

ARCHITECTURAL RECORD

DARTMOUTH
LJUBLJANA
SHANGHAI
BAD MÜNSTER
NEW YORK
WINNIPEG
KANSAS CITY
NEW HAVEN

RENOVATION
ADDITION
ADAPTATION



CEILING SYSTEMS

Between us, ideas become reality™

Another Time Books

PRODUCT: Serpentina® Classic, Champagne Gold and Wolf (color achieved with lighting)
BUILDING: Destiny USA Mall, Syracuse, NY
ARCHITECT: Holmes • King • Kallquist & Associates, Architects, Syracuse, NY



rhapsody in blue

Serpentina® Ceiling Systems give you the freedom to create effusively expressive interiors. The sculptural, 3D clouds deliver maximum design flexibility with panels ranging from 2' x 2' to 2' x 12' in a wide variety of standard colors and finishes. Perforated options with fleece backing add killer acoustics – making it the only curved metal ceiling system to have sabin testing. Visit our website to explore the many ways Serpentina can inspire a rhapsody of ideas. armstrong.com/serpentina 1 877 ARMSTRONG

Armstrong®



BIM



BIM IQ®

Like smartphones have revolutionized how people communicate, BIM IQ® will revolutionize Building Information Modeling (BIM). How does it differ from BIM? Change the glass option or mullion design—only BIM IQ® will show you that change from any view of your project, interior or exterior, in its precise location, on any day of the year! That's right, and you not only see what it looks like, BIM IQ® calculates the energy data based on your selections—no waiting. **Visit BIMIQ.com** and submit your project to see if it is a candidate for BIM IQ®.



Oldcastle BuildingEnvelope®

Engineering your creativity™

Dodge



Territory

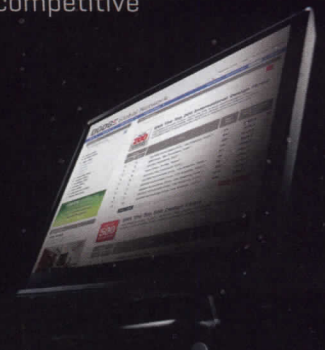
Introducing

DODGE International

Every so often, something happens—an idea or technology appears and our planet shrinks. What seemed insurmountable is replaced by a keystroke. Today we introduce Dodge International, the sole American source of international project news. By leveraging our deep relationships with the world's most influential design firms, we can provide you with early planning news on international projects so you can take action when it matters most. Just like that, you have the global competitive advantage to uncover the right opportunities for your business. And the world is yours.

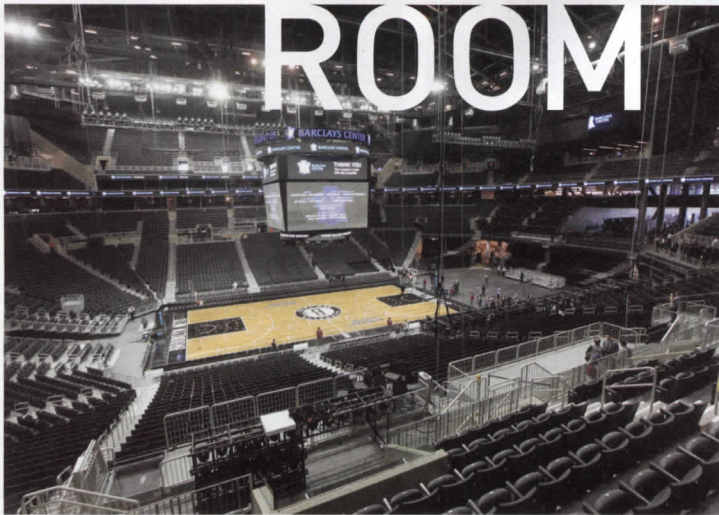
Get a preview today.

www.DodgeNetworkInternational.com



McGraw_Hill
CONSTRUCTION

COURT ROOM



A state-of-the-art arena with unparalleled sightlines and an interior environment as dynamic as its sculptural exterior, **Barclays Center** is New York's first major new entertainment venue in nearly a half century. But while the arena's unique steel paneled facade may stop traffic outside, it's the elegant long span steel roof structure inside that enables crowds to enjoy column-free views of show-stopping performances. Architects **SHoP** and **AECOM** with structural engineer **Thornton Tomasetti** made sure that, long after its first sold out performance, Brooklyn would have a new living room where every seat is always the best seat in the house.

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 18

Arena Design Architect: SHoP Architects
Arena Architect: AECOM
Design Builder: Hunt Construction Group
Structural Engineer: Thornton Tomasetti
Photo: Bess Adler

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Cathleen McGuigan, cathleen_mcguigan@mcgraw-hill.com
MANAGING EDITOR	Beth Broome, elisabeth_broome@mcgraw-hill.com
SENIOR GROUP ART DIRECTOR	Francesca Messina, francesca_messina@mcgraw-hill.com
DEPUTY EDITORS	Clifford A. Pearson, pearsonc@mcgraw-hill.com Suzanne Stephens, suzanne_stephens@mcgraw-hill.com
SENIOR EDITOR	Joann Gonchar, AIA, LEED AP, joann_gonchar@mcgraw-hill.com
PRODUCTS EDITOR	Rita Catinella Orrell, LEED GA, rita_catinella@mcgraw-hill.com
SPECIAL SECTIONS EDITOR	Linda C. Lentz, linda_lentz@mcgraw-hill.com
WEB EDITOR	William Hanley, william_hanley@mcgraw-hill.com
NEWS EDITOR	Laura Raskin, laura_raskin@mcgraw-hill.com
ASSISTANT EDITORS	Asad Syrkett, asad_syrkett@mcgraw-hill.com Laura Mirviss, laura_mirviss@mcgraw-hill.com
MANAGER, CONTENT OPERATIONS	Juan Ramos, juan_ramos@mcgraw-hill.com
EDITORIAL PRODUCTION	Rosa Pineda, rosa_pineda@mcgraw-hill.com
ART DIRECTOR	Helene Silverman, helene_silverman@mcgraw-hill.com
ASSOCIATE ART DIRECTOR	Gordon Whiteside, gordon_whiteside@mcgraw-hill.com
CONTRIBUTING ILLUSTRATORS, PRESENTATION DRAWINGS	I-Ni Chen Peter Coe
EDITORIAL SUPPORT	Monique Francis, monique_francis@mcgraw-hill.com
CONTRIBUTING EDITORS	Sarah Amelar, Fred A. Bernstein, Robert Campbell, FAIA, C.J. Hughes, Blair Kamin, Jayne Merkel, Robert Murray, David Sokol, Michael Sorkin, Ingrid Spencer
SPECIAL INTERNATIONAL CORRESPONDENT	Naomi R. Pollock, AIA
INTERNATIONAL CORRESPONDENTS	David Cohn, Tracy Metz, Aric Chen, Chris Foges
CONTRIBUTING PHOTOGRAPHER	Iwan Baan

ARCHITECTURAL RECORD: (ISSN 0003-858X) February 2013. Vol. 201, No. 2. Published monthly by The McGraw-Hill Companies, 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. Registered for GST as The McGraw-Hill Companies. 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 THE MCGRAW-HILL COMPANIES, INC.:** Harold W. McGraw III, Chairman, President and Chief Executive Officer; Kenneth M. Vittor, Executive Vice President and General Counsel; Jack F. Callahan, 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 © 2012 by The McGraw-Hill Companies. 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 x129 or e-mail architecturalrecord@theygroup.com. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, The McGraw-Hill Companies and *Architectural Record* do not guarantee the accuracy, adequacy, or completeness of any 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.

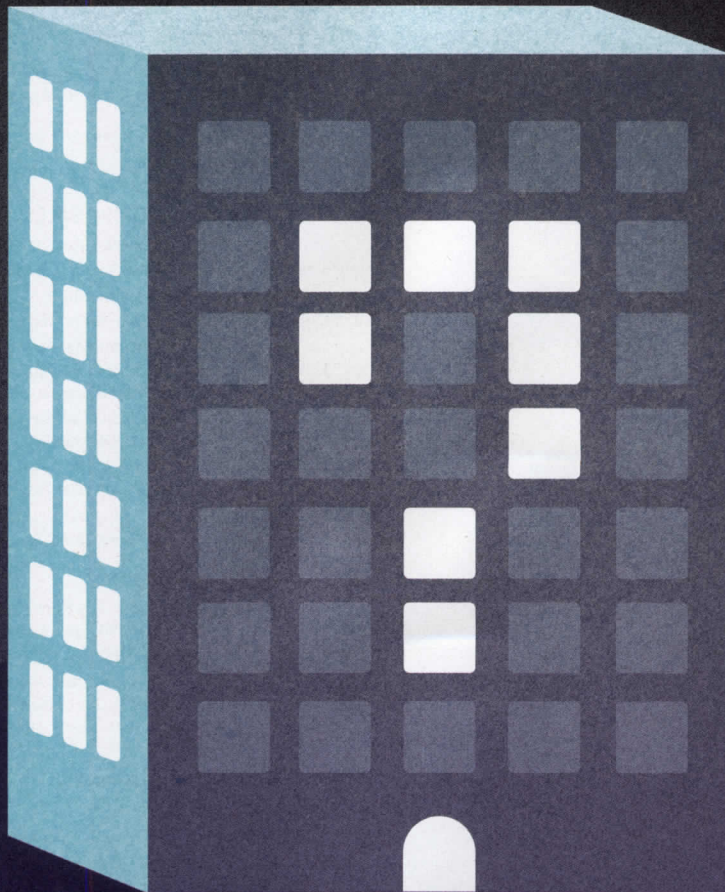
EDITORIAL OFFICES: 212/904-6229. Editorial fax: 212/904-4256. E-mail: monique_francis@mcgraw-hill.com. Two Penn Plaza, New York, NY 10121-2298. **WEBSITE:** ArchitecturalRecord.com.



The McGraw-Hill Companies



PRINTED IN USA



It's 3 am. No one's working. So why are your lights?

Only Acuity Brands provides you with advanced LED lighting seamlessly integrated with digital controls. This enables your lighting to be on when you need it – and off when you don't – reducing energy consumption 24 hours a day.

www.acuitybrands.com/integration

SMART + SIMPLE LIGHTING SOLUTIONS

© 2013 Acuity Brands Lighting, Inc. All rights reserved.

AcuityBrands.

Expanding the boundaries of lighting™

CIRCLE 58

InterlockingRock®

Lightweight Cast-Rock modules precisely interlock for smooth, seamless sculptural walls.



Tucker™ PANEL ©2010 modulararts, inc.



Kush™ PANEL ©2012 modulararts, inc.

modulararts®

modulararts.com | 206.788.4210
now with 50 InterlockingRock® designs
made in the USA

CIRCLE 30

ARCHITECTURAL RECORD

VICE PRESIDENT, PUBLISHER Laura Viscusi, laura_viscusi@mcgraw-hill.com

SENIOR DIRECTOR, MEDIA OPERATIONS Brenda Griffin, brenda_griffin@mcgraw-hill.com
DIRECTOR, CREATIVE SERVICES William Taylor, william_taylor@mcgraw-hill.com
PRODUCTION MANAGER Marilyn DeMilta, marilyn_demilta@mcgraw-hill.com

SENIOR DIRECTOR, MHC MEDIA PRODUCT DEVELOPMENT Michael Mc Nerney, michael_mcnerny@mcgraw-hill.com
MANAGER, CONTINUING EDUCATION Marissa Wyss, marissa_wyss@mcgraw-hill.com

VICE PRESIDENT, BUSINESS SERVICES Maurice Persiani, maurice_persiani@mcgraw-hill.com
DIRECTOR, CIRCULATION Brian McGann, brian_mcgann@mcgraw-hill.com

SENIOR MARKETING MANAGER Mary Beth Whited, marybeth_whited@mcgraw-hill.com

FINANCE DIRECTOR Ike Chong, ike_chong@mcgraw-hill.com
FINANCE MANAGER Tom Maley, tom_maley@mcgraw-hill.com

ASSISTANT TO MEDIA DEPARTMENT Pina Del Genio, pina_delgenio@mcgraw-hill.com

ADVERTISING SALES

NEW ENGLAND, NY, AND PA: Joseph Sosnowski
(610) 278-7829 Fax: (610) 278-0936, joseph_sosnowski@mcgraw-hill.com

SOUTHEAST/MID-ATLANTIC: Susan Shepherd
(859) 987-9913 Fax: (404) 252-4056, susan_shepherd@mcgraw-hill.com

MIDWEST (IA, IL, MN, MO, WI): Martin McClellan
(312) 233-7402 Fax: (312) 233-7430, martin_mcclellan@mcgraw-hill.com

MIDWEST (IN, MI, OH, EASTERN CANADA): Lisa Zurick
(513) 345-8210 Fax: (513) 345-8250, lisa_zurick@mcgraw-hill.com

NORTHWEST: Bill Madden
(503) 557-9000 Fax: (503) 557-9002, bill_madden@mcgraw-hill.com

PACIFIC/TEXAS: Sherylen Yoak
(760) 568-0465 Fax: (720) 559-9818, sherylen_yoak@mcgraw-hill.com

AL, AR, KS, LA, MS, NE, ND, SD, TN: Risa Serin
(212) 904-6041 Fax: (212) 904-4652, risa_serin@mcgraw-hill.com

TECHNOLOGY: Roy Kops
(415) 357-8191 Fax: (415) 357-8005, roy_kops@mcgraw-hill.com

SPOTLIGHT SALES: Risa Serin
(212) 904-6041 Fax: (212) 904-4652, risa_serin@mcgraw-hill.com

WORKFORCE/ RECRUITMENT: Diane Soister
(212) 904-2021 Fax: (212) 904-2074, diane_soister@mcgraw-hill.com

INTERNATIONAL

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

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

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

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

MCGRAW-HILL CONSTRUCTION

PRESIDENT Keith Fox

SENIOR VICE PRESIDENT OF SALES, MHC Robert D. Stuono

VICE PRESIDENT, OPERATIONS Linda Brennan, linda_brennan@mcgraw-hill.com

VICE PRESIDENT, MHC PRODUCT DEVELOPMENT Kathryn E. Cassino, kate_cassino@mcgraw-hill.com

VICE PRESIDENT, TECHNOLOGY Isaac Sacolick, isaac_sacolick@mcgraw-hill.com

VICE PRESIDENT, STRATEGIC MARKETING Patricia France, patricia_france@mcgraw-hill.com

SENIOR DIRECTOR, FINANCE John Murphy, john_murphy@mcgraw-hill.com

WEBSITE: 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. 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. **BACK ISSUES:** Call 877/876-8093, or go to archrecord.com/backissues/

McGraw Hill
CONSTRUCTION



M P A

The McGraw-Hill Companies



PRINTED IN USA

Engineering confidence.

We make function look good.
That's what we do.

We engineer confidence.

Discover how at www.thyssenkruppelevator.com

INSTALLATION

SERVICE

MODERNIZATION

ThyssenKrupp Elevator Americas



ThyssenKrupp



Project: E80th Street Townhouse

Location: New York, NY

Architect: Toshiko Mori Architects

Product: Fireframes® Curtainwall Series and
Pilkington Pyrostop® glass firewall



ART CAN BE ON THE WALL OR IT CAN BE THE WALL.

A building can work to protect, while still being a work of art. Frame your masterpiece with our Fireframes® Curtainwall Series. The narrow steel profile allows for large expanses of glass in interior and exterior applications. The system is also available in stainless steel or can feature aluminum cover caps to complement your design. Check out the complete Fireframes family of products for options from fire-rated silicone glazed curtainwall systems to glass floor systems.

fireframes



fireglass.com | 800.426.0279

CIRCLE 63

TGP



FIRE RATED
one source. many solutions.®

UNIVERSITY LEADER



See us at the IRE!
Booth 1255

An Academic Center that makes the grade.

Tite-Loc Plus Metal Roofing combines sustainability with weather resistance to earn extra credit in resourcefulness.

The 36,000-square foot Academic Center built for New College of Florida in Sarasota includes ten classrooms, 36 faculty offices, a computer lab, and common spaces. Envisioned as a hub for learning and social interaction, the building focus is on sustainability. Tite-Loc Plus aluminum roofing panels, with high recycled content, helped New College achieve a LEED Gold rating. Tite-Loc Plus is equipped with Florida Product Approvals and Miami Dade NOA, sending this academic center to the head of the class.



WWW.PAC-CLAD.COM | IL: 1 800 PAC CLAD
MD: 1 800 344 1400 | TX: 1 800 441 8661
GA: 1 800 272 4482 | MN: 1 877 571 2025

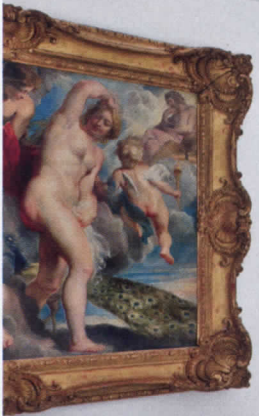
PACGREENINFO.COM
YOUR GREEN METAL RESOURCE

twitter
facebook



New College of Florida Academic Building, Sarasota, FL Architect: Moule & Polyzoides Architects, Pasadena, CA
Roofing Contractor: Murton Roofing, a TECTA America Company, Miami, FL Material: Tite-Loc Plus, PAC-850 in Zinc Metallic

ARCHITECTURAL RECORD



02 2013

NEWS

- 23 AN AMSTERDAM GEM, NEWLY POLISHED
By Tracy Metz
- 26 OBITUARY: ADA LOUISE HUXTABLE, 1921–2013
By Suzanne Stephens
- 28 NEWSMAKER: DONALD ALBRECHT
By Laura Raskin

DEPARTMENTS

- 16 EDITOR'S LETTER: CHAMPION OF NEW AND OLD
- 34 ARCHITECTURAL ANALYTICS
- 37 AFTER THE STORM: THE POST-SANDY GRID
By Peter Fairley
- 38 COMMENTARY: FOSTER'S NEW YORK PUBLIC LIBRARY PLAN
By Charles D. Warren
- 40 BOOKS: GREEN ARCHITECTURE
By David Sokol
- 45 HOUSE OF THE MONTH: MOUSSAFIR ARCHITECTES' MAISON ESCALIER
By Laura Raskin
- 46 CULTURE: MUSEUM OF INNOCENCE
By William Hanley
- 52 IN FOCUS: LOUVRE-LENS
Photographs by Iwan Baan
- 57 PRODUCT FOCUS: CEILINGS
By Rita Catinella Orrell

58 PRODUCT BRIEFS: ROUNDUP
By Rita Catinella Orrell

136 READER SERVICE

139 DATES & EVENTS

- 144 SNAPSHOT: URBAN COLLAGE SOCIAL HOUSING
By Beth Broome

BUILDING TYPES STUDY 931 RENOVATION, ADDITION, ADAPTATION

69 INTRODUCTION

70 CLAIRE T. CARNEY LIBRARY RENOVATION AND ADDITION, DARTMOUTH, MA
DESIGNLAB ARCHITECTS By Fred A. Bernstein

- 76 BAROQUE COURT APARTMENTS, LJUBLJANA OFIS ARHITEKTI By Clifford A. Pearson

82 DESIGN REPUBLIC COMMUNE, SHANGHAI
NERI&HU DESIGN AND RESEARCH OFFICE
By Clare Jacobson

90 LINCOLN CENTER THEATER LCT3, NEW YORK CITY
H3 HARDY COLLABORATION ARCHITECTURE
By Suzanne Stephens

96 BOULEVARD BREWING COMPANY CELLAR 1 EXPANSION, KANSAS CITY
EL DORADO
By Asad Syrkett

100 AVENUE BUILDING RENOVATION, WINNIPEG
5468796 ARCHITECTURE
By William Hanley

104 STONE SCULPTURE MUSEUM, BAD MÜNSTER
TADAO ANDO By Chris Foges

- 108 YALE UNIVERSITY ART GALLERY RENOVATION AND EXPANSION, NEW HAVEN
ENNEAD ARCHITECTS By Joann Gonchar, AIA

LIGHTING

- 120 STÄDEL MUSEUM EXTENSION, FRANKFURT AM MAIN
SCHNEIDER+SCHUMACHER WITH LICHT KUNST LICHT
By Linda C. Lentz
- 127 LIGHTING PRODUCTS
By Rita Catinella Orrell


THIS PAGE: LOUVRE-LENS, BY SANAA.
PHOTO BY IWAN BAAN.

ON THE COVER: DESIGN REPUBLIC COMMUNE,
BY NERI&HU DESIGN AND RESEARCH OFFICE.
PHOTO BY PEDRO PEGENAUTE.

See expanded coverage of Projects and Building Types Studies as well as web-only features at architecturalrecord.com.

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

 Visit us at facebook.com/architecturalrecord

 Follow us on Twitter at @archrecord

LEARN & EARN



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

IN THIS ISSUE



Photo: Ed Taube

Sustainable Rubber Flooring for Healthcare and Education

Sponsored by ECORE

Credit: 1 HSW/SD

Page 134

NEW ONLINE AT ARCHRECORD.COM



Photo: Edmond S. Oliveros Design & Illustration

Performance Plus: Quality Makes a Difference When Specifying Aluminum Fenestration Products

Sponsored by Capitol Aluminum & Glass Corporation

Credit: 1 HSW/SD



Acoustical Basics for Design Professionals

Sponsored by Armstrong Ceiling Systems

Credit: 1 HSW

ALSO ONLINE AT ARCHRECORD.COM



Principles of Glass Selection for Facades: From Rendering to Reality

Sponsored by Guardian Industries Corp.

Credit: 1 HSW/SD



Getting to Green: Life Cycle Analysis plus Forest Certification Give Western Redcedar High Marks in Sustainability

Sponsored by Western Red Cedar Lumber Association

Credit: 1 HSW/SD, 1 GBCI CE Hour



Sustainable Buildings on Demand

Sponsored by Sprung Instant Structures, Inc.

Credit: 1 HSW/SD, 1 GBCI CE HOUR



Sliding Hardware Systems: An Essential Tool for Saving Space in Commercial and Residential Spaces

Sponsored by Hawa Americas Inc.

Credit: 1 HSW



Surfaces Get Stronger: Compression-Molded Polymers Bring Durable, Impervious Solid Surfaces to Kitchens and Bathrooms

Sponsored by The Swan Corporation

Credit: 1 HSW



Wood Rates: How Wood Products Stack Up in Green Building Systems

Sponsored by reThink Wood

Credit: 1 HSW/SD, 1 GBCI CE Hour

Earn Free Health Safety Welfare (HSW) and Sustainable Design (SD) 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.

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



AN AMERICAN OWNED AND MANUFACTURED COMPANY

Champion of New and Old

The critic whose passion and insight changed the way we look at the built world.

LAST MONTH, the world of architecture lost the best critic of our time. Ada Louise Huxtable set the standard for architectural journalism, not only because of her many firsts—first architecture critic for the *New York Times*, hired in 1963; first cultural critic to win the Pulitzer Prize, in 1970—but because of the powerful influence of her voice, both on the public and on writers who followed her. The digging and research that informed her opinions is legendary: her articles were built on deep layers of knowledge about design, engineering, history, zoning laws, financing, real-estate deals, politics, and, most important, what she saw as the social contract at the heart of most building ventures. To be with Ada Louise (never Ada!) was like reading one of her essays—she was elegant, erudite, sophisticated, fearless, tough, and witty. Through her articles in the *Times*, and later in the *Wall Street Journal*, she taught generations of readers how to look at architecture and understand the urban realm (page 26).

While we were preparing this issue of *RECORD* on renovation, addition, and adaptive reuse, we couldn't help but think about Huxtable. A modernist by inclination, she championed the work of a wide range of architects—James Stirling, I.M. Pei, Frank Gehry. But she was often a fierce preservationist, and believed that the history revealed through a variety of buildings and public spaces—shifting, aging, and adapted over time—was essential to the vibrant texture of cities. “I am devoted to the principle that every age produces its greatest buildings in its own image,” she wrote. “Ultimately, it is the addition and absorption of this continuous record of changing art, technology, ideas, and uses that make cities the unique repositories of the whole range of human endeavor.”

Because history and modernism are hardly incompatible, she was delighted when, in 1975, the Museum of Modern Art seemingly changed its institutional course by mounting a show of 19th-century architectural drawings from the *École des Beaux Arts*. It was the style with which she'd grown up in New York, haunting such great Beaux-Arts temples as the Metropolitan Museum of Art and the New York Public Library. The library building “made no pretense at chumminess; it was intended to impress,” she wrote. “A sense-expanding spatial sequence from the arched and colonnaded portal to more marble and massive stairs and the richly detailed rooms inside provided both grace and grandeur and suggested that man might be noble, after all. Or at least, *that he knew quality from junk.*”

In her last article, published one month before she died, Huxtable went to the mat to protest the extensive alterations currently planned for that un-chummy and impressive library that she loved so much (page 38).

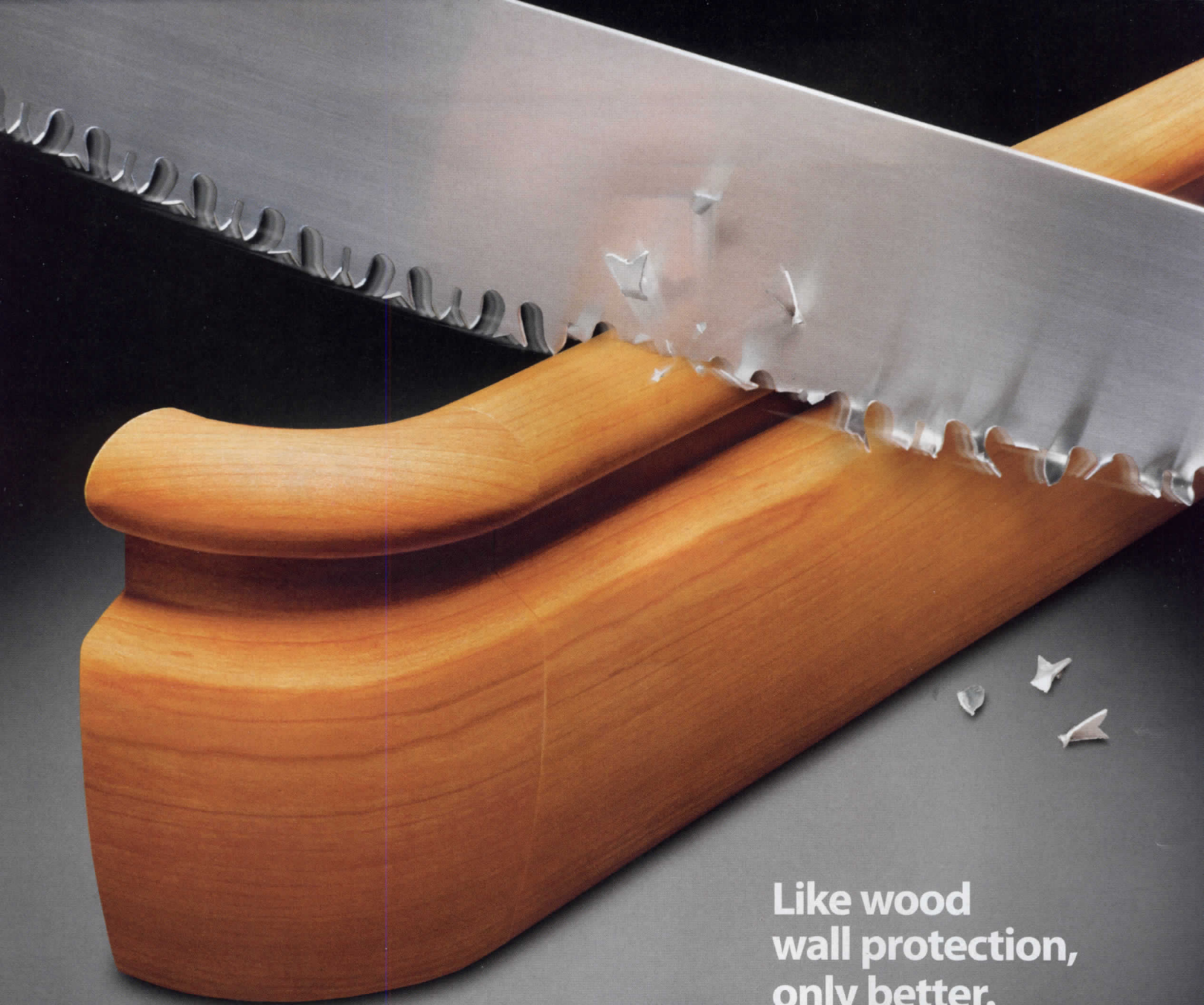
But frequently, Huxtable encouraged change and the marriage of



old and new. We're not sure how she would have ruled on designLAB's glass addition to Paul Rudolph's library in Dartmouth, Massachusetts (page 70). But we think she would have liked the idea of turning a Brit-built Edwardian police station in Shanghai into a design emporium by Neri&Hu (page 82), or a Baroque building on an old square in Ljubljana, Slovenia, into crisply contemporary apartments (page 76). When she reviewed the opening of Lincoln Center in 1966, the only building she didn't damn with faint praise was Eero Saarinen's Vivian Beaumont Theater—"a design of strong, sculptural good looks that offers, with its fronting pool and Henry Moore sculpture, the only honestly contemporary vista in the place"—and she probably would have applauded Hugh Hardy's discreet addition to it (page 90). She cheered the work of architects who may not be noble, but who clearly know quality from junk. ■

Cathleen McGuigan

Cathleen McGuigan, Editor in Chief




Like wood
wall protection,
only better.



Better, because with our new and improved patterns, Acrovyn® Chameleon™ looks exactly like real wood. It comes in all of the species designers want, yet it doesn't require any of the maintenance associated with real wood. In fact, **it's just as durable as regular Acrovyn.** And, Acrovyn 4000 **contains no PVC or PBTs**, so the best looking choice is also the right one for the environment. For a free catalog, call 800-233-8493 or visit c-sgroup.com. Find Construction Specialties on [f](#), [in](#) or [t](#) twitter.com/acrovyn.



CS™ Acrovyn® *Protection for tomorrow's environment*



Argentina / Latin America: The 2011 ENR Top 225 International Contractors reported a combined \$38.5 billion in projects in Latin America, representing 8.5% of 2011 International Contractor revenue.



ENR GLOBAL CONSTRUCTION SUMMIT 2013

Does your firm have the logistics expertise to handle global infrastructure projects? Learn best practices in procurement and supply chain management at the ENR Global Construction Summit. Don't miss this chance to explore solutions to pressing challenges, with construction professionals from the world's major markets.



Photography: © Piero Conti

SAVE THE DATE: JUNE 6-7, 2013 | NEW YORK, NY

ENR GLOBAL CONSTRUCTION SUMMIT is a call to action for senior industry leaders from large engineering and construction firms that are doing business globally or seeking to expand beyond their current borders as well as for construction project owners, industry associations, governmental and trade organizations and policymakers. ENR GLOBAL BEST PROJECTS AWARDS DINNER will celebrate and honor the best global construction projects and the companies that designed and built them. [For more information: enrglobalsummit.com](http://enrglobalsummit.com) | 800.371.3238

Silver sponsors:





888.552.9497

rockymountainhardware.com

ROCKY MOUNTAIN[®]
H A R D W A R E

HOSPITALITY
CIRCLE 24

HANDCRAFTED BRONZE HARDWARE

MADE FROM 90% POST-CONSUMER RECYCLED

MATERIALS. MADE IN THE USA.

Dance like there's a tomorrow.



ACOUSTICS



SUSTAINABLE MATERIALS
RECYCLED CONTENT



INDOOR AIR
QUALITY



FIRE
RESISTANCE



DURABILITY



MOISTURE &
MOLD RESISTANCE

CertainTeed Gypsum is serious about a sustainable future.

Partner up with us to take the lead in designing and building environments for tomorrow.

Learn more about our award-winning innovative products – such as AirRenew[®], SilentFX[®] and Diamondback[®] – online tools and continuing education by visiting www.CertainTeed.com/Sustainable

800-233-8990 • www.certainteed.com

ROOFING • SIDING • TRIM • DECKING • RAILING • FENCE • FOUNDATIONS
GYPSUM • CEILINGS • INSULATION • PIPE

CertainTeed
SAINT-GOBAIN

WE FIGURED THE
WORLD'S LEADING DECK BRAND
DESERVED THE WORLD'S MOST
AMAZING DECK FRAME.

TREX ELEVATIONS®

STRONGER, STRAIGHTER,
SMARTER, STEEL.

BECAUSE YOU DON'T
PUT A FILET MIGNON
ON A PAPER PLATE.



CCRR - 0186



WHERE ENGINEERING MEETS ARTISTRY

THE COLLECTION STEEL FRAMING DECKING RAILING LIGHTING TRIM TREX.COM



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

perspective

You don't "update" a masterpiece. "Modernization" may be the most dangerously misused word in the English language. —*Ada Louise Huxtable*, writing about the New York Public Library in the *Wall Street Journal*, December 3, 2012



The Rijksmuseum's new atrium contains portals for elevators and entrances that lead visitors underground.

An Amsterdam Gem, Newly Polished

BY TRACY METZ

IN RECENT months the museum hogging the cultural spotlight in Amsterdam has been the Stedelijk, which opened in December after a nine-year renovation and expansion (RECORD, September 2012, page 46). Many critics have panned its extension, designed by Bentham Crowell and dubbed the "bathtub."

But this spring, attention will turn to the \$500 million expansion of the Rijksmuseum, which shares a public square with the Stedelijk. It has undergone its own tumultuous 10-year planning, permitting, and building process, plagued by budget overruns and an acrimonious dispute about access for cyclists. Museum director Wim Pijbes, and with him all of the Netherlands, will heave

a sigh of relief when it reopens on April 13.

In 2000, the national government decided that after more than a century of intense use—the museum receives over 1 million visitors per year—the Rijksmuseum needed a major overhaul. The Seville, Spain-based firm Cruz y Ortiz won the international design competition for the expansion in 2001. The interior design is by Jean-Michel Wilmotte, known for his work at the Louvre.

Architects Antonio Cruz and Antonio Ortiz were faced with the challenge of bringing Pierre Cuypers's stern, symmetrical neo-Gothic structure from 1885 up to 21st-century museum standards. During the renovation, the museum's motto has been "Continue with



At a January 9 press conference, Detroit Mayor Dave Bing (above) discussed the Detroit Works plan (right) for transforming the city, backed by a \$150 million grant from the Kresge Foundation.



Adapting to Change in a Struggling City

AFTER NEARLY three years of research, members of the Detroit Works Project—an initiative launched by Mayor Dave Bing—unveiled in early January a host of recommendations for tackling the city's most daunting economic, infrastructural, and social challenges. From job growth to zoning reform, the recommendations range in scale from small pilot programs to 50-year infrastructure projects.

The Kresge Foundation and the W.K. Kellogg Foundation announced that they will jointly give \$3 million to fund an office dedicated to overseeing the implementation of those recommendations. In addition, all of Kresge's grants for the city over the next five years—a minimum of \$150 million—will be aligned with Detroit Works' recommendations. For the complete story, visit architecturalrecord.com/news. *Laura Mirvis*

(Rijksmuseum continued)

Cuypers." That meant renovating and cleaning up the existing building, which had become cluttered with added floors and walls. Even the interior courtyards, designed as sculpture gardens, had been sacrificed in the never-ending quest for more space.

To untangle this jumble and accommodate a predicted 2 million visitors per year in the near future, the architects created reception and ticketing areas, an auditorium, and a shop by going down—an ingenious but expensive solution, considering Amsterdam's soggy ground. A new main hall under the 323,000-square-foot building gives visitors a logical starting point and unites the east and west wings for the first time. Cruz y Ortiz also added a stand-alone pavilion for Asian art surrounded by water. In total, the architects added 32,000 square feet of new construction.

The presentation of the art is also undergoing a transformation. The previous director, Ronald de Leeuw, felt the museum should tell the story of eight centuries of Dutch history chronologically. Now more than 30 galleries will be dedicated to the 17th-century Golden Age. New galleries will also represent Dutch culture in the 20th century. The only artwork



The Rijksmuseum, completed in 1885, will reopen in April after a roughly \$500 million expansion and renovation.

to stay in the same place, in the Gallery of Honor, will be Rembrandt's famous *Night Watch*. For the first time, both the magnificent library and the formal gardens will be accessible to the public. The villa that in Cuypers's time housed the Teekenschool, or the Drawing School, will become a multidisciplinary educational center.

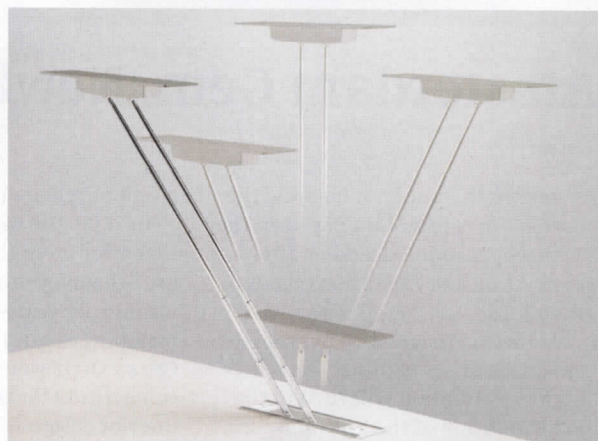
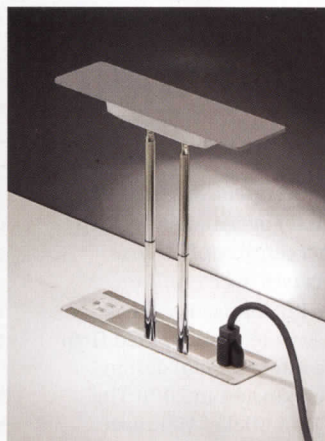
One of the thorniest issues confronting the museum was the public street that it straddles; the street has always served as an important link for cyclists between the center and the south of Amsterdam. When the museum was constructed, the south deeded the land to the city center under the strict stipulation that the street remain open in perpetuity. During the renovation, however, the museum closed it. After years of tense negotiations, the city decided to reopen the street for cyclists.

The Rijksmuseum looks north to the city center and south to Museum Square, the plaza it shares not only with the Stedelijk but also with the Van Gogh Museum (closed for renovation but expected to reopen in May) and the Concertgebouw concert hall. By summer, Amsterdam, and millions of visitors, should be able to revel in a new chapter of cultural wealth. ■

Flexibility. Convenience. LEVITY™!

Levity™ – The New Standard in Task Lighting

Simply lift cap and it automatically turns ► on its LED lights and raises to 6". Then pull up to 20" or anywhere in between. Two telescoping arms move in any direction, wherever you need light. Levity™ offers 360° of controlled, directed, focused task lighting. Push down closed when done, lights go out and Levity™ hides away. Includes two 15A/125VAC outlets. ETL listed and tested to meet UL153.



Moves from right to left, front to back and anywhere in between.

"FINE ARCHITECTURAL HARDWARE FOR YOUR FINE FURNITURE"®

MOCKETT

DOUG MOCKETT & COMPANY, INC

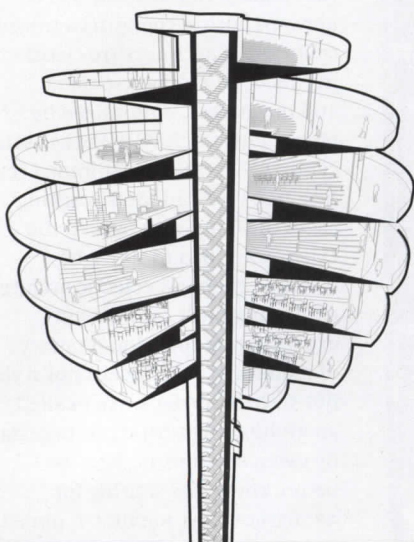
CIRCLE 45

www.mockett.com • 800-523-1269

ON THE BOARDS

- » **Phoenix Observation Tower**
- » **Phoenix**
- » **Bjarke Ingels Group (BIG)**

COMMISSIONED BY Phoenix-based real-estate developer Novawest, BIG's 420-foot-tall mixed-use observation tower would be located near the Arizona Science Center in downtown



Phoenix, if financed and approved by the city. Evoking a pin on a Google map (or a giant lollipop), the 70,000-square-foot tower would have a reinforced-concrete core with a spherical viewing ramp at the top. The base of the tower would include retail, water features, and a public plaza; visitors taking an elevator to the orb would have 360-degree views of the city. The spiraling sphere would also contain restaurants and exhibition space. The tower could become an emblem of the city, like Seattle's Space Needle or Los Angeles's Hollywood sign.

- » **Peruri 88**
- » **Jakarta, Indonesia**
- » **MVRDV**

COLLABORATING WITH the Jerde Partnership of Los Angeles and Arup Dublin, Rotterdam-based MVRDV's 1,300-foot-tall mashup of a mixed-use tower includes offices, a hotel, retail, an IMAX theater, a mosque, and four levels of parking, as well as a range of housing solutions including lofts and live-work units. The design, a competition entry for a site in Jakarta near a planned metro station, envisions a tower on top of angled, stacked



blocks. Each "urban block" has a semipublic roof deck with lush gardens, playgrounds, swimming pools, and restaurants. The Jerde Partnership designed the commercial podium, which extends from the basement level to the seventh floor.



Architecture by Eric Gartner,
SPG Architects

ENTER THE 2013

my Marvin

ARCHITECT'S CHALLENGE

WIN a trip to the 2013 Reinvention Symposium and showcase your most inspired work in a national publication.

Inspire and be inspired. And see how you measure up to your peers in the architectural community. Submit your best work that includes Marvin Windows and Doors, and our esteemed judging panel will evaluate each entry on a number of attributes. If your submission is singled out for excellence, it will be showcased amongst the winning entries in this prestigious annual event.

Submit your project at pros.marvin.com/inspired

MARVIN
Windows and Doors

Built around you.®

©2013 Marvin Windows and Doors. All rights reserved.
®Registered trademark of Marvin Windows and Doors.
1-800-268-7644

CIRCLE 32

[TRIBUTE]

Ada Louise Huxtable, 1921–2013

BY SUZANNE STEPHENS

EVERYONE HAS a favorite quote from the architecture critic par excellence, Ada Louise Huxtable. A pithy one dates to 1973: “The let-them-eat-travertine perfectionism of SOM superstar Gordon Bunshaft is seldom less belligerently antihuman these days,” she wrote in the *New York Times* about an office building in New York. Huxtable, who died of cancer on January 7 at 91, brought architecture criticism visibility and influence at a crucial time. In the boom years after World War II, the banality of commercial Modernism, the demolition of historic buildings, and the destruction of the urban fabric dominated the formation of the man-made environment. The *Times*, where Huxtable was named architecture critic in 1963, provided her a vehicle with horsepower, and her frequency of delivery guaranteed a readership. But more important, she brought to the post a distinct commitment to research and an insight into complex issues, plus the ability to present a solid argument in a forthright, tell-it-like-it-is style.

Huxtable, who grew up in New York City, did not just appear at the *Times* desk out of nowhere. After going to Hunter College, she undertook graduate work in architectural history at New York University’s Institute of Fine Arts. From 1946 to 1950 she served as an assistant curator at the Museum of Modern Art’s architecture and design department, then led by Philip Johnson. A Fulbright in Italy in the early 1950s helped her produce an exhibition and a book on Pier Luigi Nervi. Even before her appointment to the *Times*, Huxtable had written some 60

An American pragmatism guided Huxtable’s approach with a flexibility that could surprise.

freelance articles for the paper from 1957 to 1963. Being prolific helped; not surprisingly, when she joined the *Times*’s editorial board in 1973, she continued a Sunday column on architecture. By 1970 her talents had already won her the first Pulitzer Prize for distinguished criticism (of any discipline)

in newspapers. Although Huxtable left the *Times* in 1982, after receiving the MacArthur “genius” fellowship in 1981, her achievements remained legendary. While the writer’s pace slowed to six times a year when she was architecture critic from 1997 through 2012 at the *Wall Street Journal* (*WSJ*), she still kept her audience talking.

Her emphatic, no-nonsense writing style, restrained by elegant diction and laced with

alliteration, was arranged with a sense of rhythm that remained throughout her career. “This is a beautiful building that does not compromise its contemporary convictions or upstage the treasure inside. And it isn’t alchemy. It’s architecture,” Huxtable concluded about Tod Williams Billie Tsien Architects’



Ada Louise Huxtable poses in front of her collection of *ARCHITECTURAL RECORD*, left, and *Progressive Architecture*, right, at her New York City apartment in the late 1960s.

new Barnes Foundation in Philadelphia last May in the *WSJ*.

An American pragmatism guided Huxtable’s approach: she felt the critic needed to be flexible and, as newer truths emerged, to address that reality. Her attitude placed her well within the unrecognized tradition of architecture criticism in this country’s newspapers and magazines, epitomized by Montgomery Schuyler in the 19th century. After Schuyler joined the *New York World* in 1868 (working there until he went over to the *Times* from 1883 to 1907), he attacked the new, eclectic architecture being built for lacking expression of function, honesty of materials, and sincerity of style. But since Schuyler wasn’t called an architecture critic nor necessarily given a byline, he became better known by writing for *ARCHITECTURAL RECORD*, founded in 1891. Later, in 1931, Lewis Mumford helped battle clichéd Classicism and advocated organic-functional ideals as the “Sky Line” critic for the *New Yorker*. Here he built the weekly column into one of great influence by the time he stepped down in 1963. However, Mumford saw his true calling as

writing epic tomes on subjects such as city planning and technology.

To be sure, Huxtable published books, yet newspaper criticism was her forte—with its quick-on-the-draw timing directed to a general readership of powerful and influential people (as well as normal folk). She couldn’t put an end to bad buildings, although she helped save good ones. And she kept the debate going. In the very month she was appointed architecture critic at the *Times*, her stinging diatribe appeared on the planned destruction of McKim, Mead & White’s Penn Station (May 5, 1963). As she wrote, “Architects’ inhumanity to architects surpasses understanding, particularly when the earlier ones are dead. It’s a good way to kill off a city, as well.” Tellingly, the final essay of her life, published in the *WSJ* on December 3, 2012, focused on another archicidal: Foster + Partners’ plan for Carrère and Hastings’s New York Public Library (1897). She will be very much missed. ■

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



SAFTI FIRST™

FIRE RATED GLAZING SOLUTIONS

[NEWSMAKER]

Donald Albrecht

BY LAURA RASKIN

MICRO-APARTMENTS ARE having a moment, and not just as conceptual exercises. In Boston, San Francisco, and other metropolises these tiny units—around 300 square feet—are becoming a reality. A new exhibition at the Museum of the City of New York explores the changing demographic, social, and economic factors that could make micro-living viable and desirable in New York City. *Making Room: New Models for Housing New Yorkers* runs through September 15. The exhibition includes micro-unit schemes, a full-size model unit, and proposals from New York City's adAPT competition, which called on developer-architect teams to design a building of micro-units. Mayor Michael Bloomberg will waive zoning regulations at an East 27th Street site so the winning design can be built there. RECORD spoke with Donald Albrecht, the museum's curator of architecture and design, who organized the show with curatorial fellow Andrea Renner.

Why did the museum decide to mount this exhibition?

In 2011, Citizens Housing & Planning Council [CHPC] of New York did a design charrette with the Architectural League of New York. They went to five teams and asked them to come up with new schemes for housing in New York City based on the knowledge that the population was going to grow by 1 million by 2030 and that almost half of the city is single. CHPC asked if we would want to work on an exhibition. We also look at projects from other cities across the U.S., Asia, and Canada. There are really beautiful new models and films of the projects that reflect the architects' further thinking about the idea. The most fantastic part is that there is a full-scale, 325-square-foot micro-unit in the museum [built and designed by Clei, Resource Furniture, and Amie Gross Architects]. We're trying to show that you can live comfortably in a smaller space.

Some of the criticism of micro-units is that they're not very affordable for the type of person they're meant to attract—young, single, underpaid. Does the exhibition address any of the criticisms of the trend?

We don't deal with cost at all. I came to feel

that the show is complicated enough. It's not a beauty show. There's already a layer of information that has to be gotten across. Let people come to their own conclusions. We are doing a series of public programs where those issues will be aired. It will be interesting to see how the public and the media respond.

Another criticism of micro-units is that they would require cities to relax building codes.

Are we going to go back to building SROs? Architects argue no. But that is one of the specters. The architects show that yes, it's a small unit, but there are things that ameliorate that. Peter Gluck [whose micro-unit design is featured in the show] points out that in the old days, with thick walls and small windows,



A 344-square-foot apartment in Hong Kong, designed by Gary Chang.

you didn't get a lot of light. Now, with larger glass panes and thinner walls, you can get more light into small spaces. Technology has changed.

What was challenging about organizing this exhibition? It's very different from, say, the Eero Saarinen exhibition you curated at the museum in 2009.

It was challenging to understand the story. In a way, I served as a journalist translating the ideas for our general audience. The exhibition fleshes out a problem that needs to be addressed: legal living for young people coming to the city; getting people off of the Craigslist culture; stopping people from putting up sheets and walls to make new rooms that are illegal. There's an "aha" moment we're trying to show here.

It's so difficult to do an architecture show when the "thing" isn't in the gallery. But here they will see a unit. People may walk in and say, "I could never live in a micro-unit." We try to let the public flesh out the ideas. ■

noted

Rem Koolhaas to Curate 2014 Venice Architecture Biennale

The Pritzker Prize-winning Dutch architect Rem Koolhaas will direct the Venice Biennale's 14th annual International Architecture Exhibition. It will be held June 7 to November 23, 2014, a time frame that adds about 12 weeks to the event, which has typically kicked off in late August.

David and Gladys Wright House Spared Demolition

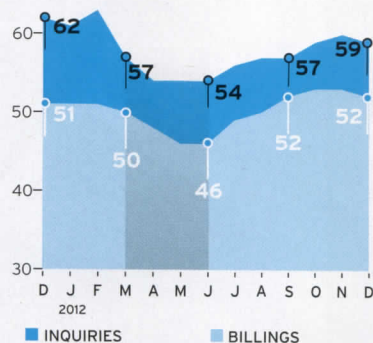
After months of demolition threats, the Frank Lloyd Wright Building Conservancy announced in December that the David and Gladys Wright house in Phoenix had been saved, thanks to an anonymous benefactor who purchased it and gave it to a nonprofit for restoration and maintenance.

Richard Meier Wins Competition in HafenCity

Richard Meier & Partners has won an international competition—beating out Foster + Partners and Zaha Hadid Architects—to design a seven-story mixed-use building and headquarters for real-estate company Engel & Völkers in Hamburg's HafenCity district.

Neutra's Modernist Cyclorama to Be Razed

After a 14-year battle with preservationists, the National Park Service announced it would demolish Richard Neutra's 1962 Cyclorama building at Pennsylvania's Gettysburg National Military Park. The park service stated that there was no need for the circular structure and that it conflicted with the preservation of the Civil War battlefield.



Design Services Still in Demand

The Architectural Billings Index score for December was 52, down slightly from November's score of 53.2, according to the American Institute of Architects. The new-projects-inquiries index slipped from 59.6 to 59.4. Still, the scores reflect an increase in demand for design services (any score above 50 indicates an increase in billings).



When you're short on space, but big on ideas.

The new HP Designjet T120 ePrinter is the smallest large format printer in its class, helping you to make the most of your space. And with HP Designjet ePrint & Share you can use your smartphone or tablet to print ideas the moment you think of them. It's the small printer that allows you to think big.

Find out more at hp.com/go/newdesignjet or call 888.772.9897.



the twenty-fourth annual

ACCENT ON ARCHITECTURE GALA

Join 500 national leaders in design, government, business, and education for the nation's premier celebration of leadership in architecture and design.

FRIDAY, MARCH 22, 2013

Learn more and find out about attending AAF's Accent Gala at archfoundation.org or by contacting Janice Marks at 202.787.1005 or jmarks@archfoundation.org.

PRESENTED BY THE
AMERICAN
ARCHITECTURAL
FOUNDATION

FRIDAY, MARCH 22, 2013 THE ANDREW W. MELLON AUDITORIUM WASHINGTON, DC

CONGRATULATIONS *to the* 2013 ACCENT ON ARCHITECTURE GALA HONOREES

The Good Design is Good Business Lifetime Achievement Awards

Presented by Architectural Record in association with AAF

Hines

Patron Award

Gerald D. Hines accepting

Bohlin Cywinski Jackson

Architecture Award

Peter Q. Bohlin, FAIA, accepting



The Joseph P. Riley Jr. Award for Leadership in Urban Design

Presented by AAF in association with the United States Conference of Mayors

The Honorable Mick Cornett Mayor of Oklahoma City

THANK YOU TO OUR 2013 ACCENT ON ARCHITECTURE GALA SPONSORS *as of 1/1/2013*

BENEFACTOR United Technologies Corporation **MEDIA PARTNER** Architectural Record **LEADER** American Institute of Architects / Cancer Treatment Centers of America / Cannon Design / Clark Construction Group, LLC / DLR Group / Gensler / HKS Architects, Inc. / Skidmore, Owings & Merrill LLP / Turner Construction **SUSTAINER** Bohlin Cywinski Jackson / First Oklahoma Corporation / Forsgate Industrial Partners / Hord Coplan Macht / Jacobs / The JBG Companies / Hines / K&L Gates / PageSoutherlandPage / Perkins+Will / Porcelanosa USA / Steelcase, Inc. / U.S. Green Building Council / Weidlinger Associates, Inc. **PATRON** Hickok Cole

WITH SPECIAL THANKS TO OUR 2013 GALA LEADERSHIP COMMITTEE Kenneth P. Baker, Assoc. AIA, Assoc. IIDA, Gensler / Eric Cantor, New Mountain Learning / G. Sandy Diehl III, SD Global Advisors, LLC / Anthony Greenberg, The JBG Companies / Diane Hoskins, FAIA, LEED AP, Gensler / Bryce D. Pearsall, FAIA, LEED AP, DLR Group / James R. Tolbert III, First Oklahoma Corporation / Randal Wilcox, Otis Elevator Company

Specifying **FIRESIST**[®] fabric at the beginning of development is a solid decision.

Visualization

Drawings are for visual representation only.

FIRESIST[®] IS A REGISTERED TRADEMARK OF GLENRAVEN, INC.

FIRESIST
82005-0000
REGATTA TWEED

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

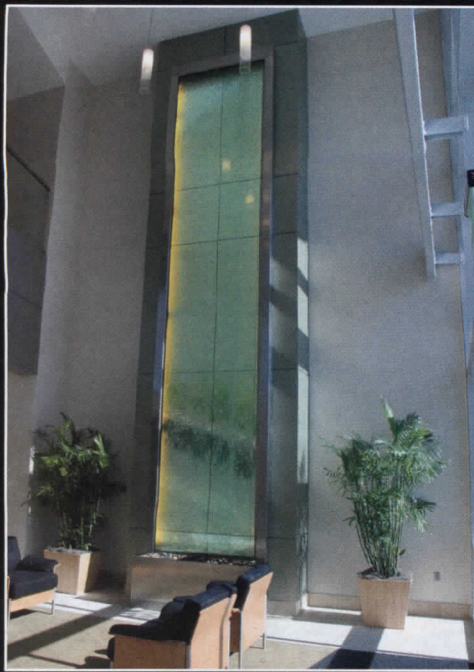
Specify FIRESIST for an up-to-code fire-resistant awning fabric that looks as good as it performs. Improved strength, colorfastness, and weather-resistance make fabrication with FIRESIST easier than ever.

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.



Scan the qr code with your mobile device.





Adache Group Architects, Inc.



InterContinental Hotel / Miami, FL



Itani Designs

You Dream It, We Build It, You Love It.

bluworldofwater
WORLD LEADER OF EXQUISITE WATER DESIGN

www.bluworldusa.com
info@bluworldusa.com | p(888)499-5433

CIRCLE 51



ENDURAMAX™
High-Performance Wall System
By Oldcastle®

Introducing...

EnduraMax™ is a complete solution for reaching beyond the surface. This system steps beyond traditional masonry by offering masonry's timeless beauty, but adding value with an energy-saving insulation barrier and built in moisture protection to produce a high-performance wall system.

Every component of EnduraMax is specially engineered to integrate into a complete high-performance wall system. EnduraMax is more than an attractive surface, its durable, innovative and allows design versatility by offering extensive colors, shapes, and size options.

That's a smarter masonry working harder for you.



- 1 Foam Panels
- 2 Masonry Units
- 3 Units & Mortar

See the EnduraMax Advantage at
EnduraMaxWallSystem.com
or call 855-887-7873 for more info.

The face of innovation.



*-Project: Westwood High School Blythewood, SC
-Architect: AAG Associates, Beaufort, SC*



EnduraMax™
Additional colors, sizes & shapes
at EnduraMaxWallSystem.com



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 leave our mark with satisfied customers and clients who have chosen North America's largest manufacturer of building products to simplify the process of making buildings happen.

We're Oldcastle Architectural, the face of masonry.

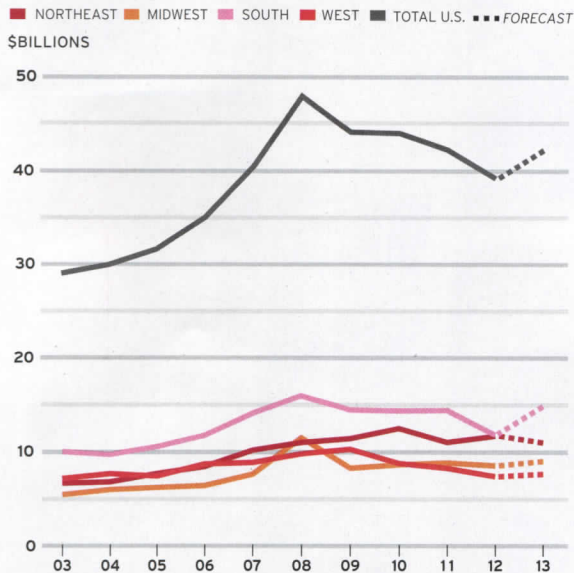
BRANDS TRENWYTH® | **ENDURAMAX™** | GLEN-GERY® | QUIK-BRIK® | AMERIMIX®

MARKET FOCUS

NONRESIDENTIAL RENOVATION

Renovation Starts by Region

Plus U.S. total and forecast figures for 2012 and 2013

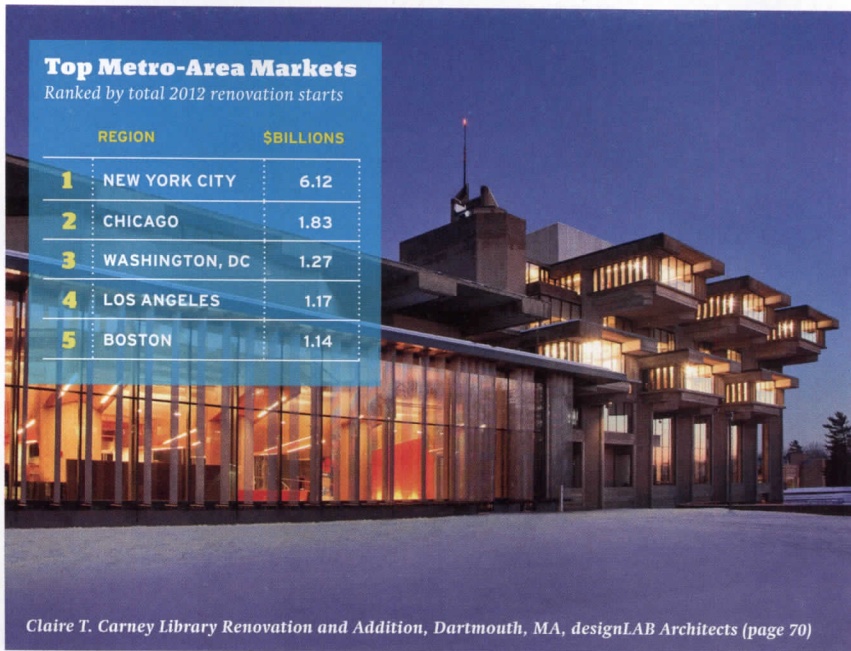


Construction starts for nonresidential renovation projects will increase 8% in 2013 to \$42 billion. Every region of the U.S., except the Northeast, will experience gains this year, with the South expected to show the healthiest growth.

Top Metro-Area Markets

Ranked by total 2012 renovation starts

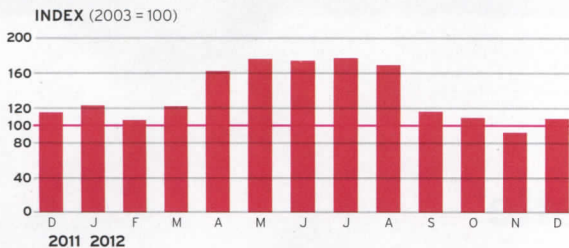
REGION	\$BILLIONS
1 NEW YORK CITY	6.12
2 CHICAGO	1.83
3 WASHINGTON, DC	1.27
4 LOS ANGELES	1.17
5 BOSTON	1.14



Claire T. Carney Library Renovation and Addition, Dartmouth, MA, designLAB Architects (page 70)

The Dodge Index for Renovation

12/2011-12/2012



The index is based on data for renovation starts that has not been seasonally adjusted. The average dollar value of projects in 2003 serves as the index baseline.

Top 5 Design Firms

Ranked by renovation starts 1/2011 through 11/2012

- 1 Gensler
- 2 Perkins+Will
- 3 AECOM
- 4 JCJ Architecture
- 5 HOK

Top 5 Projects

Ranked by renovation starts, 1/2012 through 11/2012

\$400 MILLION

PROJECT: Macy's Herald Square
ARCHITECTS: Studio V Architecture; Highland Associates; Charles Sparks + Company; Kevin Kennon Architects
LOCATION: New York City

\$250 MILLION

PROJECT: World Financial Center Winter Garden
ARCHITECTS: Spector Group; Pelli Clarke Pelli Architects; Omniplan; Morrison Dilworth + Walls; AvroKO; BCV Architects
LOCATION: New York City

\$171 MILLION

PROJECT: Henry J. Carter Specialty Hospital and Nursing Facility
ARCHITECT: Array Healthcare Facilities Solutions
LOCATION: New York City

\$160 MILLION

PROJECT: Delta Airlines LaGuardia Airport Hub
ARCHITECTS: Skidmore, Owings & Merrill; Gensler; Corgan
LOCATION: Queens, NY

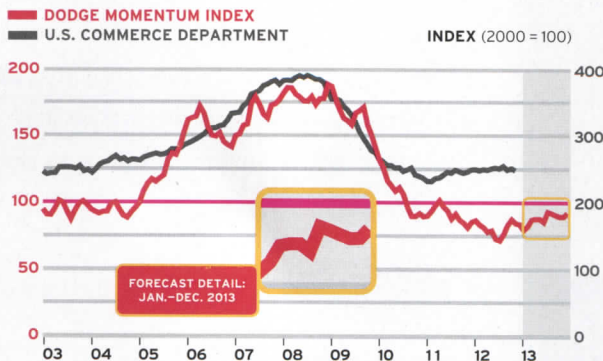
\$158 MILLION

PROJECT: PotashCorp Geismar
OWNER: PotashCorp
LOCATION: Geismar, LA

MOMENTUM INDEX REBOUNDS

In December, the Dodge Momentum Index rose 3.2% to 94.9. The upturn, which follows several months of lackluster performance, could indicate that the political and fiscal uncertainty that had restrained construction plans is easing.

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 census data.





good state



better state

You've built this business from the ground up. A State Farm[®] agent can tailor your business insurance to help protect your unique needs. Select the right coverage from a local business owner who understands what it takes to grow. Visit st8.fm/bizinsurance or contact a State Farm agent today.

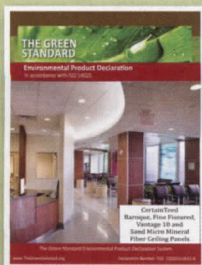
Get to a better State[®]. Get State Farm.

CIRCLE 19

 **State Farm[®]**

© 2013 CertainTeed Corporation

Products you can look up to.



EPDs you can look into.

Many of CertainTeed's Ceilings have Environmental Product Declarations (EPDs) – 3rd party certified life cycle assessments that tell their whole green story, from raw materials to reusability. That's transparency you can see.

View the EPDs at www.CertainTeed.com/CeilingsEPD

800-233-8990 • certainteed.com • <http://blog.certainteed.com>

ROOFING • SIDING • TRIM • DECKING • RAILING • FENCE • FOUNDATIONS
GYPSUM • CEILINGS • INSULATION • PIPE

CIRCLE 49

CertainTeed
SAINT-GOBAIN

The Post-Sandy Grid: Unequal Yet Superior?

A two-tier power system could deliver electricity more dependably to everyone.

BY PETER FAIRLEY

BLACKOUTS CAUSED by superstorm Sandy and other recent destructive weather events—coupled with dramatic system failures like the great Northeast blackout of 2003—have undermined confidence in the U.S. electrical grid's ability to keep homes and businesses humming. Those with means are increasingly installing their own power generation, and thus raising a provocative question: could the nation soon have a two-tier power system in which reliable electricity is a luxury, as is the case in many developing countries?

Experts in electrical transmission tend to agree that the U.S. is indeed headed toward such a future, in which people with means and initiative will have more consistent power. But this scenario need not beget electrical “have-nots.” In fact, experts say the generation capacity installed to make some users more independent of the grid could actually strengthen the electrical backbone upon which everyone else depends.

The key to this apparent paradox is the advanced technologies that will dominate the growing backup-power market. Forward-thinking electricity self-providers will eschew gas-guzzling portable generators that sit idle most of the time and often fall short in an emergency. Instead, their go-to backup-power equipment will be smart, reliable, and efficient enough to run year-round.

Jon Wellingshoff, who chairs the Federal Energy Regulatory Commission, which oversees the U.S. grid, says the shift is well under way. One example is the retrofitting of rooftop solar panels, or photovoltaics (PVs), for operating during blackouts. “It’s not a fringe idea,” he says.

PV systems generally turn off automatically when the grid goes down, so that utility crews repairing downed lines aren’t electrocuted. However, an additional piece of electronics

Forward-thinking electricity self-providers will eschew gas-guzzling portable generators.

called a transfer switch can, for a few hundred dollars more, allow a system to separate from the grid and safely go on powering its host building.

This “islanding” capability is already standard for Kenny Grigar, cofounder of Taos, New Mexico–based Off-Grid Hardware, which specializes in installing self-sufficient PV systems. Over 40 percent of Grigar’s systems are in grid-



connected buildings, and most have a transfer switch. Solar panels that don’t deliver in a blackout, he says, are only “half a system.”

Most of Grigar’s systems also include batteries to store some solar energy for use after sunset. That option is getting cheaper as more people adopt electric cars, charge them from rooftop PVs, then direct some of the stored energy to their houses.

Hobbyists are already rewiring hybrid cars such as Toyota’s Prius to power their homes during blackouts. Within the next few years that will be a standard option for plug-in cars, according to Guy AlLee, manager of Intel’s Energy Systems Research Center in Rio Rancho, New Mexico.

Several natural-gas-fueled power sources heading for the mass market can similarly multitask. They simultaneously generate electricity and hot water, and the gas lines

that feed them are generally unaffected by power outages.

These technologies—smarter PV systems, electric cars, cogeneration—benefit more than just their owners. That’s because electricity generated where power is consumed makes the neighboring grid stronger and more resilient. Such distributed generation eases demand on the grid, giving it extra margin when demand

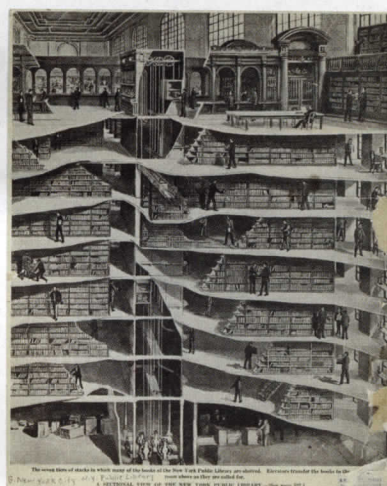
spikes. And if the grid does go down, customers looking after their own needs make it that much easier for utilities to bring it back up.

However, this utopian vision of an elite serving the greater good as well as themselves could unravel if utility companies that maintain the grid are undermined. If the “haves” aren’t completely reliant on a shared grid, support for maintaining it could slowly disappear. Rob Pratt, who manages “smart grid” R&D at the Pacific Northwest National Laboratory in Richland, Washington, warns of a possible death spiral in which distributed generation saps utility revenues, weakening line maintenance and inspiring further flight from the grid.

One solution is a rate hike for those services that most “haves” will continue to demand of the grid. Utilities buy surplus power from distributed generators and pass it to neighboring consumers; they also make grid power available 24/7 in the event that a basement generator blinks out or dim weather idles a PV system. Pratt says the rates for these grid services can be bumped up so distributed generators pay their fair share without crimping the market.

If regulators get the incentives right, the result should be a grid that delivers reliability for all. ■

Peter Fairley is a journalist based in Paris and British Columbia who covers energy and the environment for Technology Review and Nature.



Controversy over the New York Public Library's main branch at 42nd Street (left) continues with Foster + Partners' scheme to replace seven stories of stacks (center) with a circulating library (right).

New York Public Library Threatened

Foster's proposal injects false notes into a historic structure.

BY CHARLES D. WARREN

EVEN BEFORE Norman Foster presented his firm's scheme in late December to alter radically the New York Public Library's main branch, controversy swirled among scholars about plans to change Carrère & Hastings' 1897 Beaux-Arts masterpiece at 42nd Street and Fifth Avenue. Delay and secrecy in the design process exasperated the late Ada Louise Huxtable (page 26): in her last column in the *Wall Street Journal*, she said the library's proposal was "devised out of profound ignorance." Now that Foster's plans are finally public, a rising tide of criticism may engulf a process seemingly arranged to avoid wider discussion.

This is a research library only; books do not circulate there. Before Foster showed his scheme, many scholars had objected to the proposal that called for moving millions of hard-to-find volumes off-site in order to consolidate two nearby libraries into the main branch for a lending facility. Architecturally, the core of the controversy is the removal of the core of the building: seven stories of book stacks stretching two city blocks. There the collection (open only to library staff) is stored in a dense hive of cast-iron shelves, which is hung from 1,300 thin steel columns.

Remarkably, this system also supports the floor of the magnificent Rose Main Reading Room above. These construction innovations were granted U.S. patents, and the library's spatial organization is equally ingenious. A lift rises through the tiers of shelves, delivering requested books to the center of the main

reading room. That room itself, 297 by 78 feet, is a grandly proportioned space at the end of an almost operatic procession that visitors take via marble stairways ascending from the main entrance. On other levels, lavishly paneled rooms surround the stacks on three sides. The choreography of readers and books is central to the building's architectural experience.

Foster + Partners would consign the elegant iron-and-steel structure at the building's center to the ash heap of history. The scheme destroys the efficient, axial poetry of Carrère & Hastings, replacing the stacks with disconnected elements from elsewhere: the atmosphere reminds us of Foster's London Stansted Airport (1991), and the stair belongs in his ill-fated Harmon Hotel at Las Vegas's CityCenter (2010). The railings and soffits look like grilles on the latest Lincoln MKZ. The proposed reuse of cast-iron panels from the demolished stacks would lend an air of pathetic sentimentality to

elevator shaft—another distraction. It is sad that the books are treated as baggage, and astonishing that book delivery, the crucial library function, has not yet been resolved.

The library has presented its architect with an impossible task: maintain the connection between glorious reading rooms and world-renowned research collections, but insert a sprawling digital-age facility between them. In consolidating the services of two outside libraries—which currently total 350,000 square feet—into the already busy 42nd Street library, the architects can add only 140,000 square feet (80,000 from Foster's plan, 60,000 from the new underground storage). These numbers need to be faced by library leaders; they want an expanded facility in a reduced floor area.

Marx invokes inevitable change as a justification for this project. But that logic lost us New York's Penn Station. In Paris, with the building of Dominique Perrault's Bibliothèque Nationale

A muddled, multilevel concourse would replace the 19th-century patented book stacks.

the mashup. The term "pastiche," often used unfairly against those who modify buildings with stylistic sympathy, belongs here.

Unfortunately, the new functional arrangements are no better. A muddled, multilevel concourse would replace the stacks, and half of the books would move to existing below-grade storage. And how would they get to the reading room? Foster explained that they would travel on a conveyor "just like the baggage system in an airport." Its route is absent from his drawings, but the books need to change directions at least five times (horizontally and vertically) as they zigzag around old masonry and new trusses. Library president and CEO Anthony Marx has suggested substituting a visible

François Mitterrand in 1995, Labrouste's historic Bibliothèque Nationale was preserved; change can be bad or good. As the NYPL's renovation budget approaches \$350 million, alternatives to Foster's scheme abound. It is not too late to change it. Rather than closing branches (and harvesting real-estate assets), officials should rebuild the nearby lending facility to accommodate greater public use and changing technology. This would save a treasured landmark from a second-class makeover and potentially add a first-class building to the world's greatest network of public libraries. ■

Charles D. Warren, a New York architect, is co-author of Carrère & Hastings Architects (2006).

REIMAGINE METAL



NEW LOOK. FRESH APPROACH.

Innovative exterior. Exceptional energy efficiency. Superior sustainability. These are the goals for a retrofit project – and that’s what Larimer Corporate Plaza’s building team got when they used CENTRIA’s Formawall® Dimension® Series architectural insulated metal wall panels. Formawall Dimension Series panels are lightweight, easy to install over existing structures, offer limitless aesthetic options – and are the only wall system with Advanced Thermal and Moisture Protection (ATMP®) technology. Plus, CENTRIA’s team of experienced design and engineering professionals, along with our elite Dealer Network that provides trained installers and construction services, have the expertise and experience to solve your toughest retrofit challenges. Learn more about the products and people that can help you reimagine retrofits at

CENTRIperformance.com | 800.229.5427



Scan the QR Code with your smart phone to view the Larimer Corporate Plaza project gallery and learn more about the CENTRIA products selected.



REIMAGINING THE BUILDING ENVELOPE

Beauty That's More Than Skin Deep

The Shape of Green: Aesthetics, Ecology, and Design, by Lance Hosey. Island Press, 2012, 216 pages, \$30.

Reviewed by David Sokol

DID YOU know that a clean neighborhood experiences one-fifth less crime than an untidy one, that profit margins for businesses

near Rem Koolhaas's Seattle Public Library have risen 50 percent since it opened in 2004, that birdsong stimulates carbon sequestration by trees? Lance Hosey is on a mission to prove that society places value on beautiful environments, which makes them more enduring. His new book, *The Shape of Green*, leaves no case unturned for recognizing beauty as a valid consideration in green building.

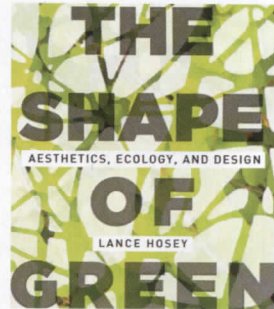
Environmentalists have sounded the call for more beauty in design since at least 1994, when John Elkington conceived the term "triple bottom line" to argue that social equity and economic development endear a building to a community, thereby factoring into its

sustainability as much as ecological footprint. *The Shape of Green* explains this three-pronged worldview, as well as other necessary backstories, such as the concept of embodied energy, without sounding at all like a textbook. Then, with equal flair, Hosey draws links between beauty and ecological responsibility, again and again.

Beauty's ability to prolong a design's relevance is gospel at Nokia, for example, which estimated that "prolonging the life expectancy of a phone by a year could cut [the phone's] total energy consumption by more than 40 percent." Moving beyond statistics, Hosey says, "To reduce green building to a hollow list of material qualities robs architecture of its own kind of 'motive power.'" However it makes its points, *The Shape of Green* claims that much green architecture has failed to connect emotionally with the public, and that these unbeautiful buildings are less sustainable than they seem.

The argument is style-agnostic. Just as he celebrates Koolhaas's futuristic library in Seattle as a revenue magnet, Hosey marvels at a classical column as anthropomorphic, relatable, and not easy to discard. Sidestepping the question of Modernism versus Classicism, he imagines an architecture in which beauty derives directly from sustainable performance.

Hosey distills his design philosophy to three guiding principles: conservation of materials and systems; attractiveness informed by principles found in nature; and connection to locality. Like Elkington's triple bottom line, these underlying concepts are not unprecedented. Biophilia—the study of humans' bond to nature—identifies many of the principles that Hosey defines as attractive. Urbanists and placemakers advocate the need for walkable cities with their own regionally distinct identities. And many consumers seem ready to buy such contemporary innovations as the Mission One electric motorcycle, which, in addition to eliminating the fuel pump, allows the rider to tuck his legs into the void where a gas engine would have been—thereby producing less wind resistance and even greater energy efficiency. What is new about *The Shape of Green* is Hosey's synthesis of research and design innovations that have been overlooked in many other books. He has crafted a sophisticated rallying cry and assembled a nascent toolbox for the next generation of eco-architects. ■



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

www.sloanvalve.com

I am an Architect



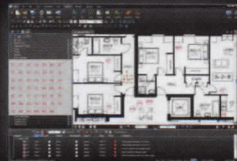
and *Revu* is my Studio.



Complete Design Reviews



Respond to RFIs



Track Punch Items



Go Mobile

Bluebeam Studio™ is the ultimate cloud-based solution for collaboration. Included in Bluebeam® Revu®, Studio allows you to manage projects digitally from start to finish anywhere, at any time. Store and manage an unlimited number of PDFs and any other file type in the cloud for free, and invite project partners to check-out and edit those files. Collaborate on the fly by adding 2D and 3D PDFs into online Studio sessions, where you and your project partners can redline the same PDF with industry-standard markups from a desktop, tablet PC or iPad. Complete design reviews, respond to RFIs directly and track punch items in real time – there are no limits to what you can do when leveraging the combined power of Revu and Studio.

Make Revu your Studio
www.bluebeam.com/digitize



bluebeam®
No limits™

© 2013 Bluebeam Software, Inc.

JuliusBlum&Co.Inc.

JB® Glass Railing

JB® Glass Railing components are available in aluminum, bronze, nickel-silver and stainless. Tested and available from stock, JB® Glass Railing system is designed for use with 1/2" or 3/4" glass. When combined with Carlstadt® self-aligning brackets and JB® glass adapters, the architect and specifier can achieve a wide range of design alternatives, meeting most regulatory requirements.



To Request your free copy of Catalog 19, email catalog19@juliusblum.com
Julius Blum & Co. Inc. is the nation's largest supplier of architectural metal products.
For complete information on all components, visit juliusblum.com

Julius Blum & Co. Inc.
800.526.6293
P.O. Box 816
Carlstadt, N.J. 07072
fax: 201-438-6003
bluminfo@juliusblum.com

VOLATILE ORGANIC COMPOUNDS

FLAME RETARDANTS

CHEMICAL EMISSIONS



DISCOVER THE NEW SCIENCE OF INDOOR AIR QUALITY

As people encounter more chemicals at home and at work and in the products they create, 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 to safeguard innovation.

UL.COM/NEWSCIENCE

UL and the UL logo are trademarks of UL LLC.



Hotel 27, Copenhagen, Denmark. Photo: Jacob Termansen.

PH50

Design: Poul Henningsen. PH 50 provides 100% glare-free light. The design is based on the principle of a reflective three-shade system, which directs the majority of the light downwards. The fixture emits both downward and lateral light, thus illuminating itself. Chili red, coconut white, mint blue, olive black or wasabi green, lacquered.



**louis
poulsen**

www.louispoulsen.com

perspective **house of the month**

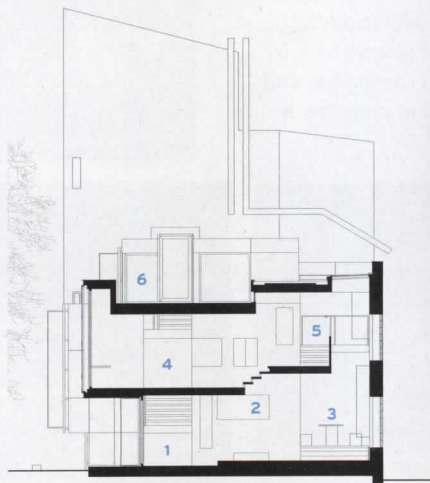
IN PARIS, MOUSSAFIR ARCHITECTES' MAISON ESCALIER PUTS A TWIST ON A BACHELOR PAD, CANTILEVERING EACH ROOM OFF A SPIRAL STAIR CORE. BY LAURA RASKIN



Perforated metal screens offer privacy and daylight (left and above). The kitchen and bathrooms are contained in the stair core (right).

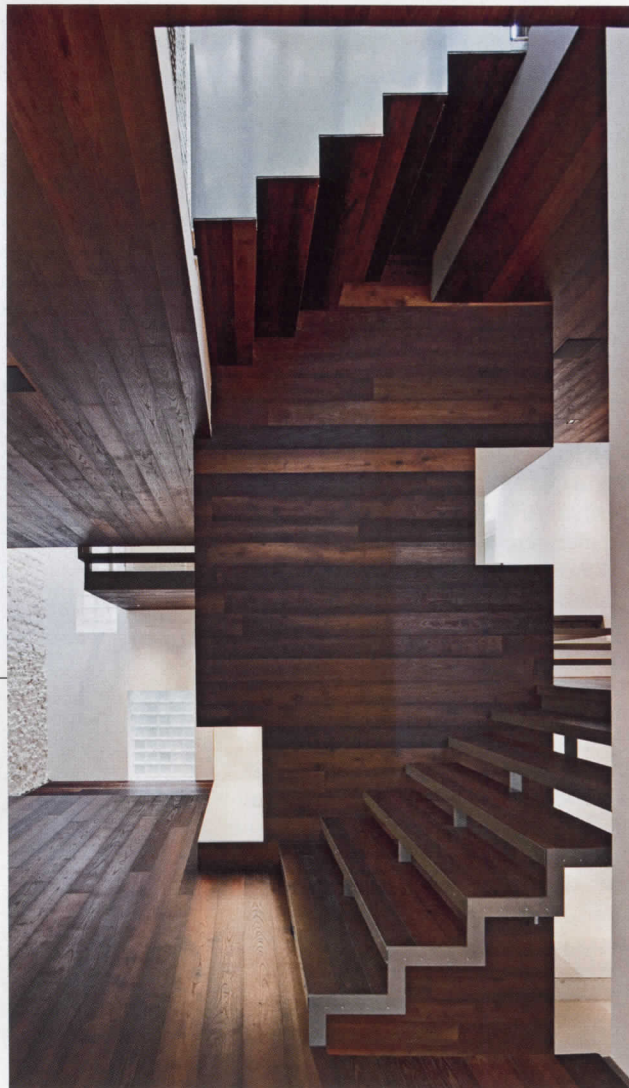
PARIS-BASED ARCHITECT Jacques Moussafir laughed and then had to count out loud when asked exactly how many floors exist in the 1,650-square-foot house he designed for a bachelor in the city's fashionable Latin Quarter. By Moussafir's calculation, there are 10, including a roof terrace; each level is a single room (if that) branching out from a central staircase core, "like a propeller." The client requested that there be no doors, and Moussafir's eponymous firm happily complied—though it did enclose two bathrooms. "It's always a dream when a client says they don't want any partitions," says the architect. Locust-wood paneling on the floors, ceilings, and stairs contrasts with white-washed masonry walls.

The steel-and-concrete structure sits between two buildings in a residential courtyard, where an old house was razed for the new one. Local preservation regulations dictated that the architect save two walls of the original house. Electronically operated metal shutters with a laser-cut leaf pattern shade the new, glazed southern facade and provide privacy for the occupant—as well as the neighbors. ■



LONGITUDINAL SECTION 0 10 FT. / 3 M.

- 1 ENTRANCE
- 2 KITCHEN
- 3 DINING
- 4 OFFICE
- 5 DRESSING ROOM
- 6 ROOF TERRACE



The Unreliable Archive

Inside Orhan Pamuk's Museum of Innocence.

BY WILLIAM HANLEY

PINNED AND labeled like butterflies in a wall-mounted shadow box, 4,213 cigarette butts welcome visitors to the Museum of Innocence, writer Orhan Pamuk's present-day *Wunderkammer* in Istanbul. The stubbed-out specimens were smoked by a woman named Füsün, the wall text tells us. And like the other objects in the museum, they were collected by her former lover, Kemal. Rejected by her, a heartsick and obsessive Kemal began pilfering everyday objects connected to Füsün, amassing this beautifully melancholy collection.

But the story behind the Museum of Innocence, like the Nobel Prize-winning writer's 2008 novel of the same name, is an invention. Füsün and Kemal are characters in the book.

Spread over four floors of a late-Ottoman townhouse, the museum, which opened last year, contains a rambling archive of mostly real quotidian objects from Westernized, bourgeois life in late-20th-century Istanbul. The author refers to it as a parallel telling of the novel's story—a physical museum that embodies a fiction.

"The building is the first piece of the collection," says Pamuk. He acquired the formerly rundown 1897 house in 2000. Over the next 12 years, the author, who briefly studied architecture before turning to writing, worked with Istanbul-based architects İhsan Bilgin and Cem Yücel, as well as the German firm Sunder-Plassmann Architekten, to restore and convert it.

The architects added a steel skeleton to shore up the structure against earthquakes—an ever-present threat in Istanbul—and excavated a neighboring concrete yard to create a below-grade museum store. They gutted the interiors, opening an atrium through the center. "For me, the Guggenheim in New York is the ideal museum space because you not only look at the objects but also the others who are looking at the objects," says Pamuk. "As I was finishing the novel, I incorporated that idea into my character's thoughts about his museum."

Pamuk arranged the collection in narrow wooden cabinets, which recall Joseph Cornell boxes, and each of the

80 displays serves as an illustration or ideogram for one of the book's chapters. They have an uncanny quality for visitors familiar with the novel, but the dioramas also have an evocative power that stands alone; the most comically moving is an old medication advertisement painted over as "An Anatomical Chart of Love Pains."

The novel's protagonist is inspired by the Musée Édith Piaf in Paris, Sir John Soane's Museum in London, and other small museums created by a single personality. Like them, Pamuk's collection preserves relics of life in a particular place and time with a palpable intimacy. But by making the real objects that it houses players in a fiction, the writer's project illuminates the storytelling involved in all acts of collecting and conserving. "State-sponsored history connects the objects and works of art in big national galleries," he says. "Here, we are saying a simple love story connects these things." The Museum of Innocence shows how un-innocent our presentations of the past can be—how we always have a narrative at work on the objects and buildings we choose to preserve. ■



Painted an aching blood red, the Museum of Innocence (above) stands out in its gentrified but still scruffy neighborhood. Rising above the entry (far left), an atrium allows simultaneous views of the museum's displays. A cabinet (left) illustrates chapter 28, "The Consolation of Objects."

Sky-high innovation in insulation science.

"Icynene has established an international reputation as a leader in spray foam insulation research and development and sustainable construction technology. Energy-saving performance is assured with Icynene, with highly innovative products – from water-blown low density open-cell to high R-value medium density closed-cell – and a global pioneer you can count on for premium quality insulation, service and technical support."



Paul Duffy, M.A.Sc., P. Eng
Icynene Principal Building Scientist
VP Engineering



ICYNENE[®]

The Evolution of Insulation

- **Building Science**
- **Dependable Architectural Resources**
- **In-House Expertise**

CIRCLE 37

Call 1-800-758-7325 or visit www.icynene.com

The World's Finest Water Feature



The Harmonic Cascade® Waterfall

Custom Designed • Precision Crafted in the USA • Available Worldwide

Exclusively from Harmonic Environments®

 Harmonic Environments®
the premier maker of custom waterfalls

www.HarmonicEnvironments.com
800.497.3529

DURAVIT



**ONTO. A NEW FORM
OF BATHROOM DESIGN.**

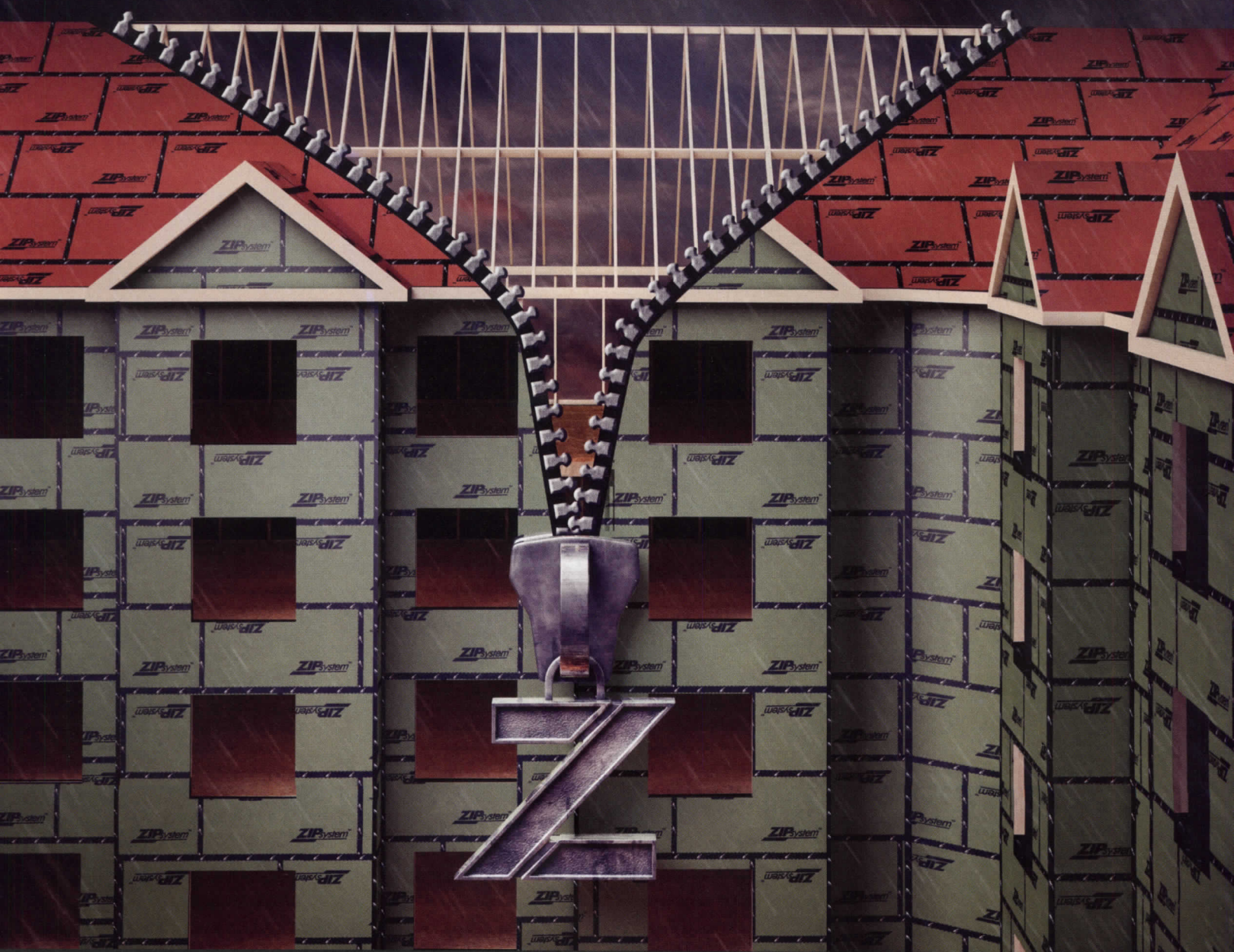
Onto, Matteo Thun

Sanitaryware, bathroom furniture, bathtubs, shower trays, wellness products and accessories: Duravit has everything you need to make life in the bathroom a little more beautiful. New for the pro - pro.duravit.us. More info at Duravit USA, Inc., Phone 888-DURAVIT, info@us.duravit.com, www.duravit.us

ZIP up a tighter envelope.

Protect your projects from the elements, with ZIP System® sheathing. Our all-in-one structural panels with a built-in water resistant barrier combined with our specially designed ZIP System™ tape guard your buildings from moisture damage during and after construction. This continuous water and air barrier also improves energy efficiency by significantly reducing air leakage. And panels go up quickly for a stronger, drier, faster seal – creating the ideal building envelope.

ZIP up your next project. ZIPSystem.com/record2.



© Huber Engineered Woods LLC. ZIP System, the accompanying ZIP System logo and design And AdvanTech are trademarks of Huber Engineered Woods LLC. Huber is a registered trademark of J. M. Huber Corporation. Huber Engineered Woods products are covered by various patents. See zipsystem.com/patents for details. HUB 3094 12/12

FROM THE
CREATORS OF





WE HAVE BEEN ABLE TO MAINTAIN THE DESIGN TEMPERATURE WITHOUT HAVING TO USE THE NATURAL GAS FIRED BACKUP SYSTEMS. THE INITIAL RETURN ON INVESTMENT PROJECTION WAS TWO YEARS. I THINK YOU JUST BEAT THAT BY A MILE.

- Craig Cigas, President and CEO of Cigas Machine Shop, Inc.



Find out what all the hype is about at www.atas.com/inspire

ATAS International, Inc.

www.atas.com | 800.468.1441 | Allentown, PA | Mesa, AZ | Maryville, TN

Disappearing Act

Louvre-Lens, a luminous outpost of the venerable Paris museum, opened in mid-December in the northern French town of Lens. The architect SANAA teamed up with Imrey Culbert and then Adrien Gardère for exhibition design, and with Catherine Mosbach for landscape. The result is a series of evanescent, one-story glass-and-aluminum pavilions delicately displaying masterpieces of art.

Photographs by Iwan Baan





SANAA's meandering rectilinear spaces, 300,000 square feet for seven pavilions, occupy a 49-acre brownfield site in the former mining town of Lens. The intriguing landscape design, seen in the west courtyard (above), is surfaced in concrete that looks like melting snow. Circular holes planted with moss alternate with swaths of grass and trees. The main Galerie du Temps (below), a shedlike space 393 feet long, chronologically presents selected Louvre masterpieces, such as Delacroix's 1830 *Liberty Leading the People* (seen at rear).





The square entrance hall (above) contains circular glass enclosures for services such as information and ticketing, a bookshop, and a café. A stair wrapping around a glass elevator connects to a subterranean study center and storage area. Gently curved walls of polished aluminum in the Galerie du Temps (below) enhance reflectivity in an ethereal setting where daylight is modulated by half-inch-thick louvers suspended from the ceiling. Visitors circulate around freestanding installations (such as the ancient Greek *kouros* in the foreground).



SAGEGLASS® INSTALLED IN OVERHEAD GLAZING
KIMMEL CENTER FOR THE PERFORMING ARTS, PHILADELPHIA, PA

200 guests.

96° outside.

1 bride.

No sweat.

The Kimmel Center's Hamilton Garden Terrace was always in high demand for events, especially weddings. But a mix of intense heat and no shade created by the Center's vaulted glass roof made the temperature impossible to control. The venue was unusable in the summer. And couples had to settle on another site for their big day.

Then SageGlass® was installed. Now, at the push of a button, the heat of the sun is tamed. The temperature is comfortable. And hosting weddings year round is a piece of cake.

See more SageGlass® transformations at sageglass.com or call 877-724-3321.

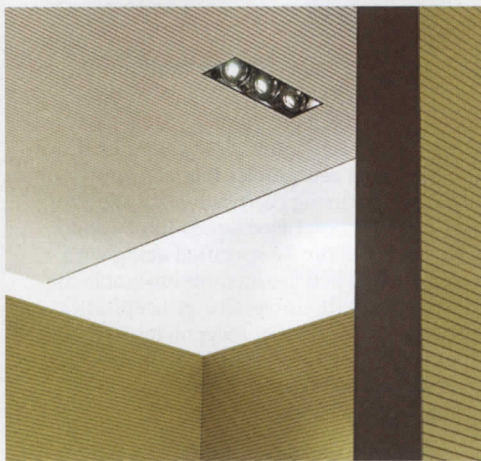


SAGE

Glass that tints on demand.

products **ceilings**

THE LATEST CLOUDS, BLADES, TILES, AND PANELS OFFER IMPROVED ACOUSTICS, EASIER INSTALLATION, AND EXPANDED OPTIONS FOR CREATIVITY ON A HIGHER PLANE. BY RITA CATINELLA ORRELL



Compositions Decorative Ceiling Clouds

USG usg.com

USG's Compositions ceiling-cloud system (top) allows designers to easily create decorative ceiling clouds with a custom appearance. The system features a virtually seamless trim that increases the variety of shapes and configurations, including rounded rectangles and squares. Installation requires minimal hanger wires, and no wires are needed around the perimeter. **CIRCLE 205**

Monolithic Ceiling & Lighting System

USG usg.com

In other news, USG announced a strategic collaboration with GE Lighting to offer an integrated new monolithic and sustainable ceiling system for commercial applications that will incorporate lighting and mechanical systems into the ceiling plane (above). The new system combines USG's highly reflective Logix ceiling with GE's energy-saving Lumination LED linear recessed luminaires. **CIRCLE 206**

Magna T-Cell Ceiling System

Chicago Metallic chicagometallic.com

At the new Scioto Downs casino and racetrack in Columbus, Ohio, SOSH Architects of Atlantic City specified over 50,000 square feet of Chicago Metallic's Magna T-Cell ceiling system. The modular design breaks up the vast stretch of ceiling with staggered elevations while supporting lights, cameras, and diffusers. Two different cell patterns in a custom tan color add visual interest. **CIRCLE 207**

Evolution Acoustic Panel System

Architectural Systems, Inc. archsystems.com

Evolution acoustic wall and ceiling panels can help create sound-sensitive environments with an integrated system that includes nonacoustical panels and simple hardware that allows for seamless installation. The collection is available in four finish groupings: solid and wood-grain melamines, laminates, real wood veneers, and faux leathers. **CIRCLE 208**

SoundScapes Blades

Armstrong armstrong.com/ceilings

Armstrong has expanded its portfolio of acoustical solutions for spaces where the ceiling structure is exposed with SoundScapes Blades (top). The seismic-tested and Class A fire-rated blades, which create a strong visual pattern, come in 14 colors and four sizes. The 2"-thick blades can reduce reverberation time in a space up to 72% with only 20% coverage. **CIRCLE 209**

WoodWorks Grille Ceiling Additions

Armstrong armstrong.com/ceilings

Also new from Armstrong is the expansion of the WoodWorks Grille ceiling-system line to include vertical and horizontal blade options and a Tegular edge (above) for easy installation in standard suspension systems. WoodWorks Grille Tegular panels are offered in 2' x 2' and 2' x 4' sizes and standard finishes including maple, light cherry, dark cherry (shown), and walnut. **CIRCLE 210**

products **briefs**

A ROUNDUP OF THE LATEST PRODUCTS ON THE MARKET, INCLUDING A NEW INTEGRATED-SINK SYSTEM FOR TIDIER PUBLIC RESTROOMS.
BY RITA CATINELLA ORRELL

**Atlas Table Collection by Brad Ascalon**

The mythical Greek Titan Atlas and the celestial sphere that he supported were the inspiration for designer Brad Ascalon's new table for Design Within Reach. The Atlas table collection features a solid North American walnut frame made in the U.S. and a thin circular slab of white marble, black marble, or travertine made in China. It measures 20" high and 21.5" in diameter. dwr.com CIRCLE 200

**Apex Litter & Recycling Receptacles**

There is nothing trashy about the Apex litter and recycling receptacles from Forms+Surfaces. Featuring corrosion-resistant aluminum with FSC-certified jatoba-hardwood slats, the units can be specified along with a coordinated bench-and-table ensemble for corporate, retail, university, or hospitality settings. Single-stream receptacles have a single 24-gallon liner; split-stream receptacles come with two 18-gallon liners.

forms-surfaces.com CIRCLE 201

Advocate AV-Series Lavatory System

After you wash your hands in a public bathroom, you typically give them a shake and then walk over to the hand dryer, where they drip water on the floor and down the wall. Eliminating this messy process is Advocate—the first lavatory unit designed to provide a sink, soap, faucet, and touchless hand dryer all in one unit. The system features a 0.38gpm faucet, high-efficiency hand dryer, and recycled, Greenguard-certified solid-surface material. bradleycorp.com CIRCLE 202

**Vivid Palette Carpet Patterns**

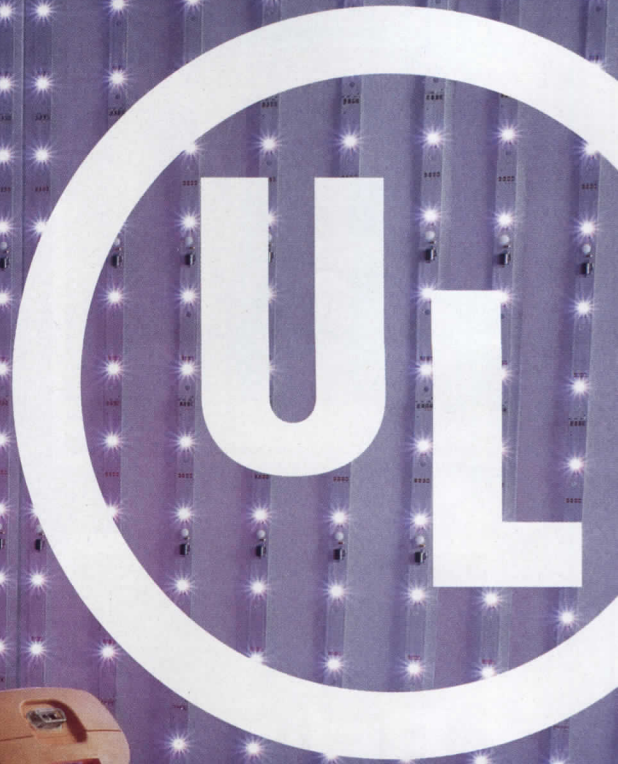
While developing six new patterns for the Vivid Palette tufted-broadloom collection, Shaw Hospitality Group challenged students at the Savannah College of Art and Design to create projects using natural dyed fibers. Techniques from the student work that inspired the collection included folding, stitching, and bundle dyeing with osage orange and black tea, dyeing with potato dextrin, and weaving with the Costa Rican cabuya fiber.

shawhospitalitygroup.com CIRCLE 203

**Escofet Cast-Stone Site Elements**

Landscape Forms, based in Kalamazoo, Michigan, is now the sole representative of the Barcelona company Escofet in the United States and Canada. The Escofet Collection includes 14 cast-stone products: 10 benches, a bench-and-table group, two chairs, and a planter. Flor (shown) is a backless, flat, asterisk-shaped element that provides both social and solitary seating options. landscapeforms.com CIRCLE 204

CONNECT WITH THE EXPERTS



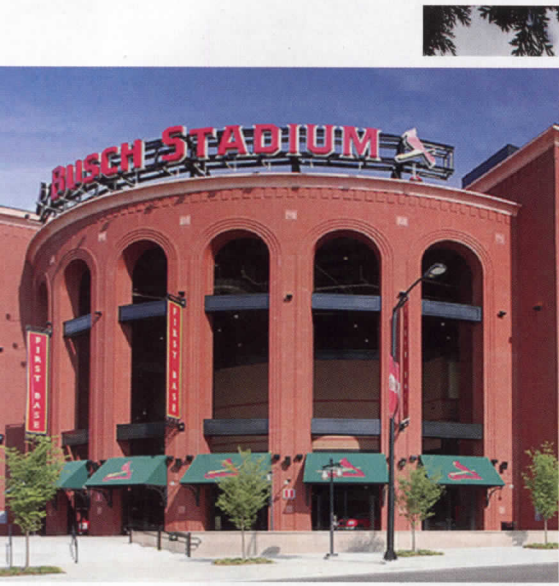
If you could take some of the legwork and a lot of the frustration out of your job, why wouldn't you? You're just an email or call away from trusted information from an impeccable source. Simply contact one of our code authority experts in the U.S. and in Canada.

EXPERTISE IS EASY TO REACH AT
UL.COM/CODERESOURCE

Join the Discussion > Discover our new group at LinkedIn.com — search "UL Codes"



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



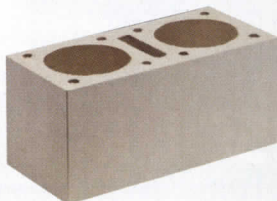
Ambassador - 3-5/8" x 2-1/4" x 15-5/8"



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"

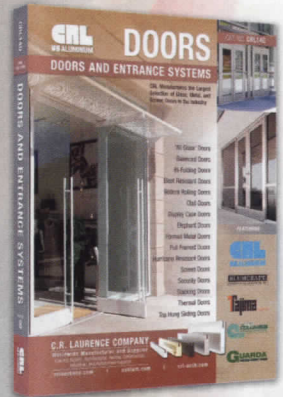
More Colors, Sizes, Shapes & Textures

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.



CRL DOORS ARCHITECTURAL ENTRANCE SYSTEMS



**NEW!
CRL14D
DOORS**

Showcasing the Largest Selection of Door Systems in One Catalog! Order, View or Download at crlaurence.com.



- 'All-Glass' Entrance and Storefront Systems
- Balanced Doors
- Sliding, Bi-Folding and Stacking Doors

- Blast Resistant Doors
- Formed Metal Doors
- Security Doors



C.R. LAURENCE COMPANY

crlaurence.com | usalum.com | crl-arch.com
email: crl@crlaurence.com | usalum@crlaurence.com

WORLDWIDE MANUFACTURER AND SUPPLIER
Glazing, Architectural, Railing, Construction, Industrial, and Automotive Supplies



DESIGN TRENDS INSPIRATION EDUCATION

CONNECTING

THE TILE + STONE INDUSTRY



Connect with the world of tile + stone design at Coverings, the ultimate design resource attended by more than 20,000 tile + stone professionals and 900+ of the finest suppliers from around the globe. View magnificent vignettes to inspire your next project, seek technical advice to ensure proper specifications, and attend nearly 70 FREE educational sessions qualifying for valuable certification credits. Coverings is an AIA/CES Provider, an NKBA CEU Provider Partner and your absolute connection to free education and CEUs.

**Connect with the most inspirational
tile + stone design event of your year.**

coverings
THE ULTIMATE TILE + STONE EXPERIENCE sm

COVERINGS 2013 APRIL 29-MAY 2 ATLANTA, GA USA

REGISTER NOW FOR FREE AT COVERINGS.COM

Please use VIP Code AAR3 when registering.



Blending history with Creative Solutions...

Challenge...

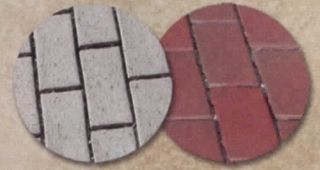
Water pooled up into ankle-deep mud directly in front of Kenan Hall At Flagler College each time it would rain. The City of St. Augustine didn't allow any new tie-ins to its storm sewer system and required all new construction to keep its storm drainage on site. Secondly, the design had to tie in with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



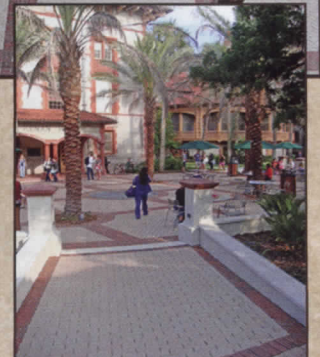
Permeable Clay Pavers...Beautiful and Sustainable



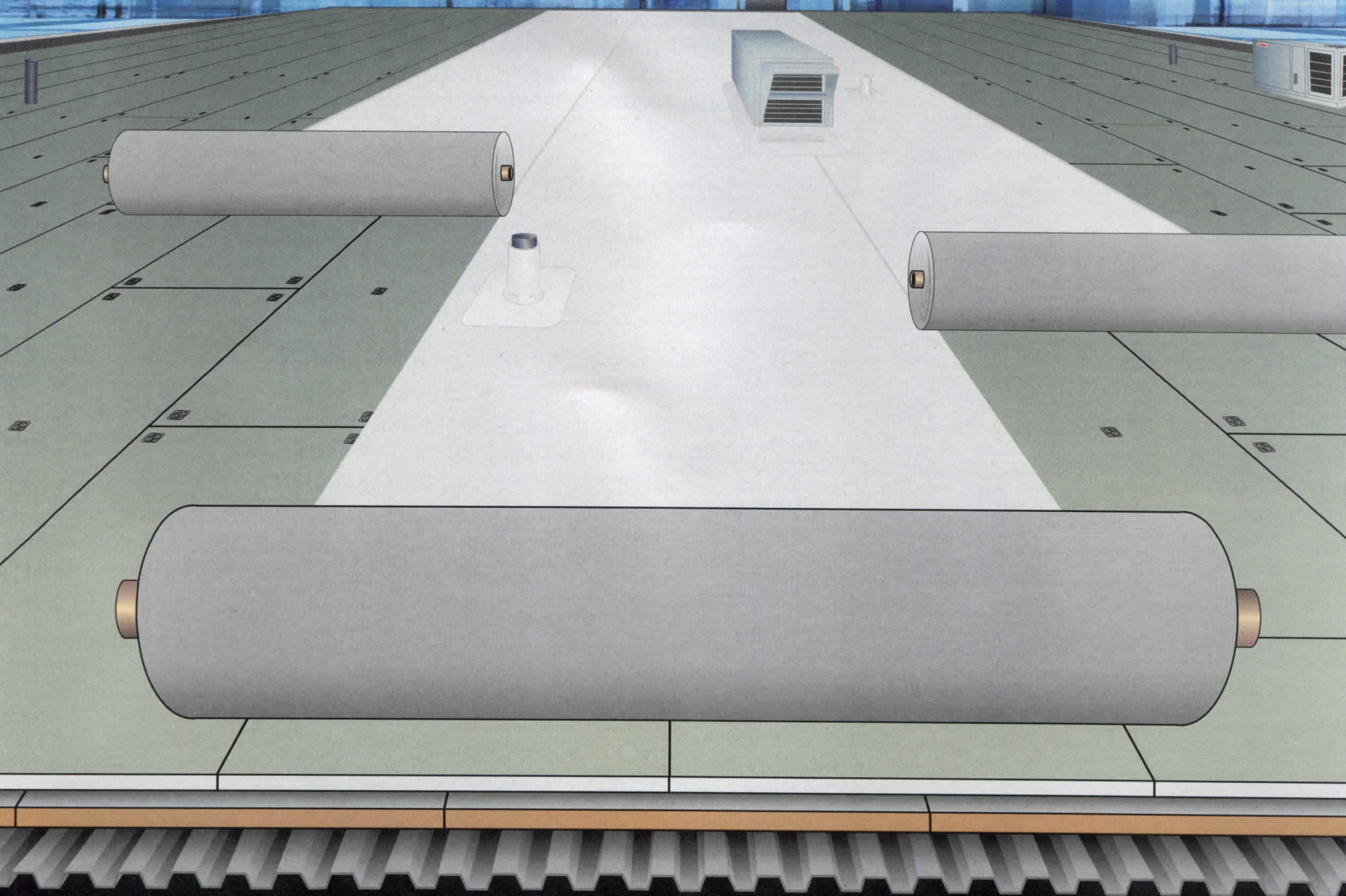
The Plaza at Kenan Hall/Flagler College in St. Augustine, Florida
Landscape Architect: Sharon Fowler of Hauber Fowler & Associates
Builder: A.D. Davis Construction
Mason Contractor: Paverscape Inc.
Distributor: Oldcastle Coastal



Winner of the 2011 BIA Silver Award
Paving and Landscape Architecture



A New Perspective on Single-Ply Rolled Goods



Premium Rolled Goods And Custom Fabricated Flashings For Time Off the Roof™



800-248-0280

www.duro-last.com/get-rolling

Follow us Twitter: @durolast

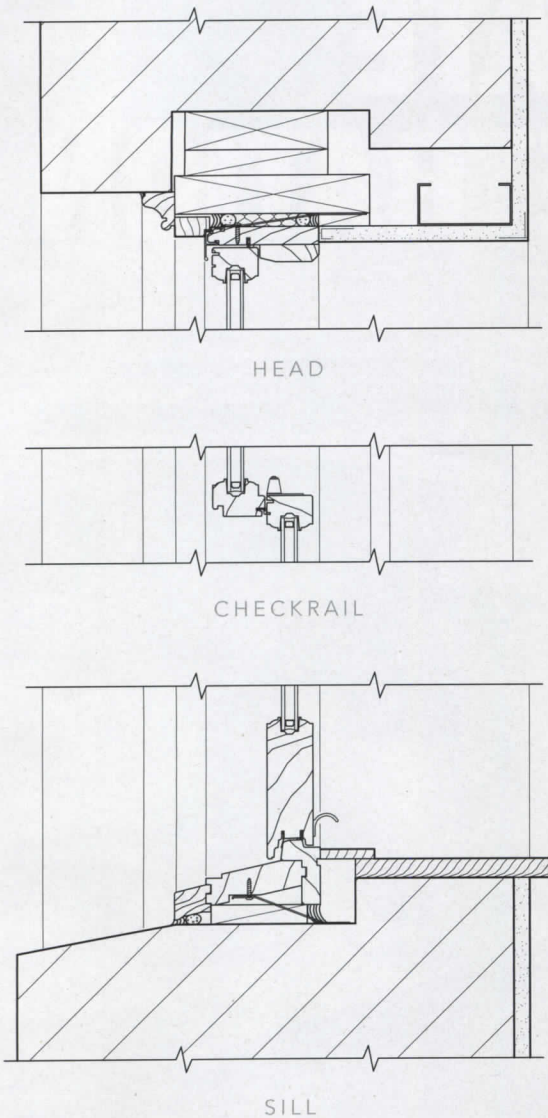
"Duro-Last" and the "World's Best Roof" in the Duro-Last Globe are registered marks owned by Duro-Last Roofing, Inc.

Requisite code approvals and Notices of Acceptance for Duro-Tuff in Florida are pending.

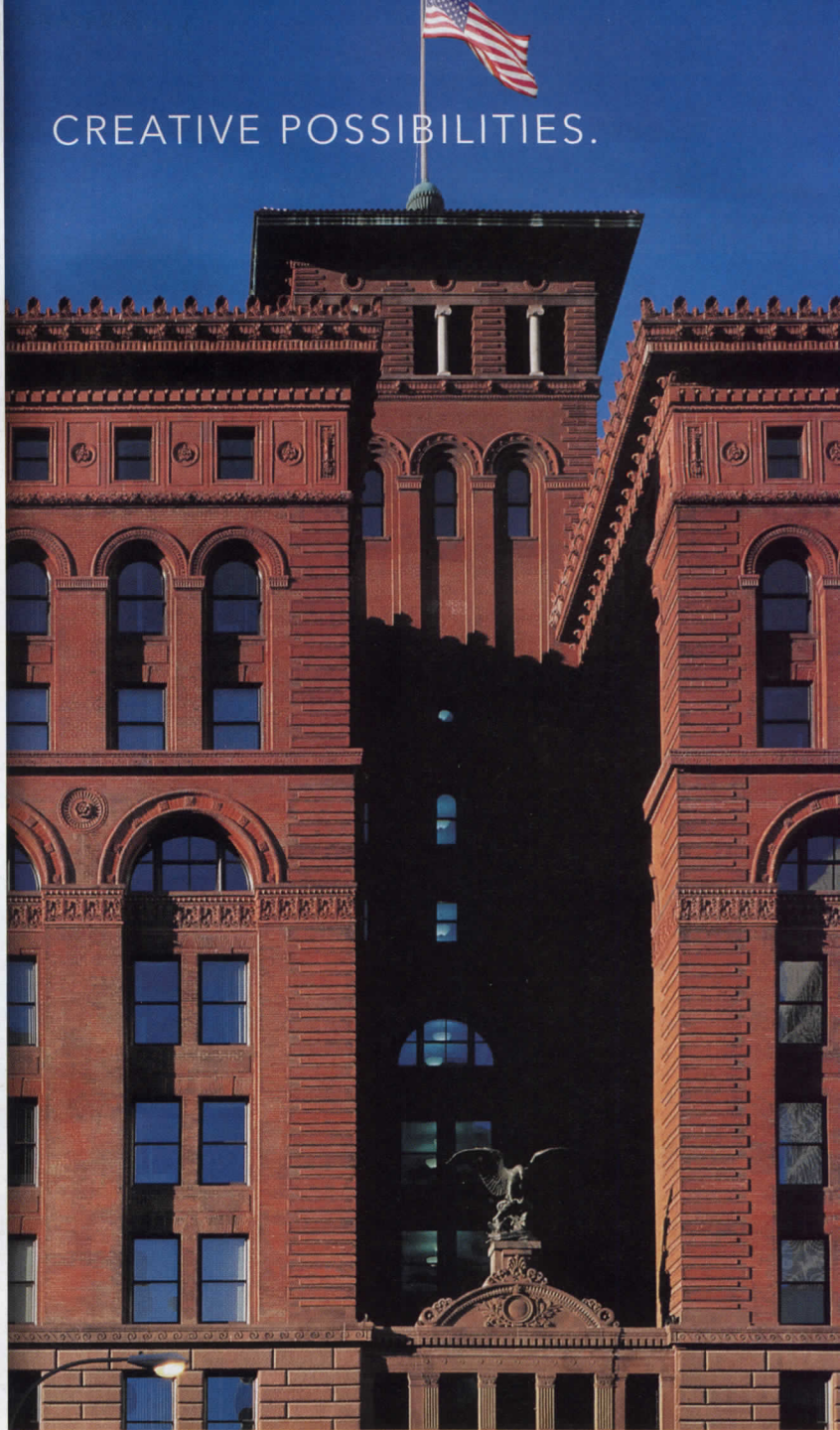
Our new Duro-Tuff™ membrane is one of five premium rolled goods product lines from Duro-Last®. Our unique custom-fabricated flashings will give you secure, water-tight rooftop transitions. Plus, you'll reduce labor from these critical areas and get *Time off the Roof* – maximum installation efficiency, fewer call-backs, and the ability to move on quickly to the next project.



TECHNICAL CAPABILITIES.



CREATIVE POSSIBILITIES.



See both sides of this story at pellacommercial.com/uuwh.

UTILICORP UNITED WORLD HEADQUARTERS
KANSAS CITY, MO
GASTINGER WALKER HARDEN ARCHITECTS

OFFICE

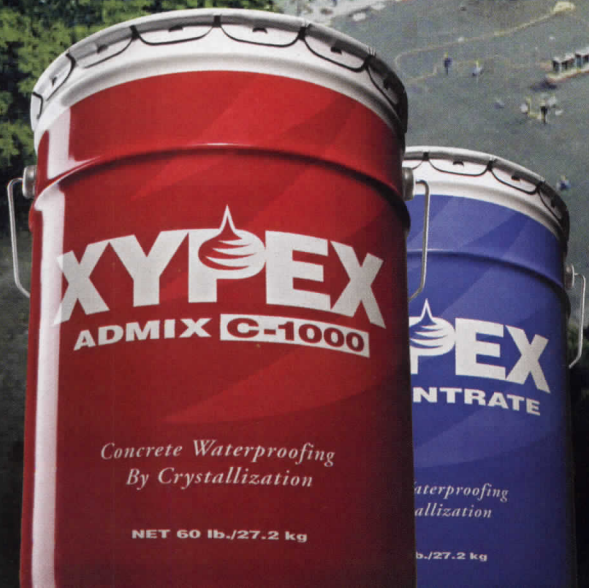
A glazing solution with the look of the original windows' plate glass but with the level of thermal efficiencies demanded for the headquarters of a multinational energy company. Window elevations with curve-top openings that re-create the historical elegance of the building's Neo-Romanesque design. The Pella Commercial team can help you put the art in smart thinking.



COMMERCIAL

CIRCLE 70

ELIMINATE WATER PENETRATION



Cracks, joint failure and ineffective waterproofing in foundations subject to hydrostatic pressure are major problems that result in leaking and concrete deterioration. Whether for new construction or structural rehabilitation, Xypex Crystalline Technology is a permanent and cost effective solution. Worldwide, in both shallow and deep foundations, Xypex has proven to be highly successful in preventing infiltration even under extreme hydrostatic pressure.

Find a distributor in your region.
www.xypex.com

XYPEX[®]



What's in a name?

A promise.



SPECIFY CollinsWood®

Pacific Albus®
Red Oak
Poplar
Black Cherry
Hard Maple
Soft Maple
White Oak
Basswood
Ash

Kane Hardwood
SCS-COC-000024

Richwood Hardwood
SCS-COC-003853

Collins Upper Columbia Mill
Collins Pacific Albus Hardwood Lumber
SCS-COC-001855

Information and Sales:

Randy Byers 814.837.0117 rbyers@collinsco.com

Steve White 304.846.9388 swhite@collinsco.com

CollinsWood.com

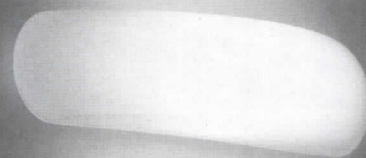
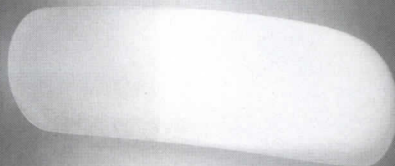
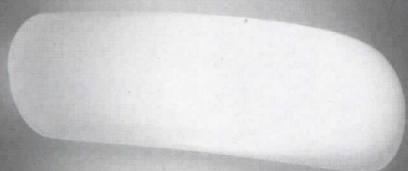
"In 1995 – before LEED – I specified sustainably harvested wood for the new San Francisco International Airport. In my research, I discovered **FSC-certified Collins Hardwood**. I was able to choose the exact quality and color, plus I got the environmental standards I support. We received the first commercial award ever given by the National Resources Defense Council for utilizing materials from sustainably managed sources. It was a win for us, for Collins, and for the earth!"

*Keith Boswell, AIA, Technical Architecture Director
SOM / San Francisco*

Collins

The first name in FSC-certified forest products.

LIMBURG Collection



New LED light bricks

Exquisite, hand blown, three-ply opal glass
coupled with the latest energy saving technology.

BEGA sets the standard



BEGA-US
www.bega-us.com
(805) 684-0533
No. 149



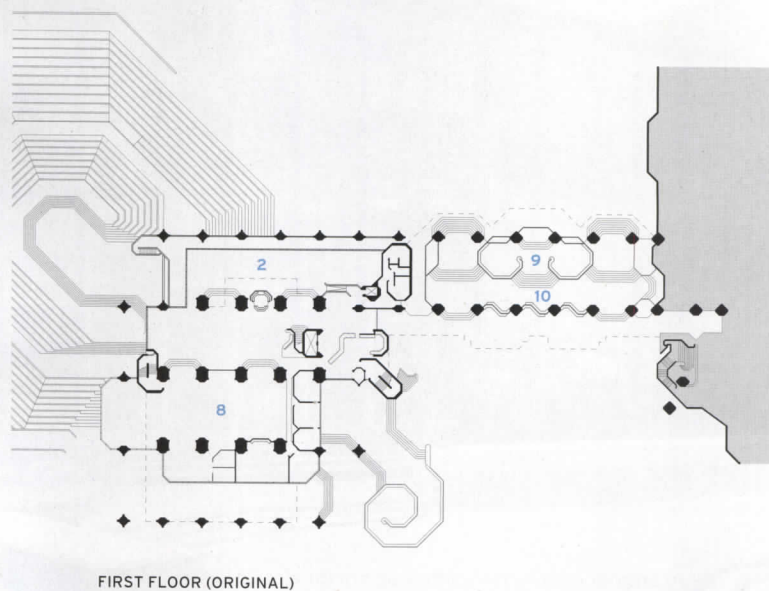
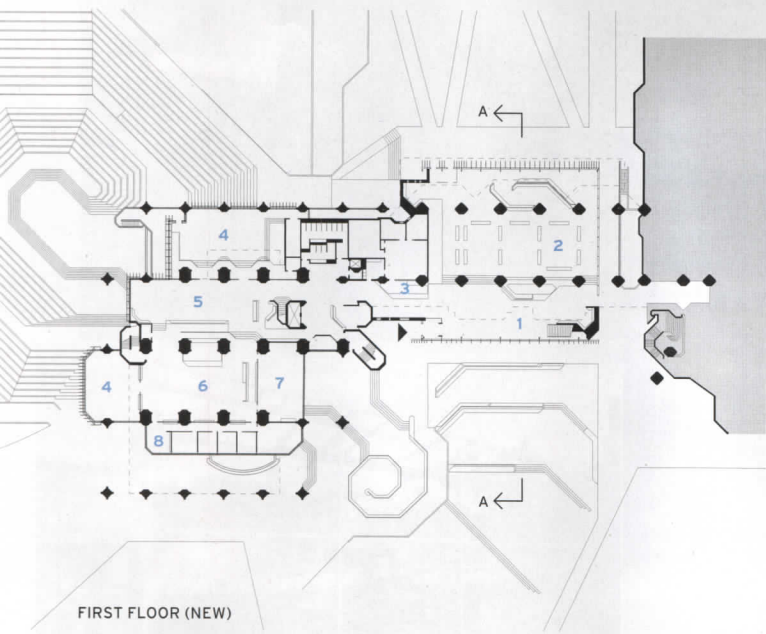
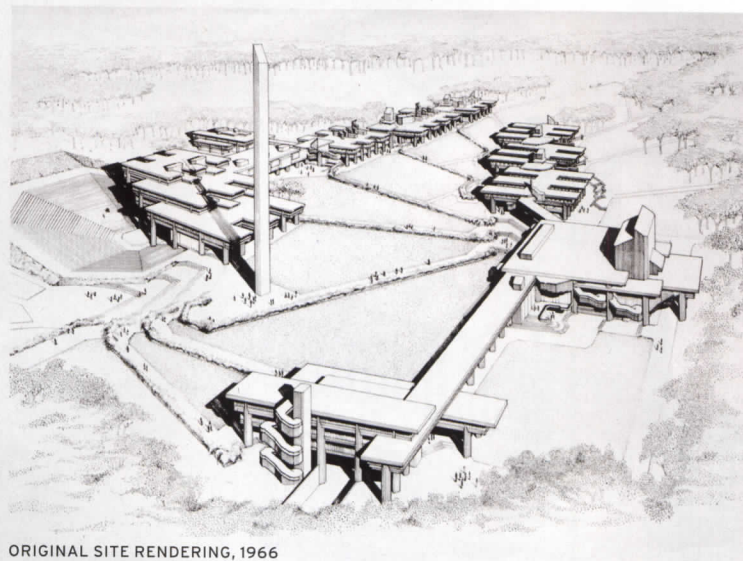
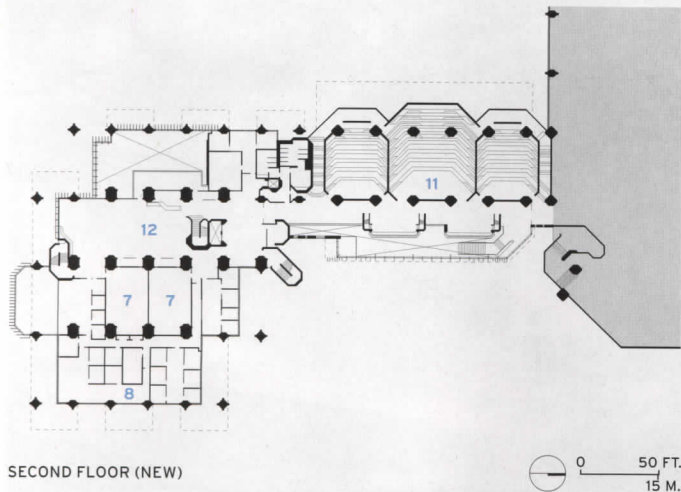
RENOVATION ADDITION ADAPTATION

HOW WE TREAT the past says a great deal about what we value. Is history a constraint that limits what architects can do? A commodity that can be tossed out in favor of something newer or bigger? Or a resource to be recycled, reconfigured, and built upon? The preservation movement that began in the United States in the mid-1960s aimed at protecting architecture of cultural or historical importance. Since then, architects have expanded their activities beyond preserving and restoring significant buildings to adapting and reinventing existing structures, sometimes taking liberties with the past that are surprising or even controversial. The projects featured in this issue range in size, context, and approach—from a small museum in Germany that combines timbers from an old barn with modern concrete construction (shown here) to a renovation of and addition to a library in Massachusetts designed by an admired but difficult 20th-century master.

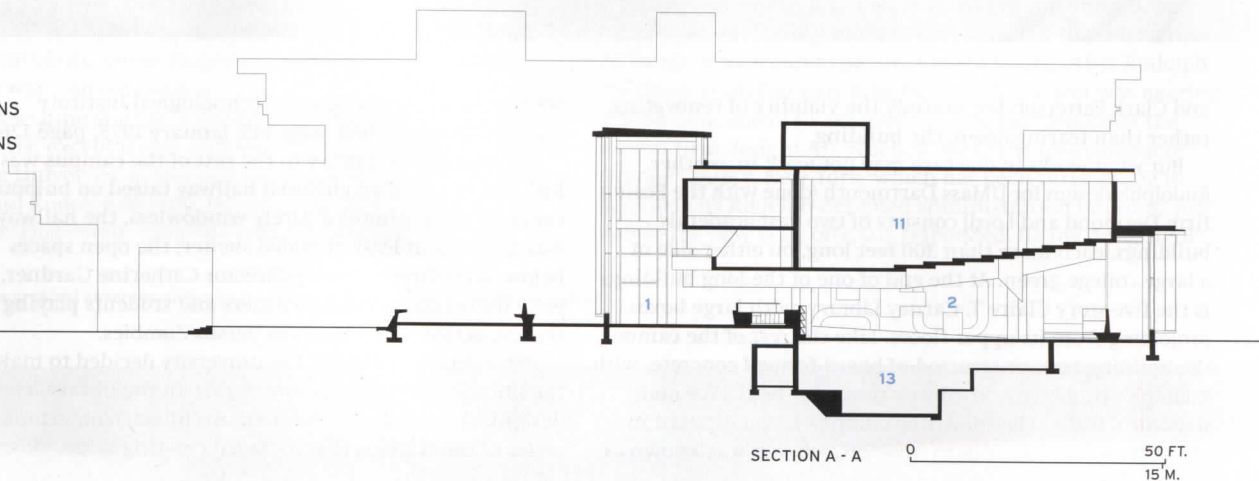
The building was constructed of board-formed concrete, with Rudolph's trademark "corduroy concrete" bricks for non-structural walls. The sprawling campus was completed in phases from the mid-'60s to mid-'70s, when it was known as

After decades of study, the university decided to renovate the library and the link more usable. In the library itself, designLAB (working with Austin Architects) undertook a series of renovations that included creating large, glass-

Claire T. Carney Library Renovation and Addition |
University of Massachusetts, Dartmouth | designLAB Architects



- 1 GALLERY
- 2 BROWSING
- 3 CIRCULATION DESK
- 4 READING ROOM
- 5 LOWER LEARNING COMMONS
- 6 UPPER LEARNING COMMONS
- 7 COMPUTER LAB
- 8 OFFICES
- 9 EXTERIOR SEATING
- 10 PASSAGE BELOW LINK
- 11 LECTURE HALLS
- 12 SCHOLARLY COMMONS
- 13 BOOK STORAGE





MAKING CONNECTIONS On the west side of the link, designLAB excavated around Rudolph's bulbous columns (right) and tucked the new facade under his projecting eaves (top). Stainless-steel screens help shade the glass addition. Above, the campus in 1985.



enclosed reading and meeting rooms from smaller, oddly proportioned spaces. That strategy necessitated removing old corduroy bricks in some places and adding new ones (made from original Rudolph molds) in other places. The changes are visible from the exterior, with some rooms extending beyond the old building line, their new windows larger and more conventionally gridded than those used by Rudolph. There is one other large change to the exterior: the installation on the roof of modern heating and cooling equipment, replacing the 53 individual fan-coil units that Rudolph secreted in closets around the building. This move essentially added a sixth floor hidden behind stainless-steel screens.

Inside the library, spaces have been reconfigured, a job that included providing ramps to create universal access—almost an oxymoron in a building that could have been designed by M.C. Escher. New lighting not only relieves the building's former gloominess but allows the richly textured concrete of ceilings and upper walls to be appreciated as never before, putting Rudolph's artistry (and that of the carpenters who built his formwork) on display. New furniture and carpets—in a palette of reds, oranges, and purples that Jennifer McGrory, associate project manager for Austin Architects, calls “op art meets Josef Albers”—was employed throughout the 150,000-square-foot renovation.

If the changes to the library itself had been the end of the project, it would be considered a success. Most of Rudolph's key features were retained, and librarian Gardner is bursting with statistics about how popular the building has become since it reopened last September. But the more visible part of the \$34.5 million UMass project involves enclosing the link

in a 24,000-square-foot “atrium” between a pair of 120-foot-long, sheer glass walls, a task just completed in January.

Downstairs, the new link serves as a large reading room and café (complete with fireplaces). Upstairs, the hallway, having had much of its corduroy-concrete enclosure removed, is now a kind of bridge overlooking the space below (as well as the entire campus, through the new 30-foot-high window wall). So, in addition to bringing students into close proximity with Rudolph's *béton brut*, it gives them sweeping views of the rest of his startling ensemble. Indeed, in and from the new atrium, Rudolph's architecture will be seen more clearly, and more comprehensively, than at any time in the last half century. But at what cost? Like the statue of Columbus,

The renovated library brings students into close proximity with Rudolph's *béton brut* and corduroy concrete.

Rudolph's work, once exterior and public, is now, for all intents and purposes, encased in a vitrine.

And the result is visible from almost everywhere on campus, since a large part of Rudolph's concrete palisade has been preempted by glass walls (which, in a wan echo of the original buildings, are shaded by vertical fins of stainless-steel mesh). Luckily, the plain new surfaces bring Rudolph's architecture into high relief—in that sense, giving Brutalism a boost. Moreover, Rudolph designed the campus as a city, and a city can absorb changes to a facade or two—

indeed, it may benefit from a bit of contrast on a repetitive streetscape. Let's just hope the university knows when to stop—that it doesn't make further alterations to Rudolph's rhapsody in gray.

The situation is different at the Orange County Government Center, which is not a campus but a single building meant to be appreciated from every direction. There an extensive renovation could make Rudolph's basic form unrecognizable. If the Orange County building is to be revamped, the work should be more like the rejuvenation of the Carney library, whose changes were incremental and in some cases invisible, and less like the wholesale transformation of the link. Even Nishi didn't lay a finger on that statue of Columbus. ■

Contributing editor Fred A. Bernstein first visited UMass Dartmouth in 2007 on a Paul Rudolph pilgrimage in New England.

INDOORS NOW

A large meeting room in the library proper (opposite) has walnut paneling and gridded windows that would probably have been anathema to Rudolph. On the west side of the link, designLAB introduced new seating and colors in a space that had been outdoors (right), while on the east side the firm created a new light-filled gallery (below).



credits

ARCHITECT: designLAB Architects – Robert Miklos, principal in charge; Ben Youtz, project manager; Kelly Ard, Sam Batchelor, Katarina Edlund, Rebecca Hutchinson, design team

ASSOCIATE ARCHITECT: Austin Architects – Jonathan Austin, principal; Jennifer McGrory, associate project manager; Russell Higgins, Tessa Reist Hathorn, design team

ENGINEERS: RSE Associates (structural); Fitzmeyer & Tocci (HVAC, plumbing); Garcia, Galuska, DeSousa (electrical); Nitsch Engineering (civil)

CONSULTANT: Wiss, Janney, Elstner Associates (building envelope)

CONSTRUCTION MANAGER: Consigli Construction

SIZE: 150,000 square feet (renovation); 24,000 square feet (addition)

COST: \$34.5 million

COMPLETION: January 2013

SOURCES

METAL PANELS: Rheinzink America

CURTAIN WALL: Oldcastle BuildingEnvelope

STOREFRONT: EFCO

ACOUSTICAL CEILINGS: Armstrong

CARPET: Lees Carpets

INTERIOR AMBIENT LIGHTING: Shaper, Louis Poulsen, Roll & Hill, New Stamp Lighting

DOWNLIGHTS: Linear Lighting, Day-O-Lite, Lightolier

Baroque Court Apartments | Ljubljana, Slovenia | OFIS Arhitekti

HEART OF GLASS

Located in the historic core of the Slovenian capital, a residential project transforms a set of buildings from the inside.

BY CLIFFORD A. PEARSON



LIKE A GOOD poker player, the Baroque Court Apartments in Slovenia's capital city show a public face that reveals almost nothing of what's going on inside. From Mestni Trg, the adjacent 16th-century town square, the three buildings that make up the new residential complex fit right in with their historic neighbors. Pastel-hued facades, projecting cornices over windows, rusticated bases, and terra-cotta roof tiles all speak the common architectural language of Baroque Ljubljana. But just as every poker player has a "tell," a subtle gesture or tic that can tip off astute rivals, the Baroque Court project lets down its centuries-old guard at one critical point: the main entry. Look closely at the opening recessed within the first of five nearly identical granite arches, and you notice the dark steel frame and minimalist hardware of a glass door



URBAN REMOVAL When OFIS started work on the project in 2007, the firm found an ad hoc set of additions filling up the center of the property (above). So the architects removed all these structures and carved out a new courtyard (top) with a garden (opposite) sitting on the roof of the ground-floor retail space. Glass wrapping around the courtyard brings daylight into all the apartments. Frits printed on the glass trace the outline of arches that used to be there, creating an intriguing layering of history (opposite).

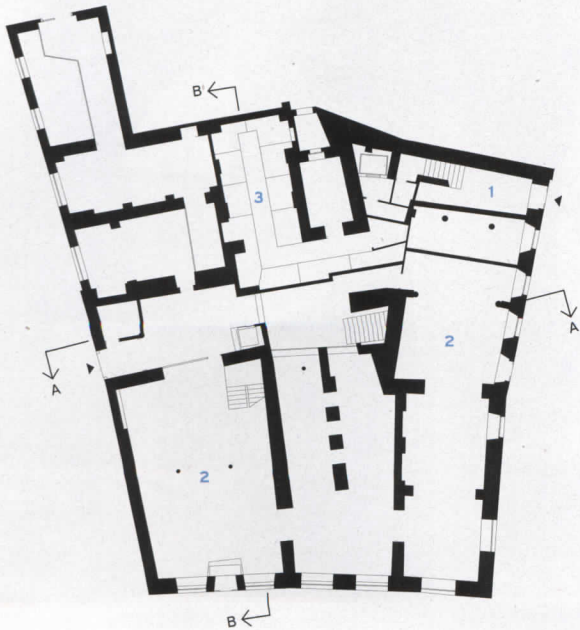
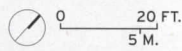




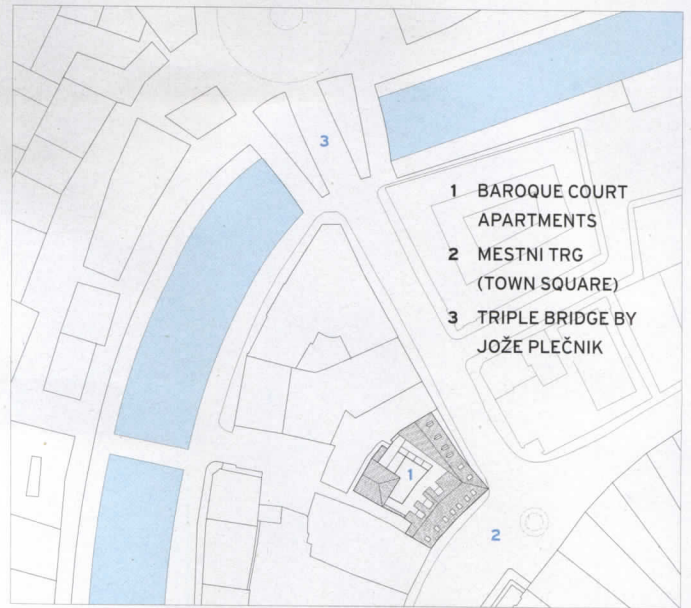
FOURTH FLOOR



SECOND FLOOR



GROUND FLOOR

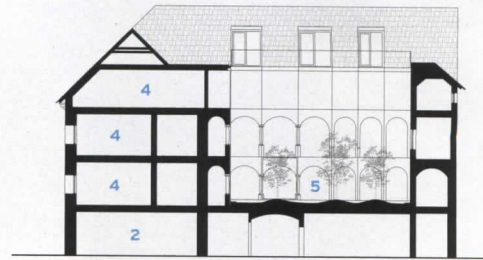


SITE PLAN

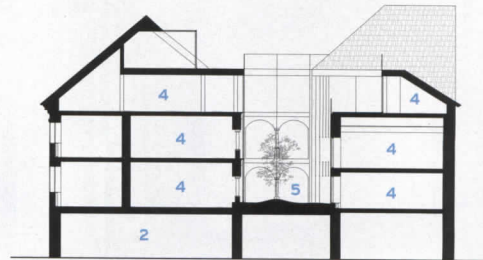


- 1 BAROQUE COURT APARTMENTS
- 2 MESTNI TRG (TOWN SQUARE)
- 3 TRIPLE BRIDGE BY JOŽE PLEČNIK

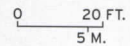
- 1 RESIDENTIAL ENTRY
- 2 RETAIL
- 3 STORAGE
- 4 APARTMENT
- 5 COURTYARD



SECTION A - A



SECTION B - B



credits

ARCHITECT: OFIS Arhitekti – Rok Oman, Špela Videčnik, partners
ENGINEERS: Elea IC (structural); ISP (mechanical); Eurolux (electrical)
CONSULTANT: Arcadia (lighting)
CLIENT: DZS
GENERAL CONTRACTOR: Timi Krsko
SIZE: 26,050 square feet
COST: \$3.26 million
COMPLETION DATE: January 2012

SOURCES

METAL-AND-GLASS CURTAIN WALL: Alufinal, Schüco
WOOD-FRAME WINDOWS: Mizarstvo Košak
GLASS: Reflex
OAK PARQUET FLOORING: Megel Inženiring
CERAMIC TILES: Marazzi



FITTING IN

The Baroque facades of the existing buildings (below) had been renovated in the 1980s, so OFIS just needed to repaint them with historically accurate colors. The architects inserted a new glass-and-steel entry door in one of the existing granite arches (left).

that hints at a different time and a modern aesthetic. Walk through that door, ascend the elegant wood stairs to the second floor, and you discover a radically different place—one where floor-to-ceiling glass and flowing white rooms bring the Baroque into the 21st century.

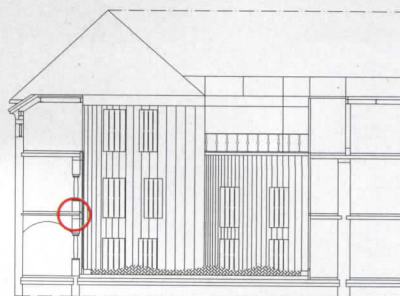
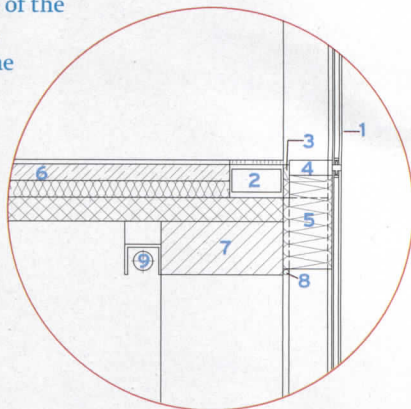
Because this project stands in the heart of historic Ljubljana, across the square from the Venetian-inspired, early-18th-century Town Hall, everything visible from the street had to pass muster with the city's heritage authorities. OFIS Arhitekti, the Ljubljana-based firm in charge of fusing old and new at Baroque Court, had made its reputation in 1998 by winning a competition to renovate and expand the



CLOSE-UP:
CURTAIN WALL

Inner Light

To bring daylight into interior spaces that had been quite dark, the architects created a four-story-high courtyard in the center of the property and wrapped it with floor-to-ceiling glass. Half the apartments look directly onto the court; the others are entered from a hallway facing it. The height of the glass panels varies, depending on ceiling heights, while the width is affected by other quirks of the old buildings. Most panels are about 10 by 6.5 feet. The varying dimensions add a syncopated rhythm to the courtyard. A film applied to the glass shows the outline of arches that had once graced the buildings. Because the frits are reflective, they help distribute light around the courtyard.



- 1 DOUBLE GLAZING
- 2 CONVECTOR
- 3 ALUMINUM SPACER
- 4 FRAME FOR CURTAIN-WALL FACADE
- 5 THERMAL INSULATION
- 6 WOOD-OVER-CONCRETE FLOOR
- 7 EXISTING WALL
- 8 CURTAIN
- 9 LIGHT



local City Museum, a project that involved adding a spiraling glass-and-steel wing onto a Renaissance palace that sits above medieval and ancient Roman ruins (RECORD, December 2001, page 86). Since that museum opened in 2004, though, the firm's partners, Rok Oman and Špela Videčnik, had been mostly busy designing dramatic new buildings, such as a pair of colorful, honeycomb-like social-housing blocks in Izola, Slovenia; a swooping soccer stadium in Maribor, Slovenia; and a graphically bold housing complex of 650 apartments in Ljubljana.

When Oman and Videčnik started working on Baroque Court in 2007, the client—a publishing company that had a bookstore on the ground floor and offices above—asked the architects to convert the complex into apartments. While the exteriors of the buildings had been renovated in the 1980s and were in fairly good shape, the interiors were a warren of dark spaces rambling over a trio of attached structures erected at different times (the oldest from the 17th century and the others from the 18th). Floor levels didn't align, and the buildings needed upgrading to meet modern seismic codes. Earthquakes are not unusual in Slovenia, and a powerful one in 1511 was the impetus for much of Ljubljana's Baroque construction in the following decades.

"The biggest challenge was getting light inside the apartments," says Videčnik. "These are old buildings, and they're pretty dark inside." Since they couldn't change the street facades, she and Oman decided to scoop out the center of the property—where an ad hoc set of additions had been built over the years—and insert a new courtyard surrounded by glass walls. Large panes that are flush on the courtyard side and supported by 6-inch-deep aluminum frames on the interior now bring plenty of daylight to the 12 residences and



REVEALING HISTORY During demolition, Oman and Videčnik found short columns and graceful arches that had been covered up by previous renovations (opposite top). The architects used these old elements as part of their design and restored the metal railing of the main stair (above). Steel columns on lower floors, added in the 19th century, were kept in apartments (above right), while new bathrooms were created (opposite bottom).

the hallways connecting them. Reflective frits on the glass trace the profile of arches that once stood there, acting as ghosts of an earlier architecture.

In the process of opening up the core of the building, the architects discovered old elements that had been hidden by earlier renovations, including squat stone columns and graceful arches facing the new courtyard. So they incorporated these features in their design, highlighting the contrasts between different eras. They also found steel columns added in the 19th century when some interior partitions were removed to create large spaces for shops on the lower two floors. In an ecumenical spirit, Oman and Videčnik kept these exposed as well. To add seismic resilience to the existing structure, the architects injected concrete into old walls. They also needed to erect new steel framing for the rebuilt roof, which now supports wood-clad decks and balconies for duplex apartments at the top of the building. Although the roof's structure is new, heritage authorities required that it be covered with terra-cotta tiles and maintain the old, irregular profile.

Establishing the right balance between old and modern was at the heart of this project and required a pragmatic

approach to materials, interiors, and services. So Oman and Videčnik restored the main stair's iron railing but installed new oak treads and risers and added an elevator. They surfaced floors in common areas with a cream-colored marble that seems both contemporary and timeless. In the apartments, they laid new wood floors but used a herringbone pattern that is often found in old residential buildings in Ljubljana. The project's apartments (four on each floor) range in size from about 1,200 to 2,400 square feet, and half of them have windows facing both a street and the courtyard. Because of the quirks of the existing buildings, each apartment is different. While white paint and large flowing spaces unify the interiors, idiosyncratic elements such as steps negotiating the differences in floor levels among the original buildings, and wall niches and moldings found in the existing rooms, give each apartment its own identity.

A block away, Jože Plečnik—Ljubljana's most famous architect—adapted and updated the city's oldest stone bridge in 1932 by sandwiching it between a pair of new pedestrian bridges. Baroque Court takes a similarly fearless approach to history, using distinctly modern moves to gracefully span different periods. ■

Design Republic Commune | Shanghai | Neri&Hu Design and Research Office

RETAIL THERAPY

Layers of the past add resonance to new interiors as a Shanghai firm transforms an old police station into a high-end design center.

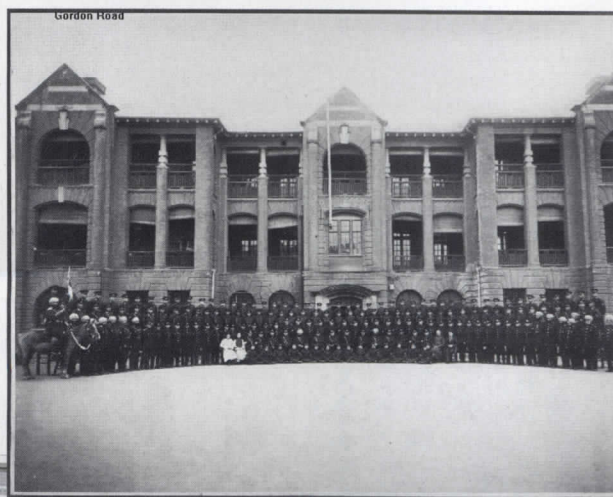
BY CLARE JACOBSON



WHILE GLITTERING new high-rises sprout everywhere in Shanghai, gems of Western-style architecture from the early 20th century can still be found throughout the city. Or at least their facades remain; their interiors are another story. “China is very good at keeping historical things in a superficial way,” explains Lyndon Neri, partner at Shanghai-based Neri&Hu Design and Research Office (NHDRO). “People want to see prominent buildings that hearken back to the city’s Concession era”—the time during the 19th and 20th centuries when foreign powers such as Britain and France administered entire districts. “But there’s no semblance of that history inside.”

In November, NHDRO finished converting a former police building in Shanghai’s central Jing’an district into a flagship store for Design Republic, the six-year-old retail venture that Neri and Rossana Hu, his wife and partner, founded to sell high design to an emerging Chinese middle class. Called Design Republic Commune, the project serves as an outlet for furniture and other products by both foreign and Chinese designers, including Neri and Hu themselves. NHDRO wanted to make a deeper connection to history here than is typical in Chinese renovation efforts. The original three-story edifice was constructed by the British in the 1910s. Over the course of its life, it served in a number of different capacities, most recently as an elementary school. Each alteration retained the Anglo-inspired facade and the basic floor plan. But after the school was abandoned about three years ago, more than one developer proposed gutting the interior and constructing a high-

COLONIAL PAST The old police station (below) was built by the British in the second decade of the 20th century, then was used in a number of different capacities until it became an elementary school. Neri&Hu cleaned up and preserved the original brick exterior (bottom), while installing new glass and dramatically reconfiguring the interiors. The architects set up a series of sharp contrasts inside between clean new surfaces and decaying old ones (opposite), creating a sly commentary on the passage of time and the role of architecture in capturing it.



STREET PRESENCE

Although city officials wanted NHDRO to remove an addition built illegally years ago (below), the architects convinced them it was OK to keep the old columns, wrapped with tall panels of glass, to create new retail space (right).



rise residential tower within the century-old red-brick shell.

As envisioned by Neri&Hu, Design Republic Commune is more than just a face-lift. After cleaning, repointing, and adding structural support to the exterior brickwork, the firm integrated old and new inside the building. Wood lath peeping through a plaster wall was kept as is. A variety of doors and hand-painted signs that were installed during different incarnations were retained too. The architects encased some sections of old walls behind glass like exhibitions in a museum of eroded materials. While the majority of the interior spaces look like white boxes inside a frame of exposed-brick walls, old details and finishes seep through—creating an intriguing layering of novelty and memory.

Exposing decayed materials in renovation work is nothing new. At the Majestic Theater (now the BAM Harvey Theater) in Brooklyn in 1987, Hugh Hardy used a century of paint layers and crumbling walls as key components of his design. But in Shanghai—where re-creation is often valued as highly as renovation—NHDRO is a pioneer in this approach. The

designers previously applied it to the Waterhouse at South Bund, a 1930s Japanese Army headquarters converted into a successful boutique hotel and restaurant.

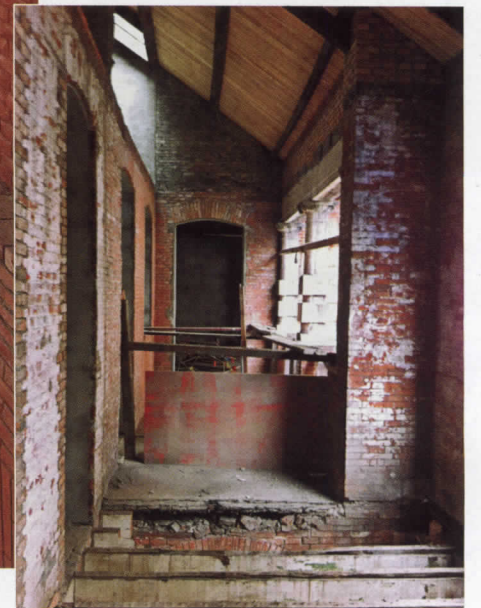
The old police station's rotting floorboards and other unrecoverable materials prevented a strict renovation there, as did a dearth of documentation on the original structure. But in any event, the firm was more interested in reinventing the building, since its interiors had been altered so much over the years. In addition to accommodating retail functions, the reconfigured venue works as a “commune”—a design center that Neri&Hu describes as “a gathering place for designers and design patrons alike to admire, ponder, exchange, learn, and consume.” It includes retail areas, a flower shop, a restaurant, an outdoor terrace, a gallery/event area, and a one-bedroom apartment that Neri plans to use as either a hotel room or a guesthouse. A tiny satellite office for NHDRO occupies an attic space.

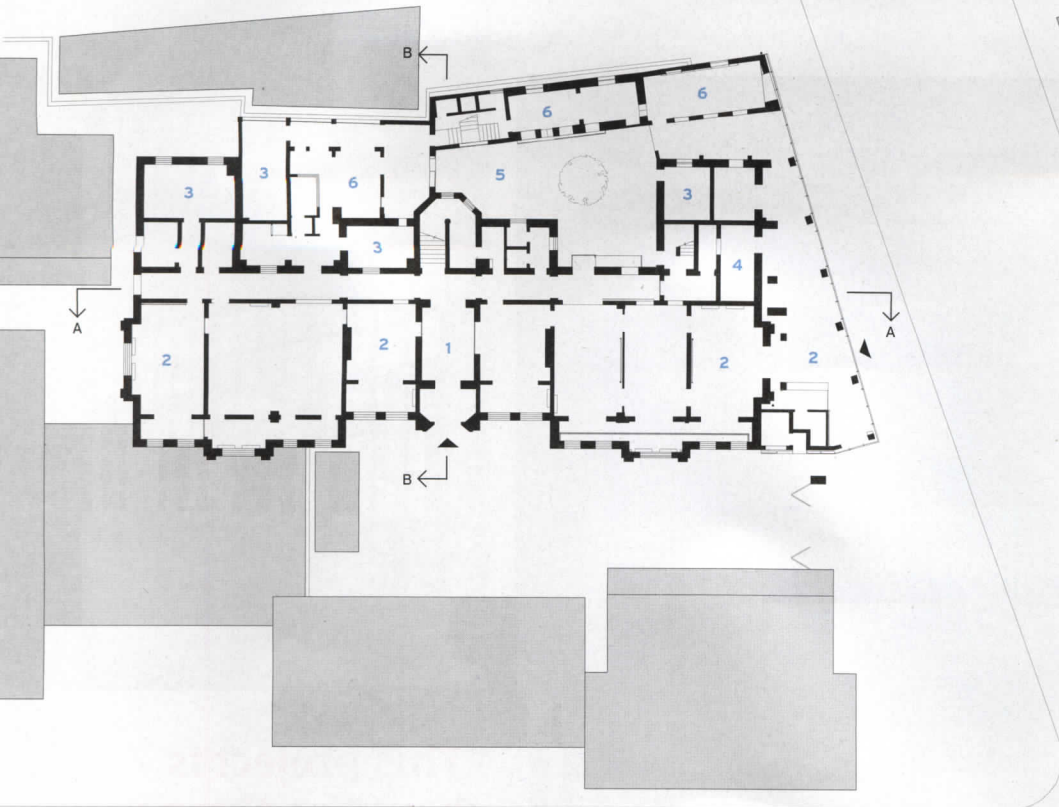
To accommodate this unusual variety of uses, NHDRO opened up the old building with some strategic cuts. “This

BRIDGING ERAS
Opposite: The architects carved out a multistory space for a corridor (near right) from cramped existing areas (far right, bottom) but kept some old elements such as doors and signage (far right, top).



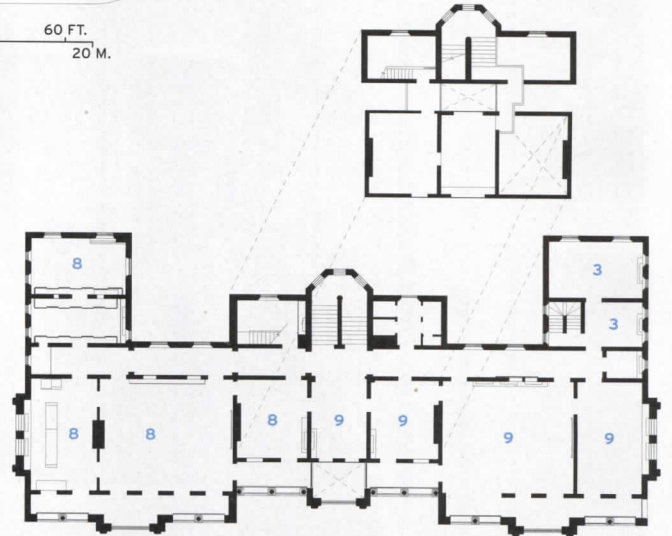
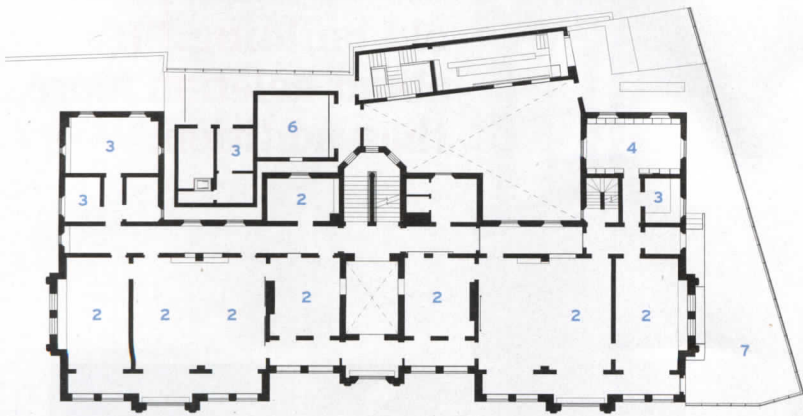
“This project is about the absence of things,” says Neri of cuts made in the old building. “It’s about deletion more than addition.”



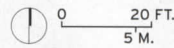


- 1 LOBBY
- 2 RETAIL
- 3 BACK OF HOUSE
- 4 OFFICE
- 5 COURTYARD
- 6 RESTAURANT
- 7 TERRACE
- 8 DESIGN REPUBLIC APARTMENT
- 9 GALLERY/EVENT SPACE

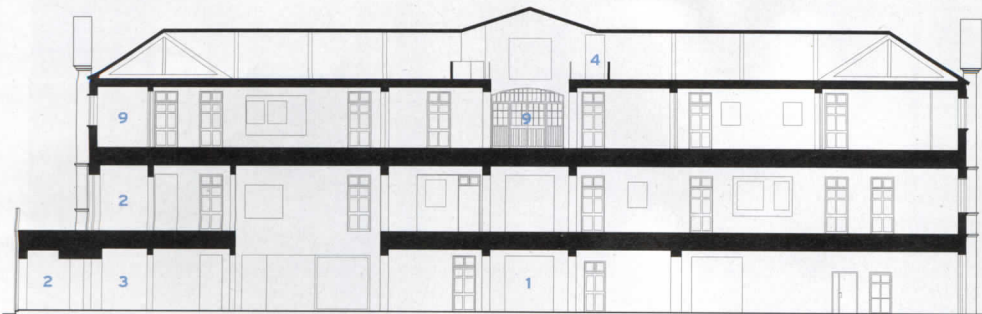
FIRST FLOOR



SECOND FLOOR



THIRD FLOOR



SECTION A - A



SECTION B - B



project is about the absence of things," says Neri. "It's about deletion more than addition." So his team removed walls from previous renovations to expose the hidden halves of decorative facade columns, and cut doorways between rooms to allow visual and physical connections. Neri says that if it had been up to the retail managers, "they would have blown the whole space wide open." But because it retains individual rooms, the layout works like a museum; visitors see "artwork" by Moooi and Tom Dixon as they tour from one "gallery" to the next. NHDRO had wanted to take out all the floors in a corridor that separates the main facade from a series of boxy rooms inside. When this approach proved cost-prohibitive, the firm removed only portions of the floor at the building's entrances to create a set of dramatic double-height spaces. This allows views from one



SPATIAL GAMES

By cutting away parts of old floors, Neri&Hu was able to create large interior volumes that help organize showrooms and other spaces around them (above). And by restoring old doors and other openings (left), the firm maintained connections to the past without being nostalgic.



floor into showrooms above it, and vice versa.

The most significant addition—a single-story glass-enclosed space on the street side—is both new and “renovated.” To create this element, the designers replaced four shop fronts that had been added to the historic building many years before. At first the government rejected the plan, since the old shops had not been constructed legally, and building in their footprint would also be illegal. But NHDRO convinced the authorities that by retaining columns that stood in the shops, they were merely completing a renovation. The transparency of the addition allows the original brick facade to be seen from the street.

NHDRO’s work in Jing’an is very different from that at another Design Republic outlet, which opened in September

in Qingpu, at the western edge of Shanghai. For that project, the firm wrapped a concrete building in a bold floral-print facade. Neri claims that Design Republic Commune is a continuation of ideas first applied at the Waterhouse. In both projects, the architects recognize the value of Shanghai’s old foreign building stock and contrast it with the best in contemporary design. Such a strategy echoes the recent development of Shanghai itself, as the city tries to balance its remaining architectural treasures from a century ago with the innovative skyscrapers that have become its new image. ■

*Clare Jacobson is a Shanghai-based design writer and editor whose book *New Museums in China* will be published this fall.*

FLUID DYNAMICS
While the architects created a number of flowing spaces, they also kept the notion of a series of rooms and a procession through them (above). Neri says he wanted people to move through the building as if through a museum, viewing “artworks” along the way (opposite).



credits

ARCHITECT: Neri&Hu Design and Research Office – Lyndon Neri, Rossana Hu, partners; Cai Chun Yan, associate in charge; Wang Yan, Fu Ying, Guo Peng, Peter Eland, Jonas Hultman, Markus Stoecklein, Christina Cho, Jeongyon Mimi Kim, Ella Ye Lu, Federico Saralvo, Zhao Lei, Xiao Lei, Darcy Tang, design team

CLIENT: Shanghai Jinggong (Group)

GENERAL CONTRACTOR: Shanghai Jing'an Construction

SIZE: 25,800 square feet

COST: withheld

COMPLETION: November 2012

SOURCES

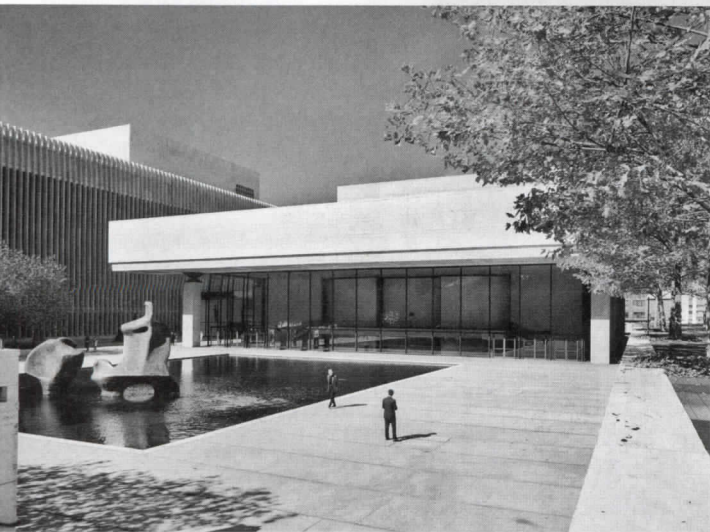
MOISTURE BARRIER: Laticrete

OAK FLOORING: Imondi

LIGHTING CONTROLS: Schneider

CARPETS: Nanimarquina

KITCHEN: Bulthaup



Lincoln Center Theater LCT3 | New York City
H3 Hardy Collaboration Architecture

SUBTLE SOLILOQUY

Hugh Hardy's addition atop
Eero Saarinen's Vivian Beaumont
Theater provides a sleekly
tailored coda to the complex.

BY SUZANNE STEPHENS



JUDGING BY Diller Scofidio + Renfro's splashy renovations of and additions to New York's Lincoln Center in recent years, it's surprising that Hugh Hardy and his firm, H3 Hardy Collaboration Architecture, would have added something so discreet to the arts complex. Furthermore, Hardy's sleekly tailored two-story LCT3, which sits atop the existing Vivian Beaumont and Mitzi Newhouse theaters, counters the image of the architect who indelibly forged his career in the 1960s with skewed geometries and brightly colored exposed mechanical ducts. Sure, it's been a while since he founded his own firm in 1962—which became Hardy Holzman Pfeiffer

LIGHT BOX H3's two-story theater (above) sits on top of the existing Beaumont building (above left) in the northwest corner of Lincoln Center. From the upper lobby and terrace, visitors can see the sloping grass-roofed Lincoln restaurant designed by Diller Scofidio + Renfro (2010).



in 1967 and then H3 in 2004. Yet the pop pizzazz that Hardy brought from the start to school, museum, and theater commissions (such as the Playhouse in the Park in Cincinnati, 1968, and the Mt. Healthy School in Columbus, Indiana, 1972) figured prominently in the generational shift away from monotonous corporate Modernism.

When asked about his new sedate structure of steel trusses, H-profile columns, and aluminum sunscreens atop the 1965 building that Eero Saarinen designed to house the Beaumont and Newhouse theaters, Hardy replies, "There is no need to show off." His deference to Saarinen dates to

Hardy's days before he started his own office. Hardy, who got his B.Arch. (1954) and M.F.A. (1956) at Princeton, had initially been drawn to creating stage sets and worked for the legendary theater designer Jo Mielziner from 1958 to 1962. His timing proved propitious, since Mielziner was collaborating then with Saarinen on the Beaumont. Meeting Saarinen turned Hardy to architecture for good. As Hardy puts it in his forthcoming book *Theater of Architecture* (Princeton Architectural Press), the exposure to the rational but unconventional Finn convinced him that "architecture, not theater, would be my future." Actually, his future would

include the architecture of theaters, if not set design. In 2009, when André Bishop, LCT's artistic director, and Bernard Gersten, the executive producer, decided they needed a small, simple black-box performance space to bring younger audiences to see experimental low-budget productions in this established venue, they turned to Hardy. After looking into several options, H3 proposed adding on top of Saarinen's building.

Saarinen's original parti for the 1,060-seat Beaumont theater and the 299-seat Newhouse space tucked into the basement had been complicated by its interlocking relationship with the adjoining New York Public Library and Museum of Performing Arts, designed in 1965 by Gordon

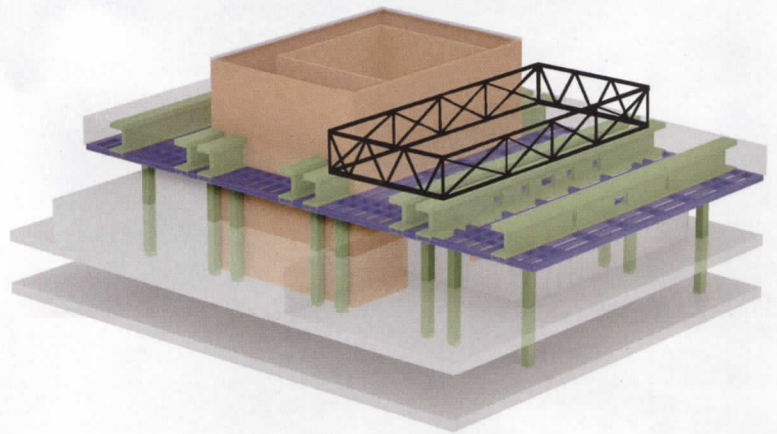
Hardy recalls that meeting Saarinen turned him to architecture for good.

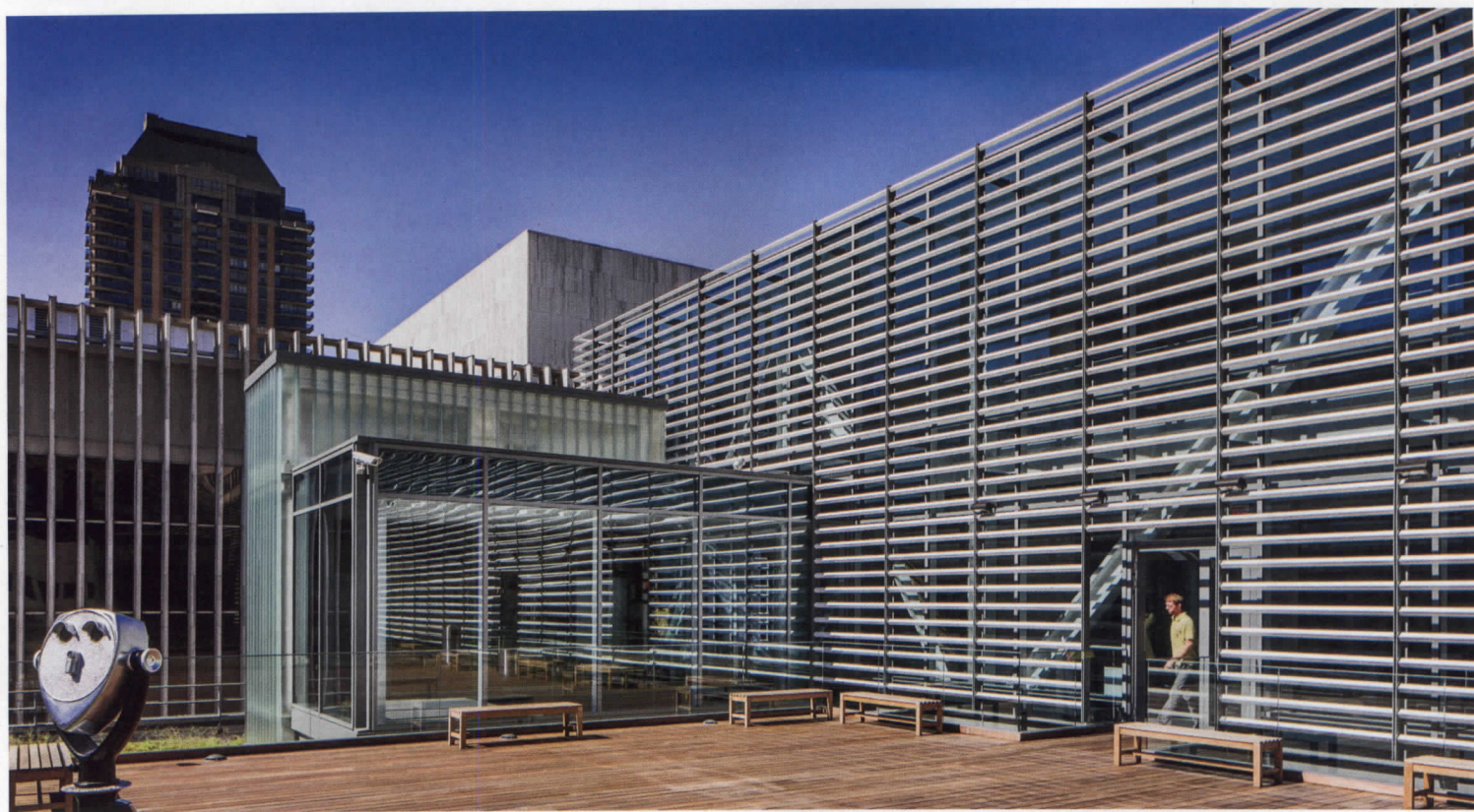
Bunshaft of Skidmore, Owings & Merrill. While the library has its own entrance pavilion on the south between the Metropolitan Opera House and the theater, the Beaumont's travertine-clad attic conceals the library's book stacks and reading rooms, placed in a square doughnut wrapping around the stage house. Bunshaft's insistence that the Beaumont's concrete columns at the base be few but stalwart disgruntled Saarinen, yet generated a commanding bridge-like structural solution. Massive concrete girders, 18 feet high with an I-beam profile, stretch across the Beaumont for

CLOSE-UP: STRUCTURE

Span on Span

The structural engineer, Severud Associates, called for two 30-foot-deep, wide-flange longitudinal steel trusses spanning 175 feet for the two-story, rectilinear LCT3 theater. The bridgelike structure, fabricated off-site, matches the span of the existing 18-foot-high, concrete I-shaped girders running across the original Beaumont theater. On the short ends, the trusses are 75 feet long to resist lateral forces, aided by a third long truss. As Severud's Alvaro Castaño notes, the engineers also reinforced the older girders' web walls above the existing columns to handle loads from the new structure.





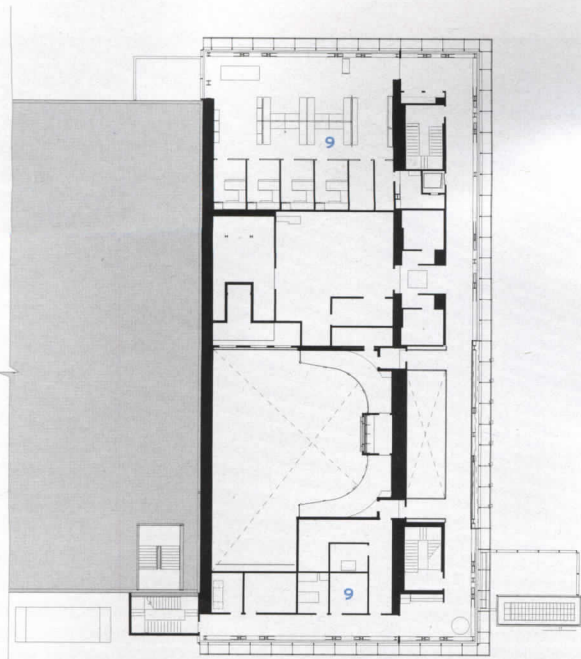
PATTERNS An aluminum sunscreen of square tubes rotated at 45 degrees shields the café and public spaces of the elevated theater from the sun (opposite and above). The channel-glass elevator shaft behind the glazed lobby was inserted in the Beaumont by removing coffers from the existing concrete deck of the ceiling structure in the building's south side (right). The terrace adjoining the café has an ipe-wood floor.

a 175-foot span. Decades later, Hardy and structural engineer Severud Associates would place another long-span steel-truss structure on top to contain a 23,000-square-foot, 112-seat theater. In so doing, H3 pulled the new rectilinear addition 58 feet back from the Beaumont's roof edge both to create an outdoor terrace off the LCT3 lobby and to mitigate the perceived mass of the new 32-foot-high structure when seen from Lincoln Center's north plaza in front of the Beaumont building. "We wanted the steel trusses of the box to have their own identity, yet complement Saarinen's travertine-marble-clad attic sitting on a glass void," H3 partner Ariel Fausto explains. "That structural conversation is important."

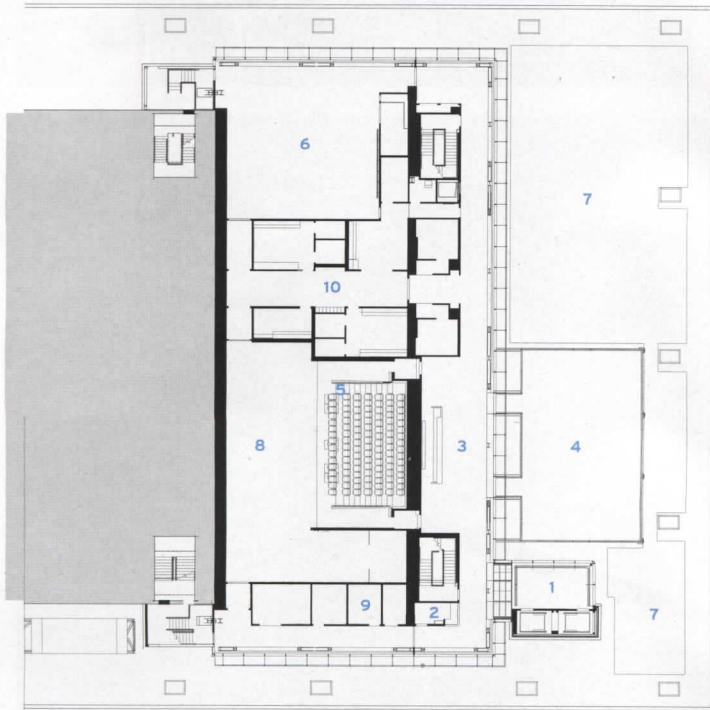
To lessen the glare on the addition's glazed walls, the architects designed an aluminum screen of square tubes turned at a 45-degree angle. During the day the screen filters light, and at night it becomes a diaphanous veil. The large existing concrete columns allowed H3 to insert two elevator cabs housed in a shaft of channel glass on the south side of the building. All the firm needed to do was to remove three coffers from the concrete deck in the Beaumont's ceiling structure.

Upon arriving at the new upper lobby for the black-box performance space (called the Claire Tow Theater), visitors find a café, which opens onto the terrace. Inside, the





LEVEL TWO



LEVEL ONE



- | | |
|-------------------|--------------|
| 1 ELEVATOR LOBBY | 6 REHEARSAL |
| 2 BOX OFFICE | 7 GREEN ROOF |
| 3 CAFÉ | 8 STAGE |
| 4 TERRACE | 9 OFFICE |
| 5 THEATER SEATING | 10 BACKSTAGE |

theater's fixed seats are upholstered in red, giving the space, with its exposed ceiling, a dramatic punch. The glazed-bar building also contains both a rehearsal room and, above it, administrative offices on the north end.

Preservationists feared that Hardy's addition would mar the quiet monumentality of the Saarinen theater. They needn't have worried. As it turns out, Saarinen's late work is served well by this subtle expansion. It may seem ironic that Hardy would return to a purer Miesian Modernism for this theater, since he had been intent at one time on scrappily playing with the style. But this project proved a wise regeneration for the Beaumont building and for Saarinen's contribution. As Hardy says, "The logic of what we did comes from what he did." ■

credits

ARCHITECT: H3 Hardy
 Collaboration Architecture -
 Hugh Hardy, founding partner;
 Ariel Fausto, partner; Mercedes
 Armillas, associate

ENGINEERS: Severud Associates
 (structural); Arup (m/e/p/fp)

CONSULTANTS: Fisher Marantz
 Stone (lighting); JaffeHolden
 Associates (theater)

CLIENT: Lincoln Center Theater

GENERAL CONTRACTOR:
 Yorke Construction

SIZE: 23,000 square feet

COST: \$42 million
COMPLETION DATE: June 2012

SOURCES

METAL/GLASS CURTAIN WALL:
 Schüco

BUILT-UP ROOFING:
 Johns Manville

CHANNEL GLASS: Bendheim
 Wall Systems

PAINTS AND STAINS:
 Benjamin Moore

FIXED THEATER SEATING:
 Theater Solutions

FULL EXPOSURE

Next to the black-box Claire Tow Theater (right) is a 1,950-square-foot rehearsal space (opposite), which receives ample daylight from the north window wall. A café (below) extends from the ticket office across the front of the building. The café's cutaway soffit allows daylight to filter down through the space, where a mobile by Kiki Smith hangs.



Boulevard Brewing Company Cellar 1 Expansion | Kansas City, Missouri | El Dorado

TOP OF THE HOPS

A Kansas City design-build team creates a sensitively crafted display case for new high-capacity tanks at a hometown brewery. **BY ASAD SYRKETT**



ON VIEW From the roads beyond the factory, drivers get a view of fermentation tanks through a perforated-aluminum screen that ranges in transparency from 23 to 40 percent (right and below).



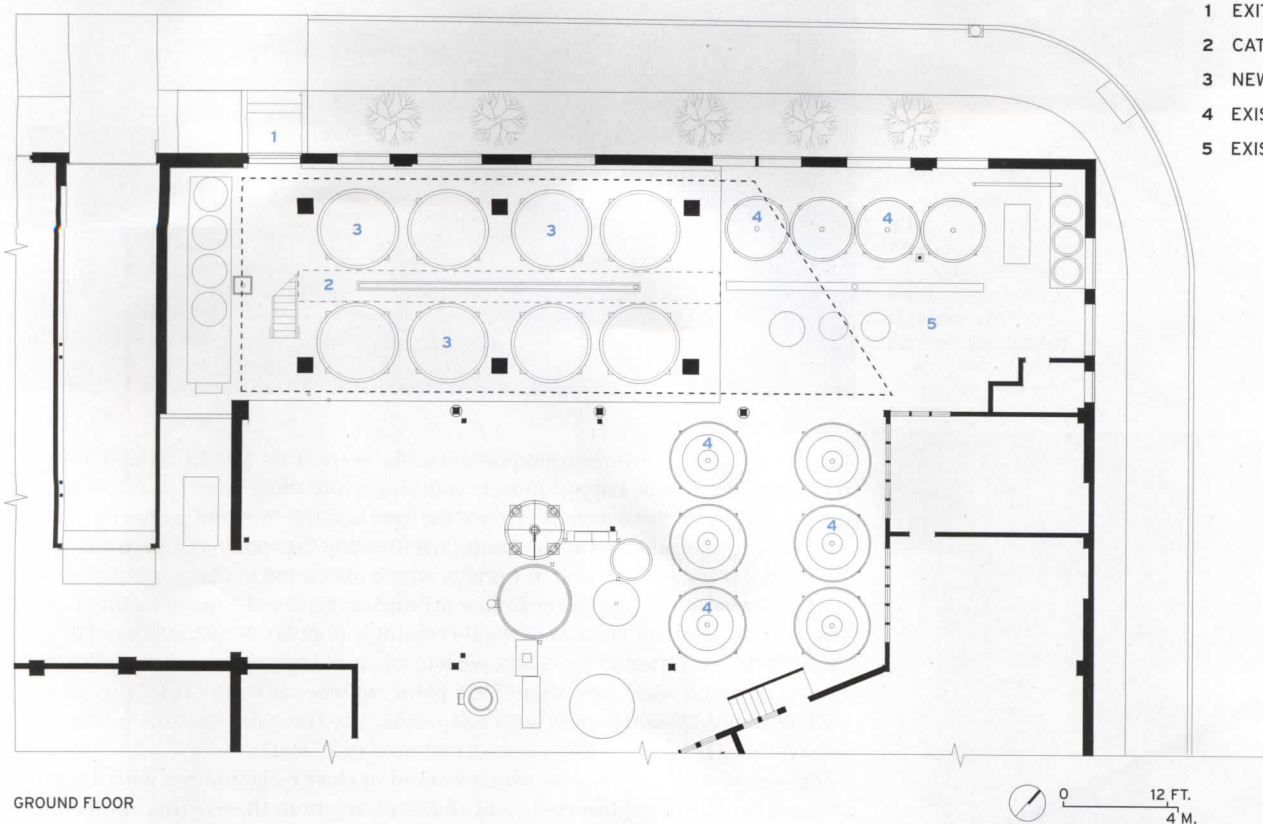
“BEER,” BENJAMIN Franklin supposedly said, “is constant proof that God loves us and wants us to be happy.” In fact, Franklin wrote those words about wine, not ale and lager. But a deep reverence for beer and the brewing process is evident in a finely tuned addition at the Boulevard Brewing Company in Kansas City, Missouri. Led by architects at El Dorado, which also acted as the general contractor, the brewery’s Cellar 1 went from a utilitarian 1920s-era storage facility to a sleek, modern vitrine for vats of the increasingly popular Boulevard brand of brew. “When I started 15 years ago, we had 20 employees and made about 20,000 barrels of beer a year,” says Mike Utz, a plant engineer at Boulevard. “This year we’ll do about 175,000 barrels with 100 people. The company has grown like crazy.” Today the company’s beer is distributed in 25 states.

Boulevard hired El Dorado—which worked in close collaboration with a team of the client’s own engineers—to add 28 feet of height to the existing 17-foot-tall “cellar.” The goal was to accommodate a production increase and provide access to new, much taller fermentation tanks, which employees access via hatchlike openings at the top of each one. The original masonry building housed tanks with a capacity less than half that of the new tanks, which, at 40 feet tall, hold up to 300 barrels of beer.

The expansion, a glass-and-steel top hat on the original early-20th-century building, also provides a comfortable work environment for the employees, explains Dali Grabar, Boulevard’s engineering project manager. A corrugated, perforated-aluminum screen that hugs the structure’s northwestern and southwestern facades passively maintains a temperate interior climate, preventing spikes in indoor temperature by reducing solar heat gain. “This summer we had temperatures up to 106 degrees, and I don’t think we ever went above 82 degrees in the building,” says Grabar. “Considering how much glass and daylight we have, I think it’s amazing.”

The addition’s elegance gives no hint of a construction period full of technical and logistical acrobatics. “The brewery had to remain operational while we did this,” says El Dorado principal Josh Shelton, describing a process that involved excavating earth to make way for a new 3-foot-deep mat-slab. While El Dorado retained Cellar 1’s original floors and masonry walls, the team erected a steel moment frame inside the preexisting structure to support a steel-grate catwalk for access to the top of each tank. “And Boulevard was installing all this piping while the glaziers were out there installing glass,” Shelton adds. “Because we were working in an old space, our project manager, Chris Burk, had to really figure out the quirks of the existing building: all the slopes of the floors, what was parallel, what wasn’t. Chris was crawling around all the tanks and pipes before we even started.”

On a recent visit, any sign of the former tangle has been replaced by a general sense of order. Two neat rows of four stainless-steel tanks run the length of the building, and the low hum of machines at work fills the air. The new cellar’s high ceilings, columnlike tanks, and delicate light create a space that feels more like a Gothic cathedral than a factory. It’s all fitting for America’s favorite alcoholic beverage, Franklin-endorsed or not. ■



GROUND FLOOR

credits

ARCHITECT: El Dorado – Josh Shelton, principal in charge; Chris Burk, project manager; Steve Salzer, envelope design

ENGINEERS: Genesis Structures (structural); PKMR (m/e/p)

CONSULTANTS: Derek Porter Studio (lighting); A2MG (glazing and aluminum skin)

CLIENT: Boulevard Brewing Company

GENERAL CONTRACTOR: El Dorado

SIZE: 2,000 square feet

COST: withheld

COMPLETION DATE: July 2012

SOURCES

GLASS CURTAIN WALL: EFCO

RAINSCREEN: Centria

MOISTURE BARRIER: Firestone

ROOFING: Firestone

DOORS: Mesker Door (metal doors)

HARDWARE: Ingersoll Rand (locksets, exit devices); LCN (closers)

INTERIOR FINISHES: Sherwin-Williams (paints and stains); Firestone (stainless-steel paneling)

LIGHTING: Cooper Lighting (interior ambient lighting); WattStopper (dimming system)



ON TAP. Workers can sample beer via spigots at the tapered base of each tank (left). Each 40-foot-tall tank has a 300-barrel capacity, and is accessed by way of a staircase on the southeast wall (right) that leads up to a steel-grate catwalk. Employees can then add anti-clouding agents and other ingredients to each vat.



TAN
3001

K 6
BBL

CLUSTIC
H 1

REC...
ER

Avenue Building Renovation | Winnipeg, Manitoba | 5468796 Architecture

THE BOX OUTSIDE

A revamped commercial building brings drama to a frequently frozen city's main street.

BY WILLIAM HANLEY



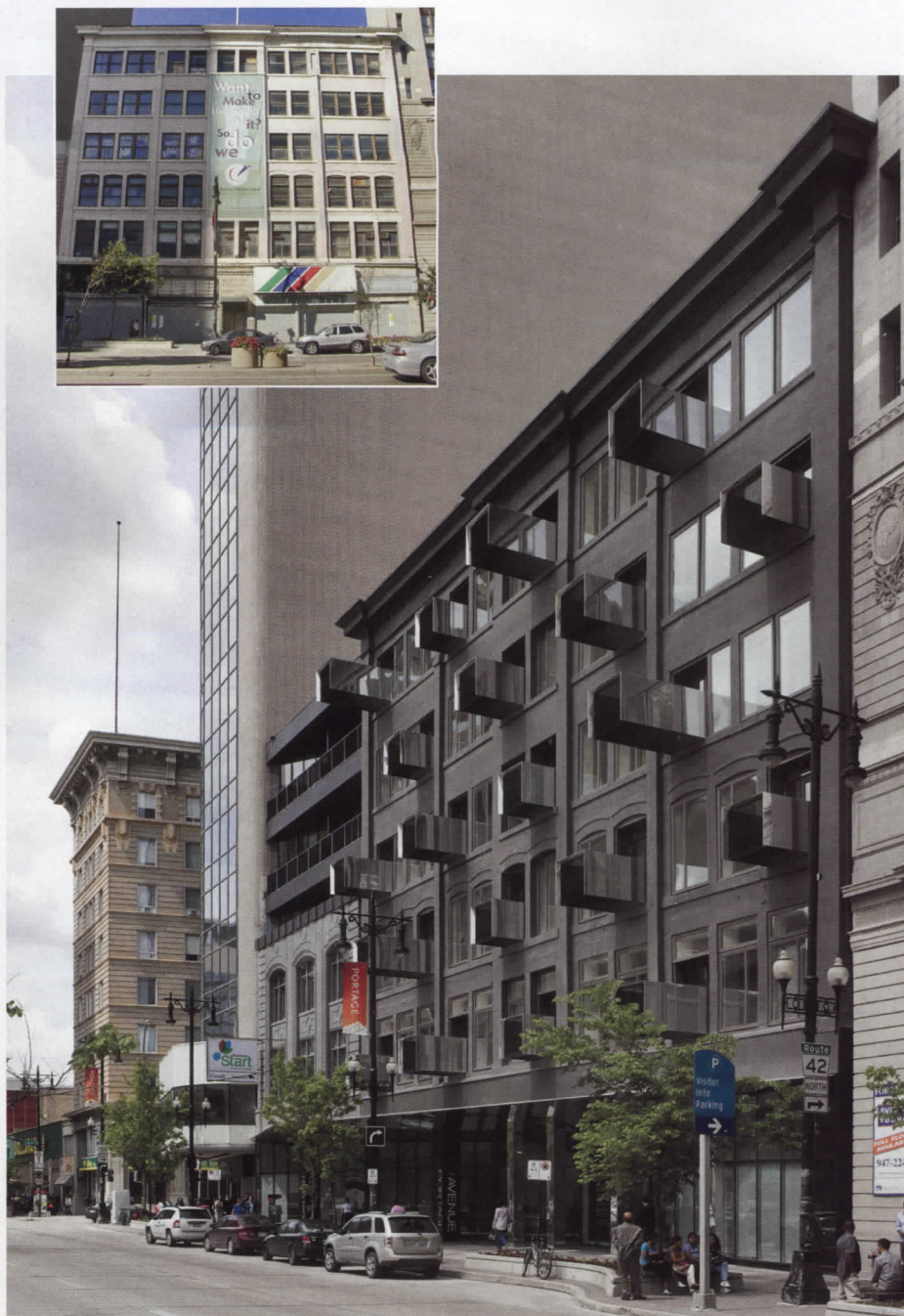
ON THE MAIN thoroughfare through the commercial district of Winnipeg, Manitoba, a series of metal boxes protrudes from the 1904 facade of the Avenue Building like a cluster of Donald Judd sculptures bursting from the windows. Shimmering in the purple-gray light and ambient snow of the winter sky, the mirrored rectangles set the building apart from the Neoclassical facades and modern corporate buildings that line Portage Avenue. "It was important in our context for the architecture to have a presence on the street," says Johanna Hurme, a principal of 5468796 Architecture, the young firm with a difficult-to-remember name that converted the former office building. "We had to show that there is a new act for the old body."

The six-story, timber-and-steel-framed Avenue Building housed offices above street-level retail space for much of its life. But suburbanized Winnipeg has long had a surplus of downtown commercial space, and after its last occupants moved out, the building sat abandoned and blighted for nearly 16 years. The city took steps to clean up the pigeon-infested edifice several years ago, but was unable to find a buyer until Mark and Rick Hofer came along.

The brothers bought the property and came up with a plan to turn the Avenue and its smaller three-story neighbor, built in 1906, into rental apartments, relying on a short timeline, a tight budget, and a cavalier attitude to make the venture profitable. "They're cowboys," says 5468796 architect Zach Pauls. The firm (featured in *RECORD's* Design Vanguard, December 2011, page 68) had recently worked with the duo to convert a century-old warehouse into a residential building, and the developers hired them again for the Avenue project with Rick Hofer's building company serving as contractor. In just under two years, the architects navigated emergent challenges and made on-the-fly design changes to transform the derelict buildings into an in-demand residential address and a signifier of a rejuvenated neighborhood.

Twenty of the project's 75 units have the prominent metal balconies, which extend 5 to 9 feet beyond the larger building's south elevation. The firm preserved the original masonry facade and window dimensions, mounting the balconies on posts attached to the existing floor. The steel-framed boxes get additional support from cross braces on each of their long sides, which the firm hid under mirror-polished, 1.8-inch-thick aluminum cladding. "We did studies with loud colors and different finishes," says project architect Colin Neufeld. "But in the end, we went with something quieter that still has a strong presence." The architects used steel grating for the balcony floors to prevent snow accumulation, which creates slightly vertiginous views down to the street.

The apartment interiors suffer from the owner also serving as the contractor. While the designers planned the units, taking advantage of the building's high ceilings to make the 430- to 1,020-square-foot layouts feel spacious, the clients finished the spaces with clunky materials and tacky Pop colors that give the interiors the down-market look of student



POLISHED PERCHES

The Avenue Building's aluminum-covered balconies (this page and opposite) connect residents to Portage Avenue street life while providing an up-close view of the project's historic 1904 facade (shown before renovation, inset).

credits

ARCHITECT: 5468796 Architecture – Johanna Hurme and Sasa Radulovic, principals; Colin Neufeld, project architect; Zach Pauls, architect

ENGINEERS: Lavergne Draward & Associates (structural); G.D. Stasyneć & Associates (mechanical); Nova 3 Engineering (electrical)

CLIENT: EdgeCorp Group (Mark and Rick Hofer)

GENERAL CONTRACTOR: Hofer Construction

SIZE: 73,000 square feet

COST: \$12.7 million

COMPLETION DATE: July 2012

SOURCES

MIRROR-FINISHED ALUMINUM: Central Prairie Products

CURTAIN WALL: Alumaticor

METAL PANELS: Vicwest

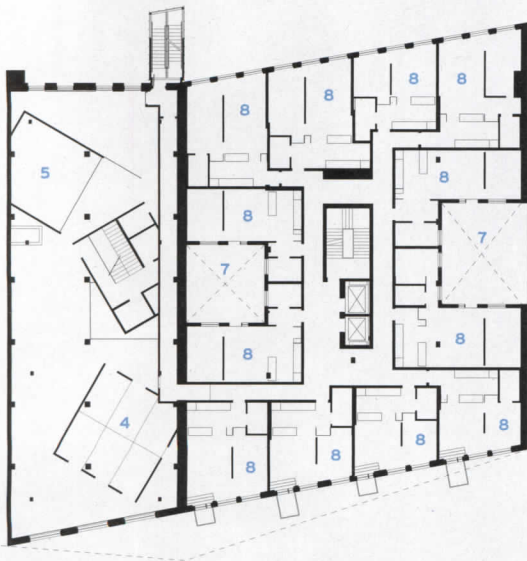
WINDOWS: Jeld-Wen

CARPET: Interface Carpet Tile

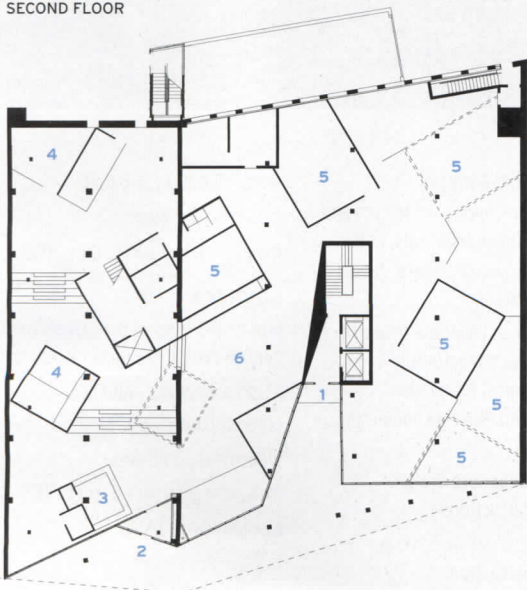
ELEVATORS: Kone



TYPICAL UPPER FLOOR



SECOND FLOOR



FIRST FLOOR

- 1 RESIDENTIAL ENTRY
- 2 COMMERCIAL ENTRY
- 3 RECEPTION
- 4 OFFICE
- 5 CLASSROOM
- 6 LOUNGE
- 7 LIGHT WELL
- 8 APARTMENT



apartments. “You have to pick your battles,” says Hurme. “What mattered most to us was the public face and maximizing the small space of the units.”

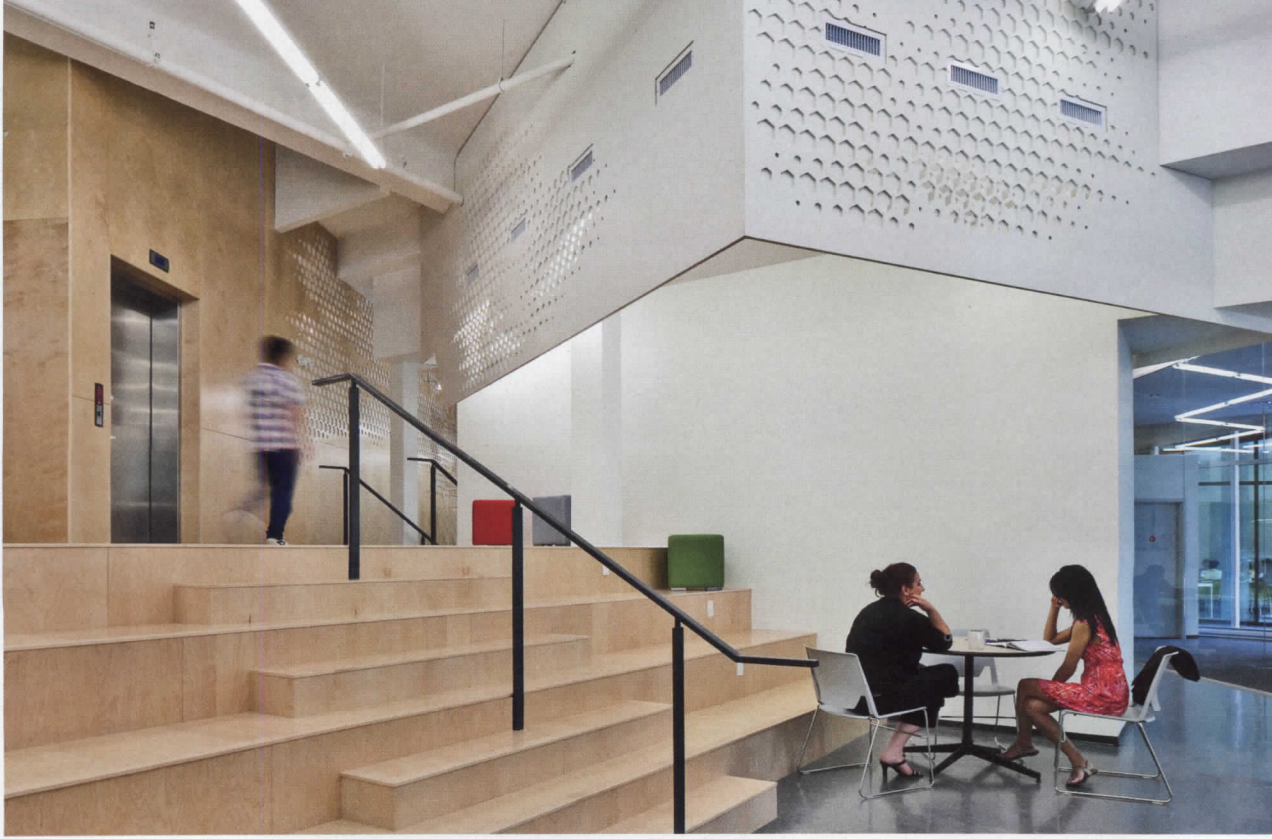
The owner’s dual role did help the project clear its biggest hurdle. Halfway through construction, Manitoba Start, a nonprofit organization that provides services for recent immigrants, agreed to a 15-year lease on the ground-floor storefront – great news in a tough commercial market. But the prospective tenant needed double the amount of space available in the original plan. The firm determined that it could convert the upper stories of the smaller building – originally slated to be apartments – into commercial space and combine them with the storefront to provide the needed space. But the project’s financing was contingent on \$2 million in city and provincial grants based on exactly 75 residential units; eliminating a few was not an option.

The architects decided to make up for the lost residential space with an addition on top of the shorter building, but they ran into another problem. The city would not permit the structure’s poured-in-place concrete frame to support additional stories. Instead, the firm floated two new floors in an independent steel structure above the building, raising it on columns that extend down through the original structure and anchor below its foundation. The owner-contractor built the addition quickly, adding the necessary apartments and accommodating the tenant while sticking close to the construction schedule. With Manitoba Start on board, the architects designed a striking interior for the nonprofit, opening a three-story atrium in the center of the smaller building and organizing classroom and support spaces in a series of boxes.

An angular canopy clad in the same aluminum as the balconies juts out from above the Manitoba Start storefront. Reflecting pedestrian traffic and the activity inside, it brings energy to the sidewalk in a city not known for its street life (the average low temperature in winter hovers around –4 Fahrenheit). Up on the balconies, residents have a rooted connection to the avenue below, a connection more like the semipublic space of a cast-iron New Orleans gallery or a classic fire escape than a private terrace. To passersby, the project’s surprising form signals that something is happening on the Winnipeg street – even in the frozen winter. ■



ANGULAR INTRODUCTION
 A piercing metal canopy (above), clad in the same mirror-finished material as the balconies, extends like a pair of airplane wings across the Avenue Building's facade, asserting its presence on the sidewalk and keeping the recessed entry clear of snow. 5468796 used simple materials and a repeated hexagon motif to create a dynamic interior for Manitoba Start (right). Despite lackluster finishes and small floor plans, the residential interiors (opposite) feel spacious.



Stone Sculpture Museum | Bad Münster am Stein-Ebernburg, Germany | Tadao Ando

BARN AGAIN

Mixing materials and methods from the vernacular and the modern, a Japanese architect creates a timeless retreat for the sculpture of two German artists.

BY CHRIS FOGES



IT HAS BEEN more than 20 years since stone sculptors Wolfgang Kubach and Anna Kubach-Wilmsen conceived the museum that now sits next to their home on a 4-acre plot above Bad Münster am Stein-Ebernburg, Germany. But the project's construction history begins much earlier, in 1785, with the erection nearby of a field barn. This rustic structure has been resurrected by Japanese architect Tadao Ando as the roof and upper story of a building that has deep affinities with its contents and its setting.

The sculptors' longstanding aim has been not simply to use stone as a material but to reveal it as matter, the product of a living earth. Manifesting time and nature in built form has also been one of Ando's consistent preoccupations. By registering changes in the weather and the seasons in his buildings, the architect heightens awareness of the passing moment and, in the process, "allows us to glimpse the eternal," he wrote in an essay several years ago. At the Stone Sculpture Museum, he reprises familiar devices to that effect: shadows of passing clouds animate smooth expanses of concrete; wind-driven ripples disturb the surface of a reflecting pool. The juxtaposition of these elements with the



reclaimed barn amplifies the project's historical character, making it at once recognizable and new. "By having such a shape, and the structure visible from inside and outside," Ando says, "the building harmonizes with nature and with tradition, and provides a sense of familiarity and warmth to local people."

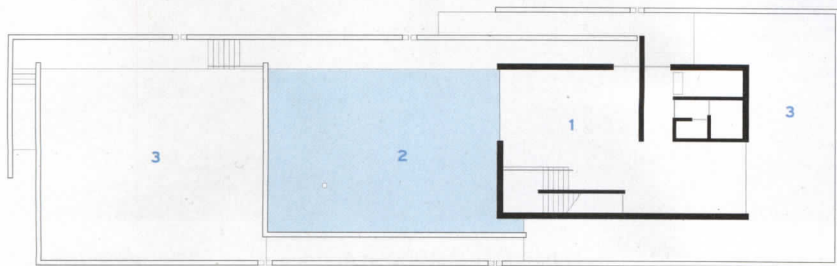
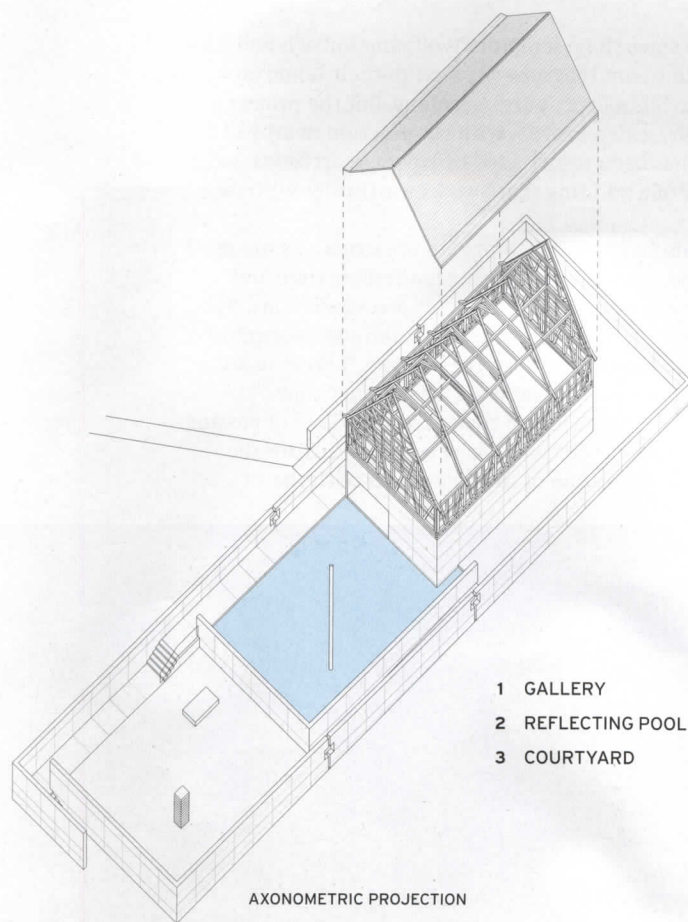
The barn was a late addition to the design: Ando's first proposal, in 1996, was for a half-buried, top-lit concrete box. This proved too expensive, and the project stalled. Almost a decade later, with more money, the clients persuaded him to revise it. "That is when I recalled Wolfgang Kubach's request to somehow use the wood structure of the surrounding barns," Ando explains. Local inquiries led the sculptors to a dismantled barn lying in storage, together with photographs and drawings of the original 1,700-square-foot building.

The old building's scarred timber frame now sits on crisp walls of fair-faced concrete with precisely spaced formwork tie holes. Below the flared eaves of a new slate roof, the woodwork of the long flanking walls is infilled with clay bricks and plaster. At each gable end, the timber is expressed as a brise-soleil, set in front of aluminum-framed, glass curtain walls. Rotten wood from the frame was replaced with new pieces; brown paint gives all the wood elements a uniform appearance.

The smallness of the barn and its clarity of form belie the rich variety of spaces

ZEN MASTER

Ando used concepts taken from Japanese gardens to design the courtyards on either side of the 2,315-square-foot museum (above). The simplicity of the forms belies a complex approach to blurring and contrasting old and new elements (opposite).



inside and around the \$1.5 million museum. The building is wrapped by three sets of freestanding concrete walls that are nested or interleaved to produce three courtyards—one behind and two in front—and suggest a promenade route through the compound. The tops of the walls impose a horizontal datum running the length of the site, while floor levels step down with the slope of the ground.

Immediately in front of the building, a shallow pool of water reflects a stone needle, *Axis Mundi*, sculpted by Kubach-Wilmsen. In the other courtyards, sculptures are planted in gravel, like rocks in a Zen garden. The influence of traditional Japanese gardens is also evident in the use of “borrowed scenery,” views through a series of rhythmically placed openings in the concrete perimeter walls that connect the microcosm of the garden to a sculpture park beyond.

Internally, the museum is quietly dramatic. From the entrance, visitors pass through a closely confined space below a mezzanine before emerging in the full-height main gallery, where the heavy presence of a concrete ceiling gives way to an eccentric tracery of gnarled timbers overhead. A second moment of revelation comes in ascending to the mezzanine. On the ground floor, views out are carefully controlled: two picture windows look into the courtyards in front and back of the building, but deep architraves frame the scene to exclude the sky, suggesting a continuous interior. From the upper level, the glazed gable opens up a spectacular prospect of the winding river valley below and, opposite, a sheer 650-foot cliff of reddish porphyry.

The museum is almost entirely daylit and, as stone sculptures require no special climatic control, unheated and naturally ventilated. The subtle colors of the stone stand out against the architect’s muted palette. It was the reticence of Ando’s work that first appealed to the sculptors, who had visited several of his buildings before engineering a meeting while exhibiting in his home city, Osaka. The architect was impressed by the site, but the budget—then \$650,000—was insufficient. Just as it seemed there was nothing more to say, recalls Kubach-Wilmsen, her husband seized a Hindu sacred stone from the corner of Ando’s office and wordlessly placed it before the astonished architect. Ando understood the gesture: banging his fist on the table, he declared, “I will build your museum.”

The project’s slow gestation was sustained by passion and patience, even after Kubach’s death in 2007. This commitment is evident in every material aspect, from the almost velvety finish of the concrete to the care with which the idiosyncrasy of the 18th-century frame has been preserved, even as it is coupled to a modern glazing system. And it is evident in the delicate tension of the architectural composition; visitors experience Modernist spatial fluidity in the same instant as evocations of the cave and the primitive hut. Its unfixed age and air of cloistered calm make this a fitting home for the Kubachs’ reflections on transience and deep time. ■

Chris Foges is the editor of the London-based journal Architecture Today.

credits

ARCHITECT: Tadao Ando Architect & Associates – Tadao Ando, Tomonori Miura

EXECUTIVE ARCHITECT: Dorian Zapp, Bodo Zapp

ENGINEER: Ingenieurbüro Lunkenheimer und Schulte (structural)

CONSULTANT: Ars Ligni (historical wood construction)

CLIENT: Wolfgang Kubach and Anna Maria Kubach-Wilmsen

CONSTRUCTION MANAGER:

Ingenieurbüro JRN

SIZE: 2,315 square feet

COST: \$1.5 million

COMPLETION DATE: August 2010

SOURCES

GABLE WALL GLAZING: Schüco

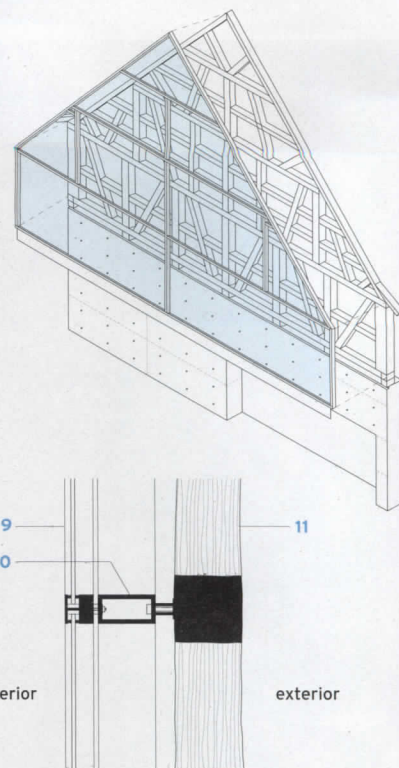
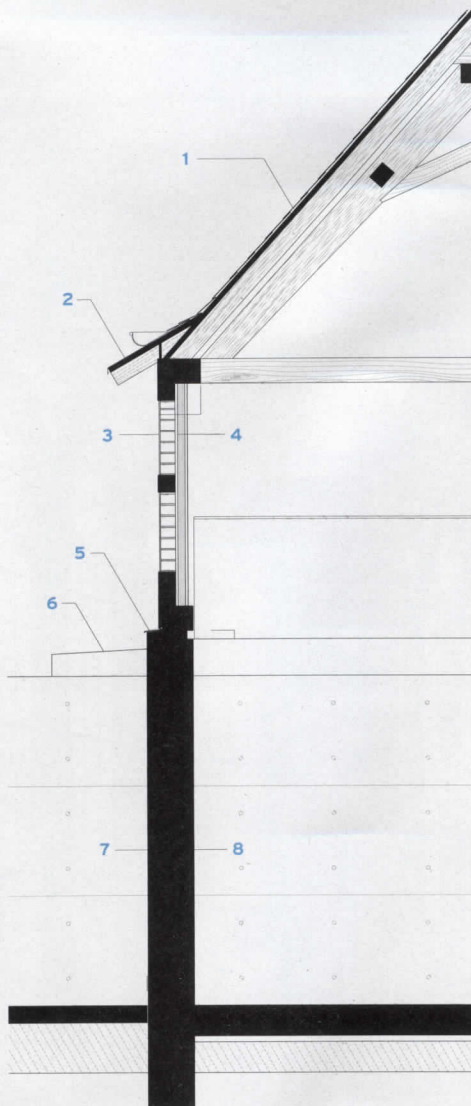
CONCRETE: Trapobet

GLASS BALUSTRADES: Hera Glas

PANORAMIC WINDOWS: Sitec Glas

Barn Raising

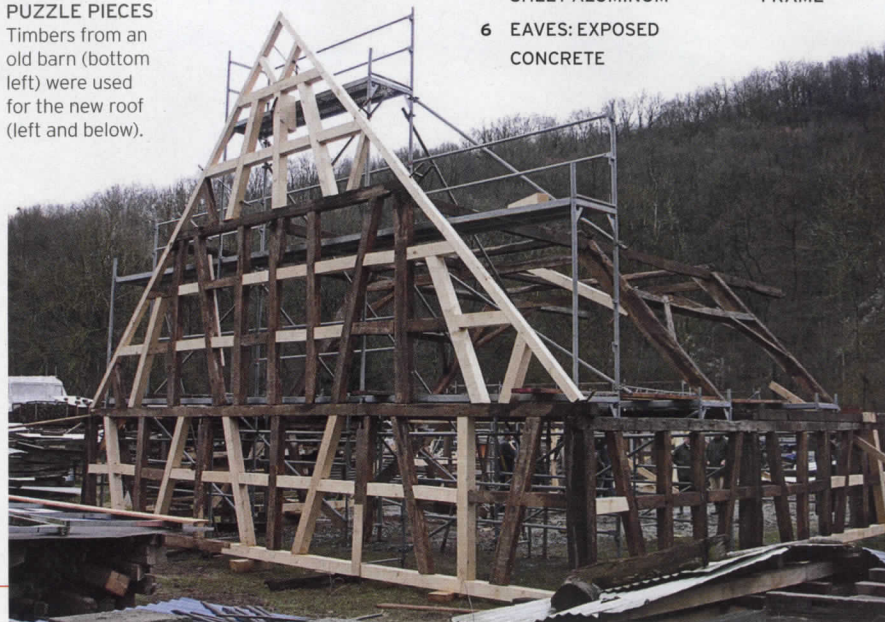
The 18th-century frame used for the roof was pieced together on the ground, where rotten timbers—fewer than a fifth—were replaced with oak from other old structures, then placed atop concrete walls. The connection is made by steel hidden in the uprights, with additional bracing at the corners. Windows are supported by steel frames between the glazing and the oak. Connections between the steel and wood help stabilize the timber structure. The loose fit of the glass walls allows natural ventilation of the unheated building. The architects had hoped to use a traditional method for the upper walls, packing the frame with twigs and clay. This proved too costly, so they used clay bricks with clay plaster instead.

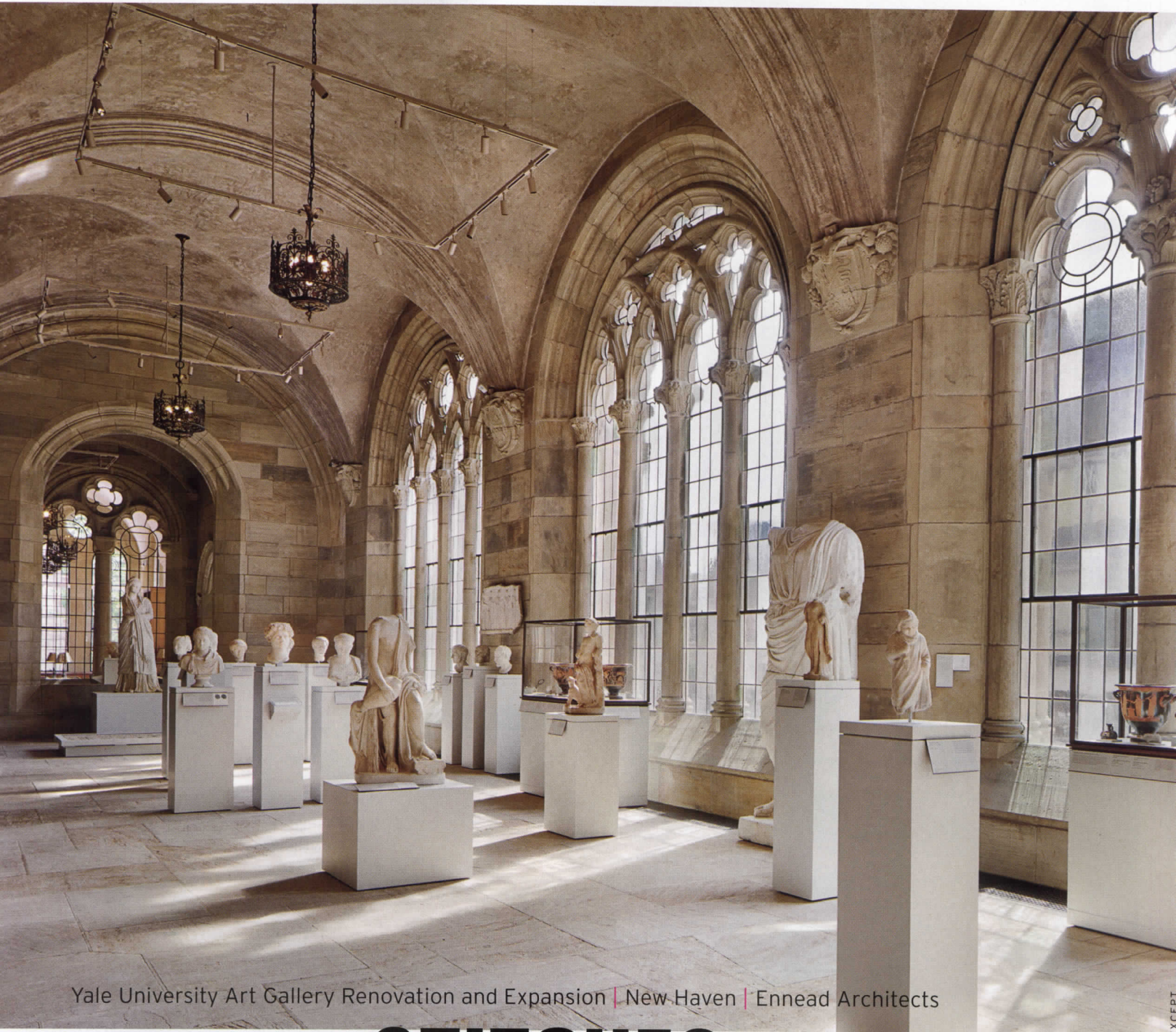


- | | |
|--|--|
| 1 ROOF: RAFTER, ROOF BOARD, WATERPROOFING, SLATE | 7 EXTERIOR WALL: EXPOSED CONCRETE |
| 2 EAVE EDGE: GALVANIZED STEEL | 8 INTERIOR WALL: EXPOSED CONCRETE |
| 3 EXTERIOR WALL: ADOBE, PLASTER | 9 SKYLIGHT: ALUMINUM SASH, CLEAR GLASS |
| 4 INTERIOR WALL: ADOBE, LATH, PLASTER | 10 BACK MULLION: STEEL |
| 5 SILL FLASHING: SHEET ALUMINUM | 11 EXISTING TIMBER FRAME |
| 6 EAVES: EXPOSED CONCRETE | |

PUZZLE PIECES

Timbers from an old barn (bottom left) were used for the new roof (left and below).





Yale University Art Gallery Renovation and Expansion | New Haven | Ennead Architects

A well-executed renovation, along with a few carefully conceived insertions, weaves together a museum's trio of stylistically distinct landmarks.

BY JOANN GONCHAR, AIA

STITCHES IN TIME



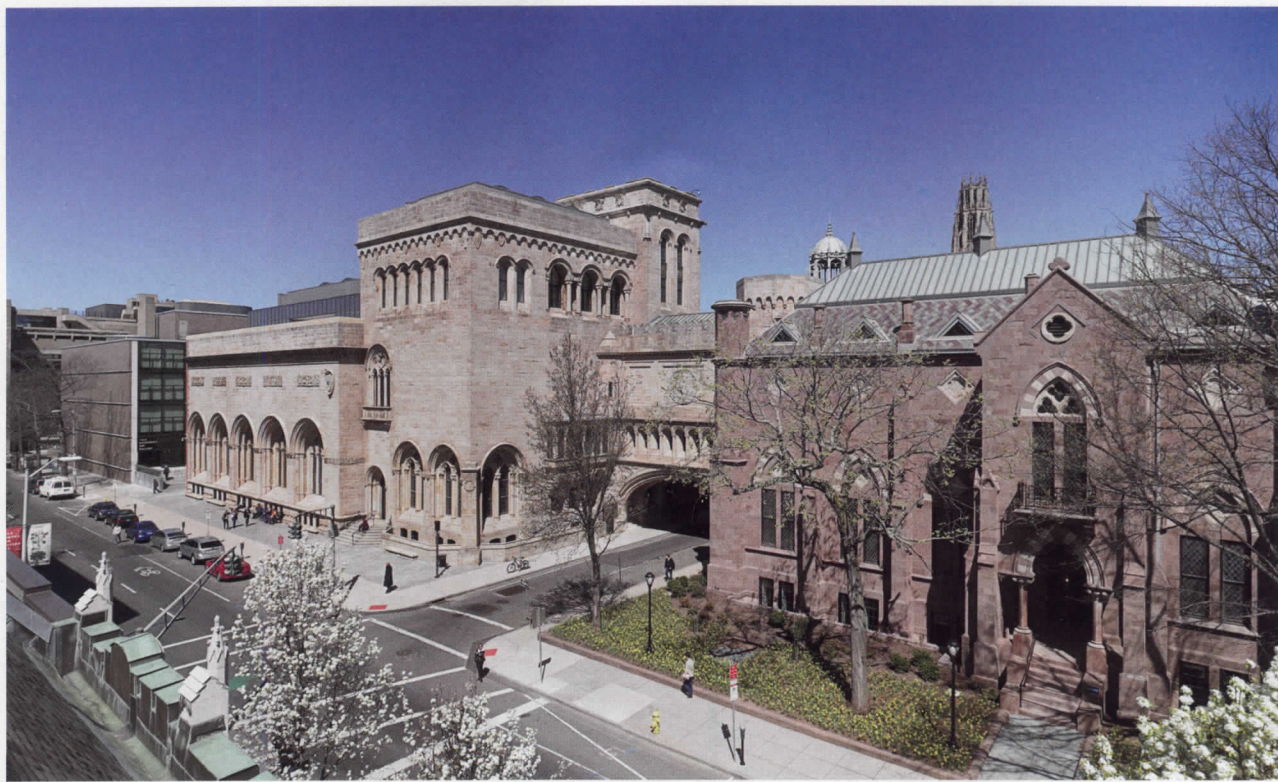
THE YALE University Art Gallery (YUAG) is inaptly named. The word “gallery” doesn’t convey the institution’s size and its almost encyclopedic scope, with holdings that number more than 200,000 objects encompassing an array of eras, cultures, and media. Since completion in December of a sensitively executed renovation and expansion by Ennead Architects, about 4,000 pieces of this extensive collection are on display in the YUAG’s three contiguous, but very different, buildings that stretch the length of one and a half New Haven city blocks. The oldest is the brownstone Street Hall, a Ruskinian Gothic building designed by Peter Bonnett Wight and completed in 1866. The youngest is a 60-year-old Modernist brick-glass-and-concrete structure by Louis I. Kahn. And sandwiched in between is the Old Yale Art Gallery, a sandstone-clad Italianate Gothic building completed in 1928, often referred to as “Swartwout” for its designer, Egerton Swartwout.

The \$135 million revamp, which has increased exhibition space by more than 70 percent to almost 70,000 square feet, reclaims areas that had been occupied by other departments, updates antiquated building systems, and addresses general

Vincent van Gogh’s oil *The Night Café*, which depicts bottle-strewn tables surrounding a lone pool player under lurid light; Thomas Eakins’s monumental canvas *Taking the Count*, which shows a downed boxer struggling to get up during a match; and a trio of Piet Mondrian’s *Compositions*—to name just a few.

Some of the museum’s spaces, like a 21-foot-tall, laylight-topped gallery for American painting and sculpture, are stately and grand. Others, such as the galleries devoted to the early Renaissance, where 13th- and 14th-century Tuscan paintings seem to pop from deep-purple walls, are quirky and intimate. And the galleries in the Kahn building, defined by their muscular tetrahedral ceilings of reinforced concrete, are low but loftlike. This variety doesn’t produce a mishmash of competing architectural styles, but instead creates a satisfying assortment of environments.

Ennead’s involvement with the project began in 1995, when Yale hired the firm (then known as Polshek Partnership) to assess the condition of the Kahn building. Ennead was then asked to create a master plan for the part of campus that is home to the university’s visual- and performing-



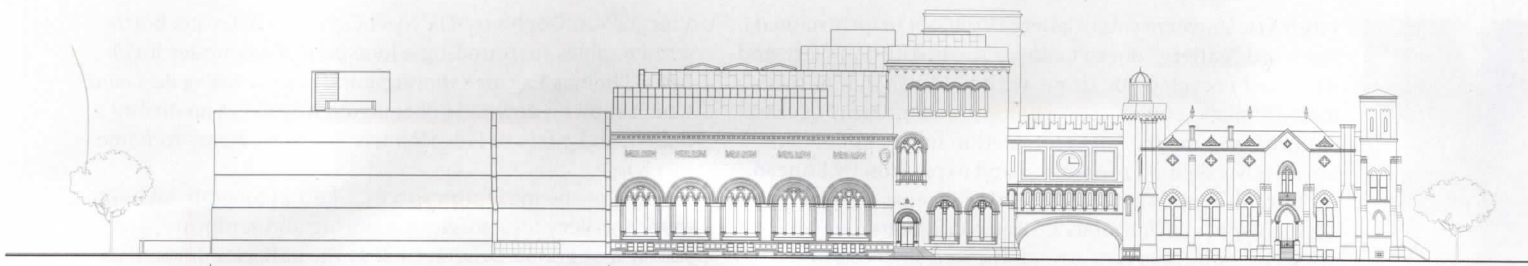
NOT HOMOGENIZED
The museum (right) consists of three connected structures by (from left in photo) Louis I. Kahn (1953), Egerton Swartwout (1928), and Peter Bonnett Wight (1866). One of the many galleries is a vaulted space in Swartwout’s building (above).

deterioration caused by a combined 280 years of deferred maintenance among the three structures, according to a tally by Jock Reynolds, the YUAG’s director. But most significantly, the project unites the landmarks while preserving their distinct characters. “We were not trying to homogenize the buildings,” explains Ennead design partner Richard Olcott.

The result is a museum with galleries almost as diverse as its collection—work that includes ancient Greek and Roman sculpture, Indonesian textiles, and Cubist paintings. And although not every piece in the collection is a standout, there are many genuine masterpieces. Among them are

arts institutions such as the Yale Center for British Art, the School of Architecture, and the Repertory Theater. Eventually the assignment grew to include the commission for the multiphased overhaul of all three structures that now make up the YUAG. The university undertook renovation of the Kahn building first (RECORD, June 2007, page 144), reopening it in 2006, before moving on to Street and Swartwout.

In addition to renovation, the project also encompassed several carefully considered interventions—a stair-wrapped elevator and two new skylit galleries for special exhibitions.

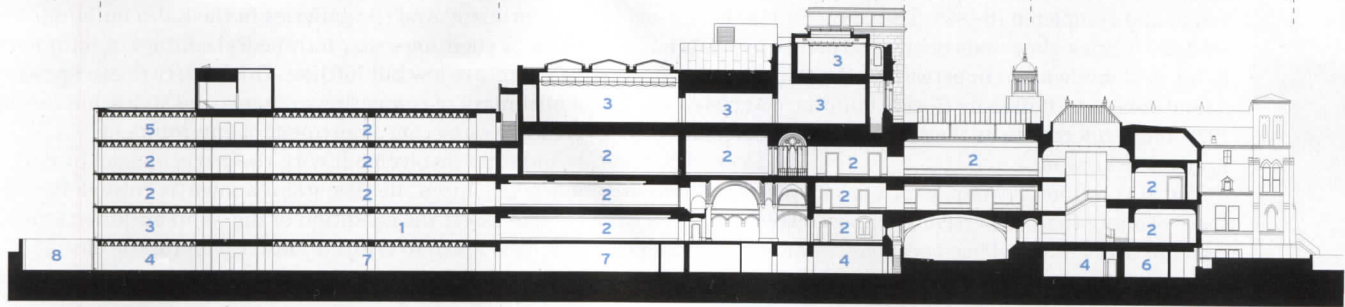


SOUTH ELEVATION

KAHN BUILDING

OLD YALE ART GALLERY

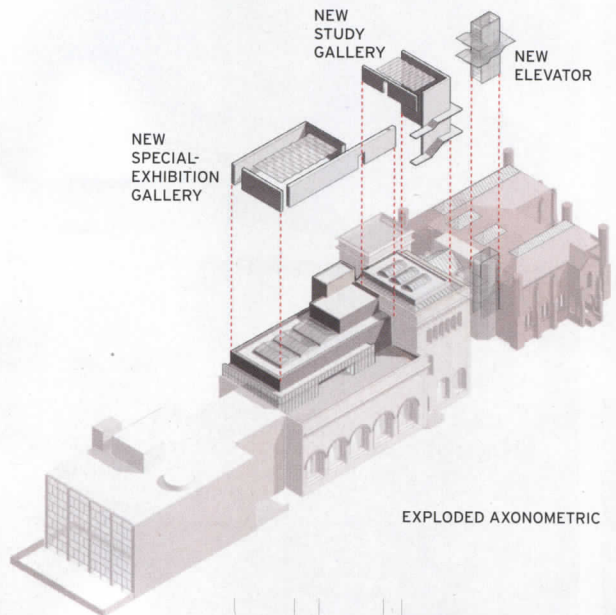
STREET HALL



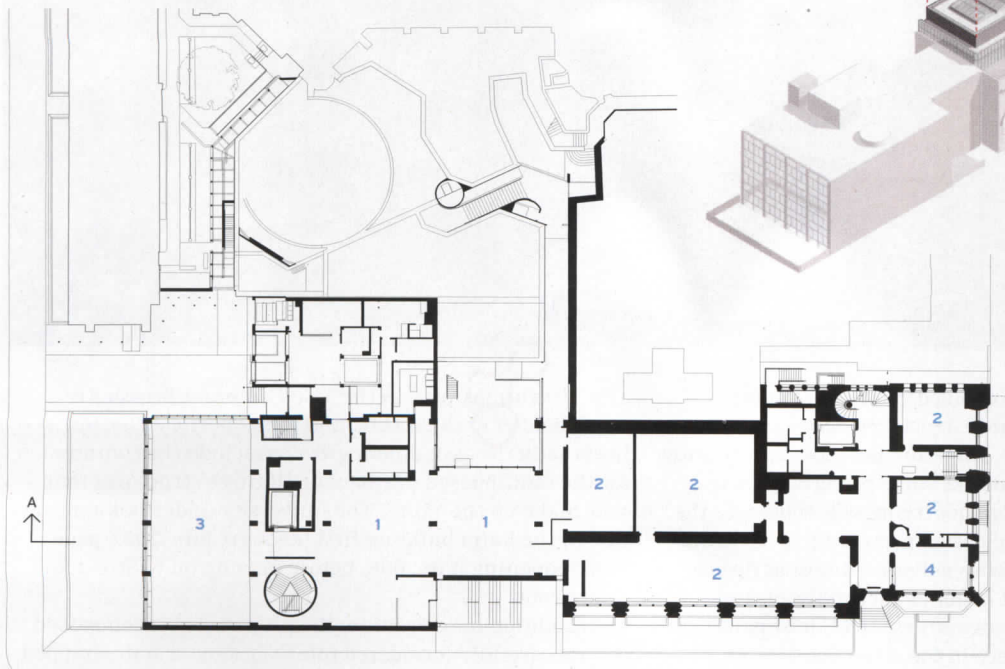
SECTION A - A

0 50 FT.
15 M.

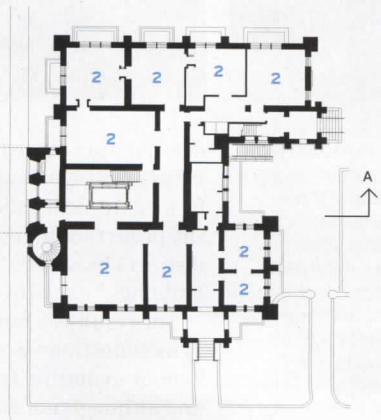
- 1 LOBBY
- 2 PERMANENT COLLECTIONS
- 3 SPECIAL EXHIBITIONS
- 4 CLASSROOMS
- 5 PRINTS AND DRAWINGS STUDY ROOM
- 6 OFFICES
- 7 COLLECTION MANAGEMENT
- 8 SCULPTURE COURT



EXPLODED AXONOMETRIC



FIRST FLOOR



0 50 FT.
15 M.



21ST-CENTURY FABRIC The project includes some new construction, such as a stair-wrapped elevator (top) that is clearly differentiated from the nearby traditional wainscoted galleries by its glass cab and shaft. Similarly, a new rooftop gallery for temporary exhibitions is decidedly modern. It has a wavelike resin ceiling that appears



to float and diffuses daylight entering the room through a skylight (above right). On the outside (above left), the glass-and-zinc-clad addition is set back from the existing parapet to make it almost undetectable from the street. The move also allows space for a sculpture terrace.

These are, for the most part, hidden from the outside: the elevator is buried within Street, while the smaller of the two new galleries has been inserted, with the help of some structural gymnastics, inside the previously almost empty shell of a tower at Swartwout's southeast corner. Glimpses of the larger gallery, which sits on Swartwout's roof, are visible from some vantage points. However, the architects chose to set the glass-and-zinc-clad addition back 25 feet from the existing parapet, a move that makes the new gallery inconspicuous and provides space for a sculpture terrace.

If the insertions are unobtrusive on the exterior, inside they are intentionally differentiated from the historic fabric. Ennead explored several designs for the elevator, including a Gothic option, says Duncan Hazard, the firm's management partner. However, the end product is appropriately 21st century: the shaft is defined by luminous glass panels, clearly distinguishing it from the surrounding wainscoted galleries. Similarly, the added white-box galleries are decidedly modern, with gently undulating copolyester-resin ceilings that seem to float and diffuse daylight entering from skylights above.

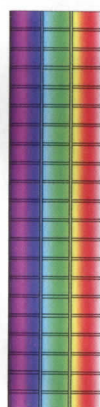
Key to the success of the project is a series of almost undetectable, but nevertheless critical, improvements to the museum's building envelope. These enhancements, along with upgrades to mechanical systems, are intended to help maintain temperatures in the galleries of 68 to 70 degrees Fahrenheit, with 50 percent relative humidity—the conditions curators generally consider optimal for conservation.

In the Kahn building, this work entailed replacement of the four- and five-story window walls, since the original ones, an early example of insulated glazing, had long been plagued with condensation problems. To address the issue, the architects substituted thermally broken aluminum for Kahn's steel, matching the exterior profiles of the original mullions exactly. But on the inside, they increased the mullion dimensions slightly in order to accommodate insulation and provide resistance against wind loads.

As further insurance against condensation, the design team increased the capacity of the fin-tube radiators and replaced Kahn's interior shading scrims, relocating them from their original position immediately adjacent to the windows to the room side of the radiators. In the old configuration the shading scrims kept the heat away from the glass, explains Michael Freliech, principal at AltieriSebor-Wieber, the project's mechanical engineer. But in their new location, they help maintain the temperature of the glazing above dew point, preventing condensation.

The upgrades to the building envelope at Swartwout and Street included the transformation of the inside face of the buildings' perimeter masonry walls into a vertical plenum. The project team removed intact historic moldings and details, stored them for later reinstallation, and demolished plaster. Contractors then created a cavity, typically 4½ inches wide, between the masonry and the new drywall. In most galleries, air is supplied from the ceiling and then is drawn into the perimeter cavity, entering through a small, continuous slot at the wall's base, before being returned to the mechanical air handler.

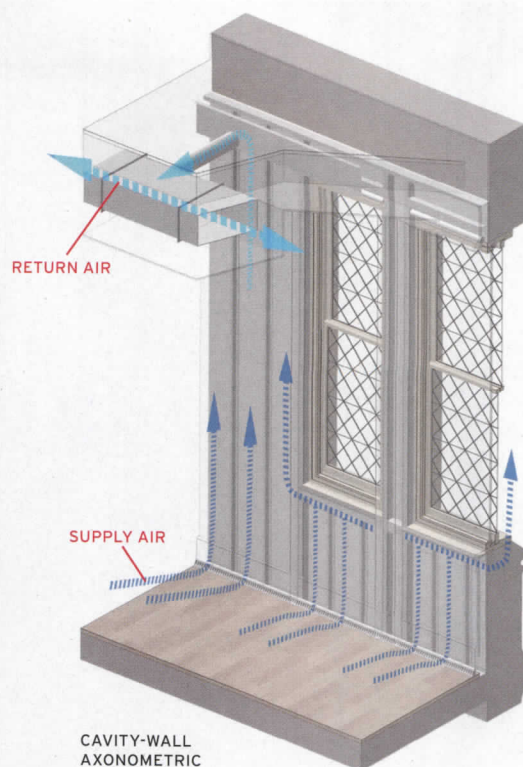
This plenum serves as insulation, creating equilibrium on either side of the drywall and retarding the formation of condensation behind wall-hung art. But in addition to



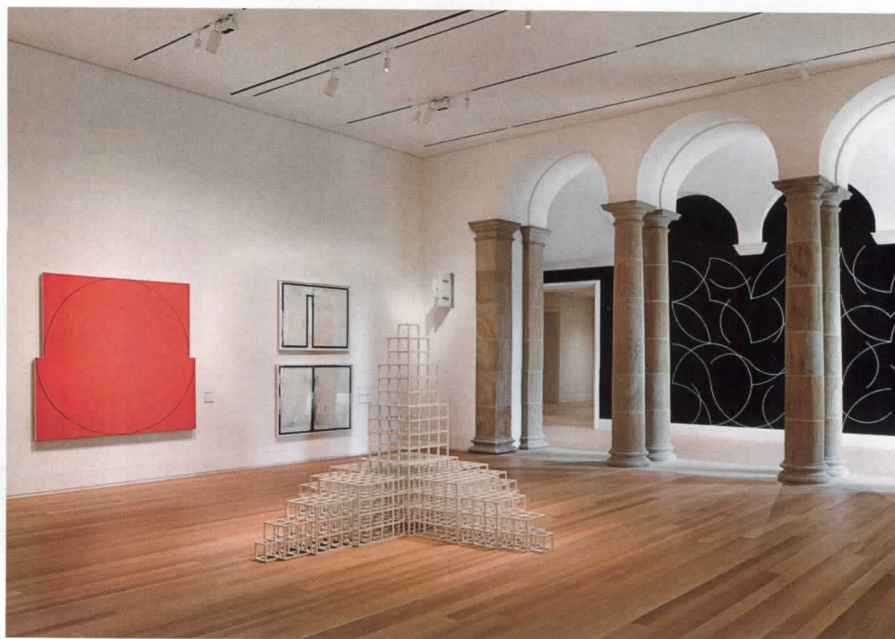
TYPICAL MASONRY WALL



MASONRY WALL WITH ARTWORK



CONDENSATION CONUNDRUM A solid masonry wall has little insulation value. As a result, a microclimate can form behind wall-hung artwork. The temperature behind a wood-framed painting, for example, can be as much as 15 degrees Fahrenheit lower than the temperature of the room, which can lead to condensation. To address the problem, designers created a vented cavity on the inside face of Swartwout's and Street's exterior masonry walls.





ALMOST INVISIBLE
Most visitors will be unaware of many of the museum's technical enhancements. They will not be able to tell, for instance, that a set of stone columns in one of the modern and contemporary art galleries (opposite) has been moved to make way for a new service core. They are also unlikely to notice the small, continuous slot between the baseboard and the floor in one of the American painting and sculpture galleries (above), which hints at the existence of a vented wall cavity.

helping conserve the collection, the cavity also protects the masonry, according to Sean O'Brien, an associate principal at Simpson Gumpertz & Heger, facade consultant for the renovation. Because the air within the plenum is at a lower pressure than that of the gallery interiors, the strategy prevents moisture from lodging itself within the masonry walls—a condition that could lead to deterioration over time.

This approach for isolating the highly humidified gallery climate from the exterior envelope also provides a level of redundancy that the more usual solution of adding vapor and air barriers does not. If condensation does form within the cavity, “it simply wicks away,” says Freliech. But with the more typical strategy of sealing up an existing building, “there is always a breach or a failure somewhere.”

Improvements to the building envelope also encompassed work on Street's and Swartwout's richly detailed leaded windows. These windows, which are wood-framed in Street and steel-framed in Swartwout, were carefully removed, cleaned and restored off-site, and then reinserted. And to improve thermal performance and keep out damaging UV light, new windows containing insulated glazing units with a polyvinyl-butyl interlayer were installed on the interior of the apertures. Most of the windows also include automated roller blinds.

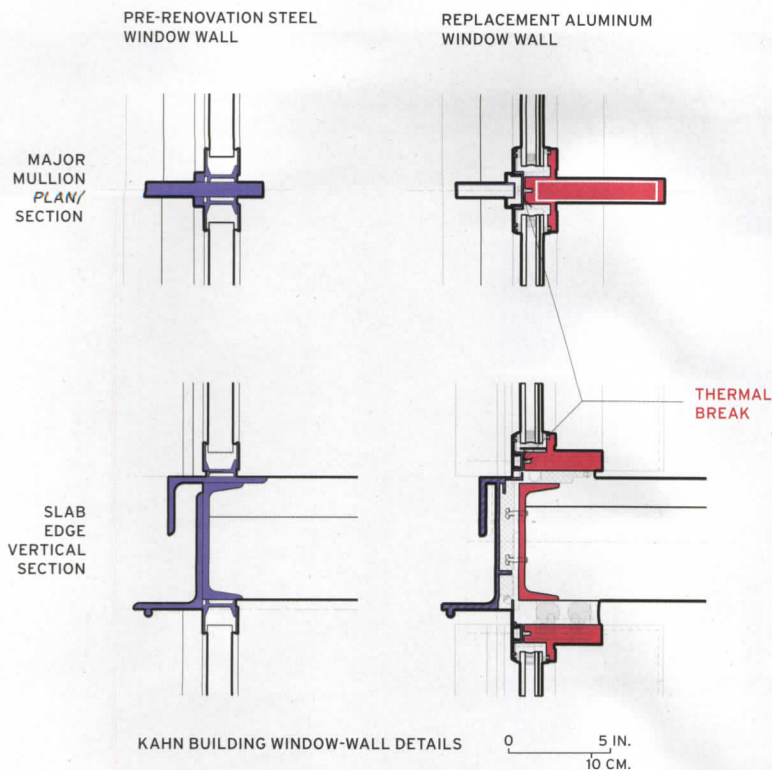
credits

ARCHITECT: Ennead Architects – Richard Olcott, design partner; Duncan Hazard, management partner; Joseph Fleischer, partner in charge of construction; Todd Van Varick, project manager for construction; Lloyd DesBrisay, David Tepper, Jane Lin, project managers for design; Kevin Krudwig, project architect for construction; Gary Anderson, Kingman Brewster, Jeffrey Geisinger, Margaret Gorman, Brad Groff, Gihong Kim, Christopher Lewis, Nathan McRae, Adam Mead, Kenichiro Mito, Dona Orozova, Charmian Place, Michael Regan, Setu Shah, Paul Stanbridge, Frederick Tang, Akari Yakebayashi, Jordan Yamada, project team
CONSULTANTS: Robert Silman Associates (structure); AltieriSebor-Wieber (m/e/p); Hefferan

Partnership (lighting); Simpson Gumpertz & Heger (exterior envelope); Building Conservation Associates (preservation)
CLIENT: Yale University
CONSTRUCTION MANAGER: Dimeo Construction
SIZE: 165,000 gross square feet
COST: \$135 million
COMPLETION DATE: December 2012

SOURCES

ZINC PANELS: VMZINC
ROOFING: American Hydrotech
ROOF PAVERS: Hanover Architectural Products
GALLERY TRACK LIGHTING: LSI
LIGHTING RESTORATION: Rambusch
GLASS ELEVATOR: Kone



These envelope-enhancement strategies couldn't be implemented everywhere. One problematic space was a vaulted, double-story hall now devoted to the display of sculpture from ancient Rome and Greece. Installing a plenum and a second set of windows here would have required covering up the room's pierlike limestone walls and modifying its graceful arched windows divided by colonnettes. So instead of trying to tightly control environmental conditions, curators used the space for the display of artifacts that are less vulnerable to changes in humidity and temperature than works on paper or canvas. The move also made sense from a daylighting perspective, since the sun streaming into the space through the south-facing windows is not deleterious to the sculpture. "There was a conscious decision to place the collections in the most appropriate galleries," says Steven Hefferan, principal of Hefferan Partnership, the project's lighting and daylighting consultant.

Daylight elsewhere in the museum is more controlled, but not at the expense of the visitor's experience. For example, the skylight assemblies that top some of Street's and Swartwout's galleries include operable louvers so that curators can limit the collections' daylight exposure. In the temporary galleries curators adjust these louvers with the change-out of exhibitions. And in the galleries with permanent installations they make adjustments seasonally. They decided against a system that would maintain consistent daylight levels by adjusting to changing outdoor conditions. "We want people to know when the sun comes out," says Hefferan.

For electric lighting in Swartwout and Street, the project team took what Hefferan terms a "two-layer approach," specifying LEDs for ambient illumination and halogen MR16 lamps to highlight the objects on display. Compared with an all-halogen scheme, Yale's chosen strategy should cut light-

ing energy use significantly—by 60 percent, according to Hefferan's estimates—but the combination should also deliver the color rendition that curators and the museum-going public are accustomed to.

It seems the designers got the balance right, because the lighting doesn't call attention to itself. Like that of the museum's other technical enhancements, such as the updated mechanical systems and the improved building envelope, the lighting's only role is to help users appreciate the trio of landmarks and their precious contents. Except for the few architectural interventions, which have been carefully conceived and are fittingly differentiated, the hand of the project team is almost invisible. ■

NO SWEAT As part of the first phase of the museum's renovation, the project team replaced the Kahn building's condensation-plagued steel-and-glass window wall. The new thermally broken aluminum mullions replicate exactly the dimensions of the originals on the exterior.



Continuing Education

To earn one AIA/CES continuing-education hour (CEH), including one hour of health, safety, and welfare (HSW) credit, read "Stitches in Time" and complete the test at ce.construction.com. Upon passing, you will receive a certificate of completion and your credit will automatically be reported to the AIA. Find additional information regarding credit-reporting and continuing-education requirements at ce.construction.com, under "requirements."

Learning Objectives

- 1 Outline the environmental conditions considered optimal for conservation of museum collections.
- 2 Identify some of the obstacles to achieving these conditions in a historic

building such as the Yale University Art Gallery (YUAG).

3 Describe the envelope-improvement strategies deployed in the YUAG renovation and explain how they should help curators maintain the desired environmental conditions.

4 Describe the approach to lighting and daylighting at the YUAG and explain its energy-saving features.

AIA/CES Course #K1302A

FOR CEU CREDIT, COMPLETE THE "STITCHES IN TIME" QUIZ ONLINE AT CE.CONSTRUCTION.COM, OR USE OUR FREE ARCHITECTURAL RECORD CONTINUING-EDUCATION APP, AVAILABLE IN THE ITUNES STORE.



Gordon's Wood and Metal Canopy Ceilings Combine Aesthetics with Performance

Project: L'auberge Casino & Hotel
 Baton Rouge, LA
 Architect: Marnell Companies, Las Vegas, NV; Manning Architects, New Orleans, LA
 Applications: Exterior Metal Canopy Ceilings with Metal and GreenWood™
 Finishes; Interior Corrugated GreenWood™ Ceilings
 Contributes to LEED®¹ Certification

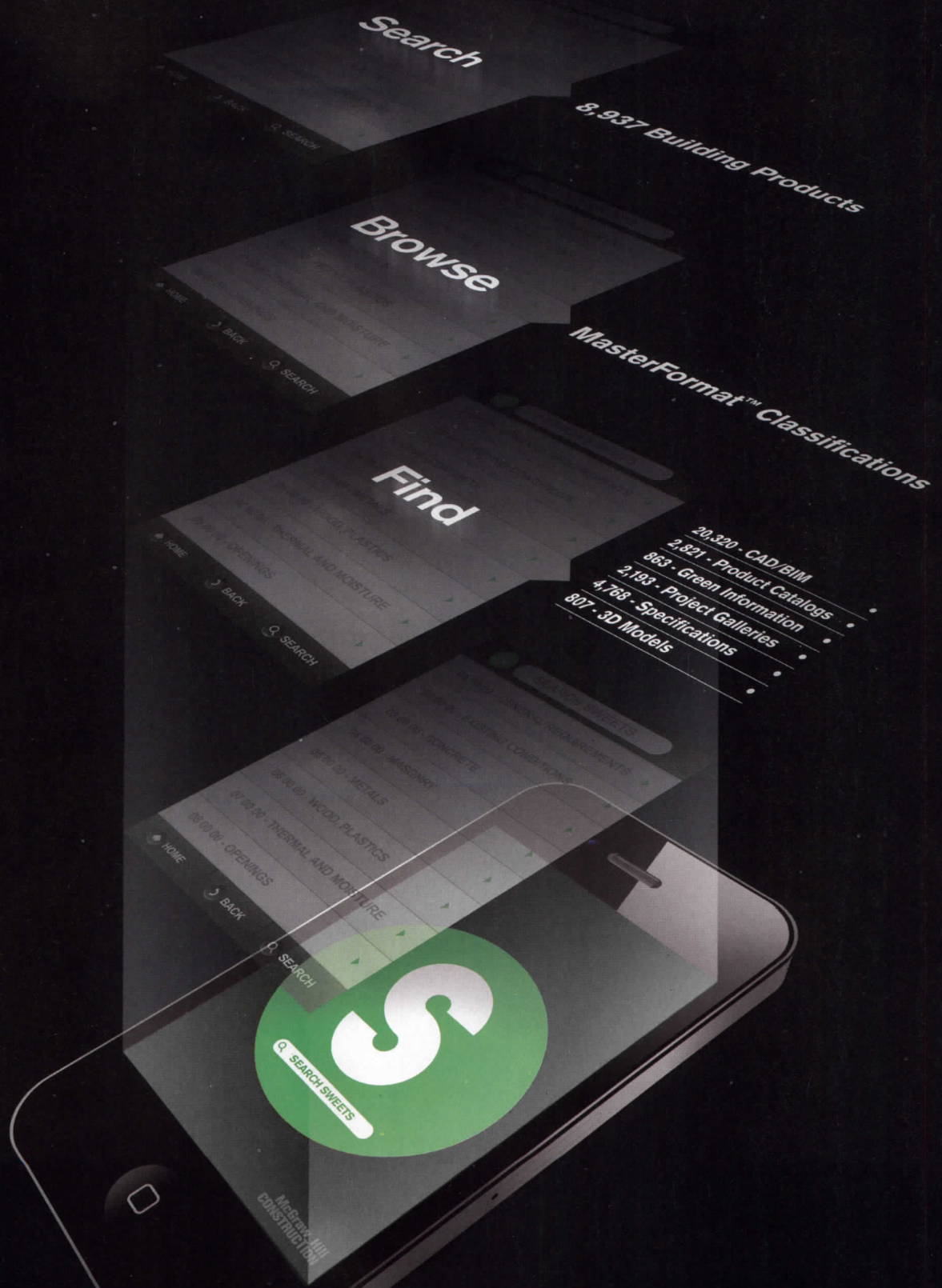


GORDON
 INCORPORATED



gordon-inc.com
 800.747.8954

¹ LEED is a registered trademark of the USGBC. **CIRCLE 66**



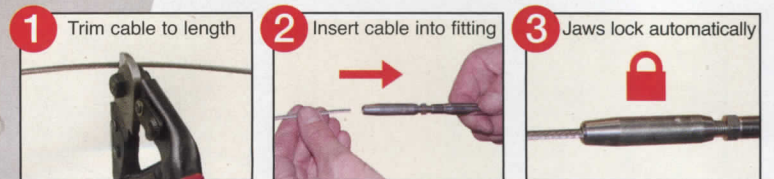
Introducing the Sweets Mobile App

Download the Sweets Building Products App at the iTunes Store or Google Play.

ier Easy

Cable railing installations just got a whole lot easier, faster, and more versatile.

Introducing Feeney's new expanded line of swageless automatic-locking **Quick-Connect**® cable fittings. Now you can select from a wide variety of sleek and versatile stainless steel fittings that offer the flexibility of field assembly and the simplicity, speed, and gripping power of our patented **Quick-Connect**® jaws. No more cumbersome and time consuming crimp tools or wedge-type compression fittings. Simply insert the cable into the fitting; the spring-loaded jaws lock-on. It's that easy.



Free catalog, call 1-800-888-2418

CABLE·RAIL®

by feeney®



feeney® *makes it easy*

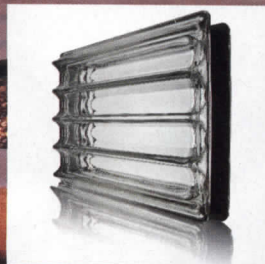
visit www.feeney10.com



Innovation

Design

Technology



**SEVES
GLASS
BLOCK**

Tony.Kava@sevesUSA.com - www.sevesglassblock.com - www.weckglassblock.com

Seves USA Inc. - 6605 Cypresswood Drive Suite 450 - Spring, TX 77379 USA - tel. 1-855-823-4411

CIRCLE 76

ALTITUDE™

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




KIM LIGHTING

www.kimlighting.com/products/altitude



CIRCLE 74

Städel Museum Extension | Frankfurt am Main | Schneider+Schumacher with Licht Kunst Licht

EYES WIDE SHUT

An enlightened design scheme doubles the exhibition space of a 19th-century museum with a daylight-filled subterranean gallery for contemporary art.

BY LINDA C. LENTZ





A **HODGEPODGE** of tightly packed additions connected to an 1878 Neo-Renaissance building by German architect Oskar Sommer, the Städel Museum dominates a stretch of cultural institutions along Frankfurt's Main River with an eclectic formality. By contrast, a recent expansion, built under the watch of director Max Hollein, is generating buzz in art and design circles for its groundbreaking approach to the seamless fusion of art, architecture, landscape, and light.

Presented with the opportunity to boost the museum's comprehensive holdings of Old Master works and modern art with contemporary pieces (including permanent loans from the Deutsche and DZ Banks), Hollein invited a select group of international architects to submit proposals that would double the existing exhibition space. The winning scheme by Frankfurt-based Schneider+Schumacher dared to go underground in order to preserve the museum's limited green space. Tucked below a popular parklike garden, the 32,000-square-foot reinforced-concrete structure is organized to follow the central axis of the original building. The architects anchored this annex to the basement of a 1921 Garden Wing and created a graceful procession with a series of elegant stairways that lead visitors up to a new event mezzanine and the subtly refurbished 19th-century lobby one floor above.

"The design had a 'wow' effect that intrigued the judges," says Schneider+Schumacher managing director Kai Otto. "There is no actual building, but we still achieved the space they needed." The challenge, he notes, was to infuse the subterranean space, dubbed the Garden Hall, with a generous sense of volume and daylight. So he and his team devised a gently domed green roof that tops an expanse of free-form concrete ceiling panels pierced with large holes. Supported by 12 slender columns, the finished ceiling curves up to an apex of 27 feet at the center of the gallery—creating a small hill on the grounds above—and holds 195 skylights in the apertures that form a playful array on the landscape.

These are not simple skylights, however. Complex devices developed specifically for this project by the Bonn-based lighting-design firm Licht Kunst Licht, in close collaboration with the architects as well as the fixture and lighting manufacturers, they constitute a unique system configured for a variety of options—daylighting and LED—that assure optimum illumination throughout the gallery at any time.

Measuring over 2 feet deep and graduating in diameter from about 5 feet at the perimeter of the hall to more than

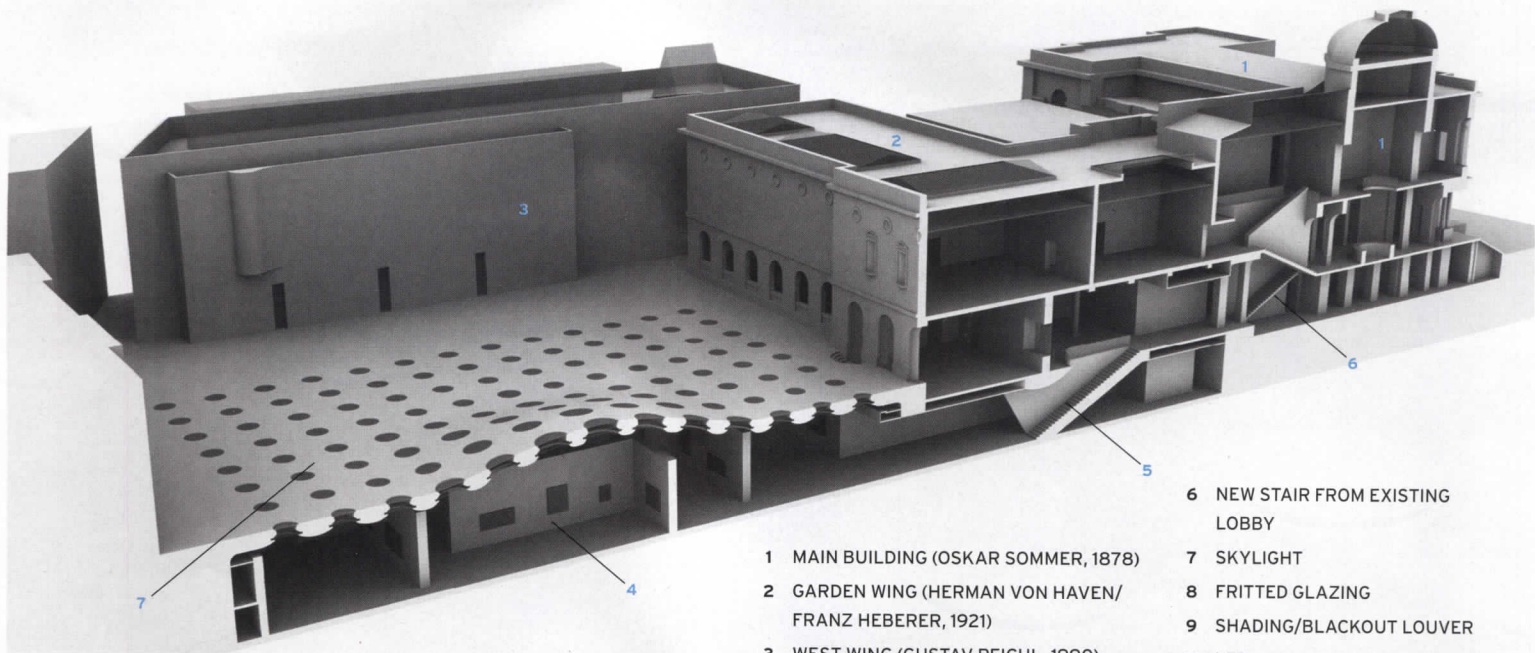
The underground structure spans the 249-by-174-foot garden with a green roof and 195 skylights that illuminate the landscape and gallery below. But more than the roof is green. The building has efficient daylighting and geothermal systems, in-floor heating, and a cooled ceiling slab.



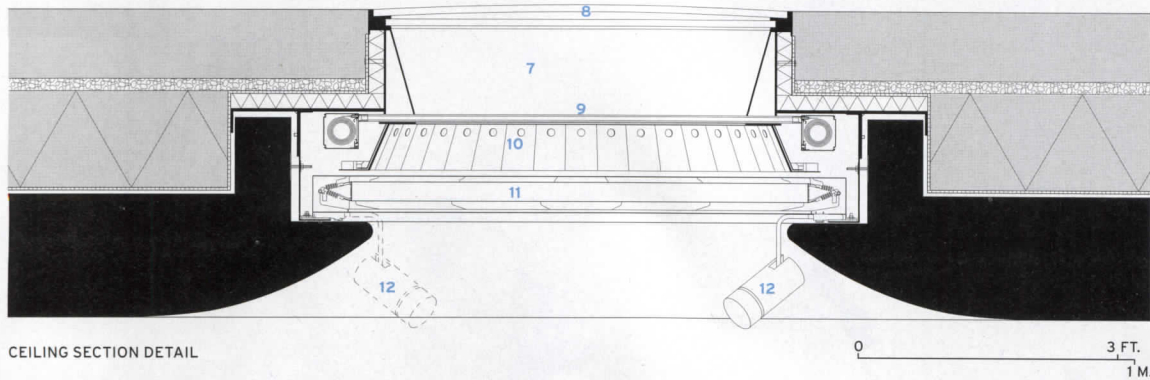
A series of elegant stairways leads visitors from the lobby to an event mezzanine and down to the Garden Hall annex (above). The skylights provide even illumination for temporary modular displays (right). A translucent textile diffuser stretched across the base of the skylights creates a fluid ceiling plane (below). Optional projection spotlights highlight individual pieces of art.







- 1 MAIN BUILDING (OSKAR SOMMER, 1878)
- 2 GARDEN WING (HERMAN VON HAVEN/
FRANZ HEBERER, 1921)
- 3 WEST WING (GUSTAV PEICHL, 1990)
- 4 GARDEN HALL ANNEX
- 5 GARDEN HALL STAIRCASE
- 6 NEW STAIR FROM EXISTING
LOBBY
- 7 SKYLIGHT
- 8 FRITTED GLAZING
- 9 SHADING/BLACKOUT LOUVER
- 10 LED
- 11 TEXTILE DIFFUSION LAYER
- 12 PROJECTION SPOTLIGHT



CEILING SECTION DETAIL

0 3 FT. 1 M.

8 feet at the center, the UV-resistant units each comprise several functional layers. At the top, convex laminated glazing is surfaced with slip-resistant ceramic frits and can be walked on (even driven over). Clear, low-iron glass ensures optimum, museum-quality color rendering.

Controlled by a daylight sensor on the roof of an adjacent building, a system of adjustable louvers below the glass provides varying degrees of light transmission—from 100 percent to full blackout—that shield the art on sunny days or during special exhibitions. Additional built-in sensors compensate for such anomalies as foliage blocking a skylight. To supplement the daylight, a ring of warm and cool white LEDs

yields the desired ambience during evening hours and on cloudy days, while special sockets for optional projection spotlights allow curators to highlight individual works on display as needed. Finally, a translucent stretch textile at the base of the fixture diffuses both sunlight and LEDs, creating a fluid ceiling plane. “We call the skylights ‘eyes for the art,’” says Otto, “because they open and close to protect it.” In many ways, they might also represent the spirited vision of Hollein and his colleagues.

A compelling installation in its own right, the Garden Hall is a luminous homage to its contents and signals that the venerable Städel has joined the 21st century. ■

credits

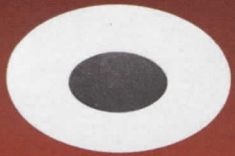
ARCHITECT: Schneider+Schumacher – Till Schneider, Michael Schumacher, principals in charge; Kai Otto, managing director; Miriam Baake, project architect; Hans Eschmann, construction management
lighting designer: Licht Kunst Licht – Andreas Schulz, principal in charge; Tanja Baum, project leader
ENGINEER: B&G Ingenieure
CONSULTANTS: Stephan Zimmermann Lightsolutions (display lighting); Kuehn Malvezzi (exhibition design); Drees & Sommer (project management); Keller + Keller (landscape design)
CLIENT: Städtisches Kunstinstitut

SIZE: 44,700 square feet
COST: approximately \$45 million
COMPLETION DATE: February 2012

SOURCES

SKYLIGHTS: Seele Sedak (glazing units); Zumtobel (LED solutions, controls); Imtech Deutschland (installation)
FREE-FORM CEILING: Ed. Züblin
FLOORING: R. Bayer Betonsteinwerk (terrazzo)
STAIRCASE: Pulver Baudekoration (stucco lustro)
WALLS: Baumgärtner Einrichtungen (mobile and fixed)

Introducing Hornet Downlight



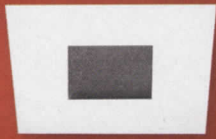
Round Pinhole
Shower



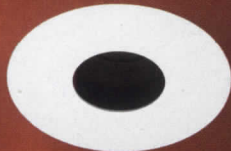
Square Pinhole



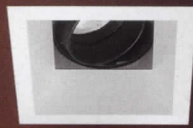
Round Adjustable



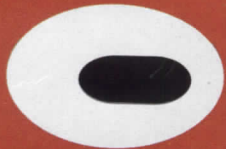
Square Pinhole
Shower



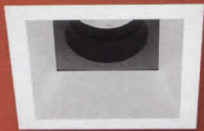
Round Pinhole



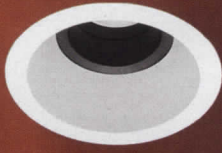
Square Adjustable




Round Pinhole Slot



Square Downlight



Round Downlight

hornet 

3.5" Downlights

- Round & Square
- 18w
- 85 CRI
- Up to 986 lm delivered
- Available in trimless

Small in size but big on performance. The new Hornet downlights deliver the output of the 20w ceramic metal halide, but with the control and crisp color of the MR16 halogen. Precise and accurate these high performers are destined to win you over.

For more information about the Hornet downlights please call **973.882.5010** or visit us at amerlux.com.

amerlux

CIRCLE 57

10 year limited
warranty
AMERLUX LED

Low profile. High performance.



data energy 68 CRI wet locations new long life standard 5-Year Warranty superior-garage LED 62.8 LPW powerful light L70 optimize spacing quality reliability stability TM-21 LM-80 100,000 hours high-performance reduce fixture count 97% reflective calculated 70% 5668 lumens delivered

REQUEST YOUR FREE SAMPLE LED LUMINAIRE
RABLED.COM

Designed beyond standards.
Engineered to perform.

RAB[®]
LIGHTING

A Master's Final Touch

Launched a year after her death, a new line of Italian-made glass lighting fixtures embodies the fluid, sculptural aesthetic that made Eva Zeisel a design icon.

By Rita Catinella Orrell

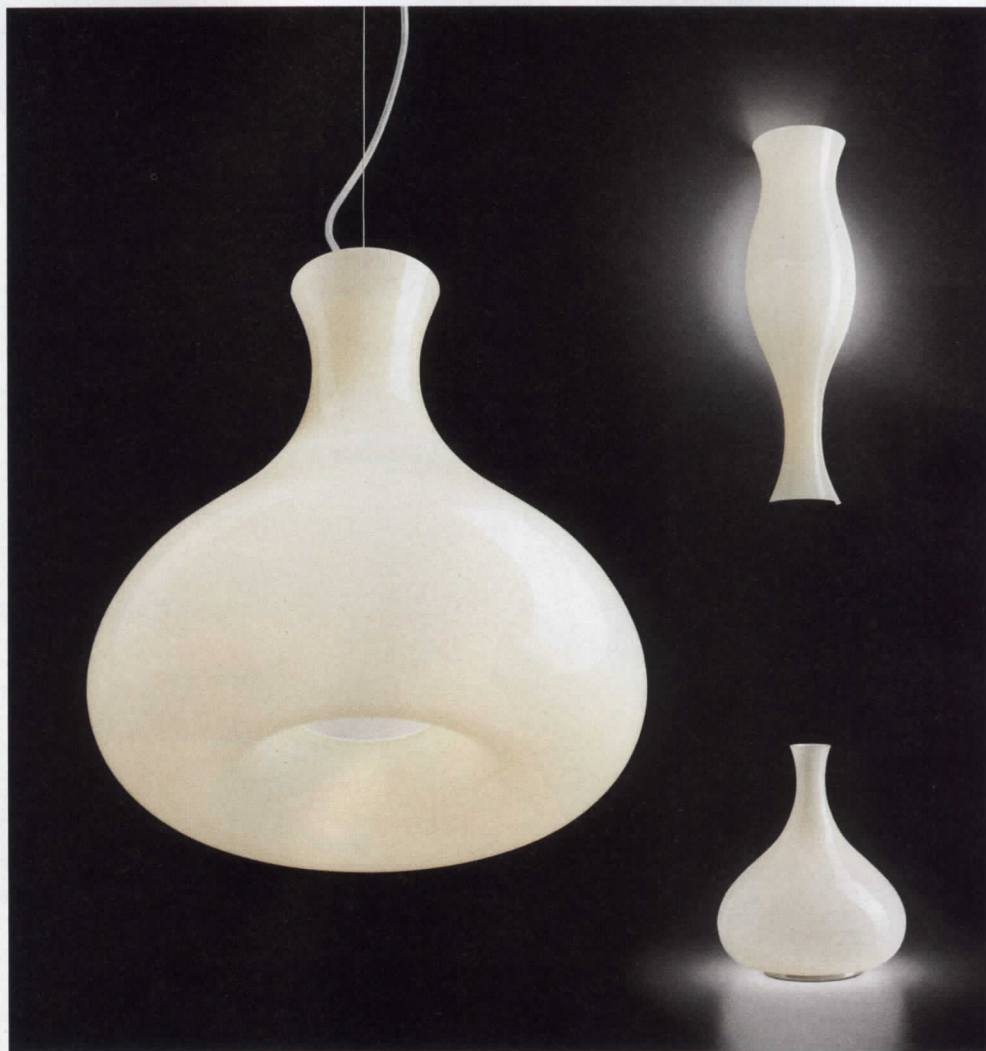


When Hungarian-born Eva Zeisel died in 2011 at the age of 105, she left behind a legacy as one of the most influential ceramic artists and designers of her generation. Her achievements, which include being the first woman industrial designer to have a solo show at MoMA in New York and founding the ceramic-industrial-design program at Pratt Institute, are even more impressive in light of her early struggles. Before emigrating to the U.S. in 1938, Zeisel endured a 16-month imprisonment in the Soviet Union during Stalin's reign and an escape from Nazi-occupied Austria.

The Eva Zeisel Collection of handblown Murano glass lighting fixtures, recently launched from Leucos, was "the last thing Eva designed with her own hands before she passed away," says Leucos USA president Josie A. Anthony, who first met with Zeisel on the project in 2010. Featuring the designer's penchant for sensuous, feminine forms, the line includes pendants, wall sconces, and table lamps in the rotund Summer design and the narrower Spring version. "The glassmakers had to stretch the limits of the art to bring some of the intricacies of Eva's designs to fruition," says Anthony. Suitable for residential and commercial use, the fixtures come in two colors and fit incandescent and fluorescent lamps.

New York's Museum of Arts and Design (MAD) has acquired the drawings, blueprints, molds, prototypes, and final pieces of the line and plans to exhibit them in a future show. "I believe she was one of the most important ceramic designers of the 20th century and on into the 21st," says MAD curator Ron Labaco. The new fixtures, he adds, "capture the essence of what was quintessentially Eva Zeisel—elegant and voluptuously curvaceous."

leucosusa.com CIRCLE 211



TOP: Eva Zeisel, shown here in 2006 in front of a pattern of her own design, died in December 2011 at the age of 105, one year after she began working on her last project. ABOVE: The Eva Zeisel Collection includes (clockwise from left) the Summer S pendant, the Spring S pendant, and the Summer T table lamp. FAR LEFT: Original wooden molds used for the line are now part of the permanent collection of New York's Museum of Arts and Design. LEFT: Glassblowers near Murano, Italy, work on early prototypes of the lamps.

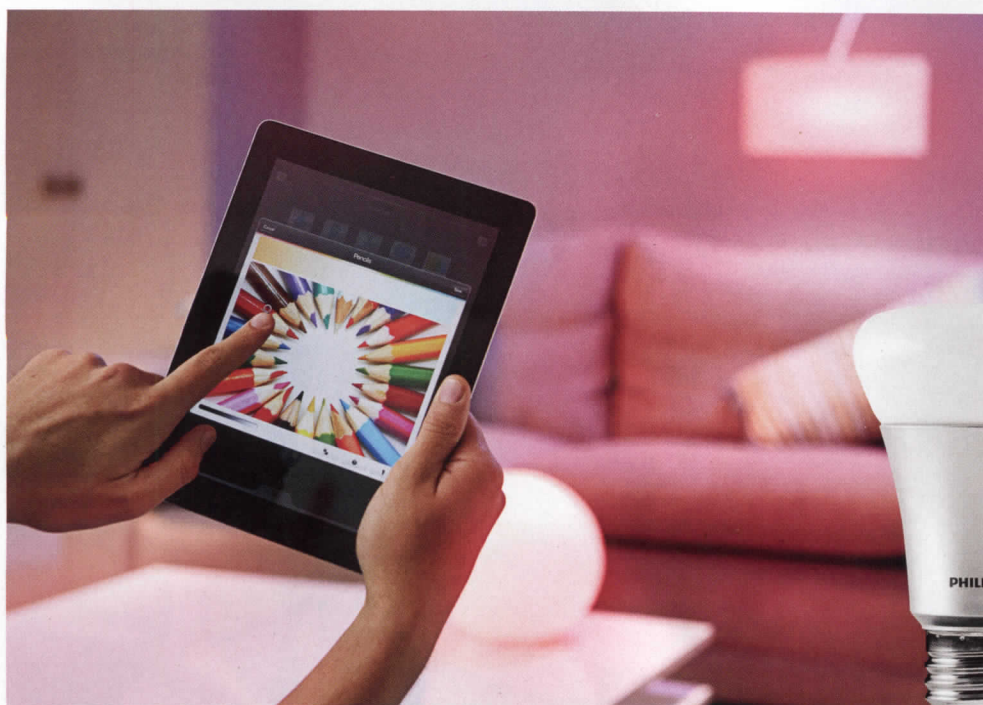
lighting **roundup**

THE LATEST OPTIONS INCLUDE FIXTURES WITH A RUGGED CHARM AND AN APP-CONTROLLED LIGHTING SYSTEM THAT CREATES CUSTOM COLOR ENVIRONMENTS WITH LED BULBS. BY RITA CATINELLA ORRELL

Crossroads Suspension

Tech Lighting's new Crossroads suspension luminaire is inspired by the glow of big-city streets and intersections at night. Made of sheets of raw steel—protected with a clear lacquer coat and accented by brass spot-welding at the joints—the 46"-long by 6"-high by 4.5"-deep fixture has a rugged, industrial look. Coordinating pieces include a 13" x 3" ADA-compliant wall sconce and a 10.5" x 3.5" low-voltage cylindrical pendant. All three fixtures come with halogen and LED (120-volt and 27-volt) lamping options. techlighting.com

CIRCLE 212

**Hue Web-Enabled LED Lighting System**

The Hue wireless lighting-control system includes three 50-watt-equivalent LED bulbs that fit into any standard light fixture, a bridge that connects to existing wireless routers, and an app that can individually manage up to 50 bulbs from any iOS or Android device. Using the ZigBee Light-Link standard, Hue bulbs can communicate with each other and have a broad signal range, regardless of the location of the bridge in a home or commercial space. The system can easily integrate with other ZigBee-based systems, such as motion sensors and home thermostats, and users can remotely create custom lighting environments from over 16 million colors. Hue will be exclusively available at Apple stores for \$199.

meethue.com

CIRCLE 213

**SR6 LED Downlight**

The SR6 LED architectural downlight from Cree Lighting Products delivers up to 1,800 lumens of 90+ CRI light, with efficacy of up to 75 lumens per watt, for applications including airports, hospitality, and museums. Combined with Cree TrueWhite technology, the SR6 delivers high-quality light with greater optical control than before, according to the manufacturer. The SR6 is available in a variety of color temperatures and with anodized-aluminum reflector finishes and out-of-the-box controls compatibility. cree.com

CIRCLE 214

**Vapor-Tight LED**

Acuity's OLV Series LED vapor-tight luminaire is an energy-efficient solution designed to protect against dust, moisture, and larger objects in factory, warehouse, retail, hospitality, or residential applications. A frosted-glass globe protects the LED and ensures even light distribution. The cast-aluminum fixture is UL-listed to U.S. and Canadian safety standards for wet locations and comes with a five-year limited warranty. lithonia.com

CIRCLE 215



MTR SQUARE

MONUMENTAL

The sleek, contemporary design is a compliment to today's modern exteriors. MTR Square offers refractor rings to reduce glare, enhance visual comfort and direct light. The "square" addition to the MTR family allows additional freedom into various landscape environments.

Project: The National September 11 Memorial, New York, NY — **Architect:** Michael Arad Project
Landscape Architect: Peter Walker (PWP Landscape Architecture) — **Lighting Designer:** Fisher Marantz Stone



To learn more,
visit us at selux.us

CIRCLE 22

selux



CASCADE COIL DRAPERY

Manufacturers of woven wire fabrics for partitions, window treatments, GuardianCoil blast mitigation screening, and other ornamental metal applications. Save energy by reducing heat loss and gain using Cascade Coil's versatile, unique, textured, flexible, and durable draperies. Manufactured to meet the needs of today's ambitious designers.

www.cascadecoil.com | 800-999-2645

Carrara Stadium
(formerly Metricon Stadium)
Gold Coast, Queensland, Australia

CIRCLE 50

The Best Pavements Are Invisible

Grasspave²



For 30 years, Invisible Structures has been manufacturing Grasspave2 - the premiere grass porous paver. Often times looking better than normal turf, Grasspave2 may be the invisible pavement you've never seen. Use Grasspave2 for fire lanes, parking lots, access roads, trails, road shoulders, and more.

invisiblestructures.com | 800-233-1510

CIRCLE 36

Loomis



PALISADE S15 LED
PIA[®] 11 Platinum Award

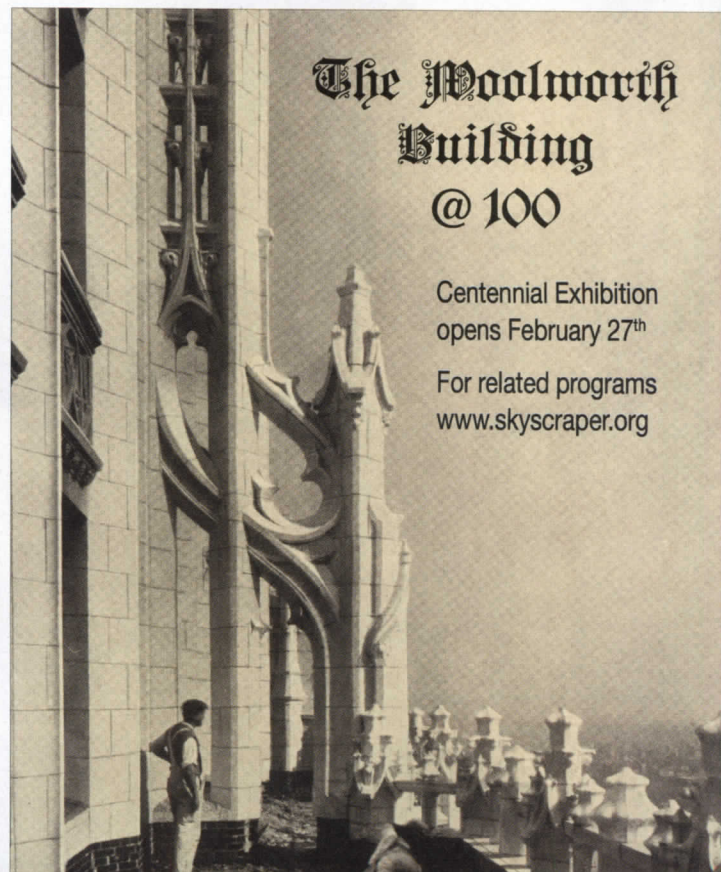
CHARLES LOOMIS, INC.
www.charlesloomis.com
800.755.0471

CIRCLE 69

The Woolworth Building @ 100

Centennial Exhibition
opens February 27th

For related programs
www.skyscraper.org



THE SKYSCRAPER MUSEUM

RESOLVE TO RENOVATE.



NEXT GENERATION GREEN RESTROOM DESIGN

The USGBC, SLOAN and Excel Dryer join forces to offer a new CEU Course, Next Generation Green Restroom Design (NGGRD). NGGRD shows architects and designers how to specify or retrofit the most cost effective, hygienic and green restrooms with today's newest technologies.

REDUCE

WATER UP TO 50% • COSTS BY 90% • CARBON FOOTPRINT OVER 70%

REQUEST INFORMATION AND PRICING

OR TAKE THE COURSE AT www.aecdaily.com
SEARCH "EXCEL DRYER" OR "SLOAN"



800-255-9235

www.exceldryer.com

SLOAN

800-982-5839

www.sloanvalve.com

CIRCLE 41

1.2 Million Roofs



1,200,000 metal roofs around the world utilize S-5!® attachment solutions to mount ancillary items. Perhaps this is because S-5! clamps install faster and easier than any other attachment solution available on the market today. Or perhaps it's because our patented round-point, zero-penetration setscrews maintain the roof's integrity and preserve the panel manufacturer's warranty. We suspect it's because with holding strength measured in tons and dependability measured in decades, roofing professionals can't afford NOT to use S-5!

1.2 million metal roofs and counting.
Always choose the best solution. Always choose S-5!

To learn more about S-5!® products, go to:
www.S-5.com/million or call 888-825-3432

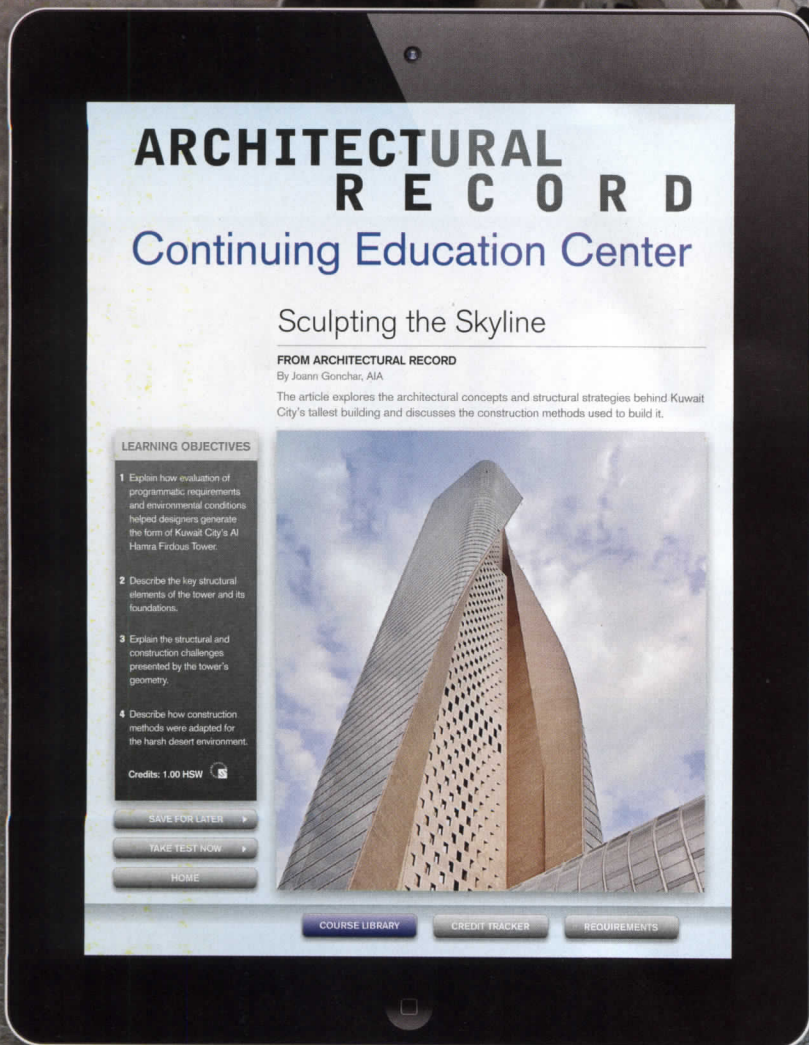
CIRCLE 60

S-5!®
The Right Way!

Snow Retention | Wind Performance | Fall Protection | Utility Attachment

LIBRARY.

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



Download free at iTunes. Sponsored by **Armstrong**

CEILING & WALL SYSTEMS



ecore™ | commercial flooring

Original Thinking. Original Ideas. Original Products.

ECORE Commercial Flooring is comprised of a portfolio of original, market leading commercial flooring brands: ECOsurfaces Commercial Flooring, QT Sound Insulation, Everlast Sports Surfacing with Nike Grind, ECO98, and Polyflor. To learn more about ECF, visit ecorecommercialflooring.com

CIRCLE 43



Healthy Outlook Family Medicine in Phoenix installed a 5,000-square-foot recycled rubber floor reflecting its commitment to an old-fashioned personalized approach combined with cutting-edge technology.

Sustainable Rubber Flooring for Healthcare and Education

Selecting floors where performance matters most

Sponsored by ECORE | By Layne Evans

The dramatic rise in births immediately after World War II led to a boom in more than babies. Demand exploded for every type of consumer product from toothpaste and cereal to televisions and cars, houses in the suburbs, schools and hospitals to serve them, and roads to drive there. Now as the first boomers move into their 60s, once again the sheer number of that generation is driving a wave of growth and innovation. At the other end of the age curve, concepts in educational facilities are also morphing, as current infrastructure deteriorates and the requirement for high performance increases. In both healthcare and education, demographic trends are shaping new models far beyond traditional schools and hospitals, many of which were first built to accommodate the boomers during the 1950s and 60s.

The new spaces will have to meet the specific needs of a changing population while making the least possible demand on limited financial and natural resources. They will serve people young and old, often those in most need of

protection and support. Innovation in design, materials, and products will be the only way forward. This course will focus on selecting floors that are sustainable throughout their life cycle, as they provide a basis for the healthy, positive, mission-enhancing spaces we need now.

In 1945, U.S. births averaged around 2.8 million a year, as they had during the 1930s. In 1946 that number grew to 3.47 million, and this dramatic increase continued through 1964. Today's population explosion in this country is of senior citizens. About half of the total population growth in the U.S. over the next 20 years is expected to be people over age 65. The baby boomers are aging—but it's a different kind of "age" than ever before. For one thing, it's much longer. A hundred years ago, people who reached age 65 could expect to live about 12 more years. Today, according to the Centers for Disease Control, this figure is closer to 19 years. So the approximately 71 million people turning 65 in the coming years can expect to live another couple of decades.

The need for healthcare is growing, but at the same time, people over 60 are often healthier, living longer, and demanding changes in the way older people function in society. This affects the old concepts of "hospital" and "nursing home" and even "healthcare establishment," as more people choose to "age in place" and want to build healthcare into their home. The demand is growing for active retirement communities, assisted living facilities at every level of support from lawn services to 24-hour medical care, long-term care facilities for higher acuity patients, and outpatient and other special-care facilities for services like joint replacement and elective surgery.

Renovation is also a strong trend. Often these are modifications to homes of baby boomers who want to age in the same place they raised their children, or move to smaller homes in urban areas where density means less driving and more cultural opportunities. But "traditional" hospitals are undergoing renovation as well. According to a survey conducted by *Health Facilities Management*

Photo courtesy of ECORE



Resilience is essential in flooring for educational facilities, making a daily difference in the safety and comfort of teachers and kids alike. Designers of City Hall Academy at the Tweed Courthouse, New York, New York (Architect: Loffredo Brooks Architects) were also committed to making the city facility an excellent example of environmental responsibility, so sustainability in all materials was a priority. But the ability of recycled rubber flooring to incorporate almost any combination of color, pattern, or artwork also brought an opportunity to make the entire floor a teaching moment: a waterjet-cut Technicolor map of the city.

magazine and the American Society for Healthcare Engineering (ASHE), 73 percent of construction is currently for facility renovation and modernization to be greener and more patient friendly, and to update information technology infrastructure and facilitate greater clinical integration within the facility and among healthcare providers (*Health Facilities Management*, February 2011). The 2012 introduction of Medicare's 30-day return stay rule, part of the Affordable Care Act, is driving health systems to manage patient care better and improve readmission rates.

SCHOOL CHANGE

Although they are probably getting the most press (as they have since 1946), the baby boomers are not the only part of the population driving innovation in facilities. Changing patterns of fertility, immigration, and education, together with a school infrastructure that is crumbling in many places, will require both investment and

rethinking. The picture for educational facilities is complex, and varies significantly by region and even by district. New schools are still being built, especially in western and southern states where demand is high. But renovation is a strong trend in education just as in healthcare. Many existing schools were first built when baby boomers were babies, and some schools are even older. In districts where budgets are tight and approval for new construction takes years and can change with the political climate, funding for small improvement projects is often less difficult.

School districts in the U.S. spent just over \$12.24 billion on construction projects completed during 2011, including 56.4 percent on new schools (\$6.9 billion). The rest of the construction was split between additions to existing buildings (\$2.69 billion) and retrofit and modernization (\$2.65 billion).

The outlook for educational construction has a lot of "ifs." This includes the size of budget cuts and the fate of the proposed American Jobs

Act, which would make a \$25-billion investment in school infrastructure to modernize at least 35,000 public schools, and a \$5-billion investment in modernizing community colleges.

These new schools and renovations are likely to be highly innovative and sustainable, as the design of high-performance schools has advanced dramatically in recent decades. This is in response to new technologies in the classroom, empowered parents, and growing evidence that informed design of classroom spaces has a positive impact on the health and performance of both teachers and students. Renovations are often undertaken specifically to improve energy efficiency and cut costs. As with healthcare, new concepts of educational facilities are emerging, including schools as community centers, as places for retraining and lifetime learning, and as physical buildings to support distance learning and other technology-based education.

▶ Continues at ce.architecturalrecord.com

CONTINUING EDUCATION



EARN ONE AIA/CES HSW/SD
CONTINUING EDUCATION HOUR (CEH)

Learning Objectives

After reading this article, you should be able to:

1. Discuss demographic trends affecting healthcare and educational facilities, and challenges involved in selecting flooring that meets their specific requirements but is also highly sustainable.
2. Explain how recycled rubber flooring meets key performance criteria such as sustainability, ergonomics, acoustics, indoor air quality, and the use of color and aesthetics to promote healing and learning.
3. Compare the life-cycle cost and environmental impact of recycled rubber flooring to other flooring materials, including cost, installation, maintenance, and life span.
4. Recognize the factors distinguishing the most sustainable recycled rubber products, including innovative renewable sources, manufacturing with low energy, green maintenance, durability, and end-of-life reclamation.

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

AIA/CES COURSE #K1302B

Advertisers Index

Get Free Information

from our advertisers! Fill out this Reader Service Card and send back today or go to ArchRecord.com > Products tab > Reader Service

Reader Service #	Advertiser	Page	Reader Service #	Advertiser	Page	Reader Service #	Advertiser	Page
58	Acuity Brands acuitybrands.com/integration	7	72	E. Dillon & Company edillon.com	15	29	Oldcastle® Architectural EnduraMaxWallSystem.com	33
75	AluFlam USA aluflam-usa.com	140	43	ECORE ecorecommercialflooring.com	133	70	Pella Commercial pellacommercial.com/uuwH	65
	American Architectural Foundation archfoundation.org	30	67	ECORE ecoreintl.com	134-135	27	Petersen Aluminum Corporation PAC-CLAD.com	12
57	Amerlux amerlux.com	125		ENR FutureTech Conference enrfuturetech.com	141	77	Pine Hall Brick Co. americaspremierpaver.com	63
	Architectural Record Continuing Education App archrecord.com	132		ENR Global Construction Summit construction.com/events/2012/globalsummit/	18-19	25	RAB Lighting RABLED.com	126
56	Armstrong armstrong.com/serpentina	cv2-1	41	Excel Dryer, Inc. exceldryer.com	131	24	Rocky Mountain Hardware rockymountainhardware.com	20
55	ATAS International, Inc. atas.com	51	59	Feeney feeney10.com	117	60	S-5! Solutions S-5.com/million	131
79	BEGA bega-us.com	68	40	Glen Raven glenraven.com/firesist	31	23	SAFTIFIRST Fire Rated Glazing Solutions safti.com/ar	27
53	Belden Brick beldenbrick.com	60	66	Gordon Incorporated gordon-inc.com	115	71	SageGlass sageglass.com	56
52	Bluebeam Software Inc. bluebeam.com/digitize	41	39	Harmonic Environments HarmonicEnvironments.com	48	22	Selux selux.us	129
51	Bluworld of Water bluworldusa.com	32	67	Hewlett Packard hp.com/go/newdesignjet	29	76	Seves Glass Block sevesglassblock.com	118
73	C.R. Laurence Co., Inc. crlaurence.com	61	38	Huber Engineered Woods ZIPSystem.com/record2	50		Skyscraper Museum, The skyscraper.org	130
50	Cascade Coil Drapery cascadecoil.com	130	37	Icynene Inc. icynene.com	47	20	Sloan Valve Company sloanvalve.com	40
64	CENTRIA centria.com	39	36	Invisible Structures Inc. invisiblestructures.com	130	19	State Farm st8.fm/bizinsurance	35
49	CertainTeed Ceilings certainteed.com	36	35	Julius Blum & Co. Inc. juliusblum.com	42	18	Steel Institute of New York/ Ornamental Metals siny.org	6
80	CertainTeed Gypsum CertainTeed.com/Sustainable	21	74	Kim Lighting kimlighting.com	119		Sweets Mobile App sweets.com	116
69	Charles Loomis charlesloomis.com	130	78	Louis Poulsen louispoulsen.com	44		Sweets.com sweets.com	142-143
61	Collins CollinsWood.com	67	62	Lucifer Lighting luciferlighting.com/nextgenerationLEDs	cv3	63	Technical Glass Products fireglass.com	10-11
47	Construction Specialties, Inc. c-sgroup.com	17	33	Lutron lutron.com/redifne	cv4	17	ThyssenKrupp Elevator Corporation thyssenkruppelevator.com	9
46	Coverings coverings.com	62	32	Marvin Windows and Doors pros.marvin.com/inspired	25	16	Trex Trex.com	22
	Dodge International DodgeNetworkInternational.com	4-5	31	Metal Construction Association insulatedmetalpanels.org	139	65	UL ul.com/newscience	43
45	Doug Mockett & Company Inc. mockett.com	24	30	modularArts modulararts.com	8	81	UL ul.com/coderesource	59
44	Duravit duravit.us	49		National Building Museum nbmshop.org	138	14	Xypex xypex.com	66
42	Duro-Last Roofing Inc. duro-las.com/get-rolling	64	28	Oldcastle BuildingEnvelope® BIMIQ.com	2-3			

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 > Products tab > Product Ads

Get more info at www.sweets.com

PRODUCT SPOTLIGHTS

Advertisement

INTERIOR FINISHES, FURNISHINGS

NOISE CONTROL PANELS

Eckel Industries, Inc.

▲ Attractive sound-absorbing Eckoustic® Functional Panels (EFPs) provide a quick, convenient method of reducing background noise and reverberation in rooms.

Product Application:

- High-acoustic-performance wall and ceiling panels for recreational, athletic, educational, religious, cultural, commercial, correctional, and institutional facilities; ideal for renovation projects and for new construction; available in virtually any color

Performance Data:

- Durable, graffiti- and fire-resistant



www.eckelusa.com

617.491.3221 | **Contact:** eckel@eckelusa.com

Circle 150

INTERIOR FINISHES, FURNISHINGS

DESIGN HEALTHIER SPACES

\$\$ | G | NEW

CertainTeed Ceilings

▲ VOC Compliant Symphony® f ceilings let you create a healthier, more sustainable environment and are third-party tested for emissions compliance.

Product Application:

- Open plan areas
- Offices
- Healthcare

Performance Data:

- Meets many LEED programs' VOC requirements
- Overtone® finish creates smooth, brilliant surface



CertainTeed.com/Ceilings

800.233.8990 | **Contact:** Customer Service

Intex Expo Booth #501

Circle 151

MATERIALS

INSULATED METAL PANELS

WR | G

Metal Construction Association

▲ Insulated metal panels deliver the highest R-value per inch, consistent insulation, unlimited design options, and exceed energy code requirements.

Performance Data:

- Highest R-value per inch
- Exceed energy code requirements
- Quick installation, low maintenance
- High-performance building envelopes
- Virtually endless design options



www.insulatedmetalpanels.org

Circle 152

MATERIALS

ALUMINUM RAILING

WR | G | NEW

Trex

▲ Trex Reveal™ Aluminum Railing—minimalist style, maximum strength. It spans long lengths for panoramic sightlines on decks, balconies, and commercial installations.

Performance Data:

- Minimal look for sleek, contemporary aesthetic; increases visibility to maximize scenic views; powder coating retains color, resists corrosion; low maintenance and strength, for commercial applications; 25-year limited residential warranty



www.Trex.com

800.BUY.TREX | **Contact:** Leslie Adkins

Circle 153

MECHANICAL SYSTEMS, HVAC, PLUMBING

MAKE THE DRAIN DISAPPEAR

WR

Infinity Drain

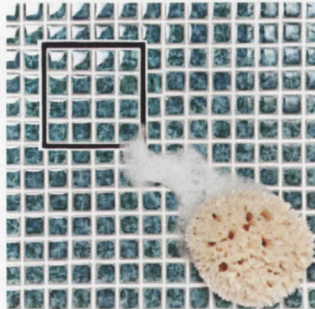
▲ Incorporate tile or solid surface material into the grate frame for a virtually seamless installation.

Product Application:

- Use for a centrally placed drain

Performance Data:

- Floor sloped in four directions
- Sizes: 5 in. x 5 in., 8 in. x 8 in., or 20 in. x 3 in.
- Use any flooring material up to 3/4 in. thick
- Choose from bonded flange or clamping drain assembly



www.InfinityDrain.com

516.767.6786 | **Contact:** Info@InfinityDrain.com

Circle 154

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ARCHITECTURAL CONCRETE CLADDING

WR | G

Easi-Set Worldwide

▲ Slenderwall is a 30 lb./sf award-winning architectural precast concrete and steel-stud exterior panel system that can contribute to LEED and Net Zero projects.

Product Application:

- BioInnovation Center, New Orleans, LA
- Westin Luxury Hotel, Virginia Beach, VA
- Hilton Gardens, Montreal, Quebec, Canada

Performance Data:

- Optional factory-installed closed-cell foam insulation and windows, no infiltration—guaranteed



www.slenderwall.com

800.547.4045 | **Contact:** Moffette Tharpe

Circle 155

SPECIALTY PRODUCTS

ARCHITECTURAL WIRE MESH

WR | G

The Gage Corporation, Int.

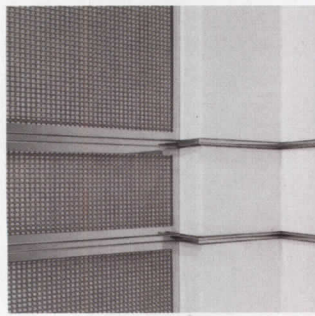
▲ GageWoven® is an innovative collection of 23 designs suitable for elevator lobbies and cab interiors, plus other architectural fabrication.

Product Application:

- Atlantic Station, Atlanta, GA
- Calgary Zoo, Calgary, Canada
- State Street Bank, Quincy, IL

Performance Data:

- Wide variety of metals available including stainless steel, aluminum, copper, and commercial bronze
- Powdercoat finish available



www.gagecorp.net

800.786.4243, 608.269.7447

Circle 156

CLASSIFIEDS

POSITION VACANT

WWW.SMPCSCAREERCENTER.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

Good Design Is Good Business

CALL FOR ENTRIES

The editors of **ARCHITECTURAL RECORD** are currently accepting submissions for the **2013 ARCHITECTURAL RECORD GOOD DESIGN IS GOOD BUSINESS** awards program (formerly the BusinessWeek/Architectural Record Awards). Good design is a priority for leaders of business and industry looking to boost productivity, rebrand, and attract customers. The Good Design Is Good Business awards honor architects and clients who best utilize design to achieve such strategic objectives. Winners will be published in the June 2013 issue.

The fee is US\$150 per entry and \$50 for each additional project. Download the official entry form at architecturalrecord.com/call4entries. E-mail questions to arcallforentries@mcgraw-hill.com. Please indicate **GDGB** as the subject of your e-mail. **SUBMISSION DEADLINE: 2/15/2013.**



REMEMBER BOOKS?!

Winter Book Sale

All books in the Museum Shop are 25% off in-store during the entire month of February.

Additional member discounts do not apply. Every Museum Shop purchase supports the National Building Museum.

www.nbishop.org
202.272.7706
Washington, D.C.



New and Upcoming Exhibitions

Voices of Design: 25 Years of Architalx

Portland, Maine

February 2–May 19, 2013

This interactive exhibition at the Portland Museum of Art celebrates the 25th anniversary of Architalx, a nonprofit organization that hosts talks and other educational programming for architects and designers in Maine. Visitors can browse Architalx's archive of voice, text, and images from lectures by many of the leading architects and designers of the last quarter-century. For more information, visit architalx.org.

Lebbeus Woods, Architect

San Francisco

February 16–June 2, 2013

This exhibition at the San Francisco Museum of Modern Art brings together 75 works from the past 35 years by one of the most influential architects working in the field. Recognized beyond architecture, Woods (1940–2012) has been hailed by leading designers, filmmakers, writers, and artists alike as a significant voice in recent decades. His works resonate across many disciplines for their conceptual potency, imaginative breadth, jarring poetry, and ethical depth. For more information, visit sfmoma.org.

The Way We Live: Iwan Baan

Los Angeles

February 20–April 13, 2013

Architecture photographer Iwan Baan's aerial image of a post-hurricane Manhattan became a viral sensation following its publication on the cover of *New York* magazine. This work will be a centerpiece in Baan's first exhibition with the Perry Rubenstein Gallery in Los Angeles. Baan's artistic practice examines how we live and interact with architecture, focusing on the human element, which brings buildings, intersections, and public gathering places to life. For more information, visit perryrubenstein.com.

Ongoing Exhibitions

Ezra Stoller: Beyond Architecture

New York City

Through March 2, 2013

This exhibition at the Yossi Milo Gallery highlights Ezra Stoller's rarely seen black-and-white images of industry, technology, transportation, and working-class Americans during the mid-20th century, as well as photographs in color. With images selected

from the entire Stoller archive of more than 50,000 images, the exhibition includes views of postwar American factories, construction sites, hydroelectric dams, and printing plants. For more information, visit www.yossimilo.com.

Traces of Peter Rice

London

Through April 5, 2013

Marking 20 years since his death, this exhibition at Arup Phase 2 focuses on structural engineer Peter Rice's contribution to five significant design projects: the Centre Pompidou and the Cité des Sciences et de l'Industrie, Paris; the Menil Collection,


Houston; the Full-Moon Theatre, Gourgoubès; and a proposal for the Groningen Museum in the Netherlands in collaboration with artist Frank Stella. The exhibition features prototypes, maquettes, drawings, paintings, photography, and a new documentary film. For more information, visit arup.com.

Seismic Shifts: 10 Visionaries in Contemporary Art and Architecture

New York City

Through May 5, 2013

Artists and architects whose work challenges disciplinary boundaries and raises critical social, environmental, and political issues are

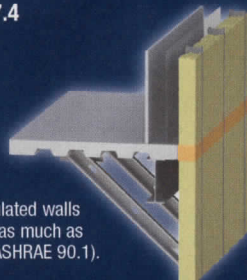


IMPRESSIVE THERMAL PERFORMANCE

Insulated Metal Panels

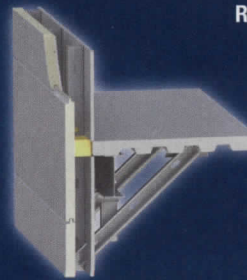
- Highest R Value per inch
- Consistent insulation
- Exceed energy code requirements
- Virtually endless design options
- Quick installation, low maintenance

6" Traditional Stud Insulated Wall
R-7.4



Traditional stud insulated walls reduce the R-Value as much as 65% (according to ASHRAE 90.1).

3" Insulated Metal Wall Panel
R-21



FOR MORE INFORMATION, VISIT WWW.INSULATEDMETALPANELS.ORG



Fire Protection.
Design Perfection.

aluflam

Fire-Rated Aluminum
Window And Door
Systems

For beauty, the best in safety and design flexibility look to Aluflam. Built to blend effortlessly with non-rated storefront and curtain wall systems, our virtually limitless portfolio includes true extruded aluminum vision doors, windows and glazed walls fire-rated for up to 120 minutes. You'll see why we've become the favorite of architects and installers alike. Aluflam gives you a barrier to fire, not inspiration.



Aluflam USA
Phone 714-899-3990 | Fax 714-899-3993
Email info@aluflam-usa.com
www.aluflam-usa.com

dates&events

recognized in this special exhibition at the National Academy. *Seismic Shifts* showcases seminal work by Nick Cave, Thornton Dial, Tom Friedman, Vik Muniz, Wangechi Mutu, Betye Saar, and Bill Viola, as well as recent projects by architects Greg Lynn, Kate Orff, and Moshe Safdie. For more information, visit nationalacademy.org.

Lectures, Conferences, and Symposia

International Design Festival

Washington, D.C.

February 21–May 19, 2013

What makes an object useful, engaging, and beautiful? What is it about a distinct design that conveys calm, wonder, and excitement in the user and helps us recall a moment in time? This free, three-month-long multidisciplinary celebration of design at Artisphere features *The Next Wave: Industrial Design Innovation in the 21st Century*, a 4,000-square-foot exhibition exploring innovation in product design from Spain, Italy, Belgium, the U.K., Scandinavia, and the United States over the last 13 years. For more information, visit artisphere.com.

Sharjah Biennial 11

Sharjah, United Arab Emirates

March 13–May 13, 2013

For Sharjah Biennial 11, curator Yuko Hasegawa has solicited a selection of artworks that reassess the Western-centrism of knowledge in modern times. A selection of architects and cultural practitioners from Lebanon, India, Belgium, Japan, Spain, and elsewhere have been asked to create temporary architectural interventions that connect Sharjah's historic area and its courtyard typology with the larger city. Artists invited to create work for the Biennial include Saadane Afif, Yang Fudong, Studio Mumbai, Kazuyo Sejima, and Wael Shawky. For more information, visit sharjahart.org.

Public Interest Design Week

Minneapolis

March 19–24, 2013

The College of Design at the University of Minnesota and PublicInterestDesign.org are hosting the first Public Interest Design Week. Public-interest design lies at the intersection of design and public service, representing a human-centered approach for the delivery of design services that aims to help people live better lives, regardless of their socioeconomic background. Speakers include *New York Times* architecture critic Michael Kimmelman, D-Rev: Design Revolution CEO Krista Donaldson, and

filmmakers Richard Neill and Lee Schneider. For more information, visit design.umn.edu.

Competitions

The Architectural League Prize for Young Architects + Designers

Submission Deadline: February 19, 2013

Young architects and designers are invited to submit work to the annual Architectural League Prize competition. Projects of all types, either theoretical or real, and executed in any medium are welcome. The jury will select work for presentation in lectures, digital media, and an exhibition in June 2013. For more information, visit archleague.org.

Radical Innovation: Hospitality Concepts

Submission Deadline: March 1, 2013

This awards program honors innovative ideas in the field of hospitality design. Any hospitality experience and/or project, built or unbuilt, qualifies for entry. Concepts must include guest rooms/suites and lobby/public areas. Including food and beverage facilities is optional but recommended. Submissions are scored on potential impact on the industry, design creativity, narrative, and viability. For more information, visit radicalinnovationinhospitality.com.

Timber in the City: Urban Habitats

Registration Deadline: March 6, 2013

This competition challenges architecture students and young professionals, working individually or in teams, to design a mid-rise, mixed-use complex for a site in the Brooklyn waterfront neighborhood of Red Hook. A panel of judges will award winners with cash prizes totaling \$30,000, and the projects will be exhibited at the Association of Collegiate Schools of Architecture meeting and the AIA convention, both in 2014. For more information, visit aca-arch.org.

Bentley System's 2013 Design Competition

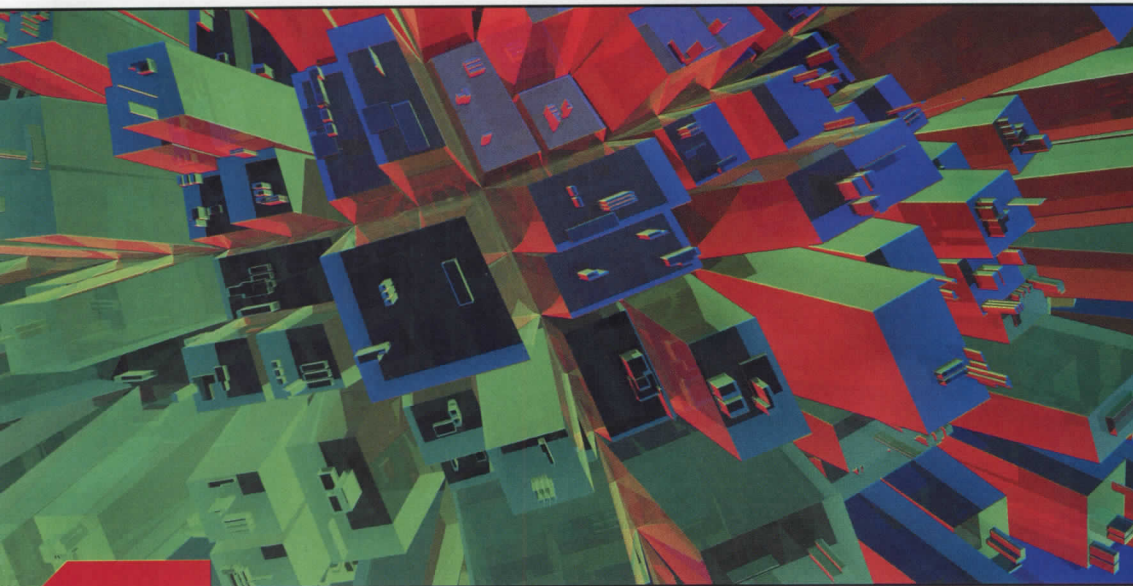
Submission Deadline: April 5, 2013

University, college, high school, and technical-school students must submit projects designed using Bentley software, along with a short essay describing their work. Project submissions will be judged by an independent panel of educators and industry professionals from around the world. The judges will assess creativity and skill in applying design and engineering principles. For more information, visit bentley.com.

E-mail information two months in advance to recordevents@mcgraw-hill.com. For more listings, visit architecturalrecord.com/news/events.

ENR FutureTech Conference

EXPLORING THE FUTURE OF TECHNOLOGY IN THE CONSTRUCTION INDUSTRY



14 MARCH 14, 2013

 SAN FRANCISCO

 HYATT REGENCY

 **REGISTER**
 enrfuturetech.com
 800-371-3238

 STANDARD RATE: \$495

 TOPICS

- *Virtual Gets Physical: New Devices to Bridge the Divide*
- *The Rise of "Super Subs": Will They Become the Drivers of the Industry?*
- *What Owners Want: The Technology Skills They Value Most in Selecting Project Teams*
- *Computational Design*
- *Digital Cities: BIM on an Urban Scale*

DECODE THE FUTURE OF CONSTRUCTION TECH

Join us for ENR's 4th FutureTech Conference, and be among the first to explore the latest and future uses of design and construction technology. We'll look at the new devices bridging the gap between virtual vision and physical reality; the use of BIM in urban scale design; the rise of "Super Subcontractors" driving the early adoption of advanced modeling and production technologies; and examine which technology skills owners value most when selecting project teams. The future will be here before you know it. Register today!

Platinum Sponsors:



Autodesk®

Silver Sponsors:





Sweets.com

Find all the product information you need, all in one place.

- *77,000 Registered Users
- 8,937 Products
- 2,821 Product Catalogs
- 863 Green Information
- 2,193 Project Galleries
- 4,768 Specifications
- 20,320 CAD/BIM
- 807 3D Models

Kawneer Co., Inc.

MasterFormat Classification:
08 44 00 Curtain Wall

- Product Catalogs
- Green Information
- Project Galleries
- Specifications
- CAD/BIM
- 3D Models

Sargent

MasterFormat Classification:
08 71 00 Door Hardware

- Product Catalogs
- Green Information
- Project Galleries
- Specifications
- CAD/BIM
- 3D Models



Super Sky Products, Inc.

MasterFormat Classification:
08 63 00 Metal Framed

Skylights

Catalogs

Green Information

Project Galleries

Specifications

CAD/BIM

3D Models

C.R. Laurence Co., Inc.

MasterFormat Classification:
08 42 00 Entrances

Product Catalogs

Green Information

Project Galleries

Specifications

CAD/BIM

3D Models

Curries

MasterFormat Classification:
08 13 00 Metal Doors

Product Catalogs

Green Information

Project Galleries

Specifications

CAD/BIM

3D Models

THIS NEW social-housing complex in Champigny-sur-Marne, outside Paris, is dubbed Urban Collage, but what really is going on here is more of a suburban ménage à trois. Paying homage to the neighborhood's existing mix of residential styles, architect Maison Édouard François created an intriguing discourse by stacking single-family residence atop housing block atop townhouse. "We didn't want to ignore this urban chaos," says architect Eitan Hammer. "We decided to identify it and work with it." A single concrete structural system runs between the typologies, starting with the copper-, zinc-, or ceramic-tile-clad townhouses at the base, on through the stucco components above. Unique entrance sequences and skewed orientations bring further variety to each piece of this most unusual design for living.

Beth Broome



DESIGN. DEFINE. DISAPPEAR.

Get everything you expect from an LED fixture....
and all kinds of things you didn't.

With our new point-source LEDX downlights, you get the features you need to create the effects you want. Fixed, adjustable, wallwash and wet location options. Five year warranty. Four color temperatures. Lumen packages from 700lm (14W) - 3000lm (53W). Zero-sightline flush and flange overlay installations, for new construction and remodel. Most importantly, you can count on absolute color temperature consistency over time between fixtures, for tens of thousands of hours, year after year.



For more information, please visit:
www.luciferlighting.com/nextgenerationLEDs

LUCIFER
LIGHTING COMPANY

Redefine what's possible with Lutron shading solutions

Challenge

Uncontrolled daylight creates glare and excess heat.

Solution

Lutron shades transform this atrium into a comfortable, dynamic space.



Calvert High School—Prince Frederick, Maryland



To meet the needs of this unique space:

- Lutron worked closely with the architect to tailor its skylight shading solution.
- 108 skylight shades and 26 roller shades operate in unison at the touch of a single button.

Witness the transformation firsthand. ▶

Video case study online—www.lutron.com/redefine
To learn more call 1.800.523.9466 for 24/7 support.



"It's awe-inspiring. When the shades move, you completely change the experience of the space."

Ran Ilkovitch, NCARB, AIA
Principal, Smolen Emr Ilkovitch Architects

