITOR</b>	Beth Broome, <a href="mailto:elisabeth.broome@mhfi.com">elisabeth.broome@mhfi.com</a>
<b>SENIOR GROUP ART DIRECTOR</b>	Francesca Messina, <a href="mailto:francesca.messina@mhfi.com">francesca.messina@mhfi.com</a>
<b>DEPUTY EDITORS</b>	Clifford A. Pearson, <a href="mailto:pearsonc@mhfi.com">pearsonc@mhfi.com</a> Suzanne Stephens, <a href="mailto:suzanne.stephens@mhfi.com">suzanne.stephens@mhfi.com</a>
<b>SENIOR EDITOR</b>	Joann Gonchar, AIA, LEED AP, <a href="mailto:joann.gonchar@mhfi.com">joann.gonchar@mhfi.com</a>
<b>SPECIAL SECTIONS EDITOR</b>	Linda C. Lentz, <a href="mailto:linda.lentz@mhfi.com">linda.lentz@mhfi.com</a>
<b>WEB EDITOR</b>	William Hanley, <a href="mailto:william.hanley@mhfi.com">william.hanley@mhfi.com</a>
<b>NEWS EDITOR</b>	Laura Raskin, <a href="mailto:laura.raskin@mhfi.com">laura.raskin@mhfi.com</a>
<b>ASSISTANT EDITORS</b>	Asad Syrkett, <a href="mailto:asad.syrkett@mhfi.com">asad.syrkett@mhfi.com</a> Laura Mirviss, <a href="mailto:laura.mirviss@mhfi.com">laura.mirviss@mhfi.com</a>
<b>EDITORIAL INTERN</b>	Anna Fixsen, <a href="mailto:anna.fixsen@mhfi.com">anna.fixsen@mhfi.com</a>
<b>MANAGER, CONTENT OPERATIONS</b>	Juan Ramos, <a href="mailto:juan.ramos@mhfi.com">juan.ramos@mhfi.com</a>
<b>EDITORIAL PRODUCTION</b>	Rosa Pineda, <a href="mailto:rosa.pineda@mhfi.com">rosa.pineda@mhfi.com</a>
<b>ART DIRECTOR</b>	Helene Silverman, <a href="mailto:helene.silverman@mhfi.com">helene.silverman@mhfi.com</a>
<b>ASSOCIATE ART DIRECTOR</b>	Gordon Whiteside, <a href="mailto:gordon.whiteside@mhfi.com">gordon.whiteside@mhfi.com</a>
<b>CONTRIBUTING ILLUSTRATORS, PRESENTATION DRAWINGS</b>	I-Ni Chen Peter Coe
<b>EDITORIAL SUPPORT</b>	Monique Francis, <a href="mailto:monique.francis@mhfi.com">monique.francis@mhfi.com</a>
<b>CONTRIBUTING EDITORS</b>	Sarah Amelar, Fred A. Bernstein, Robert Campbell, FAIA, C.J. Hughes, Blair Kamin, Jayne Merkel, Robert Murray, David Sokol, Michael Sorkin, Ingrid Spencer
<b>SPECIAL INTERNATIONAL CORRESPONDENT</b>	Naomi R. Pollock, AIA
<b>INTERNATIONAL CORRESPONDENTS</b>	David Cohn, Tracy Metz, Aric Chen, Chris Foges
<b>CONTRIBUTING PHOTOGRAPHER</b>	Iwan Baan

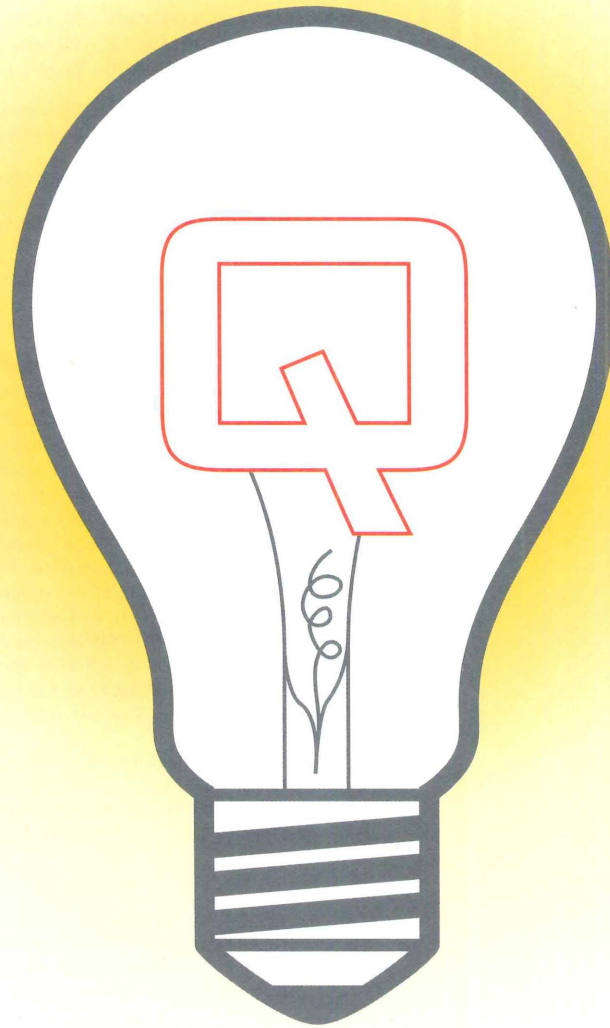
**ARCHITECTURAL RECORD:** (ISSN 0003-858X) August 2013. Vol. 201, No. 8. Published monthly by McGraw Hill Financial, 1221 Avenue of the Americas, New York, NY 10020. **FOUNDER:** James H. McGraw (1860-1948) Periodicals postage paid at New York, NY, and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 40012501. E-mail: [arhcustserv@cdsfulfillment.com](mailto:arhcustserv@cdsfulfillment.com). Registered for GST as McGraw Hill Financial. GST No. R123075673. **POSTMASTER:** Please send address changes to ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 5732, Harlan, IA 51593. **SUBSCRIPTION:** Rates are as follows: U.S. and Possessions \$70.30; Canada and Mexico \$79 (payment in U.S. currency, GST included) outside North America \$199 (air freight delivery). Single copy price \$9.95; for foreign \$11. Subscriber Services 877/876-8093 (U.S. only); 515/237-3681 (outside the U.S.); fax: 712/755-7423. **SUBMISSIONS:** Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage. **SUBSCRIPTION LIST USAGE:** Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, NJ 08520. **OFFICERS OF MCGRAW HILL FINANCIAL, INC.:** Harold W. McGraw III, Chairman, *President and Chief Executive Officer*; Kenneth M. Vittor, *Executive Vice President and General Counsel*; Robert J. Bahash, *Executive Vice President and Chief Financial Officer*; Elizabeth O'Melia, *Senior Vice President, Treasury Operations*. **COPYRIGHT AND REPRINTING:** Title reg. in U.S. Patent Office. Copyright © 2013 by McGraw Hill Financial. All rights reserved. Where necessary permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. To photocopy any article herein for personal or internal reference use only for the base fee of \$1.80 per copy of the article plus ten cents per page, send payment to CCC ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, NY 10121-2298; fax 212/904-4256. For reprints call 800/360-5549 x168 or e-mail [architecturalrecord@theygroup.com](mailto:architecturalrecord@theygroup.com). Information has been obtained by McGraw Hill Financial from sources believed to be reliable. However, because of the possibility of human or mechanical error by our source, McGraw Hill Financial and *Architectural Record* do not guarantee the accuracy, adequacy, or completeness of an information and are not responsible for any errors or omissions therein or for the results to be obtained from the use of such information or for any damages resulting therefrom.

**EDITORIAL OFFICES:** 212/904-6229. Editorial fax: 212/904-4256. E-mail: [monique.francis@mhfi.com](mailto:monique.francis@mhfi.com). Two Penn Plaza, New York, NY 10121-2298. **WEBSITE:** [ArchitecturalRecord.com](http://ArchitecturalRecord.com).



OPTIQ™

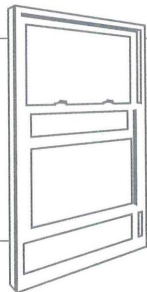
a smart new window series



## THERMAL INTELLIGENCE JUST GOT BRIGHTER

Introducing the Newest OptiQ™ Ultra Thermal Windows from Traco

The industry's smartest window keeps getting smarter. The new AA®5450 single and double hung windows – the latest in the OptiQ™ Ultra Thermal Window series – continue to set the standard for brilliance in window design. The result of an



ongoing partnership with the U.S. Department of Energy, the AA5450 series window integrates innovative features to deliver the highest levels of thermal performance. **With the AA5450 series window, thermal intelligence just got brighter.**



[kawneer.com](http://kawneer.com)

© 2013 Kawneer Company, Inc.

 **TRACO**

A DIVISION OF KAWNEER

# ARCHITECTURAL RECORD

VICE PRESIDENT, PUBLISHER	Laura Viscusi, <a href="mailto:laura.viscusi@mhfi.com">laura.viscusi@mhfi.com</a>
SENIOR DIRECTOR, MEDIA OPERATIONS	Brenda Griffin, <a href="mailto:brenda.griffin@mhfi.com">brenda.griffin@mhfi.com</a>
DIRECTOR, CREATIVE SERVICES	William Taylor, <a href="mailto:william.taylor@mhfi.com">william.taylor@mhfi.com</a>
PRODUCTION MANAGER	Marilyn DeMilta, <a href="mailto:marilyn.demilta@mhfi.com">marilyn.demilta@mhfi.com</a>
FINANCE DIRECTOR	Ike Chong, <a href="mailto:ike.chong@mhfi.com">ike.chong@mhfi.com</a>
FINANCE MANAGER	Tom Maley, <a href="mailto:tom.maley@mhfi.com">tom.maley@mhfi.com</a>
MANAGER, MANUFACTURING OPERATIONS	Mitchell Sherretz, <a href="mailto:mitchell.sherretz@mhfi.com">mitchell.sherretz@mhfi.com</a>
ASSISTANT TO MEDIA DEPARTMENT	Pina Del Genio, <a href="mailto:pina.delgenio@mhfi.com">pina.delgenio@mhfi.com</a>

## ADVERTISING SALES

**NEW ENGLAND AND PA:** Joseph Sosnowski  
(610) 278-7829 Fax: (610) 278-0936, [joseph.sosnowski@mhfi.com](mailto:joseph.sosnowski@mhfi.com)

**SOUTHEAST/MID-ATLANTIC:** Susan Shepherd  
(859) 987-9913 Fax: (404) 252-4056, [susan.shepherd@mhfi.com](mailto:susan.shepherd@mhfi.com)

**MIDWEST (IA, IL, MN, MO, WI):** Martin McClellan  
(312) 233-7402 Fax: (312) 233-7430, [martin.mcclellan@mhfi.com](mailto:martin.mcclellan@mhfi.com)

**MIDWEST (IN, MI, OH, EASTERN CANADA):** Lisa Zurick  
(513) 345-8210 Fax: (513) 345-8250, [lisa.zurick@mhfi.com](mailto:lisa.zurick@mhfi.com)

**NORTHWEST:** Bill Madden  
(503) 557-9000 Fax: (503) 557-9002, [bill.madden@mhfi.com](mailto:bill.madden@mhfi.com)

**PACIFIC/TEXAS:** Sherylen Yoak  
(760) 568-0465 Fax: (720) 559-9818, [sherylen.yoak@mhfi.com](mailto:sherylen.yoak@mhfi.com)

**KS, NE, ND, NY, SD:** Risa Serin  
(212) 904-6041 Fax: (212) 904-4652, [risa.serin@mhfi.com](mailto:risa.serin@mhfi.com)

**SPOTLIGHT SALES:** Risa Serin  
(212) 904-6041 Fax: (212) 904-4652, [risa.serin@mhfi.com](mailto:risa.serin@mhfi.com)

**WORKFORCE/ RECRUITMENT:** Diane Soister  
(212) 904-2021 Fax: (212) 904-2074, [diane.soister@mhfi.com](mailto:diane.soister@mhfi.com)

## INTERNATIONAL

**GERMANY:** Uwe Riemeyer  
(49) 202-27169-0 Fax: (49) 202-27169-20, [riemeyer@intermediapartners.de](mailto:riemeyer@intermediapartners.de)

**ITALY:** Ferruccio Silvera  
(39) 022-846716 Fax: (39) 022-893849, [ferruccio@silvera.it](mailto:ferruccio@silvera.it)

**JAPAN:** Katsuhiko Ishii  
(03) 5691-3335 Fax: (03) 5691-3336, [amkatsu@dream.com](mailto:amkatsu@dream.com)

**KOREA:** Young-Seoh Chin  
(822) 481-3411/3 Fax: (822) 481-3414

## MCGRAW HILL CONSTRUCTION

PRESIDENT	Keith Fox
VICE PRESIDENT, OPERATIONS	Linda Brennan, <a href="mailto:linda.brennan@mhfi.com">linda.brennan@mhfi.com</a>
VICE PRESIDENT, MHC PRODUCT DEVELOPMENT	Kathryn E. Cassino, <a href="mailto:kate.cassino@mhfi.com">kate.cassino@mhfi.com</a>
VICE PRESIDENT, TECHNOLOGY	Isaac Sacolick, <a href="mailto:isaac.sacolick@mhfi.com">isaac.sacolick@mhfi.com</a>
VICE PRESIDENT, STRATEGIC MARKETING	Patricia France, <a href="mailto:patricia.france@mhfi.com">patricia.france@mhfi.com</a>
VICE PRESIDENT, FINANCE	John Murphy, <a href="mailto:john.murphy@mhfi.com">john.murphy@mhfi.com</a>

**WEBSITE:** [ArchitecturalRecord.com](http://ArchitecturalRecord.com). **SUBSCRIBER SERVICE:** 877/876-8093 (U.S. only); 515/237-3681 (outside the U.S.). Subscriber fax: 712/755-7423. E-mail: [arhcustserv@cdsfulfillment.com](mailto:arhcustserv@cdsfulfillment.com). If the Post Office alerts us that your magazine is undeliverable, we have no further obligation unless we receive a corrected address within one year. **INQUIRIES AND SUBMISSIONS:** Letters, Beth Broome; Practice, Suzanne Stephens; Books, Clifford A. Pearson; Products, Rita Catinella Orrell; Lighting and Interiors, Linda C. Lentz; Residential, Laura Raskin; Architectural Technology, Joann Gonchar; Web Editorial, William Hanley. **REPRINT:** [architecturalrecord@theygsgroup.com](mailto:architecturalrecord@theygsgroup.com). **BACK ISSUES:** Call 877/876-8093, or go to [archrecord.com/backissues](http://archrecord.com/backissues).



PRINTED IN USA

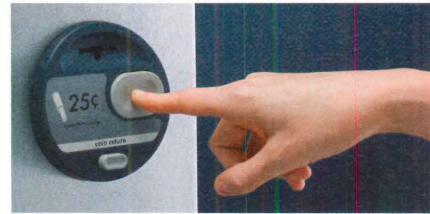
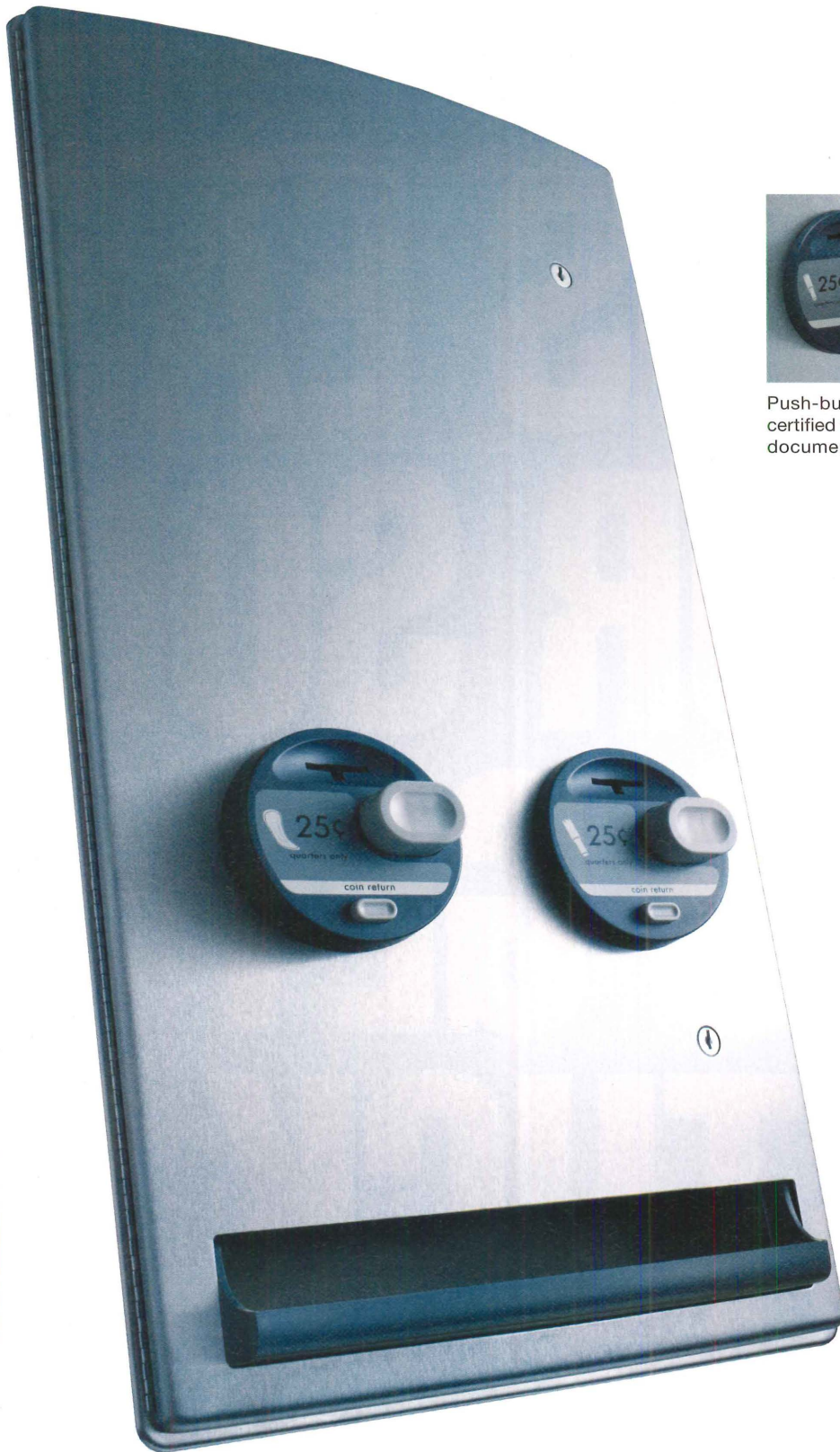
\* **InterlockingRock**<sup>®</sup>  
FEATURE WALLS  
in manageable, self-aligning modules.

modulararts.com | 206.788.4210  
MADE IN THE USA

CIRCLE 91

Nelson™ BLOCK ©2012 modularArts, Inc U.S. Patent 8,375,665

modulararts® WALLS = SCULPTURE\*



Push-button operation is certified to be ADA compliant; documentation on file.



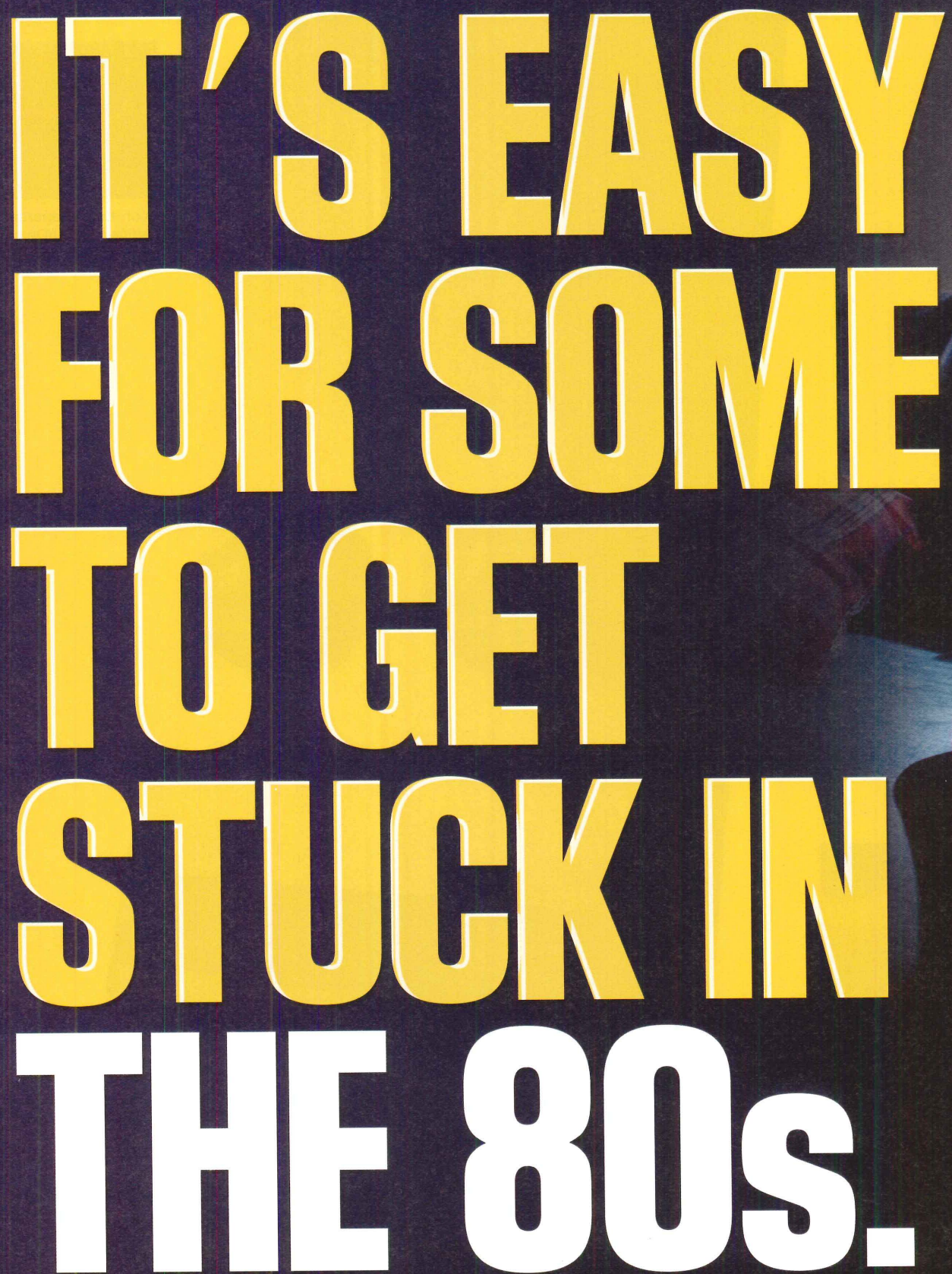
Wide-open napkin and tampon tray provides easy access to products.

## ADA compliant. The one and only.

Napkin-Tampon Vendor requires less than 5lbs of force, no grasping, pinching or twisting of the wrist. Meets ADA Accessibility Guidelines. Jam-free coin operation. Design integration with Contura, TrimLine and Classic series with coin and free-vend options. Visit [bobrick-koala.com](http://bobrick-koala.com) for a demonstration.



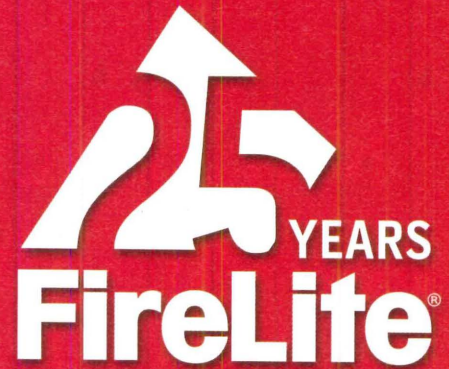
BUILDING VALUE SINCE 1906



**IT'S EASY  
FOR SOME  
TO GET  
STUCK IN  
THE 80s.**



# LUCKY FOR US HE'S NOT IN CHARGE OF PRODUCT DEVELOPMENT.



OK, so maybe it wasn't the most attractive decade. But the '80s were still smokin' thanks to FireLite. This awesome fire-rated glass ceramic changed the way we look at building design and fire-rated glass. Masonry walls and solid doors now open to bodacious views, while retaining fire ratings up to three hours. Plus its ultraHD® Technology delivers improved color, clarity and surface quality.

**FIRELITE  
TOTALLY  
RAD  
SWEEPSTAKES**

Visit [fireglass.com/25](http://fireglass.com/25) for your chance to win '80s-themed prizes!\*

#FireLite25

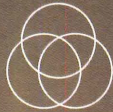


fireglass.com | 800.426.0279

CIRCLE 26



# Johnsonite®



## NATURALLY SUSTAINABLE. THAT'S IT, IN A NUTSHELL.

{ *Oh, and an oyster shell too.* }

Walnut and oyster shells. They're two of the bio-based materials in Ecolibrium®, our new wall base made from naturally renewable ingredients. Thanks to an innovative, patent-pending formulation, Ecolibrium is phthalate- and PVC-free. It's our most sustainable wall base yet. And, it's one more way Tarkett® helps you balance your flooring and accessories choices.



To learn more, call 1.800.899.8916  
or visit [tarkettna.com/InANutshell](http://tarkettna.com/InANutshell).

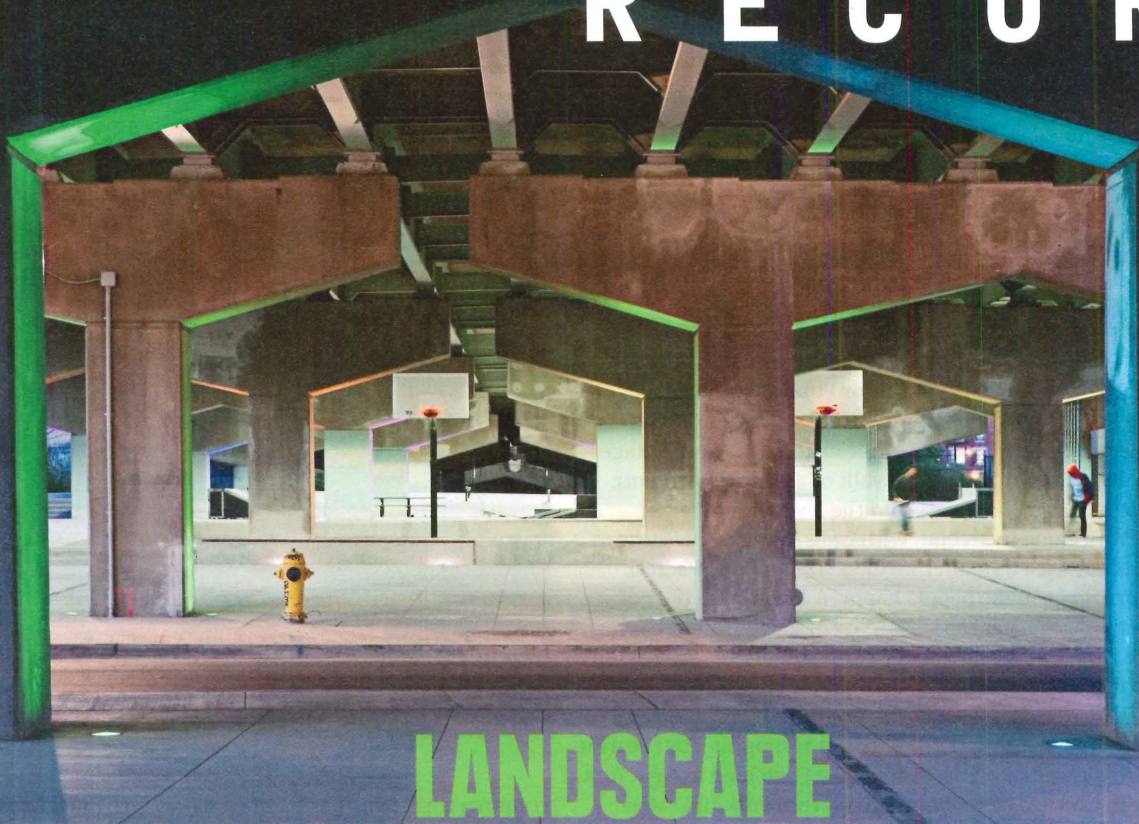
CIRCLE 45



THE ULTIMATE  
FLOORING EXPERIENCE



# ARCHITECTURAL RECORD



# 08 2013

## LANDSCAPE AND THE CITY

### NEWS

- 23 UPDATE: FRESHKILLS PARK *By Ben Adler*
- 25 HERZOG & DE MEURON TO DESIGN HONG KONG'S M+ MUSEUM *By Anna Fixsen*
- 30 TOP 300 ARCHITECTURE FIRMS LIST *By Anna Fixsen*

### DEPARTMENTS

- 14 EDITOR'S LETTER: SUMMER IN THE CITY
- 36 ARCHITECTURAL ANALYTICS
- 39 HOUSE OF THE MONTH: PETER GLUCK'S HOUSE IN COLORADO *By Suzanne Stephens*
- 41 COMMENTARY: RUMBLE IN THE URBAN JUNGLE *By Michael Sorkin*
- 47 BOOKS: VISHAAN CHAKRABARTI'S *A COUNTRY OF CITIES* *By Clifford A. Pearson*
- 49 GUESS THE ARCHITECT
- 53 PRODUCT FOCUS: LANDSCAPE *By Sheila Kim*
- 56 PRODUCT BRIEFS: OFFICE *By Sheila Kim*
- 58 QUICK TAKE: A SOU FUJIMOTO-DESIGNED OUTHOUSE *By Naomi R. Pollock, AIA*
- 144 READER SERVICE
- 147 DATES & EVENTS
- 152 SNAPSHOT: OMBRIERE AT MARSEILLE VIEUX PORT *By Anna Fixsen*

### PROJECTS

- 67 INTRODUCTION
- 68 GRAND PARK, LOS ANGELES  
RIOS CLEMENTI HALE STUDIOS *By Marissa Gluck*
- 76 JACOB K. JAVITS FEDERAL BUILDING PLAZA,  
NEW YORK CITY  
MICHAEL VAN VALKENBURGH ASSOCIATES *By Laura Raskin*
- 80 KLYDE WARREN PARK, DALLAS  
THE OFFICE OF JAMES BURNETT *By Laura Mirviss*
- 84 WASHINGTON CANAL PARK, WASHINGTON, D.C.  
OLIN *By Amanda Kolson Hurley*
- 88 UNDERPASS PARK, TORONTO  
PFS STUDIO *By Lisa Rochon*
- 92 THE CITYDECK, WISCONSIN  
STOSS *By Lee Bey*

### BUILDING TYPES STUDY 937 OFFICE BUILDINGS

- 101 ADOBE SYSTEMS UTAH CAMPUS, UTAH  
WRNS STUDIO AND RAPT STUDIO *By Mira Locher*
- 106 ITALCEMENTI I.LAB, ITALY  
RICHARD MEIER AND PARTNERS *By Chris Foges*
- 110 CONRAD N. HILTON FOUNDATION  
HEADQUARTERS, CALIFORNIA  
ZGF ARCHITECTS *By Asaá Syrket*

### ARCHITECTURAL TECHNOLOGY & LIGHTING

- 117 SHADY BUSINESS  
INTEGRATED DESIGNS FOR LIGHTING AND DAYLIGHTING, AUTOMATED BY CONTROLS, CAN HELP CONSERVE RESOURCES AND PLEASE BUILDING OCCUPANTS. *By Joann Gonchar*
- 120 JOHN AND FRANCES ANGELOS LAW CENTER,  
UNIVERSITY OF BALTIMORE, MARYLAND  
BEHNISCH ARCHITEKTEN & MCLA ARCHITECTURAL LIGHTING DESIGN *By David Sokol*
- 125 SAINT LOUIS ART MUSEUM, EAST BUILDING,  
MISSOURI  
DAVID CHIPPERFIELD ARCHITECTS / ARUP  
*By Josephine Minutillo*
- 128 ENERGY BIOSCIENCES BUILDING, UNIVERSITY  
OF CALIFORNIA, BERKELEY  
SMITHGROUPJJR / LOISOS+UBBELOHDE *By Joann Gonchar*
- 133 LIGHTING PRODUCTS *By Sheila Kim*

THIS PAGE: UNDERPASS PARK, BY PFS STUDIO. PHOTO BY DOUBLESPEACE PHOTOGRAPHY. ON THE COVER: JACOB JAVITS PLAZA, BY MICHAEL VAN VALKENBURGH ASSOCIATES. PHOTO BY ALEX MACLEAN.

See expanded coverage of Projects and Building Types Studies as well as web-only features at [architecturalrecord.com](http://architecturalrecord.com).

This symbol denotes that enhanced content is available in our iPad edition.



Visit us at [facebook.com/architecturalrecord](http://facebook.com/architecturalrecord)



Follow us on Twitter at @archrecord

## Summer in the City

New urban parks of all varieties are transforming neighborhoods around the country.

**IT'S AUGUST**, and if you're a city dweller, it's great to be able to hang out on a summer's day in a nearby park. But just how nearby depends on what city you live in. In June, the Trust for Public Land issued its ParkScore, a rating of park systems in America's 50 biggest cities. Minneapolis came out on top, based on three criteria: the percentage of residents who live within a 10-minute walk of a park (94 percent); the median size of its parks (6.5 acres), and the level of municipal investment. New York came in second, with even more people close to a park (96 percent) but with a smaller median size (only 1.06 acres).

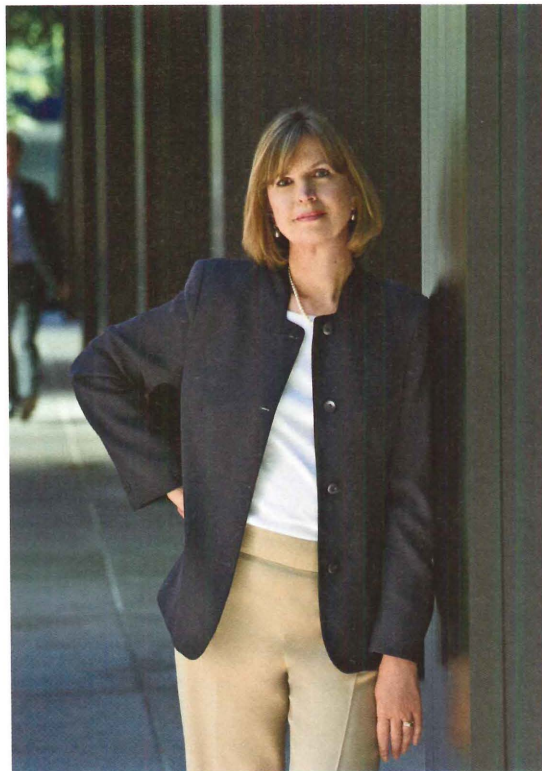
Parks, not surprisingly, make people happy. A long-term study of 12,000 Britons by researchers at the University of Exeter found that those who lived in areas with green space expressed more satisfaction and were less distressed than those who didn't.

As the population grows in urban cores, parks have become more essential than ever. And the design profession is responding by creating ever more varied and unusual public spaces—the High Line in New York, Millennium Park in Chicago, the Olympic Sculpture Park in Seattle among them. The best parks cater not only to a wide range of citizens and activities but quietly foster sustainability by harboring wildlife and reducing potential damage from flooding and other disasters linked to climate change.

In eras past, civic parks were intended as pastoral escapes. But as early as 1939, in *ARCHITECTURAL RECORD*, three modern masters of landscape architecture—Garrett Eckbo, Daniel U. Kiley, and James C. Rose—wrote a futurist manifesto, "Landscape Design in the Urban Environment," in which they advanced the following principles: "Design in the recreational environment of tomorrow must (1) integrate landscape and building, (2) be flexible, (3) be multi-utile, (4) exploit mechanization, (5) be social, not individual, in its approach."

They were ahead of their time. "Until the 1960s, the profession was basically anti-urban," recalls M. Paul Friedberg, the landscape architect of such breakthrough public spaces as Peavey Plaza (1975) in Minneapolis, recently listed on the National Register of Historic Places (and threatened with demolition). "I wasn't considered a landscape architect early in my career because I was working in hardscape."

Today's urban parks, too, reflect and embrace the complexities of the contemporary city, often by regenerating leftover spaces. In this issue, we look at new landscape projects in six cities. Three of the projects dramatically subvert the culture of the car. In Dallas, the 5-acre Klyde Warren Park, designed by the Office of James Burnett, is built over a freeway—and knits together two downtown neighborhoods that were torn apart decades ago by urban renewal and the highway's construction. In Toronto, PFS Studio went *under* an elevated roadway to transform a dank and derelict area into a surprisingly vibrant venue for skateboarding and shooting hoops. In Grand Park in Los Angeles, the design firm of Rios Clementi Hale Studios took up a neglected plaza and parking lot and created a rich collage of varied spaces for downtown office workers and residents alike. Like many cities now



reconnecting to formerly industrial waterfronts, Green Bay, Wisconsin, hired the firm of Stoss Landscape Urbanism to transform a stretch of land along the Fox River. In Washington, D.C., the latest new public space in the vast development Capitol Riverfront is Canal Park, designed by OLIN (whose founding partner, Laurie Olin, was recently honored with the National Medal of Arts).

The smallest urban park in the pages ahead isn't a "found" space, but its history as a public place has been tortured. The Jacob K. Javits Federal Building Plaza in New York was the home of Richard Serra's sculpture *Tilted Arc*, until the 120-foot-long wall of Cor-Ten steel was finally removed following a roaring controversy in the 1980s over its impact on the site. For the plaza's current iteration, Michael Van Valkenburgh Associates has created an urbane space of pink granite and pale marble, softened by crescents of plantings. Like the other new landscapes in *RECORD* this month, it is a magnet for the people who work in the area.

And isn't that the point? Along with Eckbo, Kiley, and Rose, his modernist forebears, Friedberg believes the purpose of public landscapes is to be social, filled with human activity. "We're more interesting than what we build," he maintains. "The spaces have to celebrate us, the people." ■

*Cathleen McGuigan*

Cathleen McGuigan, Editor in Chief

ALPOLIC MEANS BUSINESS.



Here's the bottom line: how your customers and clients view you is crucial to the success of your business. And here's some good news: ALPOLIC aluminum and metal composite panels combine beauty with sustainability, phenomenal strength, lightness, and durability to provide a wealth of cost-competitive, easily fabricated possibilities to architects and designers of commercial facilities. Our large range of innovative finishes will make sure your business is dressed for success. **For more information and to access our new Continuing Education course, visit us at [www.alpolic-northamerica.com/case-studies](http://www.alpolic-northamerica.com/case-studies).**

ALPOLIC®  
ALPOLIC/fr  
MATERIALS

MITSUBISHI PLASTICS COMPOSITES AMERICA, INC.



©2013 Mitsubishi Plastics Composites America, Inc. All Rights Reserved. ALPOLIC® is a registered trademark of Mitsubishi Plastics, Inc. LUMIFLON® is a registered trademark of Asahi Glass Co., Ltd.

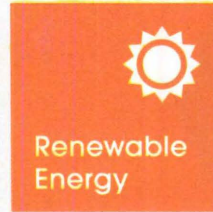
CIRCLE 86

# LEARN & EARN



Earn all your continuing education credits free online or at Architectural Record's Continuing Education App!\*

## IN THIS ISSUE



### Multi-Attribute Certification Pinpoints True Sustainability

Sponsored by Cradle to Cradle Products Innovation Institute



Credit: 1 HSW

Page 140

## NEW ONLINE AT ARCHRECORD.COM



### Wood and Environmental Product Declarations

Sponsored by reThink Wood, American Wood Council, and Canadian Wood Council

Credit: 1 HSW, 1 GBCI CE HOUR



### Trees Need Dirt

Sponsored by DeepRoot Green Infrastructure

Credit: 1 HSW, 1 GBCI CE HOUR

## ONLINE AT ARCHRECORD.COM

**Internal Curing: Concrete Game Changer – An Innovative, Cost-Effective Strategy To Improve the Performance and Extend the Service Life of Concrete**  
Sponsored by Trinity Expanded Shale and Clay

**Aesthetically Designed Architectural Door Openings**  
Sponsored by ASSA ABLOY

**Protecting Below Grade Building Structures**  
Sponsored by Epro Services, Inc.

**Sustainable Extruded Aluminum Trim Profiles Deliver Aesthetics and Durability**  
Sponsored by Tamlyn

**Simplified Steel Stair Design for Commercial and Institutional Buildings**  
Sponsored by Lapeyre Stair

**Door Opening Solutions in LEED for Healthcare**  
Sponsored by ASSA ABLOY

**Design Alternatives to the Enclosed Elevator Lobby: Fire and Smoke Safety Solutions**  
Sponsored by Smoke Guard, Inc.

**Wood Scores A+ in School Construction**  
Sponsored by reThink Wood and WoodWorks

**Electrochromic Glazing – Dynamic Control of Solar Energy**  
Sponsored by Sage Glass

Earn Free Health Safety Welfare (HSW) and Green Building Certification Institute (GBCI) credits with Architectural Record

\*All Architectural Record articles and presentations count toward the annual AIA continuing education requirement. All exams are available at no charge and are instantly processed.

A photograph of a modern, rectangular, light-colored stone sink with two sleek, chrome faucets. The sink is set in a bathroom with wood-paneled walls and a large window in the background. The lighting is warm and ambient.

## Suite Life

Visually striking. Impeccably crafted. Thoughtfully functional. Remarkably durable. Sloan's premier sink systems bring elegance and advanced performance to the washroom space.

Our sinks stay at the  
best hotels

**SLOAN**<sup>®</sup>

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

CIRCLE 49

# A NEW SLANT ON EXTERIOR METAL WALL PANELS

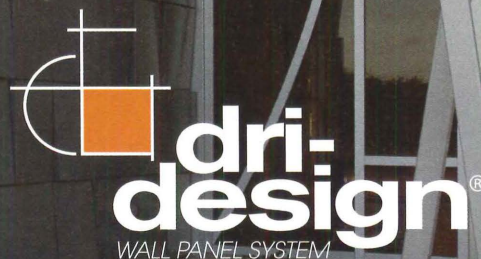
Tapered metal wall panels by Dri-Design.  
Select material, direction, depth, color and/or angle.

Expect Dri-Design's true dry joint rain-screen  
technology, affordability and sustainability.



## ADVANTAGES:

- No sealants, gaskets or butyl tape in the panel joints, means no dirty streaks or a legacy of maintenance for the building owner.
- Panels are not laminated nor a composite—they will never delaminate.
- Sustainability - Dri-Design panels are made with recycled content, are 100% recyclable and can be repurposed. At Dri-Design we make panels the world can live with.
- Fully tested to exceed ASTM standards and the latest AAMA 508-07 for pressure equalized rain-screens. Miami-Dade approved.
- Available in any anodized or Kynar color on aluminum, plus VMZINC, stainless steel, copper and titanium.
- Interlocking panel design makes installation quick and easy.
- Dri-Design is economical. Our highly automated manufacturing process makes panels in seconds.

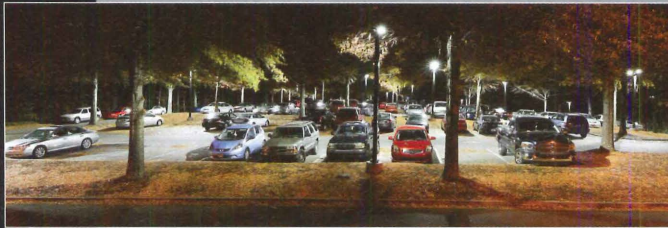


Call 616.355.2970 | [www.dri-design.com](http://www.dri-design.com)

ALTITUDE

Clemson University, Clemson, South Carolina

This is The Next Revolution in LED Outdoor Lighting.  
This is Kim Lighting.



  
**KIM LIGHTING**

[www.kimlighting.com/products/altitude](http://www.kimlighting.com/products/altitude) CIRCLE 75





WE  
HAVE

7 9 8 , 7 2 1

# FINISH COMBINATIONS

FIRST IMPRESSIONS LAST, SO WE GIVE YOU CHOICES.

Not just the right design choices, but the right environmental ones too. We offer a complete line of elevator interiors that are free from wood products containing added urea-formaldehyde, utilize powder coating as opposed to solvent-based paint, and are validated by a third party (UL Underwriters Laboratories) to be low emitting. We are the only elevator company that can say this.

Visit [www.thyssenkruppelevator.com/tools/create-a-cab](http://www.thyssenkruppelevator.com/tools/create-a-cab) to view our finishes catalog



CIRCLE 50

ThyssenKrupp Elevator Americas



ThyssenKrupp



# The face of sustainability.



-Project: Scottsdale Fire Station  
-Architect: LEA Architects <http://www.lea-architects.com>  
-Product: Trenwyth, Trendstone



**Trendstone®**

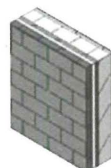
Additional colors, sizes & shapes at [Trenwyth.com](http://Trenwyth.com)



**Oldcastle®**  
Architectural

**The face of masonry.**

**The face of masonry.** No matter where you are, chances are we're somewhere close by. In fact, you've probably seen us many times before in the places you shop, work, play, learn and live. We manufacture the brands and products used in the interiors and exteriors of civil, commercial and residential construction projects across the nation. We're Oldcastle Architectural. We are the face of masonry.



For more information about our SmartBIM models and continuing education units, visit [oldcastleapg.com/ceubim.html](http://oldcastleapg.com/ceubim.html)

Brands **TRENWYTH®** | ENDURAMAX™ | ARTISAN MASONRY STONE VENEERS™ | QUIK-BRIK® | AMERIMIX™

For more information on our broad range of products or for free literature call 1-855-346-2766 or visit [oldcastleapg.com](http://oldcastleapg.com)

**CIRCLE 47**

ROCKY MOUNTAIN®

H A R D W A R E



ENDURING STYLE. To create the clean lines of our collection skilled artisans use the time-honored technique of sand casting to turn molten bronze into sculptural works of art.

DOOR WINDOW CABINET LIGHTING  
PLUMBING TILE HOSPITALITY CUSTOM

10 patinas to choose from. 90% post-consumer recycled materials. Handmade in the USA.

888 552 9497 **CIRCLE 48**  
rockymountainhardware.com

DAILY UPDATES  
archrecord.com/news  
twitter.com/archrecord

# perspective

**“We cannot expect big American cities to reach their potential when the very professions that purport to defend and perpetuate urbanism recoil at the presence of towers.” –Vishaan Chakrabarti**

An excerpt from his book *A Country of Cities: A Manifesto for an Urban America* (Books, page 47), on *DesignObserver.com*.

## Once a Landfill, Now a Lush Landscape

BY BEN ADLER



Above, a common Freshkills vista: a former landfill, it is in the process of being capped and planted with native species.

SINCE 1947, it has been one of New York’s most notorious locations: the Freshkills landfill, in Staten Island, the city’s least populated, least renowned borough. To many, it became a sort of running joke about the borough itself. After all, how seriously can you take a place whose best-known landmark is vast mounds of garbage?

Now Freshkills is on its way to becoming Staten Island’s claim to fame rather than notoriety. The landfill stopped accepting trash in March 2001; now, over it, a massive public park is under way. One of the first phases, Schmul Park, reopened in 2012. An adjacent and pre-existing park, it is a small finger sticking out from Freshkills into the Travis section of Staten Island, and it will serve as the entrance to the larger new park. Its redesign, by Freshkills master planner James Corner Field Operations, features playgrounds, ball fields,

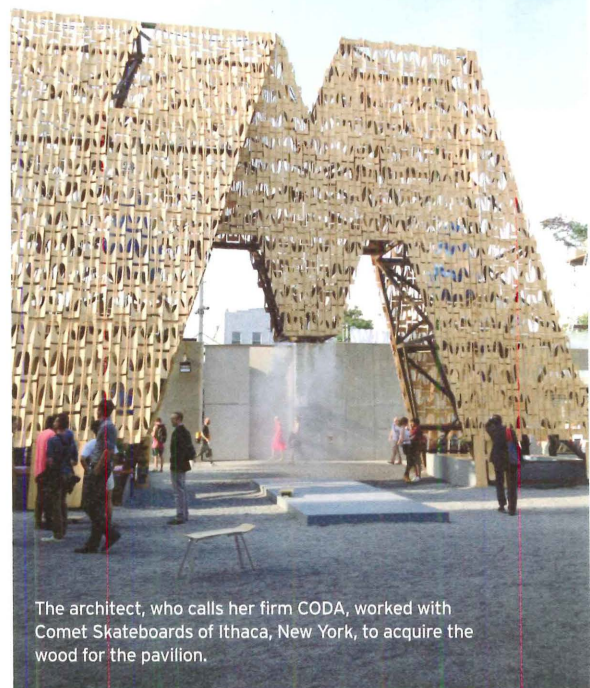
and basketball and handball courts, with a tree-lined walkway along one side.

New York’s most famous big parks—Central Park and Prospect Park—were meticulously landscaped by Frederick Law Olmsted and Calvert Vaux. Freshkills, in contrast, will be rugged and wild. At 2,200 acres, it is nearly three times the size of Central Park. Each of its four mounds of trash, which can be up to 150 feet tall, has been, or is in the process of being, capped, sealed, and covered with several layers of protection, including at least 2 feet of soil. Slinking around them are a series of tidal estuaries that connect to the Arthur Kill, the body of water separating Staten Island from New Jersey.

Rather than, say, draining the waters and building a traditional urban park, Field Operations, which won the Municipal Art Society–sponsored design competition in

## All Decks on Hand

Groan if you must at the punning title of Caroline O’Donnell’s *Party Wall*, but the name captures the Ithaca, New York–based designer’s dual intent. A giant plywood brise soleil made of scrap material left over from the production of skateboards, the temporary work bisects the courtyard at MoMA PS1, the Museum of Modern Art’s contemporary art space in Queens, New York. From a distance it reads like a billboard peeking up above the walls that surround the former schoolhouse. Inside the courtyard, it shades, mists, and occasionally spews water at the masses who turn out for the institution’s outdoor WarmUp dance parties, which continue every Saturday through September 7. One hundred and twenty of its lower panels can detach from the structure, some to become oversized skateboards with wheels, others to become chairs and tables for outdoor events. *William Hanley*



The architect, who calls her firm CODA, worked with Comet Skateboards of Ithaca, New York, to acquire the wood for the pavilion.

2003, will preserve and open the natural environment to visitors. This will help protect the species that live there and preserve the area's ability to absorb storm surges from increasingly common extreme weather events such as Hurricane Sandy.

"It used to be an enormous and very rich wetlands," explains Tatiana Choulika, associate partner at Field Operations and project manager for Freshkills. "Today we know wetlands are important to the ecosystem and for mitigating the rise of the seas." The first portion to open, in 2016, will be a double path—a hard surface for biking and skating and a softer one for walking and running—along the base of the north mound that will lead to an observation deck over the Main Creek.

Reminders of the detritus created by modern society will, however, continue to abound: the trash underground creates methane, which is captured by pipes and sold to heat homes. Each mound has a gas flare available for burning it off when necessary. But the city has issued a request for proposals for wind turbines and solar installations for the top of one of the mounds. Structures will have green roofs, as the visitor center already does. Atop the west mound, there will also be an earth-work monument that will serve as a September



Schmul Park was reconstructed and opened in 2012. It will serve as a gateway to Staten Island's Freshkills Park. A tree-lined promenade (left) will direct movement into the larger 2,200-acre park.

11 memorial, with views of the World Trade Center. (After the attacks of September 11, Freshkills served briefly as a sorting ground for debris.)

Building a park on a landfill is not as easy as drawing one on a blank canvas. You cannot build a structure on the top of trash mounds, lest the foundation pierce the caps. Tree roots pose a similar risk, so an additional 5 feet of soil must be added wherever a tree is planted. Water cannot enter the giant trash bags that hold the

garbage under the mounds, so runoff is released from pipes over a tiered staircase on one side. But there will be opportunities for recreation: more ball fields and maybe a golf course.

Field Operations, the lead designer of Manhattan's High Line park, decided to work with the historical artifacts when possible. For example, barges on the site's western waterfront that once transported garbage will be made into floating gardens. As with the rest of Freshkills, the plan is to turn dross into gold. ■

## Wireless Charging Arrives!

### To Our Power and Communications Grommets!



Place smartphone, iPod® or Bluetooth® device on the lid and it charges up!

PCS54WC is a sleek, almost fully recessed model with clean lines. Note stripes on lid: they're the actual charging elements. Thin lid opens to reveal two 110v. electrical outlets and two Category 5E data modules seated on the angled face.

Charge up to three devices at one time. And the adapter set is included; all you do is plug into adapter and lay adapter on lid, or use proper sleeve. Uses state-of-the-art WildCharge® technology.

11 5/16" x 5 5/16" overall going into 11" x 5" cutout, has 6ft. cord. Finish: Satin Aluminum. UL listed.

"FINE ARCHITECTURAL HARDWARE FOR YOUR FINE FURNITURE"®

**MOCKETT**  
DOUG MOCKETT & COMPANY, INC.

www.mockett.com • 800-523-1269

# Herzog & de Meuron to Design Hong Kong's M+ Museum

BY ANNA FIXSEN

ONE OF the world's most ambitious civic projects, the West Kowloon Cultural District in Hong Kong, gained momentum in July. The District announced that Herzog & de Meuron, in partnership with TFP Farrells, won the job to design Hong Kong's largest contemporary art museum, called M+.

Herzog & de Meuron and TFP Farrells beat out five other teams: Renzo Piano Building Workshop; Kazuyo Sejima and Ryue Nishizawa of SANAA; Toyo Ito & Associates and Benoy; Shigeru Ban Architects and Thomas Chow Architects; and Snøhetta.

The M+ project will join several other proposed cultural venues, including the Xiqu Centre for Chinese opera designed by Bing Thom Architects, as part of the District's first, multibillion-dollar development phase. M+ will rest on the waterfront of Victoria Harbor at



The upside-down-T-shaped museum is planned for a site in front of KPF's International Commerce Centre tower.

the edge of a lush 100-acre park and within a master plan by Foster + Partners.

The museum's collection will encompass contemporary visual culture from Hong Kong, China, and beyond.

"It will become the most important platform for contemporary art in Asia," senior partner Jacques Herzog told RECORD, "so we have to give the local community of artists a venue that is theirs." Herzog and his partner Pierre de Meuron won the Pritzker Prize in 2001.

Rather than imitate Chinese architecture, Herzog said the architects designed the building to reflect the Chinese principles of opposites—darkness and light.

Composed of two perpendicular elements of steel and glass, the 645,000-square-foot structure is slated for completion in 2017. The horizontal slab will function as a gallery space, and the vertical one—echoing the city's skyline—will contain office and administrative spaces.

The design activates existing infrastructure, connecting the museum to Hong Kong's Airport Express via a tunnel. A raw underground space will serve as a site for displaying art and holding performances, "as opposed to white-cube galleries," Herzog explained. At night, LED lights will project art onto the building's vertical element, making it a giant billboard.

Herzog said, "The greatest challenge for architects is to do buildings that generate public life and creative life and make the city more itself." ■

Wave Bench



IRCLE 76

Get a catalog today.  
@huntco.com / 800-547-5909

A sleeker take on site furnishings **Huntco**

## [ TECHNOLOGY ]

# Scripting for the Masses?

BY MICHAEL LEIGHTON BEAMAN

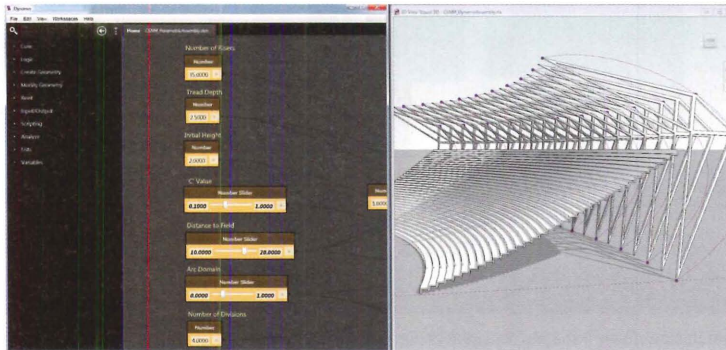
OVER THE past few years, developers of software for the architecture, engineering, and construction industries have called into question the role of the desktop computer in design. They have either produced software that exploits the desktop's computational power or have abandoned it as a design tool entirely. This marks a significant change in focus—from software that facilitates the production of digital versions of traditional architectural documentation, to the expansion of design capabilities through either advanced computational modeling or desktop-free design production reliant on mobile devices and cloud computing.

Recognizing this trend, Autodesk showcased two programs—Formit and Dynamo—at the AIA National Convention in Denver. Formit, an iPad application, allows designers to create basic conceptual forms and upload them to Autodesk's building information modeling (BIM) platform, Revit, turning the mobile device into a design tool. Formit also opens existing Revit files through the Autodesk 360 cloud service, offering some of the visualiza-

software has the potential to make computational design methods accessible to a broad base of architects. It is a plug-in for the latest versions of Revit and Vasari—a conceptual design program that Autodesk has been beta-testing since 2010. Dynamo allows designers to script operations, using a graphical interface, and “reveals capabilities in Revit, making them more accessible visually,” says Zach Kron, Autodesk's principal design strategist.

Compared to generating digital models manually, Dynamo gives designers “the ability to design with more complex variation and iteration,” says Danelle Briscoe, an assistant professor of architecture at the University of Texas, Austin. Aside from teaching both Revit and Dynamo, Briscoe is using the latter tool's algorithmic capabilities to develop a complex green facade system for a university parking garage.

Though Dynamo has been in beta-testing for over two years, in the last six months Autodesk has ramped up its development and promotion. Rather than issuing yearly releases, Dynamo, which is open-source, will be in perpetual beta mode as the company makes adjustments in response to user feedback. Dynamo, Formit, and Vasari are all currently available free from Autodesk. ■



A screen shot of the Dynamo interface running inside Revit.

tion capabilities ArchiCAD users enjoy with Graphisoft's BIMx app.

Dynamo is Autodesk's first foray into visual scripting, and—given the company's reach in the world of design and construction—the

Think 'one-step' installation.  
Think thermal efficiency.

THINK  
ALL WEATHER  
INSULATED  
PANELS

All Weather Insulated Metal Panels:  
For one step installation, superior  
thermal efficiency and now with  
three manufacturing locations.

CIRCLE 81

awipanel.com

Vacaville, CA, USA | Little Rock, AR, USA | Hamilton, ON, Canada

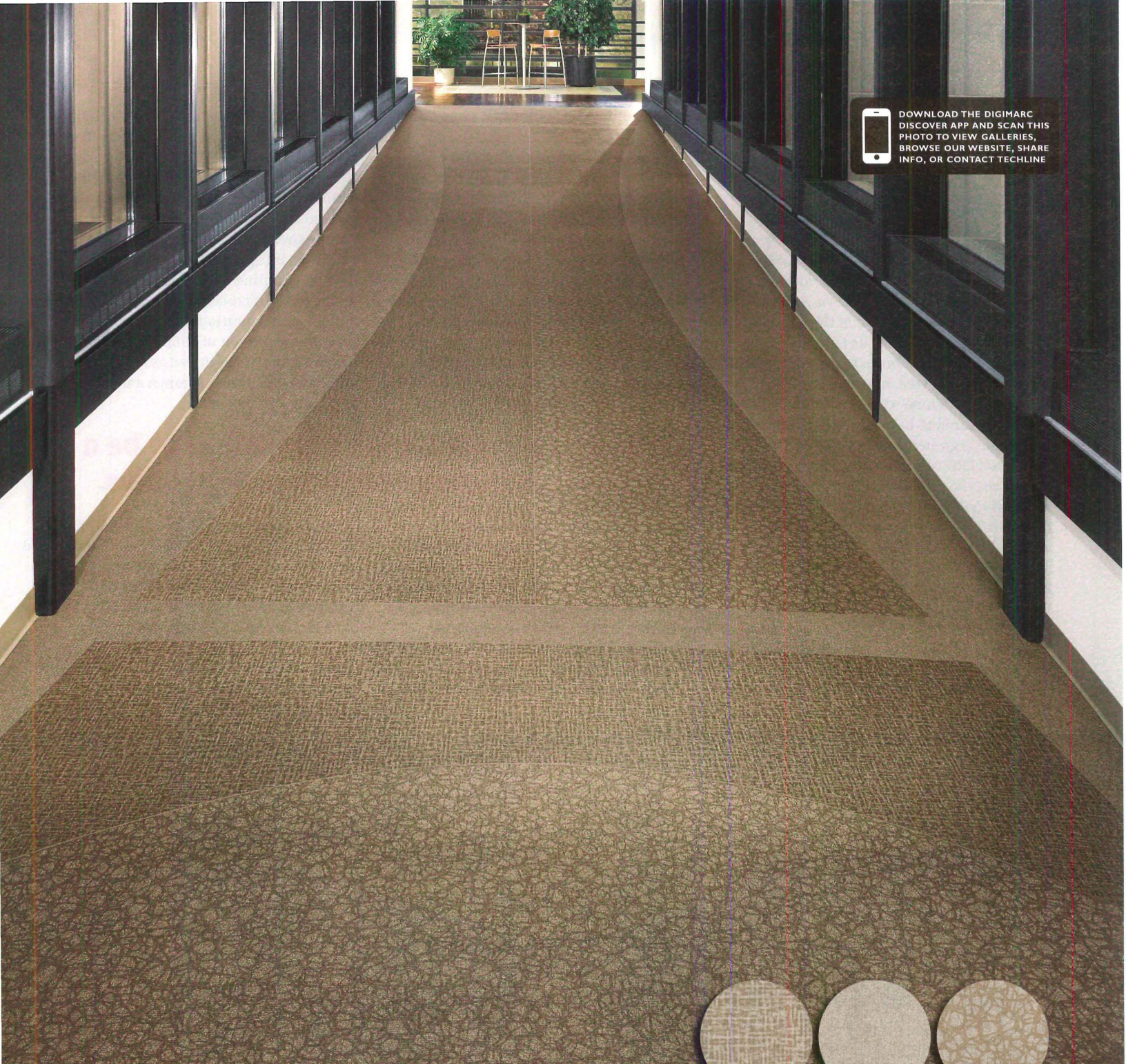


ALL WEATHER  
INSULATED PANELS

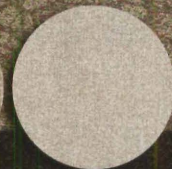
A Vicwest Company



DOWNLOAD THE DIGIMARC DISCOVER APP AND SCAN THIS PHOTO TO VIEW GALLERIES, BROWSE OUR WEBSITE, SHARE INFO, OR CONTACT TECHLINE



AMBIGU  
make believe



AMBIGU  
soothsayer



AMBIGU  
spellbound

# The cure for the common interior

REJUVENATIONS™ is an elegant sheet flooring collection created for facilities that demand high visual impact and lasting performance. The look is inspired by stone, wood, and natural fiber textiles. The clarity and definition are enhanced by five exclusive embosses. And each design in the collection – including Ambigu™, StoneRun™, and TimberLine® – easily coordinates by color and texture using CONTINUUM™ Color + Design. Explore the entire Rejuvenations portfolio today at [armstrong.com/rejuv](http://armstrong.com/rejuv) and discover the many cures for the common interior.

DESIGNED TO DAZZLE PRODUCED TO PERFORM **CREATE WITH CONFIDENCE™**



COMMERCIAL FLOORING

## LEED v4 Approved by USGBC

BY TRISTAN ROBERTS

**LEED VERSION 4** was approved in July by a vote of U.S. Green Building Council (USGBC) members, with 86 percent of the voting body casting ballots in the affirmative. Approval of LEED v4 as the next version of the LEED Rating System clears the way for its launch during the Greenbuild conference in November 2013.

The landmark vote, in which more than 1,200 USGBC member companies cast ballots, hadn't appeared to be a sure thing, with passionate arguments on both sides. Those ready for LEED v4 generally support its higher standards, the evolution of key requirements, and new topics such as a focus on disclosure of ingredients in building products. Those against have worried that changes may be too much, too quickly, and will rob LEED of its momentum while confusing the industry.

The ballot cleared each of several hurdles with ease, however, with 59.4 percent of the consensus body voting, and votes in each of USGBC's three member categories—Producer, User, and General Interest—voting yes by large

margins. Only 10 percent voted no, while 4 percent abstained.

"We are ecstatic about this," says Chrissy Macken, assistant project manager for LEED v4 at USGBC. "This is really phenomenal; it's a great sentiment from our membership that we are moving in the right direction."

Brendan Owens, vice president for LEED technical development at USGBC, says, "That's the history of this organization. The members have always been progressive and willing to move forward." He acknowledged the challenges of the six public-comment periods leading up to the ballot, as well as unresolved concerns about the new system, but says,

**The landmark vote hadn't appeared to be a sure thing, with arguments on both sides.**

"People are ready to get on with it."

Voters had the opportunity to provide comments along with their votes, and Macken says that about 15 percent did so. Even after the thousands of public comments through the course of the LEED v4 development process, the ballot comments were particularly valuable, says Owens.

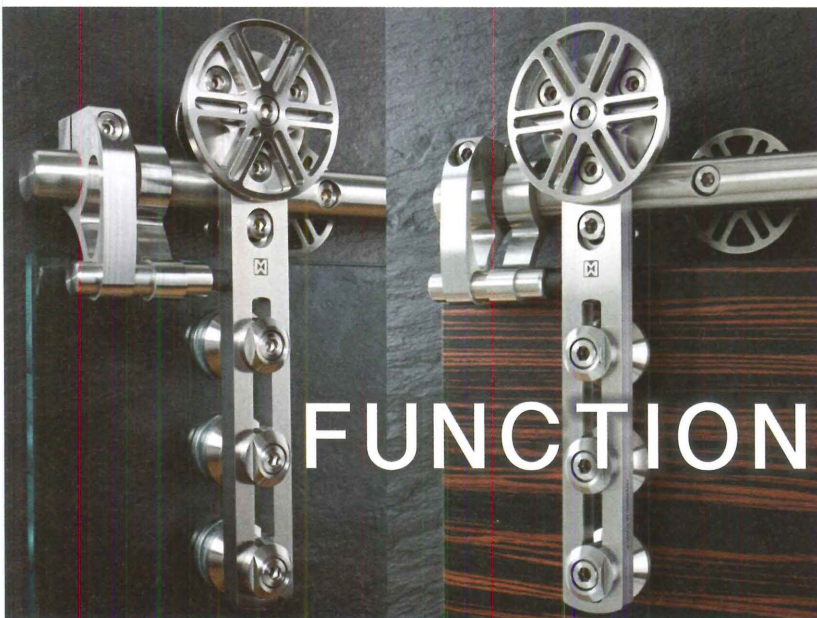
"For someone to say, 'I wanted to vote yes,

but these are the reasons I'm voting no' is very informative," he says. Owens noted that the USGBC staff and LEED Steering Committee were carefully reviewing the comments. "I think we'll find there's quite a few we'll be able to address."

The Greenbuild launch of LEED v4 will be a "holistic, integrated launch," says Owens, with USGBC planning to have LEED Online forms, updated LEED credentialing exams, reference guides, and educational offerings ready. The postponement of LEED v4, which had originally been developed as LEED 2012, is giving USGBC time to launch a more polished product, says Owens.

In response to concerns about the changes in LEED v4 being too abrupt, USGBC announced last year that it would ease into LEED v4, with project teams allowed to register for either LEED v4 or LEED 2009 until June 1, 2015, after which only LEED v4 will remain open. ■

*Tristan Roberts is editorial director of LEEDuser.com, where this story originally appeared.*



FUNCTION & BEAUTY

THE WORLDS FINEST SLIDING DOOR HARDWARE  
AS WELL AS ROLLING LIBRARY LADDERS, HAND CRAFTED IN GERMANY  
AVAILABLE THROUGH SPECIALTY DOORS

**MWE**®  
Edelstahlmanufaktur GmbH  
MADE IN GERMANY

CIRCLE 90

SPECIALTY DOORS 866-815-8151  
WWW.BARNDOORHARDWARE.COM  
WWW.MODERNSTAINLESSLADDERS.COM







**BEGA**

**New LED Area/Roadway Luminaires**

Asymmetrical wide spread light distribution  
with maximum glare control

**BEGA** sets the standard

**BEGA-US**  
[www.bega-us.com](http://www.bega-us.com)  
(805) 684-0533  
No. 149



**CIRCLE 29**

# For Second Year, Gensler on Top

BY ANNA FIXSEN

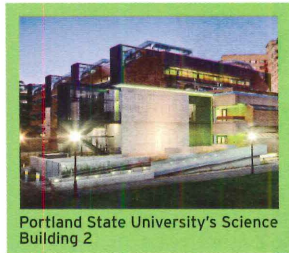
**FOR THE SECOND** consecutive year, Gensler claims the leading position in our Top 300 Architecture Firms list, which ranks U.S. companies according to architectural revenue in the prior year. Gensler reported total revenue of \$807 million, a 5.6 percent increase from 2011. The San Francisco-based firm has 43 offices across the globe and is on track to complete what it says will be the world's second-tallest tower in Shanghai by 2014.

AECOM, a Fortune 500 company that has traditionally jockeyed for first place with Gensler, came in second with reported architectural revenue of \$468.56 million. In 2012, the top 300 companies collectively earned \$10.9 billion, with the top 25 firms bringing in over half the total revenue. While a 10 percent total revenue upsurge in 2011 suggested light at the end of a post-recession tunnel, growth flattened in 2012, with a 1 percent gain in total revenue.

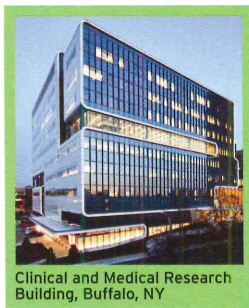
According to the survey, architects made significant gains in overseas earnings: the 2012 data reveal international revenue grew by 8.6 percent to comprise one-fifth of total revenue, whereas domestic revenue decreased by 1 percent. ■

## TOP 25 U.S. ARCHITECTURE FIRMS OF 2013

Companies are ranked by revenue (in **millions of dollars**) for architectural services performed in 2012. These data also appear in *Engineering News-Record's* Top 500 Design Firms list, which, unlike our ranking, also includes engineering-exclusive firms.



Portland State University's Science Building 2



Clinical and Medical Research Building, Buffalo, NY



Henry B. Gonzalez Convention Center, San Antonio

RANK		FIRM, U.S. HEADQUARTERS	TYPE OF FIRM	TOTAL ARCHITECTURAL REVENUE
2013	2012			
1	1	Gensler, San Francisco	A	807.14
2	2	AECOM, Los Angeles	EA	468.56
3	4	CH2M HILL/IDC Architects, Englewood, CO	EAC	387
4	6	Jacobs, Pasadena, CA	AEC	361.34
5	3	Perkins+Will, Chicago	A	360.30
6	5	HDR Architecture, Omaha	EA	325.90
7	8	URS, San Francisco	EAC	320.50
8	7	HOK, St. Louis	AE	282.86
9	9	HKS, Dallas	AE	238.48
10	10	Skidmore, Owings & Merrill, New York City	AE	210.10
11	12	NBBJ, Seattle	A	187.02
12	13	RTKL, Baltimore	EA	187.45
13	14	Kohn Pedersen Fox Associates, New York City	A	153.82
14	16	Perkins Eastman, New York City	A	145
15	11	Cannon Design, Grand Island, NY	AE	133.70
16	18	Callison, Seattle	A	132.12
17	15	Leo A Daly, Omaha	AE	129.89
18	21	Bechtel, San Francisco	EC	115
19	17	Stantec, Irvine, CA	EAL	108.80
20	19	ZGF Architects, Portland, OR	A	107.41
21	23	Ingenium International, Detroit	AE	100.30
22	22	SmithGroupJJR, Detroit	AE	91.50
23	26	DLR Group, Omaha	AE	87.23
24	25	Populous, Kansas City, MO	A	83.90
25	28	Corgan Associates, Dallas	A	79.29

**Key to firm types**

- A** Architect
- EA** Architect Engineer
- AP** Architect Planner
- EAL** Engineer Architect Landscape
- AEC** Architect Engineer Contractor
- (not all combinations listed)

See the entire Top 300 Architecture Firms list at [architecturalrecord.com/news](http://architecturalrecord.com/news).

## noted

### Philadelphia's Laurie Olin Wins a National Medal of Art

Landscape architect Laurie Olin, known for his transformation of Manhattan's Bryant Park and the grounds of the Barnes Foundation, received a National Medal of Art on July 10. He was honored for educating new leaders in his field and shaping iconic spaces around the world.

### Elizabeth Plater-Zyberk Steps Down from Miami Deanship

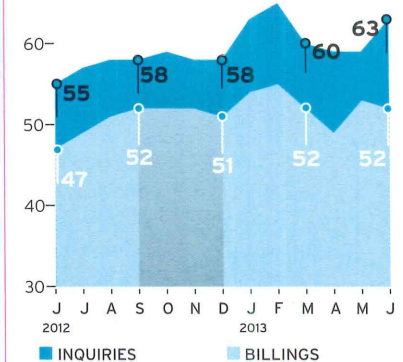
Elizabeth Plater-Zyberk, a major proponent of New Urbanism who cofounded the Congress of New Urbanism in 1992, is stepping down as dean of the University of Miami's School of Architecture, a post she has held since 1995. She will remain on the university's faculty.

### Zaha Hadid Buys Design Museum's Shad Thames Site

In a reported £10 million deal, Zaha Hadid Architects purchased the London Design Museum's Shad Thames building, a former banana warehouse. The architect will use it for her firm's archives when the museum leaves for its new location in West London in 2015.

### The Architects Collaborative's Sally Harkness Dies at 98

Architect, author, and theorist Sally Harkness died in late May at her home in Maine. She was 98. The New England native cofounded The Architects Collaborative, a Cambridge, Massachusetts-based firm, in 1945, along with Walter Gropius and six others. The firm's best-known work is in the Boston area.



### ABI Stays in Growth Mode

The Architecture Billings Index (ABI) stayed in positive territory in June with a score of 51.6 (any score above 50 indicates an increase in billings). And the new-projects-inquiry index made a leap up to 62.6 from May's reading of 59.1. "The construction sector seems to be stabilizing," says AIA chief economist Kermit Baker.

# Hidden in Plain Sight

Clear fire rated solutions that blend seamlessly



Products: SuperLite II-XL 60 in GPX Framing  
Project: CCTC Health Sciences Building (Sumter, SC)  
Architect: LS3P Associates    Glazier: Charlotte Glass



888.653.3333  
[www.safti.com/ar](http://www.safti.com/ar)



# SAFTI FIRST™

FIRE RATED GLAZING SOLUTIONS

TEXAS A&M UNIVERSITY  
LIBERAL ARTS & HUMANITIES BUILDING  
COLLEGE STATION, TX



**Tyvek.**

FLUID APPLIED WB

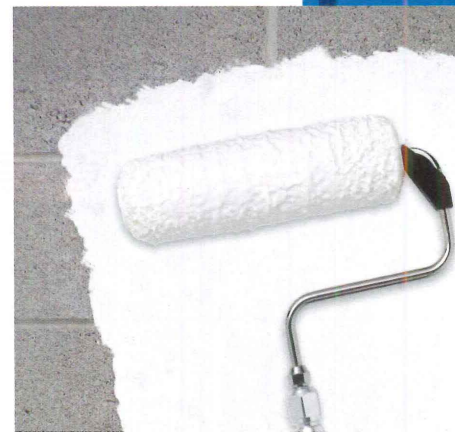
**APPROVED & APPLIED FOR TEXAS A&M.**

Only the most effective air and water barrier could pass the test to be used on the new Liberal Arts & Humanities Building at Texas A&M. The DuPont™ Tyvek® Fluid Applied System scored high for performance and ease of application to earn high marks from the installers, builders and architects.

Learn more at: [www.fluidapplied.tyvek.com/casestudies](http://www.fluidapplied.tyvek.com/casestudies)

Copyright © 2013 DuPont. All rights reserved. The DuPont Oval Logo, DuPont™ and Tyvek® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company or its affiliates. Photo courtesy of BRW Architects.

CIRCLE 66



ARCHITECTURAL  
RECORD

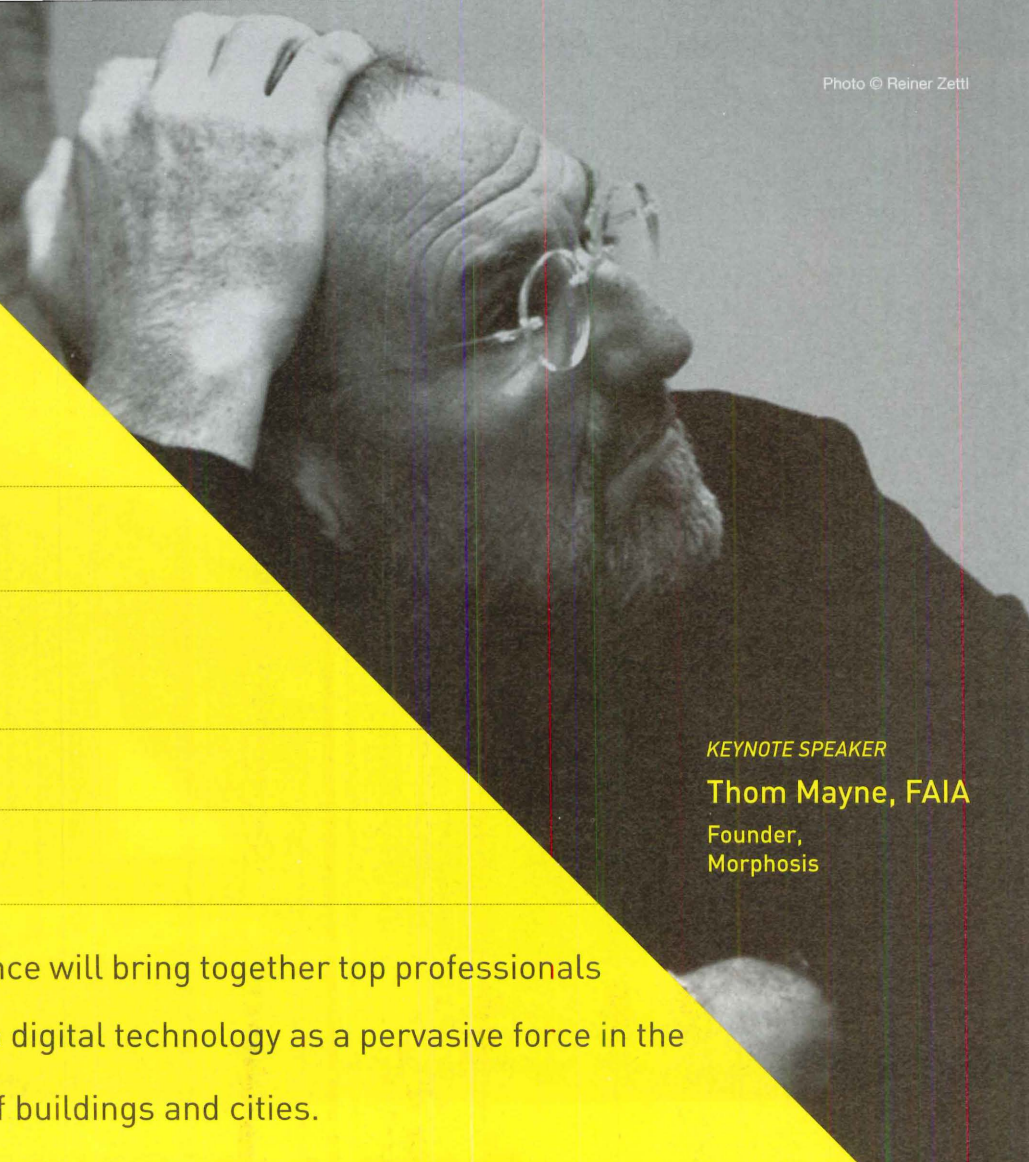
Photo © Reiner Zettl

# INNOVATION CONFERENCE 2013

## SMART CITIES

### DESIGN TECHNOLOGY & URBAN LIFE

OCTOBER 3 | NEW YORK CITY



KEYNOTE SPEAKER  
**Thom Mayne, FAIA**  
Founder,  
Morphosis

This year's Innovation Conference will bring together top professionals to discuss critical issues in digital technology as a pervasive force in the design and planning of buildings and cities.

## REGISTER NOW & SAVE

RECORDINNOVATION.COM | 800.371.3238 | #ARInnov



Key Corporate Sponsor



Product Gallery Exhibitors



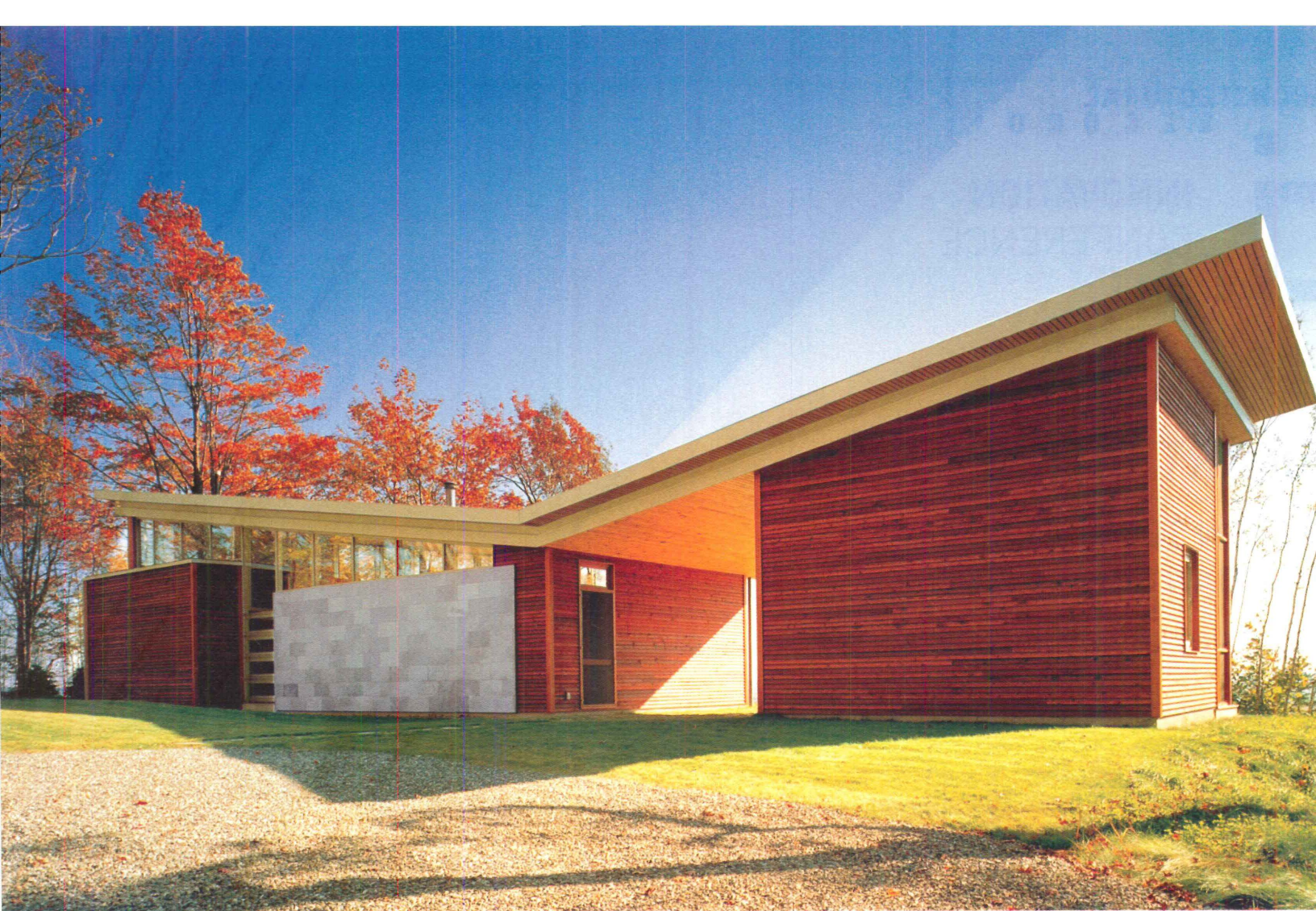
Pre-Conference Dinner Sponsor



Supporting Sponsors



KEYNOTE SPEAKER  
**Liz Diller**  
Founding Partner,  
Diller, Scofidio + Renfro



# REAL CEDAR

BECAUSE NO ONE EVER  
BRAGS ABOUT THEIR HOME  
LOOKING LIKE REAL VINYL.

For natural beauty, subtlety and depth, nothing compares to real western red cedar. Incredibly versatile in its look, Real Cedar also helps keep buildings warm in winter and cool in summer. And its low density means it's an excellent acoustic barrier when used on interior surfaces. To learn more on how this sustainable, renewable and beautiful material can be used on your next project, contact us below.

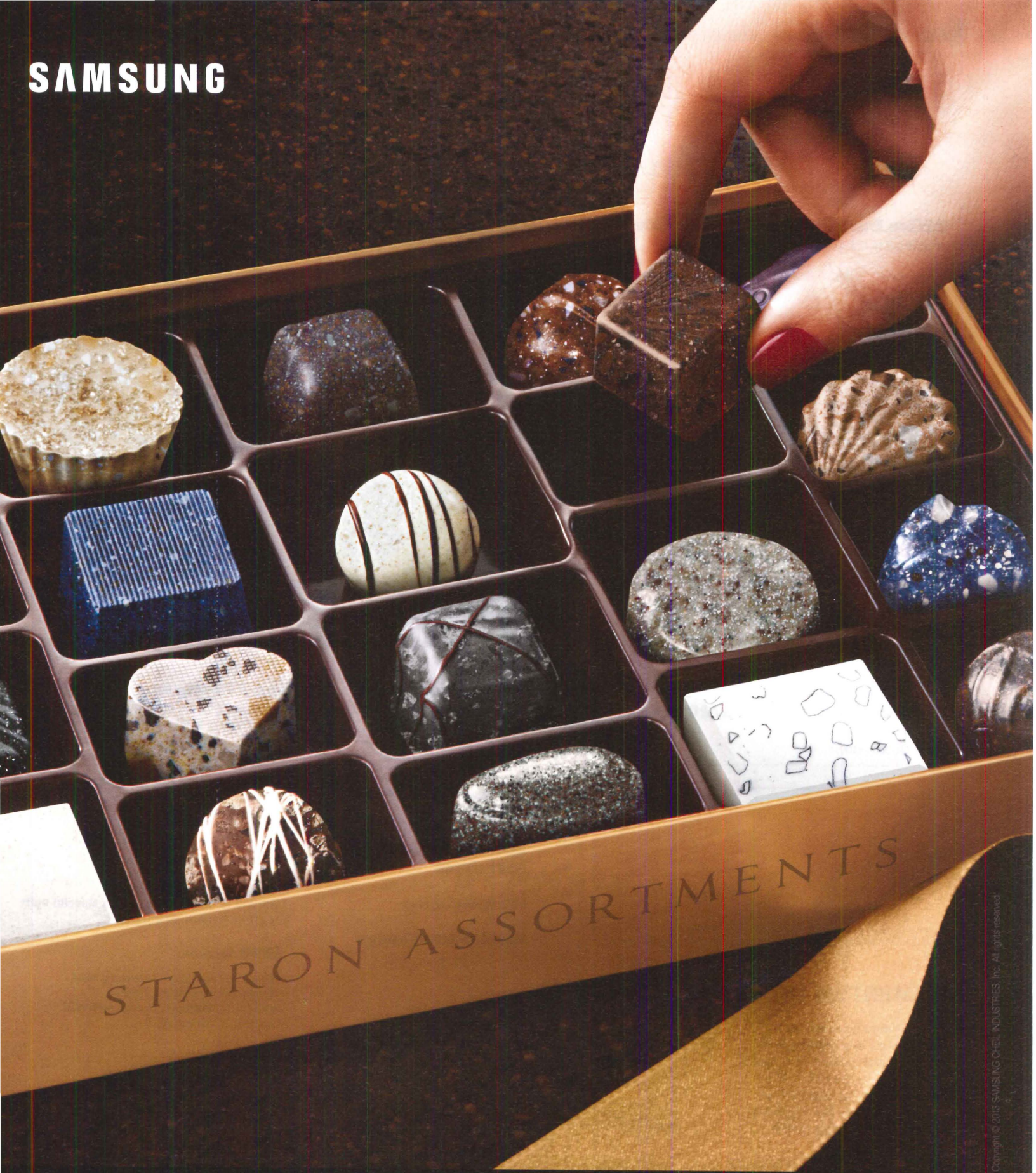


[www.wrcla.org](http://www.wrcla.org)

1 866 778 9096

CIRCLE 27

SAMSUNG



STARON ASSORTMENTS

**Satisfy any craving.**

Indulge with an infinite variety of styles, colors and shapes. [staron.com](http://staron.com)

**staron**<sup>®</sup>  
Solid Surfaces

CIRCLE 38

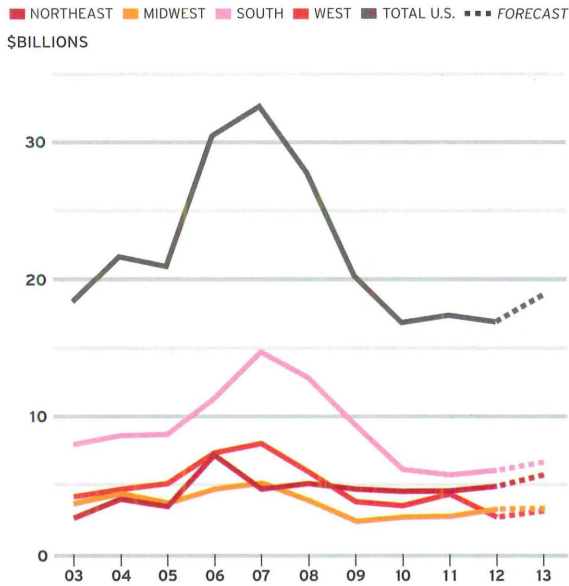
Copyright © 2015 SAMSUNG CHELL INDUSTRIES, INC. All rights reserved.

# MARKET FOCUS

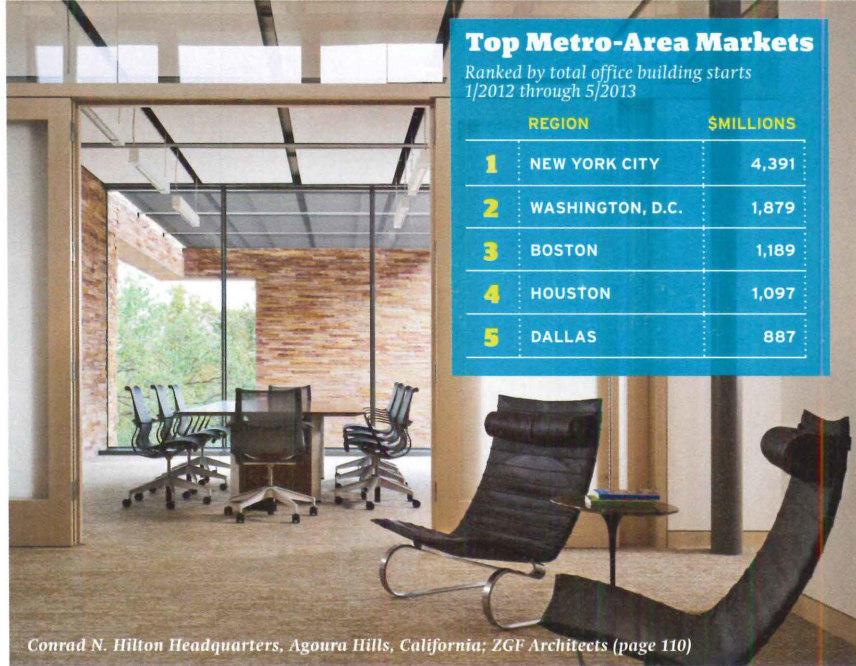
## OFFICE BUILDINGS

### Office Building Starts by Region

In addition to U.S. total and 2013 forecast figures



Office building construction starts have been slower to improve than most commercial property types due to lackluster employment gains. The sector could pick up steam as business confidence rises and vacancy rates fall.



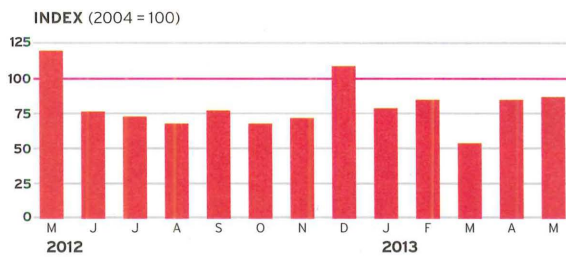
### Top Metro-Area Markets

Ranked by total office building starts 1/2012 through 5/2013

	REGION	\$MILLIONS
1	NEW YORK CITY	4,391
2	WASHINGTON, D.C.	1,879
3	BOSTON	1,189
4	HOUSTON	1,097
5	DALLAS	887

Conrad N. Hilton Headquarters, Agoura Hills, California; ZGF Architects (page 110)

### The Dodge Index for Office Building Construction 5/2012–5/2013



The index is based on seasonally adjusted data for U.S. office building construction starts. The average dollar value of projects in 2004 serves as the index baseline.

### Top 5 Design Firms

Ranked by office building construction starts, 1/2011 through 5/2013

- 1 Gensler
- 2 Skidmore, Owings & Merrill
- 3 Kohn Pedersen Fox Associates
- 4 KlingStubbins
- 5 Architectural Nexus

### Top 5 Projects

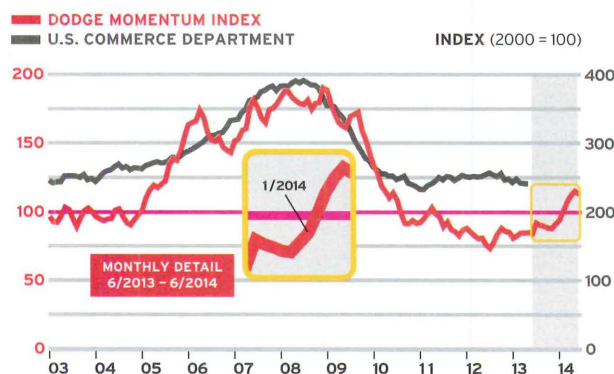
Ranked by office building construction starts 1/2012 through 5/2013

- \$714 MILLION**  
PROJECT: Hudson Yards South Tower  
ARCHITECTS: Kohn Pedersen Fox, Studios, Gensler, Perkins+Will  
LOCATION: New York City
- \$400 MILLION**  
PROJECT: Prudential Newark  
ARCHITECTS: Kohn Pedersen Fox, Mancini Duffy  
LOCATION: Newark, New Jersey
- \$250 MILLION**  
PROJECT: International Monetary Fund Headquarters Renewal Project  
ARCHITECT: Skidmore, Owings & Merrill  
LOCATION: Washington, D.C.
- \$216 MILLION**  
PROJECT: The Tower at PNC Plaza  
ARCHITECT: Gensler  
LOCATION: Pittsburgh
- \$200 MILLION**  
PROJECT: United Nations General Assembly Building Renovation  
ARCHITECTS: EYP, Perkins+Will  
LOCATION: New York City

## MOMENTUM INDEX FALTERS

After six consecutive months of increases, the Momentum Index dropped 1.5% in June, to 113.8. The month before, the index reached 115.5—its highest level since March 2009.

The Dodge Momentum Index is a leading indicator of construction spending. The information is derived from first-issued planning reports in McGraw Hill Construction's Dodge Reports database. The data leads the U.S. Commerce Department's nonresidential spending by a full year. In the graph to the right, the index has been shifted forward 12 months to reflect its relationship with the commerce data.





SAGEGLASS® SHOWN IN ITS CLEAR STATE IN THE HEART SURGERY UNIT AT DESERT REGIONAL MEDICAL CENTER, PALM SPRINGS, CA

© 2013 SAGE Electrochromics, Inc.

## Celebrating 10 years of bringing daylight to life.

In 2003, SAGE installed electronically tintable windows in the heart surgery unit at the Desert Regional Medical Center. SageGlass filled the room with natural light, blocked glare and eliminated the need for shades and blinds.

Ten years and hundreds of projects later, SageGlass continues to enhance the lives of people in hospitals, schools and commercial buildings around the world. We're pleased to celebrate our 10th anniversary of bringing dynamic solar control to life. And we're proud to commemorate our pioneer customer.

See SageGlass in operation at [sageglass.com](http://sageglass.com) or call us at 877-724-3321.

CIRCLE 59

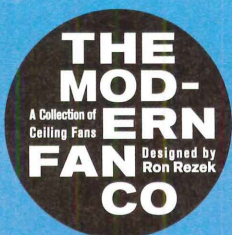
  
**SAGE**  
SAINT-GOBAIN

Glass that tints on demand.

The image features two modern ceiling fans against a vibrant blue background. The background is decorated with a pattern of concentric white circles and vertical white lines, creating a sense of depth and movement. The fan in the foreground is a large, sleek model with a spherical motor housing and three wide, flat blades. The fan in the background is smaller and similar in design. The text 'cool by' is positioned in the upper left, and 'design' is written in large letters in the lower right.

cool by

design

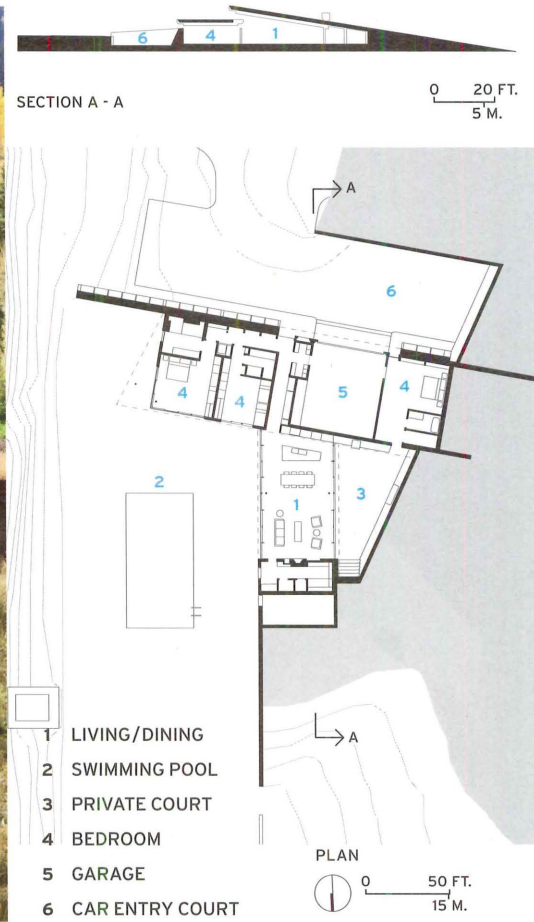


modernfan.com | 888.588.3267

CIRCLE 40

# perspective house of the month

GLUCK+ HAS PARTIALLY BURIED A HOUSE IN COLORADO TO PRESERVE THE VIEW AND SAVE ON ENERGY USE. BY SUZANNE STEPHENS



**HOUSES EMBEDDED** in the earth are becoming a specialty of Gluck+, the New York architect-led design-build firm formerly known as Peter Gluck and Partners. The reasons are compelling—the grass roofs reduce energy loads and their low profile doesn't impinge on the natural landscape. In the case of a 2,850-square-foot guesthouse in the Colorado Rocky Mountains, the clients, for whom Gluck had designed a main house on the site in 2004, wanted a separate structure to be located on property to the south between a creek and an access road. But they didn't want it to interfere with the splendid mountain vista they had from the main house. "So many views are destroyed by plunking buildings on top of the land," says Gluck.

The architects configured the guesthouse as two rectilinear steel-framed bars that intersect; the primary one contains open living and dining spaces, with a roof gradually rising to the south at a 20-degree angle. The volume



seems to collide with and lift over a rectilinear structure running east-west on a diagonal, which contains three bedrooms and the garage. A wall of solar panels on the south elevation of the bedroom wing supplies heat for the house and swimming pool.

The living and dining areas, anchored by a bluestone fireplace wall on the north, open out through glazed doors

to the pool on the east and a private, sunken, triangular courtyard on the west. Cor-Ten clads the courtyard's slanted retaining wall, into which an outdoor fireplace is carved. Just beneath the Cor-Ten fascia of the house's roofs, clerestories frame panoramic views of the mountains. "It's become more than a guesthouse," says Gluck. "It's a communal space for the family." ■

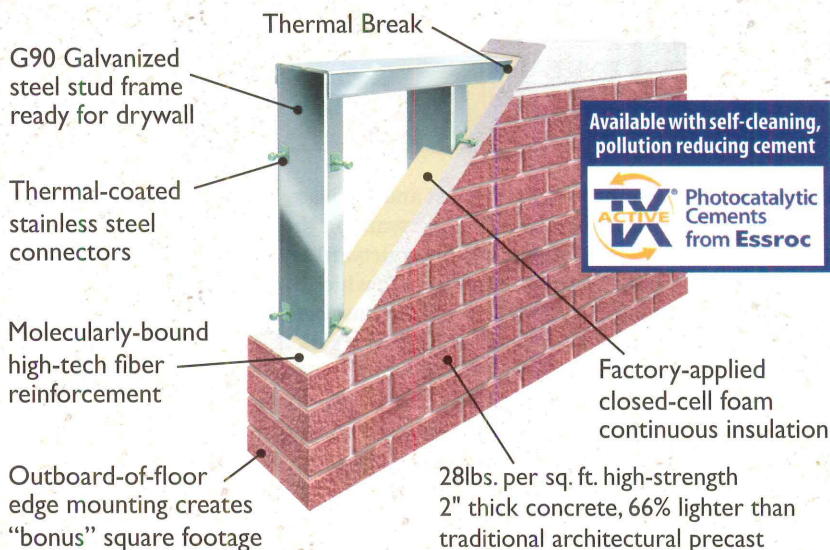
From the main house (not shown), the owners see mostly planted roofs and the white oak rain-screen for the bedrooms (top). A terrazzo floor of quartz chips and black mortar (above) unites living and dining areas with the terraces outside.

# NEW! ULTRA HI-PERFORMANCE SLENDERWALL®

Lightweight Architectural Precast Concrete/Steel Stud Envelope Panels

- 226 MPH Wind-Load Tested, 130 PSF
- H<sub>2</sub>O<sub>2</sub> - Pressure Equalized Caulk Joint Rain Screen & Leak Detection System
- Factory-Applied Closed-Cell Foam Insulation
- Factory-Installed Windows

**BioInnovation Center**  
New Orleans, LA  
Architects:  
**Eskew+Dumez+Ripple, NBBJ**  
Precaster: Jackson Precast



## Additional SlenderWall Benefits:

- One-Call Building Envelope Responsibility
- No Moisture Intrusion Guarantee
- IECC Energy Code Compliant
- Lower Structural Costs • Bonus Square Footage
- Faster Installation • Fewer On-Site Trades

[www.SlenderWall.com](http://www.SlenderWall.com) • 1.800.547.404



SLENDERWALL® is a product of Easi-Set® Worldwide, a licensor of precast products, with 68 licensed producers in 41 states and 10 countries. A subsidiary of publicly traded Smith-Midland, Delaware [SMID] ©2013

# Rumble in the Urban Jungle

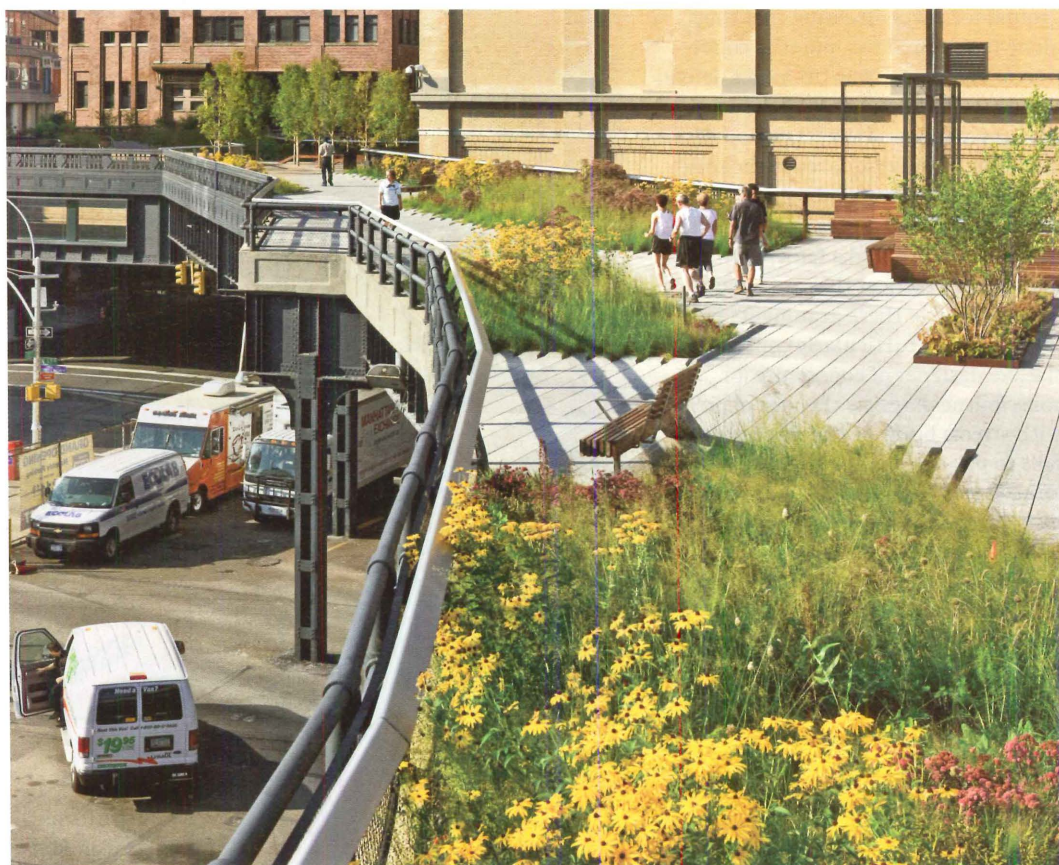
A recent book by New Urbanist authors revives an old battle with Landscape Urbanism.

BY MICHAEL SORKIN

IT'S HARD to keep up with the musical deck chairs in the disciplines these days. The boundaries of architecture, city planning, urban design, landscape architecture, sustainability, computation, and other fields are shifting like crazy, and one result is endless hybridization—green urbanism begets landscape urbanism, which begets ecological urbanism, which begets agrarian urbanism—each “ism” claiming to have gotten things in just the right balance. While this discussion of the possible weighting and bounding of design's expanded field does keep the juices flowing, it also maintains the fiction that there are still three fixed territories—buildings, cities, and landscapes—that must constantly negotiate their alignment.

This has several consequences. The first is that the theoretical autonomy of the individual disciplines remains fundamentally unfringed. The second is that new forms of a much-needed transdisciplinary practice are stymied by rigid intellectual bureaucracy. And finally, the opportunities for turf warfare are multiplied. A tiny skirmish has just been unleashed by the New Urbanists in the form of a book edited by Andres Duany and Emily Talen—*Landscape Urbanism and its Discontents: Dissimulating the Sustainable City*—which singles out that inoffensive school of thought for withering opprobrium.

But why? And why now? In their preface, the editors wistfully suggest that this was a book that should have been compiled 15 years ago. They're right: the project is pervaded by the sense that the nag being flogged long since passed through the glue factory. Their critique is antique: Landscape Urbanism is just the continuation of CIAM and its misguided principles by other means. The collection thus winds up as another—and completely unnecessary—iteration of that beloved chestnut, New Urbanism vs. Modernism. The current screed is obsessively focused yet again on what is seen as the leadership role in urbanism of a powerful and invidious cabal at the



Harvard Graduate School of Design (GSD), an effete elite that just doesn't get it. This weirdly fetishistic animus has gnawed at Duany's craw for years. What's up with that? Give it a rest!

The anti-intellectual schtick—that those academics are fey and fashionable compromisers without real values—plays repeatedly throughout the book. There's an especially puerile riff by James Howard Kunstler, which reaches the startling conclusion that Harvard is a bulwark of the status quo! Talen bemoans the Landscape Urbanists for their reversion to misconstructions of post-structuralist, Marxist, and ecological discourses as gauzy camouflage for their designs for world domination and weird, uninhabitable cities. That academics would speak in the *lingua franca* of their own community is hardly more surprising than the New Urbanists' adopting the language of developers. Their book is, indeed, full of hard-nosed whinging about the

bottom line, which, in the end, is the only substantial riposte offered to actual “Landscape Urbanist” projects. Duany particularly reviles the High Line, which he thinks would have been better—and cheaper—with Adirondack chairs from Home Depot instead of all that “design.”

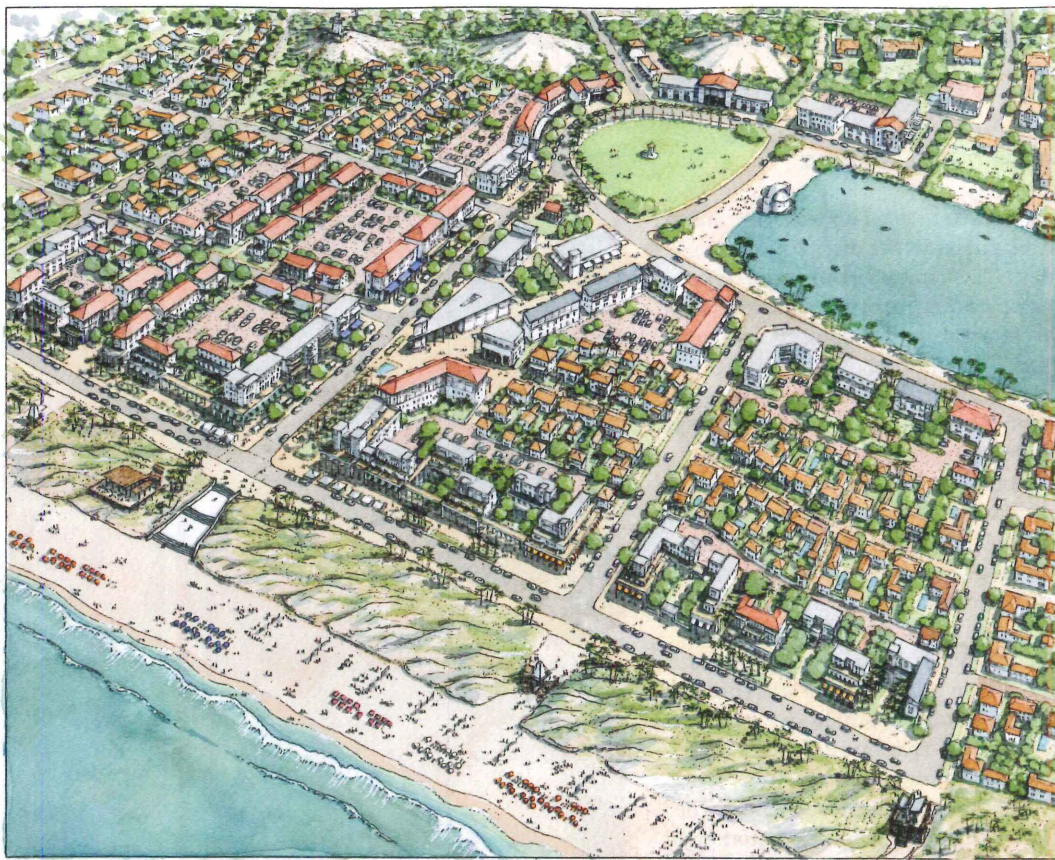
Because there's no real case, there are more straw men in this book than at a casting call for *The Wizard of Oz*. The most cited include GSD professor Charles Waldheim, landscape architects James Corner and the late Ian McHarg, Frederick Law Olmsted, the University of Pennsylvania, and various fellow travelers in the promotion of . . . what exactly? The foundational offense is clearly Waldheim's statement in his 2006 book *The Landscape Urbanism Reader* that “Landscape Urbanism describes a disciplinary realignment currently under way in which landscape replaces architecture as the basic building block of contemporary urban-

The High Line in New York, designed by James Corner Field Operations with Diller Scofidio + Renfro, is criticized by Andres Duany for being too expensive and over-designed.

ism.” This is simply tendentious, another way of saying, “It’s the environment, stupid.” But the Newbies rise to the bait. Let’s get ready to rumble!

They’ve been preparing the battleground for years, insisting that they alone have found the one true condition of equipoise. New Urbanists defend their superior wisdom in three areas: the preferability of the “traditional” city of streets and squares to the universally discredited Corbusian model, a claim to special access to knowledge of sustainability, and a faux-populist derision of practices that are “avant-garde.” None of these arguments is interesting or particularly controversial. No designer of conscience (or consciousness) resists the idea of cities with streets built for people on foot or fails to pay at least lip service to a sustainable—even equitable—environment. Insisting otherwise is just disingenuous.

But there is something interesting going on in thinking about the design of cities, informed by questions of sea-level rise and climate change, massive pollution of air, earth, and water, and a broad realignment of public



## The New Urbanists have been battling for years, insisting they have found the one true condition of equipoise.

consciousness about the limited bearing capacity of the earth. Like virtually everyone in the disciplines, both Landscape Urbanists and New Urbanists recognize this and have produced projects that address it. It’s the war over formulae that’s a waste. The New Urbanists continue to dine out on the enervated notion of a regulating “transect,” a gradated wash of conditions from rural to urban, derived from Patrick Geddes, which they serve up with all the nuance of Creationism.

But “more or less urban” is only one of many ways in which the city can be discussed and the idealist structure of the transect has been thoroughly unpacked by many writers. One key deficit of the New Urbanists’ model is that their picturesque conceit is both nonlinear on the ground and disrupted by exceptions in the form of special districts. Landscape Urbanists, though, are excited by such zones of difference,

which include “traditional” parks, as well as the “dross-scape” of rail yards, industrial zones, edge-city squalor, and other areas not easily assimilated to the historic order of streets and squares. The recognition that such territories constitute a huge component of the built environment locates an urgent question for design.

While many of the usual New Urbanist suspects contribute to the book, there’s a clear divide among them between the unabashed assailants and those with a more conciliatory position, who won’t be provoked into a death match. It’s entertaining to see how many of the book’s essayists tiptoe away from the bluster. Duany wants the High Line and Freshkills Park in New York and Downsview Park in Toronto to be seen as pretentious, but his cohort is unconvinced. Dan Solomon wisely finds these projects not just praiseworthy as places but understands they are simply parks,

not “urbanisms.” Likewise, Jason Brody sees the valuable contribution of an evolving set of landscape practices, all of which are engaged in infusing city-making with our increased understanding of the planetary crisis.

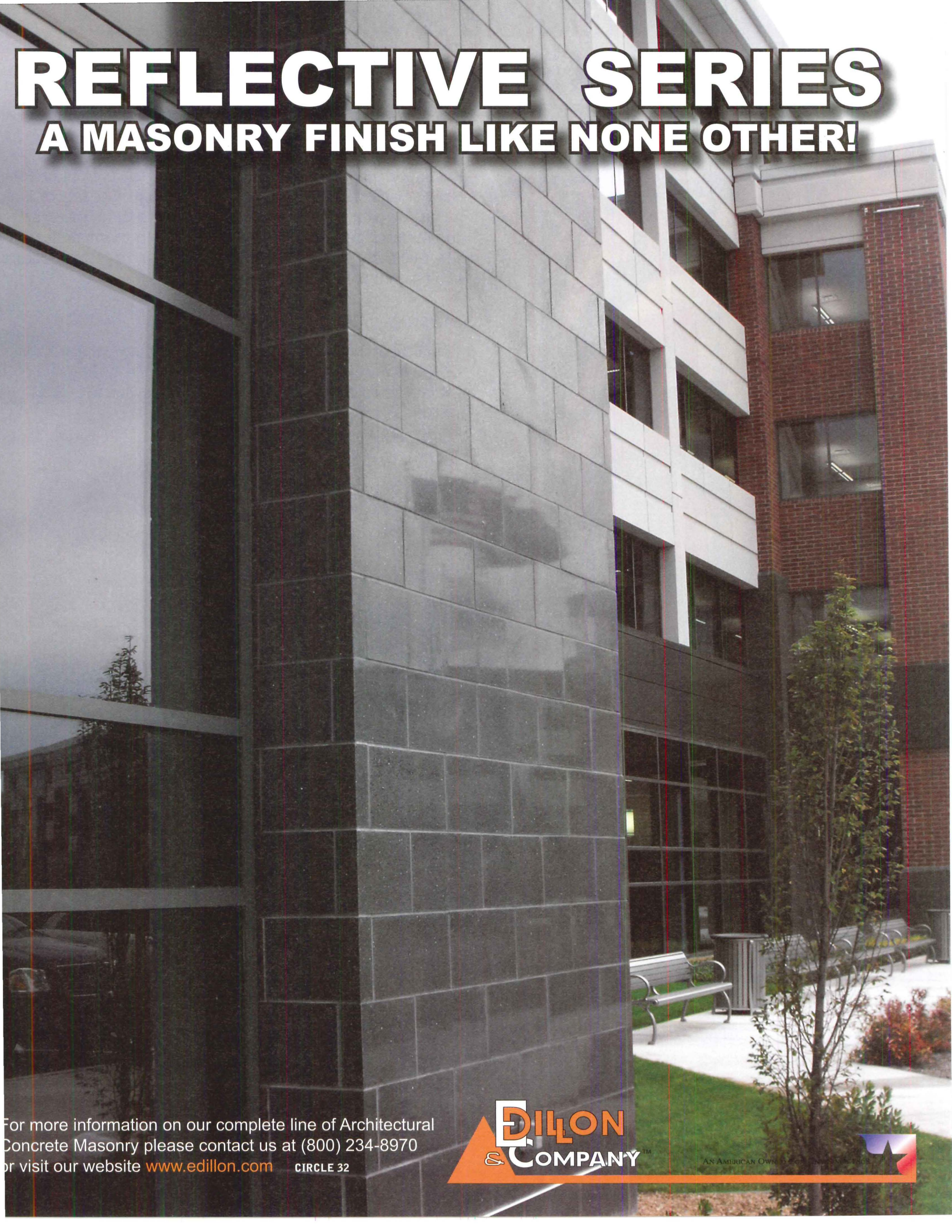
If there’s a bright spot in the schools and the professions nowadays, it rests in landscape architecture’s ability to introduce the urgency of ecological analysis into design’s atmosphere and to pioneer forms of representation and discourse that freshly depict territories and phenomena from microclimates to regions. While McHarg may have gotten it wrong in the end, with his overly anthropocentric schema, the ecological insights in his mappings were seminal. The beautiful work done by James Corner and others in bridging the gap between datascares and landscapes has opened new approaches to planning and building, and been critical in establishing new forms of analysis. We all want to be the mother of the arts, but why can’t we just get along? ■

*Contributing editor Michael Sorkin runs the graduate urban design program at CCNY.*

Duany Plater-Zyberk & Company, one of the leading firms in the New Urbanism movement, designed a master plan in 2012 for Costa Verbená in Brazil. The designers say the plan respects the site’s topography and its sensitive ecosystems, while applying a traditional street grid.

# REFLECTIVE SERIES

A MASONRY FINISH LIKE NONE OTHER!



For more information on our complete line of Architectural Concrete Masonry please contact us at (800) 234-8970 or visit our website [www.edillon.com](http://www.edillon.com) CIRCLE 32



AN AMERICAN OWNED COMPANY



# Blending history with Creative Solutions...

## Challenge...

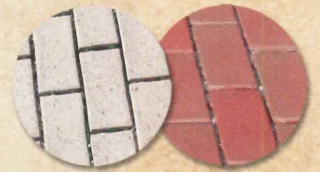
Water pooled up into ankle-deep mud directly in front of Kenan Hall At Flagler College each time it would rain. The City of St. Augustine didn't allow any new tie-ins to its storm sewer system and required all new construction to keep its storm drainage on site. Secondly, the design had to tie in with the historic nature of its surroundings.

## Solution...

Pine Hall Brick StormPave® permeable clay pavers provide an effective way to drain away stormwater while at the same time, picking up colors of the nearby building - in line with local historic-district guidelines.

The 5,300-square-foot space has become a popular gathering spot for students.

The plaza is paved in gray as the primary color with autumn as the accent.



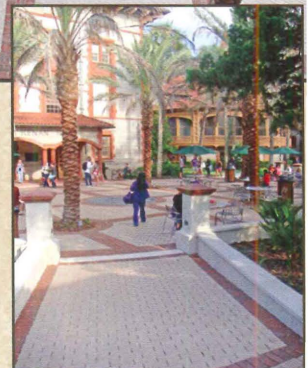
*Permeable Clay Pavers...Beautiful and Sustainable*



The Plaza at Kenan Hall/Flagler College in St. Augustine, Florida  
Landscape Architect: Sharon Fowler of Hauber Fowler & Associates  
Builder: A.D. Davis Construction  
Mason Contractor: Paverscape Inc.  
Distributor: Oldcastle Coastal



Winner of the 2011 BIA Silver Award  
Paving and Landscape Architecture



**Pine Hall Brick**  
earth friendly...naturally green



Specifying **FIRESIST** fabric in the early stages of development has never been an easier decision.

**Visualization**  
Drawings are for visual representation only.



FIRESIST IS A TRADEMARK OF GLEN RAVEN, INC.

**FireSist Fabric Certifications**

California State Fire Marshal Title 19  
NFPA 701-99, test method II  
CPAI-84; Tent walls and roof  
FMVSS 302  
FAA 25.853 (Aviation)  
UFAC Upholstered Furniture, Class 1

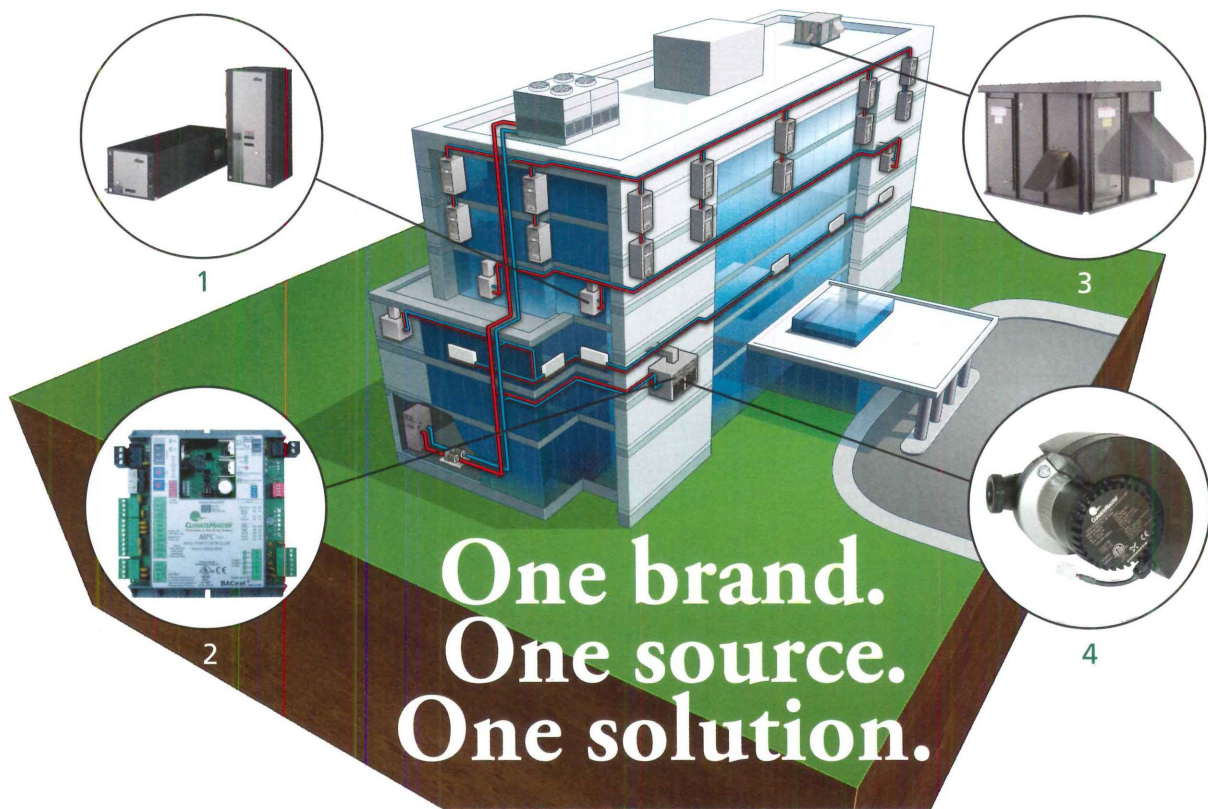
Specify FIRESIST® for an up-to-code fire-resistant awning fabric that looks as good as it performs. Improved strength, colorfastness and weather-resistance make fabrication with FIRESIST easier than ever.

There has never been a smarter decision when it comes to quality, assurance and safety. For more information, contact Glen Raven customer service at 336.221.2211 or visit [www.glenraven.com/firesist](http://www.glenraven.com/firesist).



Scan the qr code with your mobile device.





ClimateMaster® delivers complete water-source or geothermal heating and cooling solutions for every segment of the commercial construction market. Because we can provide all the components required for most applications, you are assured a perfectly matched, perfectly controlled, perfectly installed system.

**1. All the Heating and Cooling Required.**

A ClimateMaster® system will provide both heating and cooling to the building, changing modes based on the building load. Heat can even be transferred from one part of the building to another. A single control system will manage all these functions. You'll need less equipment and have a completely integrated system.

**2. Multi-Protocol DDC Controls.**

Factory-mounted Direct Digital Controls lower installation costs by reducing problematic on-site wiring. Implement a variety of building automation protocols through a PC, and read fault codes from any remote location.

**3. Energy Recovery Ventilator.**

Improved IAQ is achieved with an ERV, coupling outdoor air treatment directly to space conditioning equipment. Stand-alone and mated rooftop configurations are available to meet your design requirements.

**4. vFlow™ Variable Water Flow.**

vFlow™ variable water flow technology represents a major advance in system performance. vFlow™ not only builds the major water circulation components into the unit for a clean installation, it also intelligently varies the water flow to minimize energy consumption and improve system reliability.

Get the entire system story by calling 1-877-436-6263 to connect with a ClimateMaster® Commercial Representative.



**CLIMATEMASTER®**  
 Water-Source Heat Pump Systems

To learn about career opportunities with ClimateMaster®, visit [climatemaster.com](http://climatemaster.com) today.

A company of LSB Industries, Inc. - NYSE symbol LXU

ClimateMaster AIA  
 Courses Now Available  
[climatemaster.com/aia](http://climatemaster.com/aia)



ClimateMaster® is a proud supporter of the Geothermal Exchange Organization - GEO. For more information visit [geoexchange.org](http://geoexchange.org)



# Bright Lights, Big Cities

**A Country of Cities: A Manifesto for an Urban America**, by Vishaan Chakrabarti. *Metropolis Books*, 2013, 252 pages, \$30.

Reviewed by Clifford A. Pearson

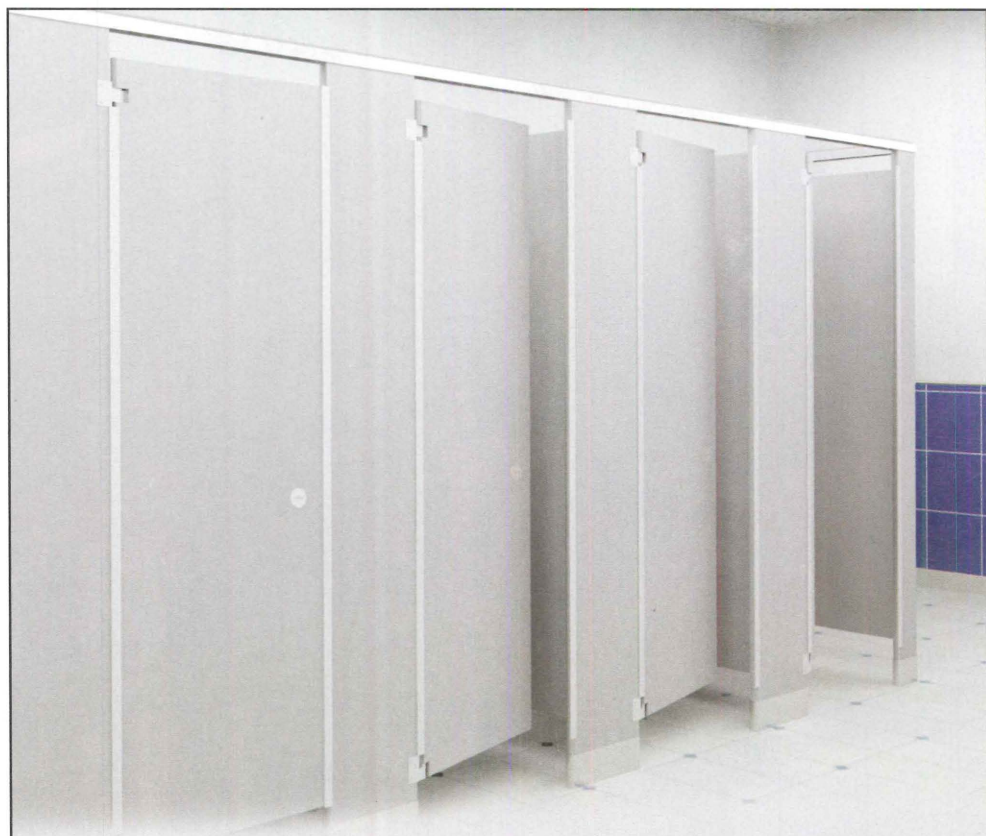
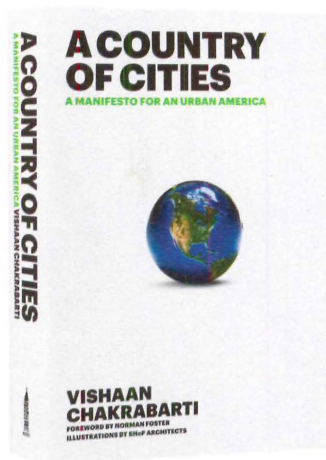
**ARCHITECT, PLANNER**, and one-time developer Vishaan Chakrabarti asks us to imagine a United States in which government invests in high-speed trains linking high-density cities and does not subsidize suburban sprawl. He admits this sounds a bit naive in an era of political paralysis and at a time when the middle class and wealthy—no matter their political affiliation—enjoy perks like the mortgage-interest deduction that help perpetuate the status quo. But he builds his argument with straightforward prose and lots of easy-to-read charts and graphs.

Hyper-dense cities are more efficient in their use of limited resources such as energy, money, and time, he says. They also offer a better quality of living by reducing commuting times, putting people closer to cultural attractions, and freeing up land for parks and outdoor recreation. "A host of scholars from different points along the political spectrum, including economists, environmentalists, and public-health experts, have made a variety of findings supporting the central premise that American cities offer a cure for many of our most urgent problems," he writes.

What's holding us back from solving these problems, argues Chakrabarti, is a set of attitudes, including an anti-urban bias rooted in Jeffersonian ideals and a fear of big development taught at even the best architecture schools. The author's experience as a director at the New York City Planning Commission, a partner in the architecture firm SHoP, and a former executive with the big developer Related Companies gives him insight on the situation we face. But it also comes with some baggage, raising questions about his impartiality, especially when he uses projects by SHoP and Related to illustrate his points.

He tackles the issue of affordability by proposing that we phase out the mortgage interest deduction and use part of that money to help subsidize low-income housing units in mixed-income projects. And he argues that employing prefabrication in high-rise construction will reduce the cost of urban housing. He admits that the book's scope does not include all parts of the country. "Instead of attempting to retool failing

suburbs, and while remaining respectful of small towns across this great nation, I focus . . . almost entirely on . . . our big cities," he says. Such an approach helps him map out a forceful agenda for urban development—and perhaps lays the groundwork for another career switch, into New York City politics. But it left me wondering what he thinks we should do with our suburbs, many of which are experiencing high rates of foreclosure and increasing levels of poverty. I guess that's another book. In the meanwhile, this one delivers a clarion call to build our cities bigger, taller, and better. ■



ULTIMATE PRIVACY™

**GLOBAL** PARTITIONS

globalpartitions.com



PARTITIONS ACCESSORIES LOCKERS

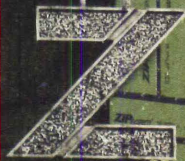
Single Source Solution

# ZIP it tight.™

Protect your projects from the elements with ZIP System® sheathing & tape. Our all-in-one structural panels, with a built-in water resistive barrier, combine with our specially designed ZIP System™ tape to help guard your buildings from moisture damage during and after construction. This continuous moisture and air barrier also offers superior drainage and permeance to keep structures dry and improves energy efficiency by significantly reducing air leakage. And panels go up faster and easier to form a stronger, drier seal—creating the ideal building envelope.

ZIP up your next project at [ZIPsystem.com/record13](http://ZIPsystem.com/record13) or visit our Architect Library at [HuberArchitectLibrary.com](http://HuberArchitectLibrary.com) CIRCLE 73

**ZIPsystem**™  
SHEATHING & TAPE



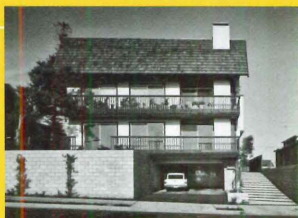
ARCHITECTURAL  
RECORD

# Guess the Architect Contest

**ENTER NOW!** A new monthly contest from the editors of RECORD asks you to guess the architect for a building of historical importance.



**CLUE:** ALTHOUGH NOT TRAINED AS AN ARCHITECT, THE DESIGNER OF THIS BOILER HOUSE AND RELATED BUILDINGS FOR A EUROPEAN COMPLEX CAUGHT THE SPIRIT OF THE AGE.



The answer to the July issue's Guess the Architect is **FRANK GEHRY**, who designed the Hillcrest Apartments in Santa Monica in 1961–62. For more details, including the winner, go to [archrecord.com](http://archrecord.com).

By entering, you have a chance to win a video camera.  
See the complete rules and entry form online at [archrecord.com](http://archrecord.com).

# IMPROVING THE AIR WE BREATHE



## DISCOVER THE NEW SCIENCE OF INDOOR AIR QUALITY

As people encounter more chemicals at home, at school and at work, it is critical to understand potential hazards and minimize adverse health effects. Through New Science, UL is working to mitigate emerging indoor air quality safety risks and safeguard innovation.

**JOURNALS. VIDEOS. INFOGRAPHICS. TRENDS.**  
**VISIT [UL.COM/NEWSCIENCE](http://UL.COM/NEWSCIENCE)**

UL and the UL logo are trademarks of UL LLC © 2013



Open Up Your Space and Invite the Outdoors In!

MANUFACTURED BY  
**US ALUMINUM**

# MW MONTEREY™

Bi-Folding Glass Wall System  
INTERIOR AND EXTERIOR APPLICATIONS

**NEW!**



**COMMERCIAL APPLICATIONS**

Hotels | Resorts | Restaurants | Sports Venues | Malls | Casinos  
Spas | Banquet Halls | Banks | Offices | Wineries | Airports

**RESIDENTIAL APPLICATIONS:**

Patios | Balconies | Exercise Rooms | Sunrooms

The Monterey System allows you to enjoy the beauty of the outdoors while providing resistance to undesirable weather conditions. Countless options are available to create large living or functional spaces that seamlessly transition outdoors to indoors.



**CRL**  
**US ALUMINUM**

## C.R. LAURENCE COMPANY

Worldwide Manufacturer and Supplier  
crlaurence.com | usalum.com | crl-arch.com

Phone: (800) 421-6144 ext. 7700 | Fax: (800) 587-7501

Glazing, Architectural, Railing, Construction, Industrial, and Automotive Supplies



**NEW! CRL14D DOORS**

Showcasing the Largest Selection of Door Systems in One Catalog!

**NEW! DC14 DOOR CONTROLS**

Features our complete line of door control products. Order, View or Download both Catalogs at [crlaurence.com](http://crlaurence.com).

CIRCLE 15

JAB372-7/13



# LP Icon mini post top

**Design:** Mads Odgård. LP ICON MINI POST TOP provides mainly direct downward illumination. In the opal version the shade is lit up from within and creates a soft diffuse upwards light. In the basic version the shade is opaque. Depending on the choice of reflector, the downward lighting characteristics will vary. The reflector types have been designed in three variations to provide either asymmetrical or symmetrical distributions of light. LED version coming soon.



**louis  
poulsen**

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

CIRCLE 22



# The Great Outdoors

These recent furnishings, materials, and accessories inject a dose of design and color into parks, plazas, or patios.

By Sheila Kim



### Scoop Planters

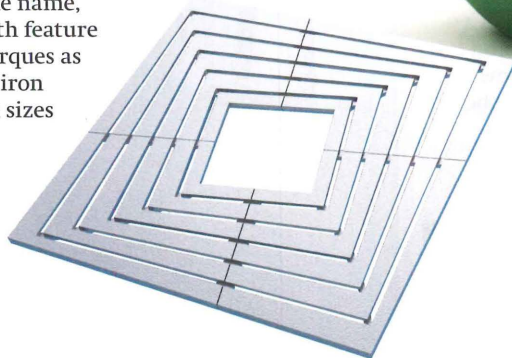
Created by Denmark-based Julie Storm of Storm Design, Scoop is a tapered, large-scale planter composed of 6-mm-thick rotomolded polyethylene. Its two parts include a donut-shaped top and a base with an integrated reservoir for self-watering. Usable indoors or out, the container measures 38" in diameter x 25" high, can be secured to the ground, and comes in red, lime, or orange.

[magnusongroup.com](http://magnusongroup.com) CIRCLE 206

### Vertigo Tree Grate

Referring to the dizzying sensation and the Alfred Hitchcock film of the same name, Vertigo tree grates from Ironsmith feature a concentric square motif that torques as it radiates outward. Made of cast iron or aluminum, the grate comes in sizes ranging from 48"-to-60" square, with tree openings starting at 14" square. Ironsmith also offers the design in a drain-grate version.

[ironsmith.cc](http://ironsmith.cc) CIRCLE 205



### Woodays Porcelain Tile

Tagina's Woodays porcelain tile offers high performance for both interior and exterior use, and mimics the look of wood grain—including oak, chestnut, and larch—making it an ideal alternative for terrace cladding. The 20-mm-thick tiles have a ribbed surface that creates visual interest and provides slip resistance, and can be laid onto gravel, sand, grass, or a paving system without any adhesives.

[tagina.it](http://tagina.it) CIRCLE 207



### The Cube Outdoor Fireplace

At once simple and sculptural, the pure geometric form of the Cube, from Spark Modern Fires, offers an ideal fire pit for minimalist outdoor settings—or serves as a secondary table surface when not in use. Its stainless-steel body, also specifiable in red, measures 34½" cubed with the lid on (28½" high with the lid removed), and the fire component uses natural or propane gas.

[sparkfires.com](http://sparkfires.com) CIRCLE 209



### Ara Bench

Slatted park benches take on a whole new look in the Ara outdoor series, designed by Cabanes for Jane Hamley Wells. Site designers can mix and match curved and straight segments to create serpentine or simple compositions—each spanning 77" to 80" in length—with or without backrests. The benches are composed of galvanized steel frames and polyethylene or tropical-wood slats in cobalt blue, fir green, anthracite, black, beige, bronze, pewter, silver, white, ruby red, or stone gray.

[janehamleywells.com](http://janehamleywells.com) CIRCLE 208



### Romeo & Juliet Bench

Romeo & Juliet from Janus et Cie is a perfect pairing that combines a slatted linear bench with two integrated planters doubling as a base. The result is a relaxing spot to perch amidst greenery even within a concrete plaza. The bench is constructed from galvanized steel and iroko wood, while the planters are composed of polyester and low-density polyethylene. Romeo & Juliet measures 10' 6" long and can be ganged together to form longer continuous benches.

[janusetcie.com](http://janusetcie.com) CIRCLE 210

### George Bollard Light

Belgian architectural lighting company Modular Lighting Instruments introduces George, a path, garden, or terrace light defined by a 23½"-tall cylindrical body that appears to be carved out at its center. Its LED or halogen light source is nestled within the top, resulting in a soft, indirect light that washes the central hollow. The interior is offered in off-white, yellow, turquoise blue, or red, within black, anthracite, or brown.

[supermodular.com](http://supermodular.com) CIRCLE 214



### Helios Heated Lounge

Launched just this year, design and fabrication studio Galanter & Jones is already generating attention for its modern heated outdoor furniture. Its recent creation, Helios, is a gently curved lounge that comfortably seats four and is made of ¾"-thick cast stone on a powder-coated tubular steel base. It features an integrated variable control system for adjusting the temperature of its attached heating cables. Each lounge is made to order by hand and is available in a selection of five seat colors and four base ones. [galanterandjones.com](http://galanterandjones.com) CIRCLE 211



### Summit Bike Rack

Its unornamented design makes Summit Bike Rack a functional piece that can meld with any outdoor or curbside setting. Formed of 1½"-diameter stainless-steel tubing, it features a framelike shape and wide stance that affords multiple locking points and easy access. Summit comes in a surface-mount format with a ¼"-thick stainless mounting plate concealed by a cast-aluminum base, as well as a base-free cast-in-place, in-ground version. [forms-surfaces.com](http://forms-surfaces.com) CIRCLE 212

### F3 by Fabio Novembre

Interior and industrial designer Fabio Novembre plays on curves found in mathematics to create his F3 (Form Follows Function) collection of outdoor furniture for Vandom. Three designs include a low table, lounge chair, and side chair, all of which can be aligned to create intriguing topographies and juxtapositions. The stackable, modular units are roto-molded polyethylene in 11 colors, including red, pistachio, pink, and white.

[vandom.com](http://vandom.com) CIRCLE 213





## CONSIDER THIS YOUR WAKE-UP CALL.

**Samsung AllShare® Cast is the future of hospitality entertainment.** Guests can now stream premium HDTV content stored on their smartphones, tablets and laptops straight to their TVs thanks to AllShare Cast technology. And with Samsung's suite of Smart TVs, guests can access the same apps and widgets they're accustomed to at home for a more personalized entertainment experience. Plus, all TVs are equipped with Samsung LYNK™ DRM technology and are REACH 2.0 compatible, making them easy to install, customize, manage and control for property managers. See all the reasons why Samsung Hospitality TVs are the future of in-room entertainment at [samsung.com/hospitality](http://samsung.com/hospitality).

THE NEW  
BUSINESS  
EXPERIENCE

The Samsung products that power the New Business Experience.



© 2013 Samsung Electronics America, Inc. All rights reserved. Samsung, AllShare and Samsung LYNK are trademarks or registered trademarks of Samsung Electronics Co., Ltd. All products, logos and brand names are trademarks or registered trademarks of their respective companies. LED backlighting. Screen images simulated.

## Color Therapy

The end of the summer may be drawing near, but that isn't discouraging furnishings companies from employing the vibrant color palettes of the season, particularly when it comes to workplace settings. The main factor?

Today's office designs continue to call for materials and appointments that spark creativity and collaboration.

By Sheila Kim



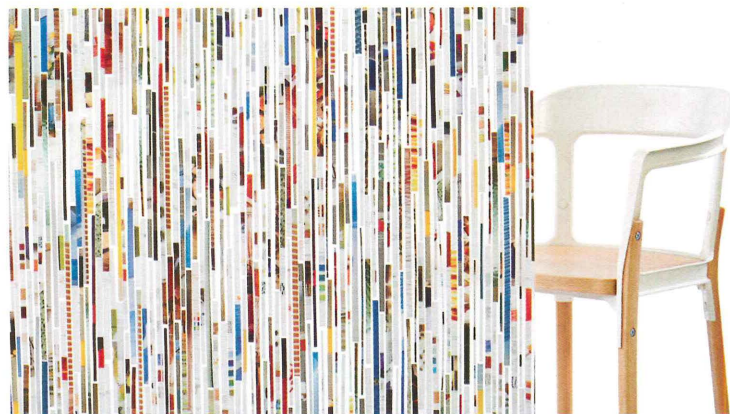
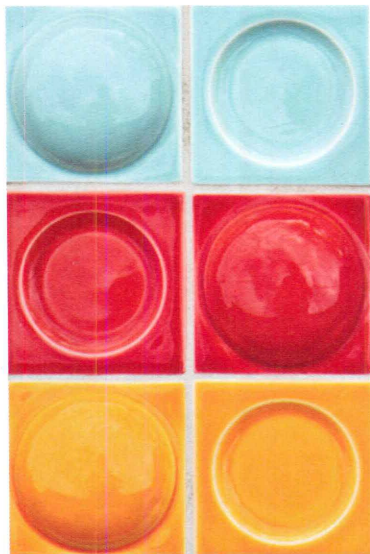
### Q5 Bench and Table System

Q5 comprises five core pieces that can be configured to meet various end-user needs—from impromptu meeting areas to temporary work surfaces. The modular collection includes a boomerang-shaped two-seater, single-seat stool, round or trapezoidal freestanding table, and bridging table unit in oak or walnut. [davisfurniture.com](http://davisfurniture.com) CIRCLE 200

### Futura Collection

After retro tiles in a Bay Area Rapid Transit station caught his eye, Jason Coleman, founder of Clayhaus Ceramics, created his own nod to the swinging '60s—Futura ceramic tiles. Five designs are offered: the convex Bubble and debossed Disk (both shown); the concentric-circle motif Portal; puffed, six-sided Hex; and Level, a square that comes in two thicknesses for dimensional compositions. Each tile is 3" square (with the exception of Hex at 2½" square), can be mixed and matched to achieve different effects, and is handcrafted and glazed in Clayhaus's Portland, Oregon, studio.

[clayhausceramics.com](http://clayhausceramics.com) CIRCLE 204



### Paper Lane Pattern for Varia Ecoresin Panels

3form continues to expand its Varia Ecoresin line through its Full Circle Program, an ongoing collaboration with artisans around the world. A new Full Circle offering for this year, Paper Lane employs the precision hand-cutting of craftspeople in Nepal to slice discarded 3form catalogs and arrange them in vertical striations, resulting in vibrant, colorful fields. Varia Ecoresin is a polyester-based material containing 40% pre-consumer recycled content. [3-form.com](http://3-form.com) CIRCLE 201



### Street Thread Carpet Tiles

Urban art makes its way into commercial interiors via Mohawk Group's Street Thread collection of four color-injecting designs by popular street artists Aakash Nihalani and Queen Andrea. The former uses boldly-hued stripes at 45° angles in Taped Off (shown) to evoke his well-known highlighter-tape creations. The tiles feature Mohawk's Duracolor nylon fibers and EcoFlex ICT backing, which contains 35% pre-consumer recycled content. [mohawkgroup.com](http://mohawkgroup.com) CIRCLE 203



### November by Mario Ruiz

Clearly, midcentury-modern influence has staying power, and one of its recent offshoots is November, a contract lounge series by Barcelona-based designer Mario Ruiz. What differentiates the line from others is a refined chamfer detail that softens the side and back edges of each upholstered piece. Lounge and side chairs, with or without arms, rest on oak legs or a more contemporary brushed stainless-steel prong base. Round coffee or side tables are finished in oak, back-painted glass, or white Corian, also with an oak or stainless base. [hbf.com](http://hbf.com) CIRCLE 202

# Precast Provides Thermally Efficient Envelope for Healthcare

The University of Kentucky's new Albert B. Chandler Hospital Pavilion had to have a high performance envelope that would improve energy efficiency, while harmonizing with the campus and shaving a year off the construction schedule. High performance precast concrete combined a continuous air and vapor barrier, as well as continuous insulation, efficiently into one system. This provided a calculated performance R-value of R-26 and saved time, materials, and money. Precast also provided the aesthetic versatility to offer several finishes. High performance precast concrete provides the efficiency you need.



Discover **High Performance** Precast  
Versatile | Efficient | Resilient

For more information  
and free continuing  
education, visit

[www.pci.org/hpprecast](http://www.pci.org/hpprecast)



CIRCLE 35



# Pit Stop

Forty miles southeast of Tokyo, Sou Fujimoto's transparent outhouse beside a railroad station provides visitors with a restroom—and a view—of their own.

BY NAOMI R. POLLOCK, AIA

PHOTOGRAPHY BY IWAN BAAN

A SINGLE glass-encased stall in the middle of a meadow, Sou Fujimoto's new public toilet is a loo with a view. Located in Ichihara, Japan, a city of 279,000, the tiny restroom is ringed by an oval fence that shields patrons without severing visual ties to the surrounding landscape: low mountains and blossoming cherry trees that draw tourists from near and far. Adjacent to the local railroad station, Fujimoto's facility caters to visitors who arrive by train and have got to go.

The project began with a direct commission from Ichihara's municipal government. Fujimoto's task was to update the modest wooden huts enclosing the washrooms at the unmanned depot. Typically, Japanese public toilets are closed and sequestered, yet the designer wanted to engage the scenic setting. "Initially, I thought we would just open the building to the sky," says Fujimoto. "But during design we realized that it would be even more fantastic to open it entirely."

With that goal in mind, the architect created two separate stalls: one of wood

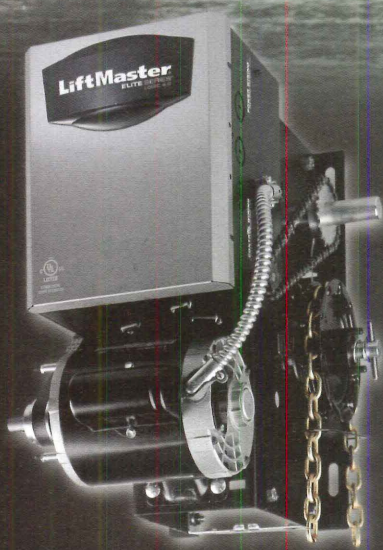
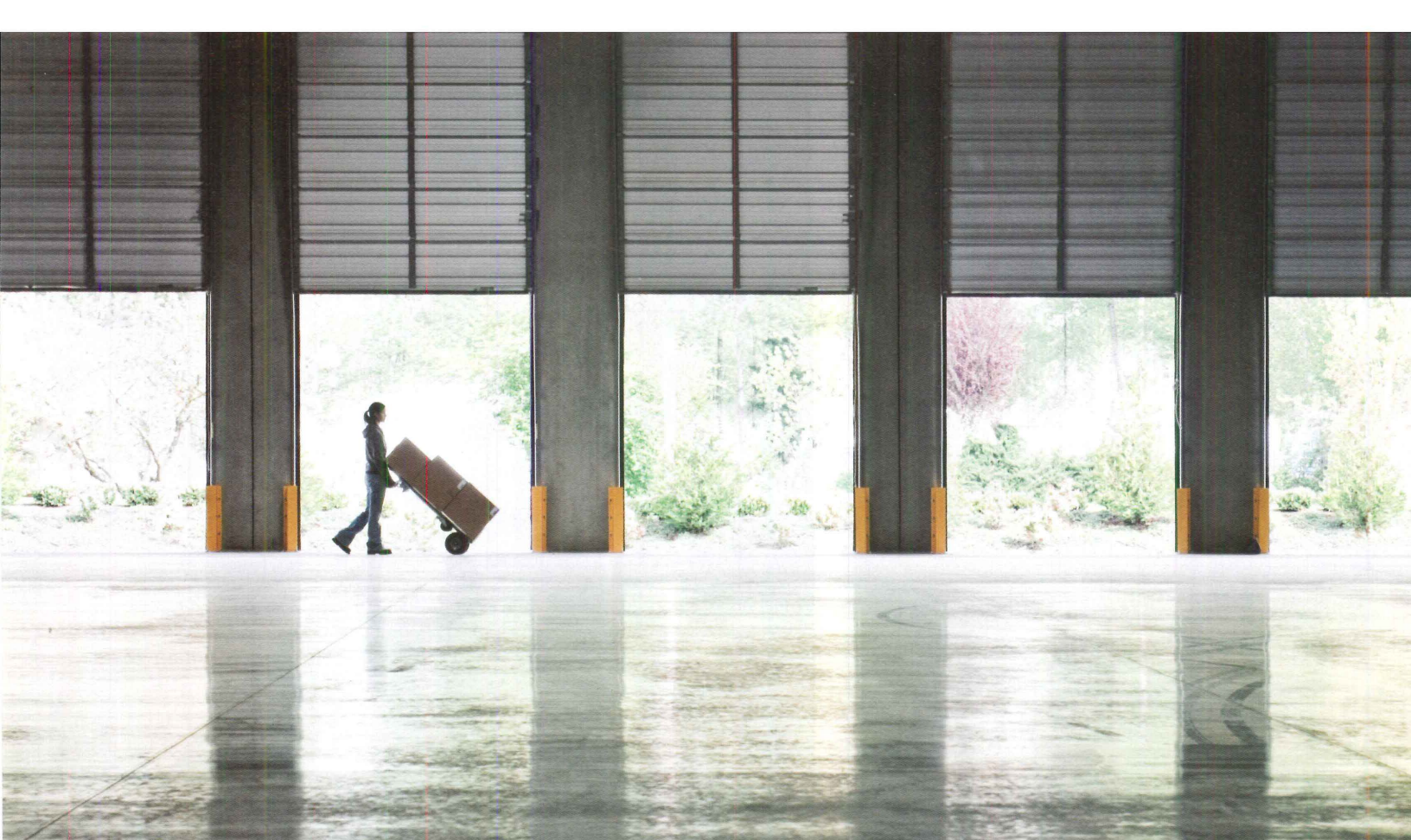


topped with clear polycarbonate and the other of glass capped with steel plate. Standing near the station, the opaque, 26-square-foot stall primarily for men is also handicapped-accessible, while the transparent 14-square-foot stall a short distance from the depot (shown) is for women.

Latched on the inside, the entrance to the women's toilet is a simple, steel gate set into the fence, a 7-foot-high barrier made of embedded wooden piles stapled together on top and sealed with silicone in between. The fence not only shields the stall's transparency, it also corrals an idyllic 2,153-square-foot untamed field that users must traverse to get to the toilet. Planted by Fujimoto and punctuated by a few trees, the greenery contrasts startlingly with the stall itself: defined by a welded steel frame and glass walls, it is barely big enough for a toilet, a sink, and a tree-shaped toilet paper holder. Both wildly exposed and comfortably enclosed, Fujimoto's facility is surely among the world's smallest and most expansive public restrooms at the same time. ■

The architect's transparent stall (for women primarily) is surrounded by a 7-foot-high oval of wood fencing. The fence allows the stall's users to experience the scenic view while maintaining complete privacy.





## The safest installation meets the smartest innovations.

**Next-generation LiftMaster® door operators lead the way with groundbreaking innovations that protect your clients.**

Our new line of door operators protects your clients' employees and property with continuously monitored entrapment protection and state-of-the-art safety features, making it easier than ever to incorporate warning lights, bells, and timers.

Plus, they meet tough new UL325-2010 standards, which is critical in complying with state and local building codes. It's all what you'd expect from the #1 brand of professionally installed door operators. There's no smarter way to protect what matters most...your reputation.

**Specify safe. Specify smart. Specify LiftMaster.**  
To learn more, visit [liftmaster.com](http://liftmaster.com) or call 800-323-2276.

Residential Garage Door Openers • Commercial Door Operators • Access Control  
Residential and Commercial Gate Operators • Telephone Entry Systems

[liftmaster.com](http://liftmaster.com)

CIRCLE 70

**LiftMaster®**  
Commercial Door Operators



It's time for **Evolution™**.

**Synthesis. Fusion. Innovation.** Metl-Span®, experts in insulated metal panels, introduces Evolution, the most comprehensive and sustainable building envelope solutions yet. Building on the foundation of our insulated metal panels, we bring to you a complete platform of building materials, featuring sunshades, grilles, louvers, column and beam covers and an extensive offering of custom fabricated products. It's time for your tools to match your ambition. **Evolution unites customization and quality so that form truly can meet function.**



**EVOLUTION**  
ENVELOPE SOLUTIONS DEFINED BY METL-SPAN

877 585 9969  
CIRCLE 36 [evolution.com](http://evolution.com)

LIGHT, TEMPERATURE AND VIEW. BALANCE ALL THREE WITH SOLARITY™ SOLAR SHADES.



Traditional blinds are all or nothing. If you want to block the sun's heat or glare, you have to block your view as well.


## **NEW!** Solarity™ Solar Shades

bring balance to this struggle by controlling light and temperature without sacrificing the view.

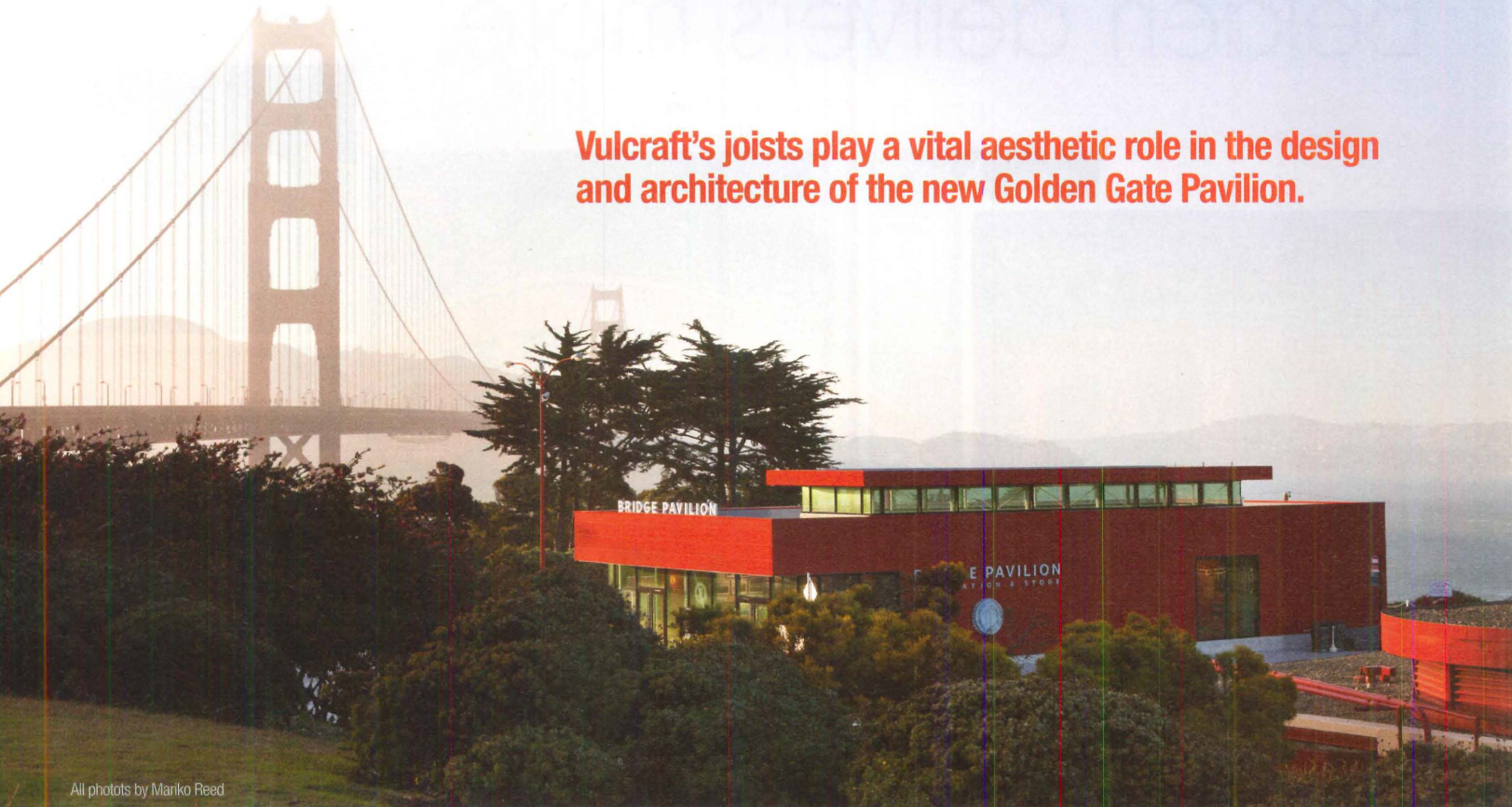
Achieve the perfect balance of light, temperature and view.

Call 877.780.0034 or visit [inprocorp.com/clickeze](http://inprocorp.com/clickeze).

**INPRO** PRIVACY SYSTEMS  
**CLICKEZE**  
A Division of InPro Corporation®

877.780.0034 | [inprocorp.com/clickeze](http://inprocorp.com/clickeze) | Find us on Linked 

**Vulcraft's joists play a vital aesthetic role in the design and architecture of the new Golden Gate Pavilion.**



All photos by Marko Reed



Vulcraft Group joists were used to assemble an inventive design for the Golden Gate Pavilion in honor of the Bridge's 75th Anniversary. "The Golden Gate Bridge has been hailed as one of the modern wonders of the world. Its visitor center deserves the latest technology and innovation," said Louis Lozano, Vulcraft's Northern California District Sales Manager.

Working with design team, Project Frog, it was determined that Vulcraft's LH series joists with their open web aspect were the right choice. These special profile joists are designed to reach longer spans while supporting large loads.

As an engineered products group of Nucor Corporation, Vulcraft is the leading producer of steel joists and decking in the United States. Our team members are dedicated to creating solutions for a range of customers. And landmarks.

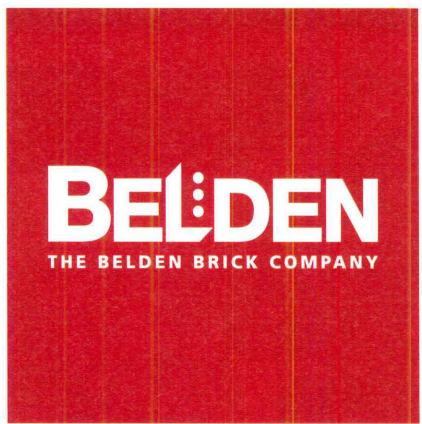


**LEVERAGING TECHNOLOGY. CREATING SOLUTIONS.**

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

CIRCLE 51

# Belden delivers more.



The Standard of  
Comparison since 1885

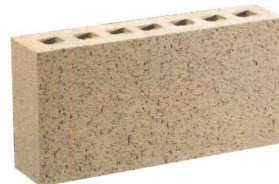
An ISO 9001:2008 Registered Quality Management System  
An ISO 14001:2004 Environmental Management System

330.456.0031  
[www.beldenbrick.com](http://www.beldenbrick.com)

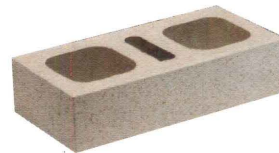
CIRCLE 42



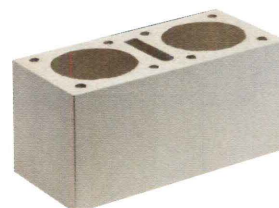
Ambassador - 3-5/8" x 2-1/4" x 15-5/8"



Double Monarch - 3-5/8" x 7-5/8" x 15-5/8"



6" Thru-Wall - 5-5/8" x 3-5/8" x 15-5/8"

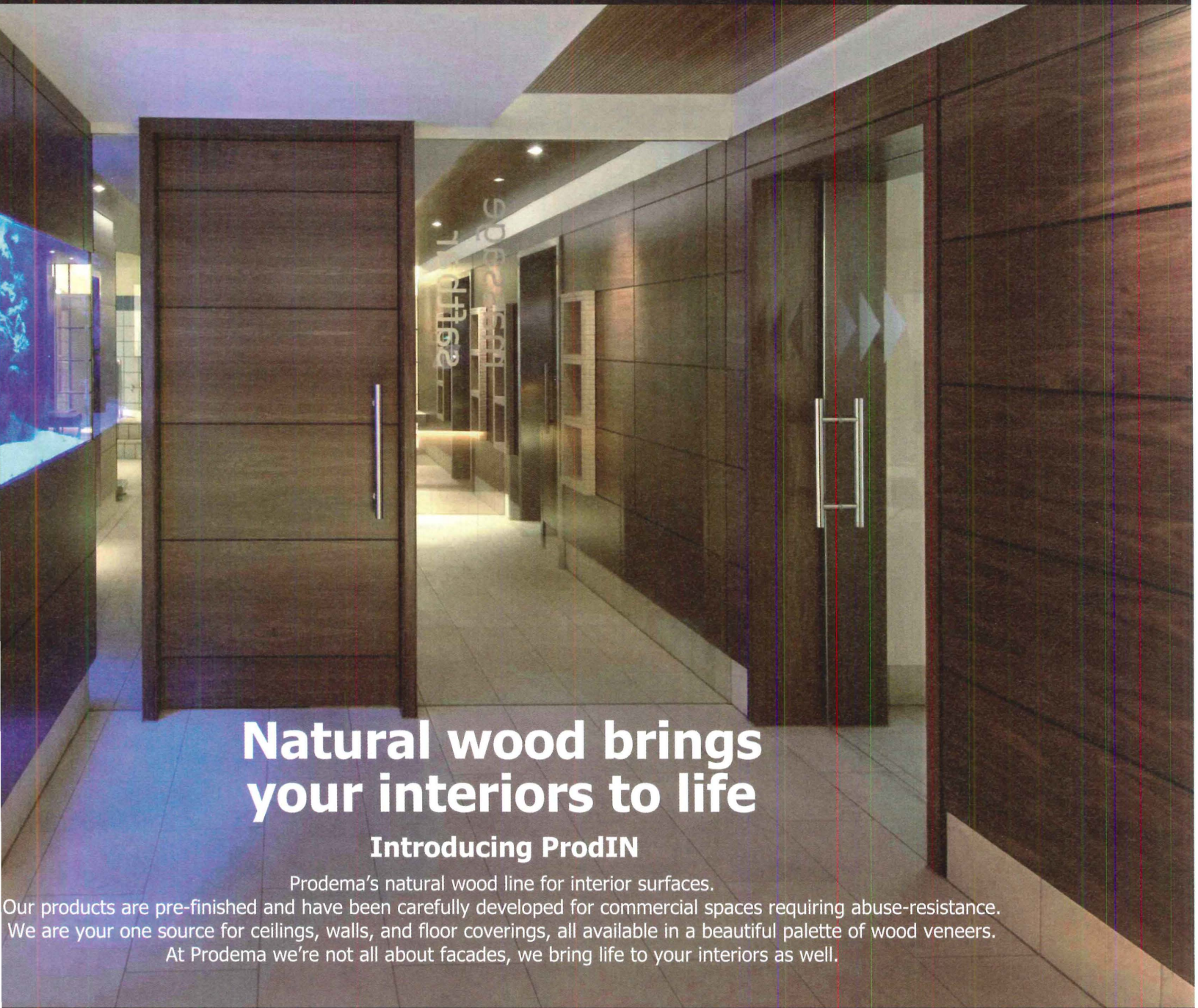


8" Double Thru-wall - 7-5/8" x 7-5/8" x 15-5/8"

## More Colors, Sizes, Shapes & Textures

The Belden Brick Company is proud to give customers more choices. With a selection of more than 300 colors, 20 different sizes, 13 textures and unlimited shapes, Belden Brick offers the widest range of products to choose from.

That is why since 1885, The Belden Brick Company has been recognized as the quality leader in the brick industry.



# Natural wood brings your interiors to life

## Introducing ProdIN

Prodema's natural wood line for interior surfaces.

Our products are pre-finished and have been carefully developed for commercial spaces requiring abuse-resistance. We are your one source for ceilings, walls, and floor coverings, all available in a beautiful palette of wood veneers.

At Prodema we're not all about facades, we bring life to your interiors as well.

### PRODEMA NORTH AMERICA

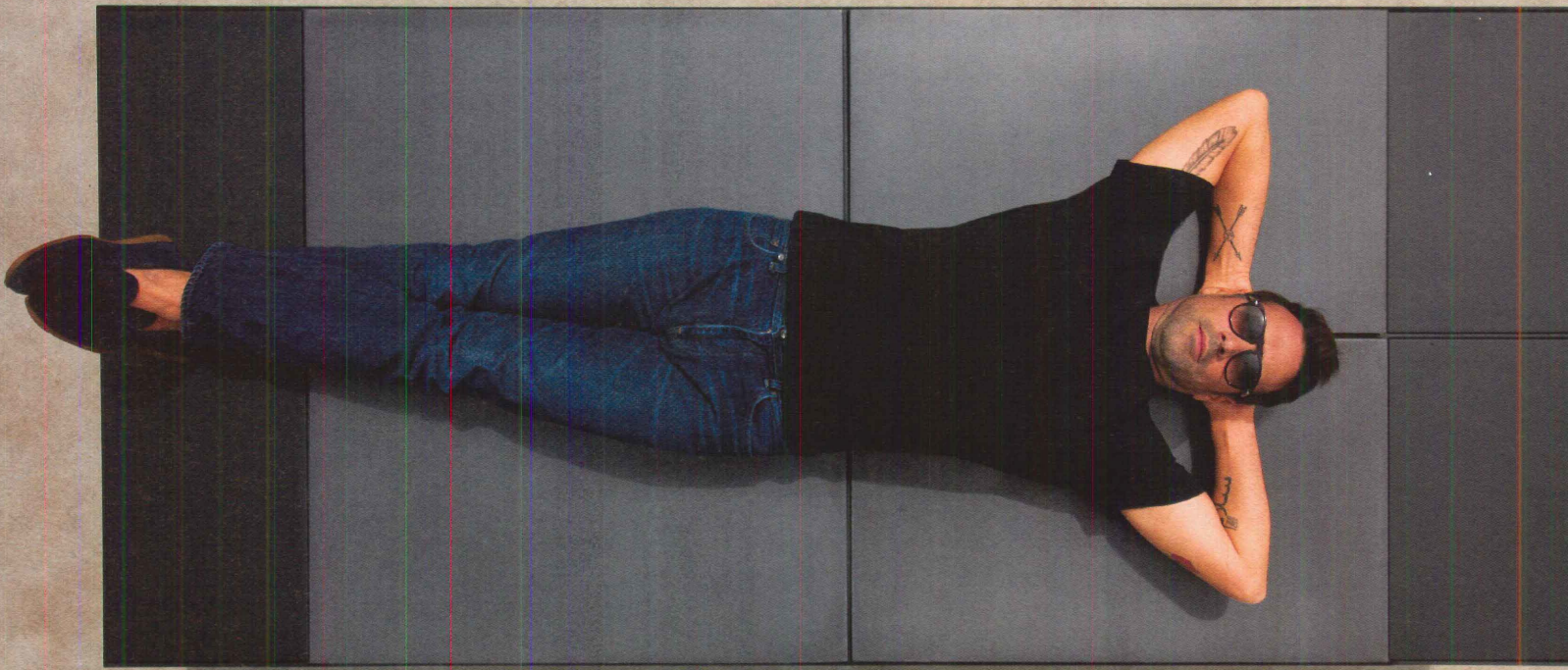
5582 N.E. 4th Court, 7B  
Miami, FL 33137 • Tel: 305-756-2062  
Email: [sales@formasinc.com](mailto:sales@formasinc.com)

Prod **IN**  
interiors by Prodema®

Prodema®  
Made to last wooden Products

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

CIRCLE 77



MORRISON

LANDSCAPE FORMS

landscapeforms.com

Elegance. Clarity. Repose.


Morrison designed for terrace life.

Find us at [landscapeforms.com](http://landscapeforms.com) or  
contact us toll free at 800.430.6208.

Designed by  
Lionel Morrison.

**CIRCLE 57**

DESIGN. CULTURE. CRAFT.

An aerial photograph of a large, green park area. Several people are walking on a light-colored path that curves across the grass. A dog is also visible. There are several bright pink chairs scattered across the lawn. The overall scene is bright and sunny, with long shadows cast by the people and chairs.

# Landscape and the City

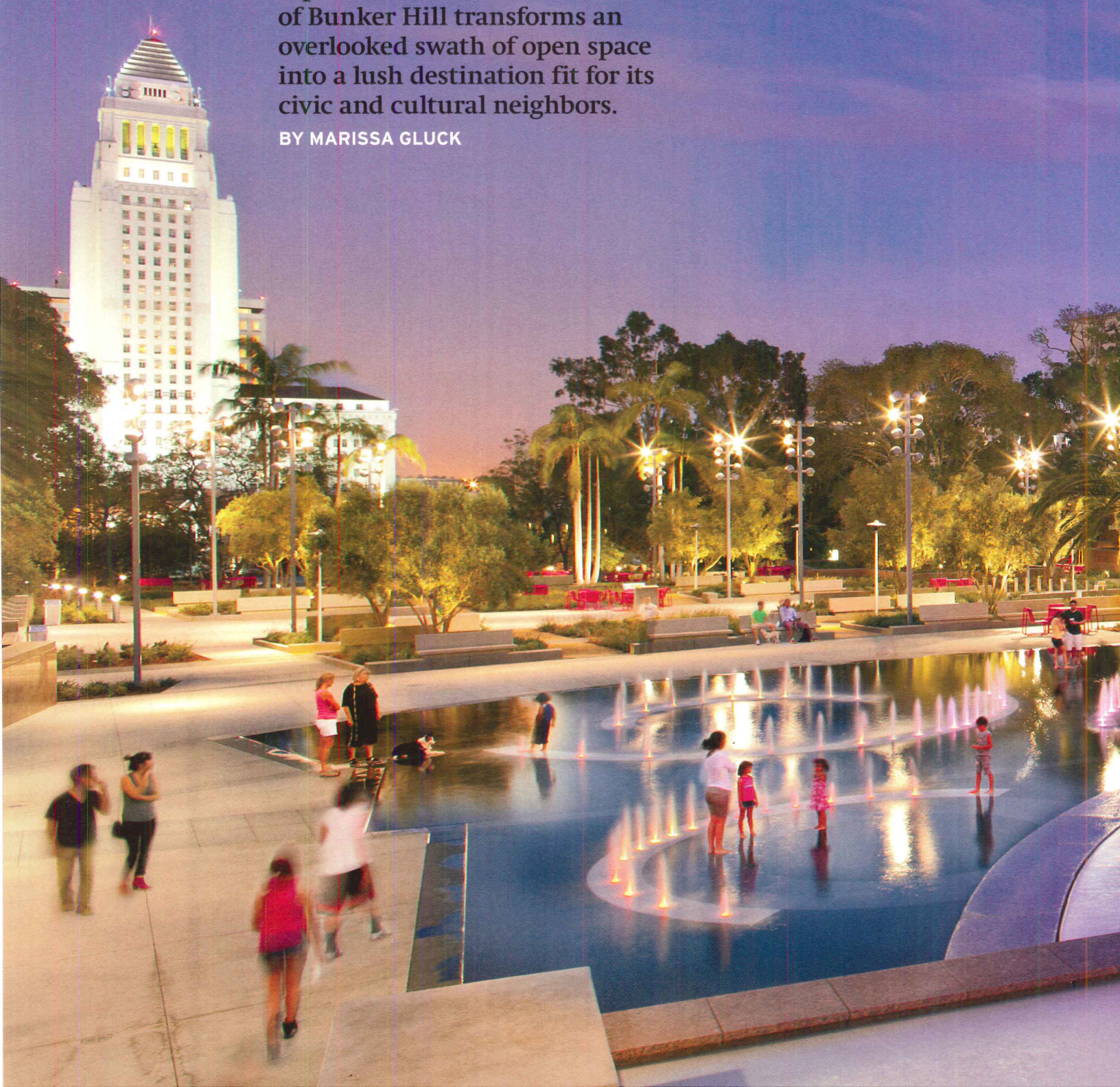
As urban land becomes more scarce and expensive, landscape designers have been using their ingenuity to find leftover spaces—along neglected waterfronts, on brownfields, and even under highways—to create the community parks that are essential to city life. The history of these places is inspiring the programs, materials, and details that make each of these new designs surprising and unique. While Jacob Javits Plaza in New York City is a small and refined example of urbanity, Underpass Park in Toronto exults in the gritty and moody belly of a highway. The 20th-century landscape architect Thomas Church once bemoaned his profession's status, saying that next to architects' it was "the parsley around the roast." But today's landscape architects—who frequently collaborate with architects—are often the master chefs.

Grand Park | Los Angeles | Rios Clementi Hale Studios

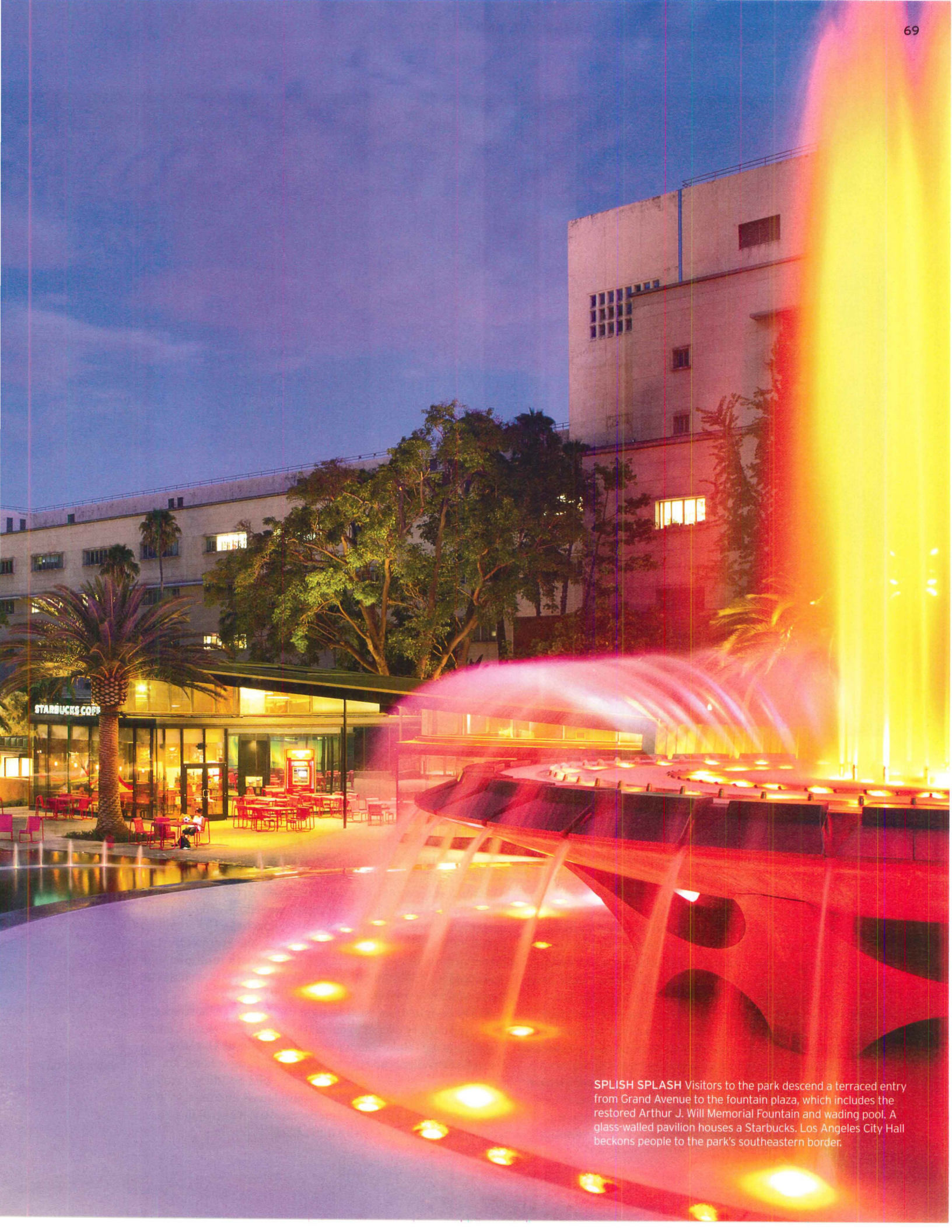
# L.A.'S PEDESTRIAN PARADISE

A park in the downtown area of Bunker Hill transforms an overlooked swath of open space into a lush destination fit for its civic and cultural neighbors.

BY MARISSA GLUCK







**SPLISH SPLASH** Visitors to the park descend a terraced entry from Grand Avenue to the fountain plaza, which includes the restored Arthur J. Will Memorial Fountain and wading pool. A glass-walled pavilion houses a Starbucks. Los Angeles City Hall beckons people to the park's southeastern border.



IN 2004, before the real estate crash, the city of Los Angeles and developer Related Companies had plans for downtown's Grand Avenue that were, well, grand. The Grand Avenue Development Project was originally slated to include a \$2 billion Frank Gehry-designed hotel, condos, and a retail complex. While the long-delayed project has been drastically scaled back since its approval in 2007, the first phase of the development, the 12-acre Grand Park, opened last summer.

For a city lacking in great parks, Grand Park represents a turning point. Paid for by Related and designed by local architecture firm Rios Clementi Hale Studios (RCHS), the \$56 million project creates a pedestrian-friendly space between Grand Avenue's Music Complex and City Hall, four blocks away.

The park sits on the former site of an inhospitable and forgotten civic plaza and surface parking lot that stretched from Grand Avenue to Spring Street. "It was cut off from the urban fabric," says Rios Clementi Hale Studios senior associate Tony Paradowski. The park replaces the plaza with terraced lawns and gardens that descend along a 90-foot grade change from east to west. Divided by two city streets, it is organized along four public spaces, or blocks. These spaces include a restored fountain plaza, a performance lawn, a community

terrace ringed by gardens, and an event lawn that can host public gatherings or marketplaces.

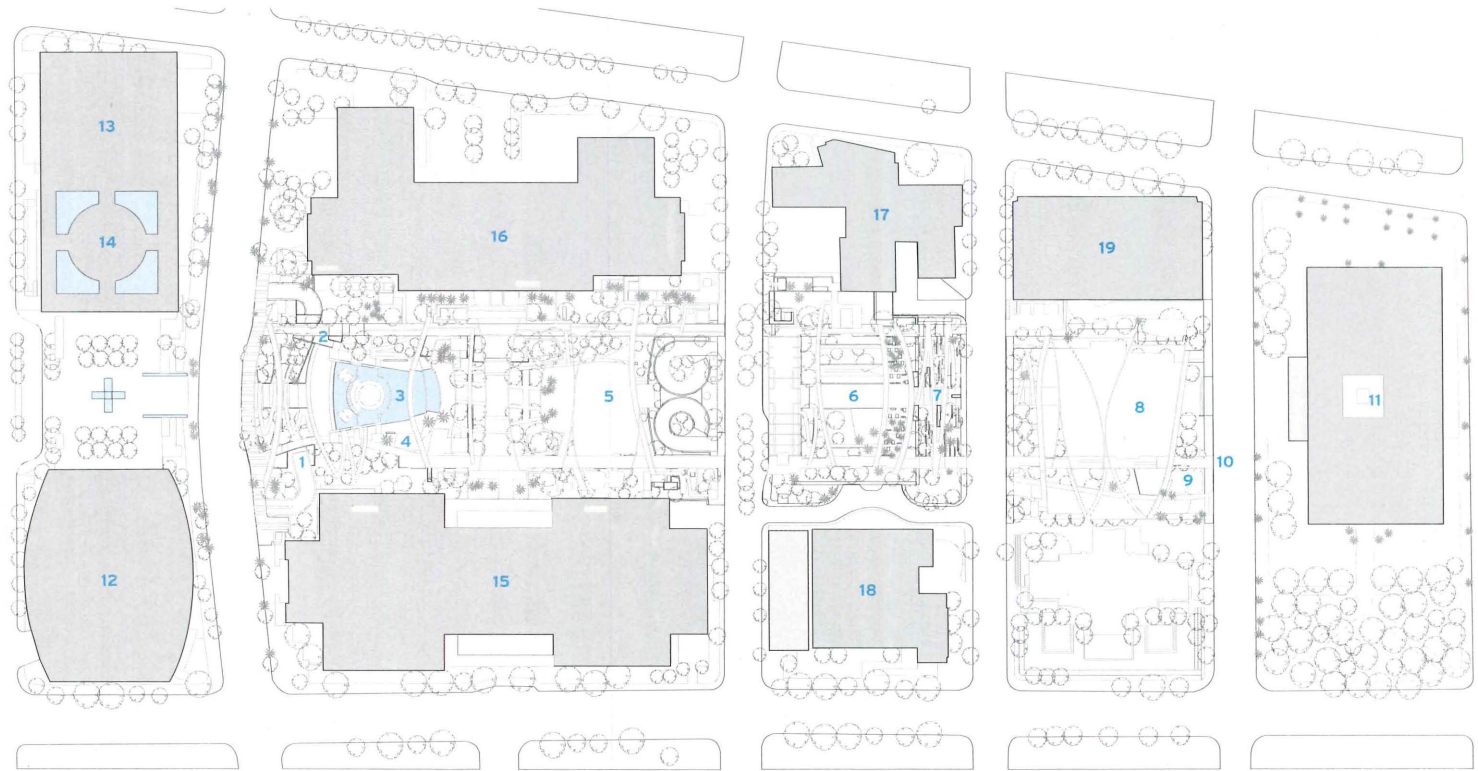
The architects were challenged to create a destination that would appeal to an ethnically and economically diverse community. The park also needed to complement its neighboring cultural landmarks, both visually and in terms of programming, including Gehry's Walt Disney Concert Hall, Arata Isozaki's Museum of Contemporary Art, Rafael Moneo's Cathedral of Our Lady of the Angels, and the Broad Museum designed by Diller Scofidio + Renfro (expected to be complete in fall 2014). To ensure community input, the architects hosted interactive workshops and forums with multiple stakeholders, including neighborhood residents, arts associations, and civic organizations.

RCHS designed the park to support a variety of activities, from community events to cultural festivals and Music Center programming (Music Center venues include the Dorothy Chandler Pavilion and the Disney hall, among others). To encourage flexible uses, the firm eschewed building a traditional band shell in favor of multi-use lawns and plazas. "It's not overly designed," says Paradowski. "Los Angeles has an informality that other cities don't have."

#### URBAN OASIS

A building for park services also contains a public elevator for ADA-compliant access to the fountain plaza off Grand Street. The architects' hot pink furniture provides the perfect perch from which to observe the restored fountain's light show (above). Stairs and ramps, accessed from Broadway, lead to the park's third block—the community terrace—containing a plaza surrounded by gardens (opposite).

- 1 ENTRANCE RAMP
- 2 ELEVATOR
- 3 FOUNTAIN AREA
- 4 STARBUCKS, RESTROOMS, AND PARK SUPPORT
- 5 PERFORMANCE
- 6 COMMUNITY TERRACE
- 7 CENTRAL STAIRS
- 8 EVENT LAWN
- 9 RESTROOMS AND PARK SUPPORT
- 10 PARK ENTRY
- 11 CITY HALL
- 12 DOROTHY CHANDLER PAVILION
- 13 AHMANSON THEATRE
- 14 MARK TAPER FORUM
- 15 COUNTY COURTS
- 16 HALL OF ADMINISTRATION
- 17 HALL OF RECORDS
- 18 LAW LIBRARY
- 19 CRIMINAL COURTS BUILDING



SITE PLAN





**IN THE PINK** The architects designed bright magenta lawn furniture—benches, café tables and chairs, and lounge chairs—that visitors can easily move around, just as in their own backyards (opposite). A long table to the north of the community terrace is the perfect place for brown-bag lunches or picnics (left).





Visitors can enter the park from either end, but the Grand Avenue entrance stairs offer a sweeping view of the fountain and City Hall. L.A.'s freewheeling unpretentiousness is evident in the bright magenta metal lawn furniture dotting the landscape. This movable custom furniture (manufactured by Janusj et Cie) allows visitors to group tables and chairs as they wish. "We looked at the iconography of parks in other cities that are really memorable," explains Paradowski. "Furnishings make the park. We wanted something that was adaptable for everybody."

A splash pad connects to the historic Arthur J. Will Memorial Fountain, creating an interactive water feature for children to play in. "I call it our urban beach," says L.A. writer Jessica Ritz, who typically opts to bring her two sons to the park instead of braving the drive across the traffic-choked city to the ocean. The landscape includes new lawns and gardens, a dog run, and a 2/3-mile pedestrian loop. There are also new public restrooms, a Starbucks, and park offices housed within two modern glass buildings with asymmetrical canopies.

One of the architects' biggest challenges was the site's steep topography. To make the park as accessible as possible, the firm built crisscrossing paths and sloping terraces to

provide a more seamless experience as visitors move from one level to another. Curving meridian paths conceptually and visually extend into and connect the park to other downtown neighborhoods, including the Historic Core to the south and Chinatown to the north. "The overall layout is an abstracted map of longitude and latitude lines," says Paradowski. The gardens feature colorful drought-tolerant vegetation from all over the world. An environmental graphics program designed by Sussman/Prejza includes giant markers that label and describe each species.

With other public amenities, such as a new pedestrian plaza in Silver Lake (also designed by RCHS), parklets replacing parking spaces in downtown and northeast L.A., improved bike lanes, and an expanding Metro system, the city is undergoing a prodigious change in its embedded car culture. Grand Park, like these other phenomena, represents a shift in L.A.'s self-perception, especially as neighborhoods, like downtown, become denser and more residential—50,000 people live downtown, up from fewer than 20,000 in the late 1990s. "There's never been a critical mass in that vicinity before," notes Paradowski. "More and more, you'll see a response to that." ■



**CIVIC SHADE** The fourth block of the park, in front of City Hall, contains an expansive lawn for public gatherings and performances. The lawn connects the dog run to the north with a covered pavilion to the south (opposite). Garden markers describe the characteristics and native regions of the plants throughout the park (left).

#### credits

**ARCHITECT:** Rios Clementi Hale Studios – Mark Rios, partner in charge; Julie Smith-Clementi, Frank Clementi, and Bob Hale, partners; Tony Paradowski, senior associate/lead designer

**CONSULTANTS:** Lighting Design Alliance (lighting); Fluidity Design Consultants (water features); Izor and Associates (ADA); Edgett Williams Consulting Group (elevators)

**ENGINEERS:** Mollenhauer Group (civil); Nabih Youssef Associates (structural); Levine/Seegel Associates (m/e/p)

**CLIENT:** County of Los Angeles

**GENERAL CONTRACTOR:** Pankow

**SIZE:** 12 acres

**COST:** \$56 million

**COMPLETION DATE:** July 2012

#### SOURCES

**ILLUMINATED HANDRAILS:** Intense Lighting

**RECLAIMED WOOD:** TerraMai

**BIKE RACKS, TRASH BINS:** Landscape Forms

Jacob K. Javits Federal Building Plaza | New York City | Michael Van Valkenburgh Associates



# TAKING THE EDGE OFF

A federal plaza with a controversial history undergoes another revolution—this one combining elements of a public square and a garden with a high level of craft.

BY LAURA RASKIN





**SITTING IN** Michael Van Valkenburgh Associates' (MVVA) Jacob K. Javits Federal Building Plaza in downtown Manhattan, at Worth and Lafayette streets, you could forget that a former iteration of the quiet plaza sparked one of the most outsized controversies about public sculpture and artists' control over the fate of their work.

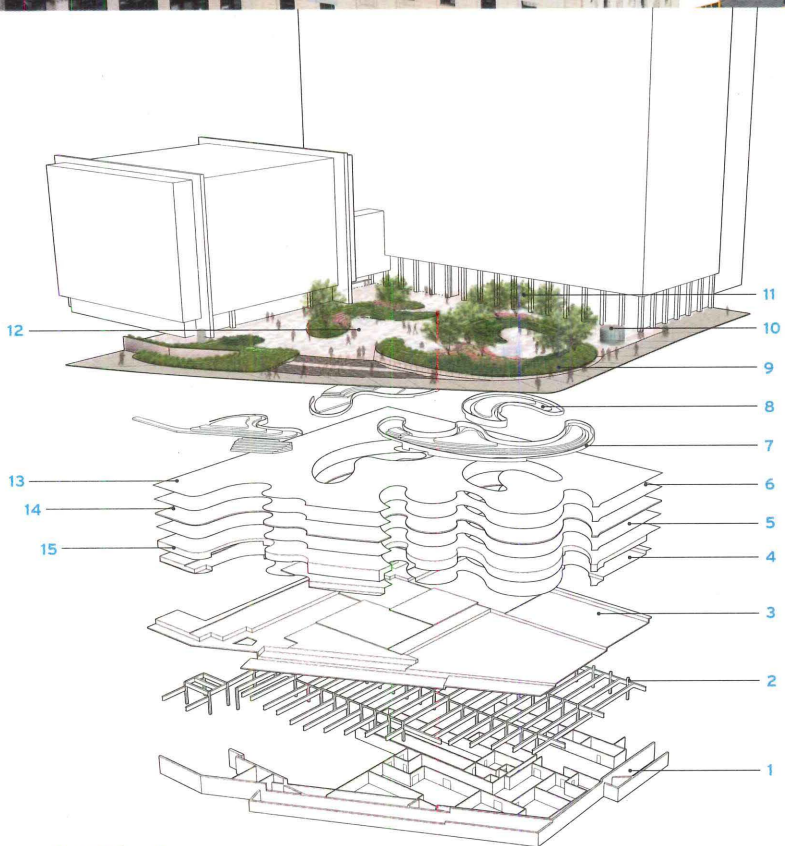
Where office workers and sunbathers now inhabit MVVA's design for the wedge-shaped space, with its sumptuous pink granite and marble cobbles and curving gardens hugging marble benches, there was once a rusted steel Richard Serra sculpture and a lot of angst. The General Services Administration (GSA) had commissioned Serra to create a site-specific piece for the dreary plaza in front of the Federal Office Building (1969). In 1981 his 12-foot-tall *Tilted Arc* was installed, bisecting the plaza and running 120 feet. Area workers immediately deemed it ugly and said it destroyed views and made the plaza difficult to traverse. Though prominent artists and others came the defense of Serra's work, the GSA decided the sculpture should be removed. Serra sued the GSA and lost—and in 1989 the sculpture was dismantled. (Serra's studio manager Trina McKeever believes it remains in storage in Brooklyn. The GSA owns the sculpture, but is not allowed to display it anywhere but in its original location.) As there had been before *Tilted Arc*, generic planters and benches returned and stayed until the 1997 installation of landscape architect Martha Schwartz's design for the plaza—looping, bright green benches and topiary-like plants.

But by 2008, the roof membrane of the 40-year-old garage below the plaza was failing. To fix it, Schwartz's design had to be removed. While it was the opposite of Serra's sculpture, some argued that the space was still hard to navigate. WASA/Studio A, the architect of the garage, suggested MVVA redesign the space, a GSA project to be funded by President Obama's 2009 stimulus package. Van Valkenburgh, known for his sprawling Brooklyn Bridge Park, eagerly accepted.

The architect organized the plaza with four mounded, sinusoidal plant beds. The organic forms embrace buttery marble benches—some discs, others rectangular slabs. A fountain emerges from the pavement on the northeast corner. Though the granite and glass Federal Building—with a jarring design by Alfred Easton Poor, Kahn & Jacobs, and Eggers & Higgins—looms over the plaza, the scale on the ground is intimate. Saucer magnolia trees do much of that work. "We thought that the grayness of the site in the winter should end in the spring with some fantastic explosion of blooms," says Van Valkenburgh. The cobbles, patterned to be a "jazzy riff" on the woven checkerboard facade of the Federal Building, also help soften the space. "It's sort of like the facade reflected in water," says the architect.

Public plazas are difficult to design and program—in-between spaces that are neither park nor street. Van Valkenburgh says that the plaza's previous incarnations reflect "an evolving idea of life in cities and urbanity." *Tilted Arc* exemplified the 1960s and '70s idea of sculpture as landscape's salvation. The plaza's transformation continues with MVVA's scheme. "Although our designs are not very similar in a spatial or material sense, Martha's thinking

**GARDEN STATE** The architects created curving plant beds to provide visitors with a sense of intimacy and separation from the street. The marble benches and cobbles add luxury to the civic plaza. Magnolias in bloom signal spring's arrival.



AXONOMETRIC

- 1 EXISTING SUBGRADE ARCHITECTURE
- 2 EXISTING STEEL PLAZA SUBSTRUCTURE
- 3 EXISTING PLAZA STRUCTURAL SLAB
- 4 RUBBERIZED WATERPROOFING ASSEMBLY
- 5 FILTER FABRIC
- 6 3-PLY MODIFIED BITUMINOUS WATERPROOFING ASSEMBLY
- 7 CAST-IN-PLACE CONCRETE CURB WALL
- 8 GEOFOAM LIGHTWEIGHT FILL
- 9 GROUNDCOVER AND SHRUB PLANTING
- 10 GLASS ENCLOSED SUBGRADE ACCESS
- 11 MAGNOLIA TREES
- 12 GRANITE AND MARBLE PAVEMENT
- 13 SAND SETTING BED
- 14 FIBER-REINFORCED CONCRETE SLAB
- 15 POLYSTYRENE INSULATION

credits

**ARCHITECT:** Michael Van Valkenburgh Associates – Michael Van Valkenburgh; Matthew Urbanski; Laura Solano; Gullivar Shepard; Elizabeth Silver, project manager

**ARCHITECT OF RECORD:** WASA/Studio A

**ENGINEERS:** WASA/Studio A; Severud Associates Consulting Engineers (structural); Mueser Rutledge Consulting Engineers (geotechnical); AKRF (environmental)

**CLIENT:** General Services Administration

**GENERAL CONTRACTOR:** Fox Industries; Kelco Landscaping and Construction (landscape)

**SIZE:** 1 acre

**COST:** \$18 million

**COMPLETION DATE:** April 2013

SOURCES

**PINK GRANITE:** Stony Creek Quarry Corp.

**MARBLE:** Vermont Quarries Corp.

**BENCH FABRICATION:** Digital Stone Project

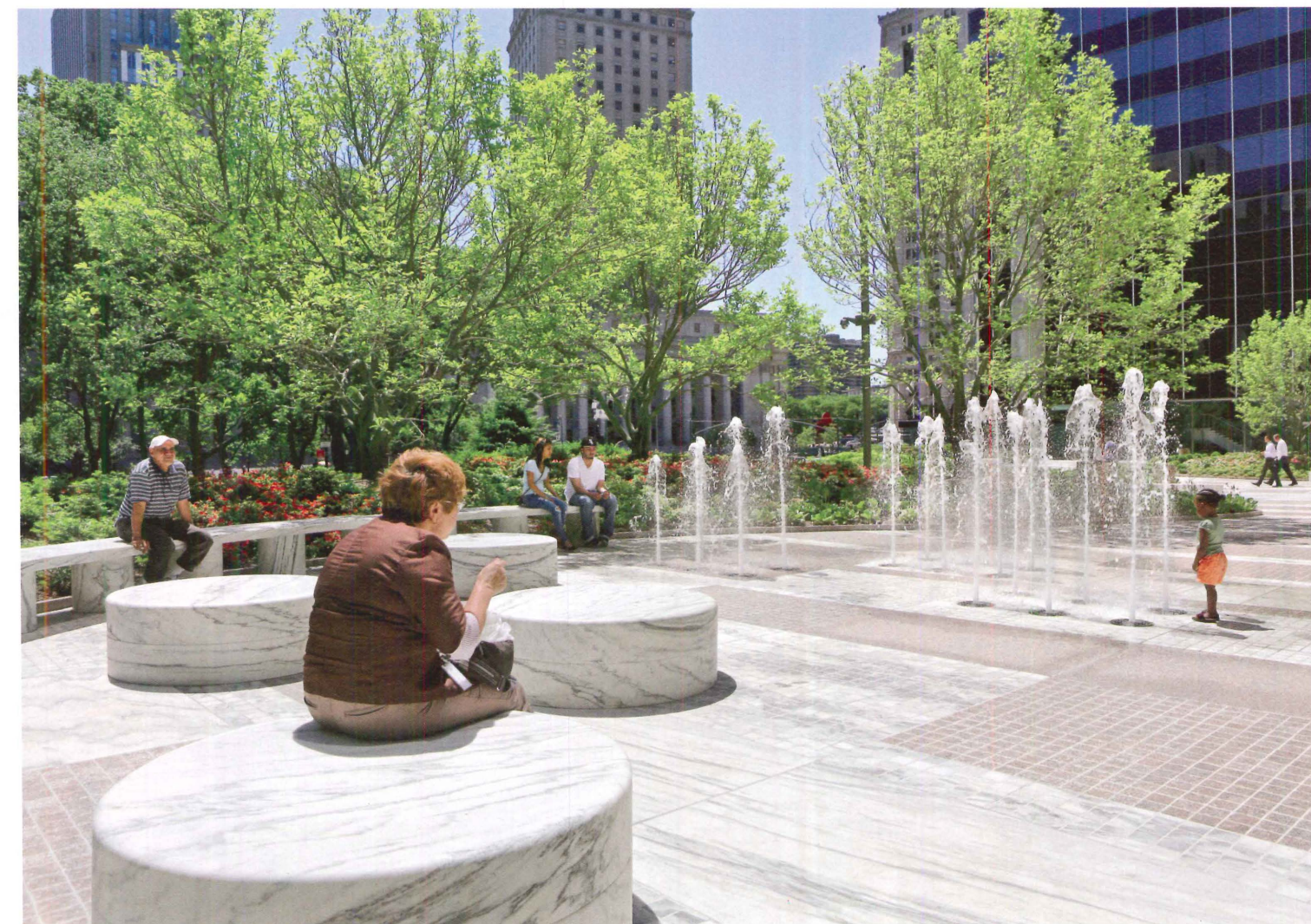
about habitation and the need to create a sense of welcome definitely influenced our approach,” he says. “In this way, I feel like our work is an extension of what she was doing.”

The plaza is inviting, in part, because of its obvious craft. From the benches, for which the marble was handpicked from a Vermont quarry, to the bronze garbage cans, which appear to balance on their rounded bottoms from sheer centrifugal force, the luxury of the hard surfaces complements the garden elements. Van Valkenburgh and MVVA principal Gullivar Shepard describe how the masons tried to keep together the veining of the marble cobbles as they took them off the palettes. “It’s mind-blowing how beautiful the patterns are,” says Van Valkenburgh. The architects removed stairs within the plaza that negotiated grade changes due to the sub-slab and instead created a softly undulating surface that slopes to meet the sidewalk. “All of the previous schemes worked within the model of a plinth, which separates the plaza from the street. Ours is designed to blur that boundary and be more inviting,” says Shepard.

While the plaza is a part of downtown’s workday frenzy, it balances privacy and engagement, allowing visitors to perch above the fray but still observe it. The architects couldn’t change the size of the site, but they could—and did—create a sliver of more enjoyable living space for city dwellers. ■



**OVER THE WALL** The pattern of the pink granite and marble cobbles loosely echoes the facade of the Federal Building (opposite). Richard Serra’s *Tilted Arc*, installed in the plaza in 1981, immediately drew fire from the public (above). In 1989, it was dismantled and removed. Today, curved plant beds hug marble benches, some with embedded LED lights. Magnolias add a park-like element to the hard-surface plaza, while a fountain invites interaction (below).



Klyde Warren Park | Dallas | The Office of James Burnett



# DECKED OUT IN DALLAS

A sprawling rectangular park on top of a major freeway unites an up-and-coming residential neighborhood with the burgeoning Arts District.

BY LAURA MIRVISS



**TUNNEL VISION**  
The ambitious Klyde Warren Park covers a 1,200-foot-long stretch of the Woodall Rodgers Freeway. A serene, 2,400-square-foot concert pavilion by Thomas Phifer and Partners is open on all sides.

AS IN MANY American cities, large highways slice through downtown Dallas. Sidewalks seem intermittent, parking lots abundant, and locals respond with strange looks when asked the best way to walk to a nearby bar or restaurant.

But Dallas is pouring millions of dollars into changing all that. In the past decade, the city has quietly inserted a handful of small green gardens between downtown office towers and condos, providing small reprieves from the expanses of asphalt and concrete. As part of this initiative, over ten years ago, local civic leaders began talking to a team of designers and engineers about coming up with a scheme for uniting the city's fractured downtown by covering over an existing freeway with a park.

Now, \$110 million later, the design team, Jacobs Engineering Group, along with landscape architect The Office of James Burnett, has delivered something radical—5.2 acres of green

long pre-stressed concrete box beams that alternate with 4.5-foot-deep concrete trenches for trees, plumbing, and electrical equipment in an *abbba* pattern. Geofom, a dense Styrofoam-like fill, lightens the load wherever soil is not needed, and the entire park is covered in a 6- to 18-inch layer of topsoil.

Klyde Warren Park, named for the 10-year-old son of park patron and billionaire energy magnate Kelcy Warren, was funded through a public-private partnership, with more than \$50 million in private donations and nearly \$60 million in city, state, and federal funding. The park is filled with amenities funded by Warren and other private donors: a playground, dog park, water features, gardens, walking paths, and a Thomas Phifer-designed concert stage and restaurant. (The restaurant is scheduled to open in the fall.) The park accommodates yoga classes, croquet, Pétanque,



space laid across an eight-lane highway. The Woodall Rodgers Freeway, oriented northeast-southwest and depressed to minimize traffic noise, ran underneath a number of perpendicular at-grade bridges used as cross streets. The park now fills the gaps between the bridges to create a 1,200-by-200-foot three-block-long deck between Pearl and St. Paul streets. "You only realize you're near a freeway at the ends of the park," says principal James Burnett. "You can't hear the roar of traffic below."

A major structural challenge was designing an at-grade park—where visitors enter from surrounding streets without ascending steps or ramps—that also met the state highway height clearance requirement of 16.5 feet. The 6.5-foot-deep park deck, braced on concrete walls along the sides and on the median strip of the highway, consists of three 100-foot-

Ping-Pong, birthday parties—and more. While the designers would have liked to have a continuous three-block-long green, politics intervened. One cross street, open to traffic, divides the park into two segments—a two-block swath and a one-block section.

The gently sloping park skims right past the Dallas Arts District, so pedestrians can easily veer off the greensward to visit the Dallas Museum of Art and the Nasher Sculpture Center, among other cultural entities. The project's success has far exceeded projections, with attendance averaging 12,000 to 15,000 visits per week. Food trucks have been a huge hit, particularly with office workers, and new paving recently was added on the southwest side to handle the extra foot traffic. Says Burnett, "Dallas was starved for this kind of urban amenity, and now it's got it." ■

**ROAD CAGE** The at-grade park (above left) is heavily programmed with amenities ranging from a botanical garden with regional plants (above) to a children's park with raised geofom mounds covered in artificial turf (opposite top). Sheltered seating on the east side looks out to the restaurant pavilion (opposite bottom).



credits

**LANDSCAPE ARCHITECT:** The Office of James Burnett – James Burnett, principal in charge; Nathan Elliott, project manager; Scott Blons, construction manager

**ARCHITECTS:** Thomas Phifer and Partners (pavilion, restaurant exterior); EndreStudio Architects Engineers (park structures); The Johnson Studio (restaurant interior)

**ENGINEERS:** Jacobs Engineering Group – Mir Hadi Ali (structural); Randy Walker (electrical); Debbie Neubert (civil); DAL-TECH Engineering (utilities)

**CLIENT:** Woodall Rodgers Park Foundation

**SIZE:** 5.2 acres

**COST:** \$110 million

**COMPLETION DATE:** October 2012

SOURCES

**PRECAST CONCRETE:** Wausau Tile

**ARTIFICIAL TURF:** ForeverLawn

**FENCING:** Ameristar

**MOVABLE TABLES AND CHAIRS:** Fermob

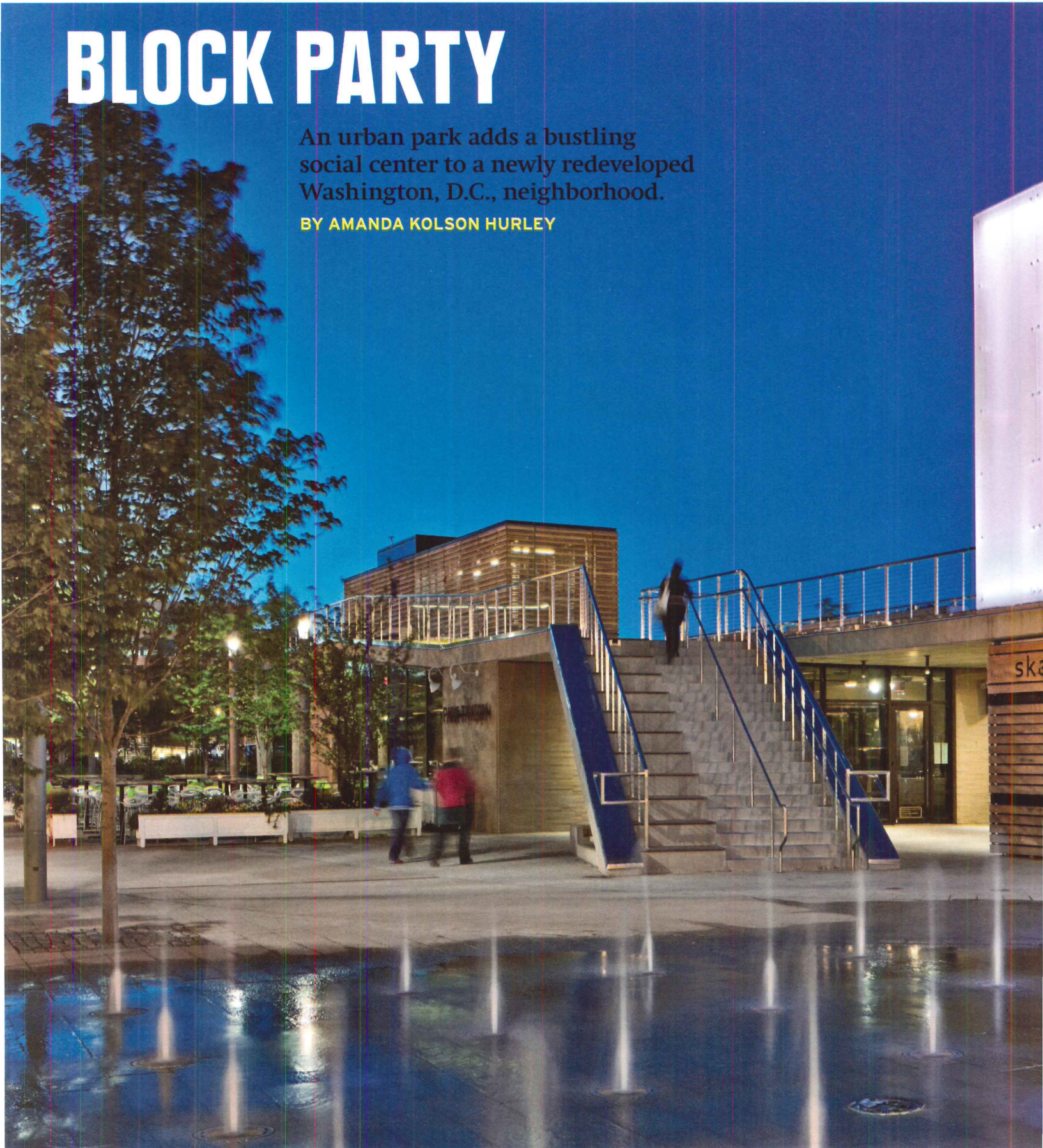
**BENCHES:** Forms+Surfaces, Landscape Forms

Washington Canal Park | Washington, D.C. | Olin

# BLOCK PARTY

An urban park adds a bustling social center to a newly redeveloped Washington, D.C., neighborhood.

BY AMANDA KOLSON HURLEY







**POINT OF ORIENTATION** Studios Architecture worked with Olin to design Canal Park's largest pavilion, which contains a restaurant and an ice-skate rental shop that serves an adjacent rink in winter. A glowing cube floats above it, providing an outdoor movie screen and a new landmark in the neighborhood.

**ON A HOT** June day in Washington Canal Park, swimsuited kids kicked a ball as they splashed around a shallow fountain. Close by, a mother hung a piñata from one of the park's looping metal sculptures by artist David Hess. If you looked north, you could see a solitary woman doing yoga on the grass. To the south, people in Washington Nationals caps drank iced tea and Bloody Marys at an outdoor café.

That might seem like a lot of activity for a 3-acre park, especially in a newly redeveloped neighborhood. But it's exactly what the designers had in mind. "It's jam-packed," says Steve Benz, the partner in charge of the project at the landscape architecture firm Olin. "The intention was to provide a diversity of activities and places that would appeal to a wide range of people."

Washington Canal Park opened late last year, one small piece of a new multibillion-dollar district that is emerging on the north bank of the Anacostia River in a once-neglected section of Washington, D.C. Just a couple of blocks to the south, closer to the water, sits the 5-year-old Nationals baseball stadium, the main catalyst for the emerging Capitol Riverfront area. Rising next to it is The Yards, a 5.5 million-square-foot mixed-use development with a waterfront park by M. Paul Friedberg and Partners.

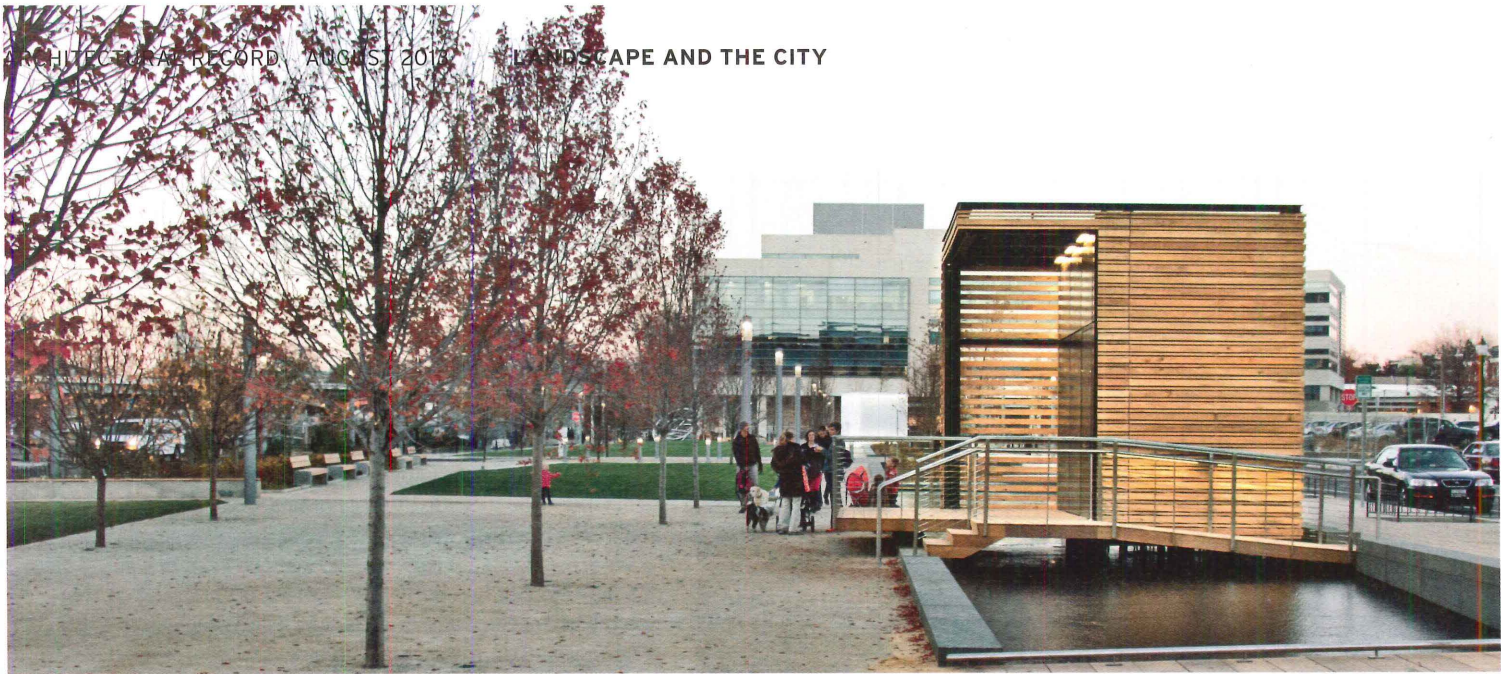
A few blocks inland, the Canal Park site was a less obvious candidate for regeneration. It had been a canal in the 19th century, connecting the Anacostia to the Potomac River. By the 1870s it was being used as an open storm sewer, and in the first part of the 20th century—following reports of passersby falling in and drowning—it was paved over. The District of Columbia acquired the site in the 1940s and most recently used it as a parking lot for school buses.

In the early 2000s, plans coalesced for a new federal Department of Transportation headquarters near the site and the redevelopment of a large public housing complex into a mixed-income residential project. The city eyed the former canal as a centerpiece of the reborn neighborhood. It set up a public-private partnership with developer WC Smith to fund and oversee the project. "We were brought in to create a park for a neighborhood that did not yet exist, using public open space as an economic driver," says David Rubin, the project's original lead designer, who has since left Olin and is now a partner at Land Collective.

The design team responded by knitting a host of spaces and functions into a varied but cohesive landscape. The park stretches across three narrow blocks. The northern block is the most passive and "serene," says Benz, with a bosquet of trees leading to an expanse of grass. The middle block mixes pastoral spaces with active ones, like the fountain. Floating above the water is a small pavilion for performances.

The southernmost block is the busiest, with a 250-foot-long ice-skating loop that defaults to a gathering space in warmer seasons, and a 4,000-square-foot pavilion that houses the Park Tavern restaurant, restrooms, and a skate-rental booth. Working closely with Olin, architects from Studios Architecture designed the structure to suggest that the landscape is peeling up. At the base, a concrete plate forms a bench where people can lace their skates, and then it folds sharply to become a set of stairs up to the sedum-planted roof. Above the skate rental booth a white acrylic cube hovers, both a beacon and a projection screen for movies and art.

The building's small footprint and 360-degree visibility were tough constraints, says Brian Pilot of Studios, who led the pavilion design with David Burns. "There's no back side, no alley



credits

**ARCHITECT:** Olin – David Rubin and Steve Benz, partners; Sophie Robitaille, associate; Kathy Lynch, project manager; Shu-Fang Liu, senior landscape architect

**PAVILION ARCHITECT:** STUDIOS Architecture

**ENGINEERS:** VIKI Capitol (civil); Nitsch (stormwater); Joseph R. Loring & Associates (m/e/p); SK&A (structural)

**CONSULTANTS:** Lynch & Associates (irrigation); Design Theorem (signage)

**CLIENT:** Canal Park Development Association

**GENERAL CONTRACTOR:** DAVIS

**SIZE:** 137,500 square feet

**COST:** \$16.5 million

**COMPLETION DATE:** November 2012

SOURCES

**CUSTOM METAL FABRICATION:** Crystal Metalworks

**SITE STONE:** Janiero

**ACRYLIC LIGHT CUBES:** 3form

**SITE LIGHTING:** HessAmerica (light poles and bollards); B-K Lighting (catenary lights)

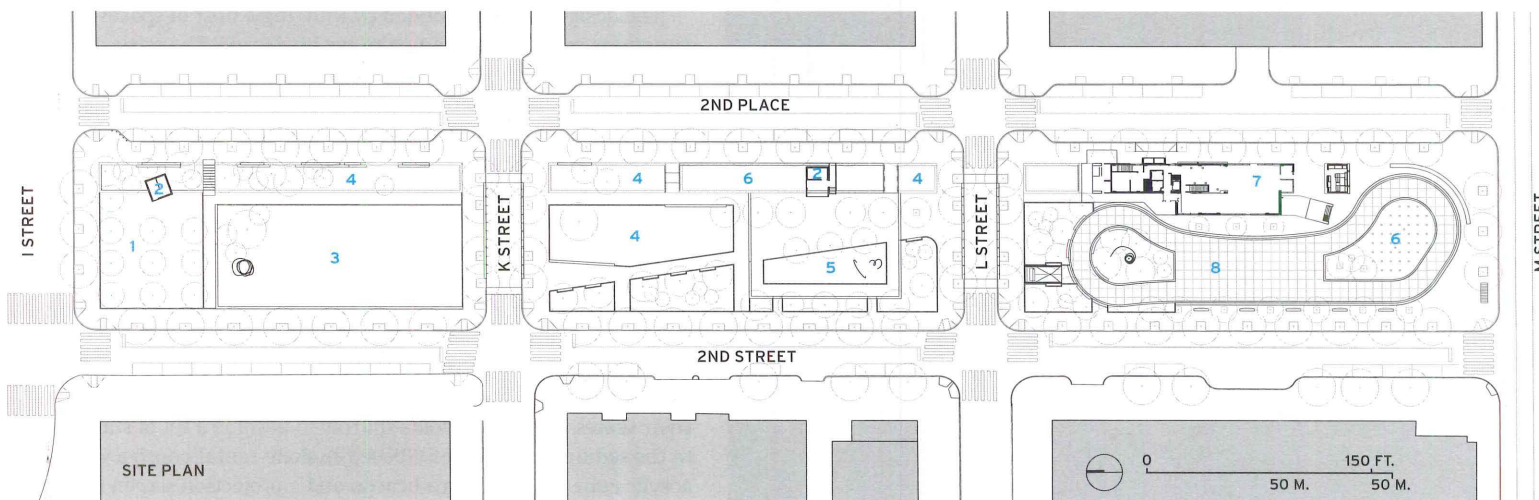
side. The roof is an equally important elevation, with neighboring buildings looking down on it.”

Not visible are the below-grade systems that make Canal Park a working landscape. Large cisterns hold storm water that supplies the fountain, the irrigation system, the ice rink, and the toilets. Ample rain gardens on the eastern edge of the site filter runoff, and geothermal wells heat and cool the Tavern. A pilot project for the Sustainable Sites Initiative, a voluntary set of guidelines and benchmarks for landscape design, the park treats 100 percent of the storm water that hits it—and the neighboring three developments.

Between the Canal Park’s November opening and the end of February, almost 20,000 people used the skating rink, well beyond expectations. In the warmer weather, the park hosts a farmers’ market, movie nights, and lunchtime concerts. Since it’s not located on a major thoroughfare, it “has to try a little bit harder to get noticed,” Pilot says—and, so far, it seems to be working just fine. ■

**URBAN VITALITY**  
In the central section of the three-block park, a pavilion clad in black locust slats (above) accommodates open-air performances. The ice rink (opposite, top and bottom), which becomes a social space in summer, gives the park its pulse, with visitors skating around its loop or congregating by the restaurant when the weather warms up.

Amanda Kolson Hurley is a freelance writer based in Washington, D.C.

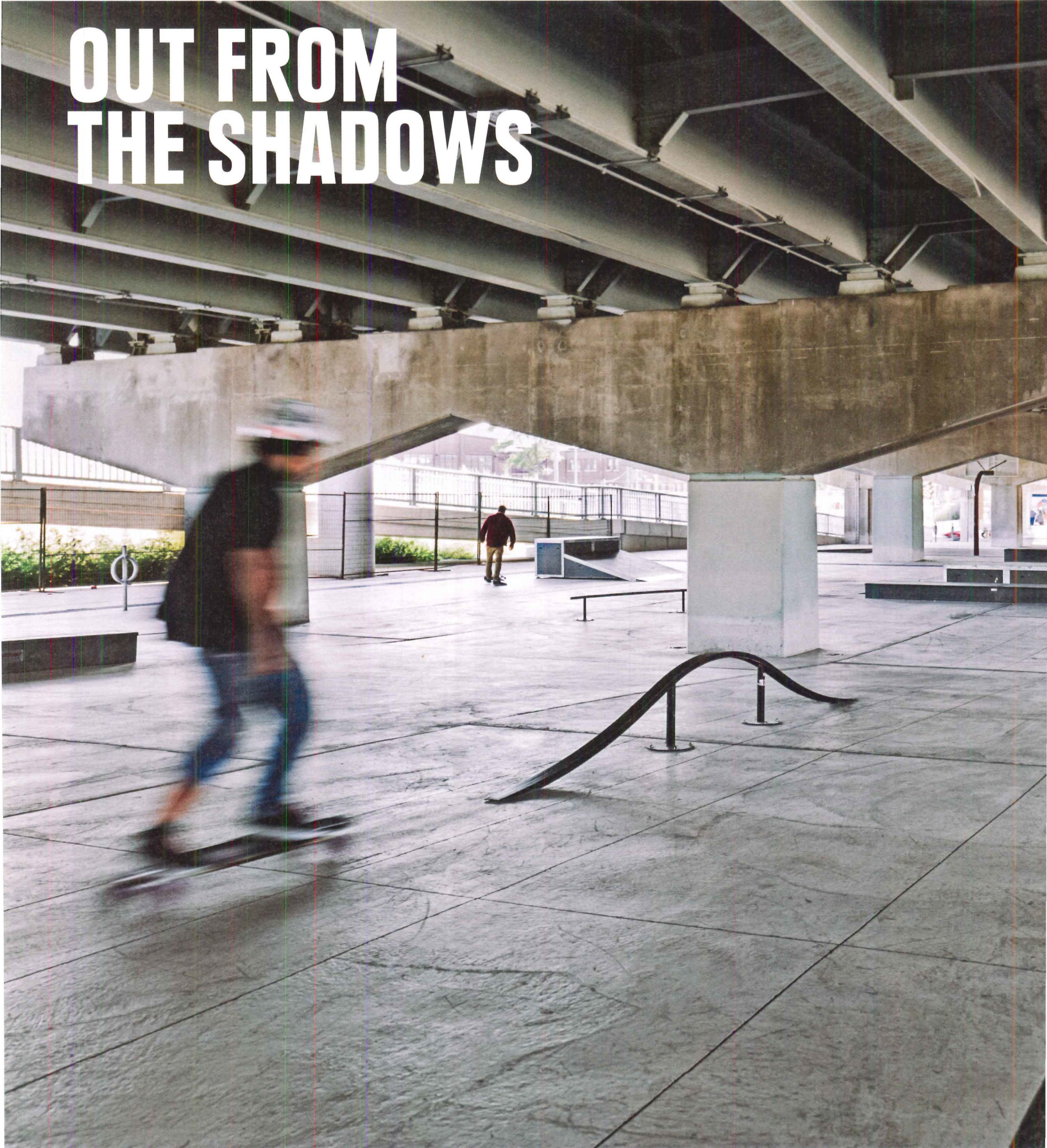


- 1 TREE GROVE
- 2 PAVILION
- 3 LAWN
- 4 RAIN GARDEN
- 5 PLAY AREA
- 6 FOUNTAIN
- 7 PAVILION AND RESTAURANT
- 8 ICE-SKATING RINK/GATHERING SPACE



Underpass Park | Toronto | PFS Studio

# OUT FROM THE SHADOWS



Finding useful public space in an unlikely location, Toronto transforms a highway underpass into a lively park that glows at night.

BY LISA ROCHON

PHOTOGRAPHY BY DOUBLESPEACE

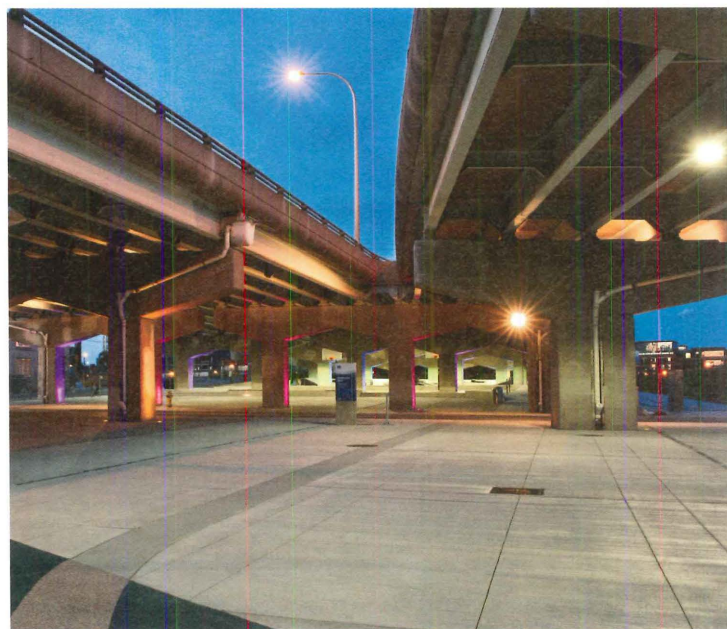


**DARK AND NEGLECTED**—that’s the kind of derelict space that lurks below most highways and elevated roadways. Cities in the process of densifying, however, can no longer afford to ignore such concrete underbellies. Toronto, which has been busy completing 70,000 residential units between 2008 and 2012—mostly condominium apartments—recently opened Underpass Park, a gutsy template that repairs a previously marginalized urban zone in the city’s East End neighborhood.

Below two elevated overpasses and a stone’s throw from the Don River, Underpass Park encompasses 2.5 acres—enough room for swings and climbing structures for children on one side of a narrow road and basketball courts and a skateboarding terrain for teenagers on the other side. The area is bounded to the north by the leafy Riverdale neighborhood, with its traditional “bay ‘n’ gable” brick homes, and to the east by the slightly edgier community of Leslieville, with film studios and vintage shops lining Queen Street East.

During a sudden rain shower this spring, about 20 young men hustled to Underpass Park to shoot hoops, glad for the roadway over their heads. A few teenagers on skateboards rode the park’s undulating metal railings and concrete ledges, while others sipped from the water fountains. Softening the edges of all the hard surfaces, more than four dozen Kentucky coffee and black locust trees rise in the gap separating the elevated Richmond and Adelaide ramps running off the Don Valley Parkway.

Designed by the Vancouver-based landscape architecture firm Phillips Farevaag Smallerberg (PFS) in collaboration with The Planning Partnership, a Toronto-based planning, urban design, and landscape architecture firm, the \$9 million Underpass Park is part of an ongoing effort by the



**PLAYING AROUND** What had been a dark area separating the Don River from downtown now attracts skateboarders, basketball players, and other active people (left). The 2.5-acre park also includes a playground for small children and places for people to just sit and relax. Colored lighting on the highway’s structural columns enlivens the area at night (above).

[View additional images at architecturalrecord.com.](http://architecturalrecord.com)

publicly funded agency Waterfront Toronto to reimagine public space below and around major transportation links.

"The park is really about the everyday," says PFS's Greg Smallenberg. It helps to bind together two large development parcels in the new West Don Lands neighborhood: to the north, the stunning black-glass mid-rises by Saucier + Perrotte Architectes and, directly south, the 18-acre Corktown Common, which opened last month; it was designed by Michael Van Valkenburgh Associates as a recreational park that doubles as a flood-protection zone.

"The thing about all of this transportation infrastructure littering our cities is that it isn't going away," says Smallenberg. "As open-space resources continue to dwindle in our cities and urban populations and densities increase, we have to take advantage of whatever open spaces we have."

Transforming a squat and grim space requires imagination—and inventive illumination. *Mirage*—an artpiece by Toronto's Paul Raff Studios consisting of octagonal panels of reflective metal suspended from one portion of the overhead highway—adds life to the park by bending light and creating watery reflections of people passing below. And lights projected onto the highway's concrete columns help animate the space as they cycle through the color wheel.

Activating the city's in-between areas is a tall order, especially where the floor-to-ceiling height is less than 20 feet (as it is at Underpass Park). The east section of the park, with

the hoops and skateboard amenities, is the most popular and best suited to the hard edge of the gritty environment. Less successful is the playground, its equipment looking bereft and difficult to love on concrete paving. Not surprisingly, children rarely gather there. The colored lights on the columns are subtle to read, even at night. Some daylight does bounce off Raff's artwork, but a larger reflective array would have incited a deeper transformation of the space.

Waterfront Toronto is charged with the revitalization of 2,000 acres of the city along the edge of Lake Ontario. With the Pan American Games opening in June 2015, the agency is under pressure to complete as many of its public spaces and housing developments as possible. Compared to high-profile waterfront parks in Toronto such as Sugar Beach or Sherbourne Commons, Underpass Park is a sleeper, except to those with skateboards or basketballs.

What to do with the Gardiner Expressway, another elevated highway that cuts through downtown Toronto, is currently provoking debate. Six design teams—including Diller Scofidio + Renfro—recently unveiled proposals for reinventing the Gardiner, above and below its massive ramps. While this discussion will probably rage for years, possibly decades, architects and planners might want to check out Underpass Park to see what works and what doesn't. ■

Lisa Rochon is the architecture critic for The Globe and Mail.



**MULTIPLE IMPRESSIONS** An artpiece entitled *Mirage* by Paul Raff Studios hovers overhead, reflecting light and color in its mirrored surfaces (left). In the evening, light is projected onto the soffits of concrete arches, slowly running through the color wheel (right). The effect of the light is subtle but helps give the underpass more allure than it had before.

#### credits

**DESIGN LANDSCAPE ARCHITECT:** PFS Studio – Greg Smallenberg, partner in charge; Nathan Brightbill, project landscape architect

**LANDSCAPE ARCHITECT OF RECORD:**

The Planning Partnership – David Leinster, Michael Ormston Holloway, design team

**ENGINEERS:** SCS Consulting Group (civil); Quinn Dressel Associates (structural)

**CONSULTANTS:** Hammerschlag + Joffe (lighting); ENVIRON (environmental)

**CLIENT:** Waterfront Toronto

**GENERAL CONTRACTOR:** UCC Group

**SIZE:** 2.5 acres

**COST:** \$9 million

**COMPLETION DATE:** Summer 2013

#### SOURCES

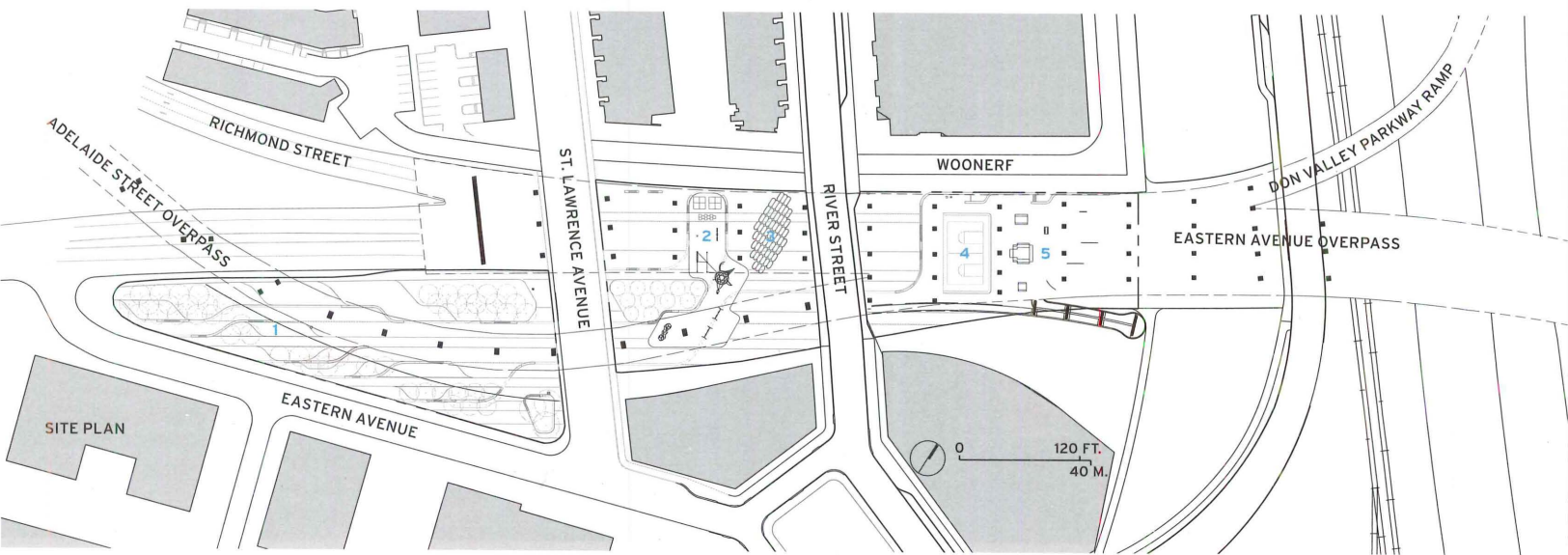
**RESILIENT PLAY SURFACE:** Rubaroc

**SKATE SURFACES:** Landscape Structures

**LIGHTING:** Illumivision (uplights); Cooper Lighting (area lights); Prisma (downlights)

- 1 PASSIVE PARK WITH WALL SEATING
- 2 CHILDREN'S PLAY AREA
- 3 COMMUNITY FLEX SPACE
- 4 BASKETBALL
- 5 SKATE AREA





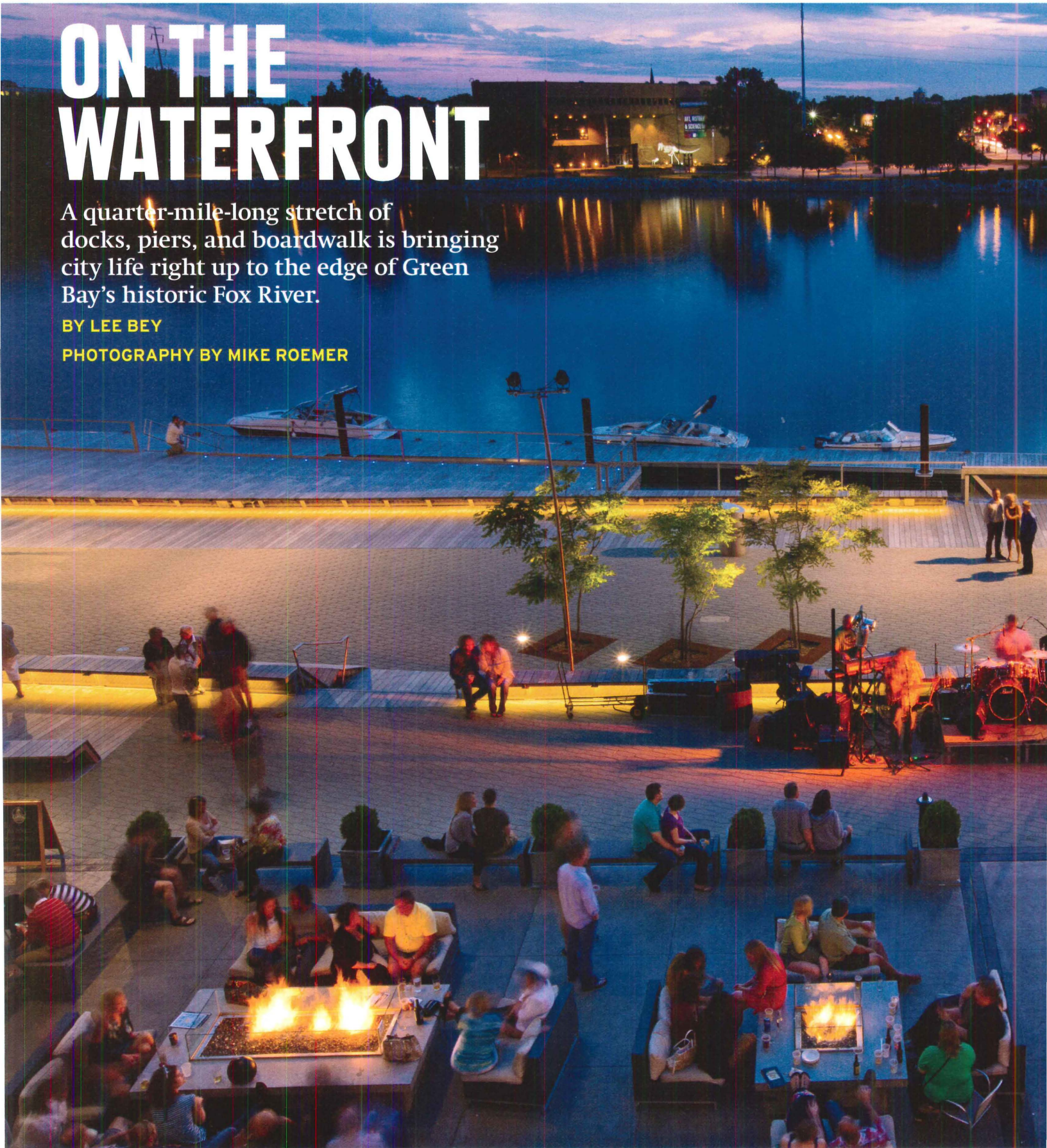
The CityDeck | Green Bay, Wisconsin | Stoss

# ON THE WATERFRONT

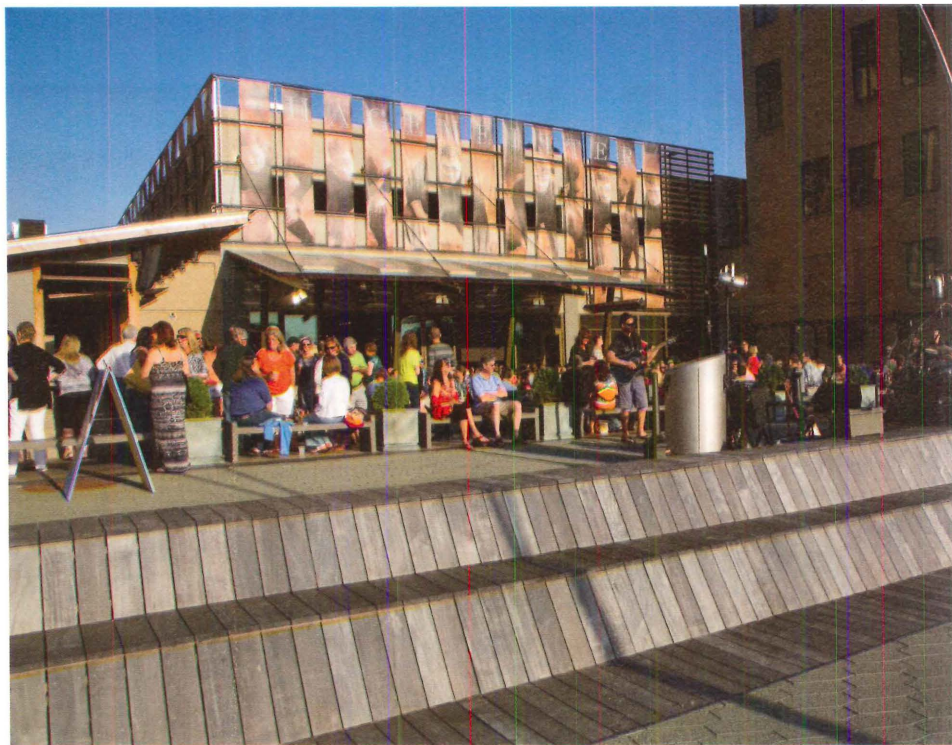
A quarter-mile-long stretch of docks, piers, and boardwalk is bringing city life right up to the edge of Green Bay's historic Fox River.

BY LEE BEY

PHOTOGRAPHY BY MIKE ROEMER







**HOT SPOT** After three years of construction along Green Bay's Fox River, CityDeck now brings residents to the waterfront for lunch breaks during the day and all kinds of dining and entertainment during the evening (left). Landscape architects at Stoss used a variety of materials for the walking surfaces, including ipé wood (above) and hexagonal-shaped concrete pavers that they designed themselves.



**FOUR YEARS** ago, the quarter-mile-long stretch of land along the Fox River, about a block from downtown Green Bay, Wisconsin, was mostly a simple path and a large empty space behind a mall parking structure. Today, the 2.5-acre site presents a very different scene. On the first day of summer, office workers are taking a midday stroll on the Fox River bank. A muscular guy with three trotting dogs glides by on a bicycle. And in a perfect—almost nostalgic—warm-weather tableau, two boys sit at the water's edge, preparing their poles and lines for a day of fishing. "It was not highly developed at all," says Michelle Bailey, a downtown worker taking a minute from an afternoon stroll. "But now, there are people here. Things are different." "It was nothing," adds Bailey's colleague Linda Myers. "Now it's coming alive."

The transformation comes courtesy of the CityDeck, a \$14 million public boardwalk with docks, landscaping, and open space built in three phases between 2009 and 2012. The project has activated the water's edge and brought the city of 106,000 closer to the eastern shore of the historic river, which flows into Lake Michigan at Green Bay. It has also served as a catalyst for real estate development on the blocks closest to the river.

"We wanted to create a place that touched the minds and the hearts of Green Bay," states Chris Reed, principal of Stoss Landscape Urbanism, the Boston firm that designed CityDeck. Reed says his firm and Green Bay's civic leaders wanted a project in which "you can enjoy the city and the river. And as it came to fruition over the last three years, you saw that happening."

CityDeck begins near a line of commercial, retail, and residential buildings that create a mixed-use zone facing the riverbank. Landscaping and a north-south path laid with elongated hexagonal concrete pavers attract pedestrians, cyclists, and joggers. But the waterfront complex changes character as it terraces down closer to the river. The pavers transition to a modern boardwalk made of durable ipé wood that yields a solid, old-school "clump-clump" sound when trod on.

"We said, 'If this is a river town, it should have a boardwalk,'" Reed recalls. He



SITE PLAN



- 1 CAFÉ TERRACE
- 2 MIXED-USE  
COMMERCIAL-  
RESIDENTIAL
- 3 RESIDENTIAL
- 4 SHOPKO LANDING
- 5 AMPHITHEATER
- 6 DOCKS
- 7 PINE ST. STEPS &  
STAGE
- 8 WATER FEATURE
- 9 LAWN
- 10 CHERRY ST.  
LANDING
- 11 WALNUT ST. PIER



## credits

**LANDSCAPE ARCHITECT:** Stoss Landscape Urbanism – Chris Reed, principal in charge and design director; Scott Bishop, project manager and lead designer; Tim Barner, Cathy Braasch, Steve Carlucci, Jill Desimini, Adrian Fehrmann, Carl Frushour, Kristin Malone, Chris Muskopf, Susan

Fitzgerald, Jana Kienitz, Lisl Kotheimer, Bryan Miyahara, Graham Palmer, Meg Studer, Sarah Wright, design team

**ENGINEERS:** GRAEF (structural); Clark Dietz (plumbing, electrical); AECOM (geotechnical and civil)

**CONSULTANTS:** Vetter Denk

Architects (urban design); LightThis (lighting)

**CLIENT:** City of Green Bay

**GENERAL CONTRACTOR:** The Selmer Co. (phase I); SMA Construction Services (phase 2)

**SIZE:** 109,000 square feet

**COST:** \$13.7 million

**COMPLETION DATE:** October 2012

## SOURCES

**UNIT PAVERS:** Wausau Tile (designed by Stoss)

**WATER FEATURE:** Aquadeux

**IRRIGATION SYSTEM:** Pentex

**LIGHTING:** Northern Electric



and his design team created substantial gathering spaces as well as quiet spots along the long wooden strip. The city programs these spaces with bands, outdoor dining, even movies. In one of its most visible features, portions of the boardwalk angle up, producing tilted surfaces on which sunbathers and sky-gazers can stretch out.

At the edge of the river, CityDeck juts toward the water, with overlooks, platforms, fishing piers, and boat docks. “We wanted to create this incredibly layered situation, so it wasn’t just one edge, but multiple edges,” Reed explains. “We designed it so it would go down to the river. By sloping it, we could give people a different perspective—while at the same time separating these movements from the main ones away from the river.”

A variety of construction methods and materials were used to create those layers. The overlooks are supported by concrete-filled pipe piles anchored in bedrock below the river. Stainless-steel X-braces between the piles keep the structure stiff against ice and other marine forces. Floating docks were designed to sustain live loads.

CityDeck also performs a less visible but important duty as a flood barrier between the Fox River and the nearby buildings. The new, engineered shoreline extends farther out in the river than the old one did, creating a deeper setback for the existing buildings. Reed explains that the team designed the project’s lower portions, which would

be at flood-stage positions during a storm, to let rising waters pass through them when necessary.

Green Bay Mayor Jim Schmitt championed CityDeck’s construction. “He put the weight of his office behind it,” Reed says. “He said, ‘Look, if we want to improve the quality of life in the city in general, we need to improve the quality of life downtown.’”

The tactic appears to be working, as the project has sparked construction and building rehabs along the river. In May the city announced plans for a \$10 million, 84-unit luxury apartment complex called CityDeck Commons scheduled to be completed by December 2014.

Meanwhile, the city’s planners want to make sure new developments don’t wall off CityDeck from downtown, so they have extended streets and sidewalks to provide easy pedestrian access to the project.

What’s next for the riverfront? Reed says people are discussing ideas for redeveloping the bank opposite CityDeck. “If CityDeck becomes this social hub, then across the river you could have wetland terraces,” he says, hinting at a potential new project that would be a soft, layered natural counterpoint to the angular hardscape of the existing one, but would grant the same easy access to the water. ■

*Lee Bey is a writer specializing in architecture and urban planning and a contributor for Chicago public radio station WBEZ.*

**STORM PROTECTION** The quarter-mile-long project not only provides docks, piers, and a boardwalk, but also serves as a flood barrier protecting the nearby buildings (above and opposite). The lower portions of the structure allow flood waters to pass through them.



“The Holcim Awards appeal to students, to professionals, to everybody who has an interest in sustainable construction and design. All can stand together and talk as equals in the arena.”

Reed Kroloff, Director, Cranbrook Academy of Art, USA.

**4<sup>th</sup> International Holcim Awards for sustainable construction projects. Prize money totals USD 2 million.**

**OPEN NOW  
FOR ENTRIES**  
[www.holcimawards.org](http://www.holcimawards.org)

Renowned technical universities lead the independent juries in five regions of the world. They evaluate projects at an advanced stage of design against the “target issues” for sustainable construction and allocate additional prizes for visionary ideas of young professionals and students. Find out more about the competitions at [www.holcimawards.org](http://www.holcimawards.org)

The Holcim Awards is an initiative of the Swiss based Holcim Foundation for Sustainable Construction. It is supported by Holcim and its Group companies and affiliates in around 70 countries, including the United States. Holcim Ltd is one of the world’s leading suppliers of cement and aggregates.



CIRCLE 33

 **Holcimawards**  
for sustainable construction



**It's okay to park and stare.**  
(We'll let you know if they're coming.)



**APEX Expanded**



**PEAK Perforated**



**SUMMIT Grating**

Architectural Metals



A GIBRALTAR INDUSTRIES COMPANY 

[www.amicoarch.com](http://www.amicoarch.com) | 800.366.2642



Mary Bartelme Park & Playground, Chicago, IL

## STYLE FLOWS THROUGH

When your vision calls for a permeable paver, there's no better option than Unilock®.

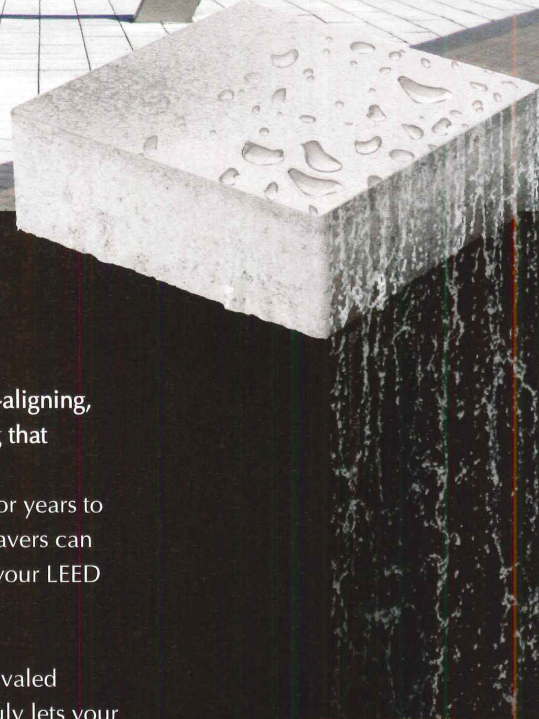
More than twenty years ago, Unilock introduced the first permeable paver to North America and since then we've steadily increased the number of sizes, shapes, colors and architectural finishes available.

Today, our EnduraColor™ Plus technology delivers superior surface durability that can be customized to bring your project vision to life with the natural look of granite, marble, limestone or even sandstone.



Unilock permeable pavers are self-aligning, structural pavers with joint spacing that complies with the Americans with Disabilities Act and will stay true for years to come. Plus, Unilock permeable pavers can help contribute toward achieving your LEED certification goals.

With national distribution and unrivaled product selection, only Unilock truly lets your style flow through.



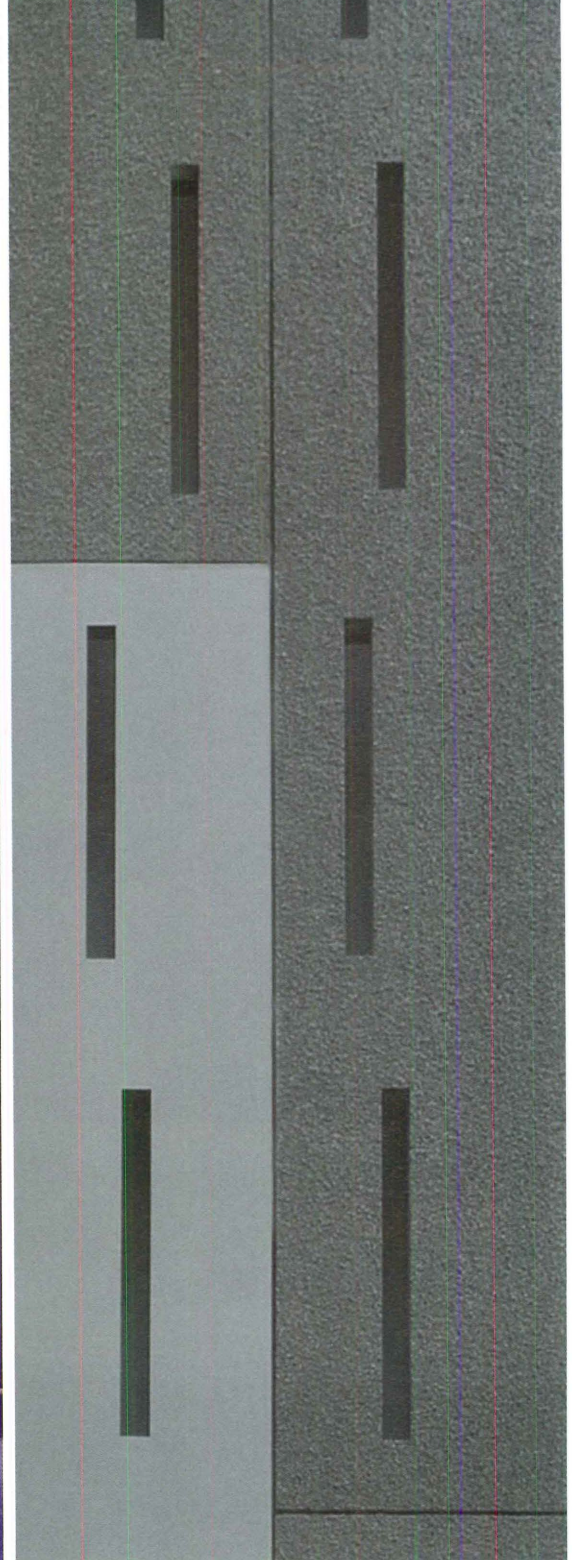
DESIGNED  
TO CONNECT.

Contact us to learn more and arrange a "Lunch & Learn". Call 1-800-UNILOCK (864-5625)

[UNILOCK.COM](http://UNILOCK.COM)



Project: AKA Beverly Hills  
Architect: Koning Eizenberg Architects  
Contractor: City Constructors, Inc.



## Discover Ultra High Performance Concrete Stronger. Lighter. Lower Cost.

TAKTL® offers a full line of architectural elements – including VECTR® facade and wall panels, corners, screens, louvers, and fins – made of TAKTL ultra high performance concrete. Uniting superior strength, durability, and environmental performance with a wide range of pattern, finish and color options, TAKTL will change the way you think about concrete.

ASTM C1186, Grade IV Certification  
Standard colors + finishes available in eight weeks  
Shown: Custom Natural, Dual Textured, Perforated

[www.taktl-llc.com](http://www.taktl-llc.com) | 412.486.1600

CIRCLE 37



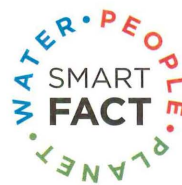
# TOTO



## PeoplePlanetWater™

IF IT BENEFITS PEOPLE, IF IT CARES FOR OUR PLANET, IF IT RESPECTS WATER, IT'S TOTO

TOTO wants you to know about every eye-opening way we've innovated the bathroom — *from EcoPower® flush valves and faucets, to our SanaGloss glaze that helps your toilet stay cleaner, longer* — but you don't have to remember them all. Instead, just keep three little words in mind: **People. Planet. Water.** They tell you everything we care about and everything we stand for.



TOTO EcoPower® sensor faucets are ideal for high-traffic commercial spaces, providing an elegant water conservation solution or LEED option. With as few as 10 uses a day, an EcoPower® product's battery can last up to 19 years.

**PEOPLE-FIRST INNOVATION**

[www.totousa.com](http://www.totousa.com) | 800-350-TOTO

CIRCLE 61



101 ADOBE SYSTEMS UTAH CAMPUS  
 106 ITALCEMENTI I.LAB  
 110 CONRAD N. HILTON FOUNDATION HEADQUARTERS

# Silicon Slope

Lehi, Utah

In the heart of ski country, WRNS Studio and Rapt Studio create a campus for software titan Adobe to bolster a sense of community and place. By Mira Locher

**JUST NORTH** of Lehi, Utah, busy Interstate 15 winds like a river past a new campus for the technology giant Adobe. Situated between the highway and the steep Wasatch Mountains, with typical suburban sprawl and billboards just across the highway, the 38-acre site is in motorists' full view. With its strong form and contemporary material palette, this first phase of the campus, by the San Francisco-based design firms WRNS Studio (the core-and-shell architect) and Rapt Studio (which designed the interiors), is a bold and visible symbol for the software company. Silicon Valley-based Adobe chose Lehi for its newest facility because of its proximity to outdoor recreation and to numerous other technology companies. While employees can enjoy the mountains and nearby Utah Lake, Salt Lake City is just a 25-minute drive north on I-15.

Despite its banality, the highway is "part of the topology of the place," says Brian Shiles, a principal at WRNS. It is "framed and captured as part of a larger painterly notion of landscape." This is clear in the parti sketch for the Adobe Utah Campus, which includes three long lines drawn on the site so as to embrace the valley and mimic the adjacent Wasatch Range. Those lines developed into three four-story







bar-shaped buildings, each bent slightly to follow the shifting topography and fit into the rough terrain. The first completed phase of the campus comprises a 200,000-square-foot office block and a connected 80,000-square-foot amenities building. The structures hug the ground in places and in others cantilever over it, with chamfered vertical metal fins rhythmically punctuating the steel-and-glass shell above the exposed concrete base.

The visual prominence of the highway was not the only challenge: a four-lane road also bisects the long, thin site. So the architects designed these first structures to be anchored firmly on the hillside and span the road as a graceful concrete bridge. Driving under the building on the approach makes for a dramatic introduction to the campus.

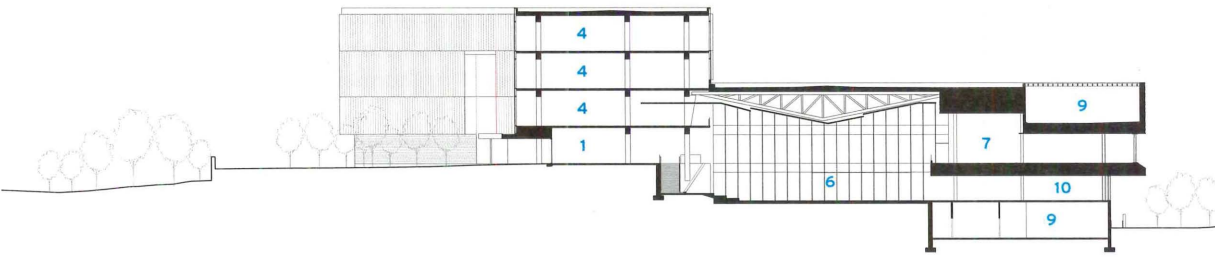
Textured poured-in-place concrete at the building's base links the refined steel-and-glass facades above with the rugged Utah landscape. Around the buildings, board-formed-concrete retaining walls demarcate planted areas and places to sit, while also defining paths to both the main entrance and the north employees' entry. One such textured wall extends into the double-height north lobby, marking the stair leading up to the main floor. There, a spacious corridor offers views to the eastern mountains and connects the north and central lobbies, as well as private meeting spaces and a well-appointed customer-briefing center, with its conference and presentation areas.

The upper floors similarly maximize views, which alternate from floor to floor between the mountains to the east and the valley to the west. Here and there, conference rooms or collaboration spaces push out from the core into the open-plan office spaces. The result is a sense of privacy in the open offices—remarkable in a building designed to house 1,000 workers with few individual offices. Rapt Studio design principal David Galullo explains, "We developed the idea of bringing neighborhoods to the work spaces, so there was some visual break to what the client called the 'sea of same.'"

An atrium connects the office block with the amenities building, which includes a full gym and locker rooms. It is where employees park their bikes after a lunchtime ride, blow off steam with a game of Ping-Pong or billiards, or take a



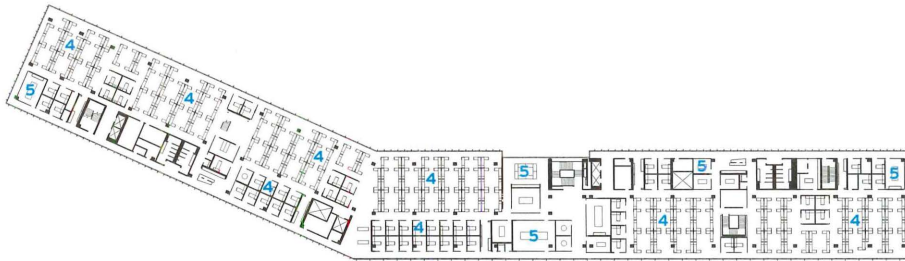
**INFORMATION SUPERHIGHWAY** The new Adobe Systems Utah campus straddles a four-lane road (above), its board-formed concrete base stepping over the thoroughfare and its steel-and-glass shell rising overhead. This first of three planned phases for the site comprises an amenities building (top, seen at right) and an office block (left), connected by a central atrium. Metal fins protrude from the steel-and-glass shell (left and above), shading interiors from the sun and punctuating the facade.



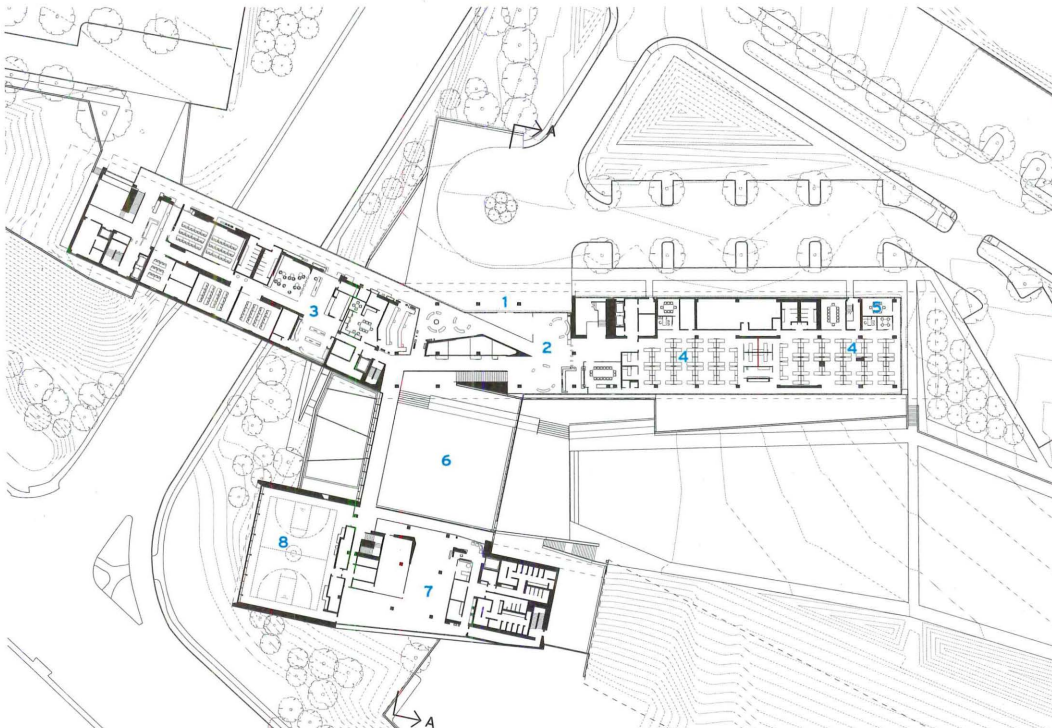
SECTION A - A

0 100 FT.  
30 M.

- 1 MAIN ENTRY
- 2 LOBBY
- 3 CLIENT BRIEFING CENTER
- 4 WORKSPACE
- 5 CONFERENCE ROOM
- 6 ATRIUM
- 7 FITNESS CENTER
- 8 GYM
- 9 MECHANICAL
- 10 KITCHEN



LEVEL 3 FLOOR PLAN

0 100 FT.  
30 M.

LEVEL 1 FLOOR PLAN

0 100 FT.  
30 M.

### credits

**ARCHITECT:** WRNS Studio – Bryan Shiles, design partner; Sam Nunes, partner in charge, project manager; Brian Milman, project architect

**INTERIOR DESIGN:** Rapt Studio – David Galullo, design principal; Kristin Salzman, project manager; Nathaniel Haynes, project architect

**ASSOCIATE ARCHITECT:** GSBS Architects  
**ENGINEERS:** Dunn Associates (structural); Colvin Engineering Associates (mechanical)

**CLIENT:** Adobe

**GENERAL CONTRACTOR:** Okland Construction

**SIZE:** 280,000 square feet

**COST:** \$74 million

**COMPLETION DATE:** November 2012

### SOURCES

**GLAZING:** Viracon (glass); Construction Specialties (custom expansion joint); VaproShield (moisture barrier)

**ROOFING:** Sika Sarnafil (single-ply membrane)

**DOORS:** Kawneer (entrances); Ingersoll Rand (hardware); McKeon Door Co. (fire control)

**INTERIOR FINISHES:** Armstrong (acoustical ceilings); Benjamin Moore (paints and stains)



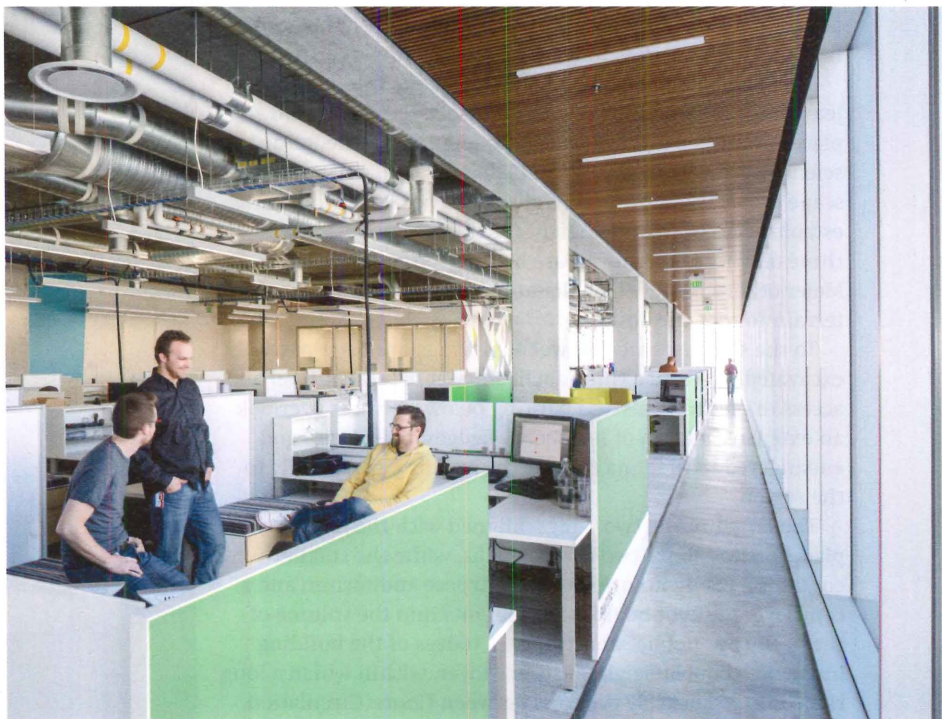
**SOCIAL NETWORK** The double-height atrium (above) provides employees a space for informal meetings, meals, and recreation, with Ping-Pong and billiards tables available to all. Open work spaces on the office wing's upper levels (below) have views either out to the eastern mountains or western valley, depending on the floor.

break in the gaming “dungeon” or the piano room. Just outside, to the south, a soccer field and a basketball court beckon, while an enclosed full-size basketball court juts over the north end of the sloping site with long views out across the highway.

While the recreation spaces are important elements of the work environment, the heart of the campus is the atrium café facing the “campus green.” Employees share meals and work individually or in small groups at tables and long wood counters. Distinguished by its faceted wood slat ceiling, the space accommodates the entire workforce when management calls an all-hands meeting.

Straightforward and sophisticated in both its architecture and its ability to build community, this first phase of the Adobe Utah Campus is an eye-catching addition to the landscape along Interstate 15. It was important to Adobe that “the story of the building starts at the freeway and the design is meaningful for the inhabitants,” says Galullo. Shiles adds, “Adobe really wanted to say ‘we’re here’ with drama and a sense of place.” ■

*Mira Locher, AIA, LEED AP, is a writer and practicing architect working in the U.S. and Japan. She is also an associate professor at the school of architecture at the University of Utah.*



# Material Witness

Milan

Richard Meier & Partners' elegant solution for an Italian cement company makes inventive use of concrete. By Chris Foges

**LABORATORY BUILDINGS** are often the graveyard of architects' good intentions, as stringent technical requirements leave little room for environmental and aesthetic concerns. Richard Meier & Partners' i.lab is an exception: the LEED Platinum-accredited research center near Milan provides flexible climate-controlled chemistry labs and material-testing facilities for cement company Italcementi. Its secondary role as a place for meetings and public events means it also demanded an appropriately expressive architecture.

The richness of that expression is exemplified by the projecting bladelike roof that shades the curtain-walled entrance hall at the tip of the building's V-shaped plan. The steel-trussed structure is clad with precast panels of white self-cleaning concrete also used for window mullions and louvers. It serves simultaneously as a demonstration of Italcementi's technical capabilities, a welcoming gesture, and a reference to the 150-year-old company's birthplace in neighboring Bergamo, Italy, to which it points like an arrow.

The structure also makes an elegant conclusion to the Jean Nouvel-designed *Kilometro Rosso*, a red metal wall placed alongside a busy highway to identify the fledgling science park within which the i.lab is located, amidst a landscape of farms and commercial sheds. The 33-foot-tall wall established a maximum height for the laboratory building—three of whose four stories are below ground level—but Meier otherwise relied on distant views and manipulated terrain to root the building.

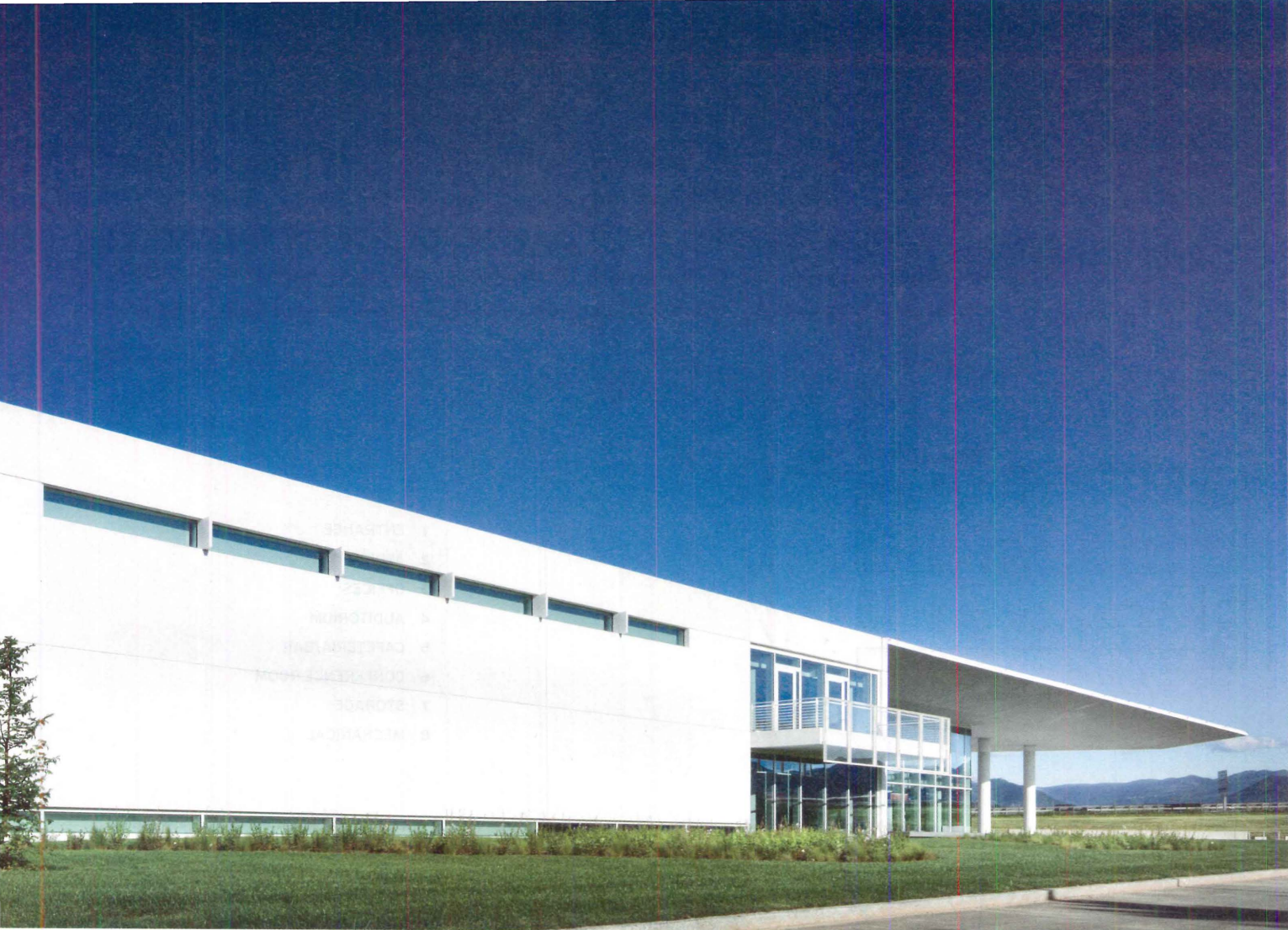
To the south, a space between its wings has been partially excavated to create a third daylighted story at basement level and access to mechanicals and parking below. Terraces overlook an extensive garden of hornbeam hedges, fruit trees, and endangered local fauna that tie the building specifically to the region.

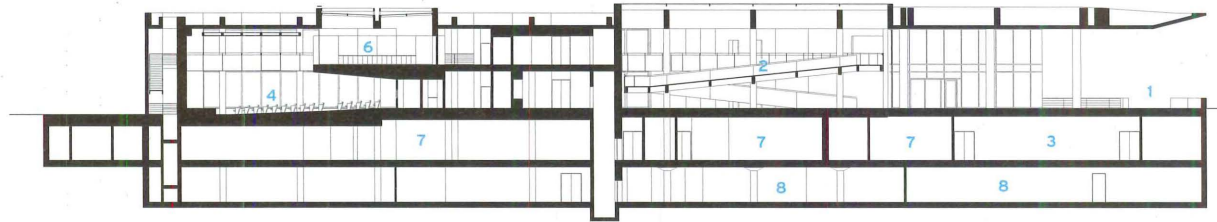
The larger of the two wings, aligned with the highway, places offices above two floors of labs, while the smaller contains a coolly luxurious multipurpose auditorium and a cantilevered skylit boardroom that juts into the volume of the hall. The "public" and "private" halves of the building hinge on a double-height entrance foyer, within which a long ramp allows leisurely progress between floors. Circulation

## WHITE LIGHT

A white photocatalytic "smog-eating" concrete clads the east facade (right). It is also used for precast louvers on the north facade (below) and for mullions. Sixty percent of the envelope is high-performance triple-glazing, allowing light into offices and the entrance hall (below right).







SECTION A - A

0 60 FT.  
20 M.



GROUND FLOOR

- 1 ENTRANCE
- 2 ATRIUM
- 3 OFFICES
- 4 AUDITORIUM
- 5 CAFETERIA/BAR
- 6 CONFERENCE ROOM
- 7 STORAGE
- 8 MECHANICAL

0 60 FT.  
20 M.

credits

**ARCHITECT:** Richard Meier & Partners – Richard Meier, Dukho Yeon design principals; Vivian Lee, Simone Ferracina, project architects

**ASSOCIATE ARCHITECTS:** Studio Sonzogni; Studio Fiumana

**ENGINEERS:** Ing. Gennaro Guala, Italcementi CTG, Studio Marco Verdina (structural); Serving s.r.l. (m/e/p)

**CLIENT:** Italcementi Group

**GENERAL CONTRACTOR:** Impresa Pandini

**SIZE:** 248,000 square feet

**COST:** \$51.8 million

**COMPLETION DATE:** April 2012

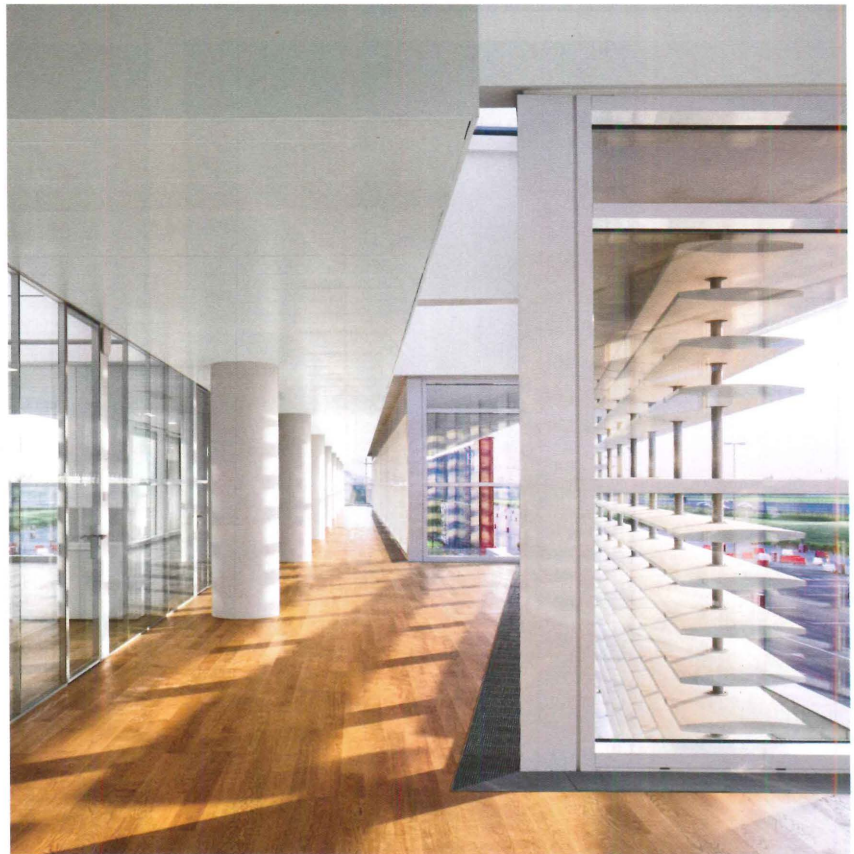
SOURCES

**CURTAIN WALL:** Schüco (extrusions); Guardian (glass)

**PRECAST CONCRETE:** Styl-Comp

**TRANSPARENT CONCRETE PANELS:** Italcementi

**FINISHES:** Interface (carpet); Ceramiche Signorelli (hardwood floors)







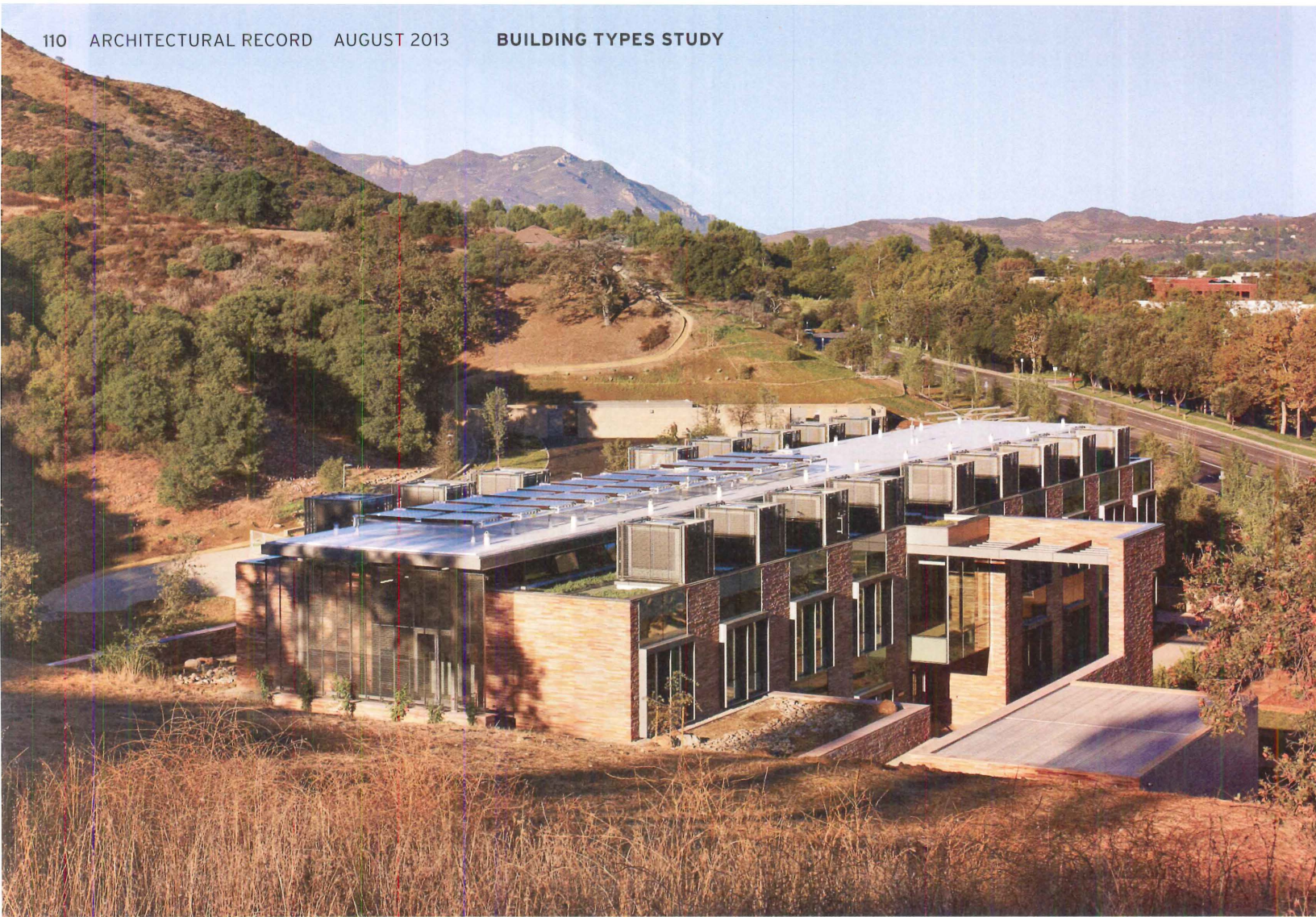
space in the work areas—where glass-walled labs and offices are pulled back from the roadside edge to create a broad route along the perimeter—is also designed to encourage chance encounters. “The idea of promenade is there in all of our projects,” explains Meier. “It creates a kind of interaction between people that is good for the company.” The space also forms an acoustic buffer, so that from desks and lab benches the busy highway registers only as a silent, somewhat hypnotic moving picture.

The building’s defining quality is daylight, which spills in everywhere, flooding elevator shafts through roof windows and drawn into basement labs via sunken courtyards. Sunlight is also bounced by pools of water onto the sloping concrete soffit of the foyer. It lends variety and animation to the white interior. (“White is not a color,” remarks Meier. “It

is a spectrum of possibilities depending on light.”) And the control of daylight, filtered by discreet shading devices to mitigate glare and heat gain, reveals the building’s technical intelligence.

Italcementi’s deputy director of innovation, Enrico Scalchi, admits to having been initially alarmed by “the white and the light, both of which are huge,” though adjustment came easily for him. Scalchi also adjusted to reduced privacy in individual work areas and the increased informal cooperation fostered by shared spaces. The lab, he says, embodies the emergent strands of Italcementi’s “DNA”—innovation and sustainability, predictably enough, but also tradition, local roots, and “love of architecture.” It is a building whose apparent simplicity belies a delicate handling of both form and content. ■

**INSIDE AND OUT**  
Skylights draw daylight inside (above) and share roof space with an array of photovoltaic and solar thermal panels. Geothermal wells extending 330 feet underground reduce energy demand for cooling by 25 percent, and for heating by half. The louvered screen (opposite) masks the view of the Milan-to-Venice expressway with sculptural élan.



## Home on the Range

Agoura Hills, California

In the foothills near Los Angeles, ZGF Architects creates a serene, environmentally sensitive new HQ for the Conrad N. Hilton Foundation. By Asad Syrkett

**AGOURA HILLS**, California, is an affluent bedroom community 30 miles northwest of central Los Angeles, marked by lush valleys and broad canyons. But its building stock is less picturesque: along U.S. Route 101, which runs through this small city of about 20,000, drivers are more likely to see banal red-clay-tile-roofed strip malls and gas stations than anything architecturally attractive or intriguing. So the new Conrad N. Hilton Foundation Headquarters, by ZGF Architects' Los Angeles office, is a welcome change of pace. The 22,240-square-foot, \$24 million building is a simple rectangular volume clad in strips of auburn, burnt-orange, and deep-yellow split-face sandstone evoking the area's vivid landscapes. The Hilton Foundation, a 69-year-old nonprofit organization, has made its mission "improving the lives of disadvantaged and vulnerable people throughout the world." It didn't just want a beautiful new office, but one that reflects the foundation's altruistic goals and acts as a model of sustainable design for other organizations across the globe.

The finely detailed, LEED Platinum-certified headquarters, designed for net-

zero energy consumption, is the first of four two-story office buildings planned for the 67-acre site. The long, narrow rectangular shape allows daylight into and views out from most of its interior spaces, which include an airy entry, offices (along the center's perimeter), three conference rooms, and central cubicle workspaces on both levels. Among its many green features—a solar thermal-heating system, water-cooled chilling, a planted roof—the building employs a passive-downdraft HVAC system, which provides ventilation and cooling for the 49 occupants. The system comprises 17 downdraft shafts or "chimneys" that punctuate the building's perimeter at regular intervals. Air travels down these shafts, entering the floors of the second and ground levels. "The passive-downdraft system takes advantage of Agoura Hills' moderate weather," explains Andrew Corney, vice president at environmental design consultancy WSP Built Ecology. "If you have a good ventilation system, you really don't need to put much energy into it."

As in a Swiss watch, these mechanical systems are concealed behind carefully selected finishes. In the lobby, glass balustrades, alabaster-hued marble flooring, and FSC-certified European ash veneer on the walls create a bright, serene atmosphere. Large windows in offices and conference rooms help bring ample daylight into the space, and clerestory windows above offices allow sunlight to filter into central circulation areas. On a recent visit, workspaces on



both levels of the two-story building were brightly, naturally illuminated, despite a predawn fog outside that obscured most direct sun. “During the day, many offices don’t use the overhead lighting at all,” says Katherine Miller, the foundation’s facilities manager. Absent, then, is the faint buzz of fluorescent fixtures or the whirl of overworked mechanical systems. Instead, walking around the foundation’s new home instills a distinct sense of calm.

In addition to the abundance of light and air inside the building, the relationship between the foundation’s interior and exterior spaces contributes to that tranquility: on the first floor, a large conference room opens up to a terrace. Employees are encouraged to take their lunch breaks or gather for informal meetings outside, and the Santa Monica Mountains to the south, Palo Comado Canyon to the northeast, and nearby Ladyface Mountain provide a remarkable backdrop. Public areas, offices, and open workspaces on both levels look out on the surrounding ranges, free of visual clutter from HVAC equipment.

The building’s systems do have an aesthetic presence, more subtle inside than out. Most of the building’s chimneys straddle two offices, for example, so that no one person has a whole shaft in his or her space, says ZGF partner Braulio Baptista. Outside, these chimneys are less discreet, jutting above the roof plane and breaking its continuity. The awkwardness of the this move is the tradeoff for hyper-efficient

#### IN THE WILD

The 22,240-square-foot Conrad N. Hilton Foundation HQ (opposite) sits at the base of Ladyface Mountain, to the northwest of the Santa Monica Mountains. The hilly site provides a stunning backdrop for employees gathering on a terrace along the building’s north side (above). Metal window frames, which surround automated shades, protrude from the smooth planar expanses of the split-sandstone walls.

#### credits

**ARCHITECT:** ZGF Architects

**ENGINEERS:** WSP Flack + Kurtz/WSP Built Ecology (m/e/p); KPFF Consulting Engineers (structural); Stantec (civil)

**CONSULTANTS:** Van Atta Associates (landscape); David Nelson & Associates (lighting)

**CLIENT:** Conrad N. Hilton Foundation

**GENERAL CONTRACTOR:** MATT Construction

**SIZE:** 22,240 square feet

**COST:** \$24 million

**COMPLETION DATE:** October 2012

#### SOURCES

**CONCRETE:** Largo

**GLAZING:** Viracon (glass)

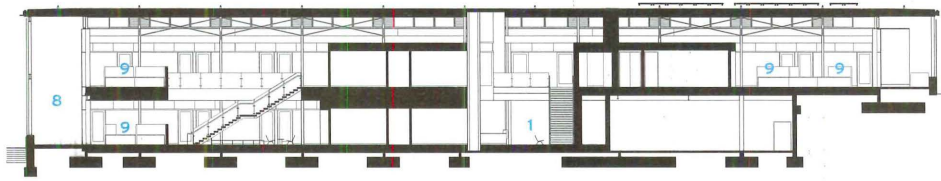
**ROOFING:** Sika Sarnafil (low-slope)

**FINISHES:** Vista Paint (paints and stains); Johnsonite, Heath Ceramics, (floor and wall tile); Haworth (flooring)

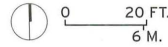
**FURNISHINGS:** Herman Miller (chairs, other furniture); Nienkämper, JANUS et Cie (tables)

**LIGHTING:** Philips (task); WattStopper, Lutron (controls)

**ELEVATORS/ESCALATORS:** KONE



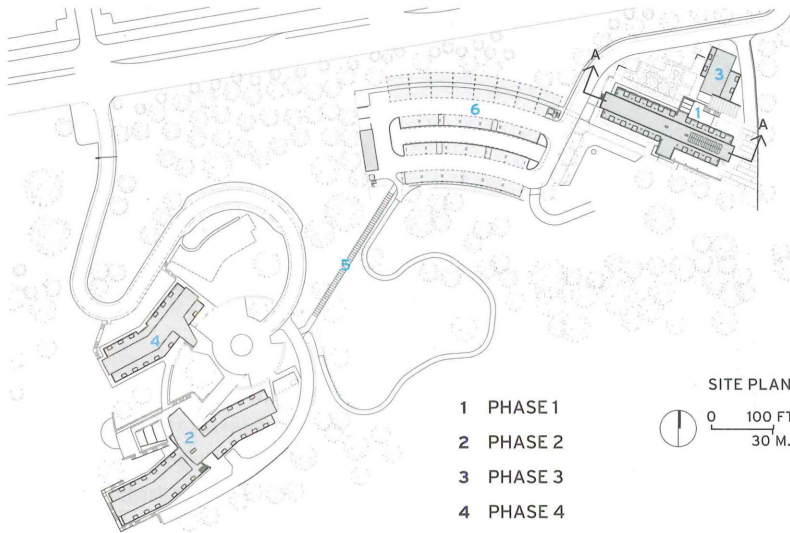
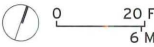
SECTION A - A



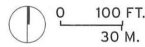
- 1 LOBBY
- 2 OFFICES
- 3 BOARDROOM
- 4 KITCHEN
- 5 PANTRY
- 6 MECHANICAL
- 7 STORAGE
- 8 TERRACE
- 9 OPEN WORKSPACE



FIRST FLOOR



SITE PLAN



- 1 PHASE 1
- 2 PHASE 2
- 3 PHASE 3
- 4 PHASE 4
- 5 FUNICULAR/CABLE TRAMWAY
- 6 PARKING

mechanical systems that keep occupants comfortable and energy use low.

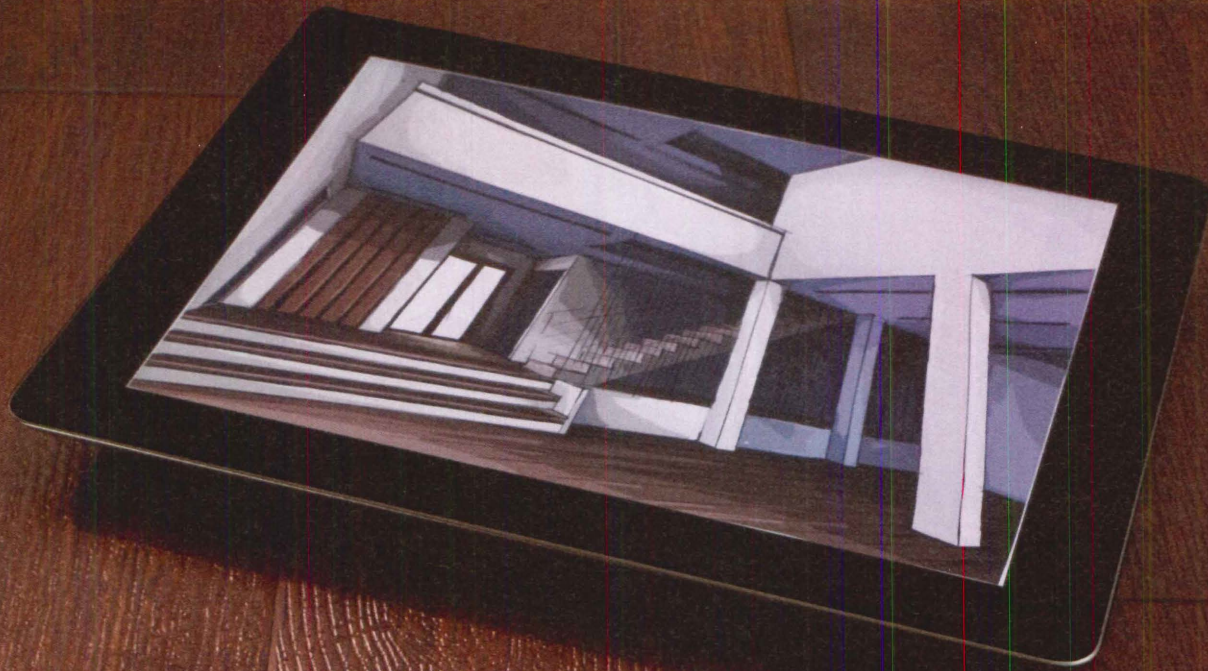
The building's mechanical systems weren't the only puzzle for the design team: because construction encroached on native flora, Susan Van Atta, the project's landscape architect, teamed up with a plant ecologist to conserve vulnerable species. "There are little multicolored flags on the site that indicate the location of each of the new seedlings we have sown," says Van Atta. As elements of the master plan continue to rise, the foundation will monitor their progress.

Despite the challenges and risks associated with incorporating an unconventional mechanical system into the new headquarters, ZGF's design has earned rave reviews from the foundation's employees. "We're really in love with the building," says Miller. ■

**OPEN HOUSE**

Inside, light and air reign supreme, as in the double-height atrium stairway that leads from the first to the second level (right). ZGF left the building's seismic structural bracing system exposed (seen at right).





## EARTHWERKS® NOT ONLY FOOLS THE EYE, IT TRICKS THE BUDGET.

Beautiful in color and texture, EarthWerks® Luxury Vinyl Tile and Plank flooring is artfully crafted to capture natural hardwood or stone, but is more affordable. EarthWerks® is perfect for high-traffic applications such as hospitals, airports, shopping centers, and apartments. In addition, EarthWerks® is easy to install, simple to maintain and is Earth friendly and recyclable. So when people compliment your flooring choice, we won't say anything if you don't.

  
earthwerks  
FLOORING INSPIRED BY NATURE



For information regarding our extensive line of sustainable vinyl flooring, please call 800-275-7943, or visit us online at [www.earthwerks.com](http://www.earthwerks.com)

CIRCLE 17



Introducing

# RSpec™ By ROXUL

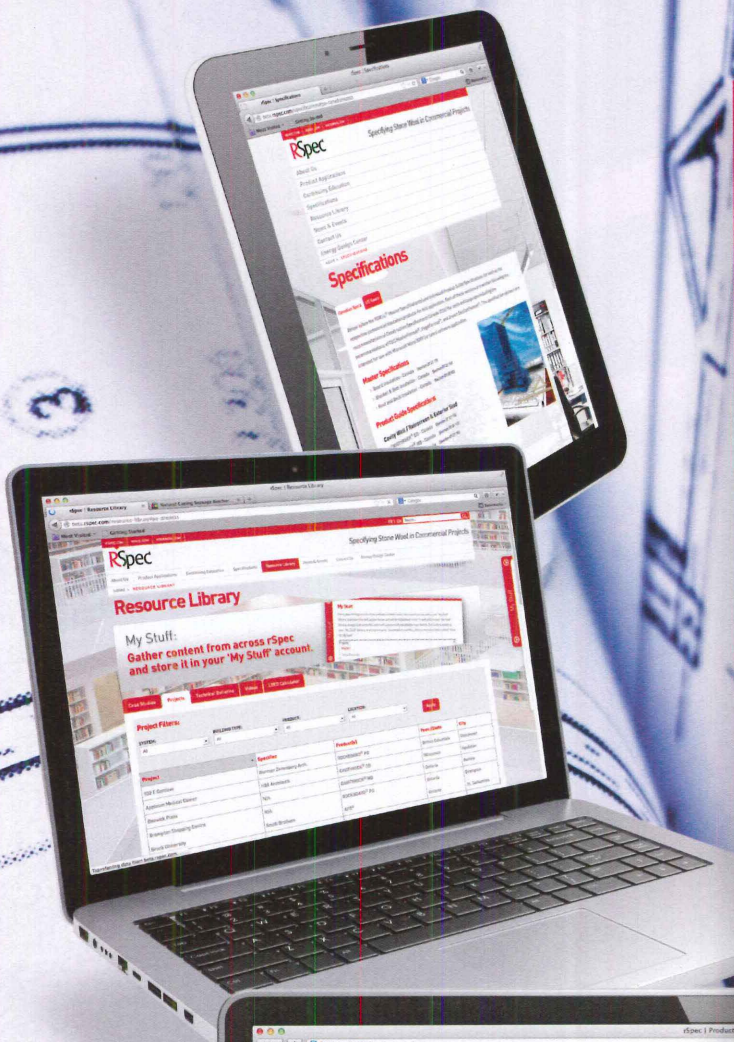
The Better Insulation™

## Simplifying the Specification of Stone Wool for Commercial Projects

- ✓ The Latest Product Information
- ✓ Individual Product Specifications
- ✓ Case Studies & Projects
- ✓ Continuing Education
- ✓ Technical Information
- ✓ Custom Virtual Portfolio

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

CIRCLE 89





# Easy

Easy to install and to maintain.

Easy on the eyes and the environment.

Our **CableRail by Feeney** stainless steel cables are virtually invisible allowing the beauty of your railing designs and the surrounding views to take center stage. They're simple to order and effortless to maintain, and with our special automatic-locking **Quick-Connect®** fittings, they're easier than ever to install. They also contain over 70% recycled materials for a friendlier eco-footprint.

Learn about our entire line of garden and architectural products, and see why Feeney has been the easy choice among design and building professionals for over 65 years.

**Free catalog, call 1-800-888-2418 or visit [www.feeney10.com](http://www.feeney10.com)**

CIRCLE 44



# CABLE·RAIL®

by feeney®

Architectural Cable Assemblies

**feeney®** *makes it easy*



**CABLE·RAIL** by Feeney  
Stainless Cables & Fittings



**DESIGN·RAIL** by Feeney  
Aluminum Railings



**LIGHTLINE**  
Door Canopies



**TRELLIS** Collection by Feeney  
Cable & Rod Trellises



**STA-LOK**  
Stainless Rod Assemblies



Copernico  
design Carlotta de Bevilacqua, Paolo Dell'Elce

Valextra shop, Milan (Italy)  
Ph. Federico Villa

# Artemide®

*design innovation architecture*

Contact your local Artemide sales office for more information.  
Toll free: 1-877-Art-9111 • [contractsales@artemide.net](mailto:contractsales@artemide.net) • [www.artemide.net](http://www.artemide.net)



# Shady Business

Integrated designs for lighting and daylighting, automated by controls, can help conserve resources and please building occupants.

By Joann Gonchar, AIA

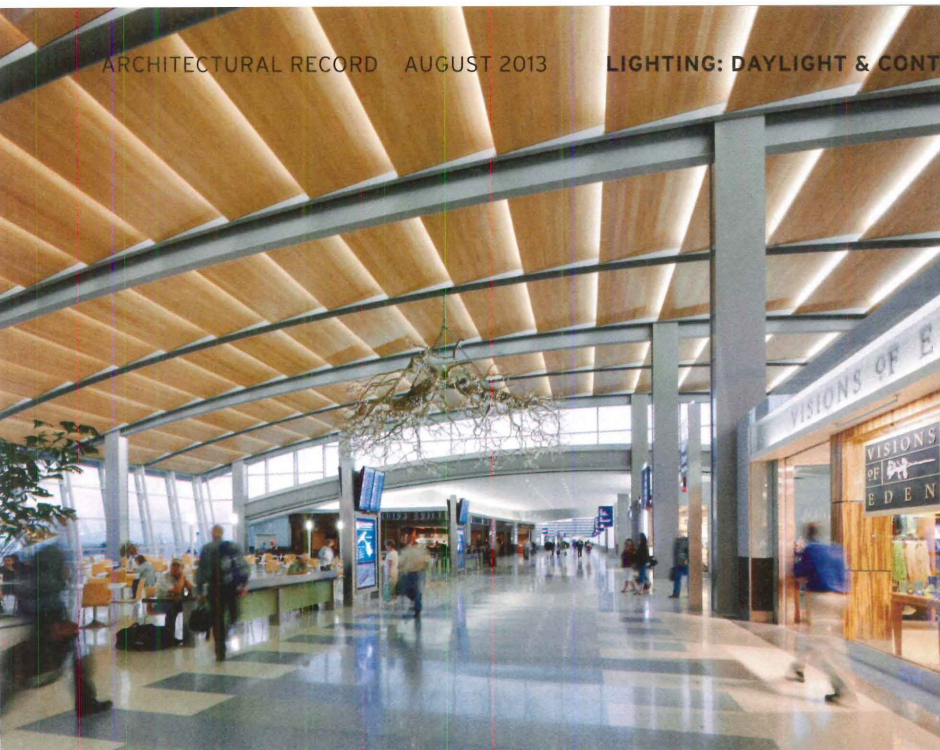
**LIGHTING ACCOUNTED** for 20 percent of the primary energy use in commercial buildings in 2010—more than either heating or cooling, according to the U.S. Department of Energy. So deploying strategies like daylighting, automated shading, and advanced controls presents an ideal opportunity for achieving energy savings. The projects in this section—a law school, an art museum, and a research laboratory—demonstrate that these technologies are being deployed with increasing frequency. But just how well do buildings with such systems perform? Rarely are they evaluated after occupancy, due in part to lack of funds and liability concerns.

One exception is the New York Times Building in Midtown Manhattan. The 52-story tower, designed by Renzo Piano Building Workshop with FXFOWLE, has a veil of fixed 3-inch-diameter ceramic tubes cloaking its glass skin. The newspaper's offices include dynamic shades, lighting that dims on the basis of available daylight, and other technologies that were far from mainstream in 2007, when the building was completed, such as under-floor air. Earlier this year, the Lawrence Berkeley National Laboratory (LBNL) published the results of a monitored evaluation of these systems conducted in 2011 and 2012.

While the tower's owners opted not to go for a LEED rating, its performance is impressive. According to the study, in the tower's daylight zones, annual lighting energy use was 56 percent less than for a typical code-compliant building. Annual electricity savings for a typical floor was 24 percent from dimmable lighting, dynamic shades, and under-floor air. The report calculated an 8-year payback for the systems. It also found that employees were largely pleased: out of 665 respondents to an occupant survey, 78 percent were satisfied with the lighting quality.

Before construction, the Times built a full-scale 4,300-square-foot mockup of one building corner to test daylighting

**GOOD GRADES** The New York Times Building, completed in 2007, includes several energy-saving systems that were then considered innovative. The tower was recently the subject of a detailed post-occupancy evaluation.



spaces where they are practical, says Eric Richman, chair of the 90.1 development team's lighting subcommittee.

The voluntary standard LEED arguably influences technology adoption as much as codes do. LEED v4, the version of the rating system that U.S. Green Building Council (USGBC) members approved in July, includes updates concerning lighting, daylighting, and controls. But not all of the changes are focused on energy. Once the new LEED launches, project teams will be able to earn a point for lighting quality if they select, for instance, fixtures that don't create glare, finishes with good reflectance, and long-life lamps. "If you change lamps infrequently, the design is more likely to remain intact," says Matt Latchford, a senior associate at Cambridge, Massachusetts, lighting design firm Lam Partners and a member of the USGBC committee charged with developing the LEED credits relating to indoor environmental quality.

Mitigating glare was a lighting-quality issue critical in the design of Sacramento International Airport's highly transparent Terminal B, a LEED Silver-certified, two-building facility by Corgan in association with Fentress Architects that opened in 2011. Tapped midway through the design phase, the Arup lighting team worked closely with the architects to develop a simple, integrated-daylight and installed-lighting scheme. The central terminal relies on precisely engineered, perforated louvers along south, east, and west glazed facades to control sunlight. Because the client required a low-maintenance system, non-dimmable T6 ceramic metal-halide lamps are triggered by dawn and dusk to go off or on. The airside building—defined by an arched, tiered ceiling with discreet dimmable fluorescent tubes—has a glazed northern exposure that provides an even wall of daylight, minimizing the need for numerous photosensors.

New technology offers aesthetic as well as operational benefits in Behnisch Architekten's law center at the University of Baltimore, where functional concerns prompted the client to choose LEDs for almost all of the lighting (page 120). But for MCLA, the project's lighting consultant, there was another lure. "What's exciting about this use of LEDs," says Maureen Moran, MCLA principal, "is that the light source and its shape are driving the fixtures' design."

Sophisticated technologies, deployed as part of a well-conceived lighting and daylighting scheme, can also enrich the user experience, as they do at David Chipperfield's addition to the Saint Louis Art Museum (page 125). Here the galleries' highly engineered coffered ceiling integrates skylights, automated shading, and electric light to create the best conditions for viewing art. And at the Energy Biosciences Building (page 128) at the University of California, Berkeley, a dramatically illuminated stair dims when bright sun shines through a skylight. The stair, encouraging scientists from different disciplines to interact, acts as a social magnet.

Projects like these demonstrate that innovative building systems can do more than conserve energy—a point reinforced by the Times tower, where 61 percent of respondents to the occupant survey said that the building enhanced their ability get their jobs done. For LBNL's Selkowitz, the design and construction industry's ultimate goal is to reach the point where realizing buildings with integrated advanced systems is more routine. "The end result," he says, "will be energy efficiency and happy occupants." ■

technologies. Stephen Selkowitz, senior advisor for building science at LBNL, points to this mockup, and to requirements that suppliers demonstrate compliance with performance targets, along with a solid commissioning plan, as some reasons for the project's success.

Regardless of whether practices such as full-scale mockups become typical, technologies like those deployed at the Times will likely become more common as codes grow more stringent. For example, in its 2010 version, the energy standard ASHRAE 90.1 for the first time required daylight-harvesting controls. And although previous iterations of 90.1 included requirements for occupancy sensors or timers in certain spaces, the latest version has new mandatory applications. The next update, due this fall, will require such devices in all

#### NORTH LIGHT

The airside building at Sacramento International Airport Terminal B features a glazed northern exposure that provides even daylight along the entire concourse. The arched ceiling has dimmable fluorescent tubes discreetly tucked into the joints between its panels.



#### Continuing Education

To earn one AIA learning unit (LU), including one hour of health, safety, and welfare (HSW) credit, read "Shady Business" and the stories that follow about the John and Frances Angelos Law Center, the Saint Louis Art Museum, and the Berkeley Energy Biosciences Building. Then, complete the test at no charge at [architecturalrecord.com](http://architecturalrecord.com). Upon passing the test, you will receive a certificate of completion and your credit will be automatically reported to the AIA. Additional information regarding credit-reporting and continuing education requirements can be found online at [ce.construction.com](http://ce.construction.com).

#### Learning Objectives

- 1 Outline recent changes to energy codes as they pertain to lighting, daylighting, and controls.
- 2 Discuss strategies for achieving an integrated lighting, daylighting, and controls scheme and explain how such a scheme can enhance energy efficiency and occupant comfort.
- 3 Describe recent advances in lighting technology.
- 4 Discuss the importance of post-occupancy evaluations of buildings deploying advanced systems, such as those for lighting and daylighting.

AIA/CES Course #K1308A

FOR CEU CREDIT, READ "SHADY BUSINESS" AND THE STORIES ABOUT THE JOHN AND FRANCES ANGELOS LAW CENTER, THE SAINT LOUIS ART MUSEUM, AND THE BERKELEY ENERGY BIOSCIENCES BUILDING. THEN TAKE THE QUIZ AT [CE.CONSTRUCTION.COM](http://CE.CONSTRUCTION.COM), OR USE OUR FREE ARCHITECTURAL RECORD CONTINUING-EDUCATION APP, AVAILABLE IN THE ITUNES STORE.

# Music to Your Eyes



Point Perfect™



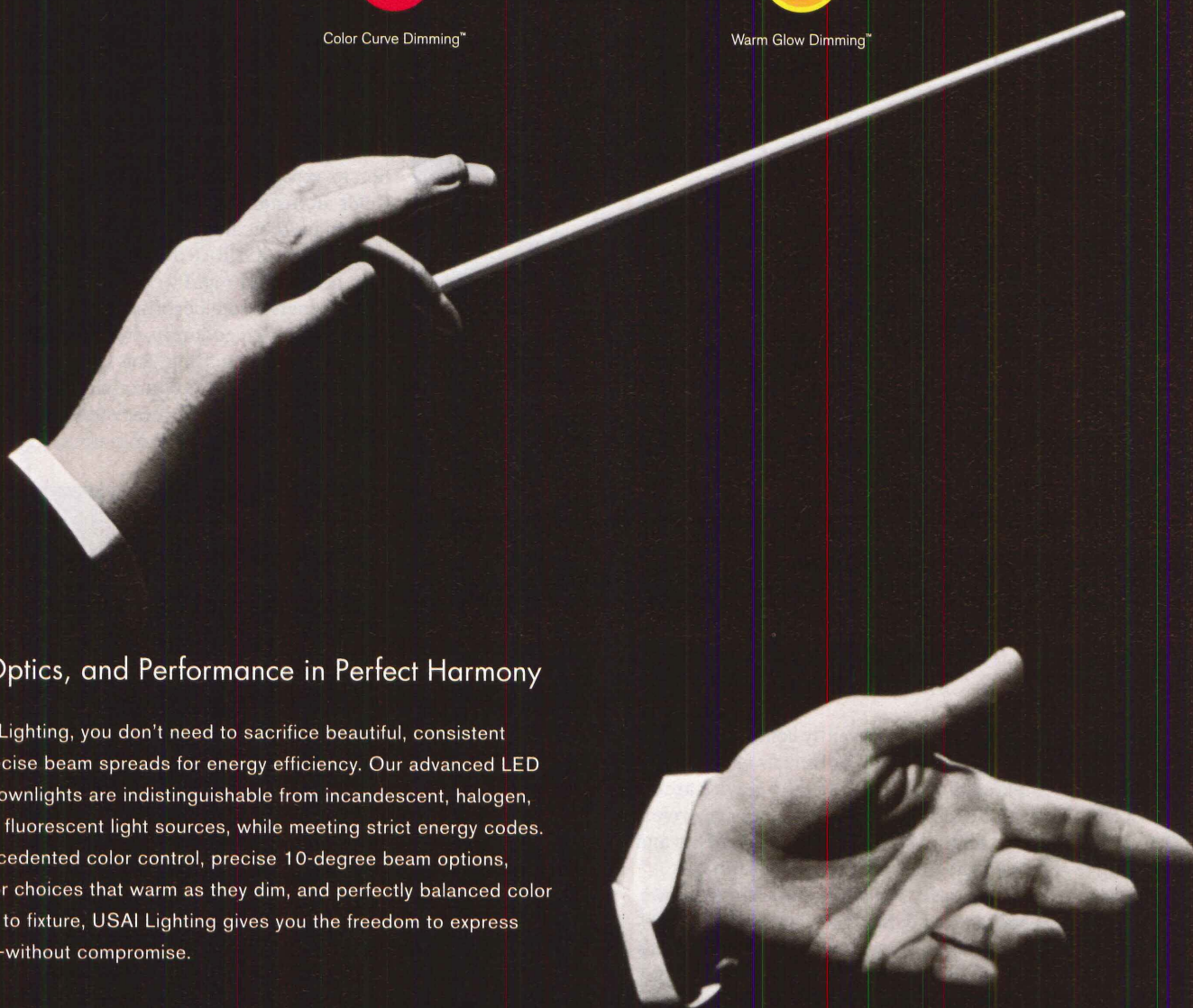
Color Harmony™



Color Curve Dimming™



Warm Glow Dimming™



## Color, Optics, and Performance in Perfect Harmony

With USAI Lighting, you don't need to sacrifice beautiful, consistent color or precise beam spreads for energy efficiency. Our advanced LED recessed downlights are indistinguishable from incandescent, halogen, or compact fluorescent light sources, while meeting strict energy codes. With unprecedented color control, precise 10-degree beam options, unique color choices that warm as they dim, and perfectly balanced color from fixture to fixture, USAI Lighting gives you the freedom to express your vision—without compromise.

**USAI**<sup>®</sup>  
Lighting

CIRCLE 53

845-565-8500

[usailighting.com](http://usailighting.com)

## John and Frances Angelos Law Center University of Baltimore Behnisch Architekten / MCLA Architectural Lighting Design



By David Sokol

**TO WIN** the commission for the recently completed John and Frances Angelos Law Center at the University of Baltimore, Behnisch Architekten, Boston—in partnership with architect of record Ayers Saint Gross—gave daylight a starring role. The design employs building skins of varying porosity and massing to represent the programs housed within the 190,000-square-foot, 12-story structure: punched windows within rainscreen cladding demarcate classrooms and offices; a fritted library volume reaches the staggered mass's full height; and all other rooms surround an extensively glazed atrium through which they visually communicate.

Daylight guided the design from inception. "Building dimensions, setbacks, and transparency of materials were key to achieving the highest possible daylight factor," says Behnisch partner Matt Noblett of using sunlight to

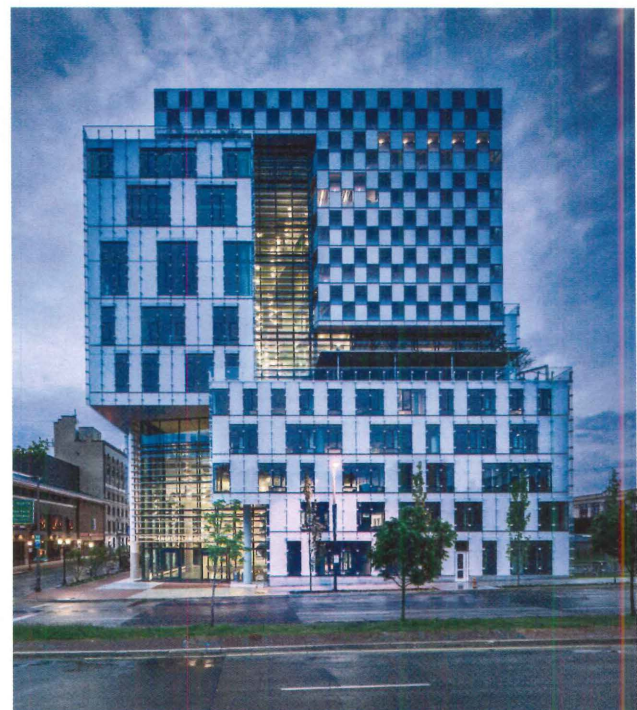
**GLASS BOX** The new law center consists of three interlocking L-shaped volumes that articulate the building programs: classrooms, offices, and a library (above). To connect these spaces, the architects created a central atrium with glazing on the north-south axis and fixed louvers on the south side to minimize heat gain (right and opposite).

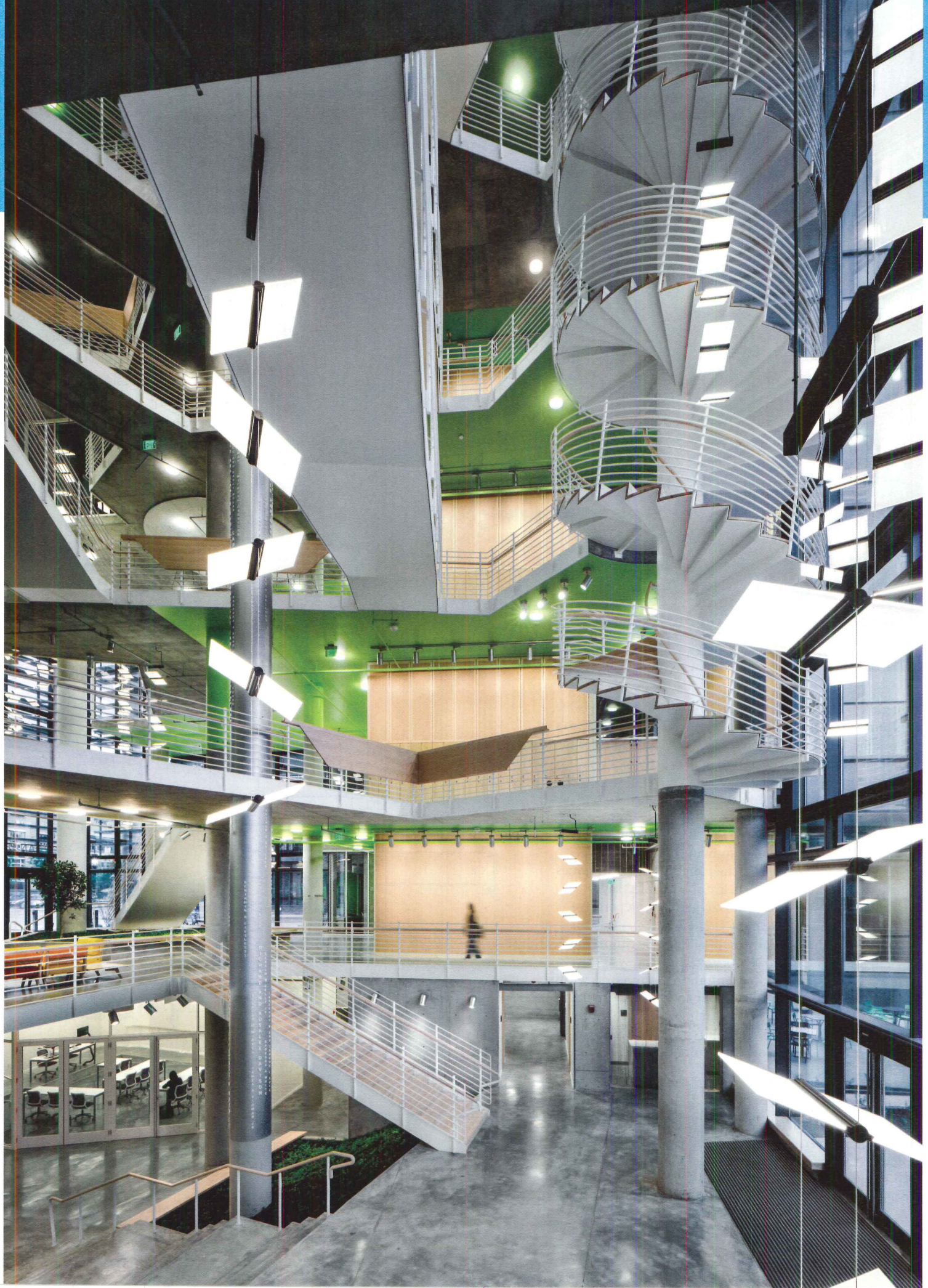
maximize occupant well-being and minimize electricity consumption. Responding to sun angles, Behnisch placed the atrium glazing on a north-south axis, with fixed louvers on the south elevation to minimize heat gain.

Yet even this careful approach to daylighting has its pitfalls, notes Scott Guenther, senior designer at the Washington, D.C.-based MCLA, the project's architectural lighting design firm. Because one's eye assimilates the highest intensity in a field of vision, he says, "areas deep inside the building had to have higher illumination levels to compensate for the perimeter." To this end, the MCLA team paid particular attention to spaces near the core on the first seven floors, which receive lower levels of illumination from a modest atrium skylight, despite the extensive glazed walls.

MCLA's solution is based on LEDs. The client was attracted to the light source for its energy efficiency and long life, and because it offered the least visual and thermal disruption to exposed radiant slabs. Combining daylight and LEDs yields an installed Lighting Power Density (LPD) of .76 watts per square foot, about 25 percent better than code, helping Angelos beat ASHRAE Standard 90.1-2007 by 43 percent.

To account for rapidly changing LED technology, the lighting designers wrote performance-based specifications for a custom disc-shaped luminaire to be mounted on ceilings throughout the building. The 1,640-lumen fixture, with a color temperature of 3,000 kelvin, is equivalent in intensity and warmth to a 100-watt incandescent A lamp. From an oblique perspective, the luminaire's acrylic plate emits an







**OPEN CLASSROOM** Abundant glazing, such as for classroom walls (above), carries daylight into the interior. Still, the lighting designers created LED ceiling fixtures and chandeliers for evening hours and to illuminate darker areas at the core.

even glow; viewed from underneath, the diodes are visible. This honest technological expression embodies Behnisch's philosophy, but it also implies a new LED-centered design vocabulary, says Maureen Moran, MCLA principal.

For the atrium, MCLA created chandeliers of cascading 12-by-18-inch panels made of the same acrylic used for the disc-shaped luminaires. These are suspended on steel cables, with the lowermost parallel to the floor and four others canting at alternating angles, drawing the visitor's eye upward. LEDs within each of the panel's aluminum spines radiate light. "The chandeliers are about scale," says Guenther. "The illuminated surfaces make you perceive the space as having more light."

MCLA programmed daily themes for the atrium, from dawn to midnight. Photo sensors override the system according to actual conditions, dimming luminaires within 25 feet of the perimeter. "It's in that zone where you get the most benefit in terms of energy savings," Guenther says.

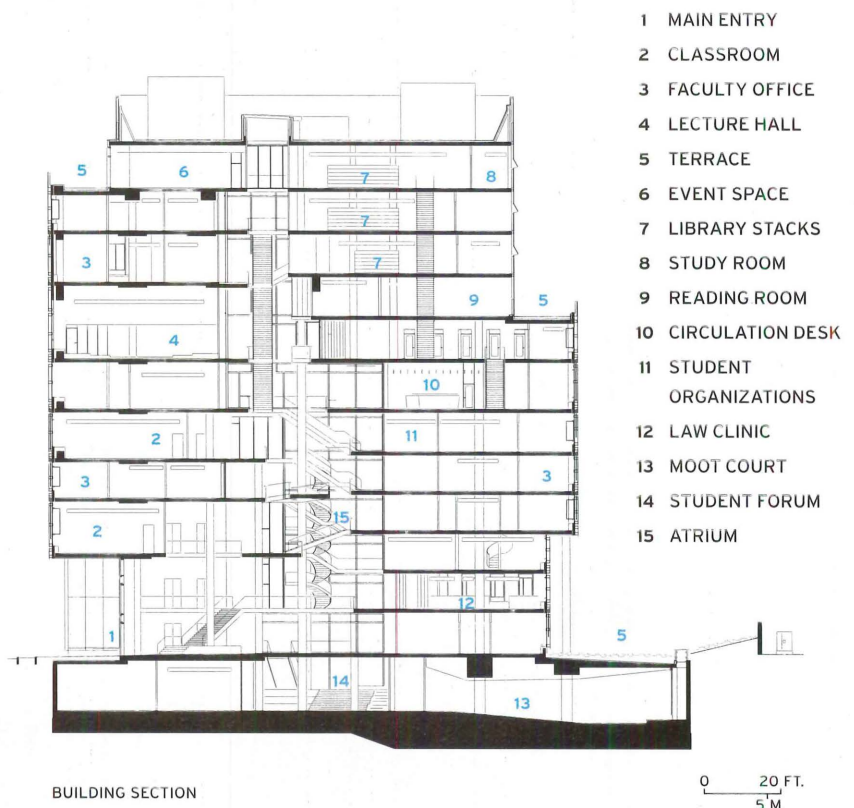
Indeed, controls were integral to the LEDs' performance. In addition to photo sensors, the building has 319 wall-mounted passive-infrared occupancy sensors, all wireless, that permit programming and overrides from central or tablet computers. As in the atrium, MCLA created scenes for classrooms. These include dimming for videos, which also prompts motorized interior shades to block the punched windows; the shades otherwise operate independently, according to rooftop solar-radiation readings, and the photo sensor-controlled classroom lights respond in turn. ■

## credits

**ARCHITECT:** Behnisch Architekten, Boston  
**ARCHITECT OF RECORD:** Ayers Saint Gross  
**LIGHTING DESIGNER:** MCLA Architectural Lighting Design  
**ENGINEERS:** Cagley & Associates (structural); Mueller Associates (m/e/p); RK&K (civil)  
**CLIENT:** University of Baltimore  
**SIZE:** 190,000 (gross) square feet  
**COST:** \$99 million  
**COMPLETION DATE:** April 2013

## SOURCES

**CURTAIN WALL:** DuPont SentryGlas; National Enclosure Company  
**SHADING SYSTEM:** Nysan (shades and controls)  
**INTERIOR LIGHTING:** Zumtobel (custom); Nimbus; Vode; Filix; Lighting Services; OptoLum; GPI Design; Eureka; EcoSense; Lutron (electric and daylight controls)  
**EXTERIOR LIGHTING:** Bega; iGuzzini; C.R. Laurence; Filix; B-K Lighting



BUILDING SECTION

- 1 MAIN ENTRY
- 2 CLASSROOM
- 3 FACULTY OFFICE
- 4 LECTURE HALL
- 5 TERRACE
- 6 EVENT SPACE
- 7 LIBRARY STACKS
- 8 STUDY ROOM
- 9 READING ROOM
- 10 CIRCULATION DESK
- 11 STUDENT ORGANIZATIONS
- 12 LAW CLINIC
- 13 MOOT COURT
- 14 STUDENT FORUM
- 15 ATRIUM

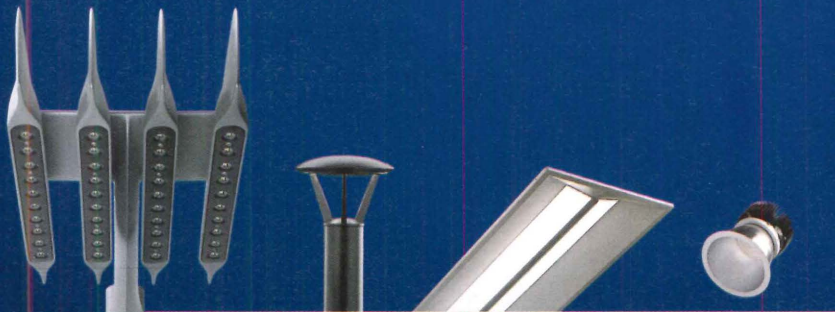
0 20 FT.  
5 M.



CREE IS LED LIGHTING

# vibrant LED Light.

Good lighting makes colors come alive; Cree LED lighting does it without wasting resources. Cree makes interior and exterior LED luminaires for commercial, retail and residential applications. We make light for working, playing and choosing the perfect pair. **Cree makes light for living.**



AREA | CANOPY | PARKING | TROFFERS | DOWNLIGHTS

Backed by Cree's 10-year LED lighting warranty covering the industry's broadest range of products.

**CREE** 

Visit [cree.com/lighting](http://cree.com/lighting)  
to view our LED lighting portfolio.

CIRCLE 30

# Fiato

Delivers light. On target.

27W, 33W or 38W • 2,418 Lm • 32,616 CBCP

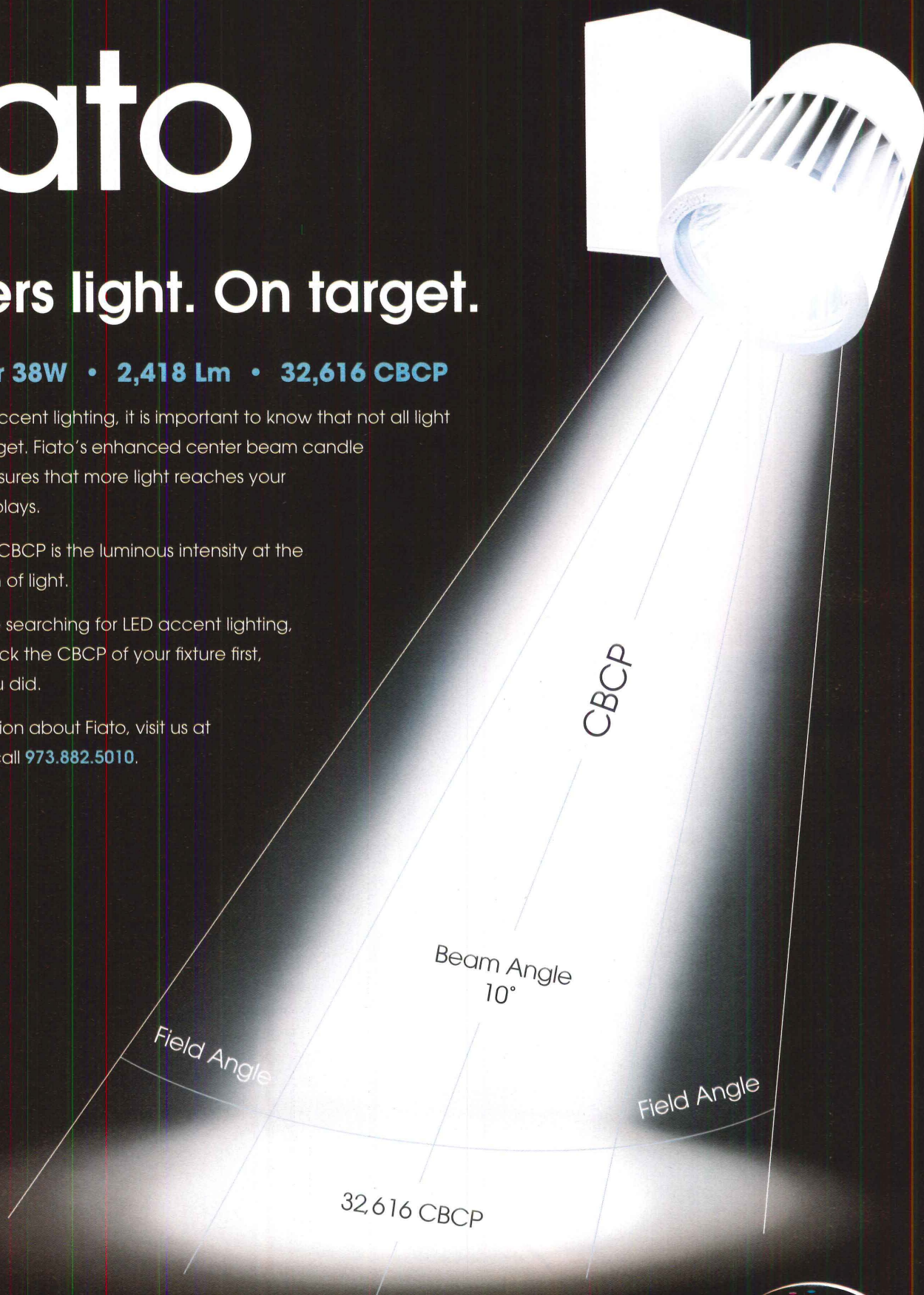
In selecting LED accent lighting, it is important to know that not all light actually hits its target. Fiato's enhanced center beam candle power (CBCP) ensures that more light reaches your products and displays.

**C·B·C·P** - *Optics*. CBCP is the luminous intensity at the center of a beam of light.

Next time you are searching for LED accent lighting, make sure to check the CBCP of your fixture first, you'll be glad you did.

For more information about Fiato, visit us at [amerlux.com](http://amerlux.com) or call 973.882.5010.

CIRCLE 28



**10** year limited  
warranty  
AMERLUX LED

amerlux



## Saint Louis Art Museum, East Building St. Louis, Missouri David Chipperfield Architects / Arup



**LIGHT BOX** A glazed north face allows daylight and views into the St. Louis Art Museum's new East Building. Inside, a waffle-like coffered ceiling comprises individual light lofts that illuminate the galleries via skylights by day and gentle fluorescents at night.

By Josephine Minutillo

**CASS GILBERT'S** Palace of Fine Arts, now the Saint Louis Art Museum, was the only permanent structure built for the 1904 World's Fair. While a cultural icon to this day, the historic building's neoclassical design limits how art can be displayed, especially large contemporary works. Museum commissioners selected Sir David Chipperfield to design an expansion for such works that incorporates daylight in the galleries and takes advantage of its location in sprawling Forest Park. His new East Building does both, but without allowing any direct sunlight to touch the art.

The key to the design is a dramatic 4-foot-deep coffered ceiling that bounces light off the structure's highly reflective concrete. Sunlight comes through skylights composed of triple-glazed translucent glass with a UV-resistant interlayer. Within each of the ceiling's 4-by-9-foot openings is a framework of aluminum extrusions that supports what the designers call the light spreader—a horizontal light-diffusing resin panel. Around the top of that is the halo, a raised collar that blocks any residual direct sunlight that might seep through. "What's unique about this solution is that while we are controlling daylight, you really [sense] it in the galleries," says Roger McFarland, principal at HOK, the architect of record. "If a cloud goes over, you notice it."

For a more direct experience of being in the park, glazed walls make up 20 percent of the building's perimeter. Strategically located, one glass-enclosed gallery

### credits

**ARCHITECT:** David Chipperfield Architects

**ARCHITECT OF RECORD:** HOK

**LIGHTING DESIGNER:** Arup

**ENGINEERS:** Arup (acoustic, a/v, ITC, m/e/p, security); MKA (structural)

**CLIENT:** Saint Louis Art Museum

**SIZE:** 200,000 square feet (includes 115,000-square-foot garage)

**COST:** \$101 million

**COMPLETION DATE:** April 2013

### SOURCES

**SKYLIGHTS:** Oldcastle BuildingEnvelope

**SHADING SYSTEM:** Lutron (shades and controls)

**LIGHT SPREADER:** Troco, 3form, Barrisol

**INTERIOR LIGHTING:** H.E. Williams (ambient); Lighting Services Inc. (track); Schneider Electric (electric and daylight controls)

overlooks the outdoor sculpture garden. Guided by an astronomical clock working with rooftop photo sensors, two layers of vertical shades control light levels within this and two other windowed galleries. A light-reducing shade allows views out to the park when down. A more opaque, diffusing shade allows little light transmission and is typically set 7 feet above the floor, descending completely only when the sun is very low. The shades are operated by the same manufacturer's control system, which has been modified to meet the specifications of the museum. "The intent was not to have the shades continuously open and close, as that would be very distracting," says Christopher Rush, senior lighting consultant at Arup, the firm charged with the project's overall illumination. "The general idea is to keep both sets of shades open as much as possible."

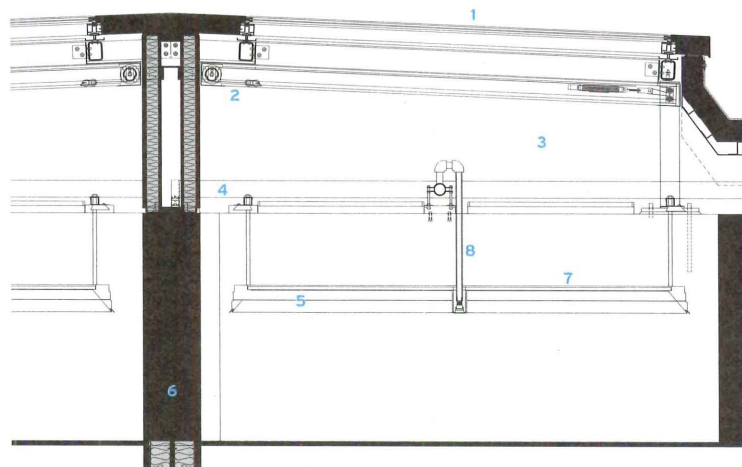
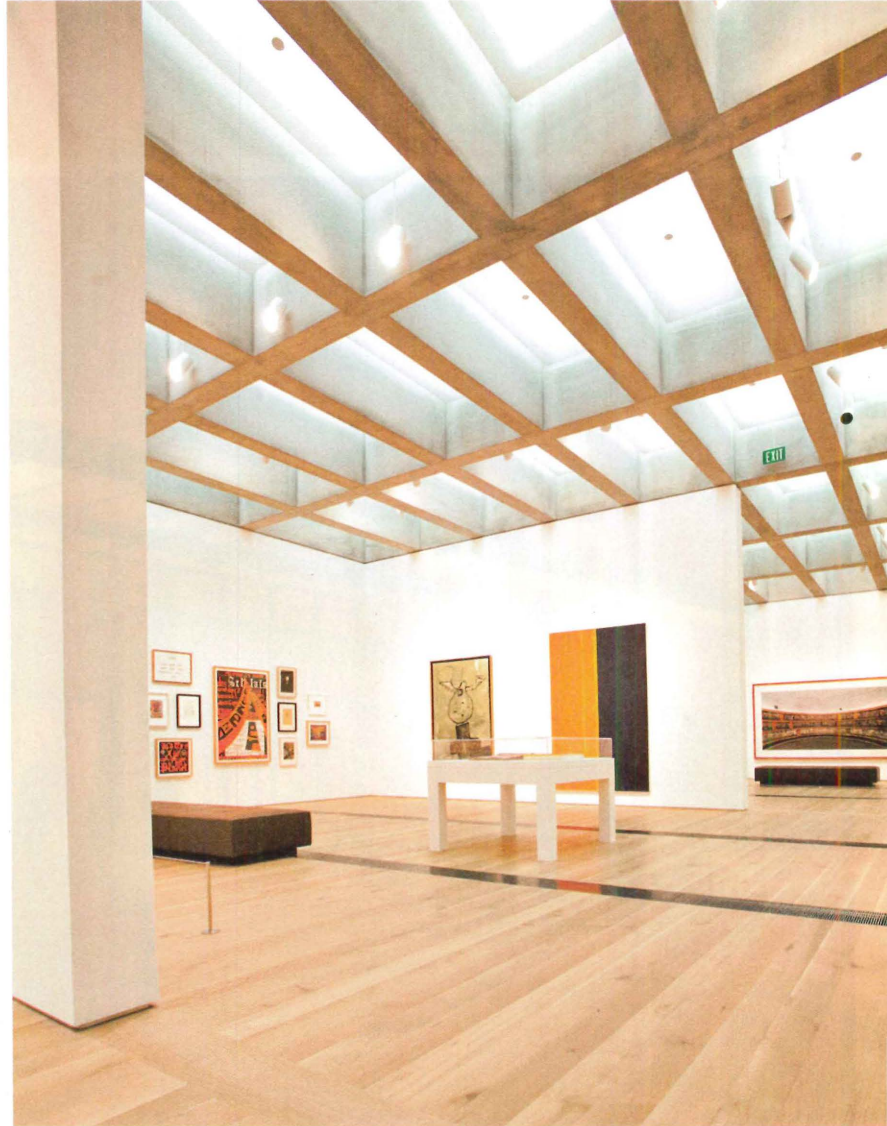
To balance daylight with conservation needs, the client and lighting designers agreed on a cumulative-exposure approach whereby the curators track average light levels over the course of the year, rather than set maximum exposure levels for any specific time. Blackout roller shades directly beneath the skylights are deployed when the museum is closed, decreasing average daylight quantities.

Electric lighting is used when sunlight levels are low—in the winter or when the museum is open at night. Fluorescent tubes tucked above the coffers provide cool ambient light, while halogen spotlights on a track built into the framework around the light spreader animate artworks. The effect can be brilliantly seen on St. Louis native Tom Friedman's "Untitled" (Seascape), 2012, a trompe l'oeil paper construction, with creases and wrinkles that evoke waves. "This piece needs light from above to bring out its full complexity," says curator Simon Kelly. "General diffuse light doesn't show this off optimally."

Properly displaying the artwork remained a constant consideration. "The challenge was making all of the technology invisible," explains McFarland. "When you look up to the coffers, you have no idea how much stuff is going on there!" ■

Josephine Minutillo is a New York-based writer and contributing architecture editor at Architectural Digest.

**OFF THE GRID**  
Sunlight enters each coffer via a triple-glazed, UV-resistant skylight and bounces off the concrete through a "light spreader," a light-diffusing resin panel in an aluminum frame. This framing also holds track lights, speakers, and sprinklers—the last peeking out of the bottom-most layer, a stretched acoustic sheet that appears to float overhead.



- 1 SKYLIGHT GLAZING
- 2 BLACKOUT BLIND
- 3 LIGHT LOFT
- 4 HALO
- 5 LIGHT SPREADER
- 6 COFFER BEAM
- 7 LIGHT-REDUCTION LAYER
- 8 SPRINKLER

SKYLIGHT SECTION DETAIL

0 3 FT.  
1 M.

# M - S E R I E S L E D

## Lines of Light and Lit Corners

Seamless, continuous lines of light with superior performance, uniformity, and unmatched flexibility. Illuminated corners are available for all M-Series LED fixtures, especially engineered to integrate into your individual design.



**Project:** Colorado School of Mines: Marquez Hall  
**Architect:** Bohlin Cywinski Jackson and Anderson Mason Dale Architects  
**Engineer:** Shaffer Baucom Engineering - **Photographer:** ©Nic Lehoux



  [selux.us](http://selux.us)

CIRCLE 88

*Celebrating 30 Years*

**selux** 30  
YEARS

## Energy Biosciences Building University of California, Berkeley SmithGroupJJR / Loisos + Ubbelohde

By Joann Gonchar, AIA

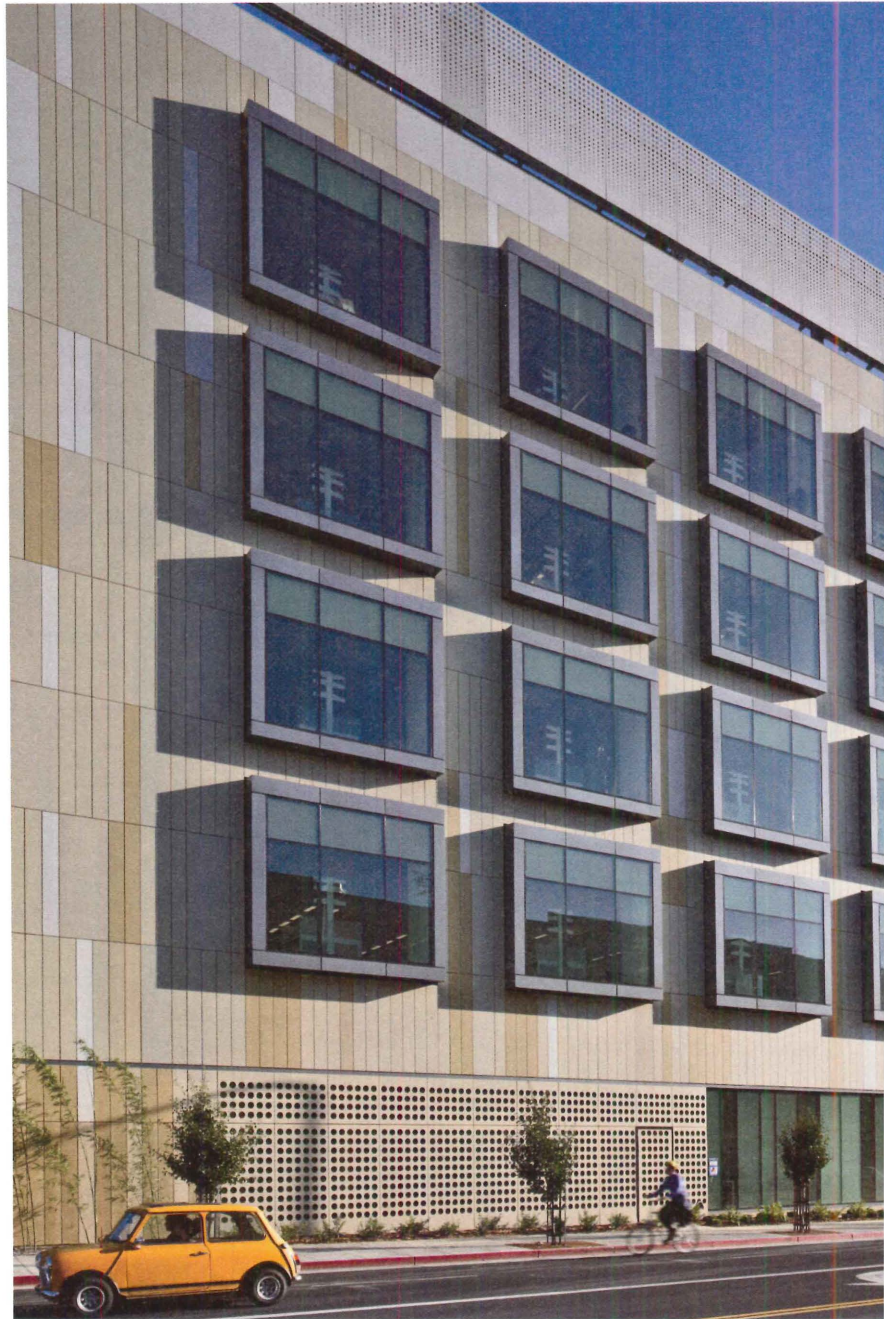
**THE SCIENTISTS** and policy experts at the Energy Biosciences Institute (EBI) are tackling some of today's most urgent environmental problems, including climate change and the diminishing supply of fossil fuels. The institute's chemists, biologists, engineers, and economists represent three different public research institutions—the University of California, Berkeley (UC Berkeley); the Lawrence Berkeley National Laboratory; and the University of Illinois at Urbana-Champaign—as well as the energy company BP. Given the diversity of these stakeholders, it is not surprising that the project brief for EBI's \$85 million, 1-year-old home at the edge of the UC Berkeley campus called for a flexible facility that would spur innovation and foster cross-pollination.

In response, designers from national architecture and engineering firm SmithGroupJJR have created an open and mostly transparent 113,000-square-foot building. Although largely daylit and designed to perform almost 20 percent better than California's stringent energy code, the five-story structure meets the demanding lighting expectations of the EBI researchers. A long and narrow bar of state-of-the-art labs is rainscreen-clad, with generously sized north-facing bay windows. Offices are enclosed in a wedge that protrudes from the building's south face and wraps one corner. This volume has a fritted glass skin that includes fixed laminated-glass sun shades for diffusing and directing sunlight.

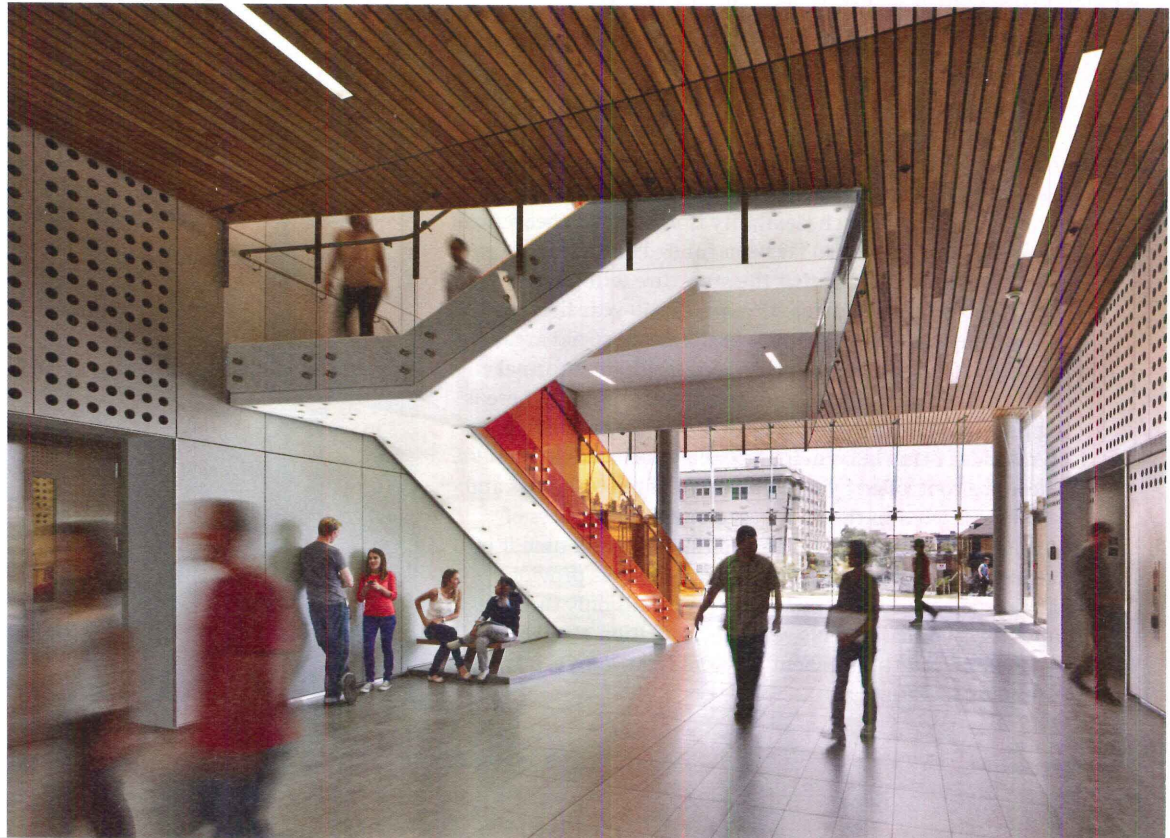
The laboratories presented the toughest challenge to illuminate efficiently, since researchers desired 80 to 100 foot-candles on their work surfaces. Here the lighting scheme includes indirect-direct fixtures suspended from the ceiling. These photosensor-controlled pendants, each with a single T5 lamp, provide ambient light and dim in response to daylight's entering through the 15-foot-wide-by-11-foot-tall bay windows. And, at each lab bench, the project's lighting and daylighting consultant, Loisos + Ubbelohde, provided a low-voltage LED task light. These are manually controlled, but, to keep energy consumption in check, sensors turn the lights off when users leave their stations for extended periods.

Since no such off-the-shelf, sensor-equipped fixture was available at the time, designers devised their own, combining components from several different manufacturers. "On the surface, this solution sounds incredibly simple," says the firm's principal, George Loisos. But in fact, creating a properly functioning auto-off task light proved surprisingly tricky. It involved development of a special shield so that the sensor would "see" only what was intended, careful placement of the infrared device so that structural elements or other objects wouldn't obstruct it, and calibration of the "gain," or sensitivity, of the sensor so that the light wouldn't turn off while the work station was occupied.

These task lights, along with the rest of the Energy Biosciences Building's electric lighting, are part of a type of network known as a digital addressable lighting interface, or



**JANUS-LIKE** The labs at the Energy Biosciences Building are housed in a bar-shaped wing that has generously sized north-facing windows and a rainscreen skin made of glass-fiber-reinforced concrete panels (above). The offices are housed in a wedge that protrudes from the building's south side and wraps a corner (top right). On the exterior of this glazed volume, a series of laminated glass shades directs and diffuses daylight. On the interior, automated shades help further improve occupants' visual comfort. The laboratory windows also include automated shades, but their primary purpose is to shield an adjacent residential neighborhood from light emanating from the facility after dark.



**ILLUMINATED SCULPTURE** The building includes several areas intended to promote informal meetings and chance encounters among its occupants. These include a stair (bottom right) whose steel structure is clad in point-supported glass. Thousands of LEDs concealed below the treads illuminate the stair. These dim in response to available daylight, but even at full brightness, the five-story stair draws only 3 amps.



## credits

**ARCHITECT:** SmithGroupJJR  
**LIGHTING/DAYLIGHTING DESIGNER:** Loisos + Ubbelohde  
**ENGINEERS:** Gayner Engineers (m/e/p)  
**OWNER:** University of California, Berkeley  
**SIZE:** 113,200 square feet (gross)  
**COST:** \$86.5 million  
**COMPLETION DATE:** August 2012

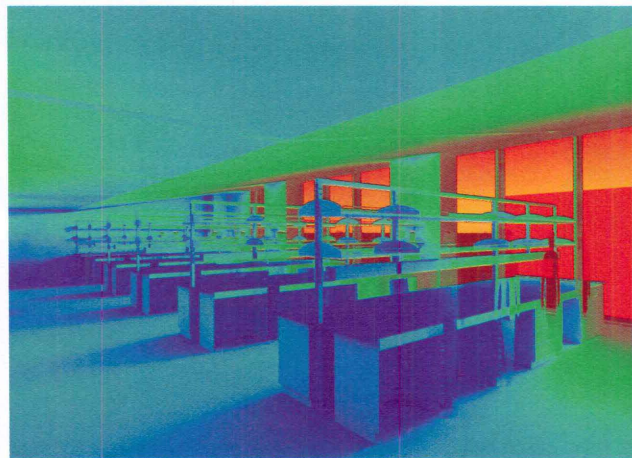
## SOURCES

**CURTAIN WALL AND WINDOWS:** Wausau  
**SHADING SYSTEM:** MechoSystems (shades and controls)  
**INTERIOR LIGHTING:** Ledalite, Linear Lighting, Zumtobel, Finelite, Borden, Kurt Versen, Lunera, Luxo, Lutron (controls)  
**EXTERIOR LIGHTING:** We-ef, Kurt Versen, B-K Lighting, Tivoli, IO Lighting, Louis Poulsen, Bega

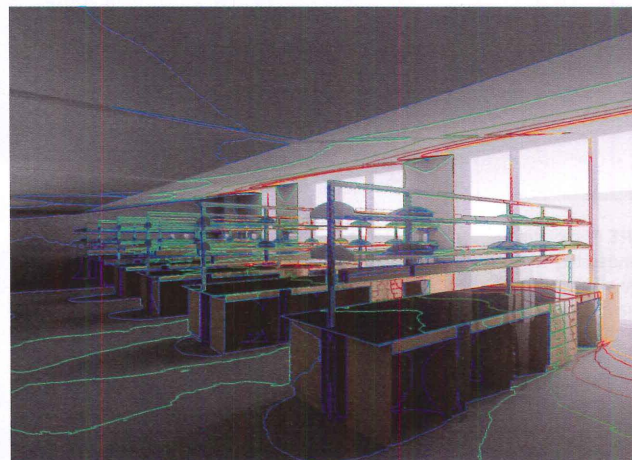
**CAREFULLY CONSIDERED** The electric lighting for the laboratories (above) includes pendant luminaires placed between the lab benches for ambient light. Each work surface has its own LED task light equipped with an occupancy sensor that shuts the fixture off when researchers leave for extended periods. Designers arrived at this scheme after simulating the effect of daylight coming through the laboratory windows at various times of the day and year. The simulations included studies of illuminance (bottom right) and luminance (top right), which show how much light surfaces receive and emit, respectively.

DALI for short. This network should allow the reconfiguration of the building's lighting without the need for an electrician, even though most of the devices are hard-wired. If a research area is divided into two with a new partition, for example, facility operators can connect the existing fixtures to different switches simply by reprogramming them. The need for such flexibility is more than theoretical, since the Institute has so far been funded for only a 10-year period, making it likely that the structure will house different research groups during its expected 50-year lifespan.

Interspersed throughout the building are social areas intended to encourage collaboration, facilitate informal meetings, and promote chance encounters. Among these is a glass-clad stair that connects all of the floors and has thousands of tiny LEDs hidden beneath its treads and risers. These are controlled by a combination of photosensors and a timer, which dim the stair based on the brightness of sunlight shining through a rooftop skylight and turn it off during late-night hours. Although the controls provide efficiencies, even at full power the stair pulls only three amps, says Loisos. But this vertical-circulation element is much more than an efficient ambient light source. It is a luminous sculpture. ■



Nits  
 5195.053  
 2190.735  
 925.825  
 389.574  
 164.282  
 69.277  
 29.213  
 12.319



fc  
 93.75  
 81.25  
 68.75  
 56.25  
 43.75  
 31.25  
 18.75  
 6.25



# A LIGHT INVESTMENT WITH SUBSTANTIAL RETURNS

The D-Series Floodlights Deliver: Compact Size. Incredible Performance.

80% Energy Savings | 20+ Year Life | 7 Optical Distributions

■ [lithonia.com/ledfloods](http://lithonia.com/ledfloods)



**d<sup>series</sup>** led floods  
*better lighting from every angle™*

Size 2

Size 3

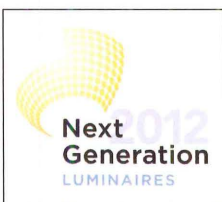
Size 1

# No compromises. No kidding.

Light output.  
Color stability.  
Driver performance.  
Fixture finish.

All warrantied for an  
industry-leading 5 years.

Learn more about RAB's no-compromise,  
5-year LED warranty at **RABLEDWarranty.com**



Winner of Three NGL Awards—  
The Most Won by a Single Lighting Brand in 2012

CIRCLE 93

**RAB**  
LIGHTING  
Designed beyond standards.  
Engineered to perform.



products **lighting**THE LATEST FIXTURES—MANY OF THEM ENERGY-EFFICIENT—  
RANGE FROM THE SHAPELY TO THE LINEAR. BY SHEILA KIM**Paraaf by Jacco Maris**

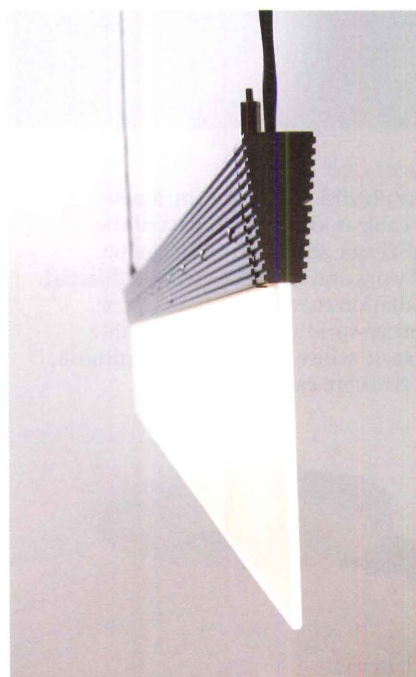
Dutch designer Jacco Maris has been manipulating metal into fluid, sculptural light fixtures since the 1990s, but his creations haven't been available in North America—until now. Global Lighting has retrofitted several of his designs for use within the United States and Canada, including the ribbonlike Paraaf (shown). Inspired by the pleated collars that were in vogue during the Elizabethan era, the pendant is hand-folded from a single sheet of stainless steel. [goballighting.com](http://goballighting.com) CIRCLE 215

**Hex Link Series by Nosanchuk**

New York interior and product designer David Nosanchuk takes advantage of 3-D printing to create his Hex Link Series. Constructed of translucent resin, it comes as a single, triple, or quadruple (shown) surface-mount sconce or as a pendant of four linked hexes. Each hex measures approximately 11" wide x 13" high x 3" deep and uses an 8W LED strip. [nosanchuk.com](http://nosanchuk.com) CIRCLE 219

**Paper Patchwork Floor Lamp**

Moooli has expanded its Paper Collection—a furnishings line created by Studio Job that plays on a familiar childhood craft—with new designs and palette combinations known as Paper Patchwork. Among the additions is a floor lamp (shown) with a turned base that, from afar, looks like solid wood but is actually composed of a wood and honeycomb cardboard core with layers of papier-mâché (paper and glue) for reinforcement. Finished in polyurethane lacquer, the lamp stands 6' 4½" high. [moooli.com](http://moooli.com) CIRCLE 218

**EI Series LED Luminaire**

GE Lighting introduces a slim, bladelike fixture that provides a bright, uniform glow when switched on and practically disappears when turned off. Dubbed EI Series LED Luminaire, the suspended light conceals LED diodes within the frame holding the blade and is rated for 50,000 hours. It is fully dimmable and can be linked to daylight control sensors for further energy savings. The 2"-thick fixture is available in 48" or 72" lengths.

[gelightingsolutions.com](http://gelightingsolutions.com)

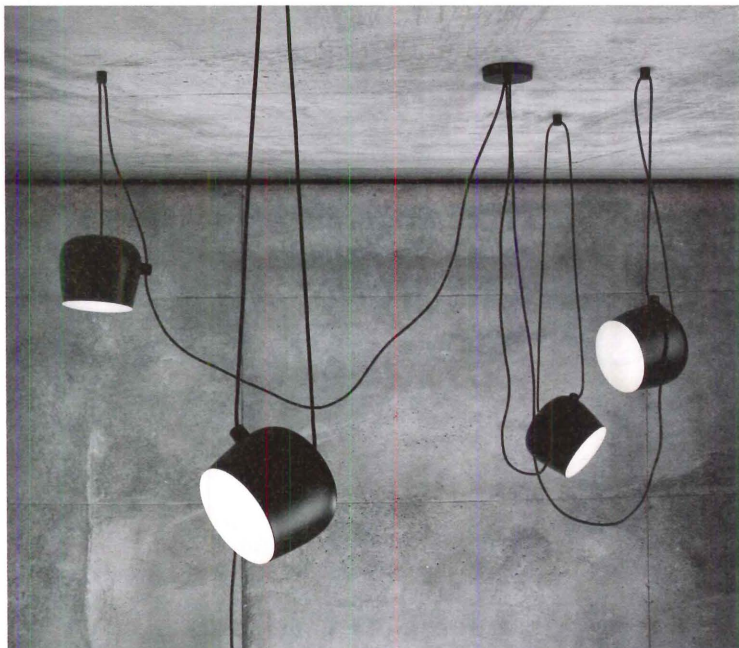
CIRCLE 216

**Le Soleil Wall Lamp**

Though only four years old, the tiered Le Soleil pendant designed by Vicente García Jiménez is already a recognizable classic from the lighting company Foscarini. Now the manufacturer has revamped the design for wall application, giving it a flat back for flush mounting and adjusting its proportions to four sloping, overlapping bands. The fixture is made of polycarbonate in red, green, or white, and uses fluorescent lamping.

[foscarini.com](http://foscarini.com) CIRCLE 217





### Nafir Pendants by Karim Rashid

Karim Rashid's Nafir single LED pendant has an organic, trumpet-shaped silhouette, while the larger format is a liquidlike osmosis of three shades. Solo or grouped, it becomes a sculptural focal point when not in use as a lamp. The shades, composed of injection-molded plastic, come in three finishes: white exterior with gold interior (shown), chrome exterior with white interior, and white exterior with white interior. [axolight.it](http://axolight.it) CIRCLE 220



### Aim by Ronan & Erwan Bouroullec

The Bouroullec brothers put their playful touch on Aim, a new suspension lamp for Flos, whose cable is an essential part of the design. Its space-helmet-shaped diffuser and 29' 6" cable can be angled and draped in a variety of ways and combined with additional pendants to create a ceiling installation that evokes hanging or climbing plants—or something otherworldly. The polycarbonate shades are finished in polished black, white, or polished aluminum, and accommodate LED lamping. [flos.com](http://flos.com) CIRCLE 224



### Gravy LED Table Lamp

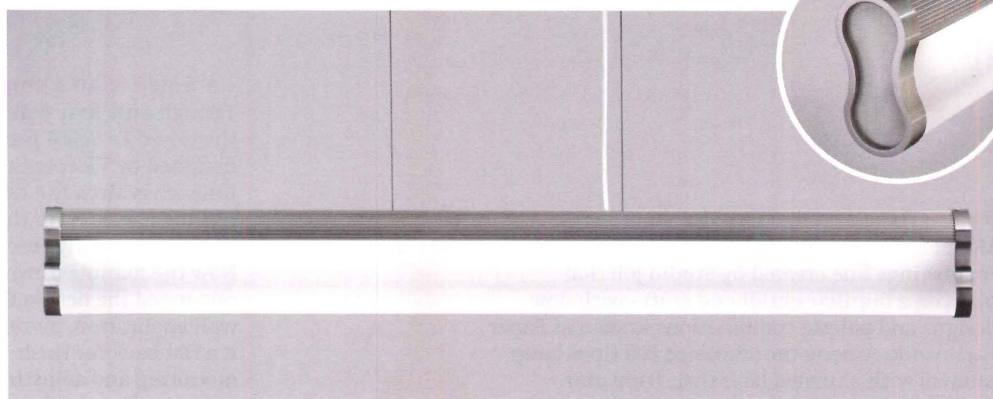
Warm wood and brushed aluminum mingle in Gravy, an LED task lamp launching this fall from Koncept. Metal forms the body and wraps the dislike head and base pieces, while a simple wood bar finished in walnut (shown), white oak, or maple stain forms the neck. Devoid of external switches and controls, the lamp is turned on and off and dimmed by tapping the underside of the LED head, and adjusted by sliding and pivoting the bar. Its thin power cord adds a subtle splash of color.

[koncept.com](http://koncept.com) CIRCLE 223



### Lumenbeam Grande LED Projector

Lumenpulse's award-winning Lumenbeam family of exterior and facade lighting just got bigger with the addition of Grande. This largest version is a 100W LED luminaire with a 13<sup>3</sup>/<sub>16</sub>"-diameter face that can project anywhere between a 60° flood and narrow 6° beam. The fixture can be mounted on the ground, walls, or poles. [lumenpulse.com](http://lumenpulse.com) CIRCLE 221



### Unison Suspension

Tech Lighting's Unison suspension light is a departure from the fluorescent workhorses of commercial spaces past. Its acrylic diffuser, contoured to follow the shape of its figure eight die-cast metal end caps, features a softer, more playful appearance while still delivering ample direct illumination. The fixture measures 47<sup>1</sup>/<sub>4</sub>" long x 5<sup>1</sup>/<sub>4</sub>" high and uses two 20W LED strips or one 54W linear fluorescent lamp. [techlighting.com](http://techlighting.com) CIRCLE 222

# LED TRANSITION ENCLOSED LUMINAIRE

Designed for the health of your occupants and the quality of your installation.



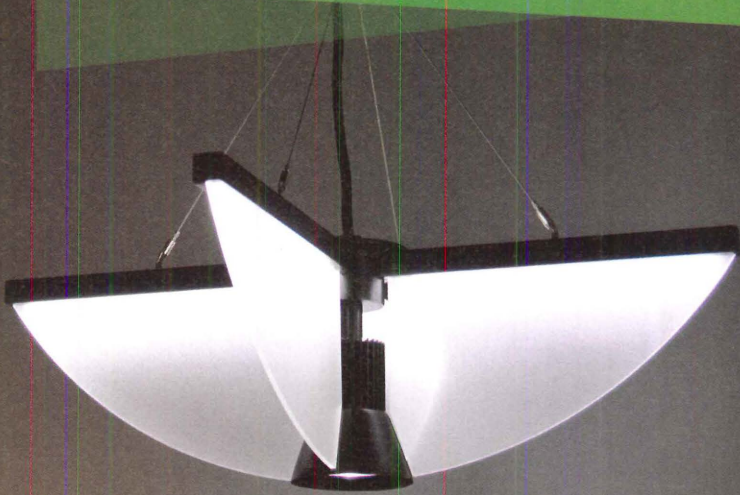
## Because cleanliness is vital.

Perfect for health care environments, the LTRE has specialty options such as antimicrobial paint which resists bacterial growth on exposed painted surfaces, wet location listing, and a full length layer of gasketing, all while maintaining the fixture's full photometric performance.

For a demanding environment, Transition® Enclosed LED is ideal.

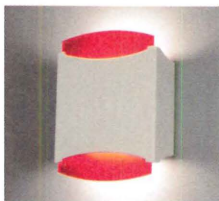
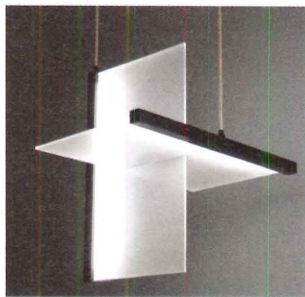
**ANTI  
MICROBIAL**

# Solid Statement.™



LED lighting with dimensional appeal. Low glare, diode-driven luminaires with precisely engineered performance optical components.

See more at [digitalspeck.com](http://digitalspeck.com).

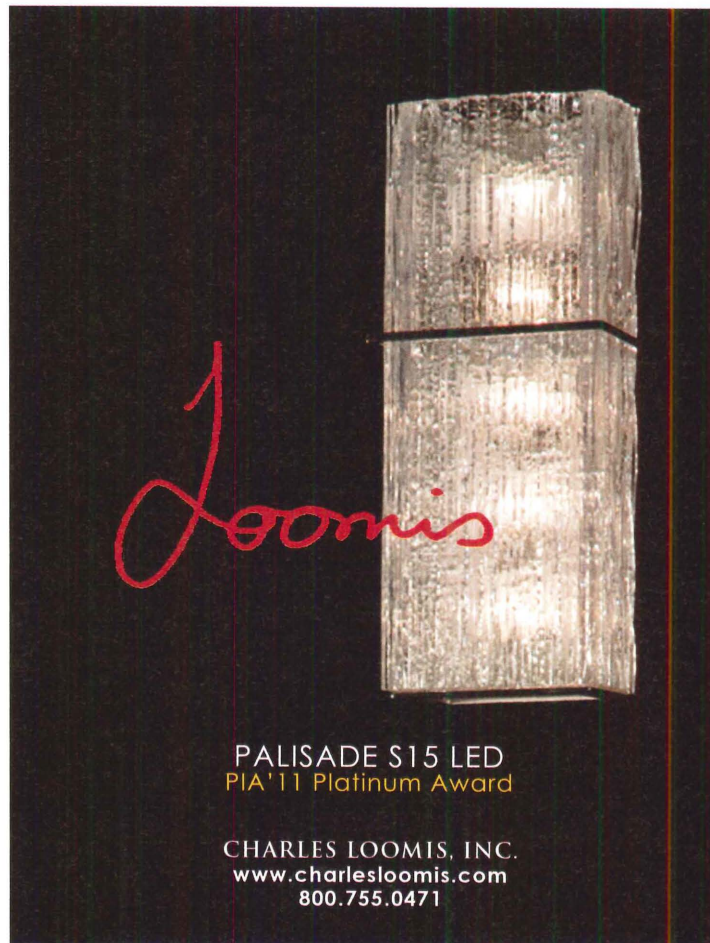


See us at **Lightfair Booth #612**

 **DigitalSpeck™** Lighting  
by Manning

© 2013 Manning Lighting, Inc. | Sheboygan, Wis. USA

CIRCLE 78

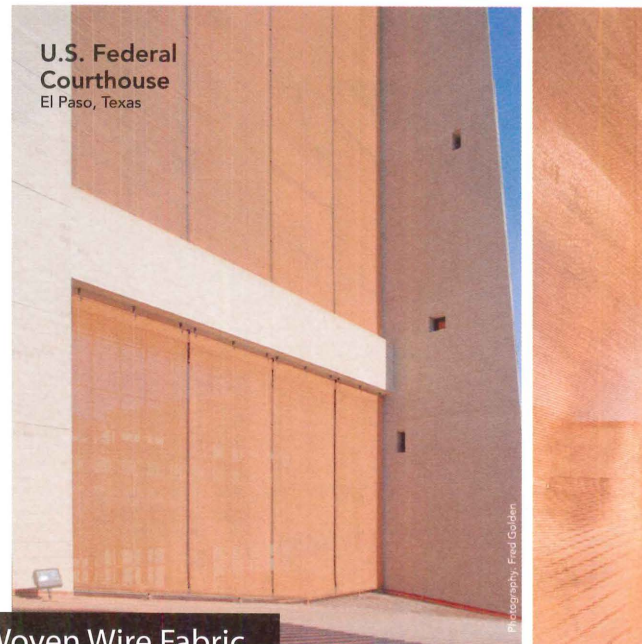


PALISADE S15 LED  
PIA'11 Platinum Award

CHARLES LOOMIS, INC.  
[www.charlesloomis.com](http://www.charlesloomis.com)  
800.755.0471

CIRCLE 83

U.S. Federal  
Courthouse  
El Paso, Texas



Woven Wire Fabric

Cascade Coil Drapery's flexible round weave woven wire fabrics are catching the eyes of today's designers. With its versatility, unique texture, variety of colors, flexibility and durability, Cascade Coil Drapery is a long term solution for today's modern style. Designers and architects around the world are creatively using this material for a wide range of applications including lighting, partitions, window treatments, and other ornamental applications. Woven wire mesh offers many advantages over conventional drapery. Besides being durable, fireproof, and virtually maintenance-free, the material diffuses and enhances lighting without blocking views or ventilation. Save energy by reducing heat loss and gain using Cascade Coil's woven wire fabric for interior and exterior window applications. For over 25 years, Cascade Coil has offered round weave woven wire fabrics that have fueled the imagination of architects, designers and other creative people in the design community. Cascade Coil proudly manufactures their products in the USA and distributes them globally.

CIRCLE 31

 **CASCADE COIL**  
DRAPERY  
[www.cascadecoil.com](http://www.cascadecoil.com) | 800-999-2645

# Control the color of your seasons...

Introducing HP<sup>2</sup>™ featuring **BKSSL** SOLID STATE LIGHTING powered by **araya**

For every season there is a reason for change — B-K Lighting gives you complete control to match your environment at your fingertips. Precision 2™ In-Grade with Color Tuning BKSSL™ Technology makes it easier than ever to control the color of your seasons.



**B-K LIGHTING**  
Quality to Last a Lifetime™

[www.bklighting.com](http://www.bklighting.com) | [www.bkssl.com](http://www.bkssl.com)

CIRCLE 94

# INNOVATE WHEN YOU RENOVATE

Use our unique LED luminaires to create exceptionally distinctive spaces.



## “Hole In The Wall” Series

Fixtures are cast GRG and, when installed, look like a custom built drywall light niche. **Now with LED options!**



## Our New LED LS Series!

The Trimless Little Steplight with a powerful wash of light.

Visit [www.elplighting.com](http://www.elplighting.com) or call us at **(626) 579-0943**



CIRCLE 55

# On this museum visit, you can bring your favorite objects home.

## National Building Museum Design Show August 15–18

Explore a wide range of custom decorative and functional objects including home furnishings, fine art, flooring, textiles, and outdoor fixtures.

Present this ad or enter code ARNBM to receive \$2 off Design Show admission. Visit [go.nbm.org/Design-Show](http://go.nbm.org/Design-Show).



Miles Chair by  
Miles & May  
Image by Photo315



[www.nbm.org](http://www.nbm.org)  
401 F Street NW Washington

# LIBRARY.

Introducing the Architectural Record CEU App. The only app that allows you to fulfill credits and track your progress without Internet access.

## ARCHITECTURAL RECORD Continuing Education Center

### Sculpting the Skyline

FROM ARCHITECTURAL RECORD

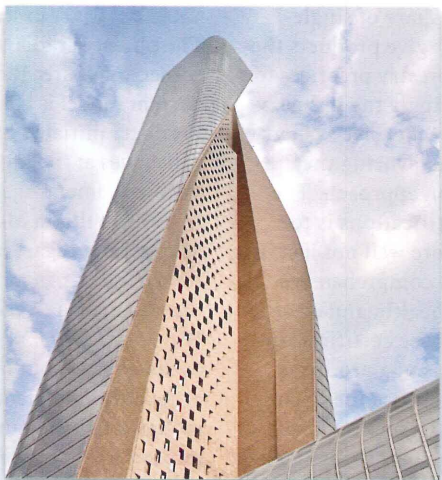
By Joann Gonchar, AIA

The article explores the architectural concepts and structural strategies behind Kuwait City's tallest building and discusses the construction methods used to build it.

#### LEARNING OBJECTIVES

- 1 Explain how evaluation of programmatic requirements and environmental conditions helped designers generate the form of Kuwait City's Al Hamra Firdous Tower.
- 2 Describe the key structural elements of the tower and its foundations.
- 3 Explain the structural and construction challenges presented by the tower's geometry.
- 4 Describe how construction methods were adapted for the harsh desert environment.

Credits: 1.00 HSW



SAVE FOR LATER

TAKE TEST NOW

HOME

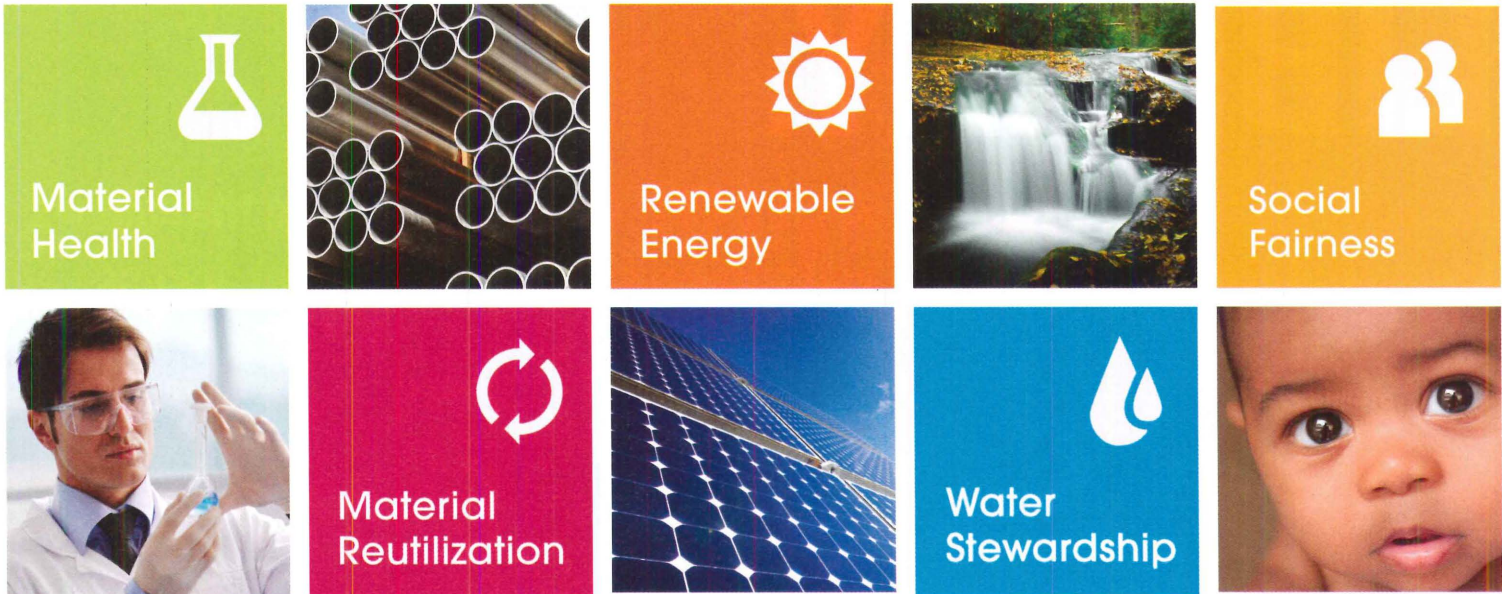
COURSE LIBRARY

CREDIT TRACKER

REQUIREMENTS

Download free at iTunes.

Photos courtesy of Cradle to Cradle Products Innovation Institute



Cradle to Cradle certification provides the framework to assist manufacturers in the making of safe, healthy, regenerative products.

# Multi-Attribute Certification Pinpoints True Sustainability

The Cradle to Cradle Certified approach evaluates and improves products for a greener world

Sponsored by Cradle to Cradle Products Innovation Institute

Everyone wants a healthier, more sustainable world. As the consciousness of sustainability has been raised over the last several decades, that statement is increasingly a given. The question becomes how to get there. Green rating systems of various stripes have emerged in an effort to guide architects and designers in creating a built environment that is safe, non-toxic, and meets energy efficiency, resource conservation, and carbon-neutral goals. Multi-attribute certifications are gathering acceptance as the preferred way of evaluating—and in some cases improving—products of all types.

This article will describe the growing influence of multi-attribute certification systems, focusing on the Cradle to Cradle Certified approach as a means of getting to products that make a beneficial impact on the world. Cradle to Cradle certification will be discussed in detail, including parameters examined and the process required, highlighting examples of improvements in certified products that are upping the sustainability quotient of working and living spaces.

## MULTI-ATTRIBUTE CERTIFICATIONS

Green building has its fair share of single-attribute certifications that give products the nod for everything from forestry practices to energy ratings. But increasingly the industry is looking for a more comprehensive system of evaluating products, and favoring the multi-attribute certification approach. The goal of multi-attribute certifications is to recognize products that score well not just in one parameter but across a comprehensive battery of environmental, health, and even social measures. Some of these certification systems include full analysis of a product's life cycle, while others simply use life-cycle thinking to identify the top issues to cover in the standards. One of the best recognized multi-attribute systems is Cradle to Cradle Certified, which was developed along visionary guidelines to evaluate products according to five parameters and to set out a path of continuous improvement towards the ultimate goal of products that are safe for human and environmental health and infinitely reutilized.

## THE CONCEPT BEHIND THE CRADLE TO CRADLE MOVEMENT

The phrase “cradle to cradle” itself was coined by Walter R. Stahel in the 1970s. The current model is based on “The Intelligent Product” initiated by Michael Braungart and colleagues at the Environmental Protection Encouragement Agency (EPEA) in the 1990s. In 1992, William McDonough and Dr. Michael Braungart published *The Hannover Principles: Design for Sustainability*. In 2002, they published *Cradle to Cradle: Remaking the Way We Make Things*, encapsulating a journey of discovery about materials as either biological or technical nutrients. In their cradle to cradle model, technical nutrient refers to a material or product that is designed to be returned to the industrial metabolism from which it came. Biological nutrients are materials or products that are designed to return to the biological cycle to be consumed by microorganisms in soil and other animals.

This concept that everything is “food” or a resource for something else is a core tenet of the Cradle to Cradle design philosophy.



With conventional use and consumption come waste—and a lot of it. The U.S. alone generates approximately 254 million tons of municipal solid waste. Building-related construction and demolition (C&D) debris amounts to an additional 160 million tons per year. Cradle to Cradle proposes that we don't have a waste problem, we have a design problem. If we design intelligently from the start, we don't need to think in terms of waste, contamination, or scarcity. Good design would allow for abundance and endless reuse—elegant solutions. In addition, the Cradle to Cradle approach strives for eco-effectiveness or rather, doing more good instead of reducing and eliminating with the goal of being less bad. Cradle to Cradle co-founder Dr. Michael Braungart points out that mankind strives to make a positive impact both economically and socially, but when it comes to the environment, we strive for “zero”—net zero, zero waste, etc.—and zero is not a terribly inspiring goal. The Cradle to Cradle approach suggests that, when it comes to the making of things, mankind can go well beyond zero to have a positive, restorative, beneficial impact on the environment.

The Cradle to Cradle design ideal then is a world that is not resource constrained, where the concept of waste does not exist, where resources can be reused infinitely, and consumption is sustainable. All materials will be safe and healthy because they have been designed knowing the metabolism they will feed, with safe and healthy ingredients. Greenhouse gas pollution is addressed through commitments to make products with clean, renewable energy and products that are produced in systems that are fair and equitable to all stakeholders.

### DEVELOPMENT OF THE CERTIFIED PRODUCTS PROGRAM

Following the publication of *Cradle to Cradle: Remaking the Way We Make Things*, McDonough and Braungart began working with clients to apply these concepts to

product design in their consulting firms, McDonough Braungart Design Chemistry (MBDC) and EPEA. In 2005, MBDC first used the Cradle to Cradle Certified logo as recognition of achievement in design and production. Over the years it evolved and in 2010, in order to scale the certification globally and make it available to the public, McDonough and Braungart gifted the Certified Products Program to the Cradle to Cradle Products Innovation Institute. The Institute is an independent, non-profit, third-party verifier that administers two versions of the program—the legacy version 2.0 from MBDC and a new version 3.0 released in November 2012.

## Cradle to Cradle Certified is becoming increasingly important as a quick reference for everyone looking for quality, sustainable products for the built environment.

“The Institute’s formation creates access for anyone to find out about the certification,” says Bridgett Luther, president of the Institute and former director of the California Department of Conservation. “The program and the process are completely transparent.”

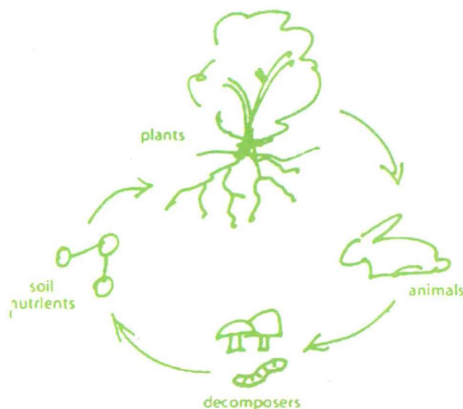
The Institute also vets and trains accredited assessment bodies that use the program to assess their clients’ products. The assessors submit assessment summaries to the Institute for verification and a certificate is issued if the product meets the requirements. An independent Certification Standards Board is the main governing body for the program. It reviews the quality standard criteria, makes revisions, additions, and changes as necessary to maintain the integrity and viability of the program.

### THE FRAMEWORK—A CONTINUOUS IMPROVEMENT STANDARD

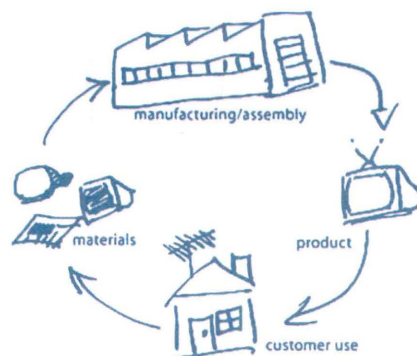
Companies pursuing certification are asked to follow a strict process that includes inventory and assessment in five areas including Material Health, Material Reutilization, Renewable Energy and Carbon Management, Water Stewardship, and Social Fairness, and to develop a plan to design and optimize their products towards the goal of being safe, healthy, and regenerative. The program recognizes that manufacturers may be at different levels of optimization, and it allows those seeking certification to enter the program at various levels and make a commitment to continuous improvement and optimization. Products are recertified every two years.

### System Overview

Cradle to Cradle Certified is a multi-attribute approach to certification of a wide range of products, with an emphasis on the built environment, fashion, and personal care products. In order to achieve certification, a product must meet the requirements for a given level in all of the following five categories:



Biological Nutrient Cycle



Technical Nutrient Cycle

© 2013 MBDC

### CONTINUING EDUCATION



#### Learning Objectives

After reading this article, you should be able to:

1. Articulate the five attributes of Cradle to Cradle Product Certification, their importance, and how they are measured.
2. Reference five levels of certification and describe what each says about a product.
3. Communicate how Cradle to Cradle Certified products meet client objectives especially related to sustainability goals.
4. Describe changes to LEED v4 that reference Cradle to Cradle Certified products.

To receive AIA/CES credit, you are required to read the entire article and pass the test. Go to [ce.architecturalrecord.com](http://ce.architecturalrecord.com) for complete text and to take the test for free.

AIA/CES COURSE #K1308D

Chart courtesy of Cradle to Cradle Products Innovation Institute

CRADLE TO CRADLE CERTIFIED PRODUCT SCORECARD					
QUALITY CATEGORY	BASIC	BRONZE	SILVER	GOLD	PLATINUM
MATERIAL HEALTH			✓		
MATERIAL REUTILIZATION			✓		
RENEWABLE ENERGY & CARBON MANAGEMENT				✓	
WATER STEWARDSHIP			✓		
SOCIAL FAIRNESS					✓
<b>OVERALL CERTIFICATION LEVEL</b>			✓		

The minimum level of achievement in any of the five categories ultimately determines the final certification level.

- **Material Health.** Identifying, managing, and, where possible, replacing substances of concern with ones that are safe and healthy for humans and the environment.
- **Material Reutilization.** Designing products so all materials can be re-used safely by nature or industry.
- **Renewable Energy and Carbon Management.** Assembling and manufacturing products with renewable, non-polluting energy.
- **Water Stewardship.** Making products in ways that protect and enrich water supplies.
- **Social Fairness.** Treating all the people involved in the product manufacturing process in socially responsible ways.

**Levels of Certification**

Because the program is not based on the binary, pass/fail model, but instead certifies the intention to continuously improve, the certification results are split into a five-level system of Basic, Bronze, Silver, Gold, and Platinum. A scorecard is created to rate the product on all certification criteria. Each criterion is assigned a level of achievement. The minimum level of achievement in any of the five categories ultimately determines the final certification level. A product may be “Gold” or even “Platinum” in one or two categories but “Silver” in three others, making the overall product certification “Silver.” The applicant is expected to optimize each aspect of their product over time, with the ultimate goal being to encourage innovation and the design of products that effectively and positively impact people and the environment.

The latest version of Cradle to Cradle certification protocol, Version 3.0, was made publicly available in late 2012. In this iteration, the bar has been raised across all attributes. In particular, the Material Health attribute features a banned list of chemicals for both biological and technical nutrients. The basic level is now

a provisional level allowing a manufacturer to establish baseline/inventory for each category while allowing products to get on the path of continuous improvement. Certification levels progress from there.

New to Version 3 is the addition of a Bronze level. In Version 2, the bar to achieve Silver was so high and broad that it didn’t allow for clear distinction between products that were in different stages along the optimization path.

Institute President Bridgett Luther adds, “The move from version 2.1 to the new version 3.0 was exciting and really brought together the teams at MBDC and EPEA to translate the best practices with their clients into something that others could teach and learn. Version 3.0 is more rigorous, but the whole program becomes a sustainability platform.”

Chart courtesy of Cradle to Cradle Products Innovation Institute

NYLON 6 FORMULATION				
MATERIAL ASSESSMENT SUMMARY COMMENTS				SCORE
(1) The potential routes of exposure of carbon black as it exists in a polymeric material do not pose a risk to the user of recycler of the material. Therefore the red flag for this ingredient is changed to a yellow assessment as used in this material. While there is very little recycled content in this material, glass filled nylon 6 can be mechanically or chemically recycled and therefore is positioned to be a true technical nutrient.				C
INGREDIENT ASSESSMENT SUMMARY				
CAS #	FUNCTION	CONCENTRATION	PROFILE	ASSESSMENT
25038-54-4	Base resin	>63%	Green	Green
65997-17-3	Reinforcement	33%	Yellow	Yellow
822-16-2	Lubricant	<1%	Green	Green
7758-02-3	Stabilizer	<1%	Yellow	Yellow
7681-65-4	Stabilizer	<1%	Green	Green
1333-86-4	Pigment	<1%	Red	Yellow(1)

For each material in a product, the chemicals are assessed for potential hazards, exposure, and cyclability.

**The Parameters**

Manufacturers seeking Cradle to Cradle certification must meet stringent criteria in five different areas, which are discussed in depth below.



**Material Health**

“Today, many architects and designers are concerned with avoiding chemicals of concern in their projects. The Material Health score of certified products can provide a quick reference for what a product contains,” says Stacy Glass, the Institute’s executive in residence for the built environment.

A product often contains many materials and each material contains many chemicals. The Cradle to Cradle Material Health assessment looks at each of these levels to arrive at an overall assessment of the products material health impact. First, the manufacturer completes a Bill of Materials detailing each material used in the product. The Bill of Materials is provided to the accredited assessor who looks at all of the material components. Then they identify all the chemicals contained in those materials down to very minute levels (100 parts per million) by working directly with the manufacturer’s supply chain, often under non-disclosure agreements to ensure all chemicals are examined. Assessors even conduct a site visit to verify inputs into the manufacturing process. Then, all of the chemicals are assessed against the program’s rating system. If products contain substances that are on the program’s banned list—such as PVC—these products will never receive certification at any level. Other chemicals are judged by establishing their potential risk to human health and the environment, across 24 different human and environmental “endpoints.”

Materials are also judged on how well they can return to either technical or biological cycles. These criteria are combined to assign each material a final grade.

Materials get an A or B when it is determined that they largely support Cradle to Cradle design objectives. Materials are graded C if they are moderately problematic due to either their chemical risk or their inability to be composted or recycled. Or materials are assessed X, meaning they have highly problematic properties that should be phased out. Products with a Material Health rating of Gold or higher have achieved this ideal and contain no X-assessed materials.

As can be seen in the table (see page 142) describing an assessment summary for a Nylon 6 formulation, in some cases, a red flag material can be changed to a moderate risk if there is no chance that the chemical will be an exposure risk to humans or the environment. In this way, Cradle to Cradle encourages product designers to change their thinking. Instead of asking whether a chemical is good or bad, ask if it is being used in the proper way.

Optimization is the process of continuously improving these aspects of a product so it gets a better grade the next time it is assessed. Optimization in the Material Health criteria often requires intensive effort and innovation. Ken Tameling, general manager at Steelcase, cites an example where the company successfully found a product alternative for a particular chair, which is Cradle to Cradle Certified at the Silver level. The company initiated a redesign project to eliminate a small concentration of an identified material of concern.

“The material we sought to replace was an integral ingredient in the product assembly. It was our objective to completely eliminate this material from the chair and our product portfolio. We had two options—search for an acceptable replacement or redesign the chair. After an extensive global search, we discovered that an alternate material did not exist. This type of deep commitment to materials chemistry can lead to cost savings, a cost increase, or cost-neutral. The expertise of our designers, engineers, and procurement people allows us to take on these challenges,” says Tameling. The company’s design and engineering team focused on solutions that could be produced utilizing materials that had already been assessed. The resulting material met the desired environmental criteria while doubling the durability of the product at a reduced cost.

While some companies do find alternative ingredients, others cannot yet. Innovation and breakthroughs in green chemistry are needed across industries to truly eliminate chemicals of concern.

Chart courtesy of Cradle to Cradle Products Innovation Institute

CRADLE TO CRADLE MATERIAL HEALTH QUICK REFERENCE GUIDE		v3 BASIC	v2 BASIC	v3 BRONZE	v2 SILVER	v3 SILVER	v2 & v3 GOLD	v2 & v3 PLATINUM
100% CHEMICAL DISCLOSURE							☑	☑
AT LEAST 95% CHEMICAL DISCLOSURE		☑			☑	☑	☑	☑
AT LEAST 75% CHEMICAL DISCLOSURE		☑		☑	☑	☑	☑	☑
CHEMICALS PROFILED FOR HAZARD AND EXPOSURE				☑	☑	☑	☑	☑
NO PVCs OR RELATED COMPOUNDS	☑	☑		☑	☑	☑	☑	☑
NO C2C V3 BANNED LIST CHEMICALS	☑			☑		☑	☑	☑
NO CARCINOGENS, MUTAGENS, OR REPRODUCTIVE TOXINS						☑	☑	☑
ONLY POSITIVE CHEMISTRY							☑	☑
RE-CERTIFIED EVERY TWO YEARS (MINIMUM)			☑	☑	☑	☑	☑	☑
DATA VERIFIED BY INDEPENDENT ASSESSOR		☑		☑	☑	☑	☑	☑

For project teams concerned with avoiding chemicals of concern, the Material Health score of a certified product can provide a quick reference for the level of optimization.



**Material Reutilization**  
Companies pursuing certification must design components of their products as biological or technical nutrients, and for each nutrient, define the path to reutilization, and develop systems to recover used products safely and continuously.

“Closed loop design may seem fairly straightforward. To truly solve for a product’s end of life, we have to make it part of the design problem from the beginning. Our designers have to think about how the product can be reused and its materials recovered as ‘food’ for new products,” says Angela Nahikian, director of global environmental sustainability at Steelcase. One example is the company’s signature chair, which was the very first Cradle to Cradle Certified product. “Our developers worked diligently to create a chair that could be disassembled in five minutes with common hand tools with as few parts as possible. During a recent redesign of the chair, we have again made sustainability advancement part of the design problem, including further reducing the number of parts. The cradle to cradle philosophy and the Cradle to Cradle certification is an inherent commitment to ongoing improvement,” says Nahikian.

One industry that has made strides in material reutilization is the carpet industry—and with good reason. Traditional carpet is

made from petrochemicals, a nylon surface and a polypropylene backing. U.S. statistics indicate that despite a guaranteed life of between 10 and 25 years, carpeting is replaced on average every seven years. When carpeting wears out, it has traditionally been sent to a landfill. Each year, billions of pounds of old carpet are removed from residential and commercial buildings and sent to landfills across the United States. This disposal of carpet contributes to the loss of landfill space, as well as the loss of valuable resources.

Consistent with Cradle to Cradle principles, some leading manufacturers have designed their carpet products as technical nutrients that can remain in constant use, effectively “closing the loop.” According to its website, more than half of the carpet sold by the carpet manufacturer Shaw Floors is Cradle to Cradle Certified Silver. The company’s technical nutrient carpet tile is designed to be returned to it after use and be perpetually recycled into the next generation of high quality carpet. In fact, the company will take back and recycle certain products at the end of their first use at no charge to the customer—a scenario made possible because the company is getting its raw materials back. This is a radical change in business model, and an example of how Cradle to Cradle design can fundamentally change business.

Continues at [ce.architecturalrecord.com](http://ce.architecturalrecord.com)

CONTINUING EDUCATION

# Advertisers Index

## Get Free Information

from our advertisers! Fill out this Reader Service Card and send back today  
or go to [ArchRecord.com](http://ArchRecord.com) > Products tab > Reader Service

Reader Service #	Advertiser	Page	Reader Service #	Advertiser	Page	Reader Service #	Advertiser	Page
14	AMICO <a href="http://amicoarch.com">amicoarch.com</a>	97	55	Engineered Lighting Products <a href="http://elplighting.com">elplighting.com</a>	137	21	PPG IdeaScapes <a href="http://PPGIdeaScapes.com/sb67">PPGIdeaScapes.com/sb67</a>	2-3
86	ALPOLIC / Mitsubishi Plastics Composites America, Inc. <a href="http://alpolic-northamerica.com/case-studies">alpolic-northamerica.com/case-studies</a>	15	44	Feeney, Inc. (DesignRail®) <a href="http://feeney10.com">feeney10.com</a>	115	77	Prodema <a href="http://prodema.com">prodema.com</a>	65
92	American Specialties, Inc. <a href="http://americanspecialties.com">americanspecialties.com</a>	47	20	Glen Raven <a href="http://glenraven.com/firesist">glenraven.com/firesist</a>	45	93	RAB Lighting <a href="http://RABLED.com">RABLED.com</a>	132
28	amerlux <a href="http://amerlux.com">amerlux.com</a>	124	33	Holcim <a href="http://holcim.us">holcim.us</a>	96	48	Rocky Mountain Hardware <a href="http://rockymountainhardware.com">rockymountainhardware.com</a>	22
	Architectural Record Continuing Education App <a href="http://archrecord.com">archrecord.com</a>	139	73	Huber Engineered Woods <a href="http://huberarchitectlibrary.com">huberarchitectlibrary.com</a>	48	89	ROXUL <a href="http://roxul.com">roxul.com</a>	114
	Architectural Record Innovation Conference <a href="http://recordinnovation.com">recordinnovation.com</a>	33	76	Huntco Supply LLC <a href="http://huntco.com">huntco.com</a>	25	24	SAFTIFIRST Fire Rated Glazing Solutions <a href="http://safti.com/ar">safti.com/ar</a>	31
41	Armstrong World Industries <a href="http://armstrong.com/rejuv">armstrong.com/rejuv</a>	2	12	Hunter Douglas Contract <a href="http://hunterdouglascontract.com/RB500">hunterdouglascontract.com/RB500</a>	4-5	59	SageGlass <a href="http://sageglass.com">sageglass.com</a>	37
52	Armstrong World Industries <a href="http://armstrong.com/shapes">armstrong.com/shapes</a>	cv2-1	85	InPro Corporation <a href="http://inprocorp.com">inprocorp.com</a>	62	80	Samsung <a href="http://samsung.com/hospitality">samsung.com/hospitality</a>	55
63	Artemide, Inc. <a href="http://artemide.net">artemide.net</a>	116	56	Invisible Structures Inc. <a href="http://invisiblestructures.com">invisiblestructures.com</a>	151	38	Samsung Staron Surfaces <a href="http://staron.com">staron.com</a>	35
16	AZZ Galvanizing Services <a href="http://azzgalvanizing.com">azzgalvanizing.com</a>	149	45	Johnsonite, A Tarkett Company <a href="http://tarkettna.com/inanutshell">tarkettna.com/inanutshell</a>	12	88	Selux <a href="http://selux.us">selux.us</a>	127
29	BEGA <a href="http://bega-us.com">bega-us.com</a>	29	34	Kawneer <a href="http://kawneer.com">kawneer.com</a>	7	49	Skyscraper Museum, The <a href="http://skyscraper.org">skyscraper.org</a>	151
42	Belden Brick <a href="http://beldenbrick.com">beldenbrick.com</a>	64	19	Kepeco+ <a href="http://kepeco.com">kepeco.com</a>	151	90	Sloan <a href="http://sloanvalve.com">sloanvalve.com</a>	17
94	B-K Lighting <a href="http://bklighting.com">bklighting.com</a> , <a href="http://bkssl.com">bkssl.com</a>	137	75	Kim Lighting <a href="http://kimlighting.com">kimlighting.com</a>	19	90	Specialty Doors <a href="http://barndoorhardware.com">barndoorhardware.com</a>	28
64	Bobrick <a href="http://bobrick.com">bobrick.com</a>	9	57	Landscape Forms <a href="http://landscapeforms.com">landscapeforms.com</a>	66	60	Steel Institute of New York <a href="http://siny.org">siny.org</a>	6
15	C.R. Laurence Co., Inc. <a href="http://crlaurence.com">crlaurence.com</a>	51	70	LiftMaster® <a href="http://liftmaster.com">liftmaster.com</a>	60	79	Stresscrete Group <a href="http://stresscretegroup.com">stresscretegroup.com</a>	147
31	Cascade Coil Drapery <a href="http://cascadecoil.com">cascadecoil.com</a>	136	68	Lithonia Lighting <a href="http://lithonia.com">lithonia.com</a>	131	37	TAKTL <a href="http://taktl-llc.com">taktl-llc.com</a>	99
83	Charles Loomis, Inc. <a href="http://charlesloomis.com">charlesloomis.com</a>	136	22	Louis Poulsen <a href="http://louispoulsen.com">louispoulsen.com</a>	52	26	Technical Glass Products <a href="http://fireglass.com">fireglass.com</a>	10-11
65	ClimateMaster, Inc. <a href="http://climatemaster.com">climatemaster.com</a>	46	46	Lutron Electronics Co., Inc. <a href="http://lutron.com/daylightautonomy">lutron.com/daylightautonomy</a>	cv4	72	Technical Glass Products <a href="http://tgpamerica.com">tgpamerica.com</a>	148
18	Columbia Lighting <a href="http://columbialighting.com/products/iser">columbialighting.com/products/iser</a>	135	78	Manning Lighting Inc. <a href="http://digital-speck.com">digital-speck.com</a>	136	50	ThyssenKrupp Elevator Corporation <a href="http://thyssenkruppelevator.com">thyssenkruppelevator.com</a>	20
84	Cradle to Cradle Products Innovation Institute <a href="http://c2ccertified.org">c2ccertified.org</a>	140-143	36	Mett-Span <a href="http://mettspan.com">mettspan.com</a>	61	61	Toto USA <a href="http://totousa.com">totousa.com</a>	100
30	Cree, Inc. <a href="http://CreeLEDLighting.com">CreeLEDLighting.com</a>	123	40	Modern Fan Co., The <a href="http://modernfan.com">modernfan.com</a>	38	82	UL Environment <a href="http://ul.com/environment">ul.com/environment</a>	cv3
43	Doug Mockett & Company, Inc. <a href="http://mockett.com">mockett.com</a>	24	91	modularArts <a href="http://modulararts.com">modulararts.com</a>	8	25	Underwriters Laboratories Inc. <a href="http://ul.com/newsience">ul.com/newsience</a>	50
54	Dri-Design <a href="http://dri-design.com">dri-design.com</a>	18	47	National Building Museum <a href="http://nbm.org">nbm.org</a>	138	71	Unilock <a href="http://unilock.com">unilock.com</a>	98
66	DuPont Tyvek <a href="http://fluidapplied.tyvek.com/casestudies">fluidapplied.tyvek.com/casestudies</a>	32	58	Oldcastle® Architectural <a href="http://oldcastleapg.com/ceubim.html">oldcastleapg.com/ceubim.html</a>	21	53	USAI Lighting <a href="http://usailighting.com">usailighting.com</a>	119
32	E. Dillon & Company <a href="http://edillon.com">edillon.com</a>	43	58	Partner Engineering and Science, Inc. <a href="http://PARTNEResi.com">PARTNEResi.com</a>	148	81	VICWEST <a href="http://vicwest.com">vicwest.com</a>	26
17	EarthWerks® <a href="http://earthwerks.com">earthwerks.com</a>	113	35	PCI Precast/Prestressed Concrete Institute <a href="http://www.pci.org/hpprecast">www.pci.org/hpprecast</a>	57	51	Vulcraft <a href="http://vulcraft.com">vulcraft.com</a>	63
74	Easi-Set Worldwide <a href="http://slenderwall.com">slenderwall.com</a>	40	87	Pine Hall Brick Co. <a href="http://americaspremierpaver.com">americaspremierpaver.com</a>	44	39	Walpole <a href="http://walpolewoodworkers.com">walpolewoodworkers.com</a>	151
						27	Western Red Cedar Lumber Association <a href="http://realcedar.org">realcedar.org</a>	34

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

To access PDFs of all full-page or larger ads appearing in this issue, go to [ArchRecord.com](http://ArchRecord.com) > Products tab > Product Ads

Get more info at [www.sweets.com](http://www.sweets.com)

## PRODUCT SPOTLIGHTS

Advertisement

### DOORS, WINDOWS

#### FIRE-RATED GLASS CERAMIC

WR

##### Technical Glass Products

▲ FireLite® family of products from Technical Glass Products is UL listed and labeled and offers fire ratings up to 3 hours.

##### Product Application:

- Post Road Elementary School, White Plains, NY
- Seattle-Tacoma International Airport, Seattle, WA
- Shaklee Corporate Headquarters, Pleasanton, CA

##### Performance Data:

- High impact safety ratings
- Clear and wireless



www.fireglass.com

800.426.0279 | Contact: sales@fireglass.com

Circle 150

### DOORS, WINDOWS

#### ONE-PIECE HYDRAULIC & LIFT-STRAP BIFOLD DOORS

##### Schweiss Doors

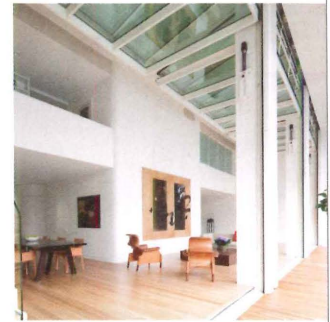
▲ Schweiss Doors manufactures unique custom doors. One-piece hydraulic doors and patented Lift-Strap opening/closing bifold doors.

##### Product Application:

- Moving doors and walls
- You think it, they build it
- Custom-designed storefronts and more

##### Performance Data:

- One-piece hydraulic doors
- Faster, safer operation, zero lost headroom, superior design that keeps working



www.schweissdoors.com

800.746.8273

Circle 151

### ELECTRICAL, LIGHTING

#### CONTINUOUS LINEAR LED

\$\$\$ | G | NEW

##### DALUME (Division of EEMA Lighting Group)

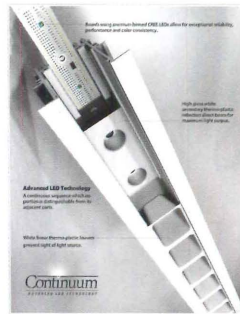
▲ CONTINUUM™, a US-made slim architectural lighting system, offering continuous sequence of linear LED lighting. Energy efficient, sleek design, low maintenance with louvers or frosted lens options.

##### Product Application:

- Compatible with T-bar and drywall ceilings or walls
- Perfect for high-end retail, hospitality, commercial, and residential; soft and crisp illumination

##### Performance Data:

- 710 lm/ft. with a high 88 CRI
- 60,000 hours life L70



Dalume.com

323.904.0200 ext. 508 | Contact: Sales Department

Circle 152

### INTERIOR FINISHES, FURNISHINGS

#### DECORATIVE METAL CEILINGS

\$\$\$ | G

##### The Gage Corporation, Int.

▲ Gage serves architects and designers around the globe with distinctive metal architectural products. Whatever the focus of your next ceiling installation—a clean and classic look, a subtle complement in the background, an elegant statement for a rich decor, an exciting custom design with endless possibilities, or a dramatic eye-catching look—Gage can help. Let your focus become their focus.

##### Product Application:

- Planet Hollywood, Westgate Resorts
- Destiny New York Cruises, Directions in Design



www.gagecorp.net

800.786.4243, 608.269.7447

Circle 153

### INTERIOR FINISHES, FURNISHINGS

#### PARTITION CLOSURES

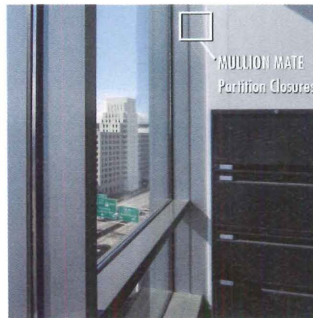
\$ | G

##### Gordon, Inc.

▲ Mullion Mate is an adjustable partition closure that creates a vertical juncture between partitions and window walls.

##### Performance Data:

- Made of extruded aluminum and is finished to match mullions
- Factory spring loaded to fit a variety of openings
- Pre-assembled for ease of installation
- Insulation is factory installed inside Mullion Mate, STC=38
- Contributes to LEED certification



www.gordon-inc.com

800.747.8954 | Contact: Tom Ayres

Circle 154

### MECHANICAL SYSTEMS, HVAC, PLUMBING

#### COLLECTION BY MODERN DESIGN ICON

WR

##### Infinity Drain

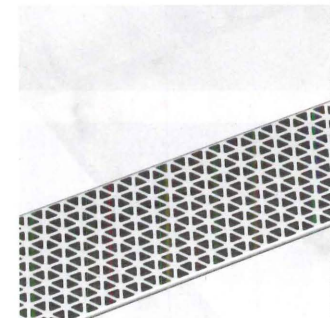
▲ Introducing a collection of exclusive linear drain covers by Marc Newson, an icon of modern design.

##### Product Application:

- Suited for both residential and hospitality applications
- Works with any type of waterproofing technique

##### Performance Data:

- Available in five finish options including Matte White and Matte Black
- Constructed of substantial 14-gauge stainless steel
- Made in USA



www.InfinityDrain.com

516.767.6786 | Contact: info@InfinityDrain.com

Circle 155

## CLASSIFIEDS

### POSITION VACANT

WWW.SMPCAREERCENTER.ORG

Find marketing/BD professionals with A/E/C experience. Call 800-292-7677, ext. 231

# ARCHITECTURAL RECORD

To view Architectural Record online visit:  
www.architecturalrecord.com

# ARCHITECTURAL RECORD

To obtain information or to reserve space contact:

Diane Soister at Tel: 212-904-2021  
or call 1-800-251-5176  
Email: [diane.soister@mhfi.com](mailto:diane.soister@mhfi.com)

# ENR

EVENTS &  
CONFERENCES

# FutureTech Conference

IMAGINING CONSTRUCTION'S FUTURE

1

NOV. 7, 2013



NEW YORK, NY



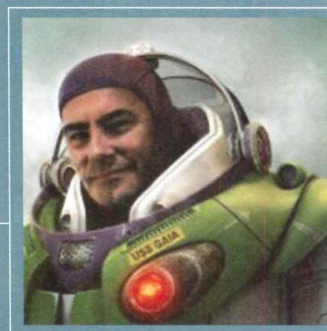
EARLY BIRD: \$395

THE FUTURE IS COMING.  
RESERVE YOUR PLACE.

Technology innovation is moving at lightning speed across the AEC markets today. New ideas and applications are being tested and launched almost on a daily basis. Design firms, contractors and construction managers are incubating and capturing technology-enabled processes that deliver new value to owners for both construction projects, as well as the asset lifecycle. Come join us at ENR Futuretech and help "imagine construction's future" this November in New York.



KEYNOTE SPEAKER: **William (Bill) Kemp**  
Founder & Chief Executive Officer  
Robotics in Space Construction



REGISTER:



[enrfuturetech.com](http://enrfuturetech.com)



800.371.3238



## PANEL DISCUSSIONS

- › *Big Data in Construction*
- › *Measuring Future Opportunity & Success Based on Predictive Analytics for a Competitive Edge*
- › *Automated Fabrication*
- › *GeoDesign & Construction*
- › *Blurring the Lines: Concurrent Design & Construction*
- › *Imagining Construction's Future*

### Platinum Sponsors:

CMiC SAP b4 consulting United Rentals VIEWPOINT

### Silver Sponsors:

bluebeam EarthCam Webcam Technology Newforma OnCenter SOFTWARE

RedVector techsuite Trimble

### Supporting Sponsor:

SMPs Society for Marketing Professional Services

## Ongoing Exhibitions

### Drawing the Future: Chicago Architecture on the International Stage

Chicago

Through August 11, 2013

*Drawing the Future* explores the dialogue among architects Frank Lloyd Wright, Walter Burley Griffin, Marion Mahony Griffin, and their European counterparts through more than 50 drawings, large-scale architectural renderings, plans, sketches, and rare books. The exhibition provides new perspectives on this critical juncture in architectural history and highlights Chicago's leadership in these architectural and design innovations. For more information, visit [blockmuseum.northwestern.edu](http://blockmuseum.northwestern.edu).

### Composite Landscapes: Photomontage and Landscape Architecture

Boston

Through September 2, 2013

The Isabella Stewart Gardner Museum debuts the first landscape-architecture-focused exhibition in the Hostetter gallery of the museum's new wing, designed by Renzo Piano. *Composite Landscapes* examines one of landscape architecture's most recognizable representational forms: the montage view. For more information, visit [gardnermuseum.org](http://gardnermuseum.org).

### Charles Correa: India's Greatest Architect

London

Through September 4, 2013

This exhibition at the Royal Institute of British Architects chronicles the prolific, half-century career of Indian architect Charles Correa and demonstrates Correa's essential role in the creation of an architecture for post-independence India. *India's Greatest Architect*, designed by architect David Adjaye, puts on display some of the 6,000 drawings that Correa donated to the RIBA archive and also features photographs, models, and films. For more information, visit [architecture.org](http://architecture.org).

### After Katrina

Boston

Through September 15, 2013

In the eight years since Hurricane Katrina, faculty, students and alumni from MIT's Department of Urban Studies and Planning and the School of Architecture and Planning have worked in New Orleans and the Gulf Coast with a number of organizations on a multitude of issues. This exhibit at the MIT Compton Gallery commemorates MIT's efforts in New Orleans. For more information, visit [arts.mit.edu](http://arts.mit.edu).

### A New Sculpturalism: Contemporary Architecture from Southern California

Los Angeles

Through September 16, 2013

The Museum of Contemporary Art, Los Angeles, presents a scholarly examination of the radical forms that have become prolific in Southern California architecture during the past 25 years. The exhibition aims to rethink how museums display architecture, allowing visitors to experience it through full-scale maquettes and full-size built structures. The show includes works by 38 architectural firms based in Los Angeles, including Gehry Partners, Morphosis Architects, and XTEN Architecture. For more information, visit [moca.org](http://moca.org).

### James Turrell

New York City

Through September 25, 2013

James Turrell's first exhibition in a New York museum since 1980 focuses on the artist's explorations of perception, light, color, and space, with a special focus on the role of site-specificity in his practice. At its core is *Aten Reign* (2013), a major new project that recasts the Guggenheim rotunda as a volume filled with shifting artificial and natural light. For more information, visit [guggenheim.org](http://guggenheim.org).

### Theaster Gates: 13th Ballad

Chicago

Through October 6, 2013

For the *13th Ballad*, Chicago-based artist Theaster Gates creates a new large-scale installation in the MCA's Kovler Atrium that comprises objects and materials from the Huguenot House. Along with a monumental double-cross sculpture and carved wooden pews, it creates an ecclesiastical ambience to suggest that art museums, like churches, are sites of pilgrimage and thoughtful contemplation. *13th Ballad* is accompanied at the MCA by a series of collaborative performances. For more information, visit [mcachicago.org](http://mcachicago.org).

### NOMADIC FURNITURE 3.0:

#### New Liberated Living

Vienna

Through October 6, 2013

Hardly a single area of everyday life and material culture has not been swept up in the do-it-yourself (DIY) revolution. This is the first exhibition to examine the intersection of the DIY movement with furniture design in a historical context. At the MAK Exhibition Hall. For more information, visit [mak.at](http://mak.at).



K803-FAFL Shown

DESIGNLIGHTS  
CONSORTIUM



lighting  
facts  
LED Lighting Partner



**Dedication to innovation, advanced technology and excellence in engineering has led to a comprehensive line of industry-leading outdoor LED fixtures. Style and performance, uniquely King Luminaire.**

A highly efficient line of post top, pendant and area lighting fixtures offering:

- 5x the usable life of HID fixtures
- Instant on/off
- Excellent light distribution
- Energy Savings
- Effective uplight control

For more information on our LED product line, and for a full list of fixtures offered, please visit us at [www.stresscretegroup.com](http://www.stresscretegroup.com) or email [led@kingluminaire.com](mailto:led@kingluminaire.com)



King Luminaire • StressCrete • Est. 1953

**STRESSCRETE  
GROUP**

Quality People • Quality Products

The full DLC Qualified Products list is available at:  
[http://www.designlights.org/solidstate/about/QualifiedProductsList\\_Publicv2.php](http://www.designlights.org/solidstate/about/QualifiedProductsList_Publicv2.php), check this list regularly for updates.

Northport, Alabama • Atchison, Kansas  
Jefferson, Ohio • Burlington, Ontario

# PARTNER

Engineering and Science, Inc.

Partner welcomes  
the award-winning  
engineers of

## BIRDSALL SERVICES GROUP

ENGINEERS & CONSULTANTS

2012 ENR Top 200

2011 NJ Concrete Award

2010 NJ Concrete Award

2010 American School &  
University Architectural Award

2010 ENR Top 200

2008 Land Use Award

2008 NJDEP Environmental  
Excellence Award

2007 Municipal Construction  
Project of the Year

Partner acquired the assets  
and key personnel of BSG



Contact us at  
(800) 419-4923  
[www.PARTNEResi.com](http://www.PARTNEResi.com)

engineering • environmental • energy

CIRCLE 58

## dates&events

### Archaeology of the Digital

Montreal

Through October 13, 2013

This exhibition at the Canadian Centre for Architecture explores the genesis of digital tools for design conceptualization, visualization, and production at the end of the 1980s and beginning of the 1990s. Featuring the work of Frank Gehry, Peter Eisenman, Shoji Yoh, and Chuck Hoberman, *Archaeology of the Digital* highlights the intersection of computer science, architecture, and engineering in the experiments by these featured architects. For more information, visit [cca.qc.ca](http://cca.qc.ca).

### Never Built: Los Angeles

Los Angeles

Through October 13, 2013

Held at the A+D Architecture and Design Museum, *Never Built: Los Angeles* explores a "what if" version of Los Angeles through a compendium of urban projects that never made it past the drawing board. In words, drawings, models, videos, and other media, this exhibition examines the visionary works that had the greatest potential to reshape Los Angeles. For more information, visit [aplusd.org](http://aplusd.org).

## Lectures, Conferences, and Symposia

### World Interiors Meeting 2013

Amsterdam

September 5-7, 2013

World Interiors Meeting 2013 is the first international conference focusing specifically on interior design and architecture, organized by and for interior professionals. The congress will bring international interior designers and architects to meet and debate the past, present, and future of interior design. World Interiors Meeting is primarily aimed at professionals working in or related to the interiors discipline, including interior architects, interior designers, architects, and designers. Panel topics include sustainability, culture, education, and the role of design in society. For more information, visit [meeting.inamsterdam.org](http://meeting.inamsterdam.org).

### International Urban Design Conference

Sydney

September 9-11, 2013

Australia's cities face a number of long-term challenges: achieving greater productivity, affordable and accessible housing, efficient public transportation, safe community spaces, services for a growing and aging population, and the implications of climate change. This conference, held at Novotel Sydney Olympic Park, is dedicated to the theme of "UrbanAgiNation" and will examine the

# TGP. IT'S PERSONAL.

Seeking long-term relationship with smooth, open-minded, creative type not into boundaries. Don't box me in. You should be strong, yet refined. Must hold transparent, clear views of the world and always be open to a broader perspective. Looking for beauty on the inside and out. Email me [sales@tgpamerica.com](mailto:sales@tgpamerica.com)

### SteelBuilt Curtainwall® Systems

Get to know this attractive curtainwall system that expands your design options. SteelBuilt Curtainwall® Systems allow you to build openings with more glass, less framing and smaller profiles than traditional aluminum systems.

- Superior thermal performance
- Larger spans of glazing
- Smaller, thinner profiles



## STEELBUILT

CURTAINWALL SYSTEMS

TGP ARCHITECTURAL  
one source. many solutions.®

[tgpamerica.com](http://tgpamerica.com)

CIRCLE 72



livability, affordability, safety, and efficiency of Australia's cities. For more information, visit [urbandesignaustralia.com.au](http://urbandesignaustralia.com.au).

### Monterey Design

#### Conference 2013

Pacific Grove, California

September 27–29, 2013

This biennial conference, hosted by the American Institute of Architects, California Council (AIACC), invites designers and architects to attend three days of lectures by international prize-winning architects including Marlon Blackwell, Odile Decq, Tom Phifer, Kengo Kuma, Marcio Kogan, and Anne Fougeron. In addition to speaker presentations, the program, held at the Asilomar Conference Center, will include social events, an exhibitor marketplace, tours, and opportunities for fulfilling AIA continuing-education credits. For more information, visit [aiacc/mdc.org](http://aiacc/mdc.org).

### In Wright's Drafting Room: Architecture Fantasy Camp

Oak Park, Illinois

September 29–October 2, 2013

Held at the Frank Lloyd Wright Home and Studio in Oak Park, Architecture Fantasy Camp has one requirement: only non-architects are allowed to enter. Campers work in the same drafting room where Frank Lloyd Wright conceived Prairie-style masterpieces such as Unity Temple, the Frederick C. Robie House and the Arthur Heurtley House. With assistance from a professional architect, participants plan and design a structure of their own. For more information, visit [gowright.org](http://gowright.org).

### 2014 International Roofing Expo

Las Vegas

February 26–28, 2014

The International Roofing Expo brings all segments of the roofing-construction and maintenance industry together for three days of face-to-face interaction, product review, education, and networking. The show will feature 450 exhibiting companies in 1,000 booths and draw 9,000 participants. At the Mandalay Bay Convention Center. For more information, visit [theroofingexpo.com](http://theroofingexpo.com).

## Competitions

### Designing Recovery

Submission deadline: August 15, 2013

This competition was created to aid in the rebuilding of sustainable and resilient communities, taking place in three distinct settings: New Orleans, LA; Joplin, MO; and New York, NY. Designed to help survivors of three recent natural disasters, the competition was announced as a Commitment to Action at CGI America, an annual event of the Clinton Global Initiative focused on finding solutions that promote economic recovery in the United States. For more information, visit [architectureforhumanity.org](http://architectureforhumanity.org)

### Hardie Design Contest

Submission deadline: August 20, 2013

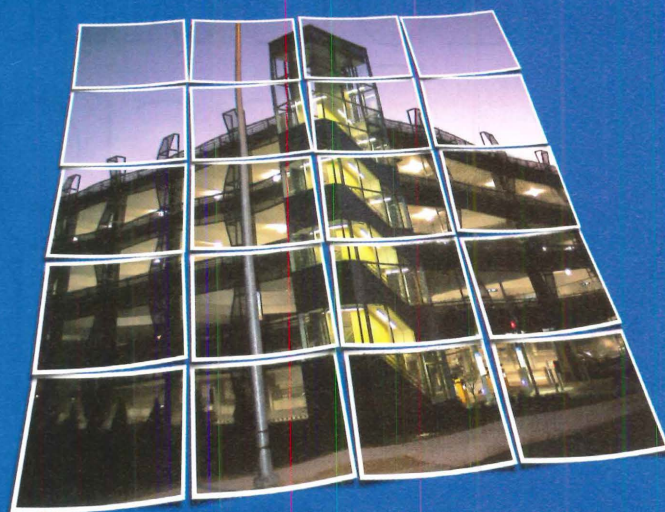
The new Hardie Design Contest gives architects and project developers and owners a chance to win a custom video shoot profiling their best commercial and multi-family projects featuring James Hardie fiber-cement siding. Applicants must submit photos of their U.S.-based project featuring James Hardie products. For more information, visit [jameshardie.com](http://jameshardie.com).

### 4th International Holcim Awards

Submission deadline: March 24, 2014

This competition, sponsored by the Swiss-based Holcim Foundation for Sustainable Construction, is offering a total of \$2 million in prize money for leading projects that contribute to sustainability among architecture, building, civil engineering, and landscape and urban design. The competition is open to architects, planners, engineers, project owners, builders, and construction firms. Projects must have reached an advanced stage of design and have a high probability of execution. For more information, visit [holcimfoundation.org/awards](http://holcimfoundation.org/awards).

E-mail information two months in advance to [recordevents@mcgraw-hill.com](mailto:recordevents@mcgraw-hill.com).



## Galvanizing is Thinking Big Picture.

### Preserve Your Project Before It's Even Built.

Hot-dip galvanizing with AZZ Galvanizing Services is the best way to ensure that your project will stand the test of time, saving money in costly maintenance repairs later. And since using eco-friendly zinc is less expensive than other corrosion barriers, the cost savings begin before the construction does — and will extend the life of the structure. Save money now and in the big picture.



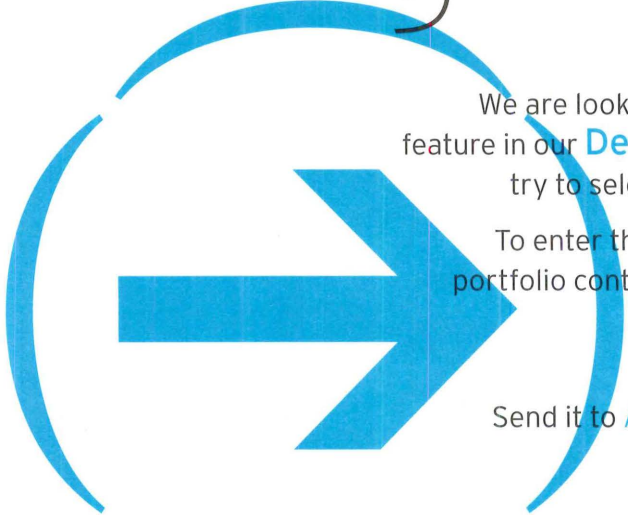
We Protect More Than Steel.



[azzgalvanizing.com](http://azzgalvanizing.com)

CIRCLE 16

# 2013 CALL FOR ENTRIES Design Vanguard



We are looking for the best emerging architecture firms from around the world to feature in our **Design Vanguard** coverage. Although we do not have an age limit, we try to select architects who have had their own practices for less than 10 years.

To enter the competition, send a low-resolution PDF (no larger than 8 MB) with a portfolio containing five to eight projects (both built and unbuilt), CVs of your firm's partners, and a short statement of your firm's design philosophy.

**Submit your portfolio by August 12, 2013.**

Send it to [ARCallForEntries@mhfi.com](mailto:ARCallForEntries@mhfi.com) (put *Design Vanguard* in the subject line).  
There is no fee to enter.

# 2013 CALL FOR ENTRIES Record Products



The editors of ARCHITECTURAL RECORD are currently accepting submissions for the **2013 Record Products** competition. Manufacturers and designers are welcome to submit new building products for the December issue, which will present the best and most innovative offerings available to architects, specifiers, and designers in 2013. Winning entries will be featured in the December 2013 issue.

For more details and to enter online, visit <https://www.wizehive.com/apps/recordproducts2013>.

E-mail questions to [ARCallForEntries@mhfi.com](mailto:ARCallForEntries@mhfi.com). (Please indicate *Record Products* as the subject of the e-mail.)

**Submissions are due September 6, 2013.**

# The Best Pavements Are Invisible

**Grasspave<sup>2</sup>**  
grass porous paving

**Gravelpave<sup>2</sup>**  
gravel porous paving



InvisibleStructures.com | 800-233-1510

CIRCLE 56

## MAKE A LASTING IMPRESSION

When it's important to make a lasting impression, think Walpole Outdoors.<sup>™</sup> With over 100 beautiful, factory-finished colors, our PVC pergolas, railing and trellises deliver the easy care and durability homeowners love. Plus, our team of designers and CAD operators have the expertise to bring your concept to reality.

**80+ years** Walpole Outdoors

800-343-6948 • walpolewoodworkers.com • facebook/walpoleoutdoors



CIRCLE 39

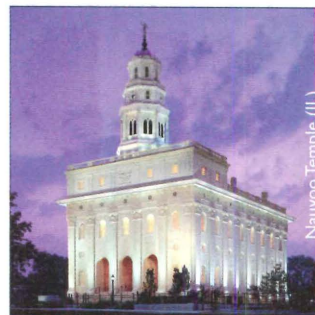
## The Woolworth Building @ 100

Through September 8, 2013

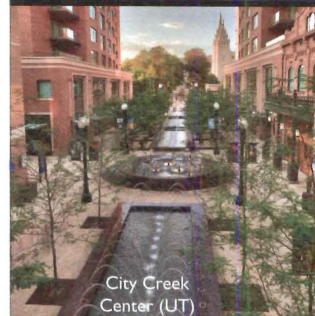
For information & programs:  
[www.skyscraper.org](http://www.skyscraper.org)

THE SKYSCRAPER MUSEUM

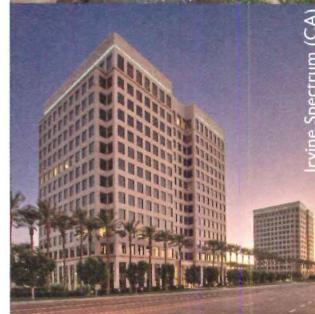
Image: Library of Congress



Nauvoo Temple (IL)  
RELIGIOUS



City Creek Center (UT)  
SITENWORK



Irvine Spectrum (CA)  
CORPORATE

WHEN EXCELLENCE IS EXPECTED,  
TRUST YOUR PROJECT'S STONEMWORK TO

**KEPCO+**  
Architectural Cladding Systems

"I would recommend the KEPCO+ team to anyone who requires forward thinking, solution oriented, & innovative people who have their attention on the quality of the finished product & how it will perform over time & under challenging conditions."

Ross Nadeau, Principal - SWA  
City Creek Project Architect

In our 28 year history, we've designed, managed, and/or installed diverse natural stone exteriors, interiors, sitework, & water features for commercial projects nationwide.

Visit our website to learn more about how we can help you create your vision:

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

CIRCLE 19

PROJECT OMBRIERE AT MARSEILLE VIEUX PORT

LOCATION MARSEILLE, FRANCE

DESIGNERS FOSTER + PARTNERS

A **MINIMALIST** structure with maximum impact, Foster+Partners' Ombrière at Marseille Vieux Port marries the World Heritage Site's ancient past with the French city's new status as a European Capital of Culture. The award-winning pavilion (part of a larger redesign of the area), made of highly polished stainless steel, is a literal reflection of the bustling promenade, though its top is matte metal so that the bright Mediterranean sunlight will not reflect harshly into surrounding buildings. Directly beneath the canopy, which is supported on slender steel columns, pedestrians are suspended upside down on its surface. "I love watching people's responses as they realize they can see themselves," says senior partner Spencer de Grey. "The reflection has an extraordinary degree of precision and definition." Yet, from afar, the structure appears as a silver splinter hovering above the wharf like a mirage. *Anna Fixsen*






**GREENGUARD**

---

PRODUCT CERTIFIED FOR  
LOW CHEMICAL EMISSIONS  
[UL.COM/GG](http://UL.COM/GG)  
UL XXXX



**ECOLOGO**

---

PRODUCT CERTIFIED FOR  
REDUCED ENVIRONMENTAL  
IMPACT. VIEW SPECIFIC  
ATTRIBUTES EVALUATED:  
[UL.COM/EL](http://UL.COM/EL)  
UL XXXX



# The New Marks of Leadership

The most trusted name in safety is making its mark on sustainability. UL Environment certifications, like GREENGUARD and ECOLOGO®, provide differentiation in the marketplace and third-party verification that a product is healthier and more sustainable. And, with a wide variety of science-backed standards, UL can give your products a clear competitive edge. Recognizable certifications, new marks, greater confidence.

[ul.com/environment](http://ul.com/environment)  
888.485.4733

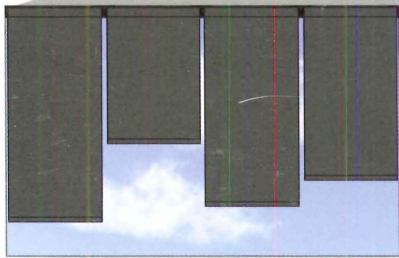


**Environment**

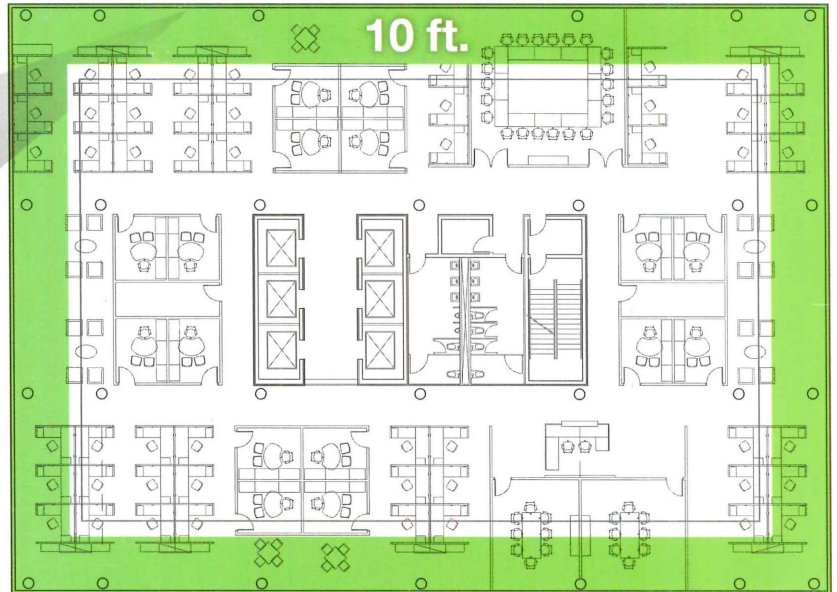
# Daylight autonomy made possible by Lutron

Using Lutron Hyperion® shading solutions can save up to 1.6 kWh/ft<sup>2</sup> per year of lighting energy.\*

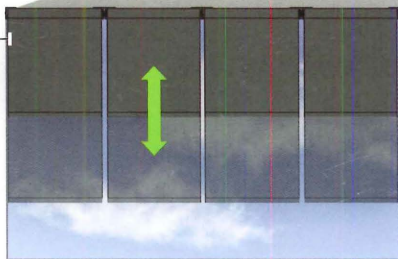
**Manual shades** provide a useful daylight zone up to only **10 ft.**



Manual shades are rarely adjusted and usually misaligned.

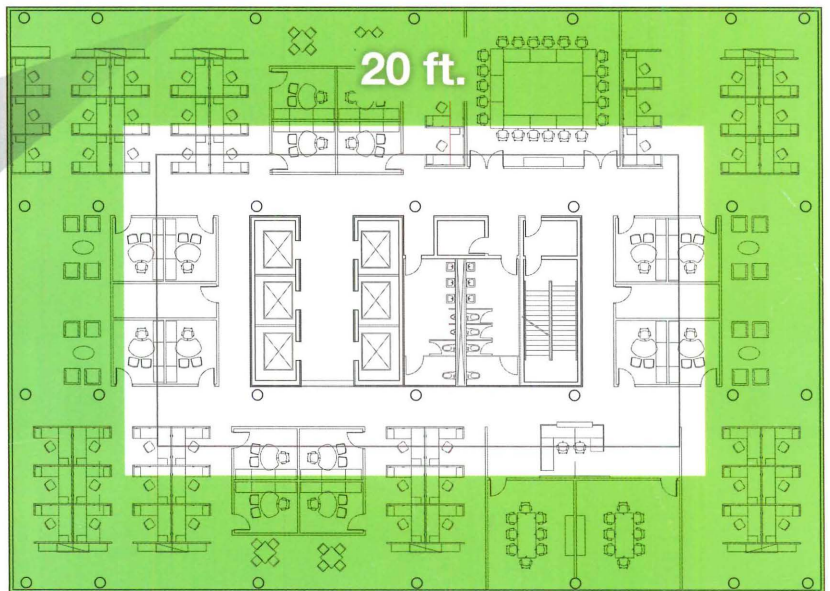


**Lutron shading solutions** extend the useful daylight zone up to **20 ft.**



Sensor adjusts automated shades according to daylight conditions.

Maximizes useful daylight entering a space, reducing electric light usage.



Wireless window sensor (discreet mullion mount)



See how it works:

[www.lutron.com/daylightautonomy](http://www.lutron.com/daylightautonomy)

CIRCLE 46



©2013 Lutron Electronics Co., Inc. | P/N 368-3287 REV A



\* Lutron Electronics Co., Inc. worked with Purdue University to analyze the benefits and savings potential of Lutron's Hyperion automated shading systems. The results showed the impact of low automated shades significantly reduce annual lighting energy usage. Savings are based on energy simulation of a perimeter private office with a lighting power density of 0.9 W/ft<sup>2</sup>, a standard clear double pane glass, and a shade fabric with 5% transmittance and a 76% reflectance. Manual shades were simulated by closed shades. Values shown are the average of three window to wall ratios: 20%, 40%, and 60%. Daylight harvesting system required.