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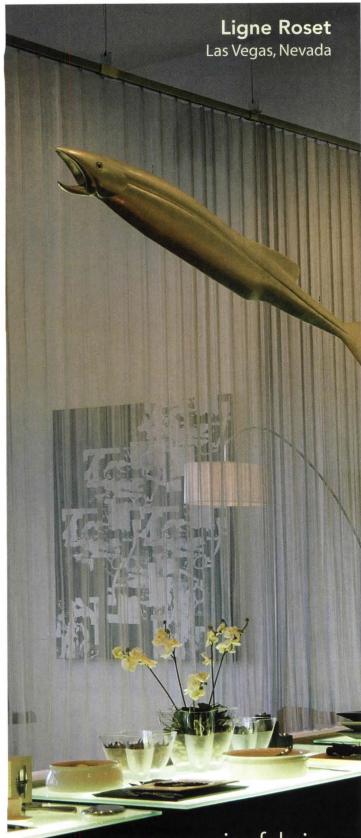


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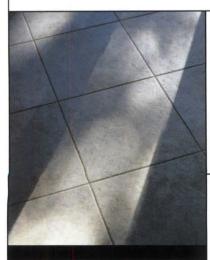
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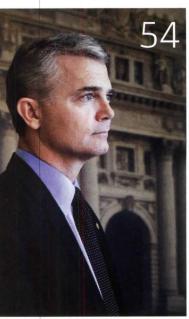
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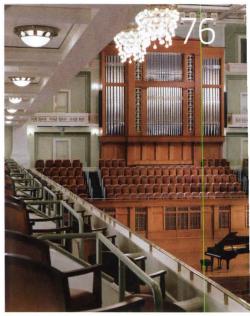
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Architect and acoustician sing from the same sheet of music in designing Schermerhorn Symphony Center, the new, city-block–sized home of the Nashville Symphony.



ON THE COVER GSA veteran Les Shepherd takes over as the agency's new chief architect, page 54. Photo by Stephen Voss. FOR THE FIRST TIME, WE KNOW HOW LATROBE WAS PUTTING TOGETHER BUILDINGS, WHAT MATERIALS HE WAS USING, AND HOW INVENTIVE HE WAS. IT'S NOT ONLY HIS MASTERPIECE, BUT HIS BEST-PRESERVED BUILDING.

From "America's First Cathedral," page 62

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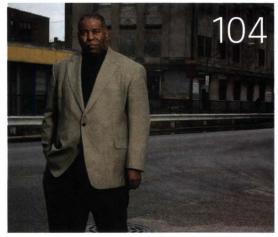
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FAR RIGHT Steven Holl Architects' School of Art and Art History at the University of Iowa, a 2007 AIA Institute Honor Award winner.



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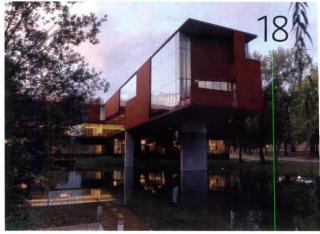
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Blogs Nebraska architect Paul Preissner (left) reports on his emerging practices, BUILDER magazine's Steve Zurier offers technology advice, and more ...

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FACE OF THE NATION



Ned Cramer

Editor in Chief

As 2006 WOUND DOWN, eyebrows and blood pressures shot up nationwide in response to rumors that the U.S. General Services Administration (GSA) had tapped classicist Thomas Gordon Smith as its new chief architect. The collective worry, presumably, was that Smith would backpedal on the GSA's recent advocacy of progressive design and start assigning the agency's \$12 billion construction portfolio to his fellow traditionalists. I'm not sure that's a fair assumption, but then we'll never know what kind of chief architect Smith would have made. The job ended up going to Les Shepherd, a GSA veteran who's been filling in since Ed Feiner's resignation two years ago. Smith was given a GSA fellowship.

So the progressives won, right? Not so fast. Shepherd may wear

a Richard Meier–designed watch, as ARCHITECT contributor Linda Hales observes in "The GSA Man" (page 54), but I've also witnessed him defend a traditional scheme as most appropriate for a federal building in the deep South. Does that make Shepherd a closet classicist? A wristwatch modernist?

I doubt we'll hear Shepherd speak on the record about his personal taste in architecture. He hasn't spent decades in government for nothing; he knows to stick to the party line—the party line, in this case, being the "Guiding Principles for Federal Architecture," drafted by the late Daniel Patrick Moynihan during the Kennedy administration and adopted as a mission statement during Feiner's tenure.

Here's a quote from the principles: "The development of an official style must be avoided." Amen to that. The most persuasive and dogmatic of pundits would have difficulty arguing that a single architectural approach could be suitable for a union of 50 states and 300 million inhabitants. So San Francisco gets Thom Mayne; Beckley, W.Va., gets Robert A.M. Stern; St. Louis gets HOK; and the GSA keeps hundreds of peer reviewers on call to make sure that nobody gets out of hand. It's as close as we're going to get to the democratic process in federal architecture. Let's stick with it.

Ned Cramer Editor in Chief

Business Is Good

We placed Allison Hecht at Rockwell Group. Her simple, straightforward advice is golden ["Business Development 101," January, page 37]. As a search consultant to architectural practices, I'm often surprised and disappointed by the low opinion many small- and mediumsized offices have of hiring a business development person. "Getting new clients is the partners' job," they say. When they make an exception and hire a junior marketing person (because they don't have to pay much), they reinforce their intuitive response to squeeze out the foreign body, because the person will usually be ineffective on their own.

It takes a big investment to build an effective marketing program and new

business development team. An office of architects needs nurturing as a business, using the tools and processes other types of businesses have learned they need in order to grow, do good work, and be profitable. Many of the types of people that need to be hired are not billable and have to be paid more than architects. Once small- and medium-sized offices become comfortable with the idea that they are indeed in business and become willing to invest in other types of specialists, they will be more able to proactively secure the kind of work they want to do.

RitaSue Siegel RITASUE SIEGEL RESOURCES New York ritasue@ritasue.com

Mistakes Were Made

The "Cleveland" article in your January issue [page 30] hews to the apparent requirement that all magazine and newspaper coverage, for all time, mention the Cuyahoga River catching fire nearly four decades ago. Do you suppose that one day such references (including the "mistake on the lake" label) will not automatically occur to journalists that imagination will finally take over?

Arnold Berke Washington, D.C. arnold_berke@nthp.org

People Who Don't Need People

The *People* magazine approach to the cover of ARCHITECT is a big mistake as well as a turn-off for architects. Once we have seen the oversize face, we don't want or need to see it again. If you show a building or part of one, it invites continued interest. We are interested in buildings; that's what your magazine is about. The covers should reflect this. As professionals, there is little we can learn from personalities that will help us do better buildings.

Walter Rosenfeld walros@rcn.com

Building Something New

The premier issue of ARCHITECT made it into my pile as I ended 2006. I really enjoyed your editorial ["For Starters," page 20] and began to feel a connection between what you are challenged with and what my challenge is: building something new and special from past origins that will enlighten and improve the lives of those who come in contact with it. Your team is building a language of design via magazine; my team is building a design practice. I appreciated your return to the essentials of as defined by Vitruvius, truly a great place to start! I wondered if the magazine would really answer the call, or if I was reading yet another well-written script of sincere intentions that ultimately go unrealized.

I was pleasantly surprised to get an insider's view of the process SOM used in developing their new website ["som.com," page 51], something I'm experiencing with my new practice. I read with great interest about Affinity software and its capability to aid building information modeling ["The Program Program," page 59]. And the breakdown of expected construction over the next 25 years ["America Circa 2030" page 92] was very informative, since that's when I plan to retire.

The layout was very nice, the graphics comfortable to read, a real pleasure. My only problem is that I'll have to make the time to read ARCHITECT each month. And I plan to share it with my team!

Robert R. Smedley THE ONYX GROUP Alexandria, Va. rsmedley@onyxgroup.com

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Recognition

2007 AIA Institute Honor Awards Projects demonstrate excellence in architecture and urban design

THE AMERICAN INSTITUTE OF ARCHITECTS (AIA) has named the 2007 recipients of the AIA Institute Honor Awards. Chosen from nearly 700 submissions, these 29 projects will be honored in May at the AIA's national convention in San Antonio. To learn more about each, including descriptions, additional credits, and jury comments, visit www.aia.org.

AWARDS FOR ARCHITECTURE

JURY: Richard Logan, Gensler (chair); Elizabeth Ericson, Shepley Bulfinch Richardson & Abbott; Philip Freelon, The Freelon Group; Thomas W. Kundig, Olson Sundberg Kundig Allen Architects; Nicole Ludacka, The Architectural Offices; Kristal Peters, Howard University; Henry Siegel, Siegel & Strain Architects; Victor Trahan III, Trahan Architects; Jane Werner, Children's Museum of Pittsburgh



School of Art and Art History, University of Iowa, Iowa City; Steven Holl Architects, New York, with associate architect Herbert Lewis Kruse Blunck Architecture, Des Moines, Iowa



University of California, Merced Central Plant, Merced, Calif.; Skidmore, Owings & Merrill, San Francisco



University of Michigan, Biomedical Science Research Building, Ann Arbor, Mich.; Polshek Partnership Architects, New York



Palo Verde Library/Maryvale Community Center, Phoenix; Gould Evans Associates + Wendell Burnette Architects, Phoenix

Meinel Optical Science Research Building, Tucson, Ariz.; richard + bauer architecture, Phoenix



Spencertown House, Spencertown, N.Y.; Thomas Phifer and Partners, New York



Memorial to the Murdered Jews of Europe, Berlin; Eisenman Architects, New York



World Birding Center Headquarters, Mission, Texas: Lake|Flato Architects, San Antonio



Dr. Theodore T. Alexander Jr. Science Center School, Los Angeles; Morphosis, Santa Monica, Calif.

Clips

The American Institute of Architects' Architecture **Billings Index** for

November was 57.5 (any score over 50 indicates an increase in billings), the second-highest total for 2006, while the index of inquiries for new projects remained strong at 62.1, just below October's reading.

According to Reed Construction Data, through November the value of nonresidential construction starts in 2006 was 8.6 percent higher than in the first 11 months of 2005. Hotels (up 75.8 percent), amusement/ recreation facilities (up 44.2 percent), and nursing homes (up 30.3 percent) were the fastest growing markets, while the three largest markets-education, retail, and offices-were up about 10 percent each.

The National Trust for Historic Preservation has named Acoma Sky City in New Mexico as the 28th National Trust historic site. This means the pueblo can avail itself of the trust's expertise as well as special funds and programs. Sky City, which sits atop a 370-foot-high, 70-acre mesa about 60 miles west of Albuquerque, dates back to 1150 and claims to be the oldest continuously inhabited community in North America. It was designated a national historic landmark in 1960.

Two leading vendors of architecture, engineering, and construction software are uniting. Graphisoft SE, the Budapest, Hungary-based developer of Archicad, agreed in December to a buyout by Nemetschek AG, creator of VectorWorks. Nemetschek, which is based in Munich, Germany, is expected to maintain Graphisoft as a division of the company.

Barbara Bloemink has joined the Museum of Arts & Design in New York as curatorial director. Previously, she was curatorial director at the Cooper-Hewitt National Design Museum, also in New York.



Canada's National Ballet School: Project Grand Jeté, Stage 1: The Jarvis Street Campus, Toronto; Kuwabara Payne McKenna Blumberg Architects/Goldsmith Borgal & Co., Architects, Toronto



Solar Umbrella, Venice, Calif.; Pugh + Scarpa, Santa Monica, Calif.



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REPORT NEWS

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AWARDS FOR INTERIOR ARCHITECTURE

JURY: Ann Beha, Ann Beha Architects (chair); Hank Hildebrandt, University of Cincinnati; James Prendergast, Goettsch Partners; Ken Wilson, Envision Design; D.B. Kim, Starwood Hotels and Resorts

The Bay School of San Francisco, San Francisco; Leddy Maytum Stacy Architects, San Francisco



Better Business Bureau Heartland Office, Omaha, Neb.; Randy Brown Architects, Omaha

Bloomberg LP Headquarters, New York; STUDIOS Architecture, New York

Endeavor Talent Agency, Beverly Hills, Calif.; NMDA, Los Angeles, with associate architect Interior Architects, Los Angeles

Haworth Chicago Showroom, Chicago; Perkins + Will | Eva Maddox Branded Environments, Chicago

ImageNet, Carrollton, Texas; Elliott + Associates Architects, Oklahoma City

Louis Vuitton Landmark, Hong Kong; Peter Marino Architect, New York, with associate architect dcmstudios (formerly Denton Corker Marshal), Hong Kong

The Modern, New York; Bentel & Bentel, Architects/ Planners, Locust Valley, N.Y.

Pierson and Davenport Colleges, Yale University, New Haven, Conn.; KieranTimberlake Associates, Philadelphia

St. Mary of the Springs, Columbus, Ohio; Nagle Hartray Danker Kagan McKay Penney Architects, Chicago Top of the Rock at Rockefeller Center, New York; Gabellini Sheppard Associates, New York, with infrastructure architect SLCE Architects, New York

AWARDS FOR REGIONAL

JURY: J. Max Bond Jr., Davis Brody Bond (chair); Shalom S. Baranes, Shalom Baranes Associates; David Crossley, Gulf Coast Institute; Richard Farley, Civitas; David L. Graham, ESG Architects

A Balanced Vision Plan for the Trinity River Corridor, Dallas;

Chan Krieger Sieniewicz, Cambridge, Mass.

Boston's Newest Smart Growth Corridor: A Collaborative Vision for the Fairmount/Indigo Line, Boston; Goody Clancy, Boston

The Carneros Inn, Napa, Calif.; William Rawn Associates, Architects, Boston, with associate architects Caspar Mol Architecture and Planning, San Francisco; Les Girouard, Berkeley, Calif.; Persinger Architects, Sebastopol, Calif.; and RMW architecture & interiors, San Francisco

Crown Properties, Gaithersburg,

Md.; Ehrenkrantz Eckstut and Kuhn Architects, Washington, D.C.



Historic Third Ward Riverwalk, Milwaukee; Engberg Anderson Design Partnership, Milwaukee

New York Stock Exchange Financial District Streetscapes + Security, New York; Rogers Marvel Architects, New York

Zoning, Urban Form, and Civic Identity: The Future of Pittsburgh's Hillsides, Pittsburgh; Perkins Eastman, Pittsburgh

Litigation

William Hablinski Architecture v. Amir Construction

Copyright case highlights subjective aspect of calculating damages

CALCULATING DAMAGES in a big-stakes architectural copyright infringement case can involve a complex blend of financial data and subjective belief that can yield unpredictable results. Case in point is the matter of *William Hablinski Architecture vs. Amir Construction, et al.,* which involved the infringement of an architectural design for a Beverly Hills mansion.

The Lawsuit

In 2003, WHA sued Amir Construction and others, including the mansion's owners, for copying a design that WHA had created for another client. WHA proved that Amir obtained access to the design from one of WHA's former employees.

To remedy Amir's infringement, WHA sought a permanent injunction, actual and compensatory damages, disgorgement of Amir's profits, punitive damages, and attorneys' fees. The court denied WHA the right to recover statutory damages and attorneys' fees under the Copyright Act because the alleged infringement occurred before the firm had registered its architectural work with the U.S. Copyright Office. (This underscores the need for copyright owners to register their works promptly to preserve these important benefits.)

The Outcome

The Copyright Act allows a copyright owner to recover actual and lost profit damages so long as they are not duplicative. When calculating lost-profit damages in an architectural copyright infringement case, the plaintiff can claim the defendant's gross profits as its lost profits, but the defendant can then deduct its expenses and the value of noninfringing factors to reduce its liability. Such factors can include the quality of construction, the home's size and amenities, and the extra margin of profit for merely developing the property.

In the first trial in April 2005, the jury returned a verdict in favor of WHA for total damages of almost \$6 million, which included lost-profit damages of \$5 million. However, Amir convinced the court to order a new trial because the questionnaire the jury used to calculate WHA's damages failed to include a provision allowing the jury to deduct the portion of Amir's profits that were attributable to factors other than the infringement. The court ruled that Amir was entitled to have the jury consider and account for the value of these factors in addition to deducting Amir's construction expenses from its gross profits.

The case was retried in December 2006. Because the only issue under dispute was the proper calculation of damages, the court did not permit evidence on liability, copyright validity, or copyright infringement. This time the jury awarded wHA only \$667,000 in lost profit damages under the theory that only 25 percent of Amir's net profits could be attributed to the infringement of WHA's copyright. This significantly lower amount was consistent with an earlier attempt by Amir to limit the lost-profit damages to the maximum amount WHA would have charged to *design* the infringing residence. The court rejected this argument in favor of a measure of damages that allowed WHA to recoup the profits it would have made had it *sold* the infringing residence itself, which presumably would include the value of factors unrelated to WHA's copyright.

In view of these competing damage theories, WHA has promised to appeal the case to the U.S. Court of Appeals for the 9th Circuit. JEFFREY C. BROWN

Jeffrey C. Brown is an intellectual property attorney at the law firm of Merchant & Gould in Minneapolis.

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REPORT NEWS

Theater for the 21st Century

the possibilities of performance

Set Design

DIGITAL DESIGN

CENTE



Architects and directors at UNC-Charlotte explore

Early of the struct & Aer it mig differ

Early renderings of the mobile structure for *Dido* & *Aeneas* show how it might assume different roles.

WHEN ANNE HARLEY JOINED the University of North Carolina–Charlotte music department as an assistant professor last fall, she found that she had to walk through the College of Architecture's building to get to her own. Passing by students and professors hard at work in studios, she became increasingly intrigued by what they were up to and would occasionally stop to inquire about a project. "They're always looking for ways to be bothered," she says.

In early November, Harley told architecture professor Eric Sauda that she would be directing a performance of Henry Purcell's 17th century opera *Dido & Aeneas*, and the two talked about how it might be staged. The timing couldn't have been better. "We had wanted to reach out to the music and theater departments," says Sauda, who heads up the Digital Design Center (DDC), a research group within the College of Architecture that focuses on emerging technology and its application in academia and practice.

As a result, the DDC—comprising four professors and six students—is designing the set for *Dido & Aeneas*, which will be performed on Feb. 22–23. In an e-mail, Sauda says

Local Recognition

AIA Chapters Name 2006 Award-Winners

CHICAGO: Joseph Cliggott, a senior associate with Goettsch Partners, was given the Dubin Family Young Architect Award. Walter Netsch, a former architect at Skidmore, Owings & Merrill who retired in 1979, was presented with a special lifetime achievement award.

MIAMI: René González was given the Award of Excellence for his design of the Cisneros Fontanals Art Foundation.

MINNESOTA: Jessica Vogel at Ellerbe Becket and Jennifer Graham-Charnewski at Julie Snow Architects have been named co-winners of the St. Paul Prize, which is given to *AIA Minnesota associate* members with less than seven years of post-graduation experience.

NEW JERSEY: Hillier Architecture, whose home office is in Princeton, has been named the firm of the year.

the primary staging concept involves a mobile structure that will be "both a physical element (siege tower, island, cave) and a platform for digital manipulation and projection." The opera will also incorporate real-time motion capture technology, in which performers on stage will also appear as multiple avatars (graphical images) on the structure's screens. Other technologies, says Sauda, might include voice-recognition software and software to manipulate sound and visuals.

Harley describes the staging as a "cubist approach" to the presentation of the Baroque opera—the tragic love story of Aeneas, the hero who escaped from Troy after its fall, and Dido, the queen of Carthage.

But the opera isn't the only performance the DDC is involved in. Sauda and his colleagues are also working with James Vesce, an assistant professor in the theater department, on a staging of *Tales of the Lost Formicans*, by playwright Constance Congdon. Scheduled for early May, the performance will occur in a "black box" theater, a space in which every part of the production can be custom designed. A dark comedy about aliens observing an American family, *Lost Formicans* is a work that pushes the boundaries of traditional theater through such devices as asides to the audience, rapid shifts in time and space, and multiple versions of characters. Sauda says the staging, which he calls an "immersive environment," will position the audience in the middle of the theater and employ layers of screens, realtime motion capture, and other technology.

Sauda notes that these collaborations, while enjoyable, are also an extension of the DDC's work. "The environment is becoming more saturated with interactivity." he says. "There is no doubt that [soon], walls, ceilings, and windows will be as much media as they are bricks and mortar. Computer scientists [and others] are busy designing these environments. We believe architects have unique insights and abilities to help with their conceptualization and design."

Harley agrees with Sauda about the way technology is permeating the everyday world, which is why she's excited about helping the DDC pursue its research. She also sees the partnership, which she hopes will continue beyond *Dido & Aeneas*, as a benefit to her chosen field. "Opera has to be reflective of what's going on in society," Harley says. "Otherwise, it's going to end up a museum piece."



The AIA board of directors has named the National Organization of Minor-

ity Architects as the recipient of the 2007 Whitney M. Young Jr. Award. The award, given to an architect or organization that exemplifies the profession's responsibility toward current social issues, honors the late civil rights activist and head of the Urban League. NOMA, based in Washington, D.C., was founded by 12 black architects at the 1971 AIA national convention.

What will be this year's **boom**ing markets for design and construction firms? According to research group ZweigWhite, the top five are health care, highways and bridges, higher education, water/wastewater, and power and energy.

The American Society of

Interior Designers has created a series of white papers that address sustainable design. Available through the group's website, the five papers are "Beyond Interior Design," "Indoor Air Quality," "Materials and Products," "Selling Green," and "Reference Guide."

The January issue of *Fast Company* forecasts 10 **hot jobs** for 2007. Among them: urban planners. "[I]ndividuals in residential planning and development," the magazine says, must be able to "meet the demand for real estate that's both decadent and practical."

The northern Italian village of Viganella is experiencing the winter sun for the first time. Because of where it sits in the Ossola Valley, Viganella receives no direct sunlight between Nov. 11 and Feb. 2. Now, thanks to a 26-foot-by-16-foot computer-controlled mirror located above the town, Viganella's main square will get five hours of sunshine each day. The mirror, which cost around \$150,000 and began working on Dec. 18, is the result of a seven-year effort by Mayor Pierfranco Midali and architect Giacomo Bonzani.

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Thurs	Feb 8	10:00	12:00	2:00	4:00	
Fri	Feb 9	10:00	12:00	2:00	4:00	
Sat	Feb 10	10:00	12:00			

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Education

NCARB Awards \$10,000 in Seed Money

IN AUGUST, the National Council of Architectural Registration Boards (NCARB) announced the creation of a grant program that will give a total of \$10,000 each academic year to architecture schools to assist in the creation and implementation of new ideas and methods of integrating practice and education. The first recipients of the NCARB Grant are the University of Kansas (KU) School of Architecture and Urban Design and the North Dakota State University (NDSU) College of Engineering and Architecture.

The KU School of Architecture received \$6,000 for its proposed "Sustainability Immersion" initiative. Through the program, architecture students will learn sustainability concepts in introductory courses and put them to use in studios and in the development of case studies while working with building industry professionals.

The NDSU College of Engineering and Architecture received \$4,000 for its effort to help local architecture firms implement building information modeling (BIM) through the school's design studios. The school's students will analyze the production operations of a firm, create BIM components that will be tested by the firm, and then study the software's effectiveness.

Traditional Architecture

Jaquelin Robertson Receives Driehaus Prize



YALE-TRAINED ARCHITECT AND URBAN PLANNER Jaquelin T. Robertson has been awarded the fifth annual Richard H. Driehaus Prize by the School of Architecture at the University of Notre Dame, in Indiana. The prize was created to honor major contributors in the field of traditional and classical architecture.

A fellow of both the American Institute of Architects and the American Institute of Certified Planners, Robertson has had a wideranging career: In the late 1960s and early 1970s, he worked on

planning efforts for New York City under Mayor John V. Lindsay; in the mid-'70s, he directed the planning and design of Shahestan Palavi, a new center of Tehran, Iran. He formed a partnership with iconoclastic modernist Peter Eisenman in the 1980s and was dean of the University of Virginia School of Architecture from 1980 to 1988. Since then, Robertson has been planning new urbanist communities such as Florida's Celebration and WaterColor with Cooper, Robertson & Partners, the firm he helped found in 1988.

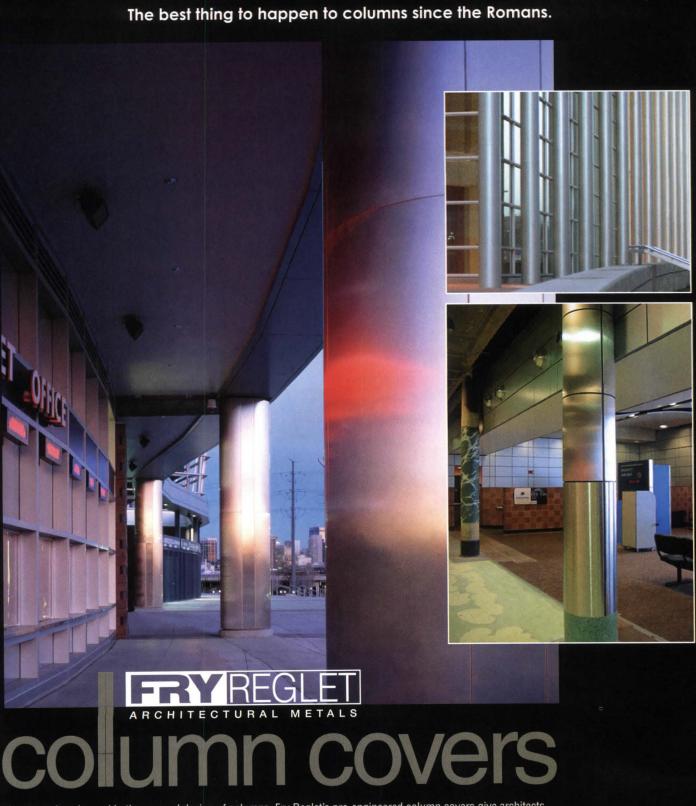
"Cities are the highest calling of architecture, and modernism was a disaster in terms of cities," Robertson says. His own work is deeply rooted in the classical tradition, particularly that of his native Virginia. "Classicism is the lingua franca of Western architecture," he says. "Whether you choose to speak it is your choice, but you have to know it."

This year's jury consisted of critic Paul Goldberger; architect David Schwarz; Elizabeth Dowling, associate professor at the Georgia Institute of Technology College of Architecture; Notre Dame architecture dean Michael Lykoudis; and patron Richard Driehaus. The prize—\$100,000 and a reproduction of the Choregic Monument of Lysikrates—will be presented to Robertson in March. Robertson joins Léon Krier, Demetri Porphyrios, Quinlan Terry, and Allan Greenberg as Driehaus Prize laureates. EDWARD KEEGAN



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Deadlines Competitions and more

FEBRUARY 22

Call for Papers: ISAMA '07

The sixth conference of The International Society of the Arts, Mathematics, and Architecture will be held May 18–21 at the Texas A&M University College of Architecture. Topics of discussion will include architecture, computer design and fabrication, geometric art, mathematical visualization, music, tessellations and tilings, and more. *archone.tamu.edu/isamao*7

FEBRUARY 23

Spectrum and Prism Awards

The Spectrum and Prism Awards competitions are open to architects, designers, builders, and other professionals whose projects demonstrate creativity and achievement in the use of ceramic tile (Spectrum) and natural stone (Prism). Projects must have been completed between January 2003 and December 2006. The awards will be presented at the 2007 Coverings trade show in April.

MARCH 1

ASFD David Kline Memorial Scholarship

For the 2007 American Society of Furniture Designers scholarship competition, North American students enrolled in any accredited design program are invited to submit a furniture project that incorporates the Tab A Honeycomb connector made by furniture and architectural hardware company Häfele America Co.

www.asfd.com/scholarship.php

MARCH 7

BE Awards of Excellence Student Competition

Presented by architecture, engineering, and construction software maker Bentley Systems Inc., this award program has two categories, one for middle and high school students and one for college students.

www.be.org/en-US/BE+Careers/Competitions/BE+Awards

MARCH 15

Beverly Willis Architecture Foundation Grants

The Beverly Willis Architecture Foundation offers funding to individuals and institutions to support innovative projects that advance the study and expand the recognition of women in architecture and related professions. The foundation gives support in particular to activities that focus on the contributions of women architects, designers, and urban planners, as well as architectural historians and critics, active in the United States from 1950 to 1980. *www.bwaf.org*

Obituary

Sheldon Fox Dies at 76 Co-founder of KPF leaves legacy as organizational leader



SHELDON FOX, A CO-FOUNDER OF NEW YORK-BASED Kohn Pedersen Fox Architects (KPF), died on Dec. 16, 2006, at his home in Fairfield, Conn. Fox was born in the Bronx, N.Y., and studied architecture at the University of Pennsylvania. After serving in Korea, he joined Kahn & Jacobs in 1955, rising to the rank of partner before taking a position with John Carl Warnecke & Associates in 1972. KPF opened its doors in 1976, with Fox managing operations, William Pedersen serving as designer, and Eugene Kohn taking responsibility for marketing. Under their joint leadership, KPF emerged as one of the world's most prominent firms. Fox retired in 1996. A FULL LINE OF DOORS WITH A FULL LINE UP OF FEATURES. WE'RE SIMPLY THE BEST OF ALL WORLDS.











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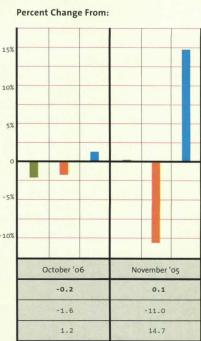


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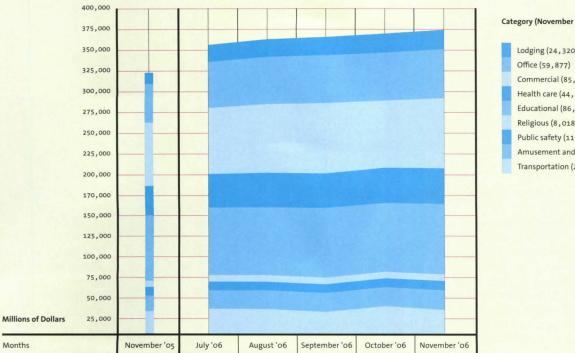
Construction Spending From the U.S. Census Bureau's monthly report on the value of construction put in place

TOTAL CONSTRUCTION (SEASONALLY ADJUSTED)





SELECT NONRESIDENTIAL CONSTRUCTION (SEASONALLY ADJUSTED)



Category (November '06 Total)

Lodging (24, 320) Commercial (85, 640) Health care (44, 615) Educational (86,812) Religious (8,018) Public safety (11, 596) Amusement and recreation (23, 990) Transportation (29, 347)

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Oahu, Hawaii

The 50th state's chief island attends to its growing pains



The National Memorial Cemetery of the Pacific, located in Punchbowl Crater, overlooks downtown Honolulu.

OAHU IS A NEARLY 600-SQUARE-MILE ISLAND PARADISE in the middle of the Pacific Ocean that is dealing with decidedly urban issues such as traffic jams and energy dependence.

"Much of 2007's legislative agenda relates to energy, water, land use, and sustainable development," says David Bylund, a senior associate at Architects Hawaii in Honolulu, one of the island's oldest firms. "The city and county of Honolulu are deciding on a significant mass-transit solution that will greatly affect the quality of life." They're also requiring all new municipal construction projects to be LEED certified.

"The smart-energy trend is being driven primarily by two things," says Tonya Dale, president of 4D Designs, a boutique architecture firm in the town of Kailua. "The cost of fossil fuels, which are extraordinarily expensive here, and a growing desire to convert to the renewable energy sources, such as wind, deep-sea water, and solar power."

More than a passing fancy or good citizenship, though, mass transit and smart energy are good business, Bylund asserts: "Our economic engine is tourism, which depends on our natural environment." MARGOT CARMICHAEL LESTER

JOB & POPULATION GROWTH

Oahu's population of 929,000 is projected to reach 1,012,000 this year. Annual job growth has been increasing since 2001, to 3.2 percent in 2005. Government—both local and federal—and retail account for half the number of employees; another quarter work in hotels and other service-industry jobs. Almost 49,000 people are employed on the island's 10 military installations.

Construction is the fastest-growing job market on the island. "We need between 10,000 and 26,000 more construction workers in the next few years," says Henry Eng, director of the Department of Planning and Permitting for the City of Honolulu.

OFFICE MARKET

Most commercial space is located in Honolulu's Central Business District, which has 6.5 million square feet of rentable office space. Waikiki has 810,000 square feet of office space and about 1 million square feet of retail space. Class A office vacancy was 8.2 percent at midyear 2006, according to Grubb & Ellis|CBI Inc., a real estate broker. The overall asking rate was \$2.56 per square foot per month.

RESIDENTIAL MARKET

The housing market is correcting and saw a 14.1 percent drop in sales value for singlefamily homes and a 20.5 percent decrease for condominiums from November 2005 to November 2006. Building permits dropped 51 percent over the same period, according to Hanley Wood Market Intelligence.

MARKET STRENGTHS

- · Proximity to key Asian markets
- One in five adults is fluent in a language other than English
- Honolulu is the only true metropolitan area in Hawaii

MARKET CONCERNS

- · Aging workforce
- · Weak mass-transit system
- · Homelessness

DEVELOPABLE LAND

There are 22,000 developable acres on Oahu, including 40 in downtown Honolulu. "There is a lack of developable land for industrial space, and office rents are not high enough yet to justify office towers," explains Dennis Wiens, senior vice president for investment at Grubb & Ellis|CBI. "The highest and best use has been for condominiums recently."

DEVELOPMENT INCENTIVES

The city-sponsored Community Facilities District uses bond funding for creating and maintaining such public services as streets, water, sewage and drainage, electricity, schools, parks, and police protection in newly developing areas.

Enterprise Zones across the island offer a reduction of state and county taxes for up to seven years for businesses satisfying certain hiring and other requirements.

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REPORT SCREEN CAPTURE

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www.archcareers.org

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Much of this information is specific to the requirements and opportunities in the United States but may be applicable in other countries which have similar docucational and licensure systems such as Canada, Mexico and the United Kingdom.

AIA

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WHAT DOES IT TAKE TO BECOME AN ARCHITECT? For those with access to the web, answering this question used to mean visiting and searching, at the very least, the sites of the five groups involved in the governance of the profession: the American Institute of Architects (AIA), the American Institute of Architecture Students (AIAS), the Association of Collegiate Schools of Architecture, the National Architectural Accrediting Board, and the National Council of Architectural Registration Boards. That's a lot of clicking.

No longer. The AIA and the AIAS—with the participation of the other three groups and the work of Lee Waldrep, associate dean of the School of Architecture, Planning, and Preservation at the University of Maryland-have recently relaunched ARCHcareers .org, which aims to be a one-stop source of information for budding architects (and their parents). The site's content covers the "Three E's" of architecture (education, experience, and examination), describing the basics of each and providing links to relevant pages on the five groups' websites.

Created in 1999 by Waldrep—who has a master's in architecture and a Ph.D. in counseling and development and has served as the site's "Dr. Architecture" since the beginning—ARCHcareers.org underwent a total reworking when Waldrep approached the AIAS a couple of years ago about taking the site on. As both the AIAS and the AIA were dealing with questions related to promoting the profession, both to future college students and to those already on the path to being an architect, the partnership was a natural one: Waldrep had an active website, and the various architecture groups had the necessary information.

The revamped site went live, quietly, in late September. The final week in December, postcards describing ARCHcareers.org were sent to several thousand high school guidance counselors and principals across the nation. The resource was also officially announced at Forum 2006, the annual meeting of the AIAS.

Now that the basic site is up, it will slowly be augmented with more-robust information, which will likely include frequently asked questions and more links to other sources of information. Looking farther ahead, Waldrep and others involved in maintaining ARCHcareers.org believe that it could eventually address the needs of architects in the college, internship, prelicensure, and young professional stages.

But however it evolves, don't expect anything too flashy. Catherine Lux, AIAS director of membership services, says the plan is to keep the site as user-friendly as possible, so that everyone-including those with older computers or only the most basic internet connection - can take advantage of the information. And this is one of the unspoken goals of ARCHcareers.org: To be a resource for not just the community of architects, but the greater world.

"The public, in general, understands what it takes to be a lawyer or doctor, even a CPA," says architect Suzanna Wight, emerging professionals director at the AIA. "But it's really mysterious what it takes to become an architect." With the new ARCHcareers.org, that's about to change. BRAULIO AGNESE

EDUCATION

www.2010imperative.org

On Feb. 20, Architecture 2030 will present "The 2010 Imperative: Global Emergency

Teach-In," an interactive forum on how design education needs to address global warming and the depletion of natural resources. The event will feature presentations from four panelists-including architect Edward Mazria, the author of The Passive Solar Energy Book (1979) and the founder of Architecture 2030, a sustainable-design advocacy group—as well as a Q&A session, during which online participants will be able to ask questions and submit comments.

TALK RADIO

Links

www.abc.net.au/rn/bydesign

In January 2006, the Australian Broadcasting Corp.'s Radio National debuted a weekly program, By Design. Presented by architecture and food critic Alan Saunders, the hourlong show covers the built world, from handheld gadgets to skyscrapers. Not all of the programs are available for download or online listening, but you can subscribe to the show's podcast. Recent programs have included a discussion with Museum of Modern Art architecture and design curator Paola Antonelli and an interview of Peter Jones, author of a biography about engineer Ove Arup.

TECHNOLOGY

www.xrez.com



XRez is three Los Angeles-based digital artists who are pursuing the opportunities now available through the rise of "extremely high-resolution

gigapixel digital photography." The group's services include location shoots, image manipulation, gallery prints, 3-D animation, and virtual backgrounds. As an example of what xRez can do, the gallery includes a 90,000-pixel-by-40,000-pixel image of Boston taken from the top of the Prudential Tower. (Above, a detail at maximum zoom.)

GALLERY



www.mic-ro .com/metro /metroart.html "Subways need not be boring or dreary!" says Metro Bits, one man's effort to make under-

ground urban travel a little more interesting. This page of Mike Rohde's ever-growing tribute to the subterranean world features more than 40 subway systems around the globe that offer riders beautiful architecture and art, such as the Los Angeles Metro's Hollywood/Highland station (above), by Dworsky Associates.

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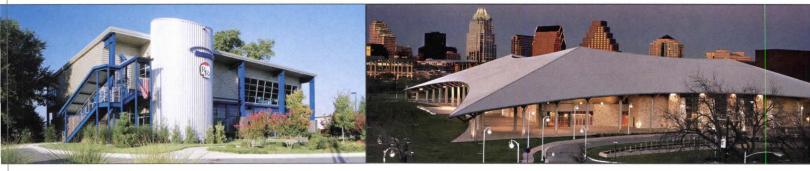
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AFTER CLOSING THE KREISBERG GROUP, P.R. PRO CLAIRE WHITAKER OFFERS A FINAL BIT OF FREE ADVICE. Text Fred Bernstein Photo Michele Abeles **GETTING THE PUBLICITY YOU NEED**



CLAIRE WHITAKER SPENT FIVE YEARS as president of The Kreisberg Group, a New York P.R. firm whose clients were architects, as well as institutions with architectural ambitions. But in December, she closed the doors to the firm founded by Luisa Kreisberg in 1984, choosing to go to work for Santiago Calatrava, one of the firm's star clients. Since Calatrava hardly needs help gaining name recognition, Whitaker will be able to focus on managing his image and helping to run his business (now largely based in Manhattan). Which means that tips for getting young architects press are no longer her stock in trade. So on her last day at Kreisberg's offices in Chelsea, she sat down (on the only thing left, a computer) to talk about how architects without Pritzker Prizes on their résumés can become better known. One thing young architects can't do, of course, is hire firms like Kreisberg, which can charge \$5,000 per month or more for representation. That's the catch-22: Only the most successful architects can afford the publicists whose job is to help them become successful.

Effective public relations is as much about quality as quantity, says Claire Whitaker.

> Over the years, I've met with many architects who I knew couldn't afford to hire me. I'd give them lots of free advice. The first thing I'd say is, **send out regular mailings**, maybe two or three a year, with photos of your work. And I don't mean e-mails. For one thing, the color has to be perfect you're trying to make your work look really good. Your list should include every journalist you can think of—you can get their names off magazine mastheads—and anybody you've already done a project for. You want your former clients to know you're still open for business.

> It's ok to **publicize losing competition entries.** In the architecture world, everybody understands that losing a competition is no great shame. In fact, entering a lot of competitions is another way to get your name out. Someone may remember that you lost, but had a good idea.

> Try to do as many public projects as you can. Restaurants, in particular, are a good way to become known. First, all of the customers will see your work. Second, lots of publications that don't cover architecture do cover restaurant openings. And third, restaurants have P.R. budgets. And the best way to get P.R., if you don't have a lot of money, is to **piggyback on your client's budget.** I've represented some very well-known architects—not Calatrava—who have never spent a penny on P.R.; the client always paid the bill.

Whatever kind of project you're doing, it's a good idea to **talk to the client in advance about whether you'll be allowed to publish.** Otherwise, you may have a hard time publishing residential projects — homeowners may have privacy concerns — or even jobs for corporate clients who don't necessarily want shareholders to see how much money they've spent. Still, at the end of the day, you have to accept your client's decision. One sure way to lose a reference is to publish behind a client's back.

Word of mouth is the most important thing in landing clients, but publicity can spark it. People have short memories, and when they're putting together a list of architects for a project, it's going to be the ones whose names they've seen or heard in the last few weeks or months.

Get friendly with journalists but don't plague them. Journalists need information, and they rely on people coming to them, as long as you don't overdo it.

Fred Bernstein studied architecture at Princeton and law at New York University and writes about both subjects. **ARCHITECT** FEBRUARY 2007



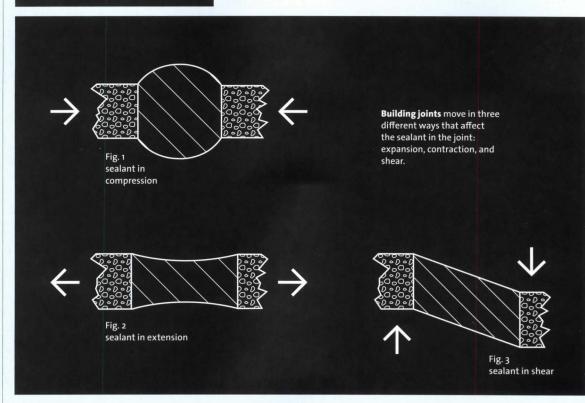
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Specs

JOINT SEALANTS



MODERN COMMERCIAL STRUCTURES rely heavily on joint sealants to prevent water damage to buildings and their contents. While residential buildings use water-shedding techniques such as sloped roofs, lap siding, and overlapping flashings, many commercial designs don't; if a joint sealant fails, there is little or no barrier to leakage. Unfortunately, in today's building environment, there are many points in the design and construction process where bad judgment or bad behavior results in sealant failure. Read the following for tips on how best to avoid these situations.

Common Uses

Joint sealers are used to close open joints to keep water and air out (both exterior and interior); for appearance and cleanability (in interior surfaces where water resistance is not an issue); and to reduce sound transmission through cracks (usually interior and internal to composite assemblies). If none of the above considerations is applicable, joint sealers are probably not necessary. Although there are many types of joint sealers, this review covers joint sealants only—pourable or gunnable material of mastic consistency that sticks to each side of a joint.

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Exterior. Most modern homogeneous rigid exterior substrates are purposely jointed, to allow movement without damage to the material. The two principal causes of movement are thermal expansion and contraction and seismic movement.

Some substrates, such as traditional shingling, can be overlapped to allow rainwater to run off while also allowing movement—these usually won't need sealing. Others incorporate the seal into the product design, such as metal panels with edge joints designed to prevent water infiltration.

Other combinations of exterior materials are simply different and, as a result, seldom form a watertight joint without the addition of a sealer.

The principal exterior substrates that are sealed are:

- exterior wall joints (masonry, concrete, plaster/stucco, EIFS, for example);
- · door and window frames;
- concrete paving joints;
- metal flashings;
- roof joints; and
- · seismic movement joints.

Interior. Joints indoors don't usually go through the thermal fluctuations that exteriors do, but they are also often jointed for other reasons. Gypsum board and plaster assemblies, for instance, often require control joints to prevent cracking. Interior joints are usually sealed to keep dirt out and make them look better. The principal interior substrates that are sealed are:

- · gypsum board;
- \cdot plaster;
- \cdot floor control and expansion joints; and
- \cdot kitchen and bathroom wet joints.

To Avoid Failures

1. Choose the correct design solution. The life span of even the best sealer materials available is finite—usually less than the expected building life span. If failure of the joint seal would be very costly, a water-shedding solution might be a better solution.

2. Estimate the actual amount of movement correctly. Consider the width of the joint, the distance between joints, and the thermal range. ASTM C 1472 can help. Joint movement is of three types:

- expansion and contraction (the joint gets wider or narrower);
- shear or lap movement (the faces of the joint slide past each other, and the sealer undergoes twisting and stretching but no compression); and

• expansion, contraction, and lap shear, all at once. (See diagrams, page 39.)

3. Choose a sealant product that will withstand the movement expected. Most joint sealer mistakes relate to movement misjudging the actual amount of movement or selecting a product that won't withstand movement. Movement capability is the relevant product characteristic.

4. Choose a sealant that will withstand the environmental conditions. The second most common cause of product failure is degradation by water and weather (including indoor wet areas).

5. Specify the sealant product correctly. The two most common ways to specify sealants are, one, by listing the manufacturer and brand name(s) of acceptable products, and, two, by specifying characteristics by description and/or by reference to voluntary standards. If both techniques are used for the same product, be sure that they are not contradictory.

6. Specify the scope of sealant work

completely. Implementation mistakes occur most commonly because of a failure to completely identify the joints to be sealed and the product(s) to be used for each.

The extent of sealing work is not always apparent from the drawings. So, it is commonly necessary to describe the extent of the sealing work in words. This may be placed on the drawings, as notes or a schedule, or may be included in the specification.

Regardless of methodology, the important point is that the description fully describe the extent of the work by identifying all the joints to be sealed.

7. Specify execution correctly. Most joint sealers require expert installation, without which failure is likely. Require installers to follow the manufacturer's installation instructions and specify reputable manufacturers who provide detailed instructions (do-it-yourself products don't usually come with detailed instructions). Take care not to introduce conflicts by specifying execution that contradicts manufacturers' instructions.

Specifying Sealants

Joint sealants are usually specified in a single section describing products, execution, and administrative requirements:

· 07920 — Joint Sealants (MasterFormat 1995)
· 07 92 00 — Joint Sealants (MasterFormat 2004)

Concrete pavement joint sealants are sometimes specified in a separate section: • 02750 – Paving Specialties

• 32 13 73—Concrete Paving Joint Sealants When more than one type of sealant is specified, the drawing notes or a schedule must identify which ones are to be used in which locations. Use terminology that will explicitly "tie" the product in the schedule or on the drawings to the product in the specification.

Some people like to give each specified sealant a Type A–, Type B–style designation. This technique has the advantage of allowing the exact type of sealer to be changed by altering the specification, without any need to change the drawing/schedule notation.

Some statements that might appear in a sealant schedule:

- "Control joints in brick veneer: Sealant Type A."
- "Joints between concrete columns and brick veneer: Sealant Type A."
- "Joints between window and door frames and brick veneer: Sealant Type A."
- "Control joints in interior gypsum board: Acrylic latex sealant."

• "Joints between kitchen and bath counter backsplash and wall: White silicone sealant."

In some cases, the sealant is to be furnished and installed by the installer of the product that is to be sealed. For instance, the window specification might require the window installer to complete the installation by sealing around the window.

In that case, the sealant and the sealing work can be specified in the window section. Alternatively, the sealant product and installation may be cross-referenced from the window section to the joint sealers section.

Whenever there are a lot of instances like this on the project, it's more convenient to cross-reference to eliminate repetitive language.

Although installation requirements for sealants should be specified, it is relatively safe to rely on a statement to "install in accordance with manufacturer's instructions." Most manufacturers will not stand behind their product if it is not installed in accordance with their instructions and recommendations.

ASTM C 1193 covers typical applications in great detail as help to the specifier, but referencing it as a specification requirement is basically useless; there are too many options to be able to enforce any of them. See the web link at the article's end for other references, including a free guide from the U.S. government.

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Selecting Products

More joint leakage is caused by using the wrong sealant than is caused by specifying the right sealant badly. There are certainly dozens of brand name products to choose from, possibly hundreds. Some sealant characteristics are critical to performance, others are arbitrary or user preferences.

To simplify the selection and specifying process, try the following technique:

- Identify the exterior joints with the most extreme movement and select a sealant for them.
- 2. Using the characteristics of the sealant selected, identify any other exterior joints that cannot be sealed with this sealant; assume all others will be sealed with this sealant.
- 3. For those joints that cannot use the selected sealant, identify the factor that makes that sealant unsuitable and look for a substitute.
- 4. Use as few types of sealants as possible.
- 5. Include an entry on the sealant schedule, "All other exterior joints: Use ..." listing the first sealant selected as the default sealant. Use a similar technique for interior sealants.



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Sealant Characteristics

Joint sealants are usually characterized by their material or chemical composition and some major characteristics. The types listed below are the most common, but there are also many unique chemical compositions made by only a few manufacturers.

- polyurethane (one-part, multipart; non-sag, pourable)
- silicone
- · polysulfide (two-part)
- butyl rubber (solvent-based)
- acrylic (solvent-based)
- · acrylic latex (water-based)

The characteristics listed below are arranged in order of their importance to performance,

with the most important first. If you work through the list from the top to the bottom, you'll rule out products that can't do the job more quickly.

Consistency. Joint sealants come in two consistencies: non-sag and pourable.

Vertical joints require non-sag sealants so the sealant will not run down out of the joint. (Non-sag is the term used in standards; gunnable is an equivalent term.)

Horizontal joints can use either non-sag or pourable sealants, but the pourable variety will yield better-looking results with less effort—the sealant is poured into the joint and levels itself under gravity.

Polyurethane sealants are usually available in both consistencies. Acrylic latex, butyl, solvent-based acrylic, and silicone are non-sag only.

Continuous immersion durability. In a fountain or other circumstance where the sealant must be in contact with water at all times, use only products that manufacturers state are suitable for continuous immersion or which are tested to ASTM C 1247 with the minimum values specified in ASTM C 920. Polysulfide sealants are among the few varieties that are suitable for continuous immersion.

Suitability for exterior exposure. The qualifications for exterior exposure consist of low-temperature resistance, UV and ozone resistance, and heat-aging resistance.

ASTM C 920 sealants are suitable for exterior exposure. Acrylic latex is not suitable for exterior exposure, unless it is not subject to rain or freezing temperatures. Silicone sealants are eminently suitable for exterior exposure from a durability point of view, but they tend to "pick up" atmospheric dust. Because rain can cause the dust to streak down the face of the building, some specifiers do not use silicone for exterior joints.

Suitability for traffic exposure. Sealants subject to vehicular and pedestrian traffic need to have a certain hardness to resist puncture and tearing. This is generally in conflict with movement capability (see below), which requires the sealant to be resilient. Elastomeric sealants tested to ASTM C 920 Use T (for traffic) are generally suitable for traffic applications, as are other sealants recommended by their manufacturers for this use: polyurethanes (pourable types) and specialty silicone (non-sag). Products that meet other standards written specifically for pavement use are also acceptable. Mildew resistance. ASTM C 920 sealants are not tested for mildew resistance. For "bathtub calk," specify a white silicone sealant specifically manufactured for mildew resistance.

Acceptable joint widths. Most elastomeric sealants are limited to joint widths between ¼ inch (6 mm) and 1¼ inch (32 mm). Some polyurethanes are designed for wider joints. The problem with narrower joints is that the absolute movement (especially compression) exceeds the capability of the sealant; some polyisobutylene sealants are designed for very narrow joints. Some narrow joints have no movement at all.

Movement capability. This is the gauge of how much extension and compression the sealant can withstand without either pulling away from the sides of the joint or failing in the body of the sealant. It is measured as a plus/minus percentage of the joint width at the time of installation, tested to ASTM C 719. This test also evaluates adhesion and cohesion as criteria for the movement limits. Movement capability over 7.5 percent rules out latex and butyl sealants. Movement capability over 25 percent is available but not universal in polyurethane and silicone sealants. Movement capability over 50 percent is rare.

Adhesion. Suitability for a specific substrate usually comes down to adhesion. Minimum adhesion is usually taken for granted, but there are variations — most of which cannot easily be quantified. Polyurethanes generally have the best adhesion, followed by silicones, then butyl and acrylic. Some substrates that may be problematic include masonry, stone, and vinyl. For instance, products tested to ASTM c 920 Use M (for masonry) have acceptable adhesion on the most common porous substrates, such as concrete, masonry, and stone.

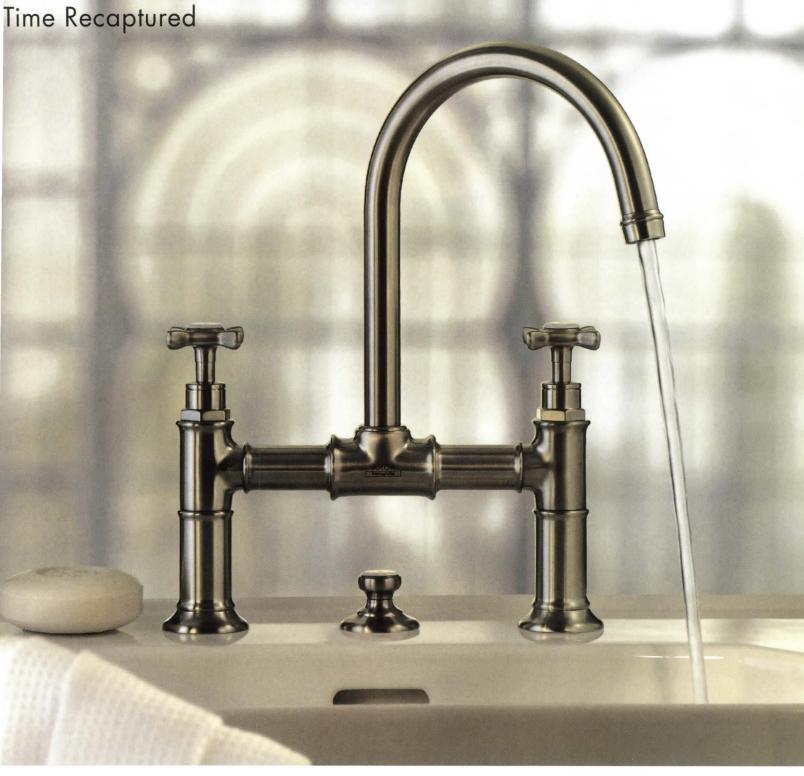
Hardness. Primarily a measure of indentation resistance, hardness is mostly used to judge whether the sealer is suitable for traffic use; minimum and maximum values are specified in ASTM C 920.

Hardness is also a measure of vandal resistance, but the harder the material, the less movement capability it has. Epoxy joint sealants are used in detention occupancies, as they are hard enough to resist picking with fingernails and plastic spoons; however, they have much lower movement capability.

Porous substrate staining probability. Sealants can potentially be made of chemical

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compounds whose component materials might leach or migrate, especially into a porous substrate such as stone. This is a pass-fail judgment — the sealant either stains or it doesn't. Elastomeric products tested to ASTM C 920 meet minimum nonstaining requirements. Although this is mostly intended to eliminate oil-based, putty-type caulks, most manufacturers also recommend that sealants be tested with the actual stone to be used as stone porosity varies.

Volatile compound emission. Volatile organic compounds (vocs) evaporate easily into the air under normal conditions; vocs that are of concern are those that irritate or impede respiration or that damage the ozone layer. Solvents and refrigerants are the two primary vocs that occur in construction and that are regulated by law and international convention.

Solvents occur in some sealants. voc emissions from architectural joint sealants are regulated by states and regional airmanagement districts. In some cases, independent regional commissions develop rules that are adopted by states.

Cure type. All joint sealants cure (change from being of toothpaste consistency to being solid) except those that are intended never to cure for some specific reason.

In principle, we usually don't care how sealants cure, as long as they perform as intended, but sometimes the cure type is relevant because it affects other characteristics, notably voc emission and installation friendliness:

- Solvent release sealants cure by the evaporation of solvents, usually referred to as vocs (most butyls and acrylics, but not acrylic-latex).
- Water-based sealants cure by evaporation of water (limited to acrylic-latex).
- Chemically curing sealants cure by the combination of chemical compounds. There are two subtypes:
 - multipart sealants combine two or more synthetic materials just before application;
 - some single-component sealants absorb moisture from the ambient air to combine chemically (usually referred to as "moisture curing").

 Noncuring sealants are deliberately designed to never cure; they don't evaporate anything. They are also usually described as nondrying and nonskinning. They stay sticky and malleable and are usually intended for completely concealed moving joints and connections.



Sikaflex 15Im is a polyurethane sealant that offers the same low modulus and joint movement (+100/-50%) capabilities of a silicone sealant, while offering all of the benefits of a polyurethane, including primer-less adhesion to porous substrates and paintability with acrylic coatings. www.sikaindustry.com

Color. Color options vary by product, by manufacturer, and by quantity. Custom colors usually require a minimum-quantity order. An alternative to integral color is to paint the finished joint. This is only appropriate when the type of paint used will withstand the movement, and the manufacturer says the sealant may be painted.

Expected service life. Service life is usually used to represent the longevity of the material under the conditions it was designed for. There are no tests for service life; statements of expected service life are usually based on field experience and are seldom published by the manufacturers. If you ask, though, a manufacturer's technical rep will tell you the relative ranking of the company's own sealants and estimated life span. Silicones and polyurethanes typically last 20 years or more. Most other types last less—sometimes a lot less.

Relative cost. The least expensive sealant is acrylic-latex, followed by butyl and solventbased acrylic, with polyurethanes and silicones the most expensive. If the higher movement capability or weather resistance of the latter are not required, the former are more cost-effective.

On the whole, however, it is usually false economy to scrimp on sealants, especially when you consider the cost of labor to remove failed sealant and install a replacement (and the effects of enduring leakage for an extended period before deciding to make the replacement).

Extreme and unusual exposures. Always verify suitability with the manufacturer. For example:

• exposure after installation to solvents, petroleum products, oxidizing chemicals;

- chlorine in water (swimming pools as opposed to fountains);
- high temperatures, as on exhaust and boiler stacks and other hot equipment; and
 high expectation of vandalism, as in detention facilities.

Related Products

- Gaskets. Hollow, preformed strips, usually rubber, which are overcompressed before insertion into the joint.
- Compressible foam sealer. Plastic foam strips that are overcompressed before insertion into the joint.
- Accessories. These include materials that are typically required for joint sealants, such as backer rods and bond breaker tape.
- Manufactured expansion joint covers. Used instead of sealants for big joints that have large movement, such as building expansion joints and seismic movement joints.
- Fire-stopping sealants. Used for closing openings in fire-resistance-rated assemblies; specified in a separate section.

The following types should be specified with the affected work, rather than in the joint sealants section:

- sealants used as adhesives;
- sealers used to join sections of roofing and waterproof membranes;
- joint fillers and sealers that must be installed as part of a manufactured or fabricated assembly; or
- sealants and gaskets used to install glass and plastic glazing, including those for structural glazing.

References and Sources

Visit www.bsdsoftlink.com/library/guides /divo7/079200.htm for a complete bibliography, including links to free design guides, ASTM standards on sealants, laws and regulations relating to vocs, and principal sealant manufacturers.

Susan McClendon is executive vice president of Building Systems Design, the publisher of BSD SpecLink, the automated specification software service. Visit www.bsdsoftlink.com for more information.

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Text Michael Z. Wise

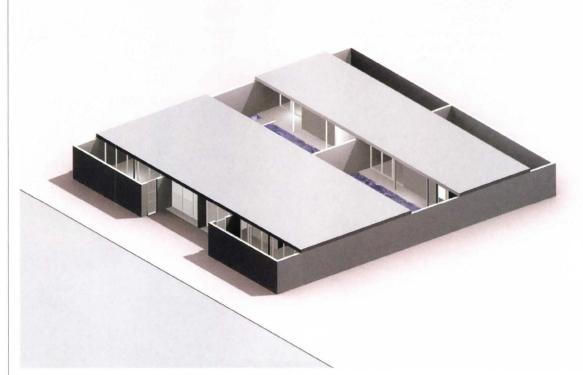




Terence Riley, director of the Miami Art Museum, sees worldwide applications for Mies' court house concept.



John Bennett, Riley's partner, was a co-designer of the spectacular Tower of Lights installation at the World Trade Center site.



THE DOORBELL RINGS OFTEN at Terence Riley's sleek new Miami home. Passersby stop to inquire if Riley, formerly the chief curator of architecture and design at New York's Museum of Modern Art (MoMA), can create a similar residence for them, while architecture students drop by unannounced to cajole the owner for a peek inside. "or, I'll give you two minutes," he usually tells the students.

Having traded in his post at MoMA a little over a year ago for the directorship of the Miami Art Museum, Riley is pressed for time, busily overseeing that institution's expansion and construction of a new building by Herzog & de Meuron. But Riley apparently thrives on creating new homes for institutions and for himself. After overseeing MoMA's transition into its latest physical incarnation by Yoshio Taniguchi, he worked with his partner, architect John Bennett, to design the Miami dwelling that they now share.

The house is half of a duplex that Riley and Bennett intend as a prototype for a leading Miami developer to replicate elsewhere and is based on a design by Ludwig Mies van der Rohe that the two architects explored as part of their research for the 2001 Mies retrospective at MoMA. Along with Mies' more celebrated designs, like the Villa Tugendhat and the Barcelona Pavilion, the exhibition included a group of so-called court houses with interior walled gardens, drawn up in 1931 soon after Mies became director of the Bauhaus. Riley believes that Mies created the low-cost court house design in response to criticism from his left-wing Bauhaus predecessor Hannes Meyer that he was overly focused on fashioning luxurious homes for the wealthy.

Riley and Bennett's house one unit of the Miesian duplex they designed—is split by a narrow lap pool. The living room and kitchen are situated on one side of the pool; bedrooms and bathrooms are on the other. To move between the two sides of the house, Riley and Bennett cross a small concrete bridge. ARCHITECT FEBRUARY 200

The court house designs were never realized in Germany, but after the Nazis shut down the Bauhaus and Mies came to the United States, several of his followers built Miesian courtyard houses, including Philip Johnson, who built one in Cambridge, Mass., in 1942.

In Miami, Riley has taken a Weimar-era experiment and given it a tropical twist worthy of David Hockney, centering his duo of houses on a pair of narrow lap pools. On one side of each pool is the living room and kitchen; on the other are two bedrooms and two bathrooms. Moving between these areas, which are enclosed on each side by tall sliding glass doors, requires crossing a concrete bridge spanning the water. Walled gardens, filled with Florida ferns and bromeliads, flank the front and back.

On a recent visit to the house, Riley's swimsuited younger brother lounged poolside in the warm winter sun. In South Florida's temperate climate, traversing the open-air courtyard bisecting the bedrooms and living area is generally unproblematic, though periodic rain and hurricanes mean sometimes getting buffeted by the elements.

Riley and Bennett had originally wanted the perimeter walls to fill the lot line, but this went against a local zoning code and prompted neighborhood opposition. At a public hearing by a local planning commission, Riley defended the concept and was ultimately able to get it built with only a small setback from the street. The New York firm K/R Architects, which Riley founded in the 1980s with John Keenen, acted as project architect.

While developer Craig Robins — whose company, Dacra Development, revitalized the Miami Design District a few blocks away from the duplex — may not share the same idealistic goals as the Bauhaus academy, he sees the reinterpreted court house concept as a template for affordable, yet high-design, housing. Riley, who undertook the project before leaving his MoMA job, says, "If a museum curator can afford it, it's definitely middle class."

With 1,600 square feet of interior living space, each unit in the duplex cost roughly \$400,000. Not exactly the housing for the masses that Hannes Meyer had in mind when he lashed out at Mies, but still of wide market interest for Robins, who quickly sold the second unit to two Brooklyn-based art dealers.

"It is a great example of where simplicity and extraordinary design produce something that offers an extremely high-quality lifestyle without an exorbitant cost," the developer says. Indeed, the house affords privacy, light, and tranquility on a small, cramped lot in what was until recently a not particularly desirable area of Miami.

"You retain those things that are usually associated with houses that are larger and more extravagant," says Riley, adding that the duplex is already sparking

Riley and Bennett's kitchen and dining space (top) spills over into the outside pool area.

The living room (right), seen from the rear of the house.









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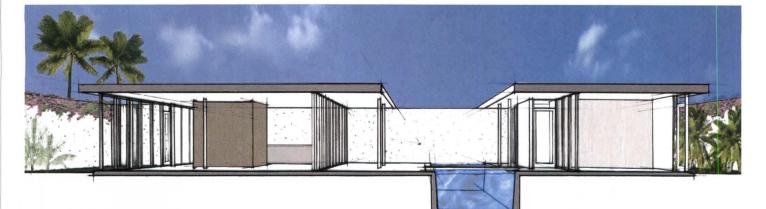
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Portfolio Florida Bauhaus

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considerable interest. "People walk in off the street and call us to ask, 'How much are these?'"

Some of the most lavish elements of Mies' residential designs are absent: "Travertine floors, onyx partitions, and the like are not what we wanted to do," Riley says. He opted for polished concrete floors, thin steel pillars, and 9-foot ceilings with an abundance of glass and white plaster walls.

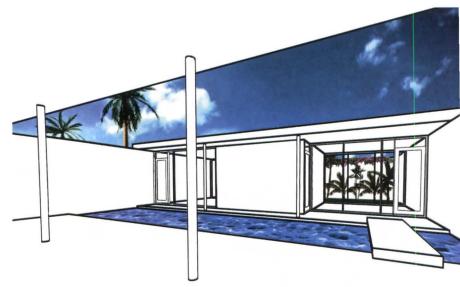
Luxury has not been entirely foresworn, however. The low-slung Bulthaup kitchen looks, Riley says, "like Donald Judd had imagined it." The furniture is by a range of designers from Eero Saarinen to Philippe Starck. "It all had to look beautiful from the bottom because once you're in the pool, you see it," says Riley.

Oddly for the home of a museum director, the walls are bare of art, save for two partitions covered with collages meant to signal Mies' desire for an integration of art and architecture. A wall overlooking the central courtyard and pool has been left blank for the projection of varied images at parties or to serve as a screen for outdoor film viewing on balmy nights.

Robins wants to build entire enclaves of these courtyard houses, but not in southern Florida, where real estate price hikes have made land expensive, spurring high-rise construction.

"We thought this was a sketchy neighborhood," Riley says, recalling when he and Bennett first planned the house three years ago. Now, a modest 1920s bungalow across the street is on the market for \$1 million.

So instead of Miami, Robins is considering Miesian enclaves for Beijing, Moscow, and Buenos Aires. If courtyard houses were to line both sides of streets in those cities, Riley says with evident delight, "it becomes a neighborhood of like-minded people who want to live in a house like this and have an interest in not just what is behind the walls, but the public spaces as well."



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north elevation

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west elevation

A sectional perspective (top) shows the living-dining area at left and, across the pool, the bedrooms and bathrooms at right. Small gardens grace the front and back of the house. The wall overlooking the pool can be used to project images and films. A view into the sleeping quarters from the veranda outside the dining space (center).

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Text Linda Hales Portraits Stephen Voss Project Images Courtesy U.S. General Services Administration

THE GSA MAN

Meet Les Shepherd, new chief architect of the U.S. General Services Administration.

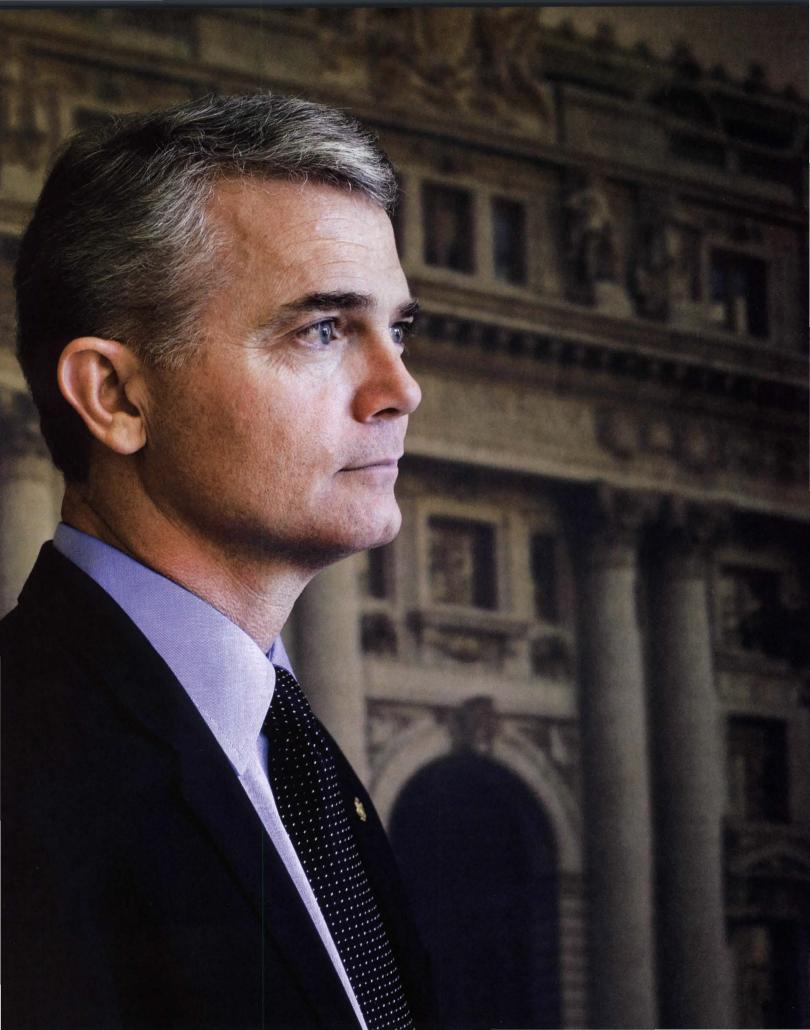
VIDEO SCREENS ABOVE THE WHITE LEATHER Mies van der Rohe chairs are flashing an intoxicating mix of buildings—built not by Mies but by Uncle Sam. Images fly by of U.S. government buildings in Chicago; Miami; Memphis, Tenn; Orlando, Fla.; St. Paul, Minn.; Cape Girardeau, Mo.; San Francisco; and Newark, N.J. They are a sampling of the \$12 billion worth of works in progress that Leslie Shepherd, the chief architect of the General Services Administration (GSA), is overseeing from his modernist aerie in Washington, D.C.

"Never a dull moment," Shepherd says on a December afternoon, acknowledging the demands of a job he held unofficially from January 2005, when his legendary predecessor, Edward A. Feiner, stepped down, until late November, when his appointment was announced.

On the day we meet, Shepherd, 49, is dressed in shades of gray. While Feiner stood out in cowboy boots, Shepherd's 6-foot-tall frame is anchored by black lace-ups. ("I have eight pairs of the exact same shoes," he says.)

The previous week had proved more challenging than most. Down the gleaming white corridor, itself a model of federal design, jurors had been winnowing entries for the 11th round of the Design Excellence Awards. The best courthouses, federal buildings, border stations, renovations, and art commissions will be honored on March 29. "I can say I personally touched half of those," Shepherd says. "I hope each project is better for it."

That same week, Shepherd also held a daylong, getacquainted session with Thomas Gordon Smith, a classicist architect who teaches at Notre Dame. Widely rumored as the agency's choice for the top job, Smith was





appointed to a federal architecture fellowship instead. Shepherd says he welcomes the "additional perspective."

In lieu of a peace pipe, the two hatched a plan for an autumn symposium on style. The working title is "Form and Meaning in Federal Architecture." The steering committee starts with traditionalists Alan Greenberg, Hugh Hardy, and Robert A.M. Stern. Shepherd quickly characterizes the effort as a natural sequel to a 1990s symposium on modernism. He waves a copy of the final report. Its silver-gray cover perfectly matches his Richard Meier-designed watch.

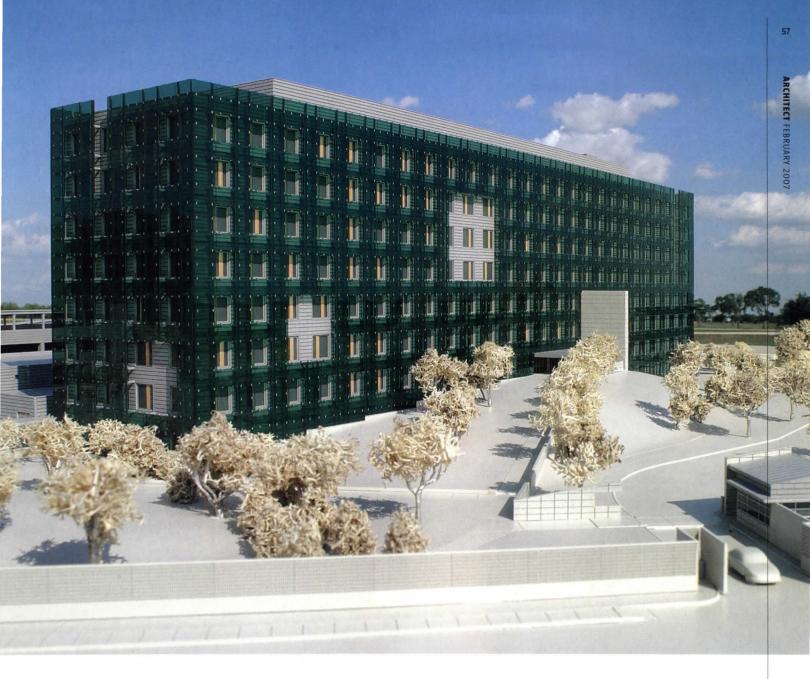
After 18 years at the GSA, Les Shepherd exudes the practiced confidence of an Olympic gymnast on the balance beam. If there is a storm brewing between classicists and progressives, he makes it clear that he will be the voice of calm.

"There isn't a style; no one has predetermined anything," he says. "We're always going to be looking for the best design talent. There's just not a single solution." Growing up in Mississippi, Texas, and New Mexico, Shepherd envisioned himself as an artist, but he abandoned the idea after hearing too many "starving artist" stories.

He set his sights on architecture while attending junior high in a thin-shelled concrete structure that reminds him of work by Bruce Goff. After earning a degree from Texas Tech, he worked on the adaptive reuse of a high school in Albuquerque, N.M. He married the developer's daughter, moved to California, and began his career with the GSA.

With a billion dollars a year to spend, half for new construction, the chief architect occupies design's power corner: Thirty border stations are in the pipeline. Forty courthouse projects are "active," including those in Toledo, Ohio; Charlotte, N.C.; Greenville, S.C.; Anniston, Ala.; San Antonio; Harrisburg, Pa.; and San Jose, Calif. Work is under way in 120 federal buildings, some new, some being modernized.

The Cape Girardeau Federal Courthouse in Missouri, a \$49.3 million, 154,000square-foot building, exemplifies the regional contextualism favored by lead designers Fentress Bradburn Architects of Denver, while nodding to the civic stature of its neighbor, city hall. The design-build project was executed with Pcc Construction Services.



In Houston, the 290,000square-foot regional headquarters of the Federal Bureau of Investigation was designed by a joint venture of Leo A Daly/LAN+ PageSoutherlandPage with LEED ratings in mind. A graygreen skin of thermal glass includes opaque shades to protect against heat while lending complexity to the building's economical mass. Light will project through the glass onto anodized aluminum shingles covering an inner core of concrete, which should bring this deceptively simple bunker to life. The project is scheduled for completion in 2008.

"It is a great compliment to that effort that we can talk about GSA buildings in the context of an overall discussion of great architecture," says Mack Scogin of Mack Scogin Merrill Elam Architects in Atlanta, who led the 2004 Design Excellence jury. Looking ahead, he cautions, "How effectively Shepherd manages to balance the demands of excellence and the constraints of cost-consciousness may determine his legacy."

Shepherd downplays his mission as "not so much" change. But he has shifted the emphasis of the most powerful client in America toward high-performance buildings and innovative approaches to workspace designs that put people first.

"Worker productivity and being a great place that people want to come to work" is more important than figuring out the program for "200 people times X board feet of space," he says.

On the wall of his office, four prints hint at another interest. They show interior projects rather than exteriors.

Anyone searching for the personal preference of Shepherd will notice that Meier designed two.

Shepherd prefers talk of substance over style. He notes that he has worked as a project manager on every single project type the GSA handles. "I know what it takes to make a project happen, and I've been in Washington long enough to understand the politics," he says.

Architects can expect him to be a stickler for being on schedule: He is driven by the passing of time, he says, recalling a lesson learned from a junior-high band teacher (for whom he played the saxophone): "To be on time is to be late. To be early is to be on time."

He is equally adamant about keeping on budget. Highprofile, high-cost new construction may take a back seat to cheaper retrofits.

He hopes that security features, which can account for 10 percent of the cost of a building, will become an opportunity for designers to push beyond rows of bollards. Shepherd just signed off on a "Perimeter



Security Desk Guide," to be published in March, which will ease architects through the minefield of options and requirements for GSA projects.

Shepherd gets high marks from many American architects, who appreciate that he has worked his way up the system, held his own on design reviews, and takes phone calls. But even those who know him are not yet sure how he intends to make his mark as a leader.

"I definitely want to maintain the stature of Design Excellence and the idea that public buildings continue to get recognized for giving something back and truly being public buildings," Shepherd responds. "I want to make it better."

Linda Hales is a design critic at The Washington Post.





The Food and Drug

Administration dedicated the new centerpiece building of its 130-acre campus in White Oak, Md., in October. The gracefully curved structure (facing page, top), designed by RTKL Partnership, is neatly adjoined and becomes the gateway to a registered historic building (bottom).

Lead designer Andrea Leers of Leers Weinzapfel Associates of Boston fought to preserve contemporary vitality in the 335,000-square-foot federal courthouse in Orlando, Fla. (top), which is due to be completed this year. Judges' concern for security altered the site plan and openness, but a light-filled lobby remains engaging enough for public gatherings.

In the staff conference

room (right), chief architect Shepherd (seated at center) with Thomas Grooms, director of design excellence and the arts division (left) and Robert Fraga, assistant commissioner for capital construction program management. Standing from left to right are William Holley, chief engineer; Gilbert Delgado Jr., director of construction excellence; Charles Matta, director of federal buildings and modernizations; Rolando Rivas-Camp, director of historic buildings; and Robert Andrukonis, director of courthouse programs.









Arquitectonica's mammoth design for the Wilkie D. Ferguson Jr. Federal Courthouse in Miami intentionally breaks the mold of civic architecture while accentuating notions of transparency, balance, and equity. Opposing arguments are represented by paired towers, one concave, one convex, on both sides of a curved glass prism. Exterior glass is laminated, insulated, and tinted, offering views of Biscayne Bay while remaining energy conscious and blast-resistant. Helmut, Obata + Kasabaum was the associate Kassabaum was the associate architect on the project.



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ARCHITECT FEBRUARY 2007

Competing for a GSA commission begins online. Opportunities are listed at www.fedbizopps.gov. Firms must signal their interest by submitting a thin portfolio—"not exceeding one-quarter-inch thickness," in GSA's parlance—describing relevant experience.

These portfolios kick off a two-stage evaluation by a panel of five experts. One member of the evaluation board is a "national peer" from the private sector, while the other four include the GSA's own design and engineering experts and a representative for the client.

The board's analysis of portfolios will lead to a shortlist. Choices are said to be weighted for past performance (35%), philosophy and design intent (25%), the lead designer's portfolio (25%), and the lead designer's qualifications (15%).

Shepherd says the agency is looking for a philosophy and approach that respond to the program as well as demonstrated creativity and experience with similar challenges. Shortlisted firms will be interviewed and ranked. The board will make a recommendation for the commission, but that isn't necessarily the end of the process.

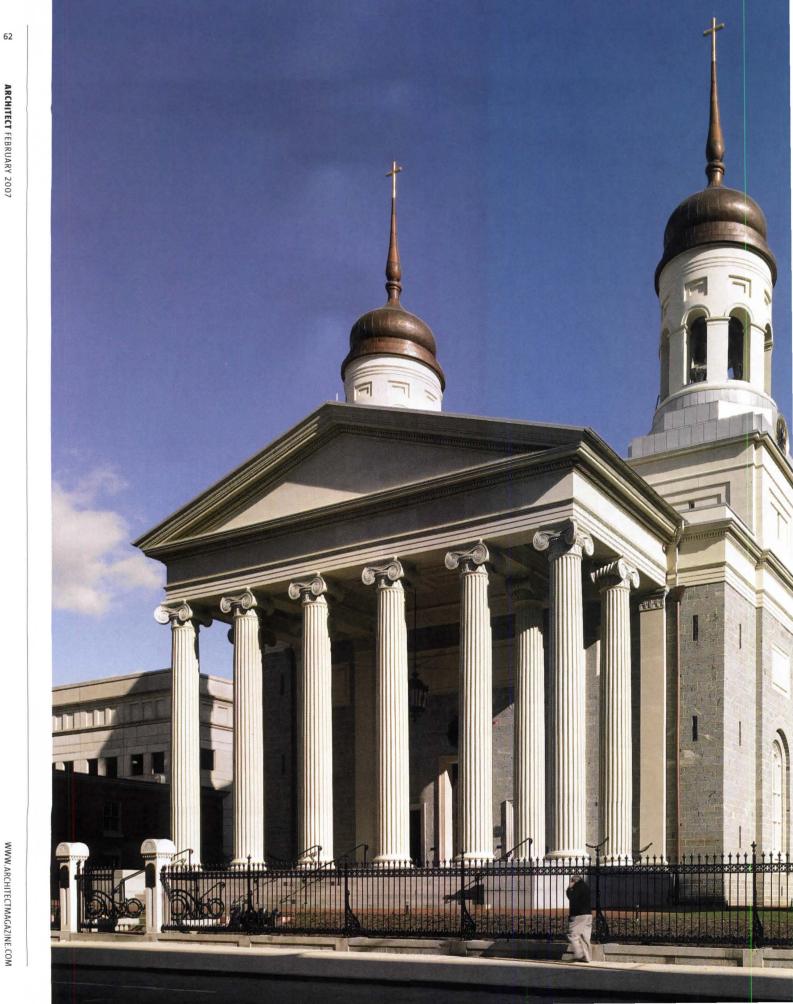
The panel may be overruled and the commission awarded to a runner-up. Occasionally, a project will be critical enough to require a charrette and evaluation by a jury of three national peers. On a high-stakes project, shortlisted firms may also be subjected to a full-blown design competition to winnow out the losers.

Whatever the exceptions, Shepherd insists, "Selection panels are independent." He waits to weigh in after the architect has been chosen.

A dramatic open-air rotunda will define the federal courthouse under way in Jackson, Miss. The design, by H₃ Hardy **Collaboration Architecture** of New York, opens the conventional courthouse layout metaphorically while echoing the state capitol rotunda seven blocks away. Daylight will enter the courtrooms through clerestories. Large bay windows will afford views of the proceedings from the street when the building is completed in 2009. (Currently, construction funding is pending.)







AMERICA'S FIRST CATHEDRAL



John G. Waite Associates restores Baltimore's Basilica of the Assumption according to the intentions of architect Benjamin Henry Latrobe.

Text Bradford McKee Photos Jeffrey Totaro/Esto

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IN ESSENCE, THE PRESERVATION ARCHITECTS at John G. Waite Associates, Architects, had not one but two clients while restoring the Basilica of the National Shrine of the Assumption of the Blessed Virgin Mary, otherwise known as the Baltimore Cathedral. The ostensible client was the Basilica Historic Trust, affiliated with the Archdiocese of Baltimore and led by Cardinal William H. Keeler. But ever in the background was another, phantom client: the original architect, Benjamin Henry Latrobe (1764–1820), who also designed parts of the U.S. Capitol under Thomas Jefferson and who never lived to see his full intentions for the Baltimore structure carried out.

Given the pains Latrobe took from 1805 until his death to perfect the cathedral (grandly, he quit twice on his client, Archbishop John Carroll), he'd have quailed at the numerous decorative insults it later sustained. During the 19th and 20th centuries, successive church leaders tried out their own various notions of Catholic expression inside the imposing granite building to impress the bishops' councils that periodically gathered there. The cathedral's interior was remodeled at least a dozen times between the Civil War and 1946, leaving it dark, lugubrious, and more than a little Gothic.

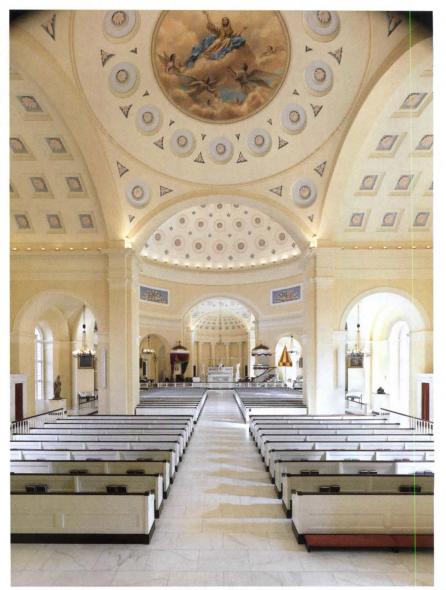
"None of these changes [was] successful," says John G. Waite, who is principal of the eponymous Albany, N.Y., firm and who led the restoration, "which is why they kept redecorating, because they didn't understand what Latrobe's architecture was trying to do."

On a hill that then dominated the Baltimore skyline, Latrobe and Carroll saw the building as a touchstone of religious freedom, which Roman Catholics of the era had reason to regard as a privilege rather than as a human right. For the first cathedral built in the independent United States, they chose a neoclassical language to make the point, stirred with subtle notes of the picturesque and sublime traditions in the way the structure's great dome and oculus carry light. And as Stephen F. Reilly, Waite's project manager, says, "the power of the neoclassical relies on light. It's three-dimensional and has gravity, and you have to use light to reveal it."

But the light, like many of the cathedral's original qualities, was gradually stolen. Around the main dome, which followed designs by the 16th century French architect Philibert Delorme and soars 87 feet high, the 24 skylights were painted black during World War II and eventually removed. The tall, translucent windows that illuminated the nave were replaced with stained glass that eclipsed daylight. White marble floors were exchanged for earthy green; dark wood pews were installed; and the reflective brightness of the interior paint scheme turned gloomy.

Those were among the more obvious mistakes Waite's firm identified and fixed during its eight-year, \$32 million forensic renovation job. Before touching the building, the firm completed a historic structure report dating and detailing "every square inch" of the building, Waite says. The discovery process involved nondestructive methods such as X-ray, radar, and ultrasound, he says, to find problems such as rotted timber or masonry voids. The architects also combed through both private and government archives to uncover clues to the construction.

For the client, there were few surprises in the end, although Mark J. Potter, the trust's director, recalls his not having expected that the air ducts feeding new diffusers in the church floor would need to thread through a series





Latrobe's redemption came partly from paint samples offering clues to the original plain palette (above), animated by clear daylight within the nave's spare frame.

Gloom gathers in a photo from about 1900 (left). Here, the high altar's footprint has expanded, and polychrome stencils and murals cover once-austere walls as interior embellishments turn more elaborate, in keeping with church fashions.

A postcard dating to 1902 (left) shows the abandonment of Latrobe's neoclassical restraint in favor of heavy-handed redecorating regimes.



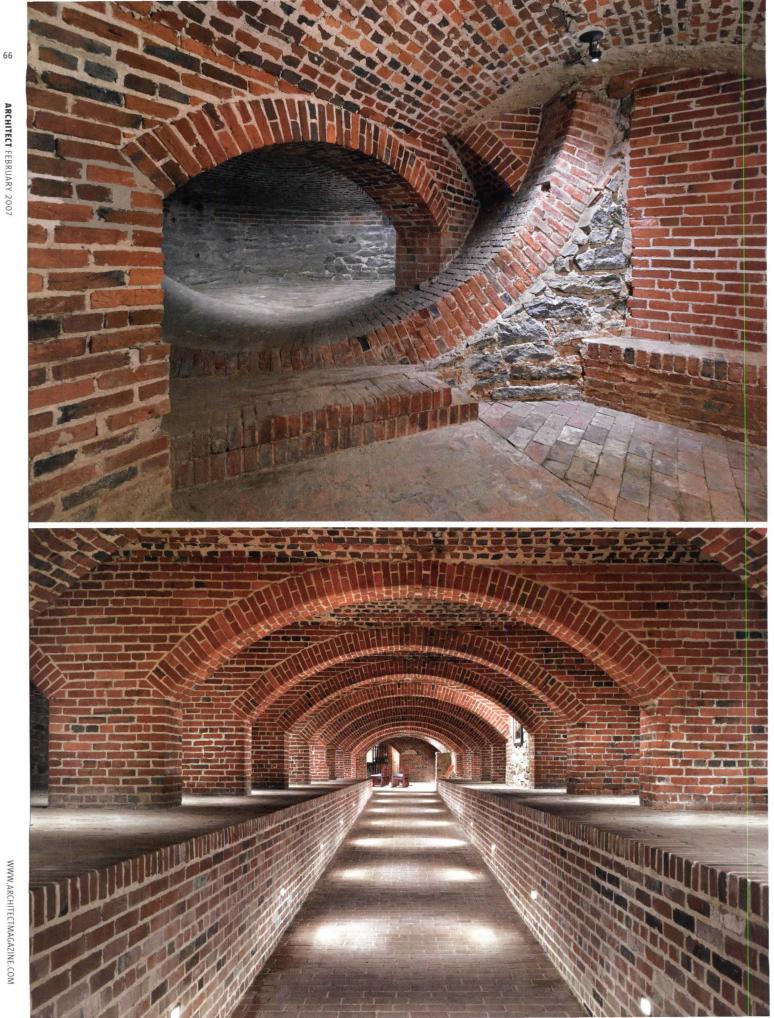
Cast-plaster medallions in the coffers of the vaults and the dome (above) and the tripartite frieze and archway moldings nearly match those Latrobe specified for the U.S. Capitol, though the cathedral is widely considered to be the architect's most refined design.

A reproduction of the original pulpit (near right) stands at the nave's eastern end. Reproduction chandeliers revive those that provided the cathedral's only interior lighting for decades.

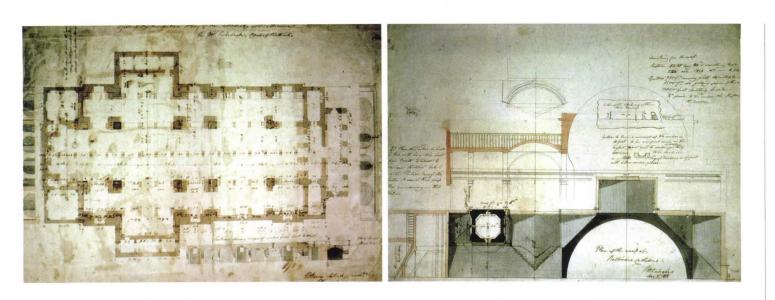
Clear glass, not quite transparent (far right), returns to the tall, arched side windows on the north and south, replacing stained glass that, though once considered more ecclesiastically fitting, greatly darkened the interior.



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EARLY 18209





1841 J.H.B. LATROBE PLATFORM FOR THE PORTICO BUILT



1861-1864 E. FAXON PORTICO BUILT



1866 CLOCK ADDED TO SOUTH TOWER 1890 BALDWIN APSE ADDITION



RESIDENCE AND BASILICA FOR CARDINAL GIBBONS

of knee walls beneath the floor. "That was a negative surprise," Potter says. Yet ultimately, he adds, "I can't imagine we could be any happier."

Within the church and in the preservation world, Waite's job may be seen as controversial. Rather than retrofit the cathedral to meet modern ecclesiastical requirements, Waite says that Cardinal Keeler insisted on going "back to basics"-to the integrity of Latrobe's design. "A lot of people said at first that this doesn't meet the secretary of interior's standards" for historic preservation, Waite says. "In the end, it did, but people didn't understand it at first."

Waite believes that neither bringing back the cathedral to some exact place in its history nor pretending that everything about the building was historic would have worked. While the misguided accretions took time, so did fulfilling Latrobe's own design. The pair of towers holding Saracenic domes - as stipulated by Latrobe - was completed by 1837 (under the direction of Latrobe's son, John H.B. Latrobe), the portico was done by 1864, and the apse was extended—as Latrobe evidently thought necessary—by E.F. Baldwin in 1890.

But Latrobe never called for a shed roof. His roof, which sloped low behind a parapet, was conspicuously replaced in the mid-1800s by a "roof of convenience," as Reilly calls it. A surviving watercolor working drawing helped the architects restore Latrobe's intended roof form and lower the parapet to its original height. Waite's team, however, initially thought the wood shingles they found may have been temporary, though William Allen, the historian in the architect of the Capitol's office, assured them that wood shingles also appear in the Capitol and were "Latrobe's material of choice," Waite recalls.

The undercroft beneath the sanctuary, where Latrobe meant to place a chapel, helps tell the story of his exacting vision and the ways in which it was thwarted. Latrobe resigned once because the builders disregarded his specifications and didn't sink the foundation piers deeply enough. When Carroll persuaded him to return, he compensated with inverted brick arches, visible in the undercroft, to carry the massive dome's load, much as spread footings might today.

Latrobe resigned a second time when, again, his design was ignored and wood joists were installed to support the church floor instead of a vaulted brick ceiling in the undercroft; that time, Carroll ordered the work redone with Latrobe's vaults. Even so, the space became too shallow for a chapel. Waite's team was able to test the depth of the piers and foundation walls with radar and underpin them to deepen the undercroft. After they removed the old, intrusive mechanical systems that filled the space and placed them outside the building in a new vault dug beneath the north yard, they were able to create the forsaken chapel.

The revelations of the most recent work have cast a certain irony on previous judgments of the building. In an essay accompanying the historic structure report, Charles Brownell, a professor of art history at Virginia Commonwealth University, cites the historian Henry-Russell Hitchcock's opinion that "internally, at least, this is one of the finest ecclesiastical monuments of Romantic Classicism."

Hitchcock, however, took less pleasure from the exterior, believing that the Saracenic domes were "not of Latrobe's design." Yet it is likely that Hitchcock, whatever he found inside the church, was not even viewing Latrobe's genuine article, whereas those onionlike domes with their slender finials—set perhaps to contrast and amplify the spherical power of the main dome-were entirely the architect's own.

"For the first time, we know how Latrobe was putting together buildings, what materials he was using, and how inventive he was," Waite says. "It's not only his masterpiece, but his best-preserved building."

Bradford McKee, a former senior editor at Architecture, is a freelance writer based in Washington, D.C.

Inverted arches in the

cathedral's undercroft (facing page, top) served as Latrobe's support for the main dome after contractors failed to dig foundation piers deeply enough. Brick vaults provide support for the church floor (bottom), as Latrobe intended, after contractors mistakenly installed wood joists. Mechanical ducts were removed, and the space was deepened to create a chapel that Latrobe designed beneath the sanctuary.

A century's progress (drawings at left) finally saw completion of Latrobe's design.

An undercroft plan (top left), before the addition of the inverted arches, shows modifications to the size of the piers.

A roof plan (top right) believed to have been drawn by Latrobe holds notes and calculations made on the site.



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ARCHI-TECTONICS, ARO, BALMORI ASSOCIATES AND JOEL SANDERS ARCHITECT, DIANE

Text Edward Keegan Photos The History Channel

At the behest of The History Channel, architects speculate what Chicago, Los Angeles, and New York will look like in the year 2106.

city of the future



FRIENDS, DIRK DENISON ARCHITECTS, GAROFALO ARCHITECTS, PROTOSTUDIO, STRAWN.SIERRALTA, URBANLAB, VALERIO/ARUP/VISUALIZEDCONCEPTS



SCHOOL OF DESIGN, OFFICE OF MOBILE DESIGN, ROGER SHERMAN + CITY LAB, XEFIROTARCH + IMAGINARY FORCES



LEWIS ARCHITECTS, KONYK, ROGERS MARVEL ARCHITECTS, SMITH-MILLER + HAWKINSON ARCHITECTS, SYSTEMARCHITECTS, TERREFORM, URGE URBAN RESEARCH GROUP

THE HISTORY CHANNEL'S SERIES Engineering an Empire depicted how the all-powerful (sometimes even deified) rulers of ancient civilizations roped clever architects into designing them the ultimate legacy: massive monuments. But after chronicling the architectural feats of the Romans and the Aztecs, the cable outlet looked ahead, announcing The City of the Future: A Design and Engineering Challenge.

In November and December last year, The History Channel convened design teams from three U.S. cities— Chicago, Los Angeles, and New York—and asked them to imagine the architectural and engineering marvels that will define their cities a hundred years from now.

"We're hoping to shape the debate about the future based on what we know about the past," says Mike Mohamad, the channel's senior vice president of marketing.

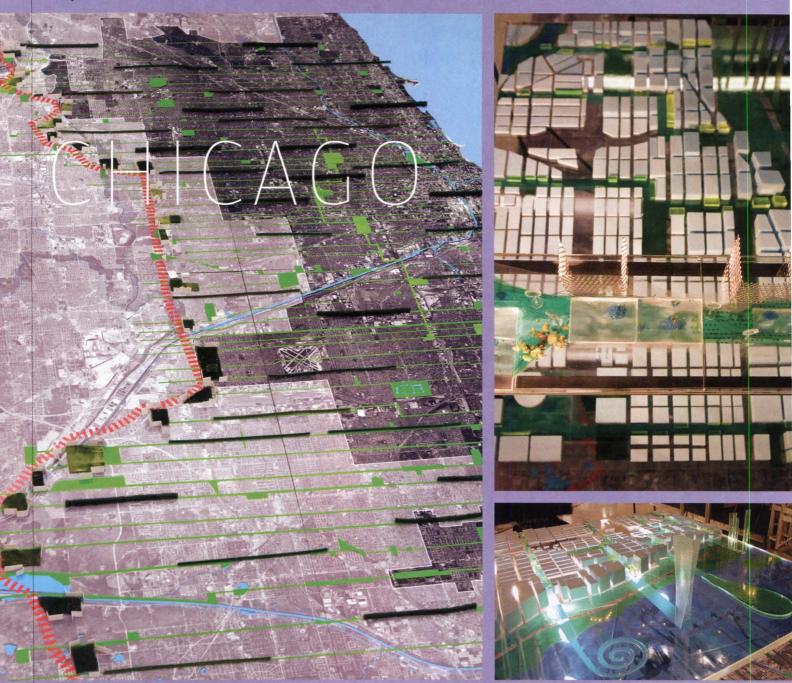
The New Orleans-based design consulting group Jones/Kroloff structured the competition, inviting several firms from each city and jurying portfolios to round out the list of contestants: 10 teams competed in New York, eight in Chicago (where ARCHITECT editor in chief Ned Cramer was among the jurors), and eight in Los Angeles. "The History Channel was interested in identifying young and forward-looking designers," explains Jones/ Kroloff principal Casey Jones, adding that the open-call submissions yielded entrants who were just as talented as the invitees. Jones noted the positive reactions of many participants. "They appreciated having a concentrated time period to think at this scale," he says.

In the first round of the competition, teams had four hours to assemble 3-D models of the city they envisioned (the models had been prebuilt during a one-week design period) before presenting them to a jury of design professionals. Honorable mentions (sponsored by Infiniti and IBM) were awarded, but only one winner was chosen in each city.

The three winning schemes went head to head in an online competition at www.history.com/designchallenge. Voting, led by Daniel Libeskind, will close on Feb. 3, and the overall winner will be announced later this month.

Each winner has already collected a cash prize of \$10,000, and the ultimate winner will garner an additional \$10,000.

In ancient Rome and the other civilizations that Engineering an Empire has covered, hubris and overextension led to decline. Do these ideas for the future of three great American cities represent the next step forward—or are they symptomatic of the end of another empire? Stay tuned. 70



WATER IS THE SOURCE OF UrbanLab's winning scheme. Dubbed "Growing Water," it proposes a series of ecoboulevards to be developed throughout the city. These wide green swaths will treat all waste and stormwater naturally in Chicago and return it to the Great Lakes in a closed-loop system.

Each of UrbanLab's major ideas builds upon an existing engineered system within the city. The ecoboulevards extend a network of boulevards and parks that are more than a century old. Closing the loop of water undoes the reversal of flow from the Chicago River (its natural flow was turned back in the 19th century). Finally, a 109-mile-long system of 20th century stormwater drains known as the Deep Tunnel would no longer be necessary. UrbanLab would reprogram the drains as new mass-transportation routes.

The team viewed the entire *Engineering an Empire* series before starting work on their proposal. "There's a holistic and massive scale to everything they profile," says partner Martin Felsen. "We wanted to work in that manner." By creating a system of multifunctional natural elements within the city, UrbanLab's intervention simultaneously serves future social, recreational, and economic needs while conserving and sustaining the city's considerable reserves of fresh water. UrbanLab's winning vision for Chicago is a system of eco-boulevards (facing page, shown in green at left) that run through the suburbs and the city (shaded gray), treating 100 percent of Chicago's wastewater naturally and returning it to the Great Lakes basin.

Botanical gardens, greenhouses, and wetland areas (facing page, top right) are part of UrbanLab's plan, which beat seven others in Chicago on Nov. 17.

The winning model (facing page, bottom right) shows Chicago with renewable energy stations on the lakefront.

Chicago's existing parks and green spaces (right) will be supplemented by the eco-boulevards.

By means of microorganisms, fish, and plants, the ecoboulevards will treat the city's wastewater, then return it to Lake Michigan (see illustration below)—undoing the reversal of the Chicago River's flow, a marvel of 19th century engineering.

Closed Water Loop 100% recycle



icro-organisms ertebrates fish

Michigan

Eco-Boulevard

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INFRASTRUCTURE — COLLECTIVELY, the large-scale products of civil engineering that propel cars, trains, power, and water across the Los Angeles region—is the theme of L.A. winner Eric Owen Moss' riff on the city of the future.

Of the concretized Los Angeles River and the railroad tracks, huge tower grids, and freeways that effectively organize and subdivide today's Los Angeles, Moss says, "These are huge investments designed to solve very simple engineering problems."

Moss proposes to bridge these defining elements and reconnect the city. Citing how Trajan's imperial baths were built over the remains of Nero's palace in Rome, Moss sees the future Los Angeles as a complex overlay of new structures and typologies, including a horticultural grid, water towers, what he calls a "NAFTA drape" (a zone for clean manufacturing uses that would help keep those industries in North America, rather than the Far East), new habitation structures spanning bridges and freeways, media towers, and a glass forest of housing.

Unsurprisingly, perhaps, Moss' Los Angeles is the most scenographic of the three winning entries, but Moss notes that his reconception of the city's infrastructure is a public policy proposal as much as a visual concept.

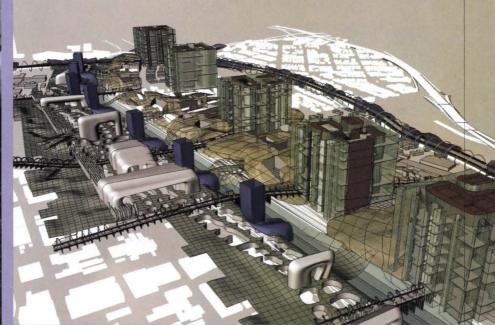
Eric Owen Moss' design

(model shown above) conquers the isolating, socially stratifying effects of massive infrastructure by integrating a variety of building types and functions—and bridging physical barriers like railroad tracks and freeways.

A rendering of Moss' future Los Angeles (facing page, top right) specifies horticultural uses alongside and over the concretized L.A. River, factory uses—a "NAFTA drape" throughout the project site, and housing on bridges and freeways.







The bracket-shaped buildings shown in gray (middle right) are part of a "glass forest" of housing; the short square towers in blue by the river are water towers.

Team members apply the finishing touches to Moss' model (right) and lift it into place (far right) at the L.A. competition on Dec. 12.





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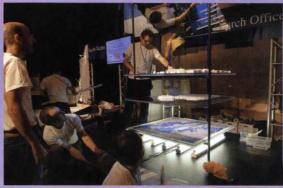
NEW YORK

A MANHATTAN TRANSFORMED by rising seas, the product of melting polar ice caps, is the apocalyptic starting point of New York 2106 by ARO (Architecture Research Office). A hybrid between a literary fantasy and an Al Gore PowerPoint presentation, this is an elegy to New York's vibrant street life, which would need to be transferred to a new building type—"vanes"—as floodwaters claimed the lowest-lying streets of Manhattan.

"Rather than view [the flooding] as cataclysmic, we saw it as an agent of revitalization and regrowth for the city," explains ARO principal Adam Yarinsky. The stacked horizontal vanes are suspended like piers over flooded streets and serve the multitude of functions that ARO predicts will remain part of New York life—they're residences, offices, shopping arcades, parks, and gardens. The existing buildings of the city are preserved by the intervention of the vanes. By reinforcing the historic order of the city, the street grid, topped by the grid of vanes, will remain the dominant influence on Manhattan's physical environment.

New York's perennial skyward thrust is augmented by twisting, Buck Rogers—inspired, open-lattice towers placed in the Hudson and East rivers. Providing evaporative cooling and water filtration, they become new vertical landmarks that celebrate the inherent sustainability of the 22nd century city.



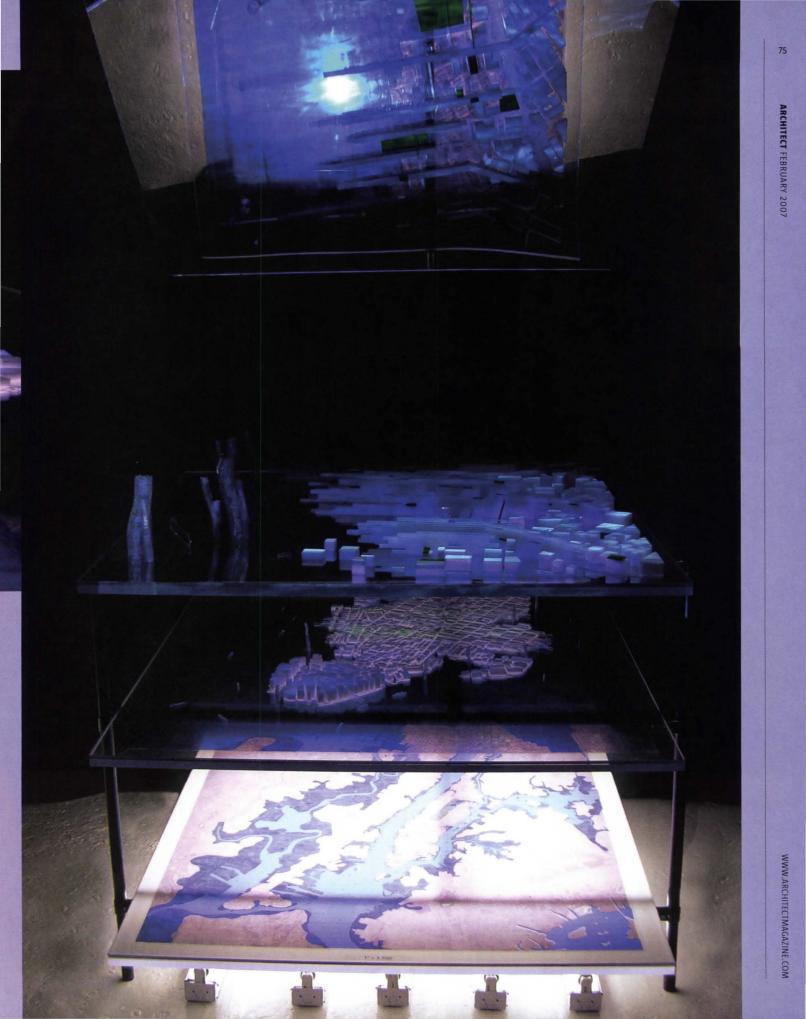


As sea levels rise by 6 inches to 36 inches, New York City moves up as well. ARO's design lifts the activity of 22nd century Manhattan to "vanes"—pierlike structures built directly over flooded streets. Pictured above: a waterlogged lower Manhattan, with evaporation towers in the Hudson and East Rivers.

The thinness of the vanes (middle left) promotes natural light and ventilation. The flexibility of the building type allows each vane to grow according to demands.

ARO's team assembles its model (bottom left) at the New York competition, held on Nov. 2.

ARO's tiered presentation (facing page) reflects its concept of a future New York with layered or interlocking urban systems—vanes built over (and between) traditional buildings.





classical maenew

David Schwarz's Schermerhorn hall builds on Nashville's civic legacy.

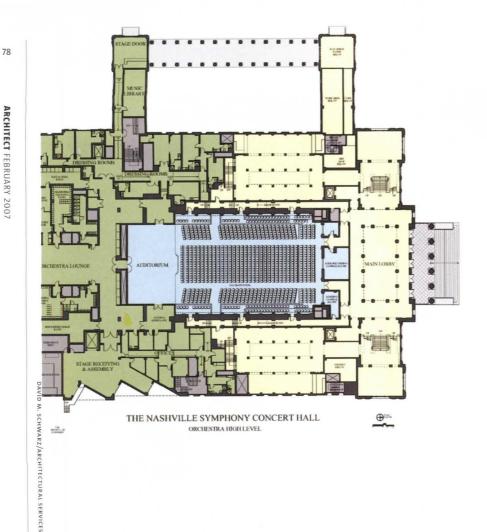
Text Dan Daley Photos Hedrich-Blessing

schermerhorn symphony center—the new, 197,000square-foot home of the Nashville Symphony-occupies a full block of the city's downtown, forming a boisterous yet elegant bridge between the famous replica of the Athenian Parthenon, in nearby Centennial Park, and the Art Deco lines of the Frist Center for the Visual Arts at the other end of Broadway. The neoclassical exterior is sheathed in Indiana limestone, burled to catch the sun's dazzle; yet the front walls have plenty of glass, a modern touch. Evoking the vitreous curtains of other classically inspired recent designs (such as Norman Foster's Hong Kong & Shanghai Bank building), these oversized windows "allow what goes on in the building to become decoration for the city, and vice versa," explains principal architect David Schwarz, of David M. Schwarz/Architectural Services, in Washington, D.C.

Inside, the structure is a dense honeycomb of spaces: a lecture hall, a music library, the symphony's offices, various dressing rooms, the concertmeister's suite, four lobbies, a series of reception rooms, a catering kitchen, and "many, many bathrooms," in Schwarz's words. But the heart of the Schermerhorn—which is named for the late maestro and musical director of the Nashville Symphony, Kenneth Schermerhorn—is the Laura Turner Concert Hall, a 30,000-square-foot shoebox design with nearly 2,000 seats, a stage that can hold up to 115 musicians, and a choral loft behind the stage. The seed of the Schermerhorn's design was planted during a whirlwind tour of classic concert halls. Schwarz and Paul Scarbrough of Norwalk, Conn.'s Akustiks, the principal acoustical designer of the Schermerhorn, joined by other members of the design team, visited halls in six cities: Vienna, Berlin, Amsterdam, Barcelona, Zurich, and Boston. They listened to a concert – sometimes multiple concerts – in each of them and started to get ideas for the Nashville project. So from Vienna's Musikvereinssaal, they borrowed the hall's rich reverberance and its use of natural light; from Berlin's Konzerthaus and from Vienna's Konzerthaus, the gracious series of public spaces around the halls; and from Boston Symphony Hall, the use of two side tiers to promote good balance between reverberance and sonic clarity.

Another decision influenced by European precedents was to illuminate the new hall with natural light. "We were in Vienna, listening to the closing chords of a Dvorak requiem fade just as the last rays of sun of the day filled the room with this incredible golden glow," Scarbrough recalls. Under the hall's coffered ceiling, soundproof clerestory windows—30 in all—run along the two long walls.

According to Schwarz, the key to creating a workable music space is collaboration between architect and acoustician, with the rapport between himself and Scarbrough being a perfect example. "Paul will tell us



At the new Schermerhorn

Symphony Center (floor plan shown at left), the 30,000square-foot Laura Turner Concert Hall is the heart of a much larger complex that includes offices, dressing rooms, and a music library.

The neoclassical façade

(bottom left), by David Schwarz, has a modern touch in its extensive use of glass.

The Nashville Symphony

Orchestra held four tuning rehearsals so that Akustiks, the acoustical consultant, could work with the musicians. At one session (facing page, top left), Christopher Blair, a design principal at Akustiks who is also a conductor, led the orchestra.

A 1:20 scale model of the concert hall (facing page, bottom left) was built by Akustiks for a series of acoustical tests and measurements. The tests helped refine key aspects of the design, such as the height and depth of the hall's side tiers.

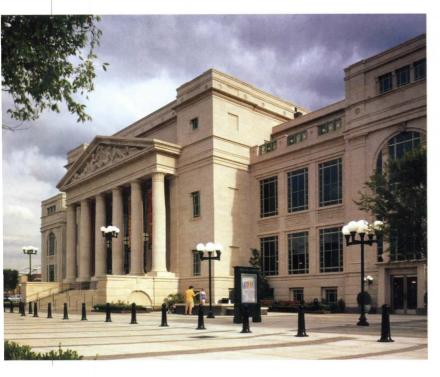
The Schermerhorn's prevailing classicism is brightened by daylight and set off by more-contemporary details, such as the flower motif in the railing.

how a surface needs to perform, and we'll design it to do that and also make it look good aesthetically," he says. He cites the cornice beneath the windows, which serves to deflect sonic energy downward, and the columns on the side walls, which act as high-frequency diffusers.

Schwarz, who also designed Bass Hall in Fort Worth, Texas, and Severance Hall in Cleveland, points out that this kind of collaboration can significantly affect the bottom line. Of the Schermerhorn's total \$120 million cost, \$90 million was spent on hard construction costs, while \$30 million went to overhead. Schwarz contrasts that with the Renée and Henry Segerstrom Concert Hall in southern California, which cost \$200 million. "The difference is attributable to having the interior materials and design work for the music, not as an aesthetic on its own," he says. "The reason the classic European music halls sounded so good was that the sounds worked with the architecture. The room is one of the instruments."

Schermerhorn Symphony Center Architect: David M. Schwarz/Architectural Services, Washington, D.C.; David M. Schwarz, principal Acoustician: Akustiks, Norwalk, Conn.; Paul Scarbrough, principal

Architect of Record: Earl Swensson Associates, Nashville, Tenn. Consulting Architect: Hastings Architecture Associates, Nashville Construction: American Constructors, Nashville







Acoustics

Acoustical design is always a tug-of-war between dynamic reverberance and control of the sonic reflections that create that reverberation. Sound is energy, striated into various frequencies. Its behavior can be reasonably predicted according to Newtonian physics, although an almost exponential number of variables—such as materials and air density—make acoustics as much an art as a science.

Sound energy emanates from a source (in this case, the stage) and will undergo two fundamental transformations as it encounters resistance. When the energy hits hard surfaces, such as walls, it will reflect back into the hall. The directionality of those reflections will depend mainly on the angles and density ("reflectivity") of the surfaces.

The other phenomenon is diffusion: When sonic energy intersects with nonreflective surfaces, such as curtains or even people, some of that energy is absorbed by those materials. The careful choice of these materials is one way that absorption is used to control additional reflections inside the hall. For instance, at the Schermerhorn, columns along the side walls act as high-frequency diffusers. One less-obvious but inspired means of controlling diffusion in the Schermerhorn is a rule that winter concertgoers must put coats in the cloakroom: If the hall were full of coats folded over arms or seats, this would significantly—and unpredictably—increase the absorption of high-frequency sounds.

The Schermerhorn was meant to be a dynamic hall, and its materials underscore that. The walls are hard plaster on concrete; the flooring is of the hardest woods, such as Brazilian cherry, African makore, and the



hickory native to Middle Tennessee. Even the nickel-silver finishings were designed to enhance the hall's reverberant quality, which Scarbrough's CAD-based measurements place at 1.96 seconds (the time it takes for a transient sound to return to its origination point after bouncing off the rear wall) in the middle frequencies — between the 1.85 seconds of the Boston Symphony Hall and the 2.1 seconds of Vienna's Musikvereinssaal, two of the rooms that served as acoustical templates for the Schermerhorn.

This lively reverberance, though, is tamed by technology. Along each side of the room, fabric-covered fiberglass panels sit on tracks in thin silos under the floor and can be raised to absorb sound reflections. Also, on the side balconies and on the clerestory level, several heavy (32 ounce weight per yard) draperies are stored in curtain pockets. All of these acoustical tools are automated, and eventually their controller will have singlebutton configurations for various types of performances.

The Schermerhorn uses technology not just to enhance the acoustics inside, but to block noise from outside. The hall is a building-withina-building, with a two-inch acoustical gap running between the inner and outer shells. All noise-generating systems, such as the HVAC, rest on absorptive neoprene-puck foundations in the basement, where the ground mass also helps stabilize them; in some cases (such as ductwork and pipes), they are also supported by ceiling hangers. When potentially disruptive noise has an unavoidable track into the shoebox—such as through the HVAC system—it encounters ducting that is lagged on the outside with two layers of gypsum board and has fiberglass lining.



Convertibility

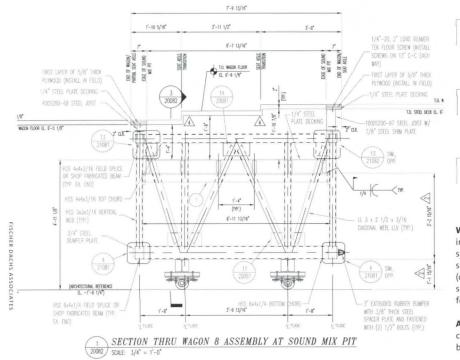
One of the Schermerhorn's most radical design features is its convertible floor space. The audience seats are arrayed on eight massive "chair wagons" — movable platforms that are roughly 60 feet wide by 15 feet deep. (The most famous chair wagon in the country is the bandwagon at Radio City Music Hall, installed in 1933, which still moves the orchestra forward during Rockettes performances.) Each of the Schermerhorn chair wagons, independently powered by small electric motors, rolls—guided by side rails—from its place on the floor toward the front of the house.

Just in front of the stage, where the lowest-raked of the chair wagons will sit, the floor is actually an elevator whose area is just slightly larger than that of a chair wagon. One by one, the platforms can be lowered, via a spiral lift (a self-extending, screw-type device), to the basement below the audience area. They are then rolled off in reverse order from their rake, revealing a 5,770-square-foot open floor that can be used as a ballroom. And it became just that on Sept. 9, 2006, for the Schermerhorn's formal opening ceremony, when a performance by the symphony gave way to an evening of dancing on the floor. The changeover time was less than an hour.

"This is more than just your typical symphonic concert hall," says architect Randy S. Nale, of architect-of-record Earl Swensson Associates. "This convertible floor makes it a multiuse space, but it never compromises its primary purpose of being the home of a symphony orchestra." The design of the chair wagons, which was specified by the theaterdesign consultants Fisher Dachs Associates of New York City and fabricated by J.R. Clancy, a stage-rigging manufacturer in Syracuse, N.Y., is as complex as it is clever. The fact that each one weighs more than 30,000 pounds is not an accident. "We needed mass, and lots of it," says Scarbrough. "The purpose was to avoid creating a membrane in the floor of each unit that could resonate in response to the music and suck the low-frequency energy out of the room." Thus, each chair wagon has a heavy tubular metal frame, on top of which are layered a ¼-inch steel plate and hardwood floorboards.

Joe Mobilia, an associate principal at Fisher Dachs, says one major challenge was to move the massive load across the main floor without damaging it. "The chair wagons were moving across a polished floor that had to always look good, and wheels could cause ruts or dents in the floor," he explains. The solution was several rows of 6-inch-wide steel rollers on which the mass of each wagon would be more evenly distributed. Technicians at J.R. Clancy then devised the sprocket-andchain guide system, and they created a scaled mockup of a Schermerhorn chair wagon that was run over a wood surface for several thousand cycles to test for potential damage to the flooring.





FISHER DACHS ASSOCIATES

When all the "chair wagons"

in the convertible seating system are used, the hall can seat almost 2,000 people (opposite page). Stowing the seats reveals a 5,770-squarefoot floor (top).

A sectional drawing of a chair wagon (left), designed by Fisher Dachs Associates.

As the diagram above shows,

the wagons are stored by rolling them to the front of the hall, where they are lowered to a space under the floor. When it's time to put them back, they are lifted in reverse order of their rake (i.e., back to front) and rolled into place.



The Grand Tour

On their European tour, David Schwarz and Paul Scarbrough visited classic concert halls in five cities: Vienna, Berlin, Amsterdam, Barcelona, and Zurich. Back in the United States, they also dropped in on Boston Symphony Hall. "We listened to a concert in each of them," says project acoustician Scarbrough. "They were in quick enough succession that you could grasp the differences between them, as well as what they had in common that made them such great concert halls."

From each stop, Schwarz and Scarbrough drew inspiration for elements of the Schermerhorn's design:

- From Vienna's Musikvereinssaal: The hall's rich reverberance, sonic impact, and ample natural light.
- From Amsterdam's Concertgebouw: The permanent choral seating behind the orchestra and the reverberant characteristics.
- From Berlin's Konzerthaus and from Vienna's Konzerthaus: The gracious series of public spaces around each hall.
- From Zurich's Tonhalle: The dynamic impact of sound in a small hall.
- From Barcelona's Palau de la Música Catalana: The incredible natural light and the richness of the visual environment.
- From Boston Symphony Hall: The use of two side tiers to promote good balance between reverberance and clarity.

Dan Daley is a freelance writer based in Nashville, Tenn.

The design of the Schermerhorn (top left) draws deeply on the European tradition.

The Palau de la Música Catalana, Barcelona (top right). An Art Nouveau landmark built in 1905–08 in a style influenced by Antoni Gaudí, it impressed Schwarz and Scarbrough with its use of natural light.

Boston Symphony Hall (right) was a model for using two *side tiers to promote sonic* balance.

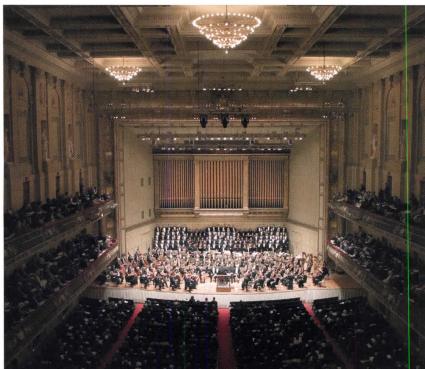
Just as the Concertgebouw

in Amsterdam (facing page, top) has permanent choral seating behind the orchestra, the Schermerhorn has a choral loft behind the stage.

Vienna's 1913 Konzerthaus

(facing page, bottom) was designed to allow the free flow of thousands of people around its three concert halls and inspired Schwarz and Scarbrough with its gracious public spaces.





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LIGHT & ARCHITECTURE design awards

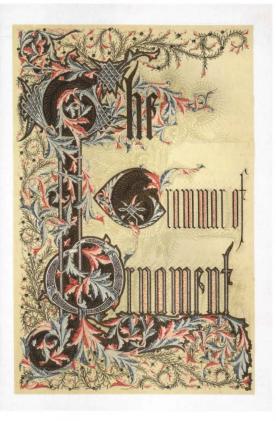
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CULTURE BOOKS **EXHIBITS EVENTS**







OBJECT LESSON

Architecture of Repose

Design axioms from the mid-1880s hold lessons for today

IN HIS MAGNIFICENT 1856 TREATISE,

The Grammar of Ornament, London architect Owen Jones lays out the interlocking roles of architecture and the decorative arts.

The first of his book's 37 axioms reads, "The decorative arts arise from and should be properly attendant upon architecture." The second declares, "Architecture is the material expression of the wants, the faculties, and the sentiments of the age in which it is created."

To achieve Jones's endgame-"repose"one has only to strive for "fitness, proportion, and harmony" through the proper use of

ornament. Jones' ideas, and the 600 handetched images accompanying them, rocked the Victorian world and helped wrest people of taste from the excesses of the age. With more than 2,350 patterns, the book inspired furnishings, architectural details, and textiles. With its frontispiece twining with vines and ferns, it clearly influenced William Morris and the Arts and Crafts movement as well as Louis Sullivan and Frank Lloyd Wright.

As an architect, Jones (1809-1874) is associated with iron buildings. But his real passion played out in the 1851 decoration of Joseph Paxton's Crystal Palace and in The Grammar, for which he culled motifs into chromolithographic images so intricate they took five craftsmen a year to complete.

The Digital Library for the Decorative Arts and Material Culture at the University of Wisconsin offers a chapter-by-chapter glimpse of motifs from such places as Egypt, ancient Greece, Pompeii, and Byzantium.

An emphasis on geometry, form, and function makes the book a pioneering work of modernism for its day. The Grammar was used to teach art, design, and mathematical principles from Oxford to Stanford for more than a century. Its enduring appeal may derive from Jones' fundamental belief that ornament represents humankind's highest ambition: "[T]o create, to stamp on this earth the impress of an individual mind."

The price of style: A rare early edition might run \$10,000 at an antiquarian bookseller such as Sotheran's in London. L'Aventurine published a paperback homage, which sells for \$15.61 at Amazon.com. A CD-ROM is available for \$40. LINDA HALES

OBJECT The Grammar of Ornament **ARTIST** Owen Jones

SOURCE \$10,000, early edition, www.sotherans.co.uk; \$15.61, paperback homage, www.amazon.com; free, online edition, digital.library.wisc.edu/1711.dl/DLDecArts WWW.ARCHITECTMAGAZINE.CON

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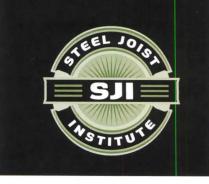
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CULTUREBOOKS

ARCHITECT FEBRUARY 2007

LOUIS I. KAHN: BEYOND TIME AND STYLE

A Life in Architecture

Carter Wiseman

Louis I. Kahn: Beyond Time and Style: A Life in Architecture By Carter Wiseman

This portrait of the brilliant, elusive architect is a fitting sequel to Nathaniel Kahn's documentary *My Architect: A Son's Journey*. Wiseman, the widely published writer and lecturer whose previous efforts include the insightful and intimate literary portrait *I.M. Pei: A Profile in American Architecture* as well as *Twentieth-Century American Architecture: The Buildings and Their Makers*, conducted more than 100 interviews to document his study of the man behind the Louis Kahn buildings—a poor immigrant with complex romantic relationships who rose to the apex of architecture and more than held his own among such monumental clients as Jonas Salk and Paul Mellon. W.W. Norton; \$48

Andrea Palladio's Villa Cornaro in Piombino Dese

Edited by Branko Mitrovic and Stephen R. Wassell

This limited-edition volume focuses on Villa Cornaro, one of Palladio's most important works, in which the architect developed the protruding pediment portico that became the signal feature of Palladian architecture across Europe and in the United States. The book, which is illustrated in double-gatefold drawings, includes the first major surveys since the 18th century, made with modern technology over a 10-day period in 2003. Essays explore the proportional system and the classical orders of the villa, the size of the foot measurement used by Palladio, the design of principal doors and staircases, and subsequent adaptations when Villa Cornaro was likely used as a Masonic lodge. By striving for an accurate survey, the scholars hope to shed new light on how Palladio achieved his stated goal of designing buildings so that "the parts will correspond to the whole and to each other." Acanthus Press; \$100

Bruno Mathsson: Architect and Designer

By Dag Widman, Karin Winter, and Nina Stritzler-Levine

A leading figure in Swedish modernism, Mathsson (1907–1988) designed sensuous furniture and environmentally sensitive buildings long before energy efficiency became design's new mantra. His special blend of ergonomics and aesthetics can be seen in the graceful woven chairs on the cover. The book serves as the catalog for a traveling exhibition, which will debut at the Bard Graduate Center in March and continue on to Seattle's Swedish Cultural Center in the summer. Yale University Press; \$60

Architecture Now! Vol. 2

By Philip Jodidio

A starstruck but handy sequel of new works from A to W (that's Allmann Sattler Wappner to Tod Williams Billie Tsien Architects). Taschen; \$12.99

The Archaeology of Tomorrow: Architecture and the Spirit of Place

By Travis Price; foreword by Wade Davis An argument for architecture beyond the material from a practitioner who has reached for environmental excellence and humanism for more than 30 years. Ten Speed Press; \$45

Carlo Scarpa Architecture and Design

Edited by Guido Beltramini and Italo Zannier; photographs by Gianantonio Battistella and Vaclav Sedy Rizzoli

To mark the centenary of Scarpa's birth, the authors provide a definitive catalog of this master of 20th century Italian modernism. More than 200 illustrations show all 58 structures designed by the "Frank Lloyd Wright of Italy," including the Olivetti showroom in Venice, the Castelvecchio Museum in Verona, and a range of glass designs. Rizzoli; \$65

The Eighth Wonder of the World By Leslie Epstein

A novel worth an architect's time if only for the controversial characterization of Amos Prince, a fictional Arizona architect who flees to Italy in the 1930s and wins a competition to design a monument to Mussolini. The author's fantastic architectural aspirations for the 500-story skyscraper Prince starts to build include a structure anchored by an asteroid and built of prefabricated units delivered by blimp. However bizarre, the design elements are far less unsettling than the currents of fascism and anti-Semitism that infuse a story of gargantuan design with human failings. Handsel Books; \$24.95





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Finalist, Best How-To Article, 2003

Winner, Best Subject-Related Series of Articles, 2001

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Finalist, Best Single Issue of a Magazine, 2001

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Winner, Best Department or Column, 1999

Finalist, Best Feature Article, 1999

CUSTOM HOME

Finalist, Best Department or Column, 2006

Winner, Best Department or Column, 1999

residential architect

Finalist, Best Single-Theme Issue, 2006

Finalist, Best Staff-Written Editorials, 2005

Finalist, Best Single-Theme Issue, 2004

Winner, Best Staff-Written Editorials, 2003

MULTIFAMILY EXECUTIVE Finalist, Best Feature Series, 2006

Finalist, Best Single-Theme Issue, 2005 Finalist, Best News Coverage, 2005

TOOLS OF THE TRADE

Finalist, Best How-To Article, 2005

Winner, Best Department or Column, 2003

Finalist, Best Staff-Written Editorials, 2001

AOUATICS INTERNATIONAL Finalist, Best News

Coverage, 2003

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Finalist, Best Single Issue of a Magazine, 2005

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CULTUREEXHIBITS



Young Chicago Chicago Art Institute Through April 29

Chicago's reputation as an incubator of fresh ideas is bolstered by this exhibition of digital and conceptual work gathered by Joseph Rosa, new curator of the newly renamed Department of Architecture and Design. Studio output from young architects, industrial designers, graphic artists, and fashion designers asserts Chicago's pivotal role on the national stage. Names to note include Qua'Virarch, UrbanLab, Clare Lyster Studio, 3D Design Studio, John Ronan Architect, Ross Wimer/SOM, Studio Blue, JNL Design, and Cat Chow. To appreciate the historical context of the contemporary talents, visitors may also want to view "Louis H. Sullivan: A System of Architectural Ornament Part I," on display at the institute through Feb. 18. *Above: Visitor Information Center, Chicago, by UrbanLab*.

BARTLESVILLE, OKLA.

Raymond Loewy: Designs for a Consumer Culture Price Tower Arts Center Through March 4 Five decades of streamlined industrial design provide a picture of design ingenuity at Frank Lloyd Wright's restored skyscraper on the Oklahoma prairie.

COLUMBUS, OHIO

Architecture Interruptus Wexner Center for the Arts Ohio State University Through April 15

The Church of Saint Pierre in Firminy, France, was designed in the 1960s by Le Corbusier with Jose Oubrerie. Only now has Oubrerie been able to bring the project to fruition. An exhibition and catalog convey the partnership in sketches, photos, drawings, and a new model.

HOLLYWOOD, CALIF.

Some Assembly Required: Contemporary Fabricated Houses Pacific Design Center February 28–May 13

If dreams of an Airstream trailer lurk in Steven Holl's shiny metal Turbulence House, a sunny day in Napa Valley must have inspired Michelle Kaufmann's Breezehouse. Six more forward-looking houses, some made from kits of parts, expose modularity at the edge.

LONG ISLAND CITY, N.Y.

Shin Banraisha: A Cultural Memory The Noguchi Museum Through April 1

Isamu Noguchi's "New Welcoming Space" for Tokyo's Keio University was designed in 1951–52 with Yoshio Taniguchi as a symbol of postwar regeneration. The room was dismantled in 2003 to make way for a new building. Artifacts, furniture, and architectural elements have been assembled at the Noguchi Museum. The museum hopes to generate awareness of the importance of preserving cultural heritage, including functional spaces that double as works of art.

LOS ANGELES

Skin + Bones: Parallel Practices in Fashion and Architecture The Museum of Contemporary Art Through March 5

Architectonic garments and buildings inspired by fabrics are only the starting point for a groundbreaking exhibition of 300 examples of avant-garde clothing and buildings by 46 designers. Architects include Shigeru Ban, Diller Scofidio + Renfro, Peter Eisenman, Foreign Office Architects, Gehry Partners, Zaha Hadid, Herzog + de Meuron, Jean Nouvel, Rem Koolhaas, and Bernard Tschumi.

MIAMI BEACH, FLA.

Modernism in American Silver: 20th Century Design Wolfsonian-Florida International University Through March 25

More than 200 works of American silver, made between 1925 and 2000, convey the rich aesthetics achieved in a timeless material. Small-scale masterpieces were designed by Eliel Saarinen, Robert Venturi, Michael Graves, and Richard Meier in this traveling exhibition organized by the Dallas Museum of Art.

MINNEAPOLIS

Streamline Design: The Essence of Speed Minneapolis Institute of Art Through September 28 The acquisition of a 1936 Tatra T87 automobile inspired this display of

automobile inspired this display of aerodynamicism in objects created by America's 20th century superstars: Norman Bel Geddes, Raymond Loewy, and Henry Dreyfuss. Also on view is the institute's newly completed expansion, by Michael Graves.

NEW HAVEN, CONN.

UN Studio: Evolution of Space Yale University School of Architecture February 12–May 4

The Amsterdam-based firm is best-known for the Erasmus Bridge in Rotterdam. This exhibition, created by the Deutsches Architektur Museum in Frankfurt, Germany, will include the firm's recently completed Mercedes-Benz Museum in Stuttgart, Germany. **ARCHITECT** FEBRUARY 2007

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NEW YORK

OMA in Beijing: China Central Television Headquarters Museum of Modern Art Through February 26

Dutch architects Rem Koolhaas and Ole Scheeren of OMA are contributing to China's urban genesis through a technologically advanced loop-shaped tower in central Beijing, which will be completed in time for the 2008 Olympics. Renderings and models at MoMA are intended to convey the iconic structure as "one of the most visionary undertakings in the history of modern architecture."

Design Life Now: National Design Triennial Cooper-Hewitt National Design Museum

Through July 29 For a third time, the Cooper-Hewitt has assembled a team of curators to assess contemporary design culture at the front lines. Leading artists and practitioners point the way forward in disciplines as diverse as architecture, animation, medicine, and robotics. Only the prosaic will be left behind.

Radical Lace & Subversive Knitting Museum of Arts & Design Through June 17

Rubber, lead, glass, and wire shelving transform an old technique into 40 miniatures, architectural interventions, and video installations.

James "Athenian" Stuart, 1713–1788, The Rediscovery of Antiquity The Bard Graduate Center Through February 11

Director and curator Susan Weber Soros sheds light on the English architect and designer behind *The Antiquities of Athens*, a highly influential sketchbook that defined Greece for 18th century Britons and inspired the development of neoclassicism. Original gouaches, rare editions, and interior designs by Stuart will travel to the Victoria and Albert Museum in London.

Louis Comfort Tiffany and Laurelton Hall—An Artist's Country Estate The Metropolitan Museum of Art Through May 20

The artist's utopian vision is revived in a recreation of his Long Island home, through surviving fragments, windows, objects, and photos.

PITTSBURGH

Gritty Brits: New London Architecture Heinz Architectural Center Through June 3

There is more to London architecture than

the stately balustrades of Buckingham Palace or the bold outlines of Norman Foster's Gherkin. In the so-called gritty East End, six emerging talents play off contemporary visual culture to define postindustrial, multicultural architecture on a more intimate scale.

PROVIDENCE, R.I

Urban America, 1930–1970 Rhode Island School of Design Museum of Art Through February 25 An exhibition of 30 prints, drawings, and

photographs by American artists conveys a dramatic urban transformation in Harlem, N.Y., Providence, and New Orleans.

RICHMOND, VA.

Growing Country, Growing Needs: Federal Architecture and Art Virginia Center for Architecture February 2–May 27

Robert A.M. Stern's new federal courthouse in Richmond sparked this exhibition of recent projects, including border stations and fine art, completed under the U.S. General Services Administration's Design Excellence Program.

AN FRANCISCO

Charles Sheeler: Across Media MH De Young Memorial Museum February 10–May 6

Manhattan circa 1920 and Ford's River Rouge Plant at its most prosperous are preserved in Sheeler's film, drawings, photographs, and other works in this traveling show.

ROTTERDAM, NETHERLANDS

Architecture of the Night: Luminous Buildings Netherlands Architecture Institute, Through May 6



SANTA MONICA, CALIF.

Strange New World: Art and Design from Tijuana Santa Monica Museum of Art Through April 21

Architectural proposals, digital art, music, and more create a portrait of Tijuana as a paradigm of the postmodern city, shaped by globalization, transnationalism, and a headlong, haphazard rush into the 21st century.

WASHINGTON, D.C.

All Horizons Quebec Design Embassy of Canada Through April 15

More than 100 recent works and prototypes by 15 industrial designers working in Quebec range from furniture and interactive fabrics to a bicycle frame in carbon fiber. The exhibition was organized by the UQAM Design Centre in Montreal and Apartment Zero in Washington.

Reinventing the Globe: Shakespeare for the 21st Century National Building Museum Through August 30

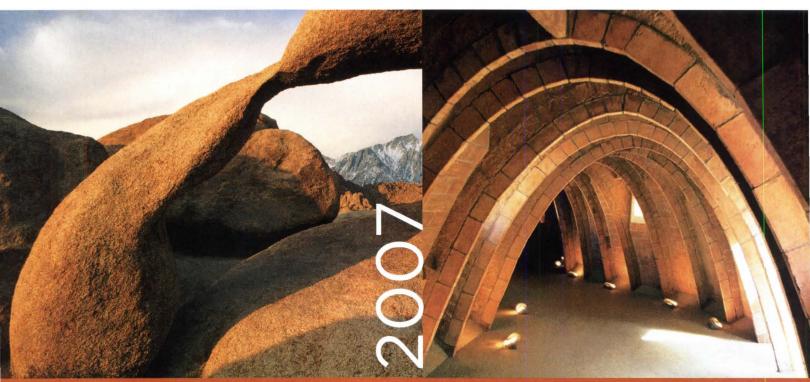
A team of designers tackles the 21st century question: If the Bard were alive today, what would his theater look like? The creative process is revealed in models, drawings, renderings and an actual set where performances will take place during a citywide Shakespeare festival. This exhibition traces Shakespeare theaters from the 16th century to the present, addressing how to present 400-year-old plays to modern audiences.

> A century of artificial light has transformed the built environment. This exhibition begins with the novel choreography of illumination staged for the debut of the Eiffel Tower at the 1889 Paris world's fair and progresses to the "light pollution" experienced in cities today. Architects must grapple with issues of energy efficiency along with safety and an awareness of how light changes biorhythms, pushing design decisions into the political realm. This exhibition relies on façades by Toyo Ito, Renzo Piano, and Jean Nouvel, among others, to provoke dialogue. Illuminated models, photographs, and collages create a work of art in the darkened gallery. Left: De Volharding, The Hague, by Jan W.E. Buys.

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• • GROWING BEYOND Green



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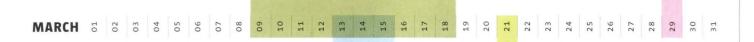
International Dialogues: Architecture and Climate Change THE ROYAL INSTITUTE OF BRITISH ARCHITECTS TRUST LONDON, FEBRUARY 6 AND 19

First in a series of programs highlighting the impact of climate change on the built environment, which contributes heavily to the planet's emissions of carbon dioxide. Kenyan environmentalist Wangara Maathai, the 2004 Nobel Peace Prize winner, will lead off, followed by Mike Davis, California urban theorist and author of Planet of Slums. www.riba.org

Building for the 21st Century: The Continuing Evolution of **Energy-Efficient Facilities at Wal-Mart** NATIONAL BUILDING MUSEUM

WASHINGTON, D.C., FEBRUARY 14 A program on Wal-Mart's progress with energy-efficient facilities by company vice president Charles Zimmerman. www.nbm.org

The Grass Ain't Greener: The Disenchantment of the American Suburb NATIONAL BUILDING MUSEUM WASHINGTON, D.C. FEBRUARY 14, 21, 28 Three films-American Beauty, Safe, and Poltergeist — offer views of the cul-de-sac as a model for residential bliss. www.nbm.org



The European Fine Art Fair MAASTRICHT, NETHERLANDS MARCH 9-18 Asian art, porcelain, and sculpture will be in abundance at the annual show and sale of extraordinary art. www.tefaf.com

Building Energy 2007 BOSTON, MARCH 13-15 The conference and trade show for renewable energy and green building professionals www.buildingenergy .nesea.org

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and retail products. www.uli-la.org /urbanmarketplace

Architectural History Now NEW YORK, MARCH 29

Cooper-Hewitt National Design Museum curator Matilda McQuaid convenes architects featured in "Design Life Now: National Design Triennial 2006" for a panel discussion. www.ndm.si.edu

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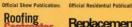
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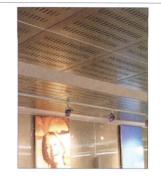
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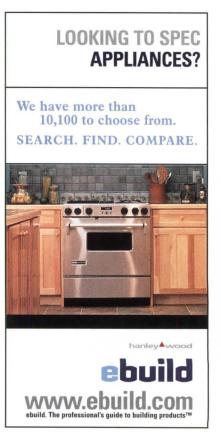


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How would you describe North Lawndale?

It's hard to tell you a little because there's a lot about North Lawndale. The population is roughly 41,000 and probably 95 percent or so African-American. Its peak population was 120,000 in the early 1960s. At that point, it was probably the second largest — if not the largest — African-American community in the country. Before that, it was the third largest Jewish community in the world.

Historically, it had a very, very large industrial base. All that's gone now. The major commercial strips — most of those streets are vestiges of their former selves. We interviewed longtime residents, and people will talk about the intensity of Roosevelt Road, with banks, insurance companies, department stores — it's all gone. But we're starting to see some [city incentives] along Roosevelt and more interest in doing development in emerging markets.

How can residents help revive the neighborhood?

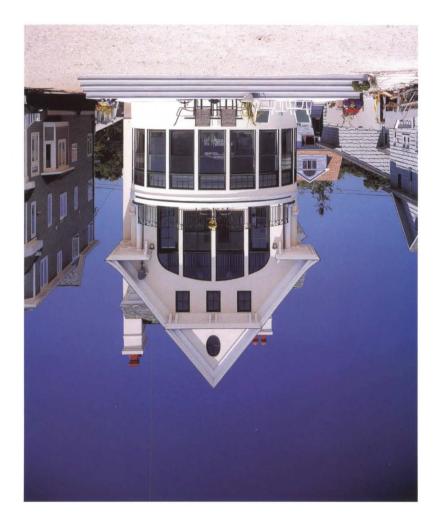
I think we have to get people who live in North Lawndale to feel invested, to be stewards of this incredible built environment. Lawndale has the largest concentration of graystones in the city. Graystones are to Chicago what brownstones are to New York, but we haven't really celebrated the graystone in Chicago.

What has been the response to the Historic Chicago Greystone Initiative, encouraging residents to buy and renovate graystones?

People innately knew there was something serious and interesting about the buildings. They just hadn't thought about it, for the most part. I've been astounded at the amount of support and recognition, the "Oh, yeah" factor. They really do get it.

What do you want to see in Lawndale 30 years from now? There was a design competition [the 2006 Burnham Prize Design Competition, held by the Chicago Architectural Club] to get architects pushing the envelope and thinking about what could happen in the future. Many entries that looked at housing development picked up on the idea of the graystone. I was very pleased with the kinds of things folks did. People who live in poor communities also are entitled to good design. I'd love to see good buildings, an aesthetically engaging place. ... [A] smart, clever, interesting place to live — and one that looks good.

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