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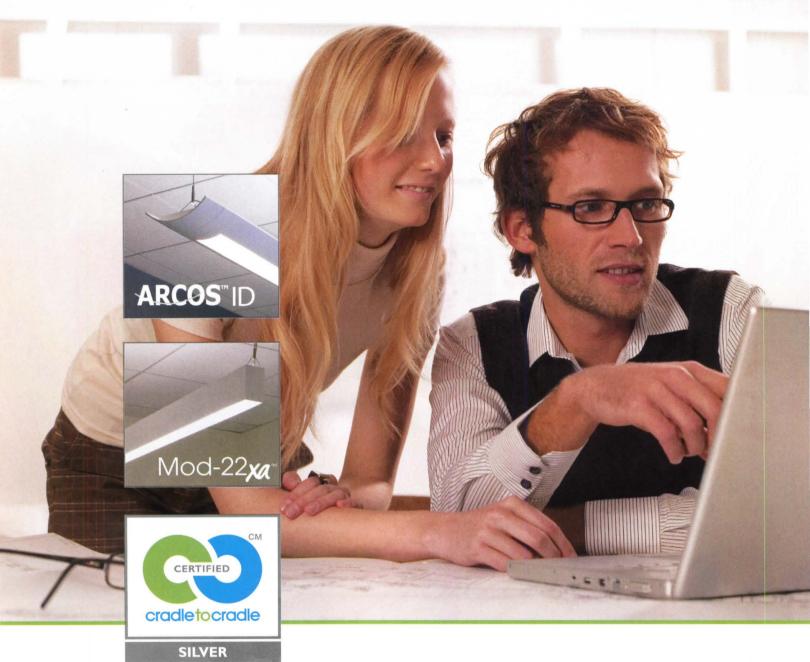


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Callum MacBean, principal and managing director of Gensler's Shanghai and Beijing offices, from "Global Truths," page 82.



**ON THE COVER** Felix, a ring-tailed lemur. Photograph by Jill Greenberg.

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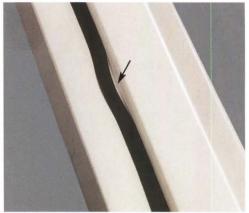
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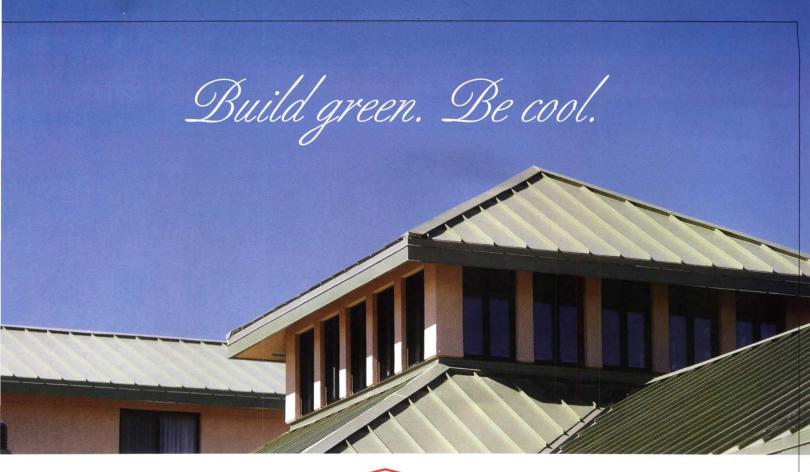
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# PREFAB IS FAB, BUT ONLY HALF THE BATTLE



**IT'S JUST WONDERFUL** that The Museum of Modern Art in New York has staged the exhibition "Home Delivery: Fabricating the Modern Dwelling" [this issue, page 57]. In the abstract, which at MoMA amounts to a state of grace, prefab offers a logical, cost-effective solution to housing. And back in the real world, manufacturing certainly does have major benefits, like the potential for strict quality control and economies of scale. Still, I have my doubts. Assuming the goal is to improve housing in the United States, is prefab really the right issue to address?

Ned Cramer Editor in Chief Manufactured housing is hardly a ground-breaking idea. As curator Barry Bergdoll carefully outlines in the exhibition, architects and others have been kicking around the concept for more than a

century. Remember Le Corbusier's Maison Dom-ino? He planted that chestnut back in 1914. Not that old age makes prefab worthless. "Home Delivery" can point to interesting recent advances in sustainable design and technology, CNC fabrication, and other areas. But not only is prefab not new, it's not uncommon either.

Today's home builders, especially giants like Toll Brothers and D.R. Horton, have their own sophisticated strategies for fabrication and installation. Stroll through the International Builders Show (affectionately known here at Hanley Wood as "IBS"), and you'll see legions of manufacturers offering ostensibly well-made, off-the-shelf components: windows and doors, framing systems, and so on. With home builders and product manufacturers so alive to assembly-line thinking, what's the point of "Home Delivery"? It can't hurt to push home builders toward ever more innovative and efficient methods, but I suspect the institution's motives were largely about aesthetics.

Granted, the aesthetics of the average new house are cause for concern. In the wrong hands, all those off-the shelf parts don't amount to much. To get a sense of what's out there, check out the 22,000 models at Dream Home Source, Hanley Wood's house-plan website. It's a mixed bag. There are some lovely traditional schemes on the site, and there are some unfortunate modern ones, and vice versa. The problems, where they arise, are universal design flaws: awful proportions, awkward layouts, ungainly massing. So the issue is quality, not style. Even "Home Delivery" says as much. Bergdoll broke with MoMA's modern-first institutional mandate and included a full-scale prototype of a traditional house, namely a New Orleans cottage designed by MIT students under the leadership of assistant professor Lawrence Sass. If gingerbread Victorian (albeit laser-cut) is okay for MoMA, isn't it time to put the debate over style to rest?

The design quality and production methods of an individual housing unit are important issues, but I suspect sprawl has a greater overall impact on aesthetics, the environment, and society. A big part of me wishes that Bergdoll had applied his formidable brainpower and MoMA's formidable resources to the subject of community planning instead of prefab. But I suspect it would be difficult to mount such an exhibition. The results could prove embarrassing. The kinds of architects who get into shows at MoMA have made great strides in form making and fabrication, as exemplified in "Home Delivery," but they've made no equivalent advances in planning. Right now, like it or not, the New Urbanism is the only game in town. It's the only cohesive planning strategy to emerge out of architecture and take hold since the demolition of Pruitt-Igoe in St. Louis in 1972—an event about which modern-minded architects are still in denial. About two years ago, I gave a lecture in which I made reference to "the failure of modern planning," prompting one well-known progressive architect to shout, "The *perceived* failure!" Give me a break.

#### **The Next Starbucks**

I just received the July issue, and the article ["The Next Starbucks, page 52] was just what I thought it would be. I am a manager at a Starbucks, and it was very interesting to see your outlooks for the company. "Art vs. Fuel" was my favorite design because it addresses my store's particular drawbacks. I love this idea and hope Starbucks takes notice, because these are things that it has lost along the way.

Stephanie Jergens Niceville, Fla.

I recently read your article about third places. First let me say, "Great job"; it's so nice that people are finally talking more about third places. We started Third Place Café nearly a decade ago and have been having third place conversations ever since, but only in the past few years has it seemed like others wanted to talk about it. Much of what the architects in your article shared are ideas we discuss with clients every day. Thanks for bringing more attention to this timeless area.

Michael Trent Third Place Consulting michael@thirdplaceconsulting.com

Starbucks has just completed a new shop in Ocala, Fla., which can only be described as the ugliest building in America—and all points north, south, east, and west. And believe me, we have our share of ugly architecture here in Florida. It appears that it was designed by an amateur and built by a blind contractor. A photo can be made available if you want to lose your lunch. The other day I spotted a Dunkin' Donuts cut from the same "mold" as Starbucks. It would appear they are self-propagating. Horrors! Build an ugly building and they will come!

E. "Manny" Abraben Abraben Architects Ocala, Fla. *abrarch1@aol.com* 

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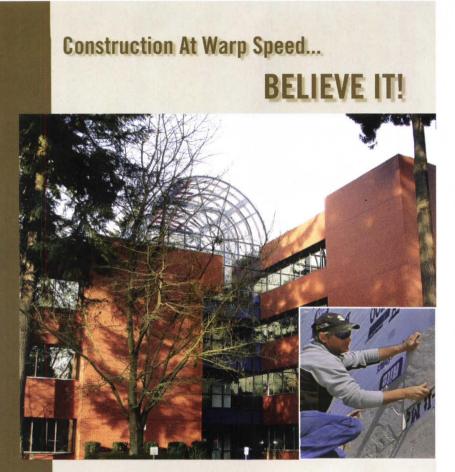
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MANIPULATOR: It's the name of Jill Greenberg's website (manipulator.com), paying homage to a defunct German culture magazine that inspired the photographer in her youth. It's also an apt tag for the Los Angeles-based Greenberg, who is probably best known for her stylized "shiny faces" portraits of both weeping toddlers (for her



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controversial "End Times" series) and celebrities like Arnold Schwarzenegger, Simon Cowell, and Gwen Stefani, "I digitally manipulate my images - most of my photography is not very 'straight,'" Greenberg says.

Greenberg grew up in suburban Detroit and attended the Rhode Island School of Design, graduating with a BFA. Her photographs have appeared on the cover of *Time*. Wired, New York, Fast Company, and many other magazines. She frequently photographs animals, almost always at her L.A. studio (where she sets up a special outdoor stage for the larger critters), and has published a book of her monkey photos.

The lemur on the cover of this month's issue was shot by Greenberg to be included in that book, but she later changed her mind – because lemurs aren't primates. Compared to other animal and human subjects, says Greenberg, "the lemur's not that hard [to shoot]. It sort of sits there." Nearly all of the animals she photographs are trained to work in the entertainment industry, Greenberg explains, although this doesn't preclude the occasional anxious moment. "I shot a bull once. That was sort of scary."

The wildest shoot of her career, though, may be a recent one with actor Matthew McConaughey. There was a "total crazy scene on the beach," Greenberg says, with throngs of screaming teenage fans. The photographer asked her subject: "Is there anywhere you can go in the world where people don't recognize you and you can enjoy yourself?' He said, 'There are certain remote areas of Africa.''

When asked about current personal projects, Greenberg switches gears: "I'm building a house." The photographer and her husband, Robert Green, hired architect Beth Holden of the practice New Theme to design them a nearly 6,000-square-foot house in the Hollywood Hills they hope will achieve LEED Platinum certification. "It's the green Greenberg-Green house," the photographer jokes.



Jill Greenberg Beverly Hills, Calif.

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Government

# Head of NYC's Department Of Buildings Need Not Be a Licensed Architect or Engineer

City Council makes 'big mistake' by passing amendment, says AIA NY executive director Bell.



Robert LiMandri

**BY A VOTE OF 41–8**, the New York City Council passed legislation on Aug. 14 stipulating that future commissioners of the Department of Buildings (DOB) need not hold a professional license in architecture or engineering. Where the City Charter previously required such licensure in the department's top post, the new amendment, known as Introduction 755-A, states that either the commissioner or the first deputy commissioner must hold a license.

The following day, as expected, Mayor Michael Bloomberg announced his intention to appoint Robert LiMandri

as buildings commissioner. Previously a deputy commissioner, LiMandri has served as acting commissioner since April, when he replaced architect Patricia Lancaster, the first woman to hold the position. Lancaster resigned after multiple fatal construction crane collapses in early 2008 killed 13 people and investigations revealed a department in disarray. LiMandri, who has been with the DOB since 2002, holds a bachelor's degree in mechanical engineering but is not professionally licensed.

The city, in its statement about Intro 755-A, maintained the legislation "will give Mayors needed flexibility in choosing the person that will run the Department of Buildings while also ensuring that an individual with the technical expertise of a licensed architect or engineer is in the department's highest leadership levels."

Rick Bell, executive director of AIA New York, disagrees. "We have such admiration for this administration," he says, "but they are making a big mistake with this decision." At press time, the chapter was considering litigation. (Engineers are upset with the legislation as well. *The New York Times* reported on Aug. 15 that the New York State Society of Professional Engineers said it was thinking about suing the city.)

"It's very important that the commissioner is a professional architect or engineer," says Bell. Citing the growing public concern over construction accidents, he adds, "This is really a public safety issue. At the scene of a disaster, the mayor turns to the commissioner for advice. Whoever is in that position should not have to be calling a deputy." The process of acquiring and maintaining a professional license — which includes understanding building codes, zoning regulations, and technical considerations — uniquely prepared candidates to head the DOB, says Bell, who could not say whether other cities require government officials in similar positions to be professionally licensed.

San Francisco architect John Schlesinger, who is the chair of advocacy for the local AIA chapter, says that the city "abides by California state law for chiefs of building departments." In San Francisco, he explains, "there is an emphasis to hire a registered engineer," but no requirement to hire an architect or engineer. Instead, he says, "There are certain criteria [nonlicensed candidates] have to meet, but if you are a licensed architect or engineer, you do not need further education to meet the state's requirements."

New York architect James McCullar feels the same way as Bell. "We must be absolutely sure that all who make decisions that affect public safety be licensed professionals. Approval of plans and issues of variances to the building laws cannot be left to administrators without professional training and licensure," says the founder and principal of Manhattan firm James McCullar & Associates.

"Our issue is not with LiMandri," Bell continues. "We are not targeting him. We are looking at the charter, since it now opens the door for future administrations to fill the commissioner's office with a political appointee." JOHN GENDALL

"Approval of plans and issues of variances to the building laws cannot be left to administrators without professional training and licensure."

-James McCullar, founder and principal, James McCullar & Associates

**ARCHITECT** SEPTEMBER 2008

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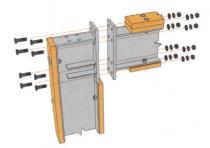
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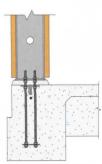


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### REPORT

Education

# **New Faces on Campus: Three Architecture Deans**



NAME: Alan Balfour school: Georgia Tech College of Architecture, Atlanta **PREVIOUS POSITION:** Dean, **Rensselaer** Polytechnic Institute School of Architecture, Troy, N.Y. **EDUCATION:** MFA in Architecture, Princeton University, 1965; Diploma in Architecture, Edinburgh College of Art, 1961 FYI: Makes a return to Georgia Tech, where he was director of the architecture program from 1977 to 1987.



NAME: Robert Probst **SCHOOL:** University of Cincinnati College of Design, Architecture, Art, and Planning (DAAP), Cincinnati **PREVIOUS POSITIONS:** Interim dean, DAAP: director, DAAP School of Design **EDUCATION:** Equivalent to M.S. Design, College of Design, Basel, Switzerland, 1974; Equivalent to M.S. Design, University of Essen, Germany, 1972 FYI: One of about 80 designers in North America who belong to the Alliance Graphique Internationale.



NAME: Kenneth Schwartz school: Tulane University School of Architecture, New Orleans PREVIOUS POSITION: Associate

professor, University of Virginia School of Architecture, Charlottesville, Va. **EDUCATION:** Master of Architecture and Urban Design, 1983; B.Arch., 1979, Cornell University Department of Architecture **FYI:** Heads up NCARB's Committee on the Intern Development Program.

# Clips

Korean-American architect **Kyu Sung Woo**, whose eponymous firm is located

in Cambridge, Mass., has won the 2008 Ho-Am Prize in the Arts. The prize recognizes South Koreans who have made outstanding contributions to the promotion of culture and the arts through their creative efforts. Woo, whose built works include the Nerman Museum of Contemporary Art in Overland, Kan., and the Whanki Museum in Seoul, is the first architect to win the prize. Since 1991, the Ho-Am Prize, created and funded by the Samsung Corp., has been awarded annually to five Koreans living in the country or abroad; the award's categories are science, engineering, medicine, the arts, and community service. Winners receive a medal, a laureate

diploma, and 200 million won (about \$200,000).

A recent study by the AIA finds that the number of **U.S. counties with green building programs** has grown from eight in 2003 to 39 in 2008, an increase of almost 500 percent. "Local Leaders in Sustainability: Green Counties," released in July, looked at the 200 most populous counties in the nation, which represent a little more than half of the U.S. population.

Six buildings have made the **short list** for the 2008 Stirling Prize, awarded by the **Royal Institute of British Architects:** Royal Festival Hall, by Allies and Morrison; Westminster Academy, by Allford Hall Monaghan Morris; Manchester Civil Justice Centre, by Denton Corker Marshall; Accordia, by Feilden Clegg Bradley Studios, Maccreanor Lavington, and Alison Brooks Architects; Bijlmer Arena Station, by Grimshaw and Arcadis; and Nordpark Cable Railway, by Zaha Hadid Architects. The winner will be announced on Oct. 11.

Gensler has hired Andrew Caruso as the firm's first director of intern development. Caruso, who has spent the past year as president of the American Institute of Architecture Students, will manage the firm's intern program, scholarships, and relationships with universities.

Los Angeles architect **Dan Meis** has merged his firm with global design and consulting firm **Aedas**. Beginning this month, Meis Architects will be known as **Aedas LA**.

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Moment frames have long been considered the expensive option when small wall sections and open floor plans make shearwalls unworkable. Simpson Strong-Tie is going to challenge that perception with the new Strong Frame<sup>™</sup> Ordinary Moment Frame. Now you can choose from 196 engineered frames, in sizes up to 16 feet wide and 19 feet tall, instead of spending hours designing your own. Engineered anchorage solutions round out the package to provide a complete moment frame solution. And since the Strong Frame uses field-bolted connections, it is easier and faster for contractors to handle and install. Now there is a cost-effective moment frame solution for residential, light commercial and multi-family applications: Simpson Strong-Tie<sup>®</sup> Strong Frame.

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Education

# AEC-Focused High School Opens Its Doors to D.C. Students

Created in a mere 14 months with help from local architecture and contracting groups, PACE aims to increase minority representation in the building professions.



The entrance to Phelps Architecture, Construction & Engineering High School, photographed this summer as the renovated building neared completion.

A SELECT GROUP OF WASHINGTON, D.C., ninth graders have started classes at the city's new \$63 million Phelps Architecture, Construction & Engineering High School, known as PACE. A hybrid of trade school and college preparatory school, PACE offers an introduction to architecture, engineering, and construction as well as training in subspecialties like computer-aided design and drafting, interior design, brick masonry, and heavy-equipment operation. In a school district that is 95.4 percent minority—the highest in the nation—PACE promises to add diversity to the future AEC workforce.

Although PACE is publicly funded through tax dollars, local organizations stepped in to get the school's building renovated and its curriculum developed in record time: 14 months, from inception to completion. The Associated General Contractors of America (AGC), which received a U.S. Department of Labor grant several years ago to pilot education projects nationwide, became involved through its D.C. chapter, which wrote white papers to persuade city officials to back the project. (The grant has run out, but chapters across the U.S. continue to pursue education initiatives, says AGC director of workforce development Liz Elvin, noting recent school openings in St. Louis and Nevada. Some of the initiatives are vocational schools within existing high schools, while others are charter schools. "PACE is unique," Elvin says, "in that it's a stand-alone public school" that is also part of the local school system.) The initial crop of 132 freshmen was chosen through an application process managed by the D.C. public school system, a procedure that will be repeated yearly. The school's capacity is 622 students.

The District of Columbia needs "about 25,000 new employees [in the building trades] every year because we have such a robust construction industry here," says Cherie Pleasant, AGC of DC's chief executive officer. In addition, many projects require a healthy percentage of D.C. residents and minorities on construction teams. Those numbers "are not always easy to meet," she notes, but "we could step up to the plate if we had a school to actually train people." AGC of DC is providing ongoing support to PACE by building its website (pacehs.org) and purchasing school uniforms.

Also donating their services are the D.C. chapter of the American Institute of Architects (AIA/DC) and the Washington Architectural Foundation (WAF), which have developed the school's architecture curriculum based on what college programs look for in first-year students. "Architecture has a lot of problem solving and teamwork, and students have to have a portfolio of work," says Kelly Malloy, who leads the AIA/DC-WAF advisory committee and is an associate at WDG Architecture in Washington. She hopes that by reaching students "at the perfect age to be thinking about what they want to be doing," PACE can help build diversity in the profession.

Located in the city's northeast quadrant, PACE is housed in a 1933 building originally erected for another vocational school that was shuttered in 2002 due to declining enrollment. The fast-track renovation—a design/ build partnership by Celina, Ohio—based educational facilities firm Fanning/ Howey (lead architect), D.C. architecture firm Bryant Mitchell, and Turner Construction—"blurred the lines of traditional process, roles, and materials," says Edwin Schmidt, a Fanning/Howey principal and executive director of the firm's D.C.-area office. At one point, Schmidt says, he found himself painting trim and sills in the building to meet the schedule.

The renovated school has been certified LEED Silver by the U.S. Green Building Council and is intended to be an educational tool itself: Walls offer examples of herringbone, basket weave, and Flemish brick patterns, and ceiling pipes are exposed and color-coded so that students can follow their paths throughout the building. HANNAH MCCANN

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# "The nation's skeleton is as fragile as the candy-cane bones sucked down to threads on Cinco de Mayo."

- Joanna Guldi, Commonweal Institute fellow, in "We've Got to Rebuild America's Crumbling Infrastructure," published on alternet.org

### In Memoriam

# **Robert Sturgis, 86, Dies**



**Robert Sturgis** 

included Cotting House at Harvard Business School, was also a devoted educator, volunteering for Boston Architectural College for more than 50 years and serving on its board of directors in the early 1980s. Last April, the school recognized him with a Selfless Labor Award. MIMI ZEIGER

BOSTON-AREA ARCHITECT Robert Sturgis, a loyal champion of livable places, died on Aug. 1. He was 86. Sturgis' commitment to innovative urban development and community planning drove the establishment of the American Institute of Architect's Regional and Urban Design Assistance Team in 1967. A longstanding member and onetime president of the Boston Society of Architects, Sturgis founded the group's Urban Design Committee. His vision allowed for growth, but not at the expense of the city's history. Sturgis, whose built work



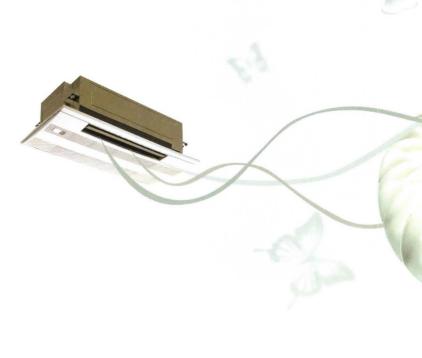
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ARCHITECT SEPTEMBER 2008

Sustainability

# USGBC to Hand Over LEED Certification Process to GBCI

**STARTING JAN. 1, 2009,** the U.S. Green Building Council (USGBC) will no longer oversee the actual certification of buildings applying for LEED status. That process will be taken over by the Green Building Certification Institute (GBCI), an autonomous organization that already manages the certification of the LEED professional accreditation program.

"The conversation [about the shift] has been taking place over the course of the past year," says Peter Templeton, senior vice president of the USGBC. The organization began talking about such a shift as it considered "how we can scale the program to meet demand" currently, more than 13,000 commercial projects await certification—"and looking at what we can do to ensure that there will always be quality and integrity in the building certification process," explains Templeton.

"Third-party certification is what we're looking at," says Beth Holst, vice president of credentialing at the GBCI, "something we can audit." GBCI will contract out the actual certifying process to certification bodies, which will ascertain a building's compliance with LEED standards and determine the level of certification. GBCI will then be able to audit the information independently. "It's creating the solution that will help us meet the capacity and the demand [for the program]," says Holst.

It will also substantially increase the size of GBCI's staff, which currently stands at five but will fold in the USGBC's current certification department, about 25 people strong. But all of these transitions concern backof-house operations; little will change for those seeking LEED certification. Applications will still be submitted to the USGBC, and that organization is not stepping back from creating and refining the requirements for the LEED building programs. "USGBC's role as a standardsdeveloping organization for the LEED system remains unchanged," says Templeton. KATIE GERFEN LEED-certified buildings: **1,705** Number of commercial projects requiring certification:

SOURCE: USGBC; DATA CURRENT AS OF AUG. 20, 2008



25

26

**ARCHITECT** SEPTEMBER 2008

"In my work as an architect I cannot imagine a situation in which I would try to compete with or imitate the environment that surrounds my buildings."

> —Richard Meier, in "Why Less Is More," published on esquire.com

### Marketing

# 2008 National Marketing Communications Award Winners

- Advertising: Rand Engineering & Architecture, New York
- Annual Report: Mancini Duffy, New York
- Book/Monograph: Busby Perkins+Will, Vancouver, Canada; Bluegreen, Aspen, Colo. (small firm)
- Brochure: Ratio Architects, Indianapolis; Amenta/Emma Architects, Hartford, Conn. (small firm)
- Corporate Identity: ADD, Cambridge, Mass.; SRBL Architects, Deerfield, III. (small firm)
- Direct-Mail Campaign: William A. Berry & Son, Danvers, Mass.; Amenta/Emma Architects, Hartford, Conn. (small firm)
- Feature Writing: SmithGroup, Detroit
- Holiday Piece: Belfor, Seattle; Street Dixon Rick Architecture, Nashville, Tenn. (small firm)
- Internal Communications: BSA LifeStructures, Indianapolis
- Magazine: HNTB, Kansas City, Mo.
- Media Relations Campaign: Reilly Communications and Freelon Group, Boston
- Newsletter—External: Otak, Lake Oswego, Ore.; Bligh Graphics, Simsbury, Conn. (small firm)

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- Newsletter—Internal: Ware Malcomb, Irvine, Calif.
- Promotional Campaign: Allegory Studios, Gansevoort, N.Y.; Hoffmann Architects, Hamden, Conn. (small firm)
- Special Event: Freese and Nichols, Fort Worth, Texas
- Specific Project Marketing: HDR, Omaha, Neb.
- Target Marketing: Affiliated Engineers, Madison, Wis.; Kinslow, Keith & Todd, Tulsa, Okla. (small firm)
- Website: HOK, St. Louis; Fathom, Hartford, Conn. (small firm)

SOURCE: SOCIETY FOR MARKETING PROFESSIONAL SERVICES

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Publishing

# **Rizzoli Architecture Editor David Morton Promoted**

## Over two decades at publishing house, his books have received 21 awards from the AIA.

DAVID MORTON, who has overseen Rizzoli's architecture program since he joined the publishing company in 1987, has been appointed to the newly created position of associate publisher, architecture. But the longtime design editor demurs when congratulated on the news. "I don't think it's that much different from before," he says, noting that his job will be pretty much what it has been for many years: "I basically do the acquiring."

And in that task, Morton, who was an editor at Progressive Architecture for more than a decade before joining Rizzoli, has been highly successful. The books he has been involved with-which have covered prominent contemporary architects, important historical figures, and design movements and other scholarly subjects - have won 21 awards from the American Institute of Architects, putting Rizzoli ahead of all other architectural publishers in that regard. In 2006, Morton was the second recipient of the \$25,000 Henry Hope Reed Award, given in conjunction with the annual Richard H. Driehaus Prize, for his contributions to the promotion of classical art and architecture.

The newly anointed publisher is working simultaneously on several titles that showcase the scope of his, and Rizzoli's, interests. "We're doing a book—a very big book, almost like an encyclopedia—on the history of building in America," he says, adding that there are also books about Frank Gehry's house designs. Arts & Crafts designer and architect Baillie Scott, modern houses in Brazil, and the fifth volume of architecture by Richard Meier in the pipeline.

In other words, it's business as usual for David Morton. BRAULIO AGNESE

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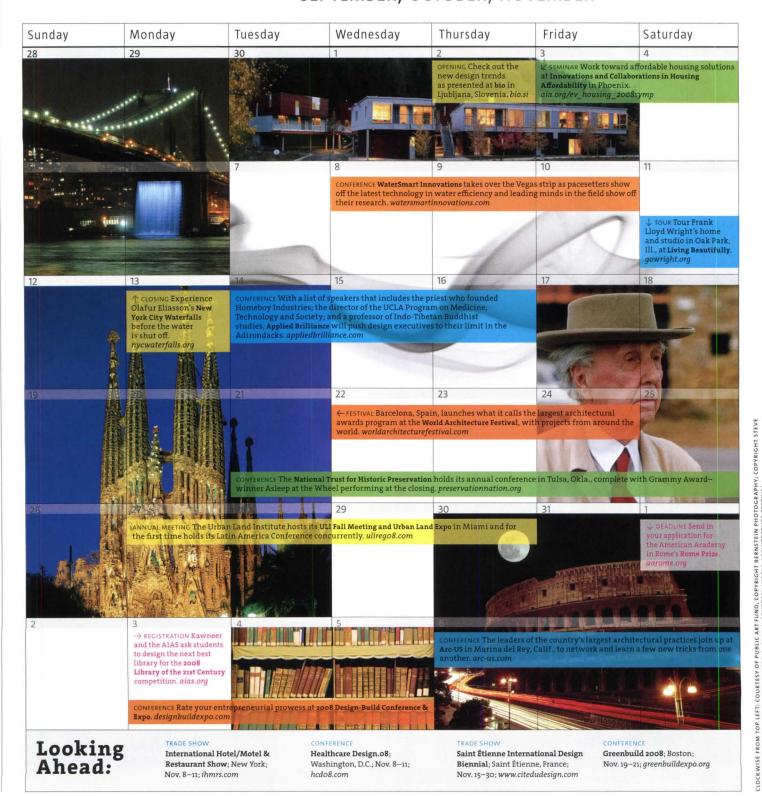
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ARCHITECT SEPTEMBER 2008

Edited by Andrew Slocomb West

# CAERDAR SEPTEMBER, OCTOBER, NOVEMBER



28

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-Robert Frasca, FAIA, Design Partner-Zimmer Gunsul Frasca Architects, LLP

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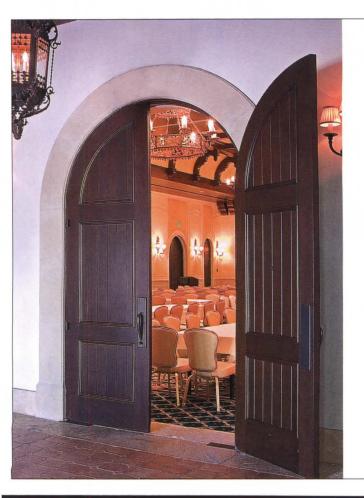
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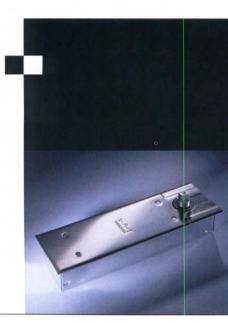


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## Text Kate Herman NUMBERS

\$106,845

### Feeling The Pinch

IT'S OFFICIAL: The economic slowdown has affected the nation's AEC firms, in the form of hiring freezes, layoffs, and a drop in revenue, according to ZweigWhite's 2008 Financial Performance Survey. The report includes data from 150 U.S. architecture, engineering, planning, and environmental consulting firms. Produced annually, the survey has become a go-to source for firms looking to improve operations-or check out the competition. About six years ago, it drove JCJ Architecture's strategic planning process, and it's been a guiding force ever since, says firm



Projected five-year revenue growth, on average, reported by non-engineering architecture firms.

Percentage of financial directors, across all firm types, who are women, a jump from 40 percent in 2005.

SOURCE: AIA



Architecture firm CFO average base salary. Across all firm types, CFOs of companies with

250-499 employees get a \$50,000

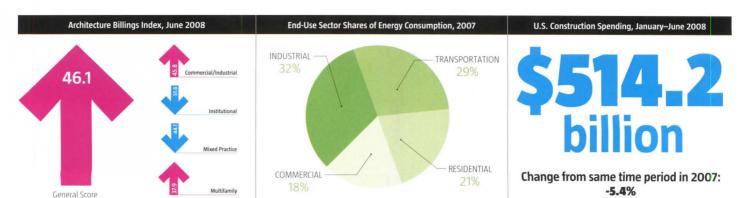
bonus yearly, on average.

The median firm revenue ratio, down from 1.87 in 2007. "If I had to pick one statistic to focus on, it would be [this]," says Ian Rusk, the ZweigWhite executive vice president who oversees the annual survey. "This ratio says for every dollar of payroll, the firm earns X dollars of revenue. A strong revenue factor would be 2.0."

president Peter Stevens: "It has the kind of metrics we want to measure ourselves against." Within weeks of the report's July release, JCJ CFO Ann Iseley had plotted the 2008 data against previous years. "It's actionable," she says. "It won't tell you what to do or how to fix something, but it shows you where you stand."

\$8,304

Average bonus cost per employee. For firms in the upper quartile, bonuses represented an average of 8.9 percent of the firm's gross revenue. 16.8% The average annual turnover rate at architecture firms. When JCJ Architecture saw turnover rise a few years ago, it checked the survey before reviewing benefits, compensation, and performance management. Turnover is now in line with survey results.



SOURCE: AMERICAN PUBLIC TRANSPORTATION ASSOCIATION, JUNE 200

36







### Text Margot Carmichael Lester

## LOCAL MARKET HUNTSVILLE, ALA.

### Population/Employment

Population in 2007: 168,132; employment jumped 32 percent from 1999 to 2007.

### **Office Market**

In 2007, the 15.5-million-s.f. office market had a 7.25 percent vacancy rate, and Class A space went for \$19.50/s.f., full-service gross.

### **Residential Market**

Median price in June 2008: \$149,500. Average time on the market: 114 days.

### **Market Strengths**

• Strong technology and military economy

- · Low cost of living
- Highly educated and skilled
  workforce

### Market Concerns

- Worker demand outstrips
  supply
- Growth putting strain on infrastructure
- Housing affordability

### Forecast

"Huntsville has a diversified economy that seems to be recession-proof," says Mike Chapman, principal of locally based Chapman Sisson Architects. "I see [the city] continuing to grow."











Alabama chapter to establish a Huntsville branch. More than 15 architecture firms are currently involved. "We want to promote buildings that are environmentally responsible and profitable," says Scott Beck, project engineer at Turner Universal's local office and the North Alabama branch chairman.

The Huntsville government is helping those outside the building industry become greener as well, with initiatives that include a comprehensive commercial and residential recycling program and the annual Air Pollution Control Achievement Award for businesses. These efforts, says Huntsville/Madison County Chamber of Commerce president and CEO Brian Hilson, have resulted in "a community that takes care of itself."

PROTECTION CENTER Architect: Fuqua & Partners Architects, Huntsville; Completion: 2007; Cost: \$26 million; Size: 140,000

RAYTHEON WARFIGHTER

\$26 million; Size: 140,000 s.f. • Eco features include reflective roof and sensorcontrolled lighting.

### QUALITY CIRCLE

Architect: Designform, Huntsville; Completion: 2009; Cost: \$6.5 million; Size: 137,500 s.f. • Seeking LEED Core & Shell Silver certification.

### NASA BUILDING 4600

Architect: Thomas, Miller & Partners, Brentwood, Tenn.; Completion: 2005; Cost: \$16.5 million; Size: 140,000 s.f. • NASA's first LEEDcertified building; includes photovoltaic roof panels.

### INSPIRATION ON GREEN MOUNTAIN

Architect: Building Science Associates, Huntsville, and Wm. Brian Jernigan Inc., Birmingham; Completion: 2008; Cost: \$100 million; Size: 72.4 acres • City's first green housing project, with eco-friendly construction, energy-efficient homes, and land conservation. SATELLITE IMAGE: GOOGLE EARTH; BUILDINGS (1–4): TIM MADDOX; DESIGNFORM; LOVE DEVELOPMENT ALABAMA; WILLIAM A. LUSK

century, when the city took a giant leap for mankind. In 1950, the U.S. Army established the Redstone Arsenal to develop rocketry, and, in 1960, NASA's Marshall Space Flight Center was dedicated. From this foundation, Rocket City launched a growing biotechnology industry. "Quite a journey within a couple of generations for a town in the Deep South," notes Timothy Packard, a senior partner at local firm Fuqua & Partners Architects. And one reason why *Foreign Direct Investment* named Huntsville a "Small City of the Future" last year.

COTTON WAS KING IN HUNTSVILLE, ALA., until the middle of the last

But it's not all space-age technology down here. This onetime watercress capital of the world ranked 18th on *Popular Science*'s 2008 list of greenest cities, prompting the U.S. Green Building Council's



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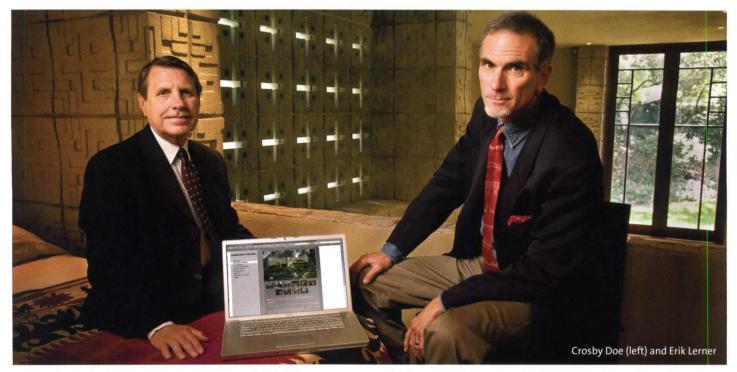
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### Matelux: When Elegance is Everything!







### In the business of selling residences by modern masters, design integrity should be part of the equation.

**COMPARED WITH A MULTIMILLION-DOLLAR PAINTING** by Andy Warhol or Mark Rothko, a house by a modern architectural master like Richard Neutra has more functional value. After all, you can live in it. But if you want to preserve its artistic and financial value, can you redo the kitchen? Most real estate people might assume new amenities would fetch a higher price. But Mossler & Doe co-founder Crosby Doe, who runs architectureforsale.com, believes otherwise. "It takes courage to keep the 1950s Thermador ovens," says the veteran Los Angeles broker and preservationist, who recently helped the owners of Neutra's Barsha House (1938) source original bathroom hardware.

Recent efforts to sell residences designed by prominent modern architects have provided a new impetus for conservation, in Doe's estimation. "As values rise," he predicts, "people will stop tearing down." Thus authentic preservation serves the best interests of both historical memory and financial investment. Doe envisions a globalized architecture market resulting in the celebration of good design. For nine years, he has increased the visibility of architecturally significant residences through Architecture for Sale, which lists Mossler & Doe properties as well as houses represented by others.

Part blog, part billboard, and part gallery, the site accepts listings from all over the world. Doe and Erik Lerner, a senior Mossler & Doe agent, screen submissions for the merit of the architecture and the photography, then draft or edit a curatorial description. Having spent 15 years practicing architecture, Lerner believes his work as a broker of historic modern homes allows him to better serve the profession. "I practice architecture by selling it," he says. "The real estate business can benefit from the expertise of a professional architect."

The site adds a handful of new properties each month. Recent listings include Frank Lloyd Wright's 1923 cast-concrete-block Millard House, known as La Miniatura, which will set you back a cool \$7.7 million, and John Lautner's 1949 Schaffer Residence, a relative bargain at \$1.8 million. Aspiring to preservation as well as publicity, Architecture for Sale reformulates the terms of real estate appraisal by borrowing a law from the art world: authenticity equals value.

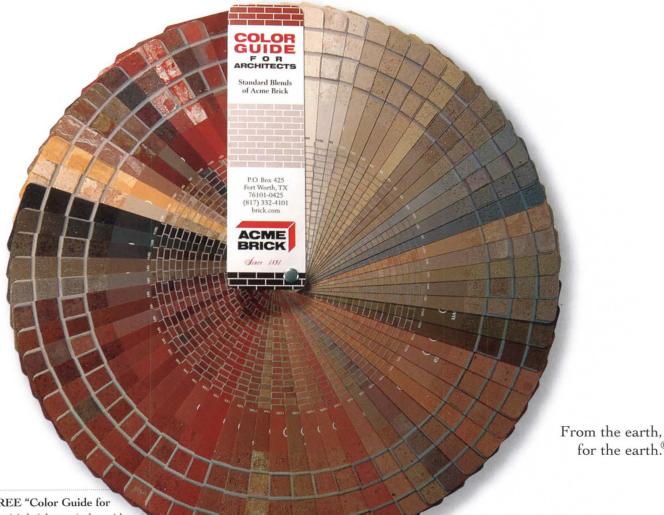
### LINKS

LINKS				
buildering.net	pdf-mags.com/design	planetizen.com/node/34049	pps.org/imagedb	
Whether it's called buildering, urban climbing, structuring, or stegophily, the act of scaling manmade things not designed for climbing—be they dozens of feet tall or a more daunting 100 stories high—has its adherents.	Free publications that exist only in PDF form strike a nice balance between websites and their glossy, printed cousins. Find new sources of design inspiration and news, as well as magazines on many other	Planetizen offers a three-part podcast with Richard "Creative Class" Florida and journalist Bill Bishop, author of <i>The Big Sort: Why</i> <i>the Clustering of Like-Minded America</i> <i>Is Tearing US Apart.</i> The subject?	New York's Project for Public Spaces has been around since 1975. Not surprisingly, it has amassed a large image library. For a small fee, anyone can access the best ones for their own use. Categories include parks,	
King Kong has nothing on these folks.	topics, at this useful site.	Demographic trends in U.S. cities.	streets, buildings, and amenities.	



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### THE INS AND OUTS OF OUTSOURCING.

Text Fred A. Bernstein Photo Mike Morgan

## **IT'S OUT OF MY HANDS**

### Outsource model building and renderings ...

In the last five years, RTKL has outsourced much of its model building and rendering to Asia (China, Vietnam, and the Philippines) and to Eastern Europe (Russia and the Czech Republic), "where we can get the quality we want," says Jacob. "There is talent all over." Saving money is only one goal. The firm likes to find rendering styles to fit particular projects and clients. Outsourcing "gives us access to [a range of] talent that wouldn't be efficient for us to keep in-house," Jacob says.

### ... only if you're in control.

"For us, the key is having foreign offices, which means having somebody close by, to monitor the work," says Jacob. Especially in the case of drawings, he notes, "there are decisions that need to be made every day." Even renderings done for presentation purposes (not as design studies) can be vital to your business: "The client could say, 'I don't like this. Go back to square one.'"

### But don't use your foreign offices merely as liaisons.

RTKL's overseas offices are busy doing projects of their own, for local as well as international clients. For the firm to be successful, each office should be self-sufficient, Jacob says.

#### And don't outsource important design work.

"For work that is integral to the design of a building, it's hard to outsource successfully," says Jacob. "Even with

"I'M ONE OF THOSE BORING kind of guys. I've only had one job in my entire life," says Paul F. Jacob III, the chairman of RTKL, a firm of 1,200 that has offices in the U.S., Europe, and Asia.

Jacob, 59, started out working for RTKL while studying architecture at Carnegie Mellon in the 1970s. During the next three decades, he helped the firm expand beyond its Baltimore base, establishing a Los Angeles office in 1986 and a large presence in China in the 1990s. He was elected chairman in 2003. Last year, RTKL was purchased by the Dutch engineering firm Arcadis, a move that Jacob explained as a way of funding further expansion. In terms of building types, "we cover the spectrum," he says. "Our portfolio is about 50 percent commercial, 25 percent healthcare, 20 percent corporate workplace, and 5 percent everything else."

A firm the size of RTKL doesn't depend on outsourcing the way a boutique practice might. Still, with an eye on growth and so much activity overseas, RTKL has found it smart to take advantage of some opportunities to hand off work. Other opportunities, Jacob says, aren't necessarily worth pursuing.

production work—such as construction documents we've found that there's hardly any savings at all, and sometimes there's a loss in quality," he says.

True, some firms are going overseas for the bulk of their drafting, Jacob acknowledges. "We've tried that on occasion. But you're literally sending information overseas, getting drawings, checking the drawings, sending them back. ... We've found that the quality goes down. It isn't worth it," he concludes.

### Besides, BIM reduces opportunities to outsource.

"The thing that's changing everything, and which we're very strongly into, is building information modeling," says Jacob. "It's a whole new way of designing, not just a new form of CAD. With BIM, you're really not drafting anymore. You're creating a database of information — a job that is almost impossible to outsource. And then you ask the software to produce the drawings. So as BIM becomes more prevalent in our profession, I think you'll see fewer and fewer firms that outsource drafting."

### Consider the effects of outsourcing on staff development.

A firm that outsources too much of its work may find it difficult to nurture and keep employees. Says Jacob: "We really try to hire people out of school and facilitate their career development. The key for them is to be able to experience a project through all the phases, from conception through production. For that reason alone, we'd be reluctant to outsource more of our work." 43

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### GRAHAM DOWNES ARCHITECTURE AND CS ILLUMINATION TAKE ON RETAIL LIGHTING FOR TEENAGERS.

Text Edward Keegan





There are a few architectural moments in the Love Culture store that marry lighting and form. At the cash register counter (above), recessed fluorescent lighting backlights a red canopy to create a focal point in the space.

**RETAILING MERCHANDISE** to a generation raised on the Internet, music videos, cell phones, and incessant texting calls for new strategies. Lighting remains an essential element, but it has evolved to grab young consumers' attention in a way that's probably distracting, even off-putting, to their parents. Graham Downes, of the eponymous San Diego–based firm, has designed the prototype stores for Love Culture with this change in perception as an essential part of the recipe.

The stores sell inexpensive "fast-fashion" clothing for young women, mostly in mall locations of

approximately 7,000 square feet each. The first ones opened last year in Southern California with additional outlets debuting regularly throughout the country. Each of the stores is white—and bright. The palette of materials is simple, durable, and low maintenance. Porcelain floor tile, glass walls, gypsum board, and acoustical tile ceilings set the stage for the few dramatic architectural moves that allow the product to become the focus.

"The baby boomer generation cannot handle visual clutter," explains Downes, who at 52 should know. But

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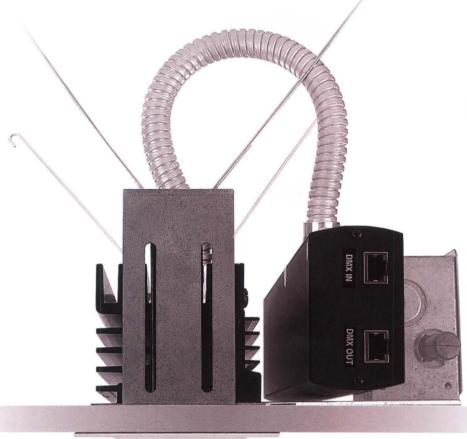
Despite the intensity of the lighting scheme, the effect is one of highlighting the actual clothing and accessory products in the store.

this is apparently not an issue for Gen Y consumers. "They bounce around the store," says Downes. "They're used to seeing multiple images on a screen, watching MTV, where there's no sequential story line." The more traditional approach to retail lighting is to maintain an ambient light level of 30 foot-candles and to use spotlighting at 150 to focus attention. The approach at Love Culture is to keep a relatively constant 70 footcandles throughout the store.

Glare is also reconsidered through a generational prism. "A tasteful store didn't have glare," says Downes of the longtime norm. "You hid all your lighting in coves, cans, and deeply recessed troughs. Now, you need to see the activity." This is accomplished in the Love Culture stores through three means—a white ceiling, illumination shining up onto that ceiling, and the use of mostly exposed light sources. The white floor helps reflect light onto the ceiling, too. Track lighting increases the visual intensity on the ceiling plane. "You can't oversmack these people," says Downes of what might otherwise be considered overkill.

"We don't leave any surface not illuminated," says Downes—which includes the store's enclosing walls. This is the one place where some lighting is—at least partially—concealed. Coves surround the store and wash the walls with light in what would be a relatively conventional lighting scheme until you recognize the wall material—it's glass. Downes notes that the surfacing material is one of the more expensive design moves in the stores, but the glass allows for the

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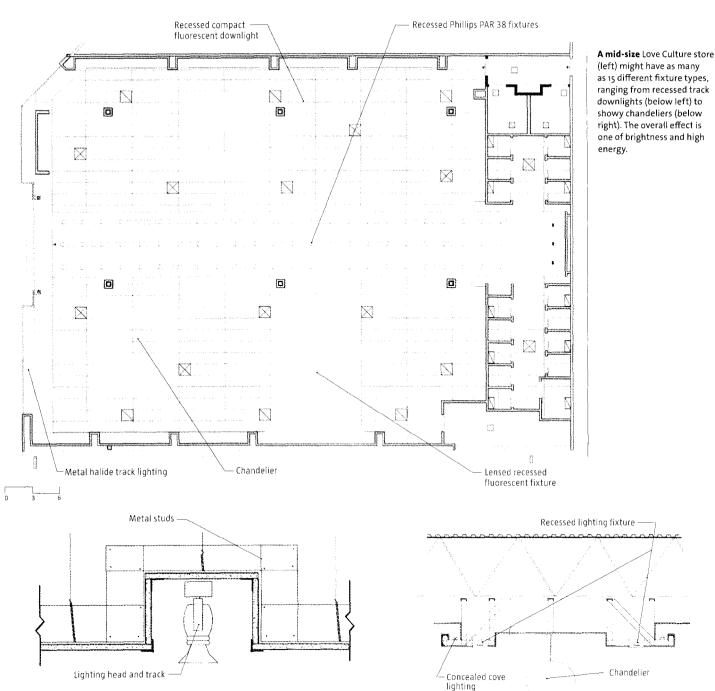


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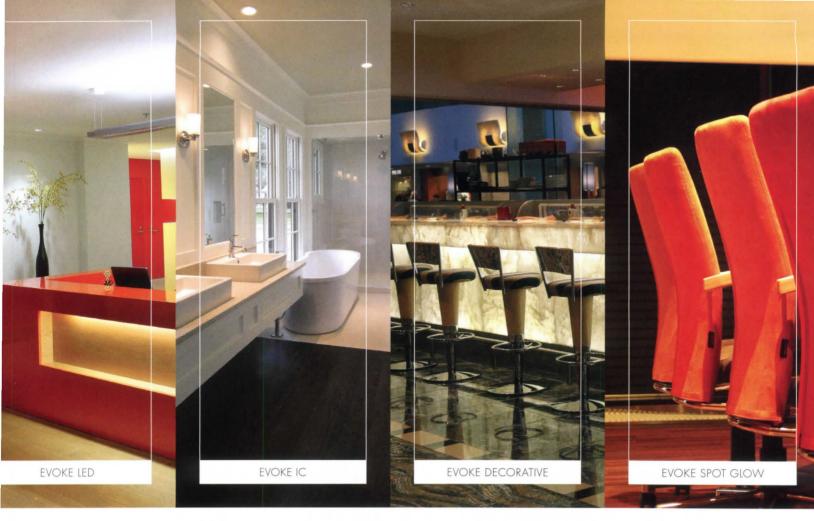
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application of varied motif decals on both front and back surfaces to create a layered sense of pattern as well as varying translucency. The very high gloss of the glass reflects the lighting from the otherwise concealed cove throughout the space in a way that a more conventional installation of translucent sheet plastic products could not. Nor would it produce the resulting and desirable glare. "The effect is open and honest," says Downes.

The walls are also where the design expression becomes a touch representational. The tone on tone application of decals depicts a repeating pattern of motifs—prairie growth, shrubs, bushes, and brocades that goes all the way around the store. The patterning of the decals makes an impression separate from the lighting, explains Downes, and the two work together to create a subtle brand identity. "How do you know it's a girls store before you see the merchandise?" asks Downes. The foliage is a first hint, followed by a strong infusion of cranberry red in select locations. It's an intense color chosen for its emotional associations with love and girls—but it's intentionally not pink in order to target a slightly more sophisticated clientele. The color occurs in three places within a typical store—in the center of the floor to create a runway effect, in a threepart Lucite soffit that marks the cash/wrap station, and in an identifying box that's located at or near the entry and that acts as a principal identifier for the store. The plastic soffit lighting is as simple as possible—ordinary

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Because lighting codes and energy constraints differ from city to city and state to state, the overall lighting scheme is a kit of parts that can be tweaked to customize each location according to local guidelines.

4-foot fluorescent fixtures recessed in the ceiling above provide a soft glow through the translucent boxes. The four-sided red glass element is appropriately overlit from above, inside, and outside. Brocade, foliage, and fleur-de-lis patterns echo the exterior wall motifs. Despite its size, this element serves as the primary signage for the store, even though it's so small. Downes likens it to the identifying tab on a pair of Levi's jeans.

Graham Downes Architecture collaborated with CS Illumination on the lighting. The architects set the parameters—fixture type for aesthetic effect, color rendition and performance, budget, and energy constraints—and the lighting consultants sourced fixtures to match the criteria. "We'd like to floodlight the stores, but we don't want to add heat," says Downes—noting that energy constraints are becoming more challenging. Plus, he says, they vary between jurisdictions, so the lighting needs to change a bit depending on store location. A modest-sized typical store might have as many as 15 fixture types—but the current generation of compact fluorescent and highintensity lights can run cool enough and be energy efficient with careful planning.

Love Culture sells what Downes characterizes as "throw-away fashion" with an immediacy implicit in its products for teenage girls. But the freshness and openness of the store needs to be enduring, he says. By keeping the design white and bright with light, he's created a store that can remain a beacon in the mall for years to come.

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### DOES WALL-E FORETELL OUR FUTURE, OR IS IDIOCRACY CLOSER TO THE TRUTH? Text Lance Hosey Photo Charlie Brown





**Robot man:** WALL-E, the last waste-disposal robot left on a depopulated Earth that is overrun by garbage, stars in Pixar's animated film (and has spawned the requisite line of landfill-ready toys, such as the one shown at right).

> **SUSTAINABLE DESIGN** aims to safeguard the future of the Earth as environmentalists worry about the effects of melting ice caps, ozone depletion, and species eradication. Even bleaker, however, imagine a future where our garbage has piled so high and wide that there is no room left for anything else—including us.

That is the premise of *WALL-E*, the latest bit of genius from animation studio Pixar. Hundreds of years from now, the entire planet has become an immense landscape of litter. Humans have long since quit the Earth, which is left to be tended by the title character, an adorable little sanitation robot whose name stands for Waste Allocation Load Lifter Earth-Class. Fritting about in this vast junkyard, WALL-E painstakingly stacks up ziggurats of trash, skyscrapers of scrap, whole cities of refuse.

Is a waste-filled future so far-fetched? In the United States alone, some 40 million plastic bottles get tossed out every day, and only a fraction of this is recycled. Until it shut down in 2001, the Fresh Kills landfill on New York's Staten Island threatened to become the highest elevation on the East Coast. A footprint of nearly five square miles and 650 tons of rubbish shipped in daily made it possibly the biggest manmade structure in the world, larger in volume than the Great Wall of China. Fresh Kills opened only 60 years ago—what will the world look like several centuries from now?

For me, however, the most terrifying glimpse of the planet's future may not be *WALL-E* or even Al Gore's 2006 documentary *An Inconvenient Truth*, but another film that came out that year—*Idiocracy*, Mike Judge's dark satire about the dumbing down of humanity and the world. Five hundred years in the future, everyone is a moron, and the environment reflects it. Crops are fed with sports drink, signs are crooked and misspelled, and every available surface is plastered with corporate logos, so entire cities look like NASCAR uniforms. Buildings teeter more than the Tower of Pisa, barely held together by guy-wires and some kind of structural duct tape. **ARCHITECT** SEPTEMBER 2008

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Fresh Kills landfill on Staten Island, pictured here in 1990, released more than 2,500 tons of methane gas daily—and had trash piles higher than the Statue of Liberty—before it closed in 2001. New York City plans to turn the 2,200-acre site into public parkland over the next 30 years.

When we first witness this wasteland, in the background we can make out an enormous, neighborhoodsized low-rise that turns out to be a colossal Costco. Big Box has become Really Big Box, or what Starbucks might call Venti Box. I'd like to enjoy *Idiocracy* as the hilarious antics of the guy who brought us *Beavis and Butt-Head*, but the sand-swept mishmash being erected today in Dubai makes me wonder how far off Judge is.

Whether or not these dystopian visions will become our fate, today a very real threat remains in the growing influence of corporate interests over culture and the environment. Worldwide, writes Eric Schlosser in *Fast Food Nation*, McDonald's is the largest single owner of retail space, and the Golden Arches may be more recognized than any other symbol on Earth, including the Christian cross. Inner cities and older neighborhoods languish because housing and Big Box (Small Box by Mike Judge's standards) have sucked commerce to the suburbs. In the 1990s, 5,000 independent hardware stores were displaced by 1,500 Wal-Marts and Lowe's stores.

As *Good* magazine reported last winter, the total acreage of Wal-Mart stores now exceeds the size of the island of Manhattan. In the next several years, the company intends to expand its footprint by about 20,000 acres, destroying habitat and encouraging sprawl, since its land use is estimated to be five times less efficient than urban equivalents. Tragically, ecosystems that have enriched the land for millennia are being replaced by franchises that disappear every decade or two, so today's malls will be tomorrow's trash. If economics continue to outweigh ecology, one day the Earth may be wrapped in a continuous commercial strip. Revisiting her childhood home of Oakland, Calif., in the 1930s, the writer Gertrude Stein famously quipped that "there is no 'there' there"; 70 years later, there's no "there" anywhere. Main Street may have been "almost all right" for Robert Venturi four decades ago, but today it no longer exists, having been replaced everywhere by rampant generic sprawl. Around the globe, density has continued to decrease during the 15 years since James Howard Kunstler wrote his brilliant attack on

"I'd like to enjoy *Idiocracy* as the hilarious antics of the guy who brought us *Beavis and Butt-Head*, but the sand-swept mishmash being erected today in Dubai makes me wonder how far off [the director] is."

suburbanism, *The Geography of Nowhere*. The lack of difference from place to place devastates culture no less than nature. According to biologist E.O. Wilson, biodiversity is the single most important aspect of ecology, so it follows that architectural and social diversity are equally essential for community.



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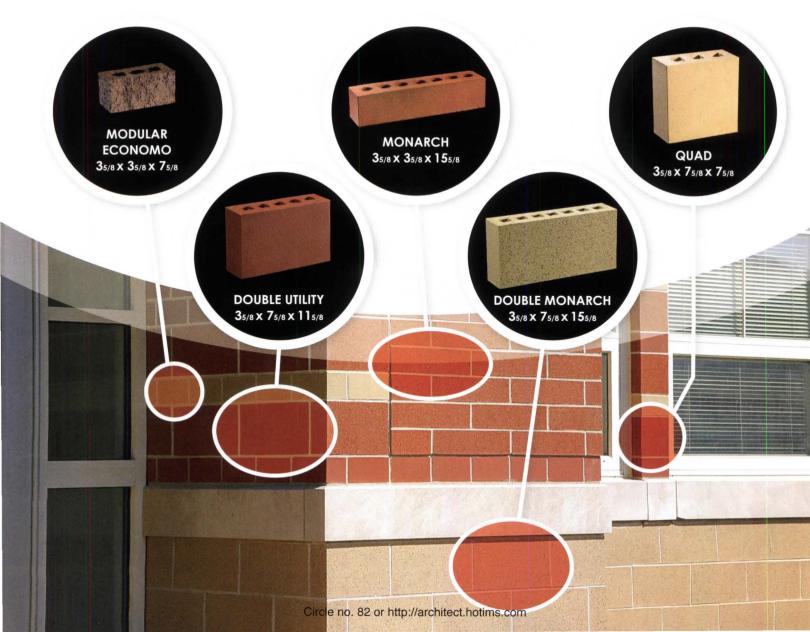
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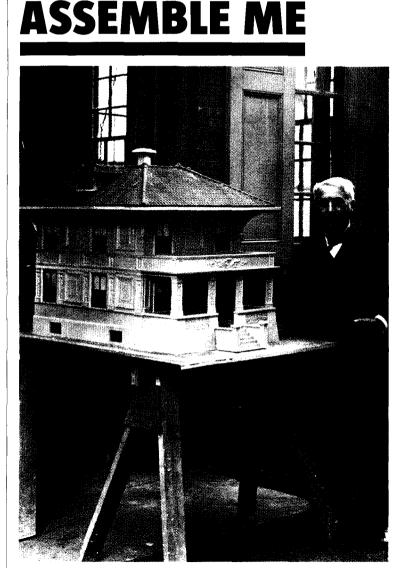
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### MOMA EXPLORES THE HISTORY AND FUTURE OF MANUFACTURED HOUSING Text Vernon Mays



Thomas Edison poses with a model of one of his more obscure and less successful inventions, a pouredconcrete house of 1906–08. Contractors required some \$175,000 in equipment, including nickel-plated iron forms, to fabricate the houses. Fewer than 100 were actually built.

PHOTO COURTESY MOMA

EVEN WHEN THE HOUSING INDUSTRY is not in crisis, the search for easy-to-build, low-cost houses has fascinated architects and inventors alike. Since the rise of mass production, great minds such as Marcel Breuer and Thomas Edison have grappled with new materials and technologies. Now a comprehensive history of factory-produced architecture is captured in the exhibition "Home Delivery: Fabricating the Modern Dwelling," on view through Oct. 20 at The Museum of Modern Art in New York.

The exhibition is impressive for its breadth of content, which includes both a traditional gallery show and five full-scale installations on an empty lot west of the museum, in the tradition of the demonstration house that Breuer built in the MoMA garden in 1949. The exhibition is also impressive for the speed with which it was assembled. After all, chief curator Barry Bergdoll only started on the job in January of 2007. Bergdoll, a distinguished historian, worked with curatorial assistant

Peter Christensen to tap MoMA's considerable collection of models and drawings, while pulling other resources from around the globe.

The result is a fascinating timeline of architectural thought and innovation. Starting in the early 19th century with prepackaged cottages for British colonists, the exhibition covers a broad spectrum of experiments in residential design, many of which resulted in commercial failure. Highlights include the awesome pencil drawings of German-Jewish architect Konrad Wachsmann-who refined his ideas for a system of panelized construction as an émigré in the 1940s, while staying as a house guest of Walter Gropius - and the highly articulated models showing Wes Jones' fascination with shipping containers as a basis for human abodes. Visitors will no doubt gain new respect for the genius of Jean Prouvé, whose design for the steel-framed Tropical House displays a sophisticated grasp of

constructability, materials, and function, all while presaging modern concerns with energy consumption. In addition, projected videos and wall-mounted monitors display an entertaining assortment of material, including a newsreel on Quonset huts, a tour of Buckminster Fuller's Wichita House, and construction of Moshe Safdie's Habitat '67.

Yet somehow, placed as they are beside such a wealth of historical material, buildings of the recent past get short shrift in the gallery show. Granted, the wall text acknowledges important advances in computer-aided design and digital fabrication techniques, but the emphasis seems to be heavy on research rather than built results in the marketplace. That's not to detract from the exhibition's small-scale material installations or the full-scale houses erected outside the museum. But anyone who comes to "Home Delivery" with an appetite for contemporary examples of prefab houses-rather than prefabrication's promise for the future-will likely leave still hungry.

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### Project: BURST\*008 Architects: Jeremy Edmiston and Douglas Gauthier

This house is a formula-driven solution that starts with a client's needs and plugs them into a computer algorithm developed by the designers. The system can create a range of different-yet-related designs that are customized in a 3-D modeling program, then broken down into planar pieces that are cut from plywood using laser or CNC technology. The entire structure—which rests on a steel moment frame—can be packed flat and delivered by truck.



### Project: Micro Compact Home® Architects: Horden Cherry Lee Architects and Haack + Höpfner Architects

Smaller than a typical suburban bedroom, this cubic house delivers maximum impact in 76 square feet of space. Framed in wood and clad in anodizedaluminum, this cozy cocoon is "geared toward single people with mobile lifestyles" and features two flat-screen TVs and an array of data connections. Interior fittings include two double beds, a sitting area, work table, shower, toilet, kitchen, and dining space for five. Basketball players need not apply. MUSEUM OF MODERN ART

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Project: Cellophane House Architects: KieranTimberlake Associates

**Built using off-the-shelf** structural steel, this house is conceived as a matrix that "collects" other materials. The intention: Anything applied to the framework can be disassembled and recycled—not discarded. The project is keen on green: Photovoltaics in the thin-film PET plastic membrane and roof canopy harvest energy. Solar collectors heat water. And an active double-wall system anticipates internal temperatures and eliminates undesirable heat gains and losses.



**Project:** Digitally Fabricated Housing for New Orleans **Architects:** MIT School of Architecture and Planning

**MIT students** working with professor Lawrence Sass developed a building that marries high technology and low cost. The one-room structure taps the architectural traditions of New Orleans. It is made of laser-cut plywood pieces that fit together with wooden joints set in place with a rubber mallet. No other tools are needed. The low-tech, on-site assembly makes this system applicable to many situations where the need for housing is dire.

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### Project: System3 Architects: Kaufmann/ **Rüf Architects**

### This stackable prototype is a

building block that can form larger complexes. The 15-footby-38-foot unit is divided into two equal parts: the "serving" space and the "naked" space. The serving space contains the guts of the house-kitchen, bathroom, electricity, Internet, laundry, dishwasher, and HVAC. It comes to the site preassembled. The naked space is formed by planar elements, such as a slab, walls, windows, and a roof, that require assembly.

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### HOW TO GET THE MOST OUT OF A TOUR WITH CLIENTS.

Text Dan Daley





### hts from a tour of CLIENT-ARCHITECT TOURS have generated their share of common reference

Highlights from a tour of Brazil, undertaken by architects from Skidmore, Owings & Merrill and their clients on the Bank Boston project in São Paulo. Bottom row, center: managing partner George Efstathiou looks at stone samples. Top row, far left: client Bob Winslow of U.S. Equities Realty examines some local fruit.

OWINGS & MERRILL

COURTESY SKIDMORE,

**CLIENT-ARCHITECT TOURS** have generated their share of surprises. Boston architect Charles Rose recalls the time he escorted a group of Benedictine monks, from a college in Pennsylvania, to look at religious architecture around Boston. The monks wore simple cassocks — while riding in a plush Learjet. When the plane hit an air pocket, jolting all the passengers out of their seats, Rose saw an opening for a joke: "I didn't realize that Benedictine monks levitated," he said. Unfortunately, the quip didn't fly with the monks, who chose another architect, despite the fact that Rose's eponymous firm had won the initial design competition.

The occasional awkward moment doesn't dispel the practical benefits of a well-planned client tour, which can ensure that an architect and client are on the same page architecturally, financially, and emotionally. "Most clients come to the table with preconceived notions about design," notes David M. Schwarz, president and CEO of David M. Schwarz Architects in Washington, D.C. "Without an articulate vision of what's desired, the design process would take far longer. Tours are a way to establish a common vocabulary with the client, an opportunity to show them how to be a better student of architecture, and it's where the individual participants—clients and designers—are forged into a team."

Jeffrey J. Gunning, who leads the retail group at RTKL in Dallas, says the growth and increasing complexity of mixed-use and vertical retail design is the impetus behind a number of client tours he has been involved with. "The purpose of the tour isn't to sell us as architects and designers; it's to give the client and the architect common reference points," he explains. As such, he says, it's important to show the clients a range of designs, and not just your own firm's. On a recent tour, two executives from the Tamdeen Group in Kuwait saw six open-air "lifestyle centers" in Scottsdale, Ariz., and in the Los Angeles area, only two of which were designed by RTKL. An inclusive tour not only broadens the client's familiarity with design trends but reinforces the client's trust in the architect as an expert, which deepens the relationship. In this instance, it also led to a commission—RTKL has designed an enclosed retail project for Tamdeen in Kuwait.

### Planning for two days or two weeks

Ideally, client tours are planned by the architect and funded by the client, and the architect's party is reimbursed for its expenses and time; reimbursements are often integrated into the overall project fee, or awarded on an hourly or daily basis in the rare event that the firm is not hired after a tour. According to architects interviewed for this article, the typical trip lasts two to four days, although they can run as long as a week and a half and cover two or three continents: In 2002, Schwarz led a group of 10 clients and designers on a whirlwind tour of seven classic concert halls in the U.S. and Europe that cost an estimated \$400,000, footed by the client (the Nashville Symphony). "We were like a rock band on tour," Schwarz laughs.

Sometimes the architect doesn't even have to leave home. Rose says he's benefited from casual walks around Boston with visiting out-of-town clients in the early ARCHITECT SEPTEMBER 2008

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stages of a project. "We do a lot of university work, so we're in a good place for that," he says. Exploring an area that you know intimately has advantages apart from convenience. Rose recalls accompanying the president of the University of South Dakota to Boston-area business schools and student union buildings, where they homed in on details like the logistics of food service. "Being very familiar with the architecture of an area is an advantage in terms of being able to get very specific," Rose says.

Rachel Lindsey, dean of the College of Arts & Sciences at Chicago State University, had her department undertake its own in-state tour prior to choosing a design for the school's planned new science and technology center. "We're restricted in terms of choice of architects by the bidding process a state school is subject to," she says. "Therefore, it's crucial that we educate ourselves

must take on the responsibility of matching clients with knowledgeable hosts at the facilities.

### **Unpredictable outcomes**

Breslau points out that client tours can often be more valuable for revealing what's not there. A working trip to Sophia Antipolis, France's state-sponsored technology center near Cannes, was intended to glean design cues for a similar grouping of structures planned for Bahrain. The scattered French installation seemed harmonious with the region's lush, rolling landscape, but both Breslau and his clients soon perceived a shortcoming. "We sensed that the exchange of ideas between people and companies was hampered by the buildings being so spread out," he recounts. "Instead, a dense, urbanlike cluster encourages that. The lesson was: Proximity has



... before we begin working with the design architect." Lindsey's itinerary of Illinois schools included the College of DuPage and Harper College. HOK's Science + Technology Group, which helped select the peer institutions on the tour and set up appointments with them, has been retained as a consultant in the planning phase. "I think the project benefits when the client and the architect can inform each other," says Jeff Schantz, the senior vice president at HOK who directs the group.

Planning arrangements vary, but, in general, architects make itinerary suggestions and clients then organize the trip, using commercial or private carriers. Seasoned planners say it's important to create an itinerary first and get the clients to buy into it, so they'll understand when they're hurried along to stay on schedule. And keep your group well informed. "We create a brief description of each stop on a trip, so that the clients can develop their line of questions ahead of time," says Gunning of RTKL. "If they have the opportunity to prepare, they'll absorb new information more easily, and that cuts down on potential communication errors."

Unguided tours can have unexpected—and unnerving—consequences. Leigh Breslau, a design partner at Skidmore, Owings & Merrill (SOM) in Chicago, recalls the time some clients went on a self-guided tour to see theater facilities designed by SOM and competing firms. But a tour of one theater hadn't been properly arranged, and the only person able to escort them inside was a recently hired stagehand, who promptly told them everything he deemed wrong with the design. (Luckily for SOM, it was a competitor's project.) "Accompanying the client is certainly recommended when possible," Breslau says dryly. And if you can't, someone at the firm

value. We might not have had that same conclusion without the tour."

Tour goals and logistics are not all that needs to be managed—so do client expectations. Two years ago, Steve Ziger, a principal at Ziger/Snead in Baltimore, took a university client to see Renzo Piano's Morgan Library expansion in New York at the client's request. The group, including the dean of the medical college, fell in love with the glass-enclosed courtyard. "When I did the math, I saw that the Morgan design cost \$12,000 per square foot," says Ziger. "Our budget was \$3,000 per square foot. The dean kept noting details he said they had to have, and I kept reminding him that we have one guarter of the budget."

The emotional aspects of tours can have a significant practical impact on the end result, too. SOM managing partner George Efstathiou had a client, Bank Boston, organize a tour for the architects who were going to design a new banking center in São Paulo, Brazil. "They knew we understood design for this type of project and how to integrate the shell and the interior of a bank building, but they also wanted us to capture the flavor of the culture in the design," he remembers. On the four-day excursion, the group traveled aboard a pair of Learjets and found cars waiting to ferry them to an array of municipal, cultural, and artistic sites.

Efstathiou says the effort brought a Brazilian flair to the design, via Oscar Niemeyer and Roberto Burle Marx, that would not have been there otherwise. "The connection we made with the clients on that tour was invaluable," he notes. "If a picture is worth a thousand words, a tour like that is worth a million words." 🛉

Dan Daley is a writer based in Nashville, Tenn.

Before designing both the Schermerhorn Symphony Center in Nashville, Tenn., and Las Vegas' Smith Center for the Performing Arts, architects from David M. Schwarz Architects and their clients visited concert halls to garner inspiration. From left, venues in Berlin, Zurich, Vienna, and Toronto.

Collaborative, Boston

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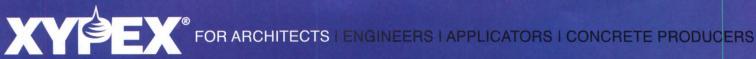


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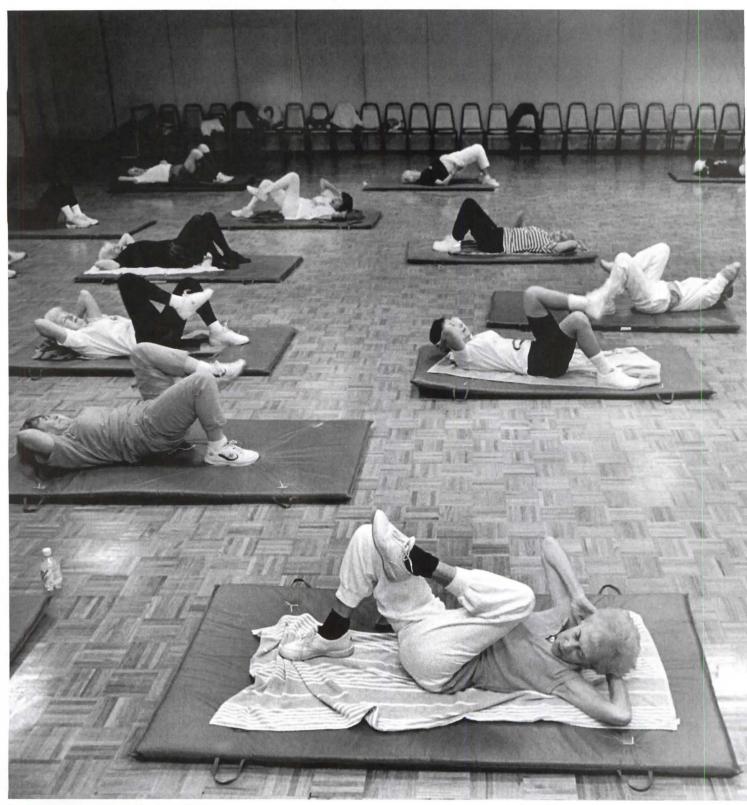
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Sweating it out at a senior exercise class in Florida.



# Text Elizabeth Evitts Dickinson OLD AGE, NEW MODELS

IF THERE'S ANYTHING THAT BABY BOOMERS *DON'T* WANT, IT'S TO WITHER AWAY IN A CONVENTIONAL NURSING HOME. AMONG THE GROWING SILVER DEMOGRAPHIC, OPTIONS LIKE URBAN LIVING, SPA-STYLE RETIREMENT CAMPUSES, AND HOME-BASED MODELS OF CARE ARE CATCHING ON—THANKS IN LARGE PART TO THE ARCHITECTS WHO ARE TRANSFORMING SENIOR LIVING.

THERE'S A WONDERFUL PHOTO OF Ethel Percy Andrus, founder of AARP, with President Dwight D. Eisenhower. It's 1961 and Andrus is standing in the White House during the first-ever Conference on Aging. Ike has just lifted the roof off a model of Freedom House, a home designed and built by AARP in honor of the event, and is peering inside, smiling. The result of exhaustive research into the needs of the elderly, Freedom House included special features such as 3-foot-wide door openings and strategically placed master light switches. This approach would later become known as universal design; it aimed to allow people to age in place with dignity.

The country went in another direction, building nursing homes and continued care retirement communities (CCRCs), those sprawling behemoths with tiered levels of care ranging from independent living to assisted living and skilled nursing. Today there are some 16,000 nursing homes and nearly 2,000 CCRCs around the country, according to the American Association of Homes and Services for the Aging.

"Forty-seven years after Freedom House, and we're still working on this," Elinor Ginzler says today. Ginzler directs AARP's Livable Communities initiative, which aims, she says, to "change the way consumers and the industry approach how houses are built so that people can age with independence, choice, and control." AARP's latest research finds a majority of people over 50 concerned about their housing options as they age. Many say they'd prefer to stay where they are, but recognize their current home is ill equipped for future needs. The alternative—the conventional nursing home—is less than appealing.

The stark reality is that America is aging, and fast. There are 76 million baby boomers, and one of them turns 50 every seven seconds. By 2026, the population of Americans over 65 will have doubled to 71.5 million. In addition to the sheer crush of housing and healthcare demand, the market desires of this aging demographic will be quite different from generations past. "This is a population for whom design does count," Ginzler says. "They pay attention to it."

Architects specializing in the field agree that design for aging needs a dramatic culture change. "In our industry, we think about museums and schools as the 'hot' thing, but people have an old image about our work relating to the communities that we create for our elders. We need to break that image," says Leslie Moldow, a principal at Perkins Eastman. Moldow also chairs the AIA's Design for Aging Advisory Group. "We can't think of it as 'one size fits all' anymore and we can't think of it as designing for our grandparents," she adds. "We need to realize that what we're doing today is what we will inherit. We should be designing for us."

### And a brief history ...



Under the Poor Laws in England and Wales, the infirm elderly are classed as "the impotent poor," and some are housed in almshouses (a London example is shown at left, c. 1895) or poorhouses.

### 16005

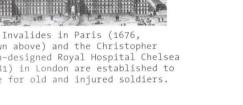


Les Invalides in Paris (1676. shown above) and the Christopher Wren-designed Royal Hospital Chelsea (1681) in London are established to care for old and injured soldiers.

#### THE EVOLUTION OF THE CCRC

Most CCRCs follow a similar model: a campus of mid-rise buildings with double-loaded corridors, massive centralized nursing stations, and wide hallways designed for ease of medical delivery and food service. Form definitely follows function, with institutional efficiency trumping individual autonomy, especially as more CCRCs move from nonprofit to for-profit entities (about 20 percent are for-profit, according to AAHSA, with private corporations like Hyatt and Marriott entering the game in the 1990s). "When you drive by one on these on the highway, you know exactly what it is," Moldow says, echoing a common complaint.

#### THE LUXURY HIGH-RISE



two independent living towers, a healthcare building with memory support (services for those with dementia and Alzheimer's), skilled nursing, and assisted living sit on just 28 percent of the land, leaving the remaining acreage open to nature. There are a variety of dining options, including an outdoor, rooftop bistro with a fireplace. It looks less like a CCRC and more like a five-star hotel.

The spa concept is not unique to Querencia. Moldow says Perkins Eastman is increasingly designing CCRCs like health resorts. "We've been looking at how to take models that are not senior-oriented, like Canyon Ranch, and bring the health spa into [retirement] communities," she says.

The Mirabella, Portland, Ore, (Ankrom Moisan Associated Architects: client: Pacific **Retirement Services: under** construction) This 30-story CCRC tower will have only eight units per floor and will feature, around its base, a full spa/fitness center, a café, a library, and a computer center. It is expected to achieve LEED Platinum. Living here won't come cheap though: Entry fees approach \$700,000.



David Dillard, president of the Baltimore firm CSD, has been designing senior living for 30 years out of CSD's Dallas office, but it wasn't until 2003 that he got a true taste of life inside a CCRC. He and an associate spent the night in a facility in Iowa before embarking on a renovation. Dillard simulated the symptoms of a stroke patient with limited mobility. He was not allowed to go outside and read without the oversight of a caregiver; he couldn't adjust the light in his room once he was in bed. Sleep was difficult due to the beeping and chattering from a centralized nursing station he called "Grand Central." "We've got to make a place look and feel like home, not a hospital," Dillard says today.

For Querencia at Barton Creek, a CCRC located just outside the city limits of Austin, Texas, Dillard and his team enhanced the 38-acre campus with a destination spa-inspired by a nearby celebrity retreat-that includes an infinity pool looking out over the desert. Ten large villas, "Residents have the ability to direct what they want their lives to be, and there's the support and infrastructure in place to help them achieve it."

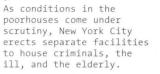
Being social creatures, what most humans want is interaction. Because isolation is a major problem for senior well-being, some developers are looking to expand the traditional CCRC into a more vibrant, mixed-use, mixed-age community. For the Newbridge on the Charles development in Dedham, Mass., Perkins Eastman is collaborating with Cambridge, Mass.-based Chan Krieger Sieniewicz to design an intergenerational campus on 152 acres along the Charles River. There will be a mix of housing options for seniors as well as a 100-pupil day care center, a Jewish K-8 day school, a summer camp, and a Jewish community center. A handful of mixed-use projects like this one are in the planning stages around the country, and architects are finding themselves in the role of master planner. "It's very complex, but that's the way this is going, so buckle up," Dillard says.

#### 1700s-1800s

Many elderly people are housed in workhouses or poorhouses, often together with criminals, orphans, and the mentally ill.

**ARCHITECT** SEPTEMBER 2008

1889





Institutionalization of elderly care has become the norm. The William Enston Home in Charleston, S.C., is an early model for a planned retirement community.

landscaping connects the building to the neighborhood.

An outdoor courtyard extends into a public park across

the street. Wide sidewalks will encourage pedestrian

activity, and a café on the ground floor will invite the

can still get outdoors by riding the elevator to the

includes a research center on elder care, is nearby.

public inside (residents who are too frail to go downstairs

fifth-floor garden). The LEED Platinum Oregon Health &

Science University Center for Health & Healing, which

Because of its proximity to public transit, Mirabella has

limited parking; there are, however, 61 bicycle spaces and

#### 1935

The Social Security Act establishes cash payments for the elderly, helping give rise to the for-profit nursing home.

#### **URBANIZATION: GOING VERTICAL**

Developing a mixed-use, multigenerational campus like Newbridge requires a very expensive commodity: land. Which is why, more and more, architects are designing senior housing into the existing fabric of urban centers where support services already exist. "There is an undeniable trend of urbanization of senior communities," says Dillard. "We have several on our boards right now." These include a contemporary tower near the Louis Kahn-designed Kimbell Art Museum in Fort Worth, Texas.

As senior housing moves into the city, it's going

#### THE SPA CAMPUS



20 spots for kayaks.



vertical. Ankrom Moisan Associated Architects recently broke ground for the Mirabella, a 30-story, 224-unit tower in Portland, Ore., which is on track to become the nation's first LEED Platinum CCRC. The sleek high-rise is in the city's developing South Waterfront District and will be fully integrated into the transit-oriented, mixeduse neighborhood.

Going vertical has distinct advantages. At the Mirabella, with just eight units per floor, residents are within a short walk of elevators and have easy access to amenities like retail, health services, and classroom space; a fifth-floor garden; a 24th-floor dining lounge; and a 25th-floor observation deck. There's also a health spa with a lap pool. Half a million dollars of fiber optics assures that current and future technological needs can easily be met.

The slim tower was designed to maintain sight lines to the nearby Willamette River, while exterior

"This is all about quality of life," says Jeff Los, a principal at Ankrom Moisan. "Every decision is focused on how to maintain the optimum experience for the individual, on how to keep people connected to the city."

The South Waterfront development the Mirabella belongs to requires that every building in the district achieve at least LEED Silver; when it is complete, it will be the largest green community in the country. Los found that going platinum was financially beneficial for his client, Pacific Retirement Services. "I teamed up with the accountant at Pacific, and we realized that we saved \$3 million at the outset," Los says about the energy savings. "It turned out that LEED was an economic benefit." (Changing to variable-speed motors on the HVAC system, for example, cost \$58,000, but the switch will save about \$42,000 a year in energy costs.)

The future residents of Mirabella are, according to Los, movers and shakers. "The big change that I've seen Querencia at Barton Creek, Austin, Texas (CSD; client: Senior Quality Lifestyles Corp.; completed June 2007) The master-planned 38-acre Querencia campus, just outside Austin's city limits, includes 10 cottage duplexes. 150 independent living units, 40 assisted living units, 40 units for skilled nursing, and 20 for memory support. It has a spa and several dining options, among them the restaurant shown at left.

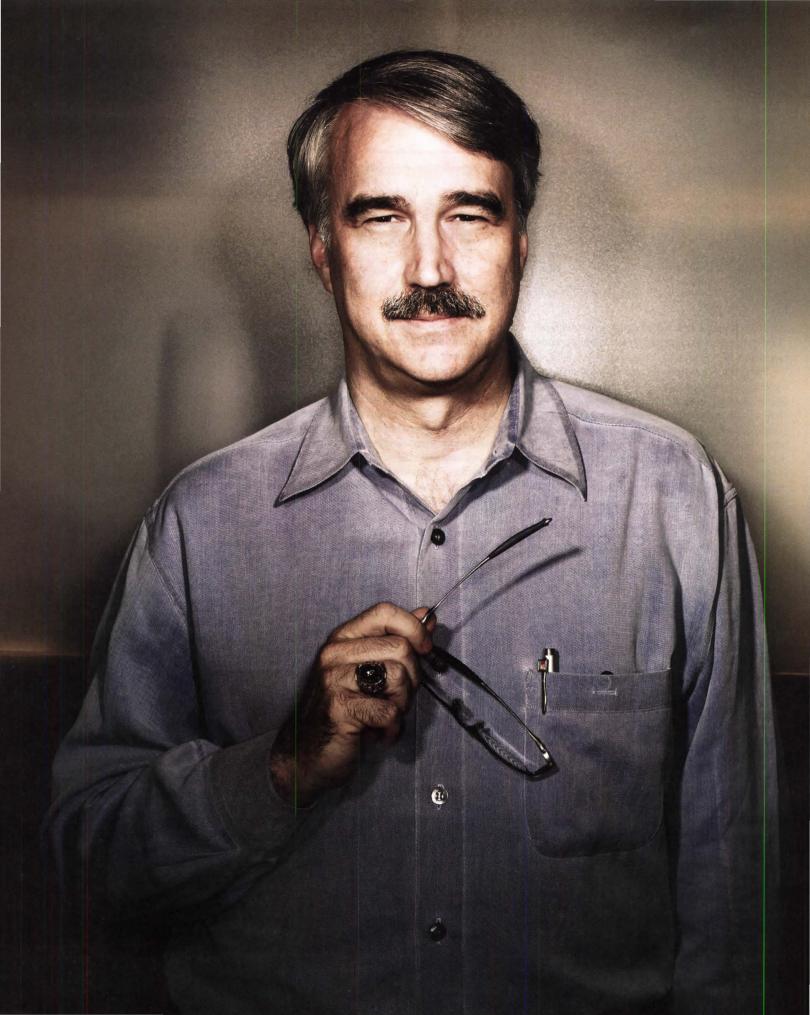
PREVIOUS SPREAD PHOTO: CORBIS; ALMSHOUSE AND LES INVALIDES IMAGES: GETTY IMAGES; MIRABELLA RENDERINGS: ANKROM MOISAN

ASSOCIATED ARCHITECTS: QUERENCIA

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### $\rightarrow$ TALES FROM THE DOWNTURN, PART THREE

# **KEVIN FLYNN**

### AS THE ECONOMY SLOWS DOWN, COMMISSIONS DRY UP, AND FIRMS START THINKING ABOUT LAYOFFS. THE 2007 CHAIR OF THE AIA COMMITTEE ON LEADERSHIP EDUCATION (AND VICE PRESIDENT OF KIKU OBATA & CO. IN ST. LOUIS) DISCUSSES WAYS THAT EMPLOYEES CAN KEEP THEIR JOBS AND COME OUT ON TOP.

### What's the focus of the Committee on Leadership Education?

It's really looking at leadership as a core value or function. We're fairly new, only two years old. We just got our full status a year ago.

### Congratulations. What is the committee working on?

I'm heading up the professional development subcommittee, and we're working on a new tool called "Living Your Life as a Leader: Your Personal Leadership Plan." Leadership is something you can achieve at any point in your career. We identified four key phases: the spark when somebody gets into the issue; initial engagement; active engagement; and lifetime engagement, where senior members become mentors of the future generation. The ideas are applicable whether you're looking to become a leader at your firm or president of the United States.

### What are architects saying to you in reaction to the economy right now?

It's really mixed. Some firms are really starting to feel it, but here in the Midwest it's different. We haven't had to lay anybody off, and things look okay for the rest of the year. Another one of our committee members had a slow first quarter, and they laid people off. Now they're really busy again, and they've got everybody working overtime.

### I've been hearing more and more about layoffs. What strategies can younger architects take to hold on to their jobs?

One thing is investing in professional development—look at the architecture profession going forward, the change in how we're doing things. It's critical for all of us—and in particular for younger architects coming out of school—to show a willingness to continue to learn. I don't think we learn half of what we need to in college. And that gap is probably widening.

What would be good areas of concentration for continuing education? One is leadership, of course, which you get little of in school. Another is technical skills—the transformation with BIM. What's going to happen to the profession if that does take hold? What skill sets do people need? Another key issue is integrated practice. Firm owners are expecting more and more out of their team. Even though the idea is that everyone's working together, there's going to have to be somebody at that table that's a strong facilitator who can get people to work together.

### What else can a younger architect do?

We asked people what held them back from leadership roles, and they said, "public speaking." In architecture, you can have the greatest design in the world, but if you can't present it, you may not be able to sell it. Ninety percent of this is being able to sell your idea to the client.

### How does mentorship factor in here?

Younger architects should be seeking that out—pushing for it. Showing initiative is important for a younger member in a firm. In a downturn, companies are looking for people to take up more work—which is not necessarily good for staff—and to be able to manage and multitask.

### What are some other characteristics of the invaluable employee?

Companies want to work with firms that understand their business needs, ones that don't just say, "You should pay for it because it's beautiful." That broader perspective, beyond architecture, is becoming really important. We look for employees to multitask and work across disciplines. You have to understand our bottom line and the client's bottom line — the return on investment. Another thing that quickly comes to mind is innovation. In a downturn, you have to offer something unique to the company—looking out for something new and analyzing the future. Just doing the CDs can be outsourced.

### Gotta be a leader.

There's also the issue of followership.

### Followership?

In order to have leaders, you have to have followers. And in this day and age, followers can have as much power as a leader—just look at the influence of the internet. Younger people may think, "They're talking about leadership. That means I have to own the firm or become mayor of my city." But leadership has a lot of levels, and to be an engaged follower is important to a democratic society.



WHEN THE UNITED STATES last occupied an embassy next to Berlin's Brandenburg Gate, in 1941, the diplomat George Kennan watched from its windows as Hitler passed by en route to the Reichstag to declare war on Washington. Nowadays, at the resurrected U.S. Embassy on the same site, diplomats peering out of the blast-resistant windows are likely to spot hostile German architecture critics lining up to denounce the building's design.

The Berliner Tagesspiegel newspaper called the building a "triumph of banality." The Süddeutsche Zeitung dubbed it "a Fort Knox at the Brandenburg Gate." The Tageszeitung compared one façade to a "social housing building" with an entry like "a prison courtyard." to the 'wellness and waterboarding' area."

Few U.S. government commissions have been as vexed by controversy. But is the new embassy really *that* bad?

**THE OLD EMBASSY BUILDING,** housed in the 19th century Blücher Palace, was severely damaged in the final days of World War II. At the start of the Cold War, its shattered remains were torn down, and the plot ended up on the noman's-land fronting the Berlin Wall.

After the Wall came down, the State Department recognized the importance of the commission to erect a new building there. In 1995, it organized its first competition for an embassy since the contest Eero Saarinen won to



The *Frankfurter Allgemeine Zeitung* was the harshest. "There is hardly a modern building in existence—aside from bunkers and pesticide-testing centers—that is so hysterically closed off from the public realm as this embassy," the paper's architecture critic, Niklas Maak, wrote. "The embassy gives the image of a country traumatized by 9/11 and the effects of globalization" and might as well be "on the route to the Green Zone in Baghdad," he added. One windowless expanse, Maak suggested, "must be home design the U.S. Embassy in London four decades earlier. Thirty entrants were winnowed to six: the offices of Venturi, Scott Brown; Kevin Roche John Dinkeloo; Robert A.M. Stern; Bohlin Cywinski Jackson; Kallmann McKinnell & Wood; and Moore Ruble Yudell. In deference to German sensitivities, the jury included former West Berlin Mayor Klaus Schütz, who dissuaded the panel from Stern's approach. (Neoclassicism is problematic in Germany, due to Hitler's overblown versions of the temples of antiquity.) By contrast, the U.S. Embassy site on Pariser Platz—the rebuilt square facing the Brandenburg Gate that Berliners like to call their city's *gute Stube*, or front parlor—was authorities to either move a street behind the embassy or eliminate a lane of traffic to create the required buffer zone, it turned into a test of wills. Relations were strained to the point that Berlin's mayor at the time, Eberhard Diepgen, publicly taunted Kornblum, suggesting "he should just go ahead and build a McDonald's restaurant on Pariser Platz instead of a United States Embassy."

The ambassador, a seasoned diplomat devoted to cultivating U.S.-German ties, was incensed. "It was seen as some kind of imperialistic demand to move the street a few feet," Kornblum remembers. At one point, Berlin officials pressed the Americans to give up their central site altogether and move to a plot in the Tiergarten behind the



#### Site Plan

- 1. U.S. Embassy
- 2. Pariser Platz 3. DG Bank
- 4. Hotel Adlon
- 5. French Embassy
- 6. British Embassy
- 7. Holocaust Memorial
- 8. Tiergarten
- 9. Brandenburg Gate
- 10. Reichstag 11. Spree River

subject to tight city regulations specifying building height and setbacks, as well as window size and symmetry, and requiring stone façades. The parcel off the square's southwest corner is a complicated one, with Pariser Platz at the northern end, the leafy Tiergarten park on the west, and the vast, somber Holocaust memorial by Peter Eisenman to the south. The winning embassy design, by Moore Ruble Yudell Architects & Planners (MRY) of Santa Monica, Calif., sidestepped any unified aesthetic in favor of what principal John Ruble calls "an assemblage of many parts."

The original design mutated considerably before U.S. diplomats finally moved in this past May. After the winner was announced in 1996, the project was put in deep freeze as the State Department grappled to come up with financing. Then, in August 1998, truck bomb explosions outside U.S. embassies in Kenya and Tanzania left 301 people dead and injured more than 5,000. In response, the State Department drastically tightened security restrictions for new embassies. Already, a 1983 bombing outside the U.S. mission in Beirut, Lebanon, had brought a 1985 mandate that embassies be set back 100 feet from the street.

Such requirements were difficult to meet at Pariser Platz because of the German desire to re-erect the square according to its original plan, and led to a protracted clash between the U.S. government and the city of Berlin, which was still adjusting to its post–Cold War sovereignty. So when then U.S. ambassador John Kornblum asked Berlin Japanese Embassy, locating the U.S. mission at the singularly awkward address of Hiroshimastrasse. "They wanted to get rid of us," Kornblum says.

A compromise was eventually reached whereby then secretary of state Colin Powell partially waived the setback requirement, in exchange for the Berlin government removing one lane of traffic in the street to the south and moving another street slightly to the west.

In the process, the architects had to pull in the footprint of their original design on two sides. The building lost one wing when it went from a rectangle to a U shape, with the outer wall of an adjacent Frank Gehry–designed bank flanking the east side of the inner courtyard. Complicating MRY's task even further, Congress slashed \$50 million off the original \$180 million budget, forcing still more modifications to a project that finally broke ground in 2004. Only 80 percent of the embassy's 500 staffers can fit into the new building, with the remainder now posted in what was previously the U.S. Consulate in West Berlin.

In the original competition guidelines, architects were urged to create a "public face that portrays an open, accessible government while accommodating security measures in an unobtrusive manner." The gleeful vengeance with which German critics have savaged the building for its failure to fulfill that brief is testament to something other than a discerning eye. *Schadenfreude* is, after all, a German concept.

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WITH THE BERLIN EMBASSY, MRY has done little to burnish America's image. Its design is a confused and uninspired jumble—largely due to countless compromises made over the project's 13-year gestation—yet it's not quite the architectural calamity critics have deemed it. In truth, the embassy is a vast improvement on the gargantuan, bunkerlike U.S. diplomatic complex just built in Baghdad's Green Zone. Rather than be handed the easier option of designing the embassy in a restricted area or outside the heart of the city (like the new U.S. Embassy in Beijing), the architects worked with the difficult, prominent site, which highlights the continuity of U.S.-German ties as well as the centrality of America's role in the creation of the postwar German republic.

The new French Embassy across the square and the new British Embassy around the corner are hardly stellar landmarks, yet the German media subjected them to markedly less opprobrium. Security needs affected the architecture of both. The street fronting the British mission, which was designed by Michael Wilford with ill-fitting colorful Pop elements meant to project an image of "Cool Britannia," has been blocked to vehicular traffic by heavy bollards. At the French Embassy, Christian de Portzamparc touted a public passageway on one side that would provide access from Pariser Platz to nearby Wilhelmstrasse. But security constraints have forced this to be sealed off.

The overall plan for the American Embassy was determined by Berlin's historic street pattern, which the city's recently retired chief planner Hans Stimmann vowed to resurrect. When the MRY design was first chosen in 1995, Pariser Platz was still tabula rasa. But by the late '90s, the square had re-emerged according to its 18th century layout, with the luxurious Hotel Adlon at one end, a collection of banks and the French Embassy at the northern side.

Josef Kleihues designed a pair of classical structures to flank the gate, while directly next to the U.S. Embassy site, Gehry demonstrated to colleagues like Philip Johnson, who loudly bewailed the city's stringent requirements, that it was indeed possible to work within the regulations and achieve design excellence. His project for DG Bank deftly weaves concrete and glass together (tucked inside is a more typically exuberant, biomorphic auditorium) while complying with municipal code.

The U.S. Embassy's four-story elevation on Pariser Platz lacks the compositional elegance of Gehry's façade; so intent is it on avoiding preening gestures, it achieves only reticent blandness, with beige limestone accented by thin, horizontal bands of darker limestone. The asymmetrically placed entrance is marked by a slit in the façade and a curving glass canopy meant to echo the fluttering of the American flag overhead—but it ends up looking oddly like an eyebrow arched at the French just across the way.

From the Pariser Platz, unappealing security doors hamper views into one of the few elements of openness a glass-roofed rotunda—in a building that members of the general public will probably never experience from inside. The rotunda gives on to what—after the ambassador's own offices—is the most successful aspect of the building. A tranquil inner courtyard, meant to recall the majesty of America's national parks, is a relaxed space within the tightly controlled diplomatic enclave. "With an embassy, you're striving for a certain kind of formality," Ruble explained while showing me around the project, "whereas for most people, the most characteristic American thing is a kind of informality—being on a first-name basis and things like that. How do you put that feeling into a government building? It's a tricky, interesting problem."

The open-roofed courtyard features that fetish of every American homeowner, a pristine green lawn. In its midst stands an Ellsworth Kelly sculpture, a totem of pearly gray stainless steel that draws a vertical line from the garden to the sky. The courtyard landscaping by the Olin Partnership uses American species like pine, dogwood, and cypress. A stone-paved outdoor terrace with a high Colorado sandstone fireplace and walls makes this an inviting space for the embassy's annual July 4 barbecue.

Inside there is a communal dining area, with another stone hearth that recalls a Western lodge or the interior of a Neutra house. George Nelson "bubble lamps" and molded plywood chairs by Charles and Ray Eames lend an air of ease within a diplomatic fortress built to withstand assault from the outside. Ruble declined to discuss security features of the blast-resistant building and asked me to move away when I began to examine the thick steel window frames in a conference room facing the Pariser Platz.

The building's most prominent element—a round tower housing the ambassador's offices—is not visible from Pariser Platz. But it looms large when one looks at the embassy from the other side of the Brandenburg Gate. The tower, topped in the competition scheme by a rounded copper cupola that harkened to the lamp atop the Statue of Liberty, has ended up encased in a rectangular steel trellis that lends it more the aura of a battleship plowing full steam ahead. According to Ruble, the trellis is intended to relate to the classical lines of the gate.

Only higher ranking visitors will ascend via elevator to this rarefied precinct. The ambassador's office has views out over the Tiergarten and is furnished with Bauhaus pieces, in tribute to the host nation. The most spectacular interior space is the adjoining round "stateroom," where 20 Brno chairs encircle a massive round table that is embedded with a compass to imply the charting of a course for diplomacy. Curved glass walls open onto a rooftop terrace with a parterre garden of American grasses. The stateroom looks out onto the dome of the Reichstag and the top of the gate, with its bronze quadriga statue of a winged goddess driving a four-horse chariot.

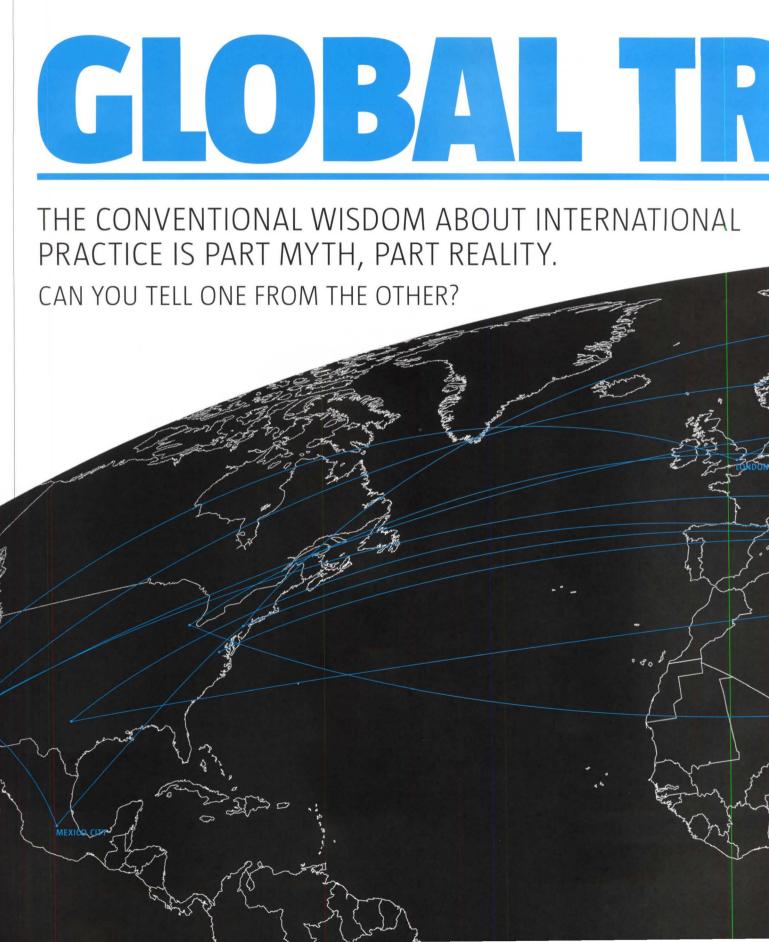
This vista will make Germany's chancellor, whose own offices are on the other side of the parliament building, green with envy. "I want you to give me the best place to have lunch in Berlin," Charles Redman, who served as ambassador when the embassy design was chosen, asked Ruble and his partners. Redman's successors certainly have that coveted spot in this jaw-dropping room.

Providing such a spectacular spot for official entertaining is a praiseworthy goal for an embassy architect, but so is providing an enticing image for the building as a whole. Relatively few Germans will ever enjoy the spectacular view from the tower; many will experience the dull exterior façades, which rely on white brise soleils poised over aluminum window frames to provide detail.

In their assessment of this thorny commission, German critics were clearly blinkered by antipathy to the current U.S. government. Still, while it's unfair to condemn this building as an emblem of American decline in the era of George W. Bush, devising secure U.S. embassies of architectural distinction is not yet a mission accomplished.

*Critic Michael Z. Wise is the author of* Capital Dilemma: Germany's Search for a New Architecture of Democracy.

AT ONE POINT, BERLIN OFFICIALS PRESSED THE AMERICANS TO GIVE UP THEIR CENTRAL SITE AND MOVE TO A PLOT IN THE TIERGARTEN BEHIND THE JAPANESE EMBASSY, LOCATING THE U.S. MISSION AT THE SINGULARLY AWKWARD ADDRESS OF HIROSHIMASTRASSE. **ARCHITECT** SEPTEMBER 2008







### 2. True or False → It work dries up at home, it's smart to shift your focus to international projects

### Answer → FALSE

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It seems like a no-brainer. With the American economy in the doldrums and the Middle and Far East booming, what could be a better strategy than shifting your focus overseas? But this approach is fraught with risk, cautions Bradford Perkins, founder of Perkins Eastman Architects and author of the handbook *International Practice for*  Adrian Cohen, managing partner of WWCOT, says that for an architect to run to China in times of domestic trouble would be a "big mistake." For one thing, "fees [there] are not at the same level you'll receive for the same kind of work in the U.S.," he points out. (A small handful of starchitect firms like OMA and Herzog & de Meuron may be exempt from this consideration.) WWCOT combines U.S. and local labor to make the financials work, but its leaders don't view Shanghai as a profit center. "The office in China is profitable, but not to the level that our [U.S.] offices are," Cohen says.

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### 1 → The best way to get international work is through a

### Answer: True

If there's one thing internationally active U.S. architects can agree on, it's that crossborder personal relationships — whether with potential clients or fellow designers — are indispensable. WWCOT, a firm based in California, got a toehold in Shanghai several years ago by sending principal Harry Lu to

explore opportunities there; Lu had trained as an architect and taught in China before coming to the States, so was able to reconnect with plenty of contacts in his home country.

Similarly, John Reed, principal of John Reed Architecture in New York, has landed projects in Korea with the help of a Korean architect, Jae Lee, who had known Reed's brother in college and became aware of Reed's work when talking with a mutual acquaintance. Mary-Ann Ray of Studio Works, a small Los Angeles practice, tells a similar story. In 2003, she says, "a [Chinese] friend of ours, a non-architect, called us out of the blue and said, 'You need to come to China, now.'" Ray and her partner, Robert Mangurian, couldn't get there immediately, but the call led to consulting work and, within a few years, they had set up BASE (Beijing Architecture Studio

Architects, published by Wiley earlier this year. Perkins says that even amid a difficult economic spell, firms should think hard before going abroad. "There are plenty of cases of firms where the key people went running off overseas and lost track of why people back home were hiring them. If you lose your base while chasing international work, it can be extremely hurtful." In his book, Perkins cites The Architects' Collaborative (TAC), a Boston firm founded by Walter Gropius that had to close in 1995 due to financial problems, including a commitment in the Middle East that became a major liability after Saddam Hussein invaded Kuwait.

Smaller firms can be particularly hobbled when senior staffers are halfway around the world for weeks or months at a time, but large firms aren't immune from difficulties either. Perkins himself admits that when he was spending 100 days a year in China to build up that practice, "it was a problem" and overburdened his partner, Mary Jane Eastman. He spends about 50 days a year in China now. 3. True or False → A small, lesser known practice can never land a major overseas project

#### Answer → FALSE

John Reed's practice couldn't be smaller: "The office is essentially me and whoever I need to work on certain projects," he says. Yet the architect has done a master plan for the redevelopment of Seoul's Sewoon District 4 and just finished schematic design for an office building there; he is also working in India. How does he manage? By being aware of his limitations and forging productive alliances (with Koetter | Kim & Associates, for instance, his collaborators on both Sewoon projects). "We just talk together day by day, so we're always on the same page," explains Reed, who travels to South Korea four or five times a year.

David Jameson, principal of a small firm in Alexandria, Va., has designed mainly single-family homes around the Washington, D.C., area and in California, but recently took

on three projects in the United Arab Emirates and a possible project in China. For the latter, Jameson is "basically trying to ally [himself] with a landscape firm in Beijing" and generate work from that. The projects in the UAE, which are houses in the range of 10,000 to 15,000 square feet, fell into his lap: The client saw his work featured in an international publication. Now Jameson is talking to a client about doing larger-scale multifamily work in the Middle East.

Being a small firm allows you to remain agile, Jameson says. Outsourcing can help you work fast, a prerequisite



### rsonal relationship.

Enterprise), an independent design laboratory with faculty from U.S. and Chinese institutions.

"The key thing is relationships," observes Callum MacBean, principal and managing director of Gensler's Shanghai and Beijing offices. "Make sure you have someone who knows people, knows the process and how to get things built and how to get paid." If you don't, he warns, "you'll be eaten alive."

of international work: "You can look at 3-D renderings in the morning after they do them overnight." It can also be something of an equalizer. "We can have the same people that [Skidmore, Owings & Merrill] uses [for its] renderings do stuff for us," he notes.

4. True or False → Clients in China, the Middle East, and elsewhere in the developing world depend heavily on Western expertise

### Answer → TRUE—but not for much longer

They're not called tiger economies for nothing: In a scant decade or so, China, India, and other developing countries have raced up the learning curve of modern building design and construction. They still lack local architects with experience building on a large scale, so they turn to architects from America. China, looking ahead, requires foreign architects to partner with Chinese design institutes, growing native architectural expertise in the process.

For many of the architects interviewed here, part of the thrill of working in emerging nations is the wider scope of the architect's role and the clients' openness to new ideas. Perkins explains, "The client is relying on the design team for much more decision making than is typical in a developed country. We will write the program for them. They trust our expertise and accept it more readily." Gensler's MacBean agrees. "Local clients will really listen to the designers. They have a thirst for knowledge." Programs, he adds, "are a lot of the time not worked out." Which means architects need to be ready to help the client pin down the program and then roll out a schematic design-and fast, because development in cities like Dubai and Beijing moves "at warp speed," in Perkins' words, with planning, programming, and schematic design often compressed into 60 days.

MacBean sees a new trend on the horizon that may tilt the balance of power between architect and client. "Fees are being driven up. It's a very competitive market," he says of China. "Clients are now willing to wait for the architect they want." A maturing market is good for China, bad for the Western architects who go there out of mere opportunism.

### 5. True or False → Female architects have a tough time working in non-Western countries

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There was a place Mary-Ann Ray worked where the contractors called her "the wife" and snickered. It was her home state of California. "I've found it so much better there than here," she says of being a female practitioner in China versus the U.S. Ray attributes that in part to her academic affiliation: She teaches at the Southern California Institute of Architecture in Los Angeles, and professors, she says, are held in very high esteem in China. Likewise, Marilyn Jordan Taylor, an urban design and planning partner at Skidmore, Owings & Merrill (SOM), says, "I don't feel it's been a disadvantage to be a woman" in her international work, which has spanned many years and countries. She was "pleasantly surprised," she says, by the Middle East.

However, Taylor points out that "guys sometimes feel more comfortable making contact with guys," especially in competitive environments—at home and abroad. And abroad, it's not unheard of for a female architect to hand over a client presentation to a male colleague or for a client to, as Perkins puts it, "want to see the old guys." The pragmatic Taylor acknowledges that she's "long had a rule: If it's clear a client isn't going to talk to me, you turn it over to someone else." (She stresses that this has happened to her only "very, very occasionally.")

Some women architects may not be willing to swallow this kind of compromise; however, it's unlikely they'll find themselves in this position often—assuming they do due diligence on countries and clients. "FEES ARE BEING DRIVEN UP [IN CHINA]. IT'S A VERY COMPETITIVE MARKET. CLIENTS ARE NOW WILLING TO WAIT FOR THE ARCHITECT THEY WANT."

— CALLUM MACBEAN, GENSLER WWW.ARCHITECTMAGAZINE.COM

Text Vernon Mays

# FROM LIONS TO LENURS

FXFOWLE ARCHITECTS WORKS WITH THE WILDLIFE CONSERVATION SOCIETY TO TRANSFORM THE BRONX ZOO'S HISTORIC LION HOUSE—A LONG-EMPTY BEAUX-ARTS TREASURE DESIGNED BY HEINS AND LAFARGE—TO A STATE-OF-THE-ART EXHIBIT HALL SHOWCASING THE WILDLIFE OF MADAGASCAR.

**WHAT HAPPENS TO** a great old building when its functional purpose is no longer relevant in contemporary times? It's a difficult question—one that the Wildlife Conservation Society (WCS) confronted in its renovation of the Lion House at the Bronx Zoo.

Designed by Heins and LaFarge and opened to public acclaim in 1903, the expressive Beaux-Arts gem is an essay in symmetry, formalism, hierarchy, and surface articulation. At the time of its completion, the Lion House was a place to come and behold the large cats imported from exotic places. The beasts were presented as curiosities—caged for the convenience of Sunday strollers. But times changed. By the 1940s, a more naturalistic habitat was created for the larger species, but smaller cats remained in the building until the mid-1980s, when it was shut down completely.

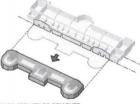
In 2002, FXFowle Architects of New York was engaged to convert the space into a new interpretive center for the WCS, which manages the Bronx Zoo and other urban wildlife parks in greater New York City. WCS has channeled millions into preserving the biodiversity of Madagascar, an island off the east coast of Africa. It actively protects the country's largest tract of rain forest, a quarter of its coastal forests, its vast coastal reefs, and the wildlife within—80 percent of the species in Madagascar are unique to the island. So when it came time to plan an exhibition for the rehabilitated Lion House, Madagascar was the obvious choice of theme.

Redesigning the building for habitation by a new collection of animals presented its own set of challenges, and the conservation agenda of WCS called for an aggressive sustainability agenda. Strategies including materials recycling, on-site generation of electricity, water conservation, daylighting, and heat recovery all combined to earn the Lion House LEED certification—it is the first New York landmark building with this distinction.





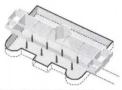




CAGE STRUCTURE REMOVED



STEEL BEAMS INSTALLED AND WALL REMOVED



CELLAR EXCAVATED AND EXISTING STRUCTURE SHORED



NEW FLOORS POURED



NEW CAGE ENCLOSURE AND INTERIOR WALLS



NEW ROOF STRUCTURE









### STRUCTURE AND ENVELOPE

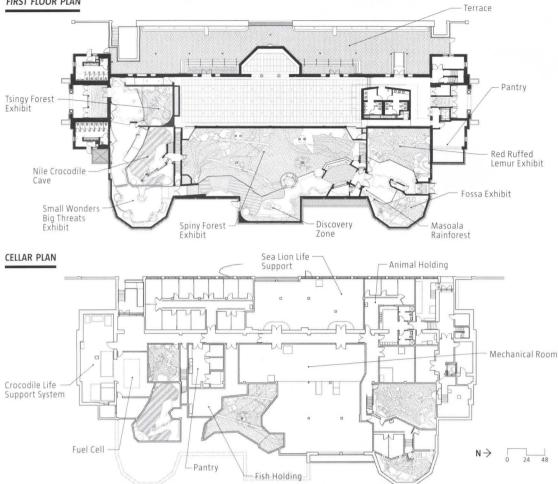
**RENOVATION OF THE** Lion House entailed reworking the building's envelope and structural system to accommodate new functions. Increasing the building's usable area from 32,000 to 40,000 square feet was largely accomplished by expanding the cellar level and creating new service space under the west terrace and the former cage area. This space is used for animal keeping, medical care, and life support systems.

The 6,000 additional square feet on the lower level also contains service and mechanical areas and allows enough height for trees for the primates to climb. Floors, walls, and cage enclosures were removed and earth-moving equipment brought in to create greater depth inside the footprint of the building. "All this happened within the envelope of the original building, while having the exterior appear unaltered," says Sylvia Smith, a senior partner at FXFowle.

The most visible exterior changes took place on the east facade, which started as a ribbon of cages; these were completely stripped away. The new program required those walls to be solid, with a thick sandwich of insulation. Even so, FXFowle reinterpreted the façade in a way that evokes its original spirit. Along its recessed sections, tubular steel columns are exposed to re-establish the structural rhythm. The columns rest on a reconstructed parapet wall made of reused bricks and a recycled-granite water table, topped with a new limestone sill. Space between the columns is infilled with ironspot bricks recovered from other parts of the building. The three projecting volumes are wrapped with ornamental iron grilles that recall their former use as cages. Behind the grilles are stainless steel panels etched with graphics of the Madagascar landscape. The effect changes with the daylight conditions.



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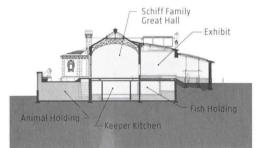


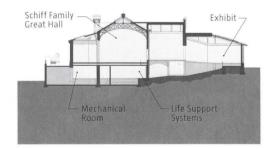
### EXISTING CONDITIONS AND PROGRAM

THE LION HOUSE is the largest building on Astor Court, a collection of Beaux-Arts structures that was designated a National Historic District by the New York City Landmarks Commission in 2000. "In some ways, it is the symbolic heart of the zoo," says Susan Chin, director of planning and design for WCS.

The original façade was composed of limestone, Roman ironspot brick, a copper roof, and a cornice of terra-cotta medallions embellished with puma, jaguar, and leopard heads. Sculptor Eli Harvey designed the medallions and the lifelike stone lions that adorn the structure. The interior was organized as a long hall with cages to one side and large, round-headed windows to the other.

In striving to create a program that would fit the building, the staff faced the inherent limitation of the original floor plan-its strong linear orientation. The small scale of most Madagascan wildlife seemed to fit an immersive exhibit, but it soon became clear that such animals take up more room than expected. "You quickly learn that it's not only about exhibit space—it's all the back-of-house functions that support the animals and plants," says Smith. The design team was challenged to accommodate 4,800 square feet of exhibit program, 6,700 square feet of wildlife support space, and 6,700 square feet of mechanical space within the existing envelope.









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True restoration was only performed in areas where the use remained the same. In other areas, such as the building's east facade, a restructuring occurred, albeit one that recalls the original construction. Cages (opposite top) were removed and replaced with metal grilles over etched stainless steel panels (opposite middle and bottom) that depict scenes of the animals housed within (below left and right).

#### The interior space that

was occupied by the cages now houses the bulk of the exhibit space (top). Materials removed from the building (see construction diagram, opposite left), such as sandstone panels and red tiles, were reused in the reconstruction or will find a place in the new Center for Global Conservation that is taking shape nearby on the zoo campus.

An additional 6,000 square feet was excavated from the cellar level to accommodate life support systems, animal holding, storage, and pantry and mechanical space (left).







WHILE THE ARCHITECTS strove to stay as true as possible to the Lion House's original exterior, avoiding significant alterations to the interior was impossible. The close collaboration between the architects and zoo staff also required a shift in attitude. "As architects, we are so used to understanding what human beings need," says Chin, who is trained as an architect herself. "When you switch to a different species, you have to reinvent the way you think." Visitors entering from the south leave the familiar world behind and pass into an immersive environment designed to simulate the Madagascar landscape. The pedestrian path weaves along a serpentine route past the Tsingy Forest exhibit, where rare primates known as Coquerel's sifakas swing from tree to tree, and the Nile crocodile cave, where visitors encounter an 800-pound crocodile.

Wedged between and beneath the exhibits is a complex maze of access ways for the animals, which are removed to holding areas each night. "The holding space is very important," says Smith, noting that not only do the animals need to be secured at night, but the exhibits need a break from the animals' tendency to devour plants. Along with animal holding areas and a large mechanical room, this level includes life support systems for the crocodiles and sea lions (which frolic in an outdoor pool on Astor Court) and space for a gigantic fuel cell.

The former viewing hall is refurbished as a multipurpose space called the Schiff Family Great Hall. The openings left by cage removal are covered by infill panels. Its original skylights were rebuilt and the battened ceiling rebuilt with concealed acoustical panels, leaving the ceiling plane open to showcase the old cast iron trusses that spring from side to side. Flooring in the hall is a raised system of concrete pavers, which allows conditioned air to be circulated in the plenum beneath and eliminates the need for visible ductwork in the ceiling.



















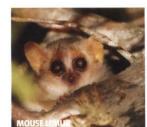
Infill panels on the east wall (left) in veneers of recycled wood finished in a rich zebra pattern cover the spaces that used to house lion cage openings (opposite top).

#### Structural members and

mechanical systems are hidden as much as possiblein some cases, artificial tree trunks or rock formations are strategically placed to encapsulate columns or air ducts (opposite middle right). Most animal support spaces, such as food preparation (left), are housed on the cellar level.

Low, suspended wood-grille ceilings in the darkened exhibit areas (far left) are a contrast to the high, bright ceilings in the habitat areas, where skylights admit daylight for the benefit of the plants and animals.







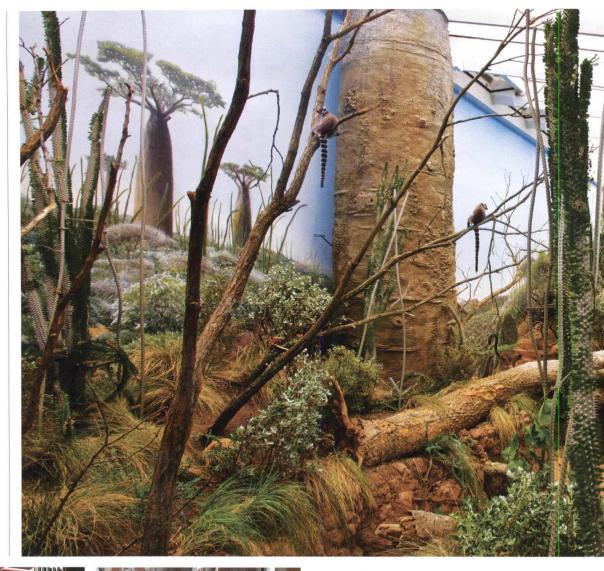


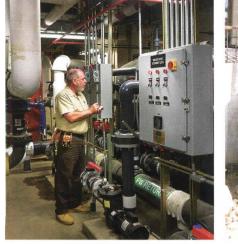
G-TAILED MONGOOSE



Animal habitats feature high ceilings with ETFE skylight panels (right). "We needed high levels of UV for the plants, but we didn't want to be designing for the worst degree days of the summertime from a sustainability standpoint," says Smith. Adjustable skylights, which can be darkened remotely by the building automation system, were the ideal solution

Heating and cooling of the building are aided by five geothermal wells placed near the building perimeter. In tandem with six 28-ton, water-to-water heat pumps. they provide heated or chilled water for heating and cooling. A fuel cell (below right) supplies at least half of the energy needs of the Lion House, Temperature and water needs for each species can be determined in cellar-level spaces such as the Nile Crocodile Life Support Systems room (below left).













ILE CROCOD

### SUSTAINABLE SYSTEMS

THE ONUS PLACED on the architects and engineers to make the building highly energy-efficient created opportunities to imbed a wide range of technologies. The most innovative of these are the skylights, a three-layer ethylene tetrafluoroethylene (ETFE) system with a movable center layer and staggered shading patterns that balance the requirements of maximum natural light with minimum heat gain as well as electrical and cooling loads.

Inadequate underground electrical distribution on the campus helped make a fuel cell an economical choice. Excess energy will be exported to the zoo grid. In addition, waste heat from the fuel cell will supply some 40 percent of the building's heat.

The active participation in the design process of both WCS and the New York City Department of Design and Construction allowed the team to explore alternatives to standard definitions of comfort. After all, the animals like to be warm, while people prefer to be cool. Right-sizing the HVAC system included controlling exhibit lighting and skylight shading through the building automation system, which also monitors and controls the sources of heat and reheat to achieve the most energy-efficient result. "We ended up agreeing that on the hottest days of the summer, people don't have to walk through here and expect it to be 72 degrees," Smith says.



**PROJECT** Lion House Reconstruction at the Bronx Zoo, New York

**CLIENT** New York City Department of Design and Construction

END USER Wildlife Conservation Society ARCHITECT FXFowle Architects, New York—Sylvia Smith (senior partner); Thomas N. Fox, Paul A. Tapogna, Krishna Rao, Danny MacNelly, Mark Ruzitsky, Nicholas Tocheff, Conrad Talley, Jeremy Geddes, Chad McKee, Sean Murphy, Heng-Choong Leong, Nicholas Hollot, Susan Masi (project team) HISTORIC PRESERVATION Building Conservation Associates Inc.

LANDSCAPE ARCHITECT Quennell Rothschild & Partners

INTELLA FROM

LIGHTING CONSULTANT Hayden McKay Lighting Design STRUCTURAL ENGINEER Anastos Engineering M/E/P ENGINEER Kallen & Lemelson Engineers ACOUSTIC CONSULTANT Cerami & Associates GEOTECHNICAL ENGINEER Langan EXHIBITION DESIGN EXhibition and Graphic Art Department, Wildlife Conservation Society LIFE SUPPORT SYSTEM DESIGN TJP Inc. CONSTRUCTION MANAGER Hill International HABITAT FABRICATION COST of Wisconsin GRAPHICS FABRICATION Dimensional Communications EXHIBIT MURALS Dave Rock SIZE 40,865 gross square feet



### SKYLIGHT SYSTEM

Foiltec North America •foiltecna.com

The need for ultraviolet radiation for the animals mandated large skylight areas with good solar transmittance—the exact opposite of what is required for reduced energy consumption and reduced A/C capacity. The TexIon Foil System, an ethylene tetrafluoroethylene (ETFE) membrane skylight by Foiltec, proved to be the solution to controlling sunlight and modulating heat loss and heat gain. Variable air pressure inside the system controls the position of the ETFE's center layer to provide shading when needed. This new technology, with an R-value of 3.3 (as opposed to 1.8 for a conventional polyester film skylight) covers nearly 8,500 square feet of roof.



#### STAINLESS STEEL PANEL SYSTEM Rimex Metals Group • rimexmetals.com

To create new interior exhibition space, the Lion House's exterior cages were enclosed with stainless steel rainscreen panels manufactured by Rimex Metals (UK). To lend interest to the metal surface, the zoo's graphic

arts department created large-scale graphics simulating the Madagascan jungle landscape. The subtle design was etched and bead-blasted into the steel surface by Rimex before shipment to the site.

### FUEL CELL

United Technologies •utc.com

A 200-kilowatt fuel cell provides electricity for the building using natural gas as its fuel source. Because it operates constantly, the fuel cell produces excess energy during off-peak times; this is exported to the zoo campus electrical grid. The fuel cell is expected to supply at least 50 percent of the Lion House's electricity need. Up to 650 MBTU/hr of waste heat from the cell is expected to meet approximately 40 percent of the building's heating requirement.



LIFE SUPPORT SYSTEMS Engineering design by TJP Inc. • tjpengineering.com

The building's cellar houses equipment to purify water in the crocodile tank inside the Lion House and in the exterior sea lion pool on Astor Court. In the case of the sea lion pool, the new system eliminates the need for routine water changes, conserving about 160,000 gallons of water each week and saving the East River from receiving the wastewater. **ARCHITECT** SEPTEMBER 2008



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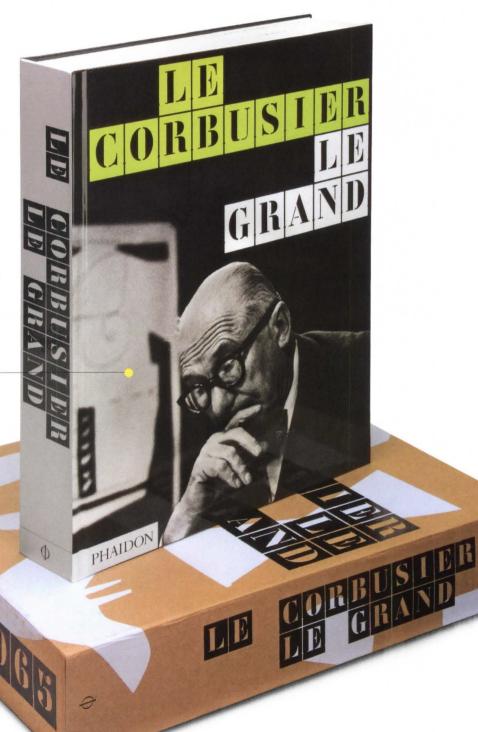
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## Text Hannah McCann BOOKS, EXHIBITS, OBJECTS



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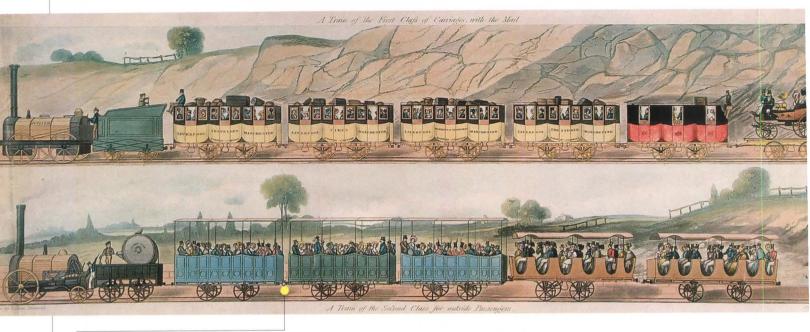
Le Corbusier Le Grand • Introductory essay by Jean-Louis Cohen • More like a movie than a monograph, this mammoth volume packs 2,000 pictures and weighs in at 20 pounds. Captions weave a story around the collage of archival material-photos, personal correspondence, newspaper clippings, and early sketches of projects with Corbu's notes scribbled overhead like the bubble quotes in comics. (An accompanying volume translates French notes into English.) Josephine Baker, Pablo Picasso, and other friends make appearances in snapshots and the architect's scrappaper doodles. Phaidon; \$200

PHOTO CHARLIE BROWN

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### CULTURE

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#### EXHIBIT

Mosques in Germany • Aedes, Berlin • Sept. 10 through Oct. 16 • An exhibition and related panel discussions examine mosques and migration in Germany. Architectural photographer Wilfried Dechau shows the shift from mosques in converted garages and factory halls to new construction. Also on display are models and plans for new mosques by Paul Böhm, Alen Jasarevic, and Koller Heitmann Schütz. aedes-arc.de

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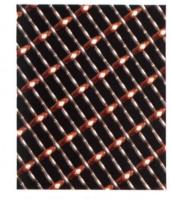
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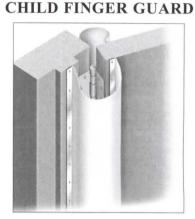
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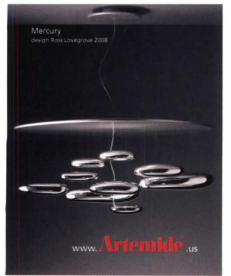
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# THE ILLUMINATOR

### Interview Edward Keegan Photo Tracy Powell

THE CO-FOUNDER OF COLOR KINETICS, WHO HOLDS MORE THAN 50 PATENTS, DISCUSSES THE FUTURE OF LED TECHNOLOGY AND HOW IT FEELS TO BE NAMED INVENTOR OF THE YEAR.

#### **AGE** 39

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POSITION Chief scientist, Philips Solid-State Lighting Solutions (formerly Color Kinetics, purchased by Philips in 2007) OTHER Earlier this year, Lys was presented with the 2008 National Inventor of the Year Award, given by the Intellectual Property Owners Education Foundation. Lys was honored for his invention of Powercore technology, whose digital power processing increases efficiency, lowers overall cost, and simplifies the installation of solid-state lighting systems.

→ Audio of this Q&A is available online at www.architectmagazine.com.

### What's your background?

I was an electrical engineer from Carnegie Mellon University in Pittsburgh. In 1996, I got interested in lighting and went to a trade show—Lighting Dimensions. I saw the length that people were going through to get a little bit of colored light in various smaller spaces. We knew the possibilities of LEDs, and we formed Color Kinetics to make that process easier for people.

### Color Kinetics is now part of Royal Philips Electronics. What are the advantages in having an international corporation behind you?

The large scale and the global scope of Philips allows us to access markets and customers that we were not able to before, as well as some technologies that Philips was working on prior to Color Kinetics.

### What are the chief benefits of LED technology?

LEDs are small, and they are relatively efficient for colored lighting applications. Recently, those benefits have translated towards white lighting as well. We are able to put LED lighting devices in places that normal lights wouldn't fit. Many of these are hard-to-access spaces where we trade on the longevity of LEDs as well.

A lot of unnecessary baggage comes with many commercially available power solutions for LEDs, because they have been designed for powering things like computers and other electronic devices. LEDs operate somewhat differently, and we use those characteristics to simplify the power systems.

### You're talking about Powercore, your invention for LED power control and conversion.

We use Powercore to simplify data distribution in controlled lights. A retrofit at Boston's Old North Church involved simply plugging in Powercore strips on top of an existing molding.

### How do you balance cutting-edge developments to permit simple solutions like that?

We simplify what our users must do and understand about LEDs. We spent an incredible amount of time and effort to simplify our systems, reduce the number of wires, or reduce the side effects of our systems. We include things like power-factor correction, which is a key component of Powercore. It's a means of removing the difficulties that happen when switch-mode power supplies are used in a large installation.

Previous winners of the National Inventor of the Year Award aren't necessarily household names, but their inventions are. They include the cell phone, magnetic resonance imaging, and the artificial heart. Where would you place Powercore technology among these? Similar to those inventions, many of the technologies are fairly complex and unknown by many people. Powercore will be branded within Philips, but the average consumer will most likely be unaware of the complexity and many of the benefits that Powercore provides.

How do you feel about your relatively anonymous role? It's wonderful to walk around and see products I have designed in various installations, but I'm not terribly concerned if the average person doesn't know who I am or exactly what's going on inside.

### You've contributed to more than 50 issued patents, with more pending. What are some of the other things that you've invented?

Many involve applications of lighting and its combination with media. A surprising number are involved with making the setup, installation, and operation of LED lighting as simple as possible.

LED lighting is now ubiquitous in architecture. What's next, and what do you see as your role in developing it? LED lighting is slowly moving into the white lighting space. As with color, we are starting with lower wattage white lighting applications and we're moving up. Over the next few years, I believe that we will see penetration into higher and higher wattage spaces, ultimately culminating in the replacement of the incandescent lamp in many applications.



### Introducing glass so brilliant it's destined to be a masterpiece.

SageGlass<sup>®</sup> glazing gives you the power to change your environment by doing what ordinary glass can't do: It switches from clear to darkly tinted at the push of a button. Now you can enjoy the sun's benefits while rejecting its undesirable effects such as fading, glare and heat without losing the view to the outdoors. This grants architects the freedom to design with more daylighting without the compromises typically associated with glass.

Because it blocks both the visible and UV light that cause fading, SageGlass glazing is ideal for museums, libraries and art galleries anywhere there is a need to protect the interior while bringing in daylight. Revolutionary but not unproven, SageGlass technology has been tested for years by the U.S. Department of Energy with outstanding results.

Why limit yourself to conventional glass with add-on solar control devices? Dynamic SageGlass products offer true design potential, so architects can create their own masterpieces. To learn more **call SAGE Electrochromics, Inc. at 1-877-724-3321 or visit sage-ec.com Circle no. 48 or http://architect.hotims.com** 

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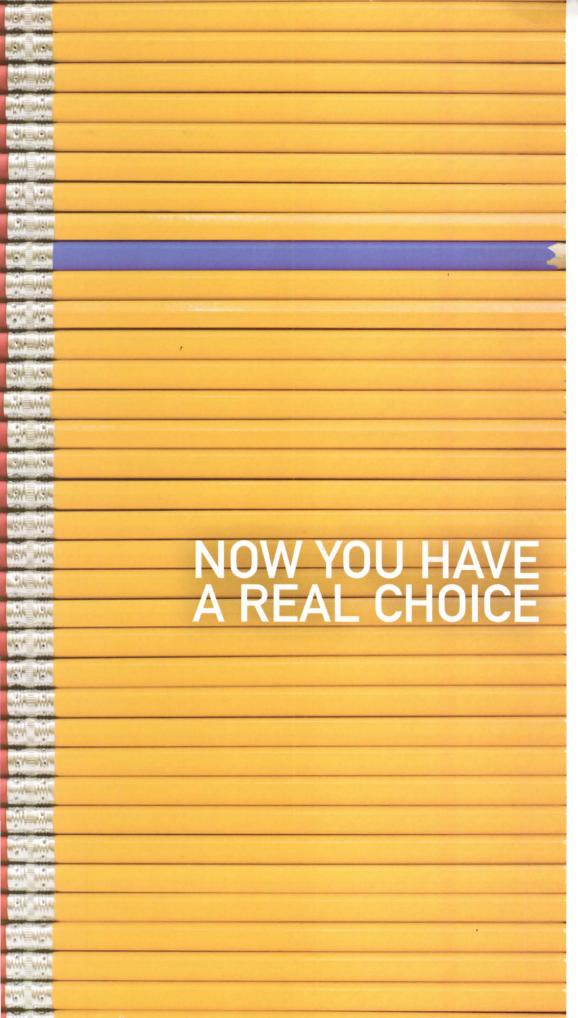


SageGlass technology controls sunlight to protect what's inside. It's the only product of its kind, providing 98% fading protection from both UV and visible light in its tinted state and 78% in its clear state.



The only glass that:

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- Actively controls daylighting
- Stops glare
- Dynamically controls heat gain while always preserving the view and connection to the outdoors.





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