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INTERVIEW

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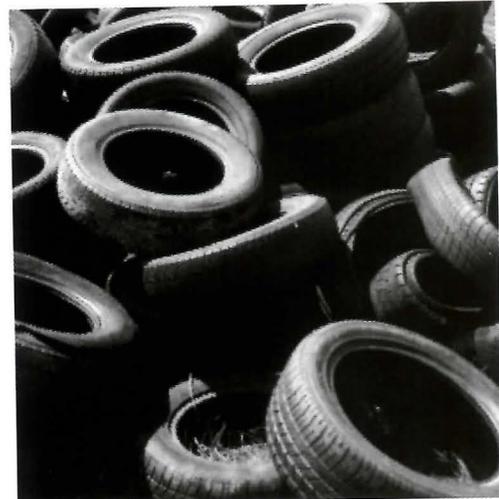
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Move Over, Zaha

Editorial

By Robert Ivy, FAIA

The awards celebration that accompanied the annual Accent on Architecture gala, sponsored by the American Architectural Foundation, brought a powerful trifecta of AIA awards this February: Vince Scully delivered a panegyric honoring the Vietnam Veterans Memorial—Homeric in its linguistic economy, unflinching, moving overall. Edward Larrabee Barnes, who received the Gold Medal posthumously, came vividly to life in the words of Harry Cobb and Toshiko Mori, who described both his wide-ranging contributions to design and to the built environment (think of the Crown Center in Kansas City or the Dallas Museum of Art, in addition to the Haystack Mountain School, in Maine) and his innate personal qualities. The third award came with a sense of urgency.

The AIA Firm of the Year Award recognizes an important shift in the practice of architecture. While in the past, and even today, the individual has made significant contributions to the built environment, the increasing complexity of contemporary society, coupled with growing demands for conversation and collaboration among design professionals, has brought the shared practice into the limelight. We are witnessing both “stars,” who garner the lion’s share of media attention, and “star firms,” who deserve wider appreciation.

Enter Leers Weinzapfel, a firm that is bridging the gap. Since its founding in 1982, this Boston-based partnership has tackled the most difficult kinds of projects, weaving architecture throughout the infrastructure of the team’s chosen city and beyond, with uncommon clarity and awareness. In projects as complex as the Tobin Bridge Administration Building, a structure that is literally suspended from a bridge approximately 160 feet off the ground, they have grafted their work into, on, around, and through the social character and physical characteristics that surround each project.

As a result, we think of a Leers Weinzapfel project as a distinctive Modernist addition “in relation” to its surroundings, such as the combined Jewish Philanthropies building, grafted into the fabric of downtown Boston, or University Pavilion at the University of Cincinnati, which forms a part of a growing collection of contemporary structures. Leers Weinzapfel buildings rarely shout for the individual spotlight, instead emitting a positive expression of their own, within the larger canvas.

The firm has brought distinction to courthouses, such as the United States Courthouses in Orlando, Florida, or in Worcester, Massachusetts—a challenging building type, made all the more difficult by the multitude of people affected by it. The list of clients for any courthouse is daunting: the commissioning authority (the federal government or a municipal authority), the occupants of the building (the judges, who sometimes act with supererogatory authority),

the public (who may be facing the greatest threat, or tragedy, or hope, of their lives), and the community that surrounds them. Each of the firm’s courthouses reflects its users needs, but also shines out above them—something that real architecture can do.

And what is more difficult than adding onto a legacy project, such as it faced at the Harvard University Science Center, originally designed by Josep Luis Sert? Yet the expansion project it conceived and executed complements the original with glowing assurance, all the while interlinking a daunting scientific program, a further example of the firm’s high skill in synthesizing and integrating different periods and people.

As architects, the founding partners established a practice that reflected a collaborative spirit, relying on a partner-level dialogue that informed each work. As their numbers and the commissions have increased, and their partners have grown to include architects Joe Pryse and Josiah Stephenson, the model has held. As teachers, the founding principals have continually reached out to new generations of architects, who then enrich their own practices.

Their design process is noteworthy for combining active listening, synthesis, and what could be characterized as a quiet persistence to achieve results in the most trying circumstances. When expediency might dictate an easier route, they repeatedly return to design excellence on the client’s behalf.

Finally, one key fact, as yet unmentioned, demands noting: Andrea Leers and Jane Weinzapfel are women. Their elevation as founding principals and inclusion on the wall of the American Institute of Architects on the occasion of its sesquicentennial marks the first time in the organization’s first century and a half that a woman, or a woman-owned firm, has had its name inscribed in granite. Their nomination and inclusion is a historic moment, and a signal.

The award goes not to an individual, though our architectural universe has its share of soloists. It goes to a partnership, remarkable for its commitment to excellence and to the people and communities that it serves. The combined practice made it on its own merits; we underscore and cheer its selection. Having cleared the path, there is adequate room on the wall of honor for all architects’ contributions for the years to come. We congratulate and celebrate the selection of Leers Weinzapfel, the 2007 Firm of the Year. Move over, Zaha Hadid!

Letters

All for small

I salute you for inaugurating your new serial feature on small projects ["Bantam Weight Champions," February 2007, page 74]. My first project, a small restaurant with an \$11,000 construction budget, was published in ARCHITECTURAL RECORD in 1979 and launched my career. Over the past 30 years, we have designed large and small projects and find joy in doing both.

—James Oleg Kruhly, FAIA
Philadelphia

Stop the show

I was most irritated by the propagandist positivism of the news item "In Beirut, the show pauses, then goes on" [December 2006, page 24]. In the article, I heard echoes of real estate developer Solidere's own publications. I expected the piece to have at least some critical comment on the work being realized in the city by the "design-luminaries." Actually, what I really wanted to read about was how the work is being packaged, interpreted, and built, not to mention all the controversy surrounding Solidere's competitions and commissions. But what irritated me the most was the repetition of empty clichés that befit a politician on a reelection campaign rather than a critical commentary on the challenges of construction in Beirut.

—Nadim Bayeh
Beirut

Brooklyn challenge

Mr. Gehry's recent work gives me pause [Record News, "Green light for Gehry in Brooklyn," February 2007, page 30]. His approach to his projects in the past decade or so has been characterized by loosely wrapping a programmatic massing with a composition of complex curved planar surfaces. Some of this work, such as the Bilbao museum, prevails convinc-

ingly despite its nature as appliqué. But when imposed on the recent IAC/InterActiveCorp headquarters in Manhattan, at least as seen from the site limits, the warped surfaces—which now must achieve closure and deal with a grid of planar glazing—simply appear forced. "Forced" is an adjective that also seems apropos to "Fred and Ginger" and the work at MIT, and leads one to fear that the starchitect is out of his depth given the massive scale and urbanistic issues at play in Brooklyn.

—Kenneth M. Moffett, AIA
Knoxville, Tenn.

The tie that binds

The review of the *Skin + Bones* exhibition at the Museum of Contemporary Art, Los Angeles, "Dressing up Fashion Dressing Down Architecture" [January 2007, page 47] was one of the most upsetting articles I have read lately. It was upsetting not only because I thought the exhibition was absolutely amazing, inspiring, and well presented, but because the writer, Russell Fortmeyer, brings the opinion of "many good consumers" who think that if you put architecture next to product design, furniture design, and fashion, it is actually degrading the profession. The arrogance of thinking that architecture is better off standing by itself in order to "strike a serious tone" shows how little Fortmeyer understands design. Good design is open to other disciplines. More than that, good design is influenced by its surroundings, including our culture, thereby enabling people to relate to and appreciate it. The terms "shelter," "geometry," and "creative process," which Fortmeyer thinks to be so generic are the basic terms in both professions that were so beautifully used as threads to sew architec-

ture and fashion together.

—Maya Bavineau
Los Angeles

Big on mini

When I saw the cover line "Residential Section: Mini Houses" on the January 2007 issue, I was excited to read on. I was disappointed, however, to discover that the section was not about real houses, but rather play houses. One of the buildings was not even a house, but a pool pavilion. There is a vast, unmet need for well-designed modest homes in America. Are there architects facing this daunting challenge? Certainly. Now let's see ARCHITECTURAL RECORD pick up the torch and devote more of its pages to highlighting their inspiring work.

—Ross Chapin, AIA
Langley, Wash.

Titillation is not enough

The distributed nervous system and actuators that architect Michael Fox devised for his installation [Record News, "Space invaders: Los Angeles installation inflates, titillates," February 2007, page 25] can be understood as a piece of electronic art, but the implications are larger and more relevant to architects than your reporting lets on. An increasing number of architects are working with those embedded control technologies, aiming at collaborations in the new field of actively responsive architecture. Please investigate and report on those ramifications, rather than leaving us with the titillation.

A prescient and valuable connection to be made in that same issue of ARCHITECTURAL RECORD would have involved questioning Diller Scofidio + Renfro about their long record of working with similar technologies ["Rain Screen Facades Are More Than Skin Deep," February 2007, page 139]. Did they

consider pressing that technology into service in the building technologies of their new Institute of Contemporary Art in Boston? Have their engineers for the building, Simpson, Gumpertz & Hager, ever incorporated similar technologies? Could a rain shield facade system with compartmentalized cavities benefit from the intelligent pneumatic technologies being pioneered by Michael Fox?

As a magazine with an otherwise probing and ethical approach to the responsibilities architecture has to develop, I expect ARCHITECTURAL RECORD, with its Continuing Education articles, to turn my attention toward important future technologies.

—Anders Nereim
Chicago

Project U.F.O.

The cover of Record's January 2007 issue claims that "Libeskind Lands in Downtown Denver." At least a hundred U.S. cities should be wary of a similar airborne invasion. Given our present state of declining resources, it is surprising that such willful and wasteful architecture continues to receive favorable review.

—James A. Gresham, FAIA
Tucson

Where were they?

The comment "where was the Paul Rudolph Foundation when it mattered?" [Record News online, January 2007] is right on the money. Where were they? Will the Micheals House become the Penn Station of suburban Connecticut? Will this ultimately save all those houses by Breuer, Noyes, Johansson, et al?

—Peter Forbes, FAIA
Florence, Italy

Please send your letters to
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Record News

Highlights

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p.40 Neutra on the block

Future Shock: Hadid and Fukasawa design homes of tomorrow

A couple of days in Frankfurt, Germany, checking out the latest fabric designs at Heimtextil, followed by a short cruise up the Rhine to witness imm, an immense furniture fair in Cologne, then jetting off to Paris for home-decorating tips at Maison & Objet—such is the pilgrimage of trend spotters and furniture fanatics each winter as a new year of design shows gets under way.

Apart from its sheer size, imm Cologne stands out for its unique displays—including its popular Ideal House exhibition, now in its fifth year, which asks two different, and usually contrasting, designers to present their ideas for home furnishings of the future. This year's theme of "The Architect and the Poet" had Zaha Hadid facing off against designer Naoto Fukasawa—the first time that a Pritzker Prize-winning architect has participated in the show.

Hadid, though, is no stranger to furniture fairs. Her furniture and lighting designs for Sawaya & Moroni, Established & Sons, and others are frequently the highlights of shows in Milan and London. Not surprisingly, many of these products were featured in her concept design for future living at imm, which she saw as an opportunity to "experiment on a smaller, more temporal scale."

Within a red, 14,125-cubic-foot box that the exhibition's organizers provide as the basic structure, Hadid created an open, dynamic volume by scooping out large chunks of the cube's faces (above). Using her trademark approach of morphing spaces, Hadid seamlessly merged furniture with its surroundings. Chandeliers drip from the ceiling while bench seating grows from the floor and a table rises like a rock formation in the center of it all. Warped walls embrace the undu-



lating ceiling to form a stairway that leads to a roofless second level reserved for a not-so-private sleeping area. Hadid has transformed a static cube into a bundle of energy.

Taking the opposite approach, Fukasawa's Ideal House emphasizes the static nature of the cube to present a quiet, contemplative space. Perhaps best known for his work as

creative director for the Japanese line Muji, Fukasawa created a pristine white box containing precise arrangements of his own Minimalist furniture.

Rather than inserting a second level, the double-height volume is exploited so that the massive, straight walls overwhelm the objects inside, leaving visitors to feel that they've somehow passed through

the looking glass into an alternate world—a vision of future living that includes increasingly empty spaces that are indistinguishable from one another. Some may find this version of the future bleak, but for others it represents the ideal, neutral background onto which they can project their own personalities. *Josephine Minutillo*

PHOTOGRAPHY: © ROLAND HALBE

Record News

Desert Island Oasis: Gehry, Nouvel, Ando, and Hadid join Abu Dhabi's big cultural gambit



For architecture lovers, its name seems especially apt: Saadiyat, the "island of happiness." In roughly a decade, this undeveloped piece of land in Abu Dhabi will be home to an unprecedented concentration of buildings by Frank Gehry, Jean Nouvel, Tadao Ando, and Zaha Hadid.

The Saadiyat Cultural District is one of six neighborhoods planned for a harbor island in the capital city of the United Arab Emirates. Spearheaded by Abu Dhabi's Tourism Development and Investment Company, the \$27 billion project is intended to increase tourism to this oil-rich Persian Gulf state. It is already being touted as the world's largest cultural development.

Although parts of the scheme became public last year, its full scope was unveiled in January. As envisioned in a master plan created by Gensler and Skidmore, Owings & Merrill, with assistance from the Guggenheim Foundation, the Cultural District will contain four museums, a performance center, and 19 biennale-style pavilions—all linked by a canal.

"It's not unlike an early-20th-century world's fair, where the buildings are temporary and create a frisson of world culture, appealing to sightseers, but ultimately leaving shells of architectural ideas," notes Mimi Zeiger, author of *New Museums*.

To anchor the district's northern end, Gehry designed a branch of the Guggenheim. Nearly 30 percent larger than his iconic Bilbao building, it is a jumble of twisted stone-clad boxes, slanted square towers, and cones. Ando's museum, which is dedicated to the region's maritime history, takes the form of a rectangular box

whose underside is scalloped into a 46-foot-high arch over the harbor. It marks the canal's far end.

Elsewhere, Hadid created a performing arts center that resembles a stack of veined, fused, and overlapping leaves, sculpted in metal and glass. The biennale pavilions, to be designed by up-and-coming architects, will be situated between it and



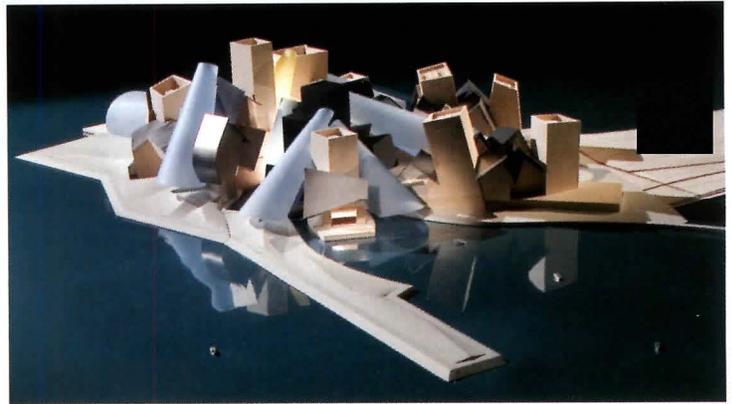
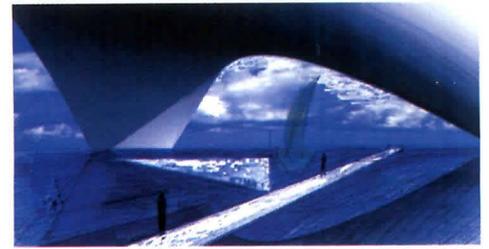
Hadid's performing arts center includes a concert hall (above). An umbrellalike roof shelters Nouvel's classical museum (top left).

an as-yet undesigned institution dedicated to Abu Dhabi's heritage.

Nouvel designed a "classical museum," devoted to art of the past. It comprises a 590-foot-wide, 80-foot-high, umbrellalike roof sheltering a cluster of one-room buildings. The French government is negotiating a \$900 million deal that would allow the United Arab Emirates to use the Louvre's name for this museum and stock it with art on loan, but the agreement has sparked controversy in France.

Given the uncertainty about individual elements, a timetable for the entire project has yet to be set. Whether or not Abu Dhabi succeeds in becoming a must-visit destination for those on a pilgrimage to see great art and architecture also remains to be seen. As Scott Tilden, editor of *Architecture for Art* (2004), observes, "The strength of the district as a cultural asset will be secondarily the architecture and primarily the quality of the collections." *Robert Such*

Ando's maritime museum forms an arch over the Saadiyat's harbor (right), while a Guggenheim museum designed by Gehry presents a jumble of towers (below).



Krens shares his inside view on Saadiyat

Thomas Krens, director of the Guggenheim Foundation, played an important role in envisioning Saadiyat Island's Cultural District after Abu Dhabi's Tourism Development and Investment Company sought his assistance in 2005. RECORD's news editor, James Murdock, spoke with him to learn more.

RECORD: What's your sense about why Abu Dhabi is doing this?

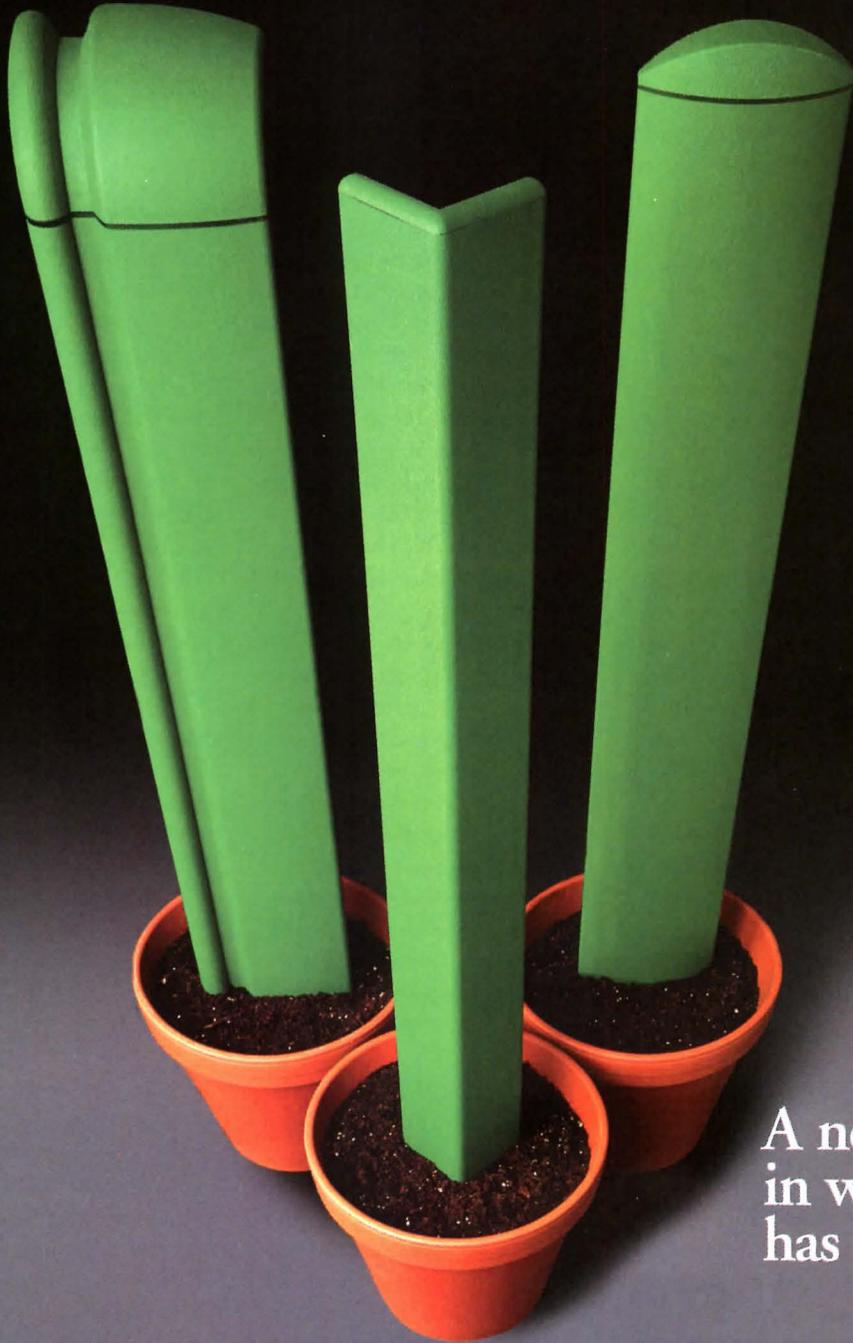
KRENS: Abu Dhabi can pump oil at present rates and their reserves will last until 2146. Let's assume that other, alternative-energy sources replace oil sometime, but probably not soon. Assuming some stability prevails in that part of the world, this country is destined to be wealthy beyond almost any conceivable imagination for a very long time. They can basically do what they want—and they are interested in education, they're interested in culture.

RECORD: Gehry, Nouvel, and Hadid's designs refer to an Islamic tradition of architecture. Was that a guideline?

KRENS: This is not about exporting European culture. It's an opportunity to make a different kind of a comment or statement in the Middle East. The Middle East is an obvious place for this, let's call it "alternative diplomacy." To the degree that you don't want to just come and put in a shopping mall, or the Empire State Building, or some kind of bizarre architectural piece, what you want to do is encourage artists and architects to think and develop their vocabularies with regional and local references. That's what they did rather spectacularly.

RECORD: You've said that the Guggenheim's challenge is to look to the next generation of museums. How does this project reflect that?

KRENS: It's a Western conceit to think that contemporary culture is a province of the North Atlantic and it's an unsustainable conceit. Now, does that mean building more museums? I don't know. But it probably means that if you don't think systematically about dealing with these kinds of cultural forces that what you risk is irrelevance. All I can say is that this is not about doing "Bilbao 2." Bilbao is a creature and product of the early 1990s. The whole point here is to go beyond that and to think about what institutions will look like in the future and how will they be shaped. You could do worse than Frank Gehry, Jean Nouvel, Zaha Hadid, and Tadao Ando for a beginning.



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Architecture profession slowly gains diversity

The complexion of America's architects has been a subject of introspection and discussion since at least 1968, when Whitney Young, Jr., president of the National Urban League, chastised attendees at the AIA's national convention for the scarcity of African-American and women practitioners.

That dialogue finally appears to be producing results. Kate Schwennsen, FAIA, the AIA's second female president, just concluded her term; current president RK Stewart, FAIA, has expressed a fundamental commitment to expanding diversity; and Marshall Purnell, FAIA, will serve as the association's first African-American president in 2008. Increases in diversity are not limited to the AIA's leadership, but there have been few comprehensive studies. The research that does exist suggests a mixed record of success—particularly when it comes to licensure.

According to the AIA's 2006 firm survey, women compose 26 percent of all architecture staffs, up from 20 percent in 1999. There are also more people of color, whose representation

grew 7 percentage points, to 16 percent. But these gains have not benefited all groups equally. Although the AIA's survey did not track specific races, other indicators suggest that African-Americans, in particular, continue to be underrepresented.

Dennis Mann, codirector of the Directory of African-American Architects, says that his directory currently includes 1,578 licensed African-American architects. That figure accounts for 1.5 percent of all licensed professionals in the nation, a percentage virtually unchanged since Young's powerful speech.

"There are approximately 1,200 African-Americans in a professional degree architecture program in any one year. That hasn't changed much," Mann observes. By comparison, both he and Steven Lewis, president-elect of the National Organization of Minority Architects, say that anecdotal evidence indicates the number of Asian-American and East Indian students is on the rise.

The composition of architecture schools is a good predictor for how the profession as a whole will

look in 20 years. The National Architectural Accrediting Board tracks some racial groups as well as the number of women, but the law firm Holland & Knight, who surveyed the profession as a whole in 2005, described these data as unreliable—making it difficult to draw any conclusions. Meanwhile, there is no definitive study of architecture practice among Hispanics, America's fastest-growing group.

One area that has been studied in some depth is licensure. Holland & Knight found that while 69 percent of white respondents said they were licensed or registered, only 45 to 48 percent of all other races said the same thing. A similar imbalance remains between men and women: Whereas 73 percent of male respondents said they were licensed or registered, only 45 percent of female respondents were.

Although people disagree about the importance of licensure, many observers side with Ted Landsmark, president of the Boston Architectural College, who stresses that obtaining a license sets in motion a domino effect to increase diversity. "If ever architects are to be perceived as leaders in the profession and rise to a place that a Marshall Purnell has achieved, it is because they are licensed practitioners with private,

corporate, and government clients," he explains. "Without that leadership, then there aren't the role models who will attract other diverse people into the profession."

Curtis J. Moody, FAIA, whose firm Moody/Nolan is the largest African-American-owned firm in the U.S., believes that a lack of current role models is one explanation for the underrepresentation of licensed African-American architects. "If you're the lone African-American in Harrisburg, Pennsylvania, you're less likely to be mentored by an African-American who's gone through it."

For women, the obstacles to achieving licensure are different. Jane Weinzapfel, FAIA, of Leers Weinzapfel Associates Architects, in Boston [AIA 2007 Firm Award winner; RECORD, January 2007, page 20], notes that child rearing can present a roadblock. "Our mechanisms for licensure need to acknowledge that there can be a collision with life events," she says.

For his part, Landsmark says that recognizing all forms of diversity is crucial for architecture's ongoing viability. "A profession that continues to shrink in relation to the size and emerging diversity of the client base will result in a niche that has little relevance to the major environmental issues that lie ahead," he observes. *David Sokol*

Design symposia focus on African-Americans

African-Americans are underrepresented among the ranks of architects in the United States today. Figuring out why that's the case—against a backdrop of nagging questions about race and housing, exposed by Hurricane Katrina—is the task of three, first-of-their-kind symposia beginning this month.

"Unspoken Borders: Perspectives on Race in Design," which the University of Pennsylvania, in Philadelphia, presents from March 30 to 31, promises to be the most comprehensive. It will supplement panel discussions with off-campus tours, including one to a controver-



Robert Taylor

sial luxury condominium and big-box retail development in Cramer Hill, an African-American and Latino section of nearby Camden, New Jersey.

"People need to see what's going on out there," says Sherry Taylor, chair of the

school's Black Student Alliance, which organized the symposium.

African-American neighborhoods will also be the subject of Harvard University's "Forced Perspective: Widening the Frame Through Which the Profession Views Itself." This event, on April 20, will pay close attention to New Orleans and the sluggish pace of rebuilding.

"We can no longer depend on the government to be our knight in shining armor," says Steven Lewis, Harvard's Loeb Fellow and the event's director. In addition to examining New Orleans, Lewis also hopes to draw more attention to black builders' historically unsung roles. "Our handprints are everywhere, but our signature is invisible," he says.

"WE HAVE TO ASK OURSELVES IF THERE'S HIDDEN OR IMPLIED RACISM."

Blame for this invisibility could lie with architecture schools, which fail to attract enough people of color: That's the view of Mark Jarzombek, who is cohosting "The Black Architect's Journey," in Boston, at the Massachusetts

Institute of Technology, from March 16 to 17. MIT holds the distinction of having graduated Robert Taylor, the first African-American to earn an architecture degree, in 1880. This makes the campus an apt setting for a discussion of race and design, Jarzombek says, but the school's record of diversity since its early days has been mixed.

"Why are these students going to some places and not others?" asks Jarzombek, who teaches architecture at M.I.T. "We have to ask ourselves if there's hidden or implied racism." This will no doubt be food for thought at all three events. *C.J. Hughes*

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Record News

AIA New Orleans Chapter names a dozen Design Award winners from largest-ever applicant pool

Design is alive in well in the struggling Gulf region. That much is clear judging from the 12 winners of the American Institute of Architects New Orleans Chapter's 2007 Design Awards. The honors were bestowed in late January at a ceremony whose theme, "Good Design is Good Business," highlighted architecture's role in the area's recovery.

This year's competition attracted more than 70 entries: the most in the chapter's 97-year history and four times the number submitted for 2006. Winning designs included both complete and in-progress work, with building types ranging from historic preservation and housing to schools and urban design schemes. The unique, sometimes daring projects repre-



Eskew+Dumez+Ripple's "wave wall" (left) is composed of 122 pivoting aluminum tubes arrayed across the LIGO Science Education Center, in Livingston, Louisiana. Wayne Troyer Architect won a Merit Award for its own studio, inside a converted New Orleans warehouse (below left).

sent a cross section of the region's design culture, which is more diverse than many outsiders realize.

"This is a great indicator for the city's redevelopment," says Melissa Urcan, executive director of the New Orleans chapter. "As the recovery continues, there's going to be more and more great work."

Eskew+Dumez+Ripple took home three honors, including a Merit Award for the Magazine Street Apartments in New Orleans, which features facades made of multi-shaped, staggered cubes. It also received recognition for the "wave wall," 122 pivoting aluminum tubes arrayed across the southern elevation of the LIGO Science Education Center, in Livingston, Louisiana.

LIGO's own scientists and artists also contributed to this design.

Wayne Troyer Architect, which earned four honors, was cited for its hip renovation of a warehouse to create new studio space for itself in New Orleans. And its Rice Mill Lofts, an industrial-to-residential, adaptive-reuse project aiming for LEED Platinum certification, won a merit award.

Perez, APC was cited for the residential conversion of 1231 Decatur, a Colonial-style building in New Orleans's French Quarter. That firm also received honors for its Navigation Canal Park scheme, a proposal to create undulating parkland along one of New Orleans's levees. *Sam Lubell*

Funds for Gulf Coast housing questioned

With the Federal Emergency Management Agency (FEMA) set to begin distributing \$400 million for semipermanent housing in states ravaged by Hurricane Katrina, controversy is brewing over how these funds are being apportioned.

FEMA announced in December that two projects in Mississippi would receive up to \$280 million, while Louisiana efforts would get a maximum of \$75 million. The agency was due to receive final plans on February 20. But Louisiana officials contend that their state got the short shrift. They point to a FEMA report documenting roughly 64,000 Louisiana residents and around 36,000 Mississippi residents still living in government-issued trailers as of last August. Calling the funds dispersal "upside down decision

making," U.S. Senator Mary Landrieu (D-La.) is considering whether or not to launch an investigation. She and others question the architectural merit of Mississippi's plans.

The FEMA Alternative Housing Pilot Program, created last fall by congressional appropriation, encourages new approaches toward "context sensitive" temporary housing to replace the current trailers. Selected from a field of nearly 30 entries, Louisiana's Cypress Cottage Partners Project was awarded \$75 million for the so-called "Katrina Cottage." First developed by Marianne Cusato, with future models by architects including Andr s Duany, the hurricane-resistant structures come in four reconfigurable varieties: two Shotgun homes, one Creole Cottage, and

one Acadian-style home.

Mississippi's top entries, the Mississippi Cottage and the Park Model, were developed during the state's Renewal Forum. Although both recall the area's Raised Cottage vernacular, they are similar in size and shape to FEMA's current trailers.

"If we're looking for alternatives then we find it very upsetting that the bulk of money went to a project that in FEMA's own words is very similar to a trailer," says Jeff Hebert, the Louisiana Recovery Authority's deputy director of planning.

FEMA could not be reached for comment, but Gil Jamieson, the agency's deputy director for Gulf Coast recovery, has said that funding was based on merit. "Had we strictly stayed with the competitive bid process, that money would have all gone to one state," Jamieson told The Associated Press.

"Mississippi had ... the most competitive housing proposals."

Mississippi is also receiving nearly \$6 million for Green Mobile structures that consume less electricity for heating and cooling. Projects in Alabama and Texas, meanwhile, will each receive up to \$16 million; no entries from Florida made the cut.

Landrieu, who chairs a Senate committee that oversees FEMA, asked the agency for a more precise explanation of how it reached its decisions. She has yet to receive a response, a spokesperson says.

It's unclear if an investigation would halt the funds distribution. If current plans move forward, Louisiana officials anticipate rolling out 500 to 700 units within three to five months. Mississippi aims for between 5,000 and 7,000 units beginning in June. *S.L.*

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Record News

The Power Broker reconsidered: Moses's legacy gets a fresh look in New York

Nearly 40 years after he was forced from power, Robert Moses still defines the maximum limits an urban planner's influence may reach. As cities struggle to update infrastructure and attract long-term investment in a climate of political torpor, exhibitions and forums across



New York City this spring invite reassessment of Moses's legacy.

A symposium at the Museum of the City of New York on February

1 set the tone for these events by bringing together development experts to discuss what the current generation of planners might learn from Moses's "iron will and financial opportunism," as Dan Doctoroff, New York's deputy mayor, termed it. Although they differed in their view of Moses's impact on the city, panelists concurred that he created roads, parks, and apartments at a time when public money was easier to grab—and public misgivings were easier to ignore.

Doctoroff, who had led the city's failed bid for the 2012 Summer Olympics, took a few swipes at state lawmakers, whom he blamed for confounding big vision today. Sounding a bit like Moses himself, he drew laughs by explaining "Doctoroff's Law," an equation that multiplies the degree of difficulty in accomplishing a project by the number of necessary state approvals. But even Doctoroff



The Panorama of the City of New York (left), which Moses commissioned for the 1964 World's Fair, reopens this spring after a rehab at the Queens Museum of Art. Moses studies an unbuilt highway in 1939 (below).

conceded that post-Moses legislation requiring citizen review of major city projects has been beneficial. "In every case, the process has made our plans better," he said.

Majora Carter, who heads the grassroots group Sustainable South Bronx, challenged the audience to go beyond letting citizens simply review plans and instead let them

initiate plans of their own. "The rebirth of communities where big projects didn't interfere with the organic process of regeneration is already big—and we can all be part of it," Carter explained. "The lesson from Moses is that these communities are smarter, kinder, more rational, and truly sustainable ones." Alec Appelbaum

Moses retrospectives and symposia abound

Remaking the Metropolis is on view at the Museum of the City of New York through May 28. This exhibition explores how Robert Moses created New York City's highway network—and helped the city better its standing on the global stage. *The Road to Recreation*, at the Queens Museum of Art through May 27, documents the relationship between Moses's roads and public spaces such as parks. Columbia University is presenting an exhibition titled *Slum Clearance and the Superblock Solution*, through April 24. The school is also hosting a public symposium, "Robert Moses: New Perspectives on the Master Builder," featuring two dozen scholars, on March 2 and 3. A.A.

Mayor Bloomberg creates sustainability office to manage New York's long-term growth

New York is often described as a city of 8 million stories. But give it a few decades and this could be 9 million, according to a recent report commissioned by Mayor Michael Bloomberg. Managing population growth won't be easy, so Bloomberg created a new department called the Long-Term Planning and Sustainability Office. It is due to release preliminary guidelines this month.

Dubbed "PlaNYC," the effort will address critical issues including housing, energy, and global climate change. New York is not alone in launching such an ambitious plan—London and other cities are already working on similar schemes—but this represents the first detailed, long-range planning initiative in its history.

"New York has mostly been putting out fires for the past third of a

century," observes Kenneth Jackson, a history professor at Columbia University. "[It] has not had the luxury or the wisdom to think in a serious way about the future."

The consequences of unmanaged growth are now evident. This much was clear in a report compiled by the mayor's Sustainability Advisory Board, a forerunner to the new planning office. It found that New York's asthma hospitalization rates are double the national average; an area twice the size of Central Park is severely polluted; and that raw sewage regularly overflows into the city's waterways.

But with the city finally on a sound financial footing, the timing was right to tackle these problems, and its future. "The city is doing well," explains Robert Yaro, a member of the mayor's advisory board

and president of the Regional Plan Association. "This plan is about managing success."

If New York is to be livable by the year 2030, when the board predicts its population will hit 9 million, the city will need 250,000 new housing units. It will also need to overhaul water and transportation infrastructures—which will be more than a century old—and build new power plants. As if these tasks weren't enough, it could be facing a 2-degree-Fahrenheit rise in average temperatures, courtesy of global warming. The advisory board therefore called for New York to reduce its greenhouse gas emissions by 30 percent.

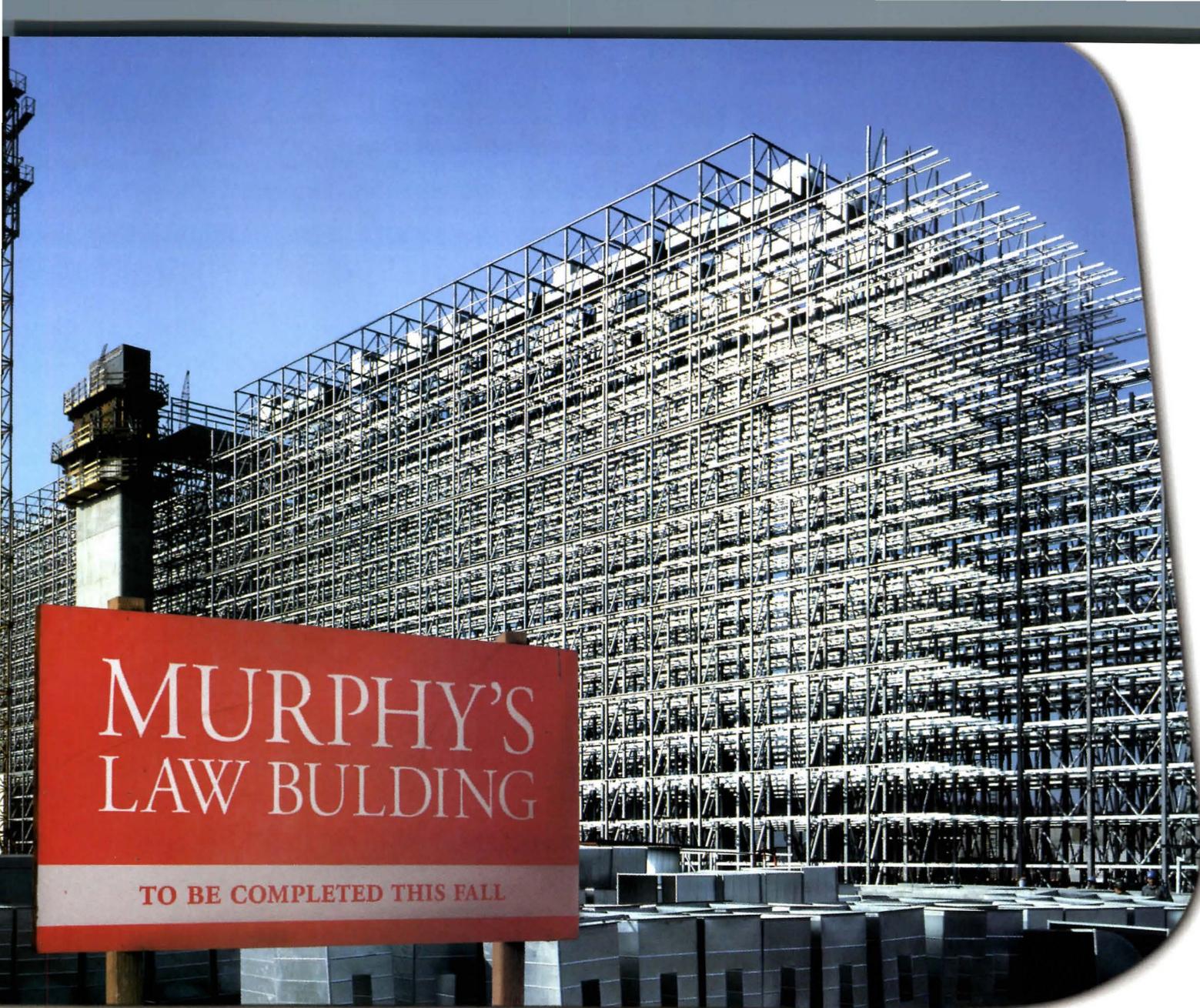
Exactly how the city will achieve these goals, and with what money, is the subject of guidelines that the new planning office is issuing this

month. Its recommendations are based on meetings held with community groups in all five boroughs.

"This is a very laudable effort," says Ernest Hutton, Assoc. AIA, cochair of New York New Visions, which helped coordinate the meetings. "Other mayors have just thrown up their hands and said New York's too big to do that."

Hutton adds that other administrations worked in the shadow of New York's ultimate power broker, Robert Moses. The new outreach efforts represent an attempt to counter his unilateral approach to urban planning. Whether or not they succeed, of course, remains to be seen.

"As Moses himself recognized," Jackson observes, "at the end of the day, there's no such thing as unanimity, and someone has to make a decision." Kevin Lerner



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Record News

Dion Neutra selling his firm's last surviving commercial building—with strings attached

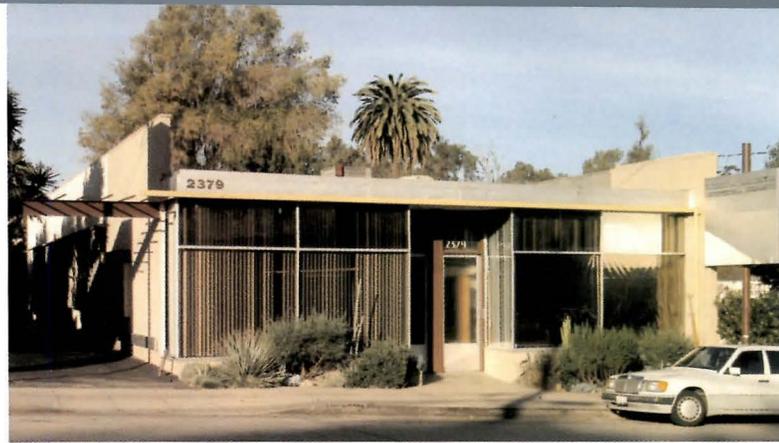
Message to Brad Pitt: If you're reading this, Dion Neutra, AIA, has a business proposition for you.

Neutra, son of the late California Modernist Richard Neutra, is looking for someone to buy his firm's former office building, in Silver Lake, California. Completed in 1950, it is now his father's only surviving commercial structure. The asking price is \$3.5 million, but there's a catch. In addition to paying all cash, a buyer must agree to leave the landmarked property untouched—or risk losing the deed.

Neutra created this innovative conservation easement because he's frustrated with seeing his father's iconic buildings, such as the Maslow House, demolished. "Unless

there's a severe penalty to pay, people end up doing stuff," he explains. "If this keeps happening, there won't be any record left of what we did. We were in practice for 80 years, and at least half of our buildings have been changed. I'm determined not to have this one changed."

And that's why someone like Brad Pitt might be interested. Neutra figures that a movie star or producer would be an ideal landlord because he or she won't spend a lot of time at the building but will keep it occupied and in good repair. Plus, Hollywood types often have an affinity for this style of architecture. "The ideal buyer is a person who simply loves Modern architecture and understands that it's under threat and needs to be



saved at any cost. Brad Pitt gets \$20 million each movie, so \$3.5 million cash is no big deal," Neutra says.

The 2,800-square-foot building is currently on the market through a silent auction that Neutra anticipates will close in April. Under the easement's terms, buyers must agree to annual property inspections by an organization such as the National Trust for Historic Preservation. If unauthorized alterations are discovered, a court will immediately transfer the deed to an entity like the trust, or one specially created for this purpose.

Neutra created this easement after learning about a similar system for historic properties in France. Although U.S. banks are proving skittish about it, which is why Neutra needs an all-cash buyer, he thinks this model could be replicated.

"What it comes down to is if you have a hidden agenda, you don't need to apply," Neutra says. "You wouldn't buy a Picasso and have plans for revising the color scheme or the lines. If you really do care about a building, you'll preserve it just like a piece of art." *James R. Murdock*

Will Boston's new Institute of Contemporary Art be its "Bilbao on the Harbor"?

With a wave of redevelopment rolling toward Boston's old industrial waterfront, Diller Scofidio + Renfro's much-lauded new home for the city's Institute of Contemporary Art (ICA) (see page 108) has established a beachhead for ambitious Modern design.

The ICA late last year moved from the Back Bay to its new home at a long-vacant site on Fan Pier, in a gritty area southeast of downtown. Plans approved for the nine-block, 21-acre waterfront district include office towers, a luxury hotel, condominium buildings, and retail shops. New public parks and a marina are also in the works. Of these projects, 1.3 million square feet of space could be under way by the end of 2007. All told, the master plan allows for up to 3 million square feet of development.

While the popularity of the ICA might suggest Boston sought a Bilbao Effect—an urban revival driven by the construction of an iconic cultural building—there was no conscious plan to seed the area



Adjacent to the Institute of Contemporary Art on Boston's Fan Pier, Hill Glazier Architects have designed a luxury hotel containing 175 guest-rooms and more than 100 condominium units (left). Elkus/Manfredi designed an 18-story office building at a site nearby (below).

by building the museum first. According to Kairos Shen, Boston's director of planning, "The plans for the entire waterfront, including the Fan Pier, predated the ICA. The civic spaces and museum evolved out of a larger planning effort. The ICA was completed quicker partly because it was not constrained by the same set of economic and market conditions that affect private developers."

The property had been tangled in legal disputes for decades, straining the patience of public officials eager to see the prime location developed. In 2005, the Pritzker



family of Chicago sold the land to local developer Joseph Fallon and Massachusetts Mutual Life Insurance, who refined a scheme negotiated by the Pritzker group

and quickly moved forward with it.

Construction on a hotel and residential building, designed by Hill Glazier Architects, is set to begin later this year on a site behind the ICA. This will be followed by a condominium building by Hill Glazier and office towers by Brennan Beer Gorman Architects and Boston-based Elkus/Manfredi Architects.

Like the ICA, the new Fan Pier projects eschew Boston's various revival styles—such as the ubiquitous redbrick Federalist mode—in favor of angular expanses of glass. "It was an easy call. Glass maximizes the views," Fallon explains.

Although the ICA is less a catalyst for these new developments than simply an accompanying project, it is nevertheless having an effect on the area. Its contemporary design, Shen says, has "stimulated a conversation about architecture and raises the bar for private development as well." *Ted Smalley Bowen*

Record News

AIA releases results from its "Top 150" buildings survey

The Empire State Building is top of the heap again. Once the world's tallest skyscraper, this 1,454-foot landmark ranks No. 1 on a list of Americans' 150 favorite U.S. structures—that according to a new poll commissioned by the American Institute of Architects (AIA) to celebrate its 150th anniversary and generate public awareness about architecture.

The Harris Interactive online poll surveyed more than 1,800 adults using a list of 247 structures—including buildings, bridges, and monuments—that an AIA panel preselected. Results were made public during the AIA's annual Grassroots Leadership and Legislative Conference on February 7. But some observers, even within the AIA itself, were surprised by the poll results, which read like a list of tourist hotspots.

The White House holds the No. 2 spot in the public's eye, followed by the National Cathedral, the Jefferson Memorial, the Golden Gate Bridge, the U.S. Capitol, and the Lincoln Memorial. Nearly half of the 150 structures, in fact, are well-known landmarks located in Washington, D.C., New York City, or Chicago.

"What we found was that Americans chose buildings that evoke powerful feelings and strong emotions," AIA president RK Stewart, FAIA, said at a press conference accompanying the survey's release. "Many of the top 10 are symbols of our democracy, but they're also the places where people live, work, and play."

Thomas Jefferson's Monticello, begun around 1769, is the oldest building on the list, and the newest—still under construction—is the New York Times's new headquarters by Renzo Piano. But contemporary architecture built within the past two decades makes up only one fifth of the list.

George Miller, FAIA, who chairs the AIA 150

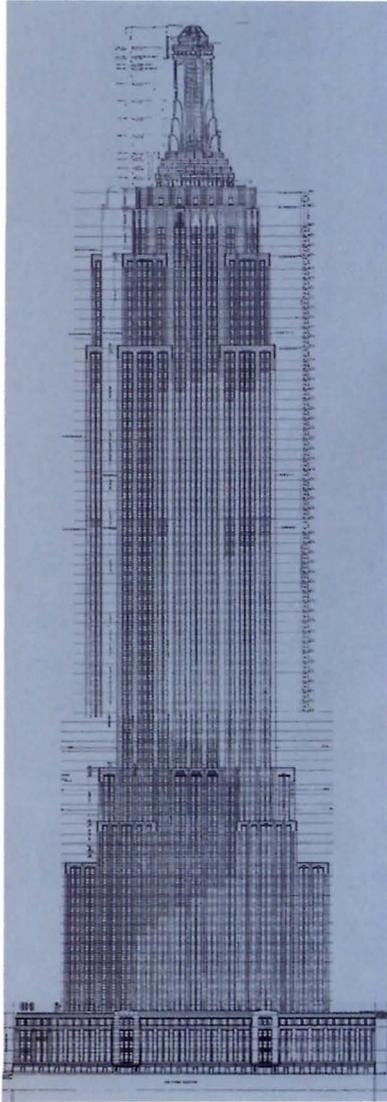
Committee, admitted that he "was expecting the list to have more architecture of our current times." Even so, Miller is pleased with the survey. Likening it to the Oscars or the People's Choice Awards, he said that the rankings are "kind of an American pastime. What the list is likely to do is generate a conversation across the country among architects and among the public."

While critics agree that the list is certainly a conversation starter, some question whether or not the AIA might have spent its money better on something else. The AIA is remaining mum on how much the survey cost, but a spokesperson says that AIA's leadership feels the effort was worth it. Visitor traffic to a special AIA 150 Web site grew from just 7,000 visits per day to more 27,000 per hour during the first day after the poll's release.

Witold Rybczynski, a professor of urbanism and real estate at the University of Pennsylvania, takes a pragmatic view. "Such lists are publicity stunts, of course, but they attract attention because people enjoy reading such compilations: partly to compare the list with their own favorites, and also to see if there is something that they have missed. Hardly profound, but harmless."

For those who keep score, Frank Lloyd Wright's work appears most often on

the list: eight times. Richard Meier scored five projects, the most for a living architect. His acclaimed J. Paul Getty Center for the Arts in Los Angeles was ranked 95. Three favorites were designed by women, including two in the top 10: Maya Lin's Vietnam Veterans Memorial and the landmark Golden Gate Bridge, in San Francisco, designed by Gertrude Morrow with her husband, Irving. Julia Morgan's Hearst Castle, in San Simeon, California, placed 41. Visit www.archrecord.com for the complete results. *Barbara J. Saffir*



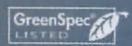
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Record News

AIA names Thomas Jefferson and Young Architect awardees

David Dixon, FAIA, of Boston, and Michael A. Fitts, FAIA, of Nashville, are this year's recipients of the American Institute of Architects' Thomas Jefferson Award for Public Architecture. This AIA honor recognizes excellence in architectural advocacy and achievement. Dixon, who directs the Goody Clancy & Associates' urban design group and is a past president of the Boston Architectural Association, received the award in the category of private sector architects who design noteworthy public projects. Fitts received the award in the category of public sector architects who produce quality designs. As Tennessee's state architect for the past 35 years, he has overseen more than \$4 billion of public works under four governors. With its Jefferson Award, the AIA typically also recognizes public officials who advocate for better design—but it did not make a selection in that category this year.

The AIA also announced the six recipients of its 2007 Young Architects Award, which recog-

nizes individuals who have made significant contributions to the architectural profession early in their careers. The winners are Roy Abernathy, AIA, a managing partner of Jova/Daniels/Busby, in Atlanta; Michael P. Eberle, AIA, an architect and senior associate at Flad Associates, in Madison, Wisconsin; Lonnie D. Hoogeboom, AIA, a partner at Natalye Appel + Associates, in Houston; Phillip Koski, AIA, owner of Inland Office for Tomorrow's Architecture, in Minneapolis; James Mary O'Connor, AIA, a principal of Moore Ruble Yudell, in Santa Monica, California; and Suzanna Wight, AIA, emerging professionals director for the AIA. Despite its name, the Young Architects Award is not age-based but is instead open to professionals who have been licensed for 10 years or less.

The AIA will officially bestow these awards in May at its 2007 National Convention and Design Exposition, in San Antonio. Watch for additional coverage on all the winners in RECORD that month. *J.R.M.*

8NW8, by SERA Architects, lauded with Turner Prize for affordable housing

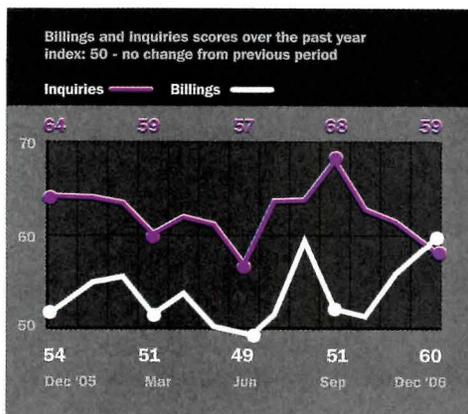


A low-income apartment building in Portland, Oregon, named 8NW8 is the winner of this year's I. Donald Turner Prize, a biennial honor given to innovators in affordable housing. Designed by SERA Architects, and developed by Central City Concerns, 8NW8 includes 180

drug- and alcohol-free SRO units. The \$50,000 award, given by the Center for Community Innovation, in Berkeley, California, commemorates the life of Turner, a housing advocate who died during a humanitarian mission to Bosnia in 1996. Chosen from a field of more than 80 entries, five others received commendation: People's Self-Help Housing; Public Initiatives Development Corporation; Mercy Housing California; New Economics for Women; and the Jonathan Rose Companies. *Jane Kolleeny*

AIA's Billings Index shows upturn at end of 2006

Beginning with this issue, RECORD is publishing the American Institute of Architect's monthly Architectural Billings Index (ABI). The index comprises data that is compiled from a survey sent to 300 firm leaders, such as principals and partners, primarily in the commercial design sector. Studies have shown that the ABI is a good predictor for construction spending roughly nine to 12 months from a given data point. The chart below also includes the average number of inquiries made to architectural firms. Look for the ABI and inquiries chart in RECORD throughout the year. *J.R.M.*



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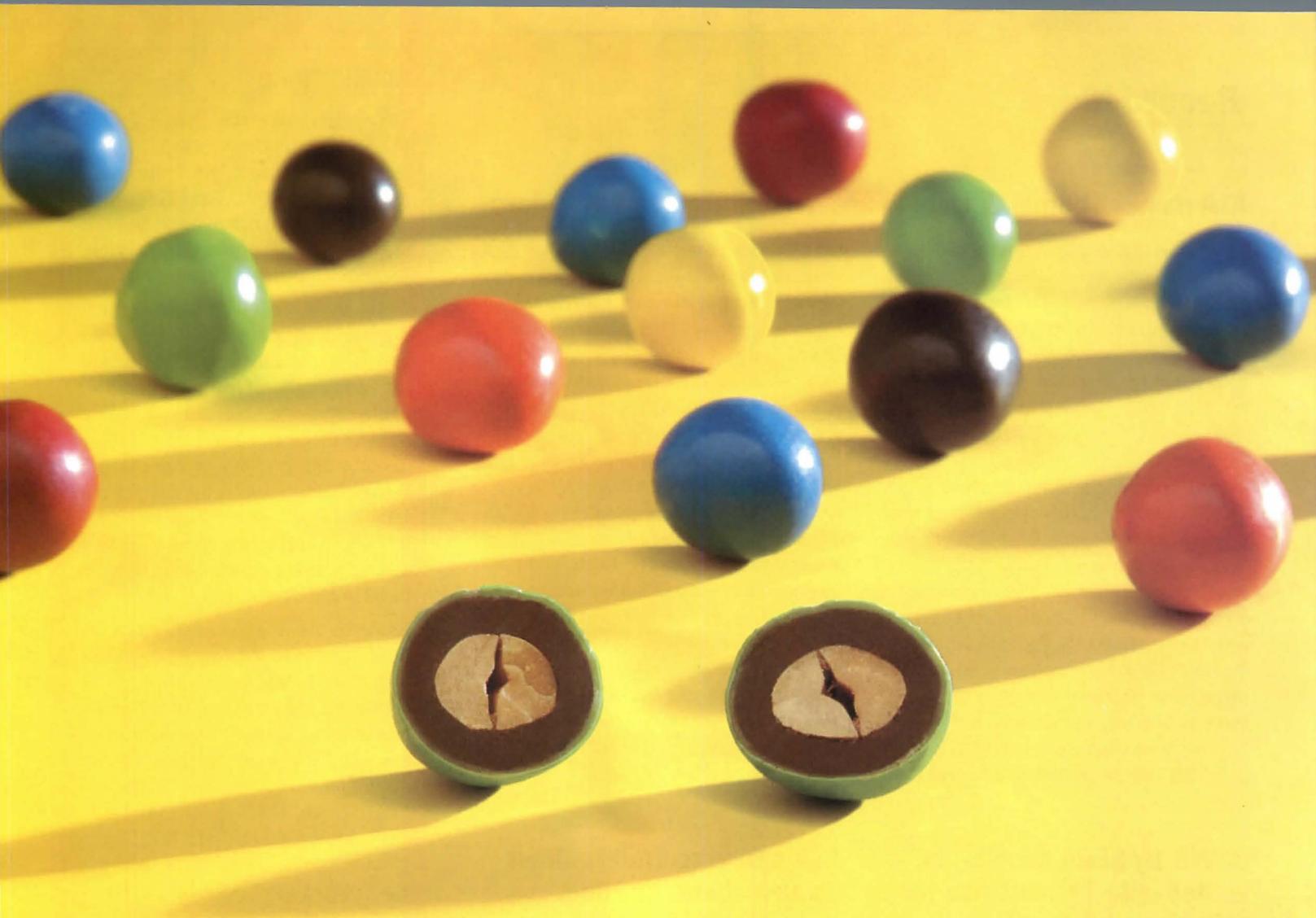
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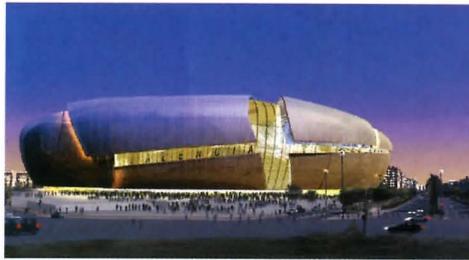
COMMERCIAL

Record News On the Boards

Valencia's street map inspires stadium design

Add Valencia, Spain, to the list of cities now constructing an iconic, sculptural sports stadium. Work begins this month on a new, 75,000-seat home for the local soccer squad. Designed by Reid Fenwick Asociados, with Arup Sport, it will be one of the largest and most ecosensitive stadiums in Europe—and, its designers hope, a point of civic pride when it opens in 2009. "Football is such an emotional sport, it's almost like a religion," says architect Mark Fenwick, referring to European soccer. "We had to pack all of that emotion and feeling into a building that would be theirs and only theirs."

The stadium's most striking element is a curvy aluminum skin, split by seemingly random fissures that suggest the entire building is a squashed metallic soccer ball. Fenwick explains that its design in fact pays homage to Valencia's geography—the cracks correspond to a map of the city's 16 districts, with the largest one representing the Turia River. But the fissures also serve a functional purpose: Computer-controlled louvers within them will open and close, depending on weather conditions, to ventilate



spectators as well as the playing field. Solar panels on the roof will supply power, giving the building an extra green edge.

Edges of any other sort will be hard to find. J Parrish, Arup Sport's architectural director, explains that the stadium will have the feel of a Spanish bullring: a tight seating bowl in which nearly all spectators face the action. This differs from traditional soccer arenas that, historically, were rectangular buildings in which many spectators face each other. Parrish adds, "It's much more curvaceous than most stadiums. You'll be able to recognize it instantly on TV, which is a modern requirement of stadiums." *J.R.M.*

Lab Architecture's fractured facade glows like lava at night



The expansion of Newcastle Region Art Gallery marks Lab Architecture Studio's first major building commission in Australia since 2002, when the firm—with collaborator Bates Smart—completed the massive Federation Square cultural center in Melbourne. Newcastle, a 150,000-person town located in the state of New South Wales, has little in common with sprawling Melbourne, a city of 3.7 million that is widely regarded as Australia's intellectual capital. But, thanks to some shared formal qualities between Lab's previous effort and its new art gallery, this sleepy harbor town will get a bold dose of big-city sophistication.

Both designs explore alternatives to repeating a regular, flat facade. Newcastle Region Art

Gallery's upper two stories will be wrapped in staggered surfaces clad in black, oxidized stainless-steel panels. This reptilian skin bears a resemblance to the triangular pinwheel grid of Federation Square's Yarra Building, but unlike Yarra's so-called "fractal facade," which was dominated by a

single triangular module, the Newcastle design will deploy irregular shapes. Moreover, the voids between panels will be illuminated from within, suggesting the appearance of molten fault lines at night. Inside, jagged volumes, asymmetrical coves, zigzags of track lighting, and a crystalline skylight will echo the exterior's uneven faceting.

The 50-year-old gallery, whose inventory numbers more than 3,000 artworks, has been in its current home since 1977. Lab's redevelopment will expand the building to 86,000 square feet without disrupting Newcastle's low-rise urban fabric. In addition to trebling the gallery space, the project will add a new theater, educational and library spaces, a shop, and a café. *David Sokol*



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archrecord2

How do you find balance in life and career? We all know architects who spend 24 hours a day at work. But we've found two sole practitioners who've learned to make time for more than just their careers. New York-based Tina Manis has devised a successful formula for running an all-women firm while being a mother. For Boulder, Colorado-based Scott Rodwin, dance and sculpture give him an outlet for self-expression that architecture can't. Visit archrecord.construction.com/archrecord2/ and go to **Talk to join the conversation in our forums.**

Design

Tina Manis: equal parts family and firm



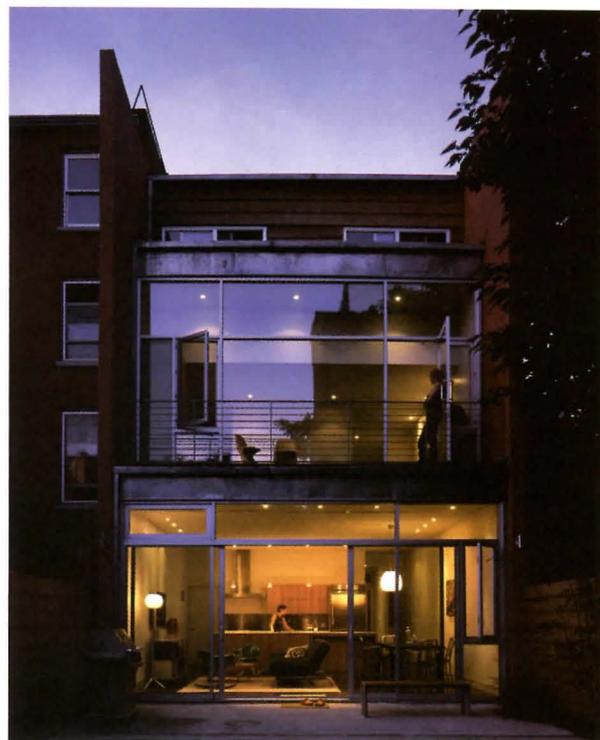
"It's hard, it's frustrating, it's wonderful, and it's exciting." Tina Manis is talking about the office she started three years ago and runs today, but could be just as easily describing raising a family. A young mother, Manis is in a position that is still surprisingly rare in the architecture field: She is the sole, female

owner of an architecture firm whose two employees are also women. "We were saying the other day we could use some testosterone, but actually I think we have enough testosterone among us," Manis says, explaining that there's no intentional gender bias at her office.

The work of Tina Manis Associates (TMA), in New York City, expresses femininity not in clichéd terms of curves and pastel colors, but in its approach to process. "We have a consciousness of and sensitivity to the everyday rhythm of residential work and also of the intricacies and politics of commercial work," Manis says. "What we make and how we conceptualize our work is neutral. I've always wanted that—I never wanted to play by a man's rules, but I didn't want to play *Sex in the City* either."

Manis, who has worked for Rem Koolhaas and Richard Rogers, clearly relishes setting up her office on her own terms. Going it alone has given her the advantage of being able to work in a nonhierarchical fashion—there's no one person barking out orders. While she's not afraid to make demands of her employees, she notes, "It's important to know that there exists another alternative, and you can still do amazing work." She's perfecting a kind of office lifestyle that allows for the inclusion of personal life—out-of-office concerns such as family—while maintaining a high level of professional rigor.

The practice is right now at a turning point. TMA recently completed a new town house in Brooklyn, New York—a rare and exhilarating opportunity to build ground-up construction in a city where there are a decreasing number of vacant lots. With this project, Manis had ideal clients. They said to her, "We have



Butler Residence, Brooklyn, N.Y., 2006

A modern transformation of an urban, single-family brownstone into a duplex, the 3,150-square-foot renovation consists of a three-bedroom home on the ground and second level, with a two-bedroom rental unit on the third floor, including a private terrace.



these program needs, but you do your thing." Despite a "phenomenally low budget," she had the liberty to express a full range of her ideas, one of which is finding beauty in the "things that seemingly have no value." She adds, "We can take the most banal, boring material and actually invent with it. We're very interested in that kind of strategy towards architecture." TMA also just completed the first phase of a studio in Queens, New York, for Japanese artist Takashi Murakami.

Much of Manis's current work is residential, although she says, "I would like to move the office toward more institutional work." Unlike many of her peers, Manis's dream isn't just landing a client with lots of money to spend. Rather, she



**KaiKai Kiki
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production spaces for the
New York headquarters
of Japanese artist Takashi
Murakami's artist collec-
tive (left and right).*



would like to work on a development for a marginalized group or a nonprofit organization. These projects "fulfill a kind of consciousness in me. There's a possibility of supporting humanity," she says. Although she jokes, another dream would be, "Getting paid well. A real jawbreaker salary." *Diana Lind*

For more photos of projects by Tina Manis Associates, go to archrecord.construction.com/archrecord2/.

Work

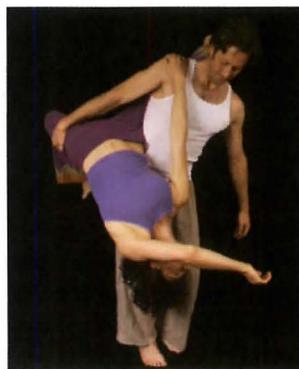
Scott Rodwin: Finding balance in art, dance, and design

There's no doubt that Boulder, Colorado-based architect Scott Rodwin, AIA, is a Renaissance man. But does he also possess some superhuman power that lets him have more time in a day than the average person? You'd think running an award-winning, seven-person architecture firm, Rodwin Architecture, would be all-consuming. Yet, Rodwin manages also to create alabaster sculptures that are exhibited in various Boulder galleries, as well as participate in a form of dance called "contact improvisational."

"Imagine pairs figure skating combined with Aikido, a game of Twister, and surfing," says Rodwin about his chosen dance style. "It's a partner dance, typically done without music or shoes. There are no set steps, and the main principle is to be in the moment, and just let the dance spontaneously emerge from those natural forces."

According to Rodwin, his approach to sculpture, which he does in either translucent Italian alabaster or alabaster from a local quarry, is similar to his techniques for dance. "I look to shape the form of the stone to create a sculpture of dynamic space within. I enjoy pushing the limits of what can be done with stone—making it as delicate and gymnastic as possible, so that the grain, character, and translucency are revealed. The pieces almost always break at some point. Sometimes I can repair them, and sometimes I have to simply let go of any idea of what it should be and work with the new form as it is."

Rodwin says that he has yet to incorporate any of his sculpture into his architectural projects, for now keeping his three interests separate and balanced. "Sculpture lets me make a physical form that is purely my own. But architecture is public art, and in that it has a higher bar—finding a human connection to a wide range of people. If I ever do create even a single really great building, I believe that will be a great satisfaction. Dance is in a different cate-



Rodwin's alabaster sculpture Cloud Dragon (left). Rodwin describes contact dance as a mixture of figure skating, Aikido, and Twister (center and right).

gory. I do it only for the experience of that present moment. Not for the end result. In that, it is often immensely satisfying. And then it is gone."

Rodwin may not think his architecture is great, but others do. He recently won the AIA Western Mountain Region Chapter's 2006 Young Architect of the Year Award. Does he have time to celebrate? Hardly. He admits that not yet having a family may be why he has so much time for his multiple interests, which don't stop at architecture, dance, and sculpture. While he's also completed books on women's self-defense and, recently, *A Wildly Incomplete Guide to Contact Improv*, he's now working on writing a book of dating stories called *Boys are Dumb, Girls are Crazy*. "My life doesn't leave much time for TV," he says. *Ingrid Spencer*

For more information on Scott Rodwin and all his ventures, go to archrecord.construction.com/archrecord2/.

Can Robert Moses be rehabilitated for a new era of building?

Critique

By Michael Sorkin

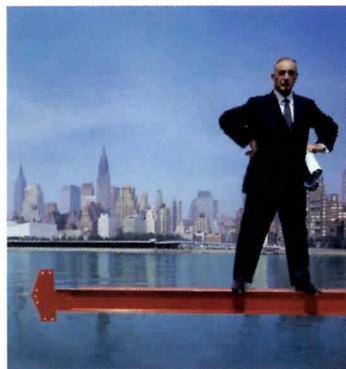
Robert Moses is back. In a sentiment that has been brewing for several years, the city's erstwhile master builder has come in for a heavy dose of revisionism. When so many of our big projects seem vexed by incompetence and stymied by community opposition, nostalgia for a man who can get things done is running rampant. And Moses was that in spades. As Lewis Mumford put it, "In the 20th century, the influence of Robert Moses on the cities of America was greater than that of any other person."

As the result of a three-part show—at the Museum of the City of New York, the Queens Museum, and Columbia University—curated by architectural historian Hilary Ballon, as well as a fascinating book, *Robert Moses and the Modern City*, co-edited by Ballon and Kenneth Jackson, and swelling media coverage, New York is burning with Moses fever. There is, in fact, much to celebrate in his 40-year career. Moses built on a mighty scale—parks by the hundreds, enormous public swimming pools and magnificent beaches, glistening suspension bridges, elegant parkways, and remade waterfronts—a legacy that forms the basis of much of what is great about New York today.

Since the 1960s, however, Moses has been remembered more for his dark side, for the half million poor people displaced by his projects

Contributing editor Michael Sorkin runs his own design studio and is the director of the urban design program at City College of New York.

for highways and urban renewal, for the neighborhoods he destroyed, for the psychotic roadways he slammed through the city. Mumford—joined by Jane Jacobs and many others—came to revile him, a view fixed by Robert Caro's titanic 1976 biography, *The Power Broker*, which accused Moses of having "used the power of money to undermine the



democratic processes of the largest city in the world." In urbanist Robert Fishman's slightly more ambivalent words, Moses—who did not shy from comparing himself to Baron Haussmann—"combined the high-minded idealism of a public servant with the insults and innuendoes of a Tammany politician."

The dark side of history

While I agree that it's important to celebrate the constructive part of Moses's achievement, I want to devote this column to the brief for the dark side, the cautionary lessons of this history. For all his successes, Moses did very bad things and there are three indelible charges that continue to have enormous relevance, both in how we



A new book and trio of exhibitions reexamine Robert Moses (left) and his legacy of building projects, including the Jerome Avenue Overpass (above).

remember Moses and how we plan today. These are, simply put, that Moses pioneered and ruthlessly wielded a set of fundamentally undemocratic instruments for planning; that his priorities were distorted to the detriment of a more "holistic" view of urbanism; and that he was a racist whose project disproportionately harmed the poor and people of color.

Although Moses was not the inventor of the public authority, his refinement of its instrumental power and his use of that apparatus to consolidate sweeping control in his hands was dramatically innovative. From the headquarters of the Triborough Bridge and Tunnel Authority on Randall's Island, Moses presided over a freestanding empire that was essentially immune from public review and that wielded powers of condemnation, bonding, and revenue collection that made it virtually autonomous. Moses ruled like

a king, dispensing largesse, ignoring opposition, and ruining the careers of those who stood in his way.

Expansion of powers

While the chastening example of his dictatorial methods continues to be a caution, it is striking that the major planning projects in New York today—including Ground Zero and the West Side Yards in Manhattan and Atlantic Yards in Brooklyn—are all enabled by the special powers of condemnation and immunity from full review exercised by their owners, the Metropolitan Transit Authority and the Port Authority of New York. The baleful specter of Moses also surely hovers over the current national expansion of governmental powers of eminent domain and seizure of private property in order to advance not public but private commercial interests, so dramatically pioneered by Moses in projects like Stuyvesant Town and the raft of urban-renewal

Critique

developments built under Title One of the 1949 Federal Housing Act.

Although it would be perverse to criticize Moses for not being more sweeping in his ambitions and activities, his life work was focused on three main areas: parks, roadways, and urban renewal. While Moses's park building was both visionary and refined, his activities on behalf of highways and "slum clearance" were deeply fraught. Moreover, for many critics, this repertoire begs the question of the range of things that these priorities excluded, to the city's detriment, including, most prominently, attention to mass transit as well as other elements of municipal infrastructure—such as, schools, hospitals, sewers, and public housing. Because Moses was so successful in realizing his agenda—and in attracting funds for it—this triplex of priorities both diminished the prospects for other projects and framed for years the core agenda of planning itself.

Good guy, bad guy

As Ballon and Jackson write in the introduction to their book, the seeming discrepancy between the marvelous parks and the nightmare neighborhood destruction is often accounted for by a "two Moses" theory: "the good Moses of the 1930s ... associated with a faith in government's ability to act on the public behalf, and the bad Moses of the 1950s," whom they link to "a loss of faith in the government to act wisely, particularly in urban affairs where governmental programs, however well intended, had destructive consequences." Their semiredemptive argument seeks to situate Moses's activities in a wider context in which he appears not as the arch-fiend but as a supernumerary devil, reflecting larger trends in public opinion and the shifting availability of national government programs and financing.

In this reading, Moses's clean-slate urban renewal is simply a

particularly successful extension of a more general consensus about the large-scale excision of "diseased" areas of the city and the displacement of the poor—both a way of retaining middle-class vitality and of exploiting the clearance money flowing from the feds under Title One.

Irresistible offers

Similarly, the highways Moses sought to blast through the city in the later part of his career (and which in their blithe outrageousness planted the seeds of his undoing) are seen as rational, if reflexive,



responses to the 90 percent financing available for the Interstates after 1956, which proved suicidally irresistible to so many American cities. And there's the implication that, while Moses may have been unashamedly racist (the evidence is disgustingly abundant), so were lots of people in positions of power.

These arguments have a few problems. For one, Moses's road-building career began long before federal legislation financed its acceleration. Indeed, his very success was formative in creating the culture in which the automobile was seen as the irresistible alpha in the traffic hierarchy and in which public transportation was invisible. To the degree that he held a theory of the city, it was thoroughly Modernist in its priorities, and—like Corbusier and CIAM—Moses saw cities primarily as a conductive medium for speedy circulation.

When the Interstate legislation was being drafted, Moses was



adamant that, contrary to initial planning, "the interstates must go right through cities and not around them." That this vision of the city—defined by its regional circulation sinews and their unobstructed movement through town—was in

Moses built recreational facilities, such as the Highbridge Pool (above), in Washington Heights, and bridges like the Marine Parkway Bridge (left) over Rockaway Inlet, but ignored subways and mass transit.

the air for much of the 20th century in no way exonerates Moses. He was not simply the passive recipient of the good news, he was present at the creation.

Beware of evasions

The same is true of his roughshod tread on neighborhood ecologies. While Moses may have thought he was pursuing a higher calling to advance the public good, he cannot be judged simply in terms of the durability of his projects, their architectural quality, or even their adaptability to changed circumstances—parks built for the middle class that now find themselves in neighborhoods turned poorer. Nor does it suit to see Moses's work simply as the product of his own authoritarian personality, to freight his project with psychic biography. His aggrandizement of power, his dreadful effects on the lives of so many people, his distortion of the constructive energies of govern-

ment are not incidental to his "real" legacy; they are his legacy. While the comparison may be hyperbolic, a focus on the architectural—even public—quality of his achievements risks the same kind of distortion as does a view of Mussolini through the filter of Terragni or the train schedule. How do you create a "balanced" view of someone who was "also" a monster?

Clearly, the contribution of Robert Moses cannot be addressed simply as a question of architecture or planning but must engage issues of culture. The authors of *Robert Moses and the Modern City* have written with balance and insight about a very complicated case, and the catalog of work the book compiles is invaluable and, in many ways, breathtaking. But the risk that Moses poses today is in the conflation of vision and unilateralism. At the level of planning, I am disquieted by the growth of so-called "public-private partnerships," which often represent not simply the abdication of the duty of the government to assure that the common good will contain a full measure of equity in results, but also an end-run around democracy itself, bypassing the hard work of guaranteeing that the voices of all citizens will be heard and acted on with equal weight.

As we daily witness the mayhem in Iraq, the disaster of our attempts to impose our vision of the common good on a body politic that sees the effects of these intentions as both disenfranchising and deadly, it is wise to be wary of any imperious man on a horse who claims to know what's best for us. ■

What happens when architects meet reality TV?

Commentary

By Christopher Hawthorne

One morning last December, a team of producers, cameramen, and sound engineers spent several hours transforming a courtyard at the Los Angeles County Museum of Art (LACMA) into the backdrop for an unlikely marriage between architecture and cable television. The occasion was a competition organized by The History Channel, with help from the American Institute of Architects, called The City of the Future.

Seven teams of local architects, plus one from the Harvard Graduate School of Design, had been asked to imagine how Los Angeles might look in the year 2106. (Chicago and New York hosted similar events the same month.) Each team had one week to prepare its scheme and 15 minutes to explain it to a five-person jury. The jurors—who in L.A. included architect Thom Mayne, former *Dwell* magazine editor Alison Arieff, and the city's new planning director, Gail Goldberg—then had all of 20 minutes to pick a winner.

The contrast between the full century the architects were asked to traverse into the future and the accelerated choreography of the event itself was jarring. So, for that matter, was the buzzer—installed by the organizers in an effort to keep the teams on schedule—that was loud enough to wake the slumbering Pleistocene vertebrates in the La Brea Tar Pits next door to the

Christopher Hawthorne, architecture critic for the Los Angeles Times, last wrote for RECORD on emerging architects in L.A., in May 2006.

museum. It worked, though: Even the famously verbose Eric Owen Moss, who won first place in L.A. with a surprisingly straightforward scheme that called for building atop the city's freeways and concrete riverbeds, didn't dare keep talking through the ear-splitting sound.

But perhaps strangest of all was the way the charrette ended. While L.A.'s mayor, Antonio Villaraigosa, was making disappointingly banal comments about his enthusiasm for the future and handing over a \$10,000 check (oversize, of course) to Moss, The History Channel crew was busy dismantling all the electronic scaffolding that briefly propped up the 22nd-century L.A.

The channel has no firm plans to turn footage of the event into an actual series. Producers saw the proceedings more as a kind of research—a chance to see how architecture played on screen. That left visitors to the LACMA event with a sense that all of these visions of the future city were simply melting away, magnificent ice-castle cities reduced to puddles that we tracked through on the way back to our cars.

The proposals, many of them surprisingly sophisticated, mixing practical ideas about sustainability and mass transit with elements of Superstudio-style futurism, live on in various ways. Several of the teams have added their schemes to their Web sites, and at least one, a proposal by Hernan Diaz Alonso and Imaginary Forces that earned an honorable mention from the jury, can be found on *YouTube*. (Funny and smart, it is worth seeking out.)

And The History Channel pitted the winners in each city's competition against one another in a final round that was decided by online voting, with Chicago's Urban Lab coming out on top over Moss and the New York victor, Architecture Research Office. The channel has also added video of the charrettes to its own

San Francisco firm, Kwan Henmi Architects, with her husband. She was recruited for the show by a pair of CBS producers who spotted her at Monsoon restaurant in Santa Monica, where she and her husband were hosting an 18th birthday party for their son, a freshman at nearby Loyola Marymount University.



Architect Sylvia Kwan pits her wiles against a cast of mostly younger and more heavily tattooed contestants on *Survivor*, which takes place this season on the island of Fiji. Will running her own firm for 25 years help her win or hurt her?

Web site at www.history.com.

But the degree to which the participating firms—all of them talented, none desperate for work—were willing to endure this Pavlovian exercise in exchange for a little free publicity was surprising. In other words, if the charrette represented a marriage between architecture and pop culture, it looked about as stable as the Britney-KFed union. If you exchange vows in the middle of a Klieg-lit Potemkin village, after all, it is probably only a matter of time before the relationship falls apart.

As it happens, the CBS show *Survivor*, which helped kick off the reality-TV craze seven years ago, has an architect among its bleached-teeth, Pilates-toned castaways for the first time this season. Sylvia Kwan, 52, runs a successful

Producers of the show, which is taking place this season in Fiji—"a place once known for its cannibalism," the grave voice-over reminds us—wasted no time in taking advantage of Kwan's presence. On the first episode, broadcast on February 8, Jeff Probst, the host, flew over the contestants in a biplane and dropped into their midst a wooden crate that contained ... a set of blueprints. There was also a frayed-edged, X-marks-the-spot-style map leading the castaways to a supply of hammers, nails, two-by-fours, shingles, and even a toilet seat. I kept looking for evidence of a product-placement deal with Home Depot, but *none materialized*.

"I could not believe my eyes," Kwan recalled in a phone interview. "I stood there and unrolled an entire

Commentary

set of plans. I was expecting that we'd do what the contestants usually do, which is build a couple of lean-tos."

Kwan helped the other contestants construct a rather elaborate shelter for themselves, which of course put a large target on her back. Too much intelligence too nakedly shown is about as dangerous on *Survivor* as it is in a presidential campaign these days. While the group was hammering together the shelter, this exchange occurred:

Kwan (inspecting a post):
"I feel that this guy is a little bit askew, but, oh well."

Young, tattooed contestant from Boston, known as "Rocky," who is either dumb or playing dumb or, most likely, a little of both: "What? What's ascoot mean?"

Kwan: "Askew."
Rocky: "Huh?"

Kwan: "A-s-k-e-w. It's an architectural term. It means not orthogonal."

Rocky: "There's another big word."

Whether or not askew is really "an architectural term" is a question for another day; in any event, Kwan's leadership on the shelter job made her stick out like—well, a 52-year-old architect surrounded by a bunch of aspiring B-listers in their 20s. No matter that there was no actual architecture going on, and that Kwan had simply acted as lead contractor in executing a building designed by some anonymous figure hired by CBS. When Probst told the 19 contestants that they were going to be split into two tribes of nine, with one person left to spend the night alone, Kwan was easy to single out.

"So it sounds like, Sylvia, you really stepped up to be the leader,"



Teams from EDAW/DMJM Design/DMJM H&N/AECOM (left) and Eric Owen Moss (right) develop competing visions of L.A. in 2106 for The History Channel.

Probst said. "Does that ring true to everybody here? Nobody disagrees with that?"

With that Sylvia was asked to divide the group into two tribes and then was sent to the dreaded Exile Island. She spent the night in a treehouse; with its thatched roof and shrunken heads on spikes, it might have been designed by Colonel Kurtz & Associates.

Survivor has long perfected its brand of primitive chic, which is best seen in the one piece of architecture that makes an appearance every season: the setting for Tribal

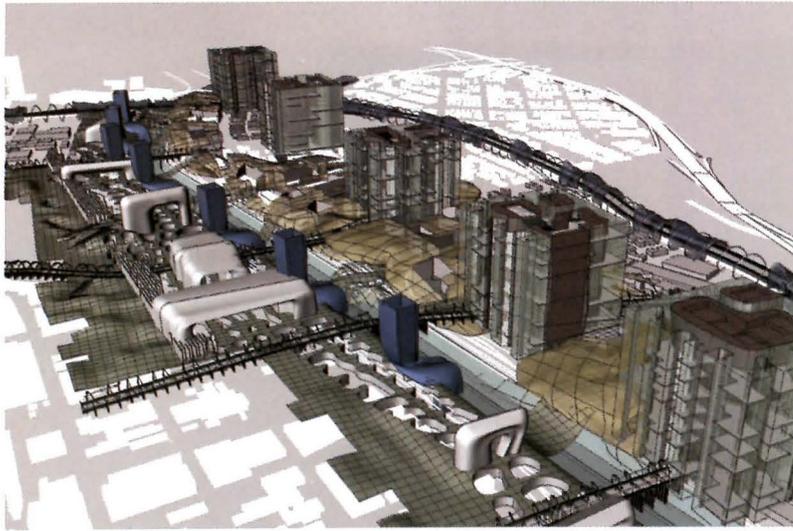
Council, which is usually circular, open-air, and lit by candles and torches—half Robinson Crusoe, half Westin Maui. As an Exile Island resident, Kwan was given immunity the first week, but it will be fascinating to watch, as the season progresses, whether the initiative and expertise she's already shown will get her quickly eliminated. To be honest, it will be a pleasant surprise if it doesn't happen right away.

If The History Channel competition and Kwan's presence on *Survivor* teach us anything about the collision of architecture and



Image of the Bank of America Tower at One Bryant Park courtesy of dbx. Architecture by Cook+Fox Architects.

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Eric Owen Moss's winning design calls for building atop the city's freeways.

television, it is probably that the profession should count itself lucky that so far contact between the two has been relatively limited. Architects might lament that so far there has been no reality-TV show to illuminate their field the way *Top Chef* has done with cooking or *Project Runway* with fashion. After all, while magazines and newspa-

pers have become downright obsessed with architecture in the past decade, television has largely kept its distance.

But maybe architects should be happy with the occasional hour on *Charlie Rose* or the existence of a handful of sitcom characters, like Ted on the CBS show *How I Met Your Mother*, for whom being

an architect mostly means only that they are coated with a sheen, however thin, of smarts and gentility. After all, consider the new Bravo series *Top Design*, which in a few short weeks on the air has already painted the world of interior design with the broadest of brushes, somehow managing to seem homophobic and homophobic at the same time. That show offers a reminder of how seeing your own professional world through a television screen is rarely an encouraging sight, let alone an accurate

or an ennobling one.

Certainly we learned that after the master-plan competition at Ground Zero, which was the last time architects appeared on television programs in significant numbers. The highlight (or maybe lowlight) of that publicity whirlwind was undoubtedly the December morning in 2003 when Daniel

Libeskind and David Childs appeared side-by-side on *The Today Show* in the middle of their struggle for control of the Freedom Tower. When Katie Couric asked about reports that the two architects weren't getting along, Childs patted Libeskind on the knee, called him "Danny," and assured Couric that their relationship was "spectacular."

As I wrote in *Slate* later that day, Child's word choice couldn't have been more apt. And it remains a word to remember as we consider The History Channel competition, Kwan's experience on *Survivor*, and the way producers are slowly beginning to circle the world of architecture. What those shows—and their viewers—are looking for is pure spectacle, which is neither good nor bad but simply the coin of the television realm. Any architect brave enough to chase pop-culture fame as opposed to mere, lower-wattage architectural celebrity would be wise to keep that in mind. ■



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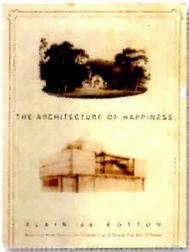
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Blending in and standing out in architecture

Books

The Architecture of Happiness,
by Alain de Botton. New York:
Pantheon Books, 2006,
288 pages, \$25.



Reading Alain de Botton's attempt to discover why some buildings bolster our mood and others can cause misery is like listening to a well-read, well-spoken dinner companion who seems to know something about everything. De Botton's previous titles include *Status Anxiety*, *Essays in Love*, *The Consolations of Philosophy*, *The Art of Travel*, and *How Proust Can Change Your Life*.

As specialists in architecture, we may be skeptical of de Botton's dilettantism. In this equal parts psychological investigation and aesthetic treatise, some of de Botton's statements are oversimplifications. Is it true that "no one before" the 18th-century builder of Strawberry Hill, Horace Walpole, "had ever attempted to apply the ecclesiastical idiom of the Middle Ages to a domestic setting"? No, for the idiom had been used for houses (Penshurst Place, in England; Ca' d'Oro, in Venice) almost as long and often as it had for churches. And we may object to some of his descriptions, though delightfully entertaining. Here he is on Le Corbusier's Villa Savoye: "It seems

that the house may be no more than a temporary visitor and that its rooftop equipment could at any point receive a signal that would lead it to fire its concealed engines and rise slowly over the surrounding trees and historically styled villas on the beginning of a long journey home to a remote galaxy." At other times, his presentation of a perfectly sound idea, such as "the notion of buildings that speak" is marred by his apparent assumption that he has invented it.

But de Botton has not only a charming manner, but substance beneath it. His ideas, if sometimes cranky, are often admirably independent, refreshing, and even profound. This, for example, protesting against star architects: "The architects who benefit us most may be those generous enough to lay aside their claims to genius in order to devote themselves to assembling graceful but predominantly unoriginal boxes. Architecture should have the confidence and the kindness to be a little boring." And later in the book: "The places we call beautiful are ... environments that satisfy needs we never consciously knew we even had." *Stanley Abercrombie*

Camouflage, by Neil Leach.
Cambridge: MIT Press, 2006,
248 pages, \$25.

When we think of camouflage, our thoughts go first to military apparel designed to hide the soldier from danger in battle. But as fashion statements, such camouflage makes the user stand out on the street. For architect and theorist

Neil Leach, camouflage is a deeply ingrained human process. "We human beings are governed by the urge to conform and blend in with our surroundings ... We have a chameleonlike urge to adapt, and, given the increasing mobility of contemporary life, we are constantly having to do so." *Camouflage* the book explores this process in the course of the author's development of a theory of aesthetics.

Camouflage is not so much about concealment as it is about a desire to feel connected, to adjust, assimilate, and engage in a mediation between ourselves and our



environment. The book's argument is solidly constructed upon a foundation of philosophy, psychoanalysis, and especially, cultural theory, drawing from a pantheon that includes Adorno, Bataille, Bhaba, Benjamin, Deleuze, Derrida, Freud, Heidegger, and Marcuse. Though accessible, *Camouflage* requires an engaged effort on the part of the reader.

By the author's own admission, "*Camouflage* is addressed, perhaps, less to architecture itself than to the subjective processes by which human beings experience architecture." While scores of thinkers are referenced in the index, only four

architects are noted, and Adolf Loos is the only one mentioned more than in passing. And no works of architecture are considered. Nevertheless, the subtext about environments has implications for architecture. For the author, "the concept of camouflage points toward the important social role of the aesthetic domain as a means of reinserting the individual within society."

This exquisitely designed publication is itself an aesthetic domain, understated and carefully considered. Its cover is subtly seductive. All illustrations are of a young woman adapting, assimilating, and blending into various environments. They are hauntingly beautiful and are important to the craft and message of the book, yet they are also mysterious. All we are told is that they are the work of "the late Francesca Woodman." One suspects that there is further meaning that is hidden—perhaps through camouflage.
John A. Loomis, FAIA

Noise Orders: Jazz Improvisation, and Architecture, by David P. Brown, Minneapolis: University of Minnesota Press, 159 pages, \$60.

Type the words "architecture" and "jazz" in an Internet search engine and you might be surprised to discover numerous links to sites about software design. But the links between jazz and architecture that concern David P. Brown, associate professor of architecture at the University of Illinois in Chicago, are between modern architecture and urbanism, and jazz, the improvised



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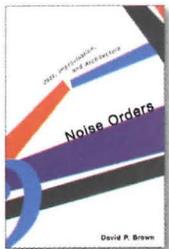
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Books

musical form. This is an ambitious undertaking, particularly given the myriad contested definitions of jazz



and architecture, so Brown's book deserves attention. Although flawed, it is a perfect example of G.K. Chesterton's "a good bad book."

An early draft of a chapter appeared in *Sites of Memory: Perspectives on Architecture and Race*, edited by Craig E. Barton (2001). That essay demonstrated Brown's erudite familiarity with the theoretical underpinning of Chicago's avant-garde jazz scene.

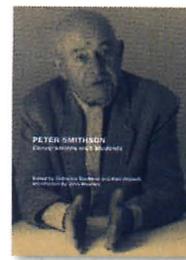
How this music connected to Chicago's architecture seemed vague. In the finished book, there is further evidence that Brown has a sweeping grasp of complex jazz theory—and can make some useful associations when he allows himself to transition from jazz theory to architectural practice. Linking the cascading, swooping piano runs of Cecil Taylor's improvisations to the flowing design of Santiago Calatrava's Bocde Roda Bridge is one stunning example.

But Brown's prose smacks of Postmodern academese. Grand theories abound, but specific, well-documented examples of architects thinking in a jazzy, fluid, less hierarchical and rule-bound way are rare. About a dozen poorly reproduced black-and-white architectural drawings and photographs punctuate this text. Among the major architects who have acknowledged their

indebtedness to jazz, how can Max Bond and Frank Gehry go unmentioned, and Walter Hood be given cursory acknowledgement? But as jazz great Fats Waller crooned, "This will have to do, until the right one comes along." *Norman Weinstein*

Peter Smithson: Conversations with Students, edited by Catherine Spellman and Karl Unglaub. *New York: Princeton Architectural Press, 2006, 96 pages, \$18.*

In many ways this is a sweetheart of a little book. Just two years before his death in 2003, Peter Smithson participated in a series of conversations with architecture students at Arizona State University (ASU) and delivered a brief lecture, "The Response to the Glut," which was followed by questions from the audience. Smithson's responses, his lecture, and the conversations are assembled here, along with an essay by editors Karl Unglaub, of Barcelona's EMBT Architects, and



Catherine Spellman, a professor at ASU. The book, part of the series *Conversations with Students* that has featured Rem Koolhaas, Louis Kahn, Santiago Calatrava, and others, functions as a primer on its subject. It familiarizes the reader with the eminence grise of postwar British architecture while looking back over his life and the work he produced in the course of a nearly six-decade career.

Indeed, the book is almost a survey of late Modernism and its malcontents, as Smithson revisits the genesis and aftermath of Team 10, the New Brutalism, and his longtime collaboration with his wife, Alison. Spellman and Unglaub fill in the gaps with extensive foot-



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Books

notes, but would have done Smithson a favor by correcting a few errors and misspellings in the text. For example, in the otherwise engaging essay "10 Richter Scale," they note that Smithson's friend and fellow Independent Group member Eduardo Paolozzi traipsed about the London neighborhood of "Bloomsberry." Nor do the editors check the very ruminative Smithson, whose train of thought can wend its way, in a few short lines, from the influence of graphs to the ashtrays of Charles Rennie Mackintosh.

On the other hand, Peter and Alison Smithson's writing was always characterized by a certain expansive airiness, as was true of their architecture, with its mystery, its voids, and elisions. In that regard, the editors have remained true to the Smithson spirit, and their book is a fitting tribute.
Ian Volner

Romantic Modernist: The Life and Work of Norman Jaffe Architect 1932–1993, by Alistair Gordon. New York: Monacelli Press, 2006, 240 pages, \$50.

Norman Jaffe was an architect with abundant talent, easy charm, matinee-idol looks, and a turbulent spirit. One August morning in 1993, he piled his clothes neatly on a beach and disappeared forever into the ocean. With this first biography of Jaffe, Alistair Gordon tries to understand him and give him his due.

The author follows Jaffe from his beginnings in 1932, as the son of poor Jewish immigrants in Chicago; to his departure for Seattle at 15, where he lived with relatives; to military service in Japan during the Korean War; to architecture school in Chicago and U.C. Berkeley; to employment with Joseph Esherick, exponent of the warm, woody Bay

Area style; to relocation in New York, where Jaffe worked for Skidmore, Owings & Merrill and then for Philip Johnson. In 1964, when his Berkowitz House in Upstate New York was published in *Record Houses*, Jaffe opened an office in Manhattan, expecting a flood of commissions. They failed to materialize. At the



same time, his wife (whom he had abandoned in California) was killed in an auto accident, and Jaffe assumed custody of their son.

Believing that domestic architecture dealt in dreams and stood at the core of the American experience, Jaffe slowly built a reputation based on the warmth of his Modern houses for artists and filmmakers on the East End of Long Island.

Influenced by Esherick, Wright, and Sullivan, Jaffe's unbroken shingled facades were topped by skylights; his steeply sloping, mono-pitched roofs sometimes touched the ground at one end while soaring as high as codes permitted at the other. As Jaffe became court architect to some of the biggest egos in the New York area, his name became a brand for conspicuous luxury. In the early '80s, he fled to an ashram in India, and on his return sought meaning in nonresidential work. There were a couple of high-rises in Manhattan, a couple of planned communities on Long Island, and the Gates of the Grove Synagogue in East Hampton, New York, completed four years before his death. Outwardly, the synagogue is a modest shingled form; its interior, however, is breathtaking. Hand-hewn in cedar and skylit, it uses every possible device to "pull you upward out of your shoes," Jaffe once told me. It was the jewel in the crown of his turbulent career.
Andrea Oppenheimer Dean



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New AIA firm survey indicates that while business is good, the profession itself changes slowly

Practice Matters

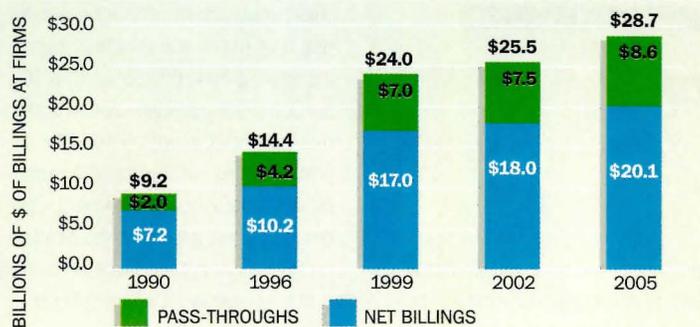
By Andrew Pressman, FAIA

The just-released AIA firm survey, *The Business of Architecture*, is essential reading for the profession's observers because it is the most complete benchmarking of trends such as firm size, economy, project delivery methods, and many other practice concerns. But after reading the latest edition, one expert opined that it could also have been titled *Business as Usual*, because many long-standing trends changed so subtly in the three years since the last report that it is very hard to say whether those shifts indicate real changes or the temporary bumps and dips experienced by all professions. On the other hand, in the newest report, authors Kermit Baker, Hon. AIA, James Chu, and Jennifer Riskus have begun testing two of the most remarkable shifts in the profession's behavior: the rapid adoption of green design and building information modeling (BIM). These weren't even mentioned in the last survey, but they'll only be gaining ground in the future.

No matter what you call the survey, it tells us that business is good. Firm billings increased 11 percent between 2002 and 2005, to reach \$28.7 billion annually. That contrasts nicely with 2002, when nonresidential billings were hardly growing, and the profession was being carried by its residential work. The survey notes, "According to U.S. Department of Labor figures, payroll

Contributing editor Andrew Pressman, FAIA, is a practicing architect in Washington, D.C., and the author of Professional Practice 101.

BILLINGS GROW BY 11 PERCENT BETWEEN 2002 AND 2005



employment at architecture firms increased more than 2 percent in 2004, almost 4 percent in 2005, and is on pace to increase close to 5 percent in 2006." In terms of proportion of firm activity within this growth profile, the residential sector has increased over 5.5 percent since the 2002 survey, to 17.7 percent of firm billings, and about 60 percent of that is in multifamily. Institutional still takes about 50 percent of the total share.

The big challenge for firms is recruiting appropriate talent to support all that growth, and finding and retaining the best people is clearly an ongoing strategic priority. This is also boosting wages. One short-term and perhaps less-than-ideal solution is outsourcing: Just over one third of firms outsource work frequently or when workloads are heavy. Only 8 percent of those firms say they send work offshore.

Firm matters

One interesting trend is that the number of sole practitioners declined 9 percent since 2002, while two-to-four-person firms

increased by the same number, indicating perhaps that sole practitioners are partnering up. The report indicates that, "Architecture firms have remained predominantly smaller practices.... the percentage of firms with five or more employees remained fairly constant in recent years." Moreover, small firms are still dominant, with 96 percent of all offices, yet large offices (50 or more employees) control almost 42 percent of all staff, and almost 52 percent of all billings. Predictably, the largest firms, according to the survey, also have much higher aver-

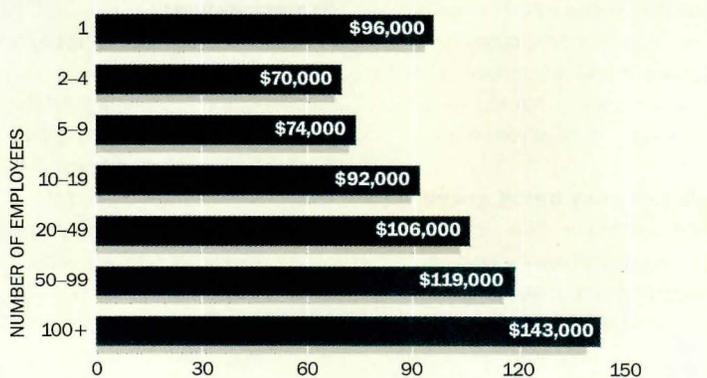
age net billing per employee—\$143,000 in firms with 50 or more employees, while firms with fewer than 20 average \$83,000. The survey implies that the larger firms' investment in advanced technology allows their staff to be more productive, although it seems likely that many other factors influence these sums.

Sadly, women and minorities are still grossly underrepresented in firms, but there has been some incremental improvement. Women now compose 26 percent of all architecture staff; minorities, 16 percent. These numbers have been growing about 1 percent per year since 1999.

The digital domain

Small- and medium-size firms (49 or fewer employees) that are nimble and can leverage technology will survive and prosper, and may even be competitive with their larger counterparts, yet many are hesitant to make the investment in technology needed to improve productivity

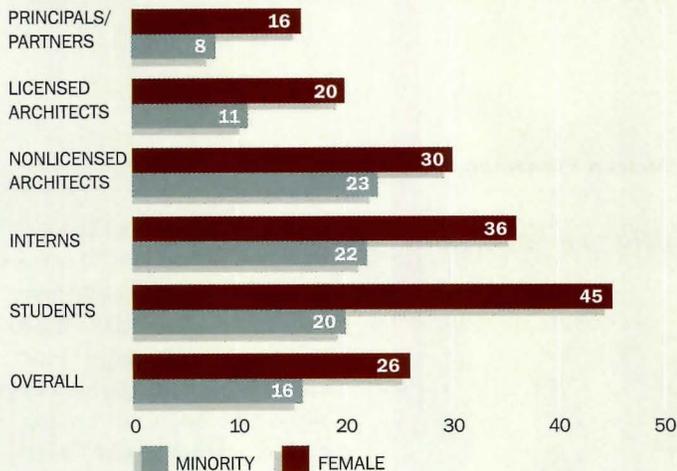
NET BILLINGS AVERAGE \$84,000 PER EMPLOYEE



Practice Matters

OVERALL, WOMEN MAKE UP 26 PERCENT OF ALL ARCHITECTURE STAFF; MINORITIES ACCOUNT FOR 16 PERCENT

PERCENT OF WOMEN AND RACIAL/ETHNIC MINORITIES BY POSITION AT FIRMS



and performance. The report states that overall, few firms use BIM software (about 10 percent are using it for billable work), and most of those are the larger firms. According to James P. Cramer, Hon. AIA, chairman and C.E.O. of the Greenway Group, "Medium-size firms are not going to be competitive nor innovative until they invest at least \$5,000 per employee in IT, and that means adding BIM purchases right now. It is puzzling to see in the AIA survey that firms spent only an average of \$2,700 per employee on IT expenses."

Web sites are an essential practice tool for recruiting staff, marketing, public relations, linking branch offices, and communicating with clients [see Practice Matters, RECORD, February 2007, page 57]. One curious finding, noted by Cramer, is that a whopping 40 percent of the firms that replied to the survey do not have Web sites.

It's not easy being green

By any definition today, an excellent building design must include a range of green, sustainable, and environmentally sensitive attributes. The trend is only *now catching on*, since only about one third of all non-

residential projects initiated in 2005 had "green features." And a mere quarter of firms designing projects in the residential sector characterized them as green. On average, 13 percent of firms have LEED-certified specialists.

Sustainable design goes to the heart of our social and environmental responsibilities as professionals. One of the challenges that architects face is convincing some clients that excellent (or even good) building performance should be a priority and an integral part of the design process from a project's inception. The data in the AIA firm survey may, however, be a great resource to assist in developing a persuasive argument for promoting the trend in green design.

Project delivery

An expected trend regarding project delivery, noted by Mark Zweig, founder of the AEC management consulting firm ZweigWhite, is that even though traditional design-bid-build is still the most dominant method—accounting for 60 percent of firm billings—it is slowly being superseded by other methods. It has declined 5 percent since 2002. While design-build receives much attention as the delivery method

FIRMS SPENT AN AVERAGE OF \$2,700 PER EMPLOYEE ON IT



that will replace design-bid-build, it was construction-management-at-risk that made the greatest gains, increasing from 6.9 percent to 10 percent. Conventional construction-management accounts for 13.5 percent, and contractor-led design-build grabs about 9.6 percent. For the first time, architect-led design-build has been called out separately, and represented a scant 3.9 percent of all firm billings.

The idea that design-bid-build is being supplanted by other delivery methods has implications for development of specific skill sets for future architects and, therefore, for architectural education. This paradigm shift, according to David W. Hinson, AIA, chair of the architecture program at Auburn University, in Alabama, suggests that the construction phase will be

Data in context

In interpreting the firm survey, it is important to place the data in the context of one's own practice goals and vision, which may indeed aspire to achieve something different from the representative numbers ("benchmarks and best practices") in the survey. As noted in the survey's appendix, survey results are based on 2,606 responses (a 22 percent response rate) from domestic offices of U.S. architecture firms owned by AIA members. The survey data was weighted to accurately represent all office sizes in the universe of domestic firms noted above. Jean R. Valence, Hon. AIA, vice president and director of strategic development at Symmes Maini & McKee Associates, sums up the consensus among several firm principals and management

SIGNIFICANT SHARE OF FIRMS INVOLVED WITH GREEN PROJECTS

PERCENT OF FIRMS WITH ANY PROJECTS USING PRINCIPLES OF SUSTAINABLE ARCHITECTURE, AS SHARE OF FIRMS WITH PROJECTS IN THAT SECTOR, BY CONSTRUCTION SECTOR



just as collaborative as the design phases. "The importance of working in teams will extend dramatically deeper into the project timeline," says Hinson. The art of collaborating and negotiating must be integrated into courses across the curriculum, including design studio, architectural technology, and professional practice.

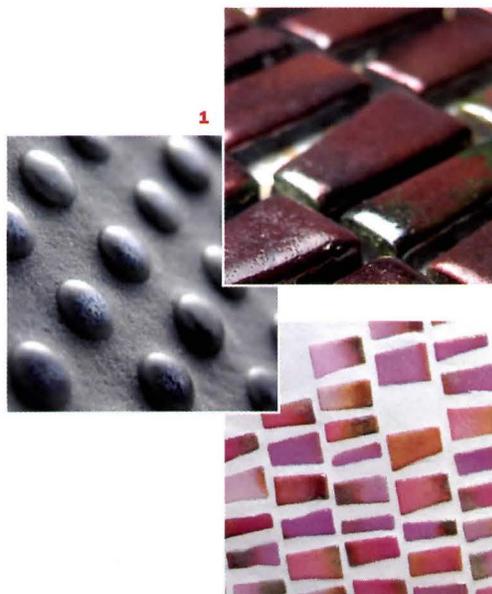
consultants: "While there are no great revelations in the findings, the amount of effort that the AIA invests in composing a valid sample for this survey is laudable." ■

The Business of Architecture is available free of charge to AIA members and can be ordered by calling 800-242-3837, and selecting Option 1.

Trade Show Review Bologna • Cersaie

With more than 1,000 exhibitors in 2006, Cersaie showcased a dizzying array of tiles with trends toward historically sourced floral prints, kitschy patterns, and gleaming metallic finishes. *Russell Fortmeyer*

1 Connect the dots Lite-Brite patterns are called to mind in Ceramica di Treviso's Silk stucco options (near right), while designer Toto Dolfato has created a ceramic mosaic look for the company's TrevisoProgetta's Murazzi line, shown with and without grout (far right top and bottom). Murazzi is available in a wide range of colors in a standard 12"-square grid. Ceramica di Treviso, Villorba, Italy. www.ceramicaditreviso.it **CIRCLE 200**



2 Patterns, please The Live collection from Ceramiche Provenza injects the sensibilities of 19th-century Victorian wallpaper into tile, with subtle hues that thankfully avoid the gloomy tonalities of the period. Tiles are available in 23"- or 16"-square or 23" x 16" sizes, and in muted green and blue colors. Ceramiche Provenza, Modena, Italy. www.ceramicheprovenza.com **CIRCLE 201**



3 Finding the one The Enigma line's punch-card effect brings texture to an otherwise subtle surface. This *Matrix*-like pattern is available in neutral colors and in various sizes, including 20"-square and 26"-square tiles. Monocibec, Sassuolo, Italy. www.monocibec.it **CIRCLE 202**



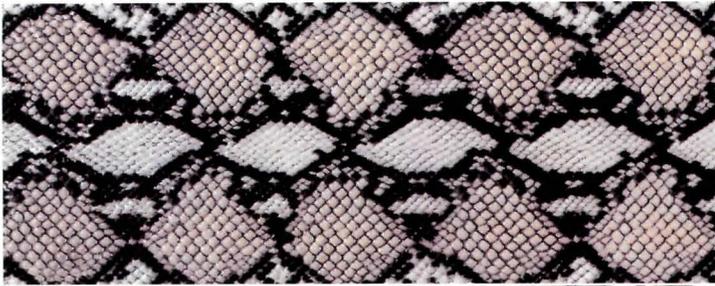
4 Crazy daisies Bisazza's Decori collection, shown in the Daisy option, incorporates a laser-cut floral scheme in glass chip slabs that manage to be both retro kitschy and decidedly modern in a larger-than-life scale. The line is available in black-on-white, red-on-white, or white-on-blue (shown), and in 12"-square and 24"-square sizes. A 3/8" thickness is suitable for floors. Bisazza, New York City. www.bisazza.com **CIRCLE 203**



5 Stealing beauty Fioranese's Steelwork line brings the sheen of metal to the durability of ceramic tile. The tile's metallic artificiality is extremely difficult to detect, making it a great substitute for floors and walls that can't support a slab of Cor-Ten. Available in a variety of tinted polishes, the tiles come in 4" x 24", 12" x 24", and 24"-square sizes. Fioranese, Fiorana Modenese, Italy. www.fioranese.it **CIRCLE 204**



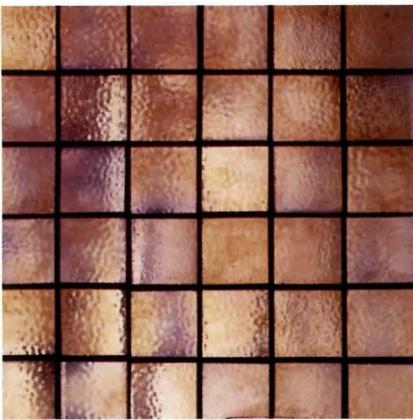
Trade Show Review Bologna • Cersaie



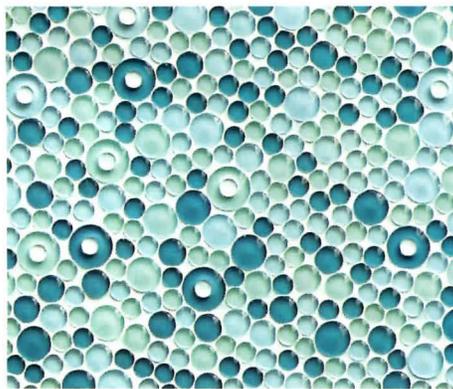
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7



8



10



6 Animal instincts Settecento's Animalier line, featuring snakeskin and leopard prints in white, black, and yellow, attests to the continuing popularity of animal prints at the show. A high kitsch-factor suggests the line should be used sparingly outside of a Las Vegas hotel room. Settecento Valtresinaro, Spezzano, Italy. www.settecento.com **CIRCLE 205**

7 Solid gold Casa Mood's extruded ceramic Maiolica series brings an understated glitz to kitchens bathrooms with white, black, silver, and gold (shown) color options. Tiles are available in 12"-square mosaics or individual sizes, such as 3" x 6" and the 6"-square tiles shown here. This series is part of a new comprehensive collection debuting throughout 2007. Casa Mood, Alpharetta, Ga. www.casamood.com **CIRCLE 206**

8 Blowing bubbles Like a bowl of Fruit Loops, Giaretta Italia's Cristall'ò collection of glass mosaics transforms any surface into a playfully bubbling color field. Available in minty green (shown), blue-green, lavender-purple, black-white, and yellow-orange. Giaretta Italia, Pove del Grappa, Italy. www.giarettaitalia.it **CIRCLE 207**

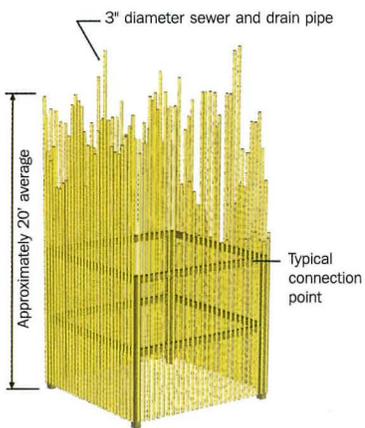
9 Clean lines The intense, linear texture in Marazzi's Sahara collection lends Minimalist architectural gravitas to any space. Available in gray, beige, and black in 12" x 24" and 24"-square sizes. Marazzi, Sunnyvale, Tex. www.marazzitile.com **CIRCLE 208**

10 Never needs watering Sici's self-explanatory glass mosaic Flower Power collection exemplifies one of the more over-the-top design statements at Cersaie. There are multiple flower schemes available, in room-defining 47"-square and 60" x 115" sizes. Sici, New York City. www.sici.com **CIRCLE 209**

9



Snapshot



By **Beth Broome**

Jay Smith's Square of Circles tree house incorporated simple, off-the-shelf materials and was built by a small crew of friends, but that's about where the similarity to the iconic, American backyard building type ends.

From June through December of last year, Smith's project was on view at the Dallas Arboretum as part of its *Ultimate Tree Houses* exhibition, a collection of 13 designs selected from entries by local architects. The designers, who were involved in choosing the trees for their creations, were each awarded a \$2,500 stipend for construction. The guidelines stipulated that the structure be ADA accessible and interactive, and that it not attach to the tree.

For Smith, a young architect practicing with the Dallas firm Shipley Architects, practical concerns were of paramount importance. Not only were the constraints strict and the budget slim (though he chipped in his own funds), but the architects were given just four days to construct their projects on-site. Of the handful of conceptual ideas Smith came up with, the one shown here was the most buildable. "The massing responds to the size of the tree,"

Redefining the backyard tree house

IMAGES: COURTESY JAY SMITH

Snapshot

Smith says, “but I wanted the elements to be more on a human scale.” In search of the right vertical building material, he combed the local hardware stores and came up with cellular core PVC pipe, typically used for sewage and drainage lines.

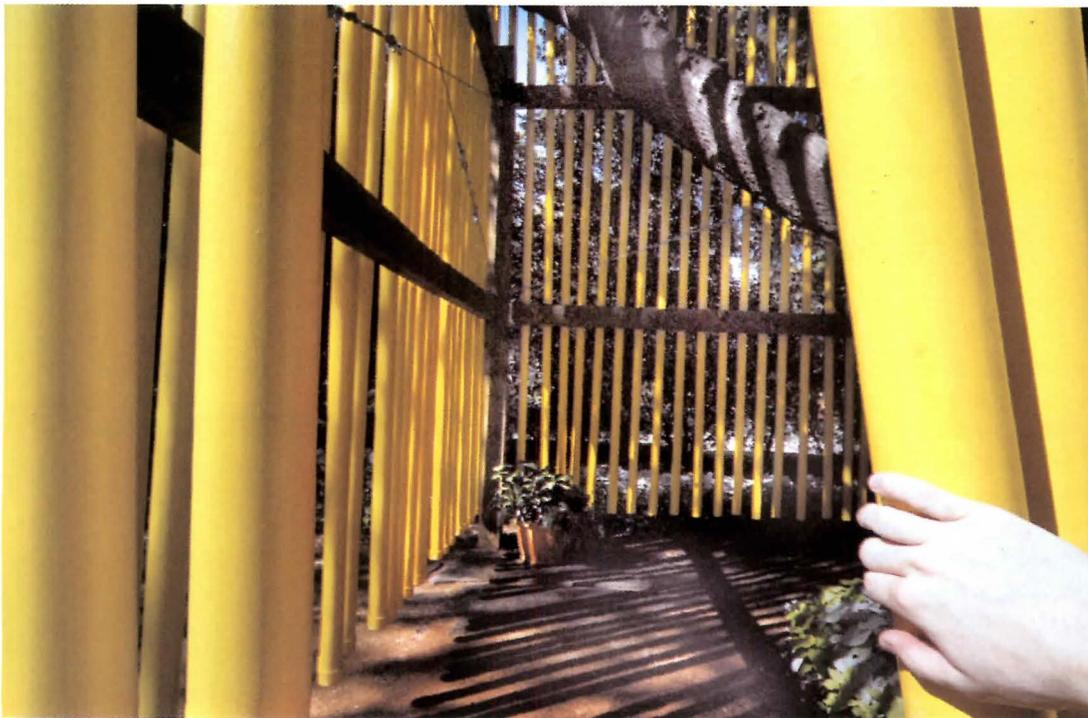
One hundred eight vertical pipes were bolt-hinged to a 16-foot-square frame of pine beams and columns braced with steel tension cable. The pipes hung a foot over the ground and terminated just under the branches, the tallest rising 34 feet. “I made the plan,” says Smith, “and the tree dictated the elevations.” Bolted only to the top beam, the pipes could be pivoted by visitors entering the space. The tree’s canopy provided a majestic ceiling.

Smith constructed much of the project in a warehouse and then assembled on-site with about a dozen friends and family, including his father and girlfriend. While the structure was not physically attached to the red oak it shrouded, it was thoughtfully connected to its site and subject in many other ways. The bright yellow that Smith chose to paint the pipes—originally striving for a contrasting, man-made look—soon proved to be an anchoring force, echoing and complementing the hues of the leaves and surrounding flowers as they changed over the seasons.

Perhaps in the interest of preserving their goodwill, Smith chose not to re-recruit the construction team to help him disassemble. Instead, he posted the tree house, which won awards from the Dallas AIA and the Texas Society of Architects, for sale on eBay. The result? A win-win-win situation: Smith washed his hands of the removal process, proceeds went to the American Cancer Society, and one happy bidder has given a new life to Square of Circles in his Dallas-area backyard. ■



The Square of Circles tree house, a temporary installation, paid homage to one of the Dallas Arboretum's red oaks. The tree's broad canopy served as a ceiling to the structure, which did not connect at any point to the tree (above). Yellow-painted PVC pipes bolted to a wood frame could be pivoted to gain entry into the space (left).





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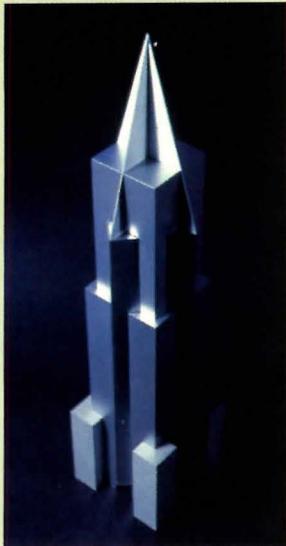
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William
McDonough, FAIA

On the **Next**
Industrial
Revolution

Interviewed
by Robert Ivy, FAIA
Edited by Andrea Dean





Projects completed early in McDonough's career include the Warsaw Tower, in Poland, the first project to propose planting trees to offset carbon emissions (far left). McDonough designed three passive solar homes in Ireland as part of his senior thesis at Yale School of Architecture (left).

Born in Tokyo, raised in Hong Kong, and trained in the U.S. at Dartmouth and Yale, 56-year-old William McDonough founded William McDonough + Partners, Architecture and Community Design (WM+P) in 1981. The 30-person firm translates cradle-to-cradle ideas into structures that make oxygen, store carbon, and produce more energy than they consume. After completing the Environmental Defense Fund's New York headquarters in 1984, McDonough sold his ideas to such corporations as Gap Inc., for which WM+P designed a 1997 grass-roofed corporate campus, and the Ford Motor Company, for which it is performing a 20-year, \$2 billion reengineering of the River Rouge Plant in Dearborn, Michigan. In 1994, when McDonough started a stint as dean of architecture at the University of Virginia, he moved his firms from New York to Charlottesville, where they remain today. In 1996, McDonough became the first and only individual recipient of the Presidential Award for Sustainable Development. His work takes him to Europe, Canada, and China, where he is helping draw up infrastructure plans in six new city districts.

William McDonough foresees what he calls "the next industrial revolution," in which environmentally driven product design and manufacturing processes would usher in an era of good design and abundance. Reducing the use of natural resources will slow pollution and depletion, so what's needed are new production strategies that eliminate waste altogether. He sees a future in which products can be repeatedly recycled and upgraded ("upcycled," he calls it). This kind of environmentalism, McDonough argues, will be good for business and job retention. McDonough Braungart Design Chemistry (MBDC), a partnership formed with the German chemist Michael Braungart, helps clients develop eco-efficient strategies and products. McDonough and Braungart's book, *Cradle to Cradle* (2002), makes a down-to-earth pitch for improving productivity by designing for reuse at every step of manufacturing. Last August, *RECORD's* editor in chief, Robert Ivy, and McDonough talked in McDonough's Charlottesville office, their chairs resting on a sand-colored carpet of nylon pellets and polymers that will be reclaimed again and again in a near-infinite cradle-to-cradle loop.

ARCHITECTURAL RECORD: In your professional life, you've been something of a polymath. Is that how you see yourself?

WILLIAM MCDONOUGH: I went to 19 schools in different countries before college. I've been exposed to different cultures and places and ideas. I think that broad exposure shows in my range of interests. Being a dean at the University of Virginia, I was impressed by the breadth of interests of the university's founder, Thomas Jefferson. In comparison to him, everyone looks like a slacker.

AR: Talk a little about how your interests fit into your professional life.

WM: I'm grounded in architecture, so I spend a lot of time on specific design questions for particular projects. In my business with Michael Braungart, we get down to the details of architecture and products and systems. Our work involves connecting with corporations and spending time talking to C.E.O.s and meta-managers.

AR: Is there a motivating or underlying influence that has led you where you are?

WM: I think that having seen people starve to death of disease in places of extreme shortages and having seen people thrive in places of abundance has yielded a set of values about the human right to celebrate life, liberty, and the pursuit of happiness, as Jefferson characterized it, and also the right of nature to exist and thrive.

AR: Did you have an "aha" moment or did you grow into this?

WM: It was a combination. Growing up in Hong Kong was a major influence. My grandparents lived in the woods in Puget Sound, where I spent my summers. As a child, I was either there or in the center of a bustling city with 6 million people on 40



Dr. Michael Braungart is a chemist and cofounder with McDonough of McDonough Braungart Design Chemistry (MBDC), in Charlottesville, Virginia.



The green office design of the Environmental Defense Fund in New York strives to respond to sick building syndrome (far left). The Bison Courtyard in Banff, Alberta, uses on-site storm-water and resource management, and certified sustainable harvested wood (left).

square miles. So that affected me. At Dartmouth I studied international relations. People have said that our work today is a form of high diplomacy as well as a form of action.

And then the energy crisis happened when I was in architecture school at Yale. I was shocked when major architects taught that solar energy had nothing to do with architecture. A few of us broke from the ranks at Yale. We were looking for what it meant to be a swan in the next century. I built my first solar house in Ireland while at Yale. We started the Environmental Trust Fund, and that was the first time we worked with materials on a molecular level. And then I won a competition for a skyscraper in Poland, for which I proposed that the developer plant 10 square miles of trees to offset the building's effects on climate change. That was 1989.

In 1991, I met Michael Braungart. The two of us coming together was what we called design chemistry. That was a great moment! Michael is a genius, and he showed me that the disparate threads I had been looking at in an intuitive way had a scientific basis, and that science had a design basis. That was a revelation.

AR: *The basis of your understanding is architectural, and his is scientific. Yet you're delving into areas at the intersection of these two worlds. Has it taken you into science?*

WM: For me science is like music. I love listening to it, but I am not a scientist. I am very attention-deficit disordered; I jump around a lot. So I'm always amazed at how scientists are able to drill down and stay with a subject. The practice of architecture at this point in history necessarily has to be informed by the science of making. You see polymaths like Vitruvius or Jefferson being very interested in science. You couldn't have a fundamental view of the human experience without science.

AR: *Is architectural education grappling with questions of science*

or making us inquisitive enough to explore?

WM: As a dean, I didn't have faculty trained in these areas, and there was a confusion in many educators' minds about interdisciplinary thinking and multidisciplinary thinking.

AR: *Expand on that, please.*

WM: I need a multidisciplinary team, including a chemist, to do my work, but I don't have to know chemistry. I think the important thing for architectural education is to teach that we need multidisciplinary teams to do the green work.

I think an important thing that's been missing is a coherent framework for design based on a sustaining strategy. It's sort of like we need a new Bauhaus, a new platform of thought and activity, and it will require a broad range of interests. The Bauhaus brought fundamentals of engineering to the arts and art values to engineering. We need to bring those two dimensions back together and combine them with advanced science, the understanding of relativity and DNA.

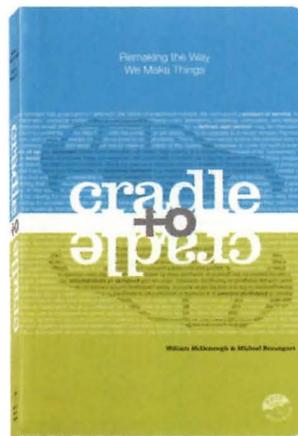
I don't have the math or science to be able to engage in a comprehensive discussion with a physicist or chemist, but I can read an equation. I can understand that energy equals mass, mass is not growing, but energy and bio-

mass are. So growth can be good. From a design perspective, that's an immensely valuable piece of information,

That brings us to DNA, because what's missing in the equation is biology. That's the next discovery of our era—DNA and nanotechnology, which includes knowing what's going on at the molecular level, what goes on in a virus, what goes on in genetic engineering, and synergetics.

AR: *These three issues or interests—high tech, nanotech, and synergetics combined with an underlying ethical framework and concern for the human condition—set you apart. Do you see yourself as having a point of view that differs from others?*

WM: No. I think that what I'm talking about is common sense.



Cradle to Cradle: Remaking the Way We Make Things, North Point Press, 2002.

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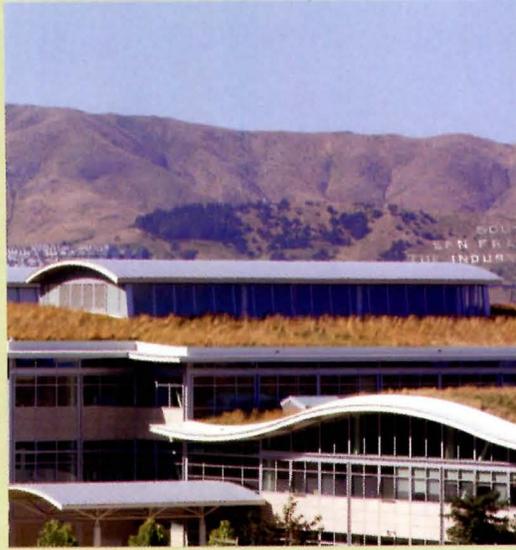
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The LEED Gold Ford Rouge project in Dearborn, Michigan, includes a 10-acre living roof, the largest green roof in America (far left). The Gap offices in San Bruno, California, feature an undulating roof covered in native grasses and wildflowers that respond to the local terrain (left).

I think everybody can understand what I'm talking about.

AR: Al Gore's made his movie, oil is at \$70 a barrel, temperatures have been at record highs, and China recently had the largest typhoon in 50 years. Has our clientele and the educated public come around?

WM: Any sentient creature would have to recognize that there's a sea change coming. There's what some people have called "the McDonough paradox": It's the worriers who will solve the problems for those who aren't worrying much. Not only will they solve the problem; they'll seize its opportunities.

AR: Are people knowledgeable about products?

WM: No. We're seeing people promulgating products as having recycled content, but what if you're recycling toxic products? The nice thing about cradle to cradle is it asks a very simple question: Are you cradle to cradle or not? It's not very complicated.

AR: Corporations seem to be jumping on the bandwagon because of the commercial implications. Could you talk a little about the implications of this for you as a planner and architect?

WM: Many people are adopting cradle to cradle and the specific strategies that Michael and I are proposing. And clients have become sophisticated, which allows us to continuously push the envelope. So we don't market ourselves; we respond to the marketplace.

AR: That's interesting. Do you have competitors?

WM: We've been careful not to compete. The Latin root for compete, *competare*, means "strive together," go forward together. I think I've also made a considered judgment not to expose my work broadly, but rather to expose the ideas broadly. And our ideas are not inconsistent with other peoples' good ideas. Other groups may be very focused on, for example, efficiency or being less bad; we're focused on being more good, because being less bad is still being bad. It's good to be less bad, but it's insufficient.

AR: Describe to me how your work began in the U.S., but evolved and grew to become international.

WM: My first building was in Jordan. When I graduated from

Dartmouth, I followed my professor of urban planning to Jordan as a field representative for the 100-year master-plan team for the Jordan Valley. I lived with the Bedouins, building settlements for them. After being nomads for millennia, they were settling, due to border closings in Iraq, Syria, and Lebanon. We had to figure out what it meant to settle a Bedouin.

AR: You are now working in China. What's your take on China's challenges?

WM: China is just so explosive. It's like wrestling a supernova. It's expanding and contracting simultaneously, so that it's both terrifying and thrilling. The Chinese have a long history of relating to the landscape and regard it as perpetual. So when they get the idea that we're designing for perpetuity, it makes sense to them. The other thing is that the president of China has called on the country to adopt a circular economy, and we're regarded as part of that.

People often ask me why I work with corporations that have been culprits in destruction, and my response has to be, "Who am I supposed to be working with?" China's similar. She's shaking the world and can flip a switch and turn off our economy. How could I not be involved in a place that's going to build new housing for 400 million in 12 years? Why would I not want to be a minuscule part of this huge undertaking? And we're considered very much part of it.

AR: Let me change gears a little. Are there challenges that you've faced that you haven't found a solution for or things you've tried that didn't work?

WM: Definitely. When you do experimental work you don't slide from success to success. You lurch from one stumble to the next. We stumble all the time. The things that we tried and didn't really work had to do with business. We've discovered that we're better as leaders than as managers. The other thing I've learned is that there is no instant success. Someone said paths are made by walking them. So we're just trying to walk the path, just keep going in our plodding way.

AR: You've chosen to keep your firm at a certain size as well.

WM: Right. I want an organization that's only large enough to



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KNAUFINSULATION



The Guantang Chuangye Sustainable Development Demonstration Project in Liuzhou, Guangxi Zhuang Autonomous Region, China (left), consists of an area of almost 5,500 acres that aspire to create a city master planned around sustainable strategies.

get the work done and small enough that I can stay in touch with everybody in it.

AR: *This is counter to a trend for architectural firms to get larger.*

WM: I've met with C.E.O.s who ask what's my business model, and when I tell them I'm a small service business, their jaws drop. I'm perfectly happy economically doing it the way I do it. Like any small business, we're always on the edge, but we're used to it. I get royalties from the products I've designed. And I get paid for speaking to big trade associations and corporate leaders.

AR: *What do you see as your primary strength as a professional?*

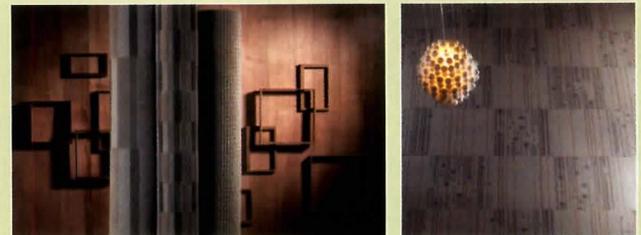
WM: I'm totally comfortable in a corporate boardroom, I'm comfortable in a neighborhood meeting, or in a group of designers chewing over some knotty problem. And I think that has been incredibly valuable.

AR: *Who taught you to do that?*

WM: I think growing up in an English colony, Hong Kong. My father was president of Seagram overseas, so I spent a lot of time as a student with senior business executives. Their language doesn't sound unfamiliar. My broad experiences and the fact that I've been not only in professional practice but also in academia gives me confidence. I think confidence is a big part of it. I'm very confident. Plus I don't expect anybody to give me something for nothing.

AR: *You may have all the architects in the country seeing this interview. What do you want to tell them?*

WM: One is that we are ready to help architects and others with our deep chemistry. We would like to connect thousands of firms and individuals through our Web site and make our databases and cradle-to-cradle approach available to them. We'd like hundreds of firms to become cradle-to-cradle firms. We'd like to save firms the trouble of forming their own "green teams." We'd share our resource information and that of thousands of people around the world. We focus on design chemistry, but there will be others who concentrate on botany, zoology, energy, water, social fairness, food. If we all said we want cradle-to-cradle things—carpets, shoes, cars—that's



Judged for their content, recyclability, and manufacturing, these Cradle to Cradle-certified products embody ecologically intelligent design that eliminates waste: Work*Life and Urban Reflections from Shaw Industries (above two); MechoShade Systems (upper right); and the Steelcase Think chair (right).



hugely powerful. I would invite everybody to join us. That would be one really important message.

The other message is that what we're doing is fundamental to human rights. The fact that we could be running out of natural resources makes the growth of human populations a problem. If each child being born is seen as a problem, then human rights cease to exist. So we need to restore the soil, or industry needs to upcycle it. We need to see petrochemicals as an asset that can be made into plastics and not burned. Cradle to cradle is a celebration of a world of abundance, not a world of limits. That's the big message. ■

For an expanded version of this interview, go to archrecord.construction.com.

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The courthouse rises in an area east of downtown where old warehouses, a highway overpass, and railroad tracks set the character. The city hopes the new courthouse will serve as a catalyst for redevelopment. The entry facade (this page) engages the street with glass and a grand stair.



In Eugene, Oregon, **Morphosis** creates a **U.S. COURTHOUSE** that provides common ground for people with different points of view

By Clifford A. Pearson

At a time when Americans are deeply divided about the role of government and whether judges should interpret or apply the law, courthouse architecture has become a potential battlefield. No matter what it looks like, every new courthouse—especially one built by the federal government—sends a message about values and political beliefs.

Iconography was very much on the mind of Michael Hogan, the chief judge of the U.S. District Court for the District of Oregon in 1999, when the General Services Administration (GSA) held a design competition for the Wayne Lyman Morse U.S. Courthouse in Eugene. (Hogan is no longer chief judge, but remains on the court.) A conservative jurist appointed by the first President George Bush, Hogan imagined Cass Gilbert's Supreme Court building in Washington, D.C., whenever he thought of courthouse design. Enter Thom Mayne, the Morphosis principal who flaunts his credentials as a leftist iconoclast and designs buildings whose fragmented forms embody, as he explains, "a lack of completion, an open-ended process." Natural enemies, Hogan and Mayne locked horns immediately. When Hogan was outvoted and Morphosis won the Eugene courthouse job, the judge couldn't see how he could ever be comfortable working in a building designed by Mayne. But he set himself the task of engaging Mayne in a discussion of values and ideas, challenging the architect while keeping his own mind open. The two strong-willed individuals had plenty of time to wrestle with issues large and small, as the courthouse site changed and the building didn't open until December 2006. By then, Hogan and Mayne had become close collaborators, still disagreeing on politics but speaking in one voice about the critical issues expressed in the \$78 million, 270,000-square-foot courthouse that stands on the south bank of the Willamette River.

The judge and the architect found common ground by focusing on values such as transparency, access, and civic engagement. "Old court-

Project: Wayne Lyman Morse United States Courthouse, Eugene, Oregon

Design architect: Morphosis—Thom Mayne, FAIA, principal; Kim Groves, project manager; Maria Guest, job captain; Ben Damron, Patrick Tighe, Eui-Sung Yi, project designers; Caroline Barat, Linda

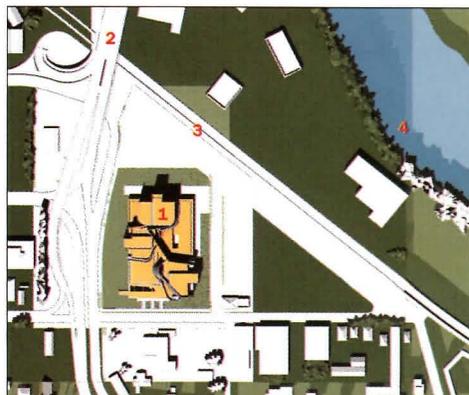
Chung, Ted Kane, Ung-Joo Scott Lee, Rolando Mendoza, John Skillern, Martin Summers, project team

Executive architect: DLR Group

Engineer: KPFF (structural, civil)

Construction manager: Jacobs Facilities; Construction CPR

General contractor: J.E. Dunn



Given little architectural context to connect with (top), the building establishes its own design vocabulary that expresses an open-ended process (above).

1. Courthouse
2. Elevated roadway
3. Railroad
4. Willamette River



The building places a fluid, steel-frame structure atop a straitlaced, concrete base. The 8th Street elevation (top spread) refers to old courthouses with its grand stair and raised entry on a *piano nobile*. The concrete stair, adjacent amphitheater seating, and planted terraces also serve as security measures, replacing bollards and heavy walls. A roof deck (left and opposite, bottom) provides daylight to the hallway leading to the building's six courtrooms.



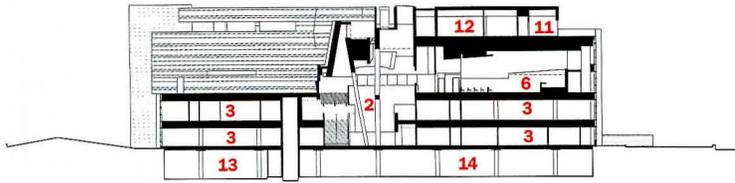
houses sat on the public square, so everyone knew where the law was,” says Hogan. “With their imposing columns and porticoes, they expressed the importance of the courts and served as civic landmarks.” After traveling to France with Mayne to visit Richard Rogers’s Law Courts in Bordeaux, Jean Nouvel’s Palace of Justice in Nantes, and the Cartier Foundation in Paris, Hogan saw how these values could be embodied in buildings made with modern materials and technologies. “We spent a lot of time talking about history and breaking down the courthouse into its

THE CURVING, ORGANIC FORMS OF THE COURTROOMS ESTABLISH A COLLECTIVE LANGUAGE FOR THE BUILDING.

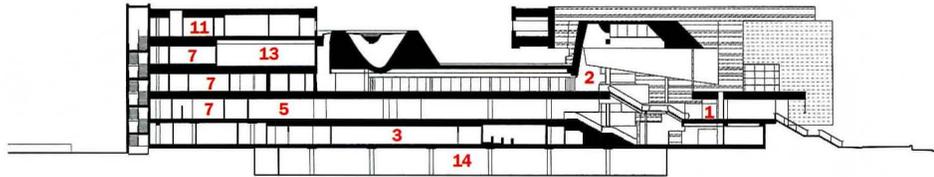
essential elements,” explains Mayne. “We both admired the old, one-room courthouse in the middle of town that had an iconic, singular presence,” adds the architect. “In a lot of recent courthouses, however, the courtroom gets lost in a sequence of many different office and judicial spaces.”

So Mayne and his project manager Kim Groves started with the project’s six courtrooms and designed the rest of the building to support the primacy of the spaces where justice is served. The curving, organic forms of the courtrooms they developed allude to the cedar-clad pods





SECTION A-A



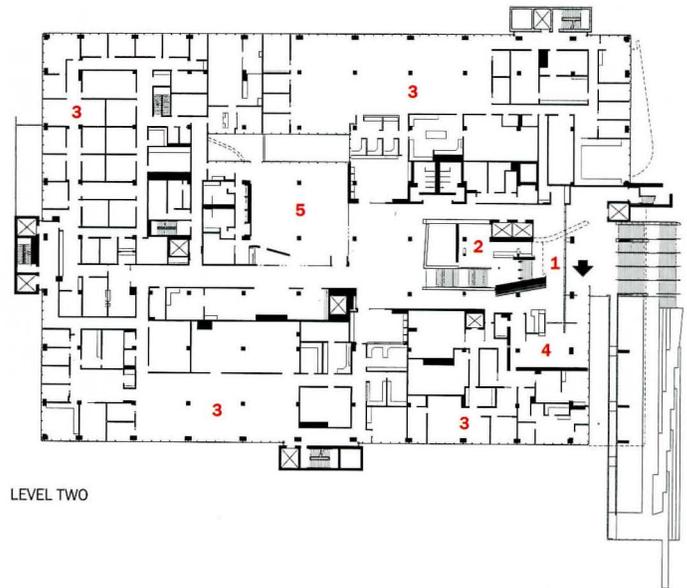
SECTION B-B

1. Lobby
2. Atrium
3. Offices
4. Security
5. Jury assembly
6. Courtroom
7. Jury suite
8. Roof deck
9. Roof terrace
10. Bamboo garden (below)
11. Judge's chamber
12. Library
13. Mechanical
14. Parking

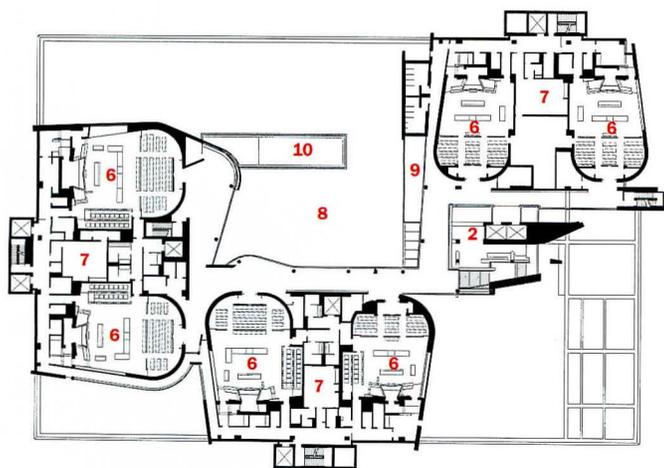
To keep the courtrooms on one floor, Morphosis freed them of ancillary functions, such as the judges' chambers (which it placed on the fifth floor) and offices (which it put on the first and second floors).



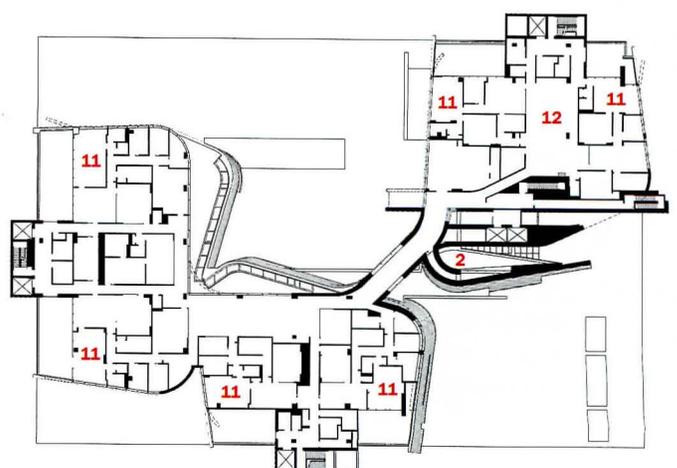
LEVEL ONE



LEVEL TWO



LEVEL THREE



LEVEL FIVE



The building's orthogonal and curvilinear geometries come together in the skylit atrium (above and below).

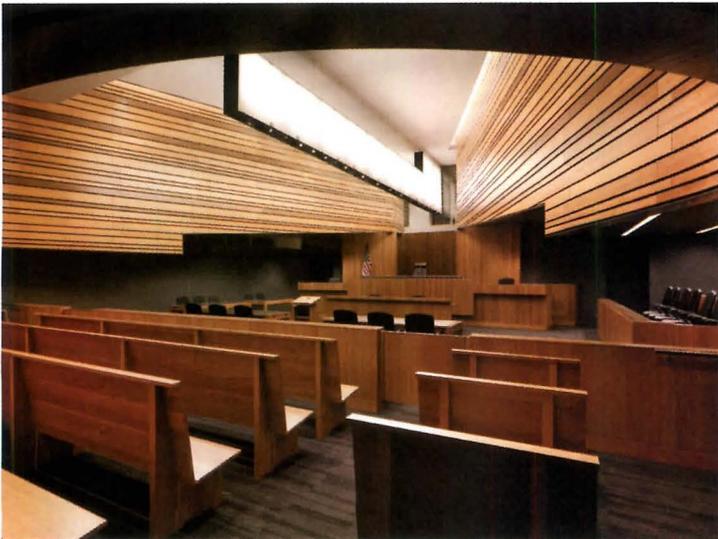
Rogers designed in Bordeaux and establish what Mayne calls a “collective language” for the rest of the building. In an unusual move, Mayne and Groves placed the judges’ chambers above the courtrooms instead of adjacent to them, and inserted pairs of teardrop-shaped courtrooms in three pavilions. As a result, the rooms for judicial proceedings read as distinct forms, announcing their role as the public venue for justice. Wrapped in ribbons of 16-gauge stainless steel brushed with a nondirectional finish (so it won’t create glare), the courtroom pavilions express a fluid attitude to the law (or at least design) that seems to be more Thom Mayne than Michael Hogan. Inside each courtroom, though, a strong central axis—reinforced by a suspended, beamlike lighting fixture and a window directly above the judge’s chair—reminds the public of the judge’s stature and seems to speak in a more conservative tone.

This split personality runs throughout the building. While the courtrooms and judges’ chambers wrap themselves in undulating cloaks of brushed steel, the floors below (which house administrative and support spaces as well as offices for the courts, the U.S. Attorney, probation and pretrial services, the GSA, two U.S. senators, and one member of the House of Representatives) follow an orthogonal, 28-foot grid. In structure, the building divides in two, as well, with the lower two floors employing a poured-concrete frame and the upper three floors a steel





The architects sculpted the hallway leading to the courtrooms, bringing in plenty of daylight (above two). Paneling of cherry and walnut add warmth to the courtrooms (below two).





Artist Matthew Ritchie created the illuminated wall murals (at left) and the sculpture (at right) on the third-floor roof deck.

frame. The idea was to create a rectilinear plinth on which Justice stood in her draped steel robes.

To imbue the building with a civic presence and recall the iconography of old courthouses, Mayne gave it a *piano nobile* accessed by a grand stair on its main elevation facing 8th Street. Raising the entry level to the second floor also helped the architect handle tight security requirements in an unobtrusive way. Instead of heavy bollards or imposing walls, he used a row of grassy terraces, the concrete grand stair, and adjacent amphitheater seating to protect the building from car bombings. Setbacks and planted berms on other elevations provide security. As in all federal courthouses, three separate circulation systems (one for the public, one for judges, and one for prisoners) offer another layer of security.

The building's orthogonal and curvilinear characters come together in an impressive atrium that rises five stories. While the project's two personalities sometimes seem to be at odds with each other when viewed from outside, they are more resolved on the inside, creating dynamic spaces not only in the atrium but in the double-height hallway on the third floor connecting the six courtrooms. With daylight coming from above and from a large roof deck around which the hallway wraps, the courtroom floor vividly establishes the sense of openness and transparency that Mayne and Hogan wanted so much to communicate. But, alas, the roof deck (except for a small area on one side) is closed to the public. A trio of illuminated murals by artist

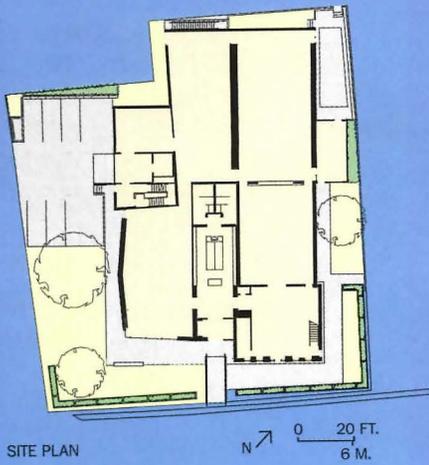
Matthew Ritchie depict Oregon's history and landscape and serve as visual links between the three courtroom pavilions. (The courthouse features an effective art program, with pieces by Ritchie, Kristin Timke, Cris Bruch, and Sean Healy.)

The courtrooms, which range in size from 1,800 to 3,000 square feet, express the gravity of the judicial process without resorting to any old-fashioned symbols or devices. Cherry and walnut paneling wrap around the upper portion of the rooms in a warm embrace, while dark gray carpeting and walls define a lower, somber area around the simple, pewlike seating.

Although environmental concerns were not part of the project's original mission, Mayne and Hogan agreed the building must reflect Oregon's prevailing ethos of sustainability. Using a variety of green strategies—including proper solar orientation, daylighting, efficient air handling through access flooring, and radiant heating in the floors of the main public spaces—the building achieved a LEED Gold rating.

"This building is the first deep look at courthouse design in decades," states Hogan. Approaching issues of security, transparency, and iconography in fresh ways and *drawing forth* underlying values, Mayne and his firm have created a building that speaks to constituencies who don't always agree on many things. ■

For Sources, go to page 202, and Projects at archrecord.construction.com.



SITE PLAN

N ↗ 0 20 FT.
6 M.

On a cramped site, the architects pushed the building's envelope to its limit without imposing on the quaint town. The new building gives the museum a strong presence on the main thoroughfare.



PAAM
SQUACOTOWN, NY
ASSOCIATION & MUSEUM

Machado and Silveti challenge and benefit a historic seaside community with the PROVINCETOWN ART ASSOCIATION AND MUSEUM

By John Gendall

To those who have visited Provincetown, Massachusetts, it would be hard to imagine a 20,000-square-foot institutional building rising up in the middle of that quaint, New England seaside town. But such a building now exists, and thanks to a thoughtful design by Machado and Silveti Associates, it fits right in.

Operating from a white clapboard house since 1921, the Provincetown Art Association and Museum (PAAM) has been a long-standing presence on Cape Cod. But ad hoc additions over the years left the museum an architectural collage of disjointed constituent parts. With each addition carrying its own mechanical system, the museum was not only unsightly, but also inefficient. The lack of climate control and leaking roofs discomfited employees and visitors, but more important, prevented the museum from borrowing artwork from other institutions.

When the new executive director Christine McCarthy took over, she decided to finally restore and expand the museum. Her challenge was to commission a large institutional building on a cramped site in a quiet residential section of the small beach community.

McCarthy turned to Boston-based Machado and Silveti, whose principals, Rodolfo Machado and Jorge Silveti, are longstanding Harvard professors and Provincetown homeowners. The two Argentina-born architects have always been particularly committed to generating specific designs in the context of competing, even polarizing, styles. They set out to navigate a third way, resulting in what the two call “unprecedented realism,” the title of their 1995 monograph edited by K. Michael Hays. In this approach, they acknowledge competing vernacular and formally autonomous precedents, but position their work in the unforaged territory in between.

In between in Provincetown

Such a scheme was required for the Provincetown museum. Rather than razing the entire structure, the team salvaged and restored the original house along with two galleries in the back, while tearing down the more

Project: Provincetown Art Association and Museum, Provincetown, Massachusetts

Architect: Machado and Silveti Associates—Jorge Silveti, principal in charge; Rodolfo Machado, consulting

principal; Andrew Cruse, AIA and Michael LeBlanc, associates in charge; Kelly Smith, Derek Johnson, John Clegg, Chris Grimley, project team

Client's Project Manager: Daedalus Projects



The museum's ground-level opening connects it to the neighborhood (above and opposite). Lighting in the second-story art school is partly

concealed behind cedar strips, while two box lanterns (above and top) are extruded, enlivening the relationship of solid and void.



The tripartite arrangement carries through to the western elevation. At the side of the addition, a new receiving door (above) has simplified the shipping and storage of art.



derelict add-ons. In a \$5 million, two-part process, in 2004 the architects restored the old house so that the museum could mount shows in its exhibition space while the new wing was being built the following year.

Silvetti notes that they “used every buildable square inch of space.” But by manipulating the relationship of solid and void, the architects eliminated what the program suggested would be an urbanistic imposition on the small town. The elevation’s massing is broken up into three horizontal bands. The lower, concrete-and-glass portion is set back from the building’s volume. Tucked beneath the upper two levels, it withdraws from the street, an effect accentuated by the glass walls. On the top level, a boxy glass lantern is pulled up and out from the cedar siding, which amplifies this isolated element as a negative space in relation to the mass. And at night when the museum’s lights are on, other glazed voids appear that are otherwise partially concealed by day behind the thin strips of cedar. Some of the voids are behind the cedar, while others emerge from it, allowing them to break up and activate the surface.

In addition to reducing the overall volumetric impact, these techniques also manage to negotiate the space between two aesthetic polarities. The building neither capitulates to the town’s shingled ver-

nacular Cape Cod context, nor reacts against it as a purely formal, autonomous object. The uppermost band is wrapped in cedar—like so many of the museum’s neighboring clapboard buildings—but is positioned here in thin, linear strips, like unmovable louvers. The middle register is clad with cedar shingles, the most quintessential Cape Cod element. But they are custom Spanish cedar, and are sized larger than

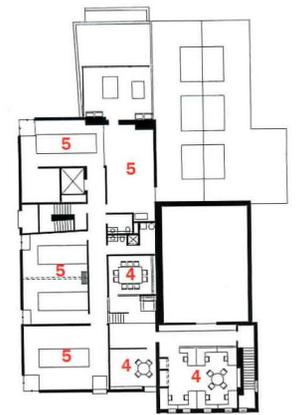
IT NEITHER CAPITULATES TO THE CAPE COD CONTEXT, NOR REACTS AGAINST IT AS A FORMAL, AUTONOMOUS OBJECT.

their Massachusetts counterparts. Fixed using a Dutch lap system, each shingle overlaps on both its top and its side, in contrast to the typical Cape Cod style that overlaps only top to bottom. And on the lowest band, the concrete and glass assert the design’s contemporaneity. But the concrete is board-formed, so its surface is imprinted with local wood. Each of the building’s distinct surfaces therefore reveals a manipulation of material and form that leaves the architecture uncommitted to any aesthetic categorization.

The new building almost doubles the museum’s space, which had been confined to the original

clapboard house since 1921. The new building picks up cues from the house, but with contemporary expression.





SECOND FLOOR

1. Reception/bookstore
2. Gallery
3. Museum back-of-house
4. Administration
5. Museum school



FIRST FLOOR

0 10 FT.
3 M.

The art school on the museum's second story is flooded with daylight (left). The first permanent home for this popular community resource, the school has access to the museum's collection.





Features such as natural light helped the museum earn a LEED-Silver distinction. Light-sensitive artwork can be exhibited in the two galleries in back.

Old and new

A staircase leading up to the second-story classroom and offices helps to suture the new to the old. This feature links buildings whose floors have two different heights (10 feet in the new compared with 8 feet 6 inches in the old) without compromising the interior continuity between the two volumes. On the exterior, the new building follows the eave of the old one, which unites the two with a single, strongly articulated line. This visual continuity is accentuated by pushing the new building's upper level to the western side, away from the old house.

Partitioned into five galleries, the exhibition spaces can be used individually or collectively. Some galleries are intimate, others more expansive, but together they provide a logical and unencumbered venue for viewing art. And in a rare move for a building type that normally demands enclosed galleries, a glass wall in the first gallery allows an interaction between the museum and Provincetown's main pedestrian thoroughfare. Two galleries toward the back are totally enclosed and can thus exhibit light-sensitive work. A second-story art school draws from both the exhibitions and collection. The architects accommodated a desire by the school to have the collection on-site by adding 2,000 additional square feet of storage space.

The first art museum to ever qualify for LEED, PAAM earned a

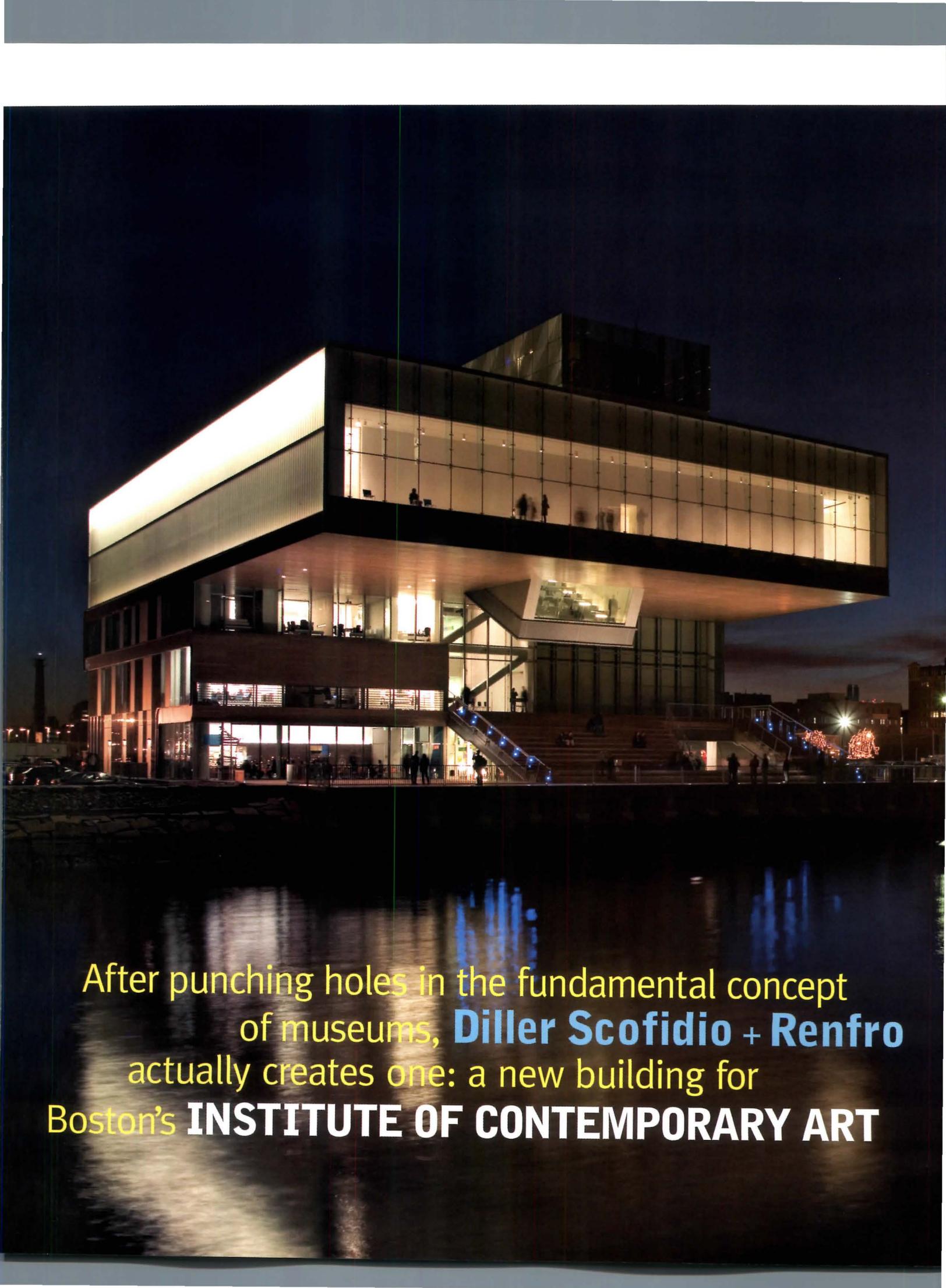
Silver rating from the U.S. Green Building Council. Photovoltaic arrays coupled with a number of other measures, such as a thermally efficient skin, low-flow water features, and natural light and ventilation contribute to a substantial overall measure of sustainability.

Art (vs.) museum

Recent museum architecture often invites commentary on its relationship to the art it houses (currently notable in the escalating debate over Daniel Libeskind's Denver Art Museum [RECORD, January 2007, page 84]). On one side of the discussion are museums whose formal expressiveness results in interior spaces that force the art and its curators into awkward submission. And on the other side is an architecture resigned to providing little more than exhibition walls enclosed in a box.

Appealing once again to its ability to find a third way, Machado and Silvetti transcends that debate. With PAAM, the firm realizes a museum with an expressive and elegant form perfectly amenable to showing art. Its simple beauty satisfies the intentions of both sides of the conversation, and panders to neither. ■

For Sources, go to page 202, and Projects at archrecord.construction.com.



After punching holes in the fundamental concept
of museums, **Diller Scofidio + Renfro**
actually creates one: a new building for
Boston's **INSTITUTE OF CONTEMPORARY ART**

ICA visitors appear as if on display inside the museum's luminous box (opposite), dramatically cantilevered 80 feet toward the bay (below).



PHOTOGRAPHY: © NIC LEHOUX, EXCEPT AS NOTED



By Sarah Amelar

It seems remarkable that architects Elizabeth Diller and Ricardo Scofidio—longtime irreverent skeptics of the very idea of the art museum—ever won the commission to design the recently completed home of the Institute of Contemporary Art (ICA), in Boston. But ICA director Jill Medvedow—whose short list ran from Diller+Scofidio, of New York, to Peter Zumthor, of Switzerland; Office dA, of Boston; and Studio Granda, of Iceland—was more than willing to take risks. In fact, she sought out architects who had never realized a major building in the United States before. To meet that criteria, Diller and Scofidio had no need to reinvent their résumé: In more than two decades of practice, they had lingered provocatively on the theoretical fringes of architecture, completing only one actual building (Slither housing [2000], in Gifu, Japan) and one interior (the Brasserie restaurant [2000], in New York's Seagram Building).

Ever since the firm's founding in 1979, Diller+Scofidio (which formed Diller Scofidio + Renfro, with Charles Renfro, in 2004) challenged the rituals and spatial constructs of everyday life, upending such culturally embedded icons as the picture window, the tourist suitcase, and the great American lawn. Its discourses, engaging electronic technologies and sparked with ironic visual and linguistic puns, largely inhabited the arenas of installation and conceptual art, video, or dance, rather than architecture per se. The strategy typically relied on an amusingly clever device that viewers quickly realized was altering their perceptions or choreographing their moves and, in so doing, delivering a pointed social or institutional critique.

Even in the Diller+Scofidio retrospective at the Whitney Museum in 2003, the duo deployed a playfully undermining device: robotic drills on tracks that scuttled about the exhibition, randomly driving messy holes into the museum's pristine walls. While Diller and Scofidio were complicit with the museum in producing a grand show of their work, their staged (institutionally sanctioned) "disobedience" seemed to insist: But you see, we're still provocative outsiders—we're not *really* part of The Establishment.

With the ICA, the architects still seem to be casting themselves as cerebral titillators or intellectual guerrillas. But in contrast to their Blur Building (2002)—a temporary pavilion in the form of a self-generating cloud, housing virtually nothing but fleeting experience and a fog-creating mechanism—the 65,000-square-foot ICA definitely needed enclosure and solutions to the nitty-gritty of program and site constraints. In moving the 70-year-old museum across town from a cramped former police station in Back Bay to Fan Pier, a desolate, 21-acre site on South Boston's waterfront

Project: ICA, Boston

Architect: Diller Scofidio + Renfro—
Elizabeth Diller, Ricardo Scofidio,
Charles Renfro, principals

Associate architect: Perry Dean
Rogers Partners Architects

Engineers: Arup (structural, m/e/p);
Robert Sillman Associates (metal)



The architects tucked the museum's entrance obliquely into its southwest corner (left). The west elevation reveals the "folded" section through the theater, with the slope of raked seating descending from the third to the second floor, and then continuing down through the stadium steps outside (opposite). The "fold" is expressed here in a South American hardwood, Santa Maria, with painted aluminum panels. Crowning the structure, north-facing light monitors project up from the cantilevered gallery volume, rendered in channel glass (opposite).



PHOTOGRAPHY: © PETER VANDERWARKER (THIS PAGE)

poised for development, director Medvedow had a top requirement: to put the galleries on a single floor. The catch was, she needed 17,000 square feet of exhibition space (for temporary shows and the newly forming permanent collection), but the parcel allowed a footprint of only 16,000 square feet.

With the architects' characteristic deluge of ideas, they proposed four schemes, one with a barge letting exhibition space break away and travel to other waterfront neighborhoods. Determined to maximize the galleries' overhead daylight, Diller Scofidio + Renfro engineered a trade-off with the Boston Redevelopment Authority (BRA). The ICA would retract its footprint to the north, on the water side—widening a stretch of the city's future 47-mile HarborWalk—in exchange for the right to overhang the coastal path. Hence the genesis of the museum's top (fourth) floor, a luminously translucent, "floating" box of skylit galleries, surging toward the harbor on an extreme cantilever, 80 feet long, with four, 24-foot-deep steel megatrusses.

The ICA rises like a giant periscope, its lens hovering tantalizingly at the brink. Engaging the water is so key to the scheme that the structure's landside—its main approach—almost feels like its rear. Most people, unless in a water taxi, arrive across a sea of parking lots (future hotel, residential, and mixed-use sites, now in development) to an apertureless, banded composition of channel and clear glass with matte-aluminum panels. The entry, understated as a back door, slips visitors in obliquely at the southwest corner.

On the waterside, the \$41 million building reveals its most open and dynamic face. In the trade-off with the BRA, the architects were not merely broadening the HarborWalk and gaining gallery space. They envisioned the path extending up metaphorically into the building, like a single undulant ribbon "enfolding public and private realms," as Diller puts it. With one continuous surface material—Santa Maria, a hardwood used in boat-building—the boardwalk "flows" up to form stadium steps (a see-and-be-seen venue) overlooking the water. The deck then morphs into the stage floor and raked seating inside the museum's theater, only to curl back, wrapping the auditorium ceiling and rolling outdoors again as the cantilever's underbelly above the grandstand. Revealing the wood's course, the east and west elevations are essentially section cuts. "The Fold," hardly a new idea, was all the rage in the 1990s, inspired by writings of Gilles Deleuze and the proclivities of emerging computer software. Despite that decade's prodigious outflow of "folded" schemes from architecture schools and theoretical practices, only a few (from UN Studio and several other firms) actually got built.

While the ICA's fold flows dynamically down the building's west side, the curve becomes more rigid, far less expressive on the east face, where it seems almost a conceit superimposed on more straightforward, rectilinear forms. Diller suggests that where it unfurls into a grandstand, the form subverts the traditional notion of monumental front steps rising



Sectional views across the open elevator shaft and adjacent atrium space (left) reveal enticing fragments: the Mediatheque's upper levels and, through a vertical truss, the outdoor deck. The ICA draws on many of the architects' earlier explo-

rations. Here, a tower of exposed fluorescent bulbs at the center of the museum's internal stairwell (below) recalls *Loopholes*, a 1992 Diller+Scofidio installation, much as the Mediatheque (opposite) draws ideas from the Slow House scheme.



to a rarified domain of art. Whether or not the ICA's understated entrance and transposed "front steps" really buck The Establishment (and that's arguable), the building responds, most of all, to the aqueous edge.

The architects saw the harborscape simultaneously as a "draw and a liability or distraction from the artwork," says Diller. "Opening up the views all at once seemed too much—almost pornographic, totally exposed." Instead, the architects envisioned the building as a view-altering apparatus, or what Diller calls a "valve turning on and off the context." With a relatively simple program—a lobby, museum shop, café, 325-seat theater, administrative offices, and galleries—the architects "choreographed," as they put it, the journey through the ICA, consciously controlling the focus along the way, much as their conceptual work toyed explicitly with perception. From the spatial compression of an entry zone under the slope of the theater's rake, offering an oblique glimpse of the harbor, visitors ascend in a room-size elevator, scanning views out through its glass walls and supporting trusswork. With these visual teasers as constructive distraction, the elevator slips by the barely noticed, largely administrative second and third floors to an introspective, windowless zone: two neutral, well-proportioned galleries, illuminated by daylight (or electricity at night) filtering through a stretched-fabric ceiling under a north-facing sawtooth.

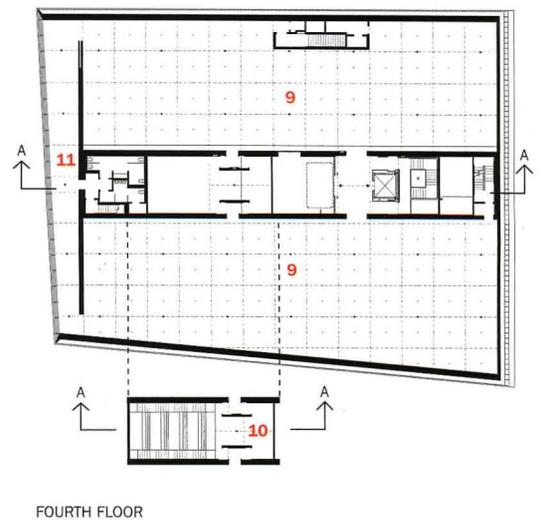
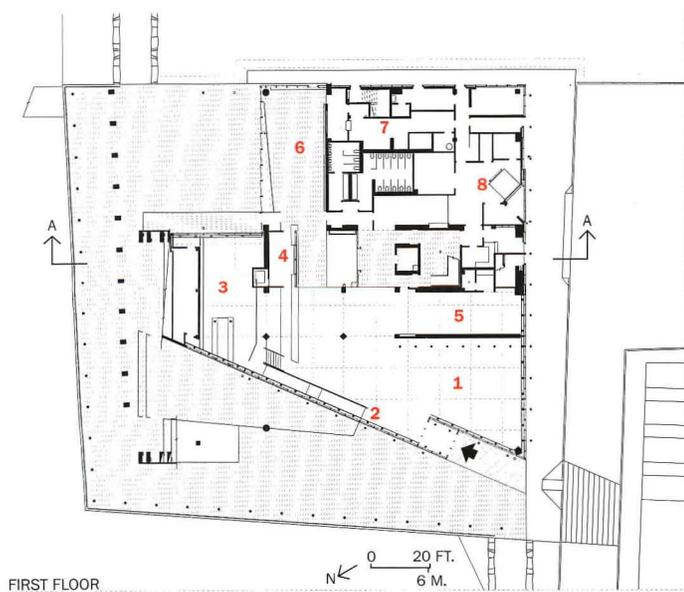
Soon the view comes back with a splash (almost literally) in the



SECTION A-A: Through Mediatheque and outdoor grandstand



1. Lobby
2. Ramp
3. Bookstore
4. Coats
5. Art education lab
6. Café
7. Food preparation
8. Loading dock
9. Gallery
10. Mediatheque
11. Founders' Gallery
12. Bridge
13. Elevator lobby
14. Atrium
15. Mechanical





Founders' Gallery, a passageway connecting the paired exhibition spaces. This panoramic perch is enclosed to the north by a 128-foot-long, floor-to-ceiling, mullionless window (the lens of the great periscope) and conveys the breathtaking sense of floating above the water in a hall virtually inhabited by the bay and urban skyline. But this was not the architects' original intent.

They had planned to apply to the glass a lenticular film that would allow only perpendicular views out (appearing blurry from oblique angles), giving you the sensation of being stalked by vistas as you walk along. But when the museum board and staff toured the construction site, they were so wowed by the va-va-voom view, they insisted the glass remain clear. So the full-frontal "pornographic" panorama exposes itself sooner than first envisioned (a dramatic out-of-sequence move Diller still wistfully bemoans).

From here, the viewing "valve" closes down considerably in the Mediatheque, a cascade of flat-screen computers, with raked seating, descending to the biggest screen of all, a 21-by-9.5-foot, downward-canted window, framing a horizonless, dizzyingly abstracted "swatch" of the water's wavy surface. The means are simple, and the effect mesmerizing.

The computers let the visitors who can tear themselves away from the spectacularly manipulated view research the ICA collection. From the exterior, the Mediatheque appears as a projection booth or huge trap door, flapping down from the cantilever's underside. Inside, this space—a conceptual art piece in and of itself—is arguably the most extraordinary part of the ICA, akin to James Turrell's work in transforming vast natural expanses into framed, viewable planes of pure light or color. The Mediatheque also recalls Diller+Scofidio's unbuilt Slow House (1991), which was essentially a door along a curve leading to a picture window with ocean views partly blocked by a monitor showing a video of the ocean—one controlling device leading to another—rigged to keep the viewer from ever lining up the horizon lines in and outside the monitor. The Mediatheque, like Slow House, suggests that architecture mediates perception as much as, say, video does.

If visitors pass from the Mediatheque into the theater, entered one floor down, atop its rake, they regain full harbor views, this time through the stage's backdrop: two glazed, perpendicular curtain walls. Here, the outdoor stadium steps appear as a lower tier of theater seats, descending toward the real stage, the water. Again, the skyline's civic presence becomes almost palpable. (The giant picture window also has screening and black-out blinds.)

While the Founders' Gallery panorama is at least as stunning as the stage's backdrop, the experience of being stalked by views through lenticular film might have offered a phenomenal counterpoint to both the theater and Mediatheque, clarifying the spatial sequence and heightening the sense of the building as a view-controlling valve. But the lenticular addition might have transformed the ICA entirely into a self-conscious cerebral game, a museum as a series of intellectual art pieces, by the architects, competing with (and blowing out of the proverbial water) the work in the "regular" galleries.

Certainly, as realized, this box of visual tricks raises questions about what controls our readings of what we see—with a nod to the familiar 20th-century conundrum of what is art. But when it comes to displaying actual exhibitions, the new ICA building takes a far tamer approach. "Having spent our lives on the other side of the wall, making art and feeling frustrated by spaces," says Diller, "we wanted the galleries to be neutral, reprogrammable, unscripted." So they relegated the official art to good, handsomely proportioned, evenly luminous spaces that are, in the end, conventional.

Without radically shifting our experience of seeing art or our understanding of what a museum is, the ICA achieves a light-filled architecture with compelling connections to the water and the city. In some sense a retrospective of the firm's conceptual ideas, the building is more a viewing machine poised at an edge than a cutting-edge machine for viewing art. ■

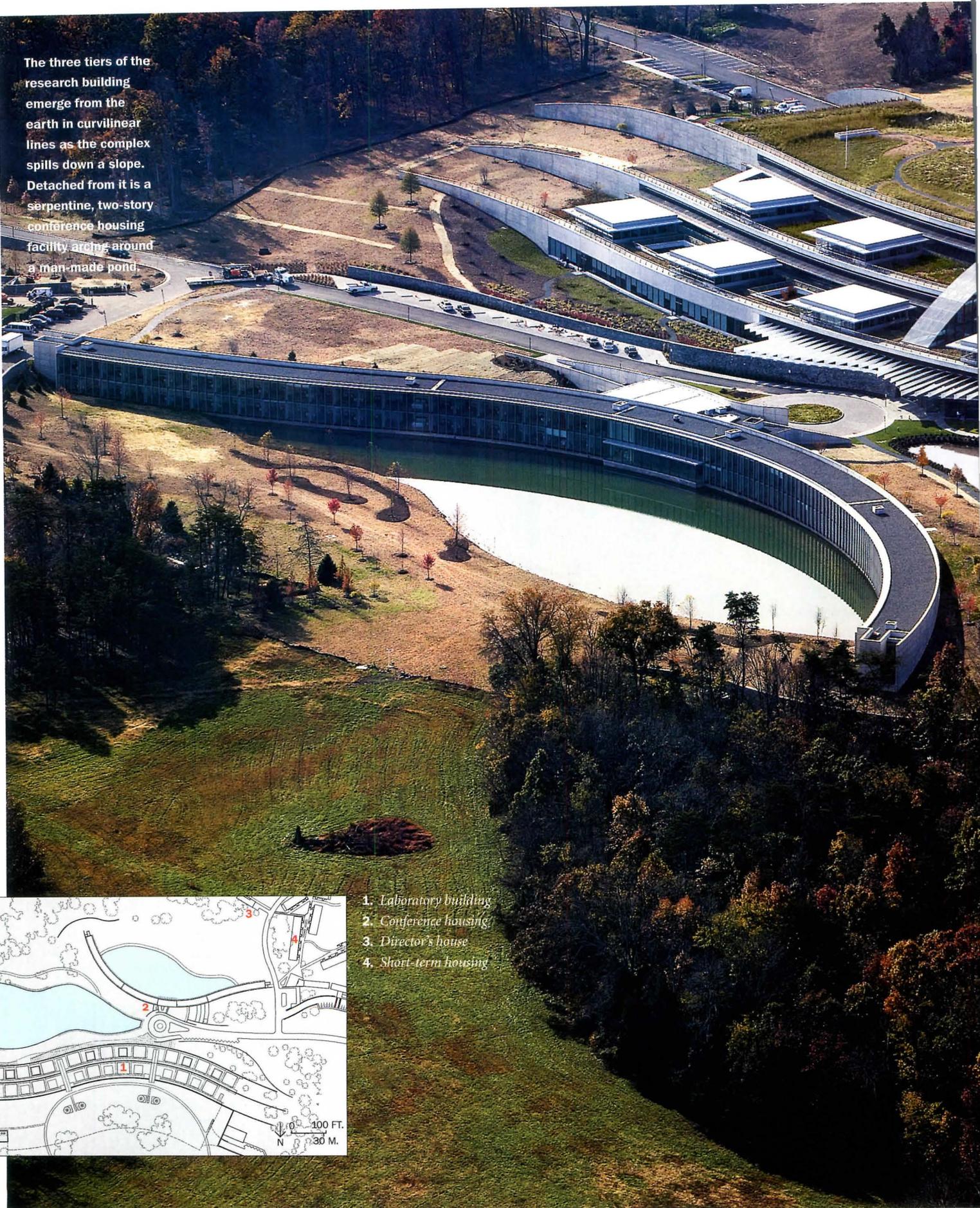


For Sources, go to page 202, and Projects at archrecord.construction.com.

The architects provided open exhibition spaces that the curators can partition temporarily, as needed. A luminous, stretched-fabric ceiling, filtering daylight from north-facing monitors, floats visually above the galleries (opposite, top and middle). Both the theater (opposite, bottom) and the Founders' Gallery (right) expose full harbor views.

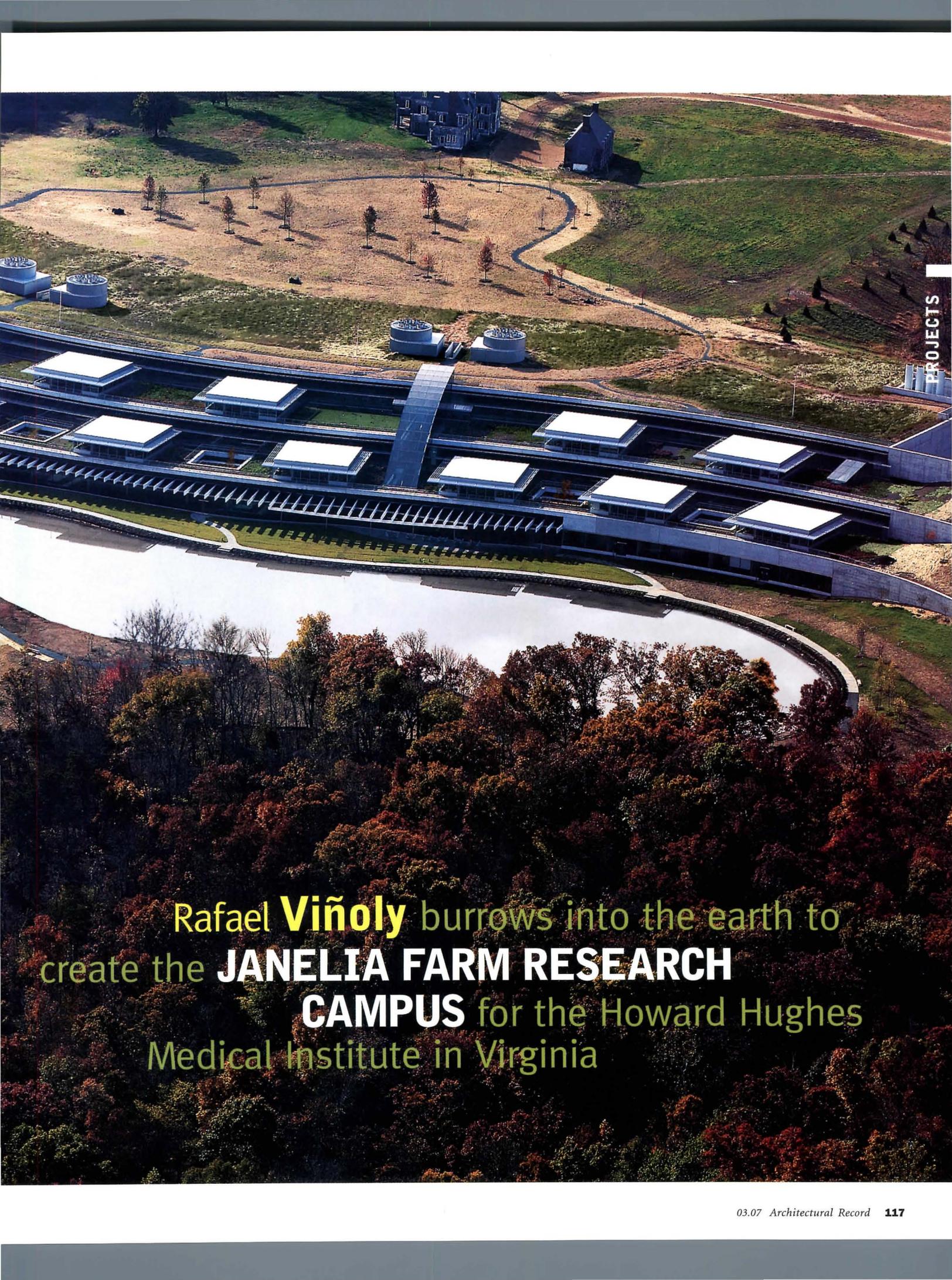


The three tiers of the research building emerge from the earth in curvilinear lines as the complex spills down a slope. Detached from it is a serpentine, two-story conference housing facility arching around a man-made pond.

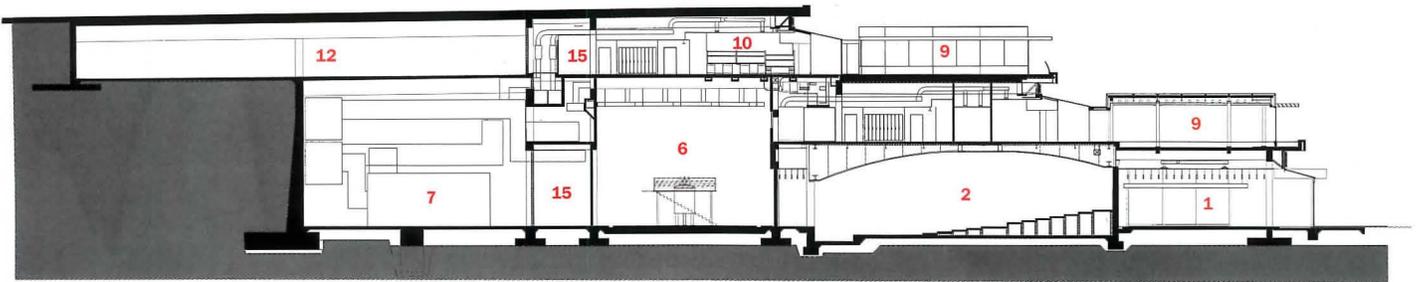


1. Laboratory building
2. Conference housing
3. Director's house
4. Short-term housing



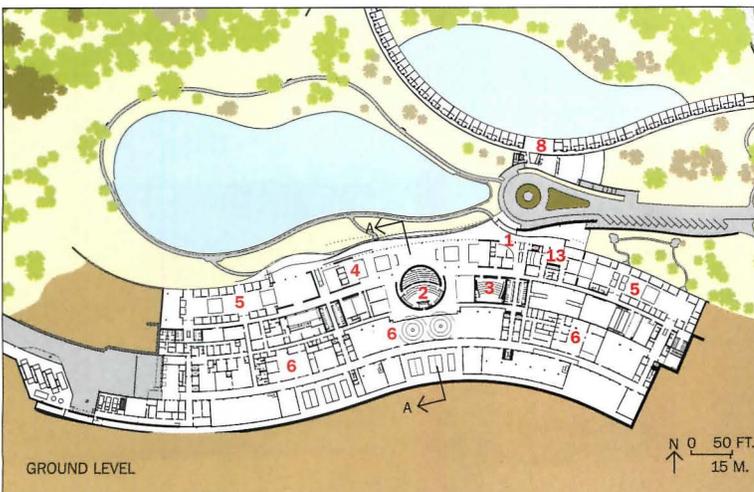


Rafael **Viñoly** burrows into the earth to create the **JANELIA FARM RESEARCH CAMPUS** for the Howard Hughes Medical Institute in Virginia



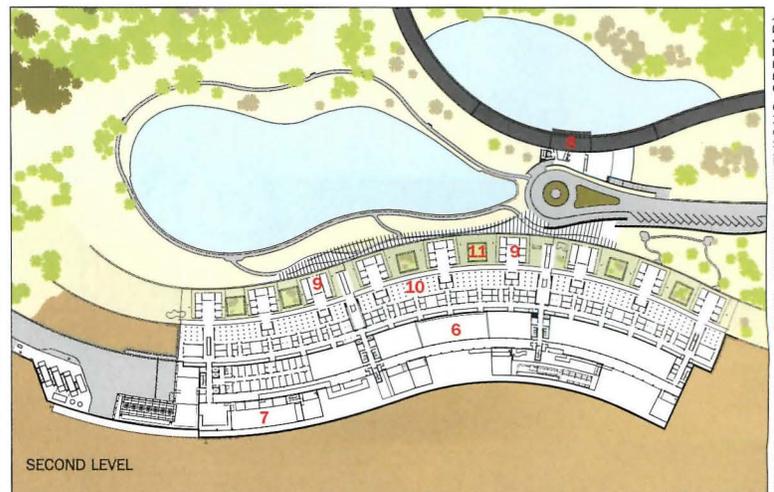
SECTION A-A

0 100 FT.
30 M.



GROUND LEVEL

N 0 50 FT.
15 M.



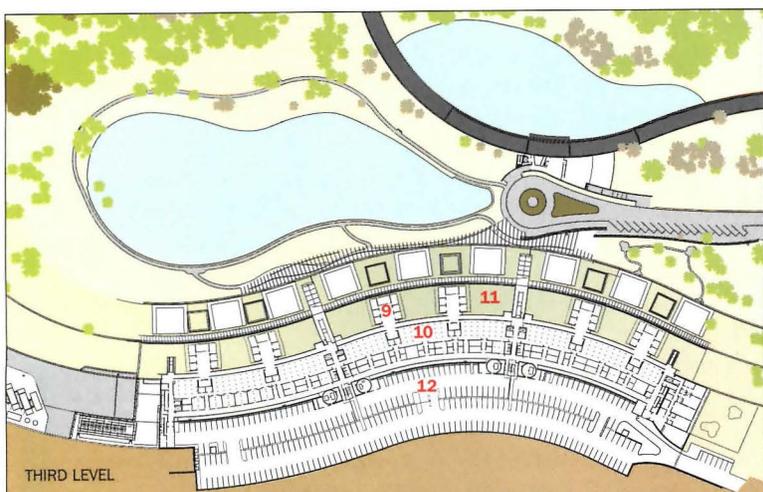
SECOND LEVEL



The three-tiered, 947-foot-long laboratory building contains the auditorium, seminar room, dining room, café, and administrative offices on the first

level, with the laboratories on the second and third. The labs overlook planted terraces, on which glazed office pods for the scientists are placed.

- | | |
|-----------------------|------------------|
| 1. Lab building lobby | 9. Office cell |
| 2. Auditorium | 10. Labs |
| 3. Seminar room | 11. Roof terrace |
| 4. Library | 12. Parking |
| 5. Offices | 13. Dining |
| 6. Lab support | 14. Main stair |
| 7. Building support | 15. Corridor |
| 8. Conference housing | |





At the entrance, painted steel truss beams support a glass canopy. Poured-in-place concrete columns demarcate interior zones where ceiling beams are veneered in maple and glazed atriums admit more daylight.

By Suzanne Stephens

The more successful buildings by Rafael Viñoly, FAIA, display distinct athletic gestures—from the smoothly arcing roof of the 1994 Lehman College Physical Education Facility in New York to the exuberant, glass-barrel-vaulted roof of the Kimmel Center for Performing Arts in Philadelphia [RECORD, March, 2002, page 106]. With the newly completed Janelia Farm Research Campus outside Leesburg, Virginia, however, Viñoly has exchanged such feats of bravura for a subtler move—that of merging a 947-foot-long, 280-foot deep, curvilinear building with the earth. By deftly inserting a three-tiered, terraced structure into the gentle slope of a hill to serve as a research center for the Howard Hughes Medical Institute (HHMI), the Uruguayan-born, New York-based architect has created a dramatically deferential work of architecture. Although the planting needs about five more years before hard edges of the building begin to be softened by the landscape, the concept is already compelling.

HHMI, headquartered in Chevy Chase, Maryland, is a philanthropic foundation that awards grants to scientists and engineers for advanced biomedical research. Since it was formed in 1953, the foundation has supported decentralized investigation in various academic and research institutions. Now, finally, scientists can come to the 581,000-square-foot center to work in small, often interdisciplinary teams for

various lengths of time. In addition, the campus offers 96 rooms as overnight accommodations in a separate, 59,000-square-foot conference housing structure, plus short-term housing in a cluster of nine multifamily residences. The scientists started moving in last fall; by 2009, the HHMI expects to have about 100 visiting investigators and 250 research staff.

In planning this campus, HHMI found a 281-acre tract of land near Washington, D.C., bordering a Potomac tributary 15 minutes by car from Dulles Airport. The property had belonged to Vinton and Robert Pickens, an artist and journalist, respectively, whose steeply pitched, hipped-roof brick house, designed in 1936 by Smith and Walker, crowned the site. Since the state of Virginia required the manor house, now listed on the National Register of Historic Places, to be kept intact, along with a view cor-

Project: *Janelia Farm Research Campus, Howard Hughes Medical Institute, Ashburn, Va.*

Architect: *Rafael Viñoly Architects—Rafael Viñoly, FAIA, lead designer; Jay Bargmann, AIA, project director; Sami M. BaSuhail, AIA, Charles Clements, AIA, and Bob Steel, project managers*

Client: *Robert McGhee, HHMI architect and senior facilities officer*

Engineer: *Thronton Tomasetti (structural); Burt Hill (m/e/p, fire)*

Interior designers: *Rafael Viñoly Architects; Robert McGhee*

Landscape: *Dewberry and Davis; Paula Hayes*

At the top of the lab building, a steel stair—covered by an arched glass skylight—turns and is cantilevered to the roof level. Curved lines of the auditorium (below left) and café (below right) on the ground floor soften hard surfaces.





The glazed walls of the labs (above) allow scientists to view the landscape (below). Viñoly's office designed lab casework and left ceilings free of pipes and wiring.



facilities officer, Robert McGhee. Viñoly adds, "We were told to forget about hierarchy or tenure—just convey the reality of the excitement of research." In addition to conference accommodations and short-term housing, a residence had to be provided for the director, but not the Pickens mansion: That was too hierarchical and formal for HHMI's vision, says McGhee.

With the assistance of Lars Lerup, the dean of Rice University's School of Architecture, in Houston, McGhee sent a dozen architects

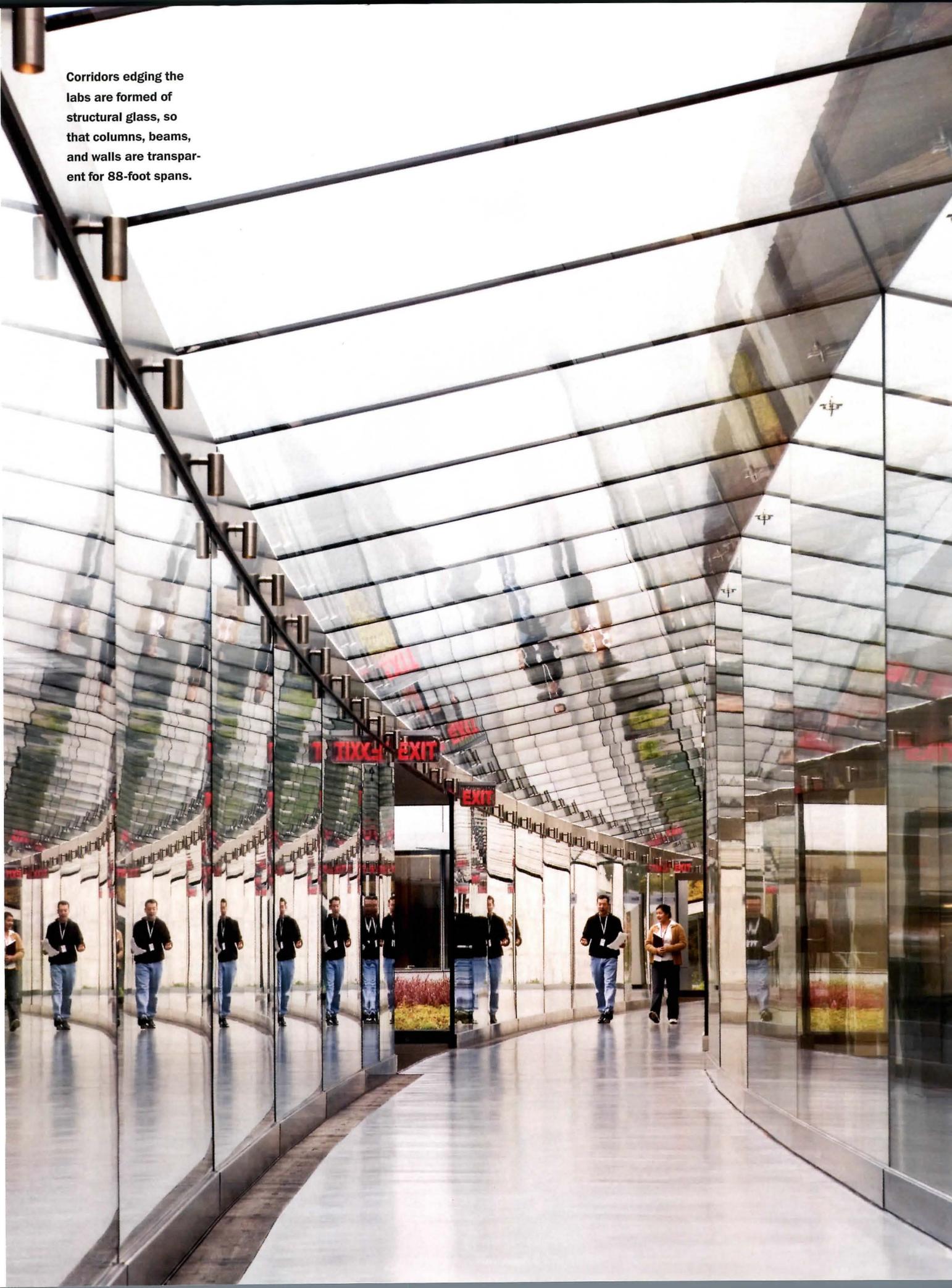
ridor across the Potomac to Sugar Loaf Mountain, the placement of the lab building and separate conference housing posed a challenge.

More specifically, the program called for creating a campus that would foster interaction between scientists in their laboratories and offices, not to mention dining areas devoted to dining and socializing, according to the institute's architect and senior

requests for qualifications. Once a short list was narrowed down to four, including Pelli, Clarke, Pelli; Tod Williams Billie Tsien; and Kallman McKinnell & Wood, HHMI asked the architects to come up with concepts. Two review sessions subsequently took place—the first at HHMI headquarters, the second at each of the architect's offices. Viñoly and Jay Bargmann, AIA, Viñoly's project director for HHMI, both note that the program was one of the most impressive they had encountered because of its philosophy and detail. Nevertheless, nothing is easy: McGhee relates that when he visited Viñoly's office two weeks before the final presentation, "They had laid out one-story hexagons across the site. I said, 'We're not doing that,' because it was too spread out for interaction." Then to McGhee's surprise, "Viñoly threw the work away, and came up with a provocative scheme within the next two weeks." Explains Bargmann, "We changed the approach, designing from the inside out, and we put the offices on the outboard area of the labs, so that offices and labs and nature would interrelate."

The gently serpentine building is composed of three floors embedded in and terraced down a slope to the tributary. Two skylighted staircases divide it into thirds and help give a sense of orientation to the occupants. The lowest level, defined on the exterior by curved fieldstone walls, opens into a lobby leading to the auditorium, large seminar room, as well as dining room, pub, and other communal facilities. Throughout, square, glassed-in

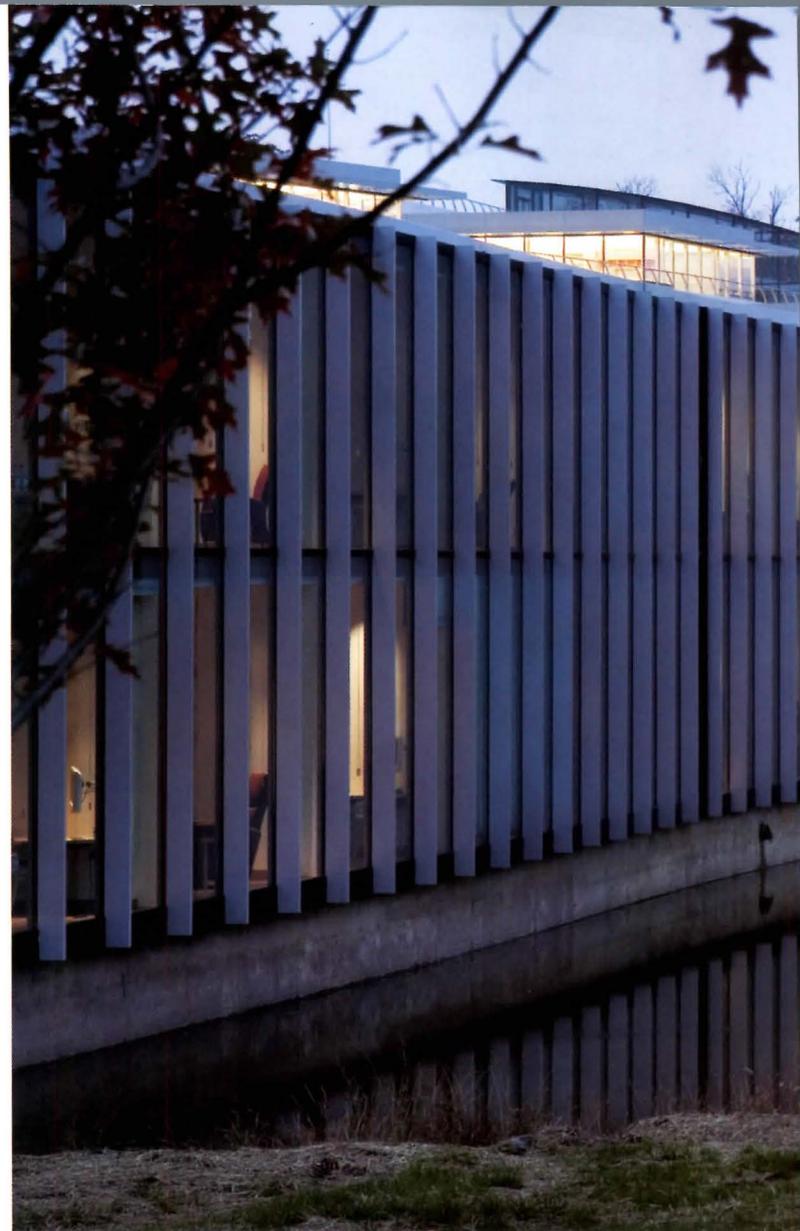
Corridors edging the labs are formed of structural glass, so that columns, beams, and walls are transparent for 88-foot spans.





The poured-in-place concrete structure of the conference housing (top) is partially concealed by earth berms; its lobby (above) fea-

tures limestone walls and marble floors. The longer-stay housing units (below) are clad in fieldstone and cementitious wood.



atriums bring additional daylight inside. On the second and third floors, labs overlook glazed corridors, which in turn reveal views of roof gardens and the distant landscape. Along these two tiers of roof terraces, the architects situated offices clustered in square glass pods, where computer research and meetings could occur near the actual laboratories themselves. The poured-in-place concrete and steel hybrid structure for the “landscape building,” as it is called, gives way to structural glass extending along the serpentine corridors that separate the labs from the offices and grassy terraces. Glass beams, columns, and walls of low-E clear glass allow the scientists unimpeded glimpses of pastoral landscape for dazzling, 88-foot-long spans.

The architects located the back-of-the-house mechanical operations at the rear of the first and second levels of the building. The long, deep swath of raw space, which the architects have dubbed “the factory,” contains 22-foot-high, floor-to-floor windowless volumes on the first level and 17-foot-6-inch-high spaces on the second. Heavy-duty elements, such as loading docks, substations, condensers, chillers, boilers, and air-handling equipment, can be found here, along with isolation slabs to prevent noise or vibration from extending into the labs.

On the third level, the architects inserted the parking garage for 300 cars in the back portion; its planted roof helps build out the top of the slope for the building. From the stairs on this floor, visitors can ascend to

PHOTOGRAPHY: © PAUL WARCHOL (TOP AND BOTTOM LEFT); BRAD FEINKNOFF (MIDDLE LEFT)



On the north side of the conference housing, 96 rooms on two levels follow an Aaltoesque curve around the man-made

storm-water retention pond. Another pond is adjacent to the lab building. Nearby is the director's house, also designed by Viñoly.

the topmost roof terrace—where they step up onto a grassy lawn to discover in a surreal way that they are the backyard of the Pickens manor house.

In order to create a proper investigative environment, Viñoly and his team selected materials that impart a luxurious, Miesian simplicity. Basaltina floors in the lobby give way to a warmer mesquite wood in the

ACCOMMODATIONS RECAPTURE A CLASSIC MODERN AESTHETIC IN A COMPLEX THAT REFINES 1960S MEGASTRUCTURAL IDEAS.

café and bar, and hornbeam wood on the floor of the dining room. Frosted-glass panels enclose the circular auditorium, while a reddish makore wood clads its interior surfaces, handsomely complementing the plushly upholstered red seats for 250.

Across from the glazed entrance to the lab building, another swerving fieldstone wall guides visitors into the curvilinear, two-story conference center that arcs around a man-made pond. Here, modestly proportioned guest rooms with Aaltoesque furnishings overlook the water and woods. Similarly, 53 transient-housing units of studios to four-bedroom duplexes, with fieldstone walls alternating with cementitious wood paneling, recall the San Francisco Bay Region Modernism of the 1940s.

If the residential quarters seem to recapture a classic Modern aesthetic, the complex as a whole represents a refinement of certain High Modern, megastructure-meets-escarpment schemes of the 1960s, such as the riveting but unbuilt Sunset Mountain Park Urban Nucleus designed by Cesar Pelli for Santa Monica, California, in 1965, when he was at Daniel Mann Johnson Mendenhall, or John Andrews's 1967 Scarborough College in Ontario, Canada, a muscular, concrete behemoth. Viñoly demonstrates that this almost-forgotten legacy can still be mined for effect today.

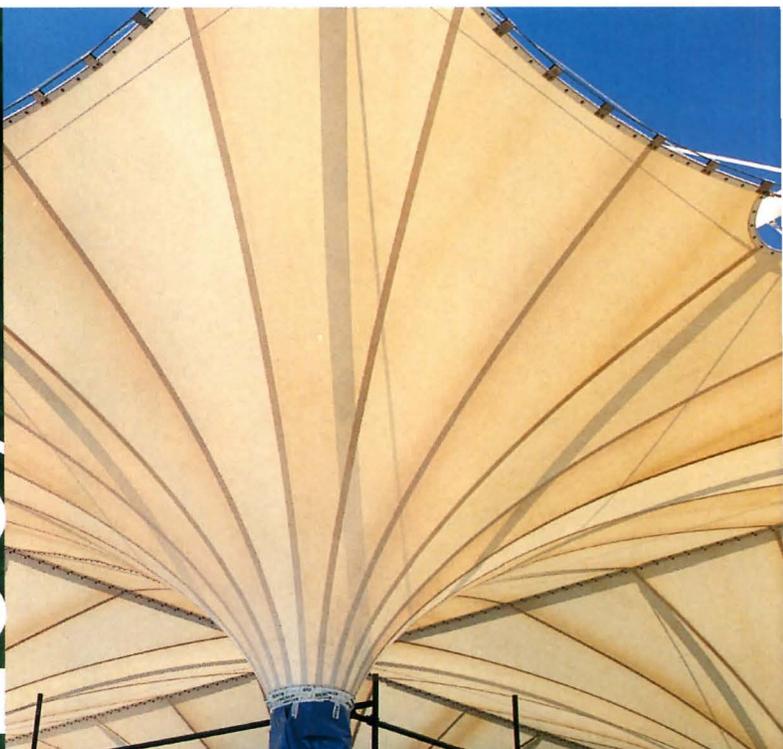
At Janelia Farms Research Campus, scientists can convene to work on pathbreaking discoveries in the neurosciences, genetics, immunology, or cell biology without feeling they have to live around the clock in a large, rectilinear steel file drawer. While it takes time to assess design success, the initial reaction to the luxurious and intellectual setting has been extremely positive, reports McGhee. That said, it is too bad the clients and the architects haven't figured out a use for the Pickens manor house. The main residence and the carriage house could be converted easily into an orientation space and museum of science. Of course, it would cost money (this project did hit the \$500 million mark). But as a public outreach program, it would be worth it. ■

For Sources, go to page 202, and Projects at archrecord.construction.com.



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GOVERNMENT BUILDINGS

Open and Shut

In pursuit of green benefits and political symbolism, government agencies embrace glazed curtain walls and skylights—as well as the brise-soleil.

By James Murdock



U.S. CENSUS BUREAU Suitland, Maryland

By using a facade screen, a curvy plan, and narrow floor plates, Skidmore, Owings & Merrill makes a 2.5-million-square-foot headquarters feel smaller than it actually is.



REDMOND CITY HALL Redmond, Washington

MulvannyG2 balances formal elements with playful flourishes that add a touch of character to a developer-built city hall in an area known for innovative businesses.



LIMERICK COUNTY COUNCIL Dooradoyle, Ireland

As part of Ireland's series of new county and town halls, Bucholz McEvoy Architects pursue a green agenda that reflects the country's revived economy and place on the global stage.



U.S. POST OFFICE & COURTHOUSE Brooklyn, New York

R.M. Kliment & Frances Halsband Architects restore the interiors of a historic courthouse, and insert offices into an adjacent wing, to provide a new home for four government agencies.

In many respects, Brooklyn's U.S. Post Office and Courthouse is the quintessential late-19th-century federal building. Opened in 1892, and expanded several times since, its Richardsonian Romanesque exterior—signaled by rusticated, granite walls—conveys strength and unanimity. Other federal structures built around the same time throughout the still-growing nation incorporated regional materials and vernacular quirks.

A careful balance between shared forms and local differences in federal architecture persisted into the mid 20th century, when a watered-down Modernism ushered this equilibrium out the door. But the pendulum is again in motion. The U.S. General Services Administration's Design Excellence Program, now in its 17th year, aims to improve the quality of government buildings—often with an environmentally sustainable edge to attain LEED Silver certification. The latest generation of buildings show a renewed interest in context, thanks to their sensitivity to climate and geography. But do they project a shared symbolic message?

The U.S. Census Bureau Headquarters, in Suitland, Maryland, says quite a lot. Its facades are fully glazed, but also screened by a wood brise-soleil. Glass holds a powerful, if unrealistic, symbolism in the realm of government architecture: openness and transparency. It's refreshing that even in this especially security-conscious age, a building can present such an inviting face. Then again, the bureau is located on a wooded site outside Washington, D.C., out of the public eye, and the attractive brise-soleil—while there to cut solar glare—also helps it hide among the trees.

State and local agencies seem to be pursuing a similar path. Redmond City Hall, in Washington State, includes a council chamber wrapped by a glazed curtain wall—as well as shaded terraces that overlook the grassy site of a future city park. Even abroad, in Europe, an open mood prevails. The Limerick County Council Headquarters, in southwest Ireland, presents a glazed facade to a shopping center and busy road beyond, and it too is sheltered by a brise-soleil. Interestingly for a nation seeking to redefine itself on the global stage, this combination suggests both innovation and circumspection.

And then there is the stone courthouse in downtown Brooklyn, its interiors largely restored to their original state after decades of decay. At its core is a public atrium capped by an expansive skylight. In 1913, not long after this radiant space first opened, Louis Brandeis famously stated, "Sunlight is said to be the best of disinfectants." While embracing this principle, and giving it a new environmental spin, the current generation of government buildings have tempered transparency with practicality. ■

For more information on these projects, go to Building Types Study at archrecord.construction.com.

One: U.S. CENSUS BUREAU

Suitland, Maryland

Skidmore, Owings & Merrill breaks apart floor plates and clads facades in wooden fins to mask a building's massive size.

By Sara Hart

Architect: Skidmore, Owings & Merrill—David Childs, FAIA, Gary Haney, AIA, Stephen Apking, AIA, design partners; Peter Magill, AIA, management partner; Elias Moubayed, Nazila Shabestari Duran, AIA, project managers

Client: U.S. General Services Administration

Design-build architect: Skanska USA, with HKS Architects

Associate architect: Metropolitan Architects and Planners

Consultants: Wiles Mensch, A. Morton Thomas and Associates (civil); Walter P. Moore (structural); Southland Industries, GHT (m/e/p); CDC (curtain wall); EDAW (landscape); Domingo Gonzalez Associates, Cline Bettridge Bernstein Lighting Design (lighting)

Size: 2.5 million square feet

Cost: \$331 million

Completion date: January 2007

Sources

Glazed curtain wall: Viracon; Enclos

Concrete panels: Artex Systems

White oak blades: Sentinel Structures

Ipé boards: ISEC

Doors: Herculite; Elmes

Glass fins: Vanceva

Raised flooring: Tate Access Floors

Lighting: Philips; Nieghthardt; Zumtobel; Prudential; Edison Price

For more information on this project, go to Building Types Study at archrecord.construction.com.



Every 10 years since 1790, the public and media have turned attention to the U.S. Census Bureau's panoptic data collection about individuals, households, and businesses. The data are analyzed, disseminated, and debated—essential work for a democracy. Today, the bureau's role reaches way beyond its decennial undertaking. Calling itself "America's Fact Finder," it conducts surveys on economic and social issues.

Although the bureau maintains 12 regional offices, 6,000 employees are headquartered in Suitland, Maryland, outside Washington, D.C. With the agency having outgrown its aging 1942-vintage home, the

Sara Hart is a New York-based writer and a former senior editor of RECORD.

General Services Administration (GSA) commissioned Skidmore, Owings & Merrill (SOM) to design a new, 2.5-million-square-foot complex on an adjacent, 80-acre wooded site.

Program

The client had an unusual requirement regarding flexibility. Every 10 years its head count triples for the duration of the census-taking process. The bureau asked SOM to create a system for accommodating this temporary, albeit gigantic, expansion. In addition to addressing the needs of a technology-driven enterprise, the program also reflected the GSA's requirement that new facilities earn a LEED Silver rating.

But the scope of this project

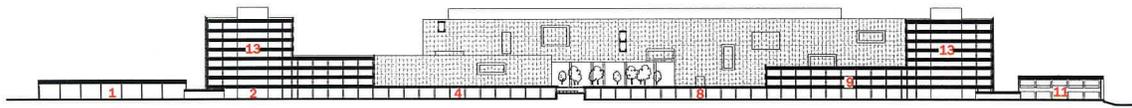
SOM took a 1,100-foot-long footprint and curved it (above). A brise-soleil made of wooden fins—dubbed the "bark veil"—either allows views straight into the interiors or helps mask the building's scale (opposite).

extended beyond physical expansion and system upgrades. The Census Bureau wanted its headquarters to be a model of worker productivity and a magnet to attract and retain skilled professionals. Thus, it requested additional amenities, including a health-care center, library, gymnasium, cafeteria, credit union, and conference center.

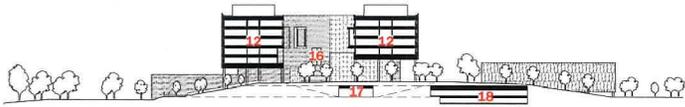
Solution

SOM splayed the building's overall volume into two wings that slot





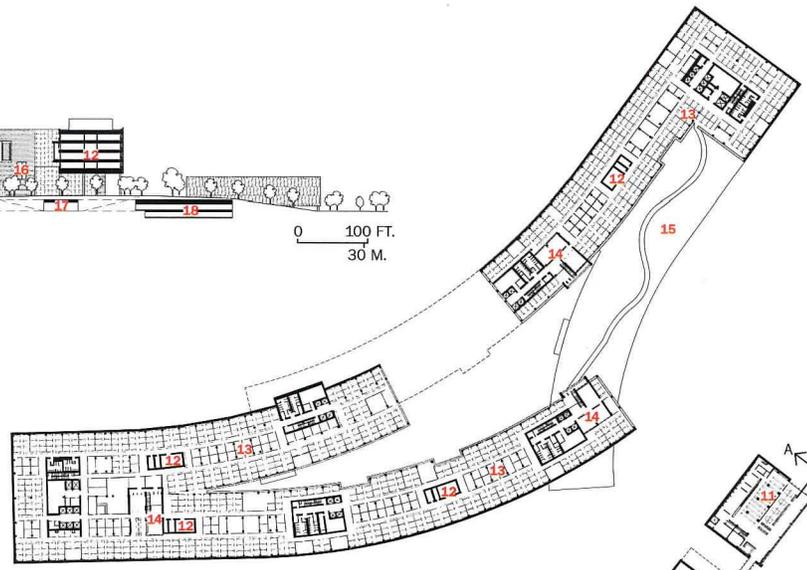
SECTION A-A



SECTION B-B

0 100 FT.
30 M.

1. Delivery area
2. Cafeteria
3. Conference center
4. Training center
5. Auditorium
6. Credit union
7. Lobby
8. Fitness center
9. Health unit
10. Café
11. Library
12. Interior office
13. Open-plan office
14. Shared space
15. Roof garden
16. Courtyard
17. "Street" corridor
18. Below-grade parking



FOURTH FLOOR



GROUND FLOOR

0 100 FT.
30 M.

together around a central court. Narrow, 41-foot-wide floor plates give the building an almost European feel and ensure that every workstation receives ample daylight, helping lessen electricity needs. Outside, a brise-soleil shades the curtain wall. Vertically mounted fins—made from wavy, marine-grade, white oak panels—reduce solar glare indoors and establish a rhythmic pattern across the facades.

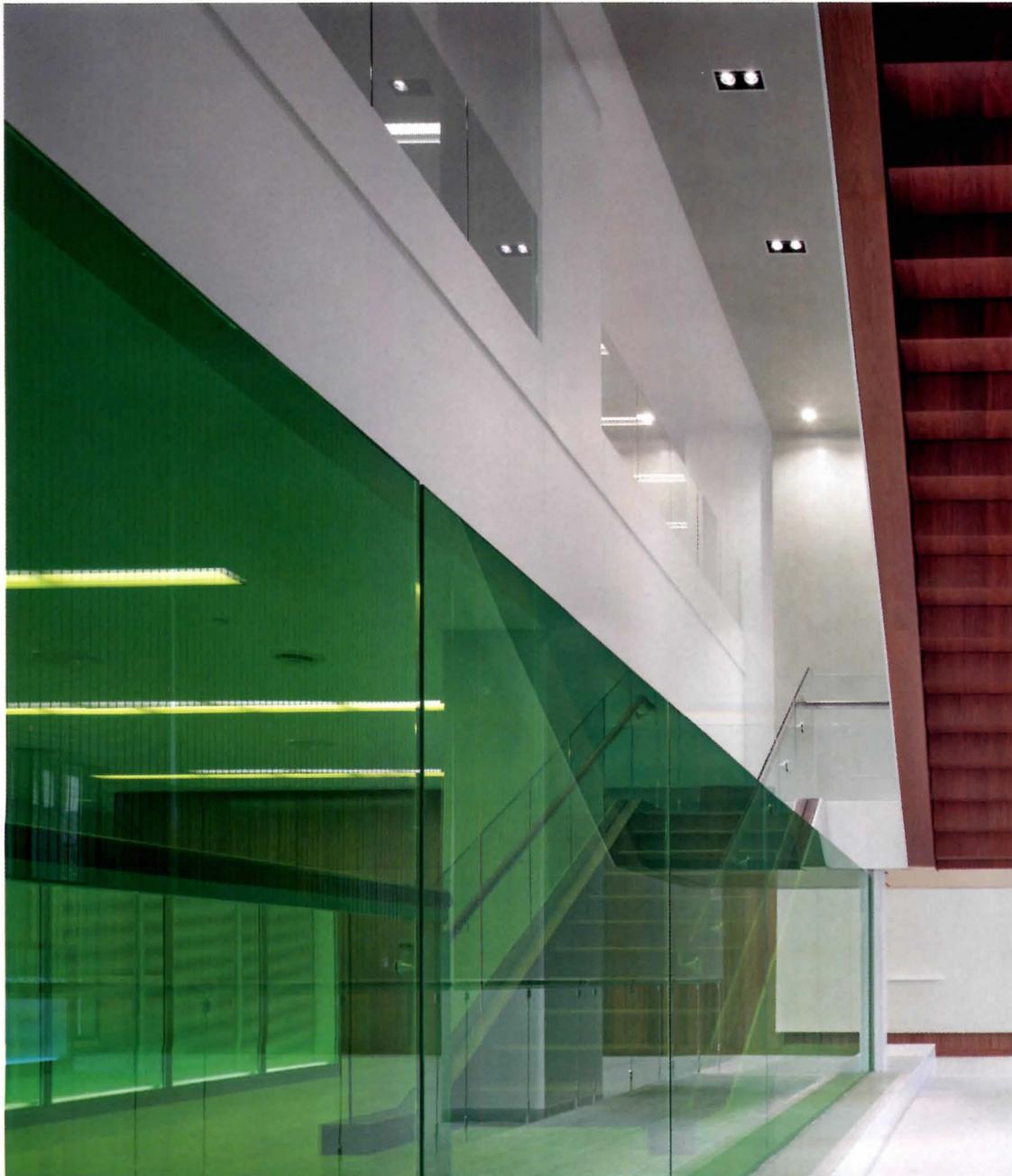
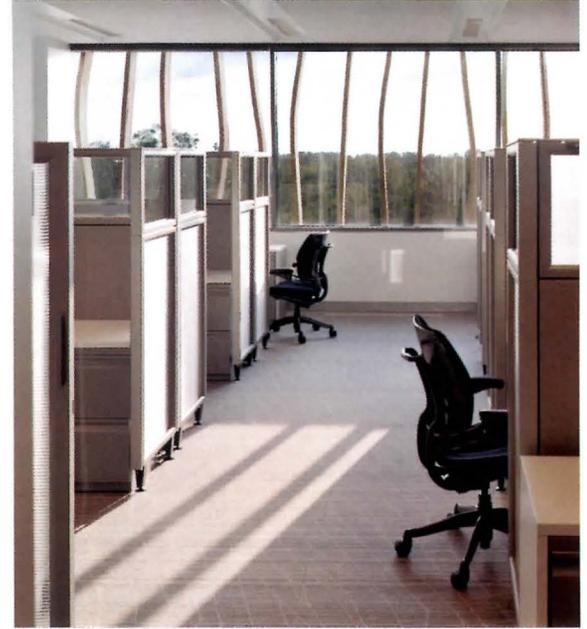
Inside the office areas, SOM organized individual workstations into open-plan "bull pens," flexible areas that can be expanded from four workstations to 10 when the bureau staffs up for census-taking. To codify the building's different functions and assist in orientation, SOM's interior design team, led by Stephen Apking, developed a strategy composed of three well-defined elements: the Street, the Boxes, and the Color Spectrum. The Street is a ground-floor corridor connecting program amenities to work areas. Above ground, the Boxes rise through the building's two floors to connect vertically linked functions with staircases and elevators. Workstations at the building's perimeter are rendered in contemplative neutral tones, but the Color Spectrum morphs from this subdued palette into vibrant colors that guide people through interior zones: Blue areas lead to green zones, followed by yellow, orange, and red. This paint system eliminates the sameness that a monochromatic

Pictured from the west (near right) and east (far right), a courtyard at the building's center is open both to the sky as well as the north and south elevations. SOM's design team, led by partner Gary Haney, AIA, created this space by splaying the building's mass into two narrow wings.



Composed of thin white oak boards, the “bark veil” facade screen diffuses solar glare indoors (near right). A low-roofed entry volume, on the southeast elevation, allows views into the center court (far right). An auditorium volume projects from the southwest elevation (below).





At perimeter office areas, the color scheme remains muted (above right), but deeper within the building, its palette takes on more vibrant shades, including yellow in the credit union (above left) and green in vertical circulation areas (left). The different colors help orient visitors as well as employees.

scheme would have generated over such a vast building.

In an unusual move, the GSA adopted a “bridging” design-build delivery method. This approach combines the strengths of design-build with the advantages of traditional design-bid-build. After SOM developed the construction documents to roughly one-third completion, the project went out to bid for design-build firms. (HKS Architects and Skanska USA received the commission.) Jag Bhargava, project executive for the GSA’s Property Development Division, says that this method allowed the contractor to begin work before construction documents were complete, shaving a year off the project’s delivery date.

Commentary

Consider the daunting challenge of putting a roof over a small city, population 6,000. No matter how one manipulates the envelope and interiors, the vastness of a 2.5-million-square-foot requirement remains. SOM cleverly took a 1,100-foot-long footprint and curved it. This move alone humanized the building. A straight line the length of almost four football fields would have created a one-point perspective with an infinite vanishing point, resulting in psychological discomfort for the building’s occupants. But the curve set up an opportunity for a series of visual events along the way. SOM’s interior design team carved out spaces and applied textures to create a rhythm that beautifully undermines an otherwise harsh reality.

The wood brise-soleil, or “bark veil,” as the architects call it, is best understood in person. Viewed straight on, its fins wiggle in front of the curtain wall, revealing the interior. But as one walks along the facade and views it obliquely, these elements become camouflage, and the giant structure begins to dissolve into its wooded environs. SOM and its partners pulled off a magic trick that should be a role model for future buildings of such immensity. ■



Brazilian ipé hardwood lines the cafeteria walls (left). Beyond, the “Street” links all program areas (below). An origamilike relief—made of laser-cut, medium-density board—casts shadows that mitigate the corridor’s length.



Two: REDMOND CITY HALL

Redmond, Washington

MulvannyG2 balances dignified and playful elements in a city hall that reflects its community's innovative spirit and picturesque landscape.

By Randy Gragg

Architect: MulvannyG2 Architecture—Ming Zhang, design principal/lead designer; David Glassman, project manager; Peng Liew, project architect; Peter Lian, project designer

Client: Redmond Community Properties
Interior architect: MulvannyG2 Architecture (public spaces); Perrault Interiors (offices)

Consultants: MacDonald-Miller Facility Solutions (mechanical engineer); Sasco (electrical engineer); Magnusson Klemencic Associates (civil and structural engineer); Hewitt Architects (landscape); Lighting Group Northwest (lighting); JGL Acoustics (acoustics)

Size: 114,068 square feet

Cost: \$20 million

Completion date: December 2005

Sources

Aluminum wall panels: Alpolic

Elastomeric roofing: Sarnafil

Aluminum curtain wall and entrances: Walters and Wolf

Glazing: Viracon

Wood doors: VT Industries

Metal doors: Curries

Locksets: Assa Abloy

Hinges: McKinney

Ceiling panels: Hunter Douglas

Wall coverings: Knoll

Toilets: Caroma

Water-free urinals: Falcon

For more information on this project, go to Building Types Study at

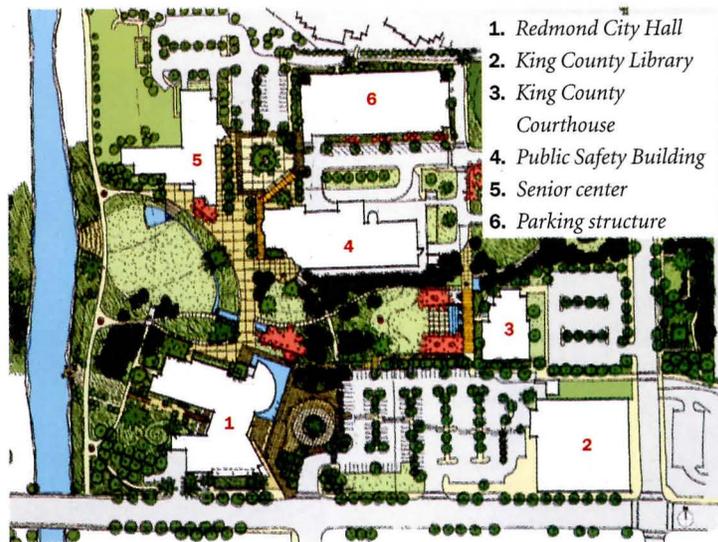
archrecord.construction.com.

Like many fast-growing suburbs, Redmond, Washington, knew plenty about constructing roads and fire stations but little about making civic buildings. Home to both Microsoft and Nintendo, this town—16 miles east of Seattle—saw its population jump by nearly one third, to 46,000 people, in the past 20 years. At the same time, the city's staff more than doubled, growing into seven different facilities. Operational efficiency demanded consolidation. But the design-bid-build process, once the norm for civic facilities, carries financial and political risks in today's environment of spiraling construction costs. So Redmond chose a path increasingly popular with municipalities nationwide: forming a nonprofit corporation that finances and constructs a building, then leases it back to the city.

Program

The client wanted a new gateway municipal facility located on the main arterial road. Part of an existing 17-acre government campus, the site abuts the Sammamish River and 10 acres of open space that the city will turn into a park. The program was simple: a 105-seat council chamber and offices for the 270-person municipal staff, with expansion space for 80 more people. The city also wanted the project to earn a LEED Silver rating.

Randy Gragg is the architecture critic for The Oregonian in Portland, Ore.



Solution

The city's nonprofit Redmond Community Properties hired Wright Runstad & Company as a fee developer, which in turn held a design competition juried by its own staff, the mayor, and the city council. Unlike other finalists, who responded with boxlike structures, MulvannyG2 split its building into two steel-framed wings, one oriented south to face the main road, the other toward the river. A double-height lobby connects them, offset at one corner by an asymmetrical, drum-shaped council chamber.

Lead designer Ming Zhang hoped to create "a new, 21st-century image for government," an environment that projects both dignity and the friendly informality epitomized by Redmond's culture of boundary-busting innovation. A grand, three-story

colonnade with a wide canopy roof defines the main entry: Pivot joints connecting its steel columns offer playful, erector-set versions of capitals and bases, while soft Algerian sandstone clads the facade along this elevation. By contrast, the building's roadside face is covered in precast stone, dignified enough for passing cars but without real stone's cost.

The council chamber volume stands almost as a separate entity at the building's northeast corner. Zhang again balanced formality with friendly accessibility. Copper panels facing the entry signal "civic importance," while a floor-to-ceiling glass curtain



A wide canopy and tall colonnade signal the main entry (above right), located between a sandstone-faced office wing and the copper-clad council chamber. An aluminum and glass fountain bathes surrounding facades in reflected light (below).



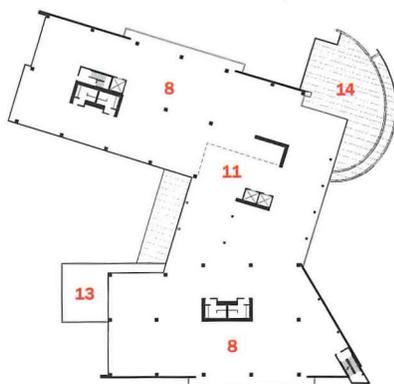
wall, facing the park, lets soft northern light into the chamber and symbolizes government transparency.

Zhang's overarching goal was to "link humans to nature." Accordingly, the lobby brings some of the building's grand exterior scale indoors. Two glass curtain walls define an atrium between the office wings. Window bays and terraces offer plenty of options for city staffers to enjoy park views and a breath of fresh air. The space opens westward to a patio and a storm-water swale, topped by Zhang's most overt nod to his Chinese heritage, a zigzag bridge. This traditional feng shui feature is intended to slow a person's path through nature.

Commentary

Overall, the building's relationship with the outdoors is its greatest success. The public spaces' airy connections with the landscape promise to ease the pain of business rituals such as zoning plan reviews. Sadly, though, Zhang was unable to exploit the rich indoor/outdoor connections for the building's energy performance. Operable windows, for instance, were eliminated by the developer early in the process due to cost. Limited sunshading on south-facing windows, moreover, promises steep summertime air-conditioning bills. And the 60-foot width of the office bays was clearly determined by the developer's pro forma numbers rather than by a desire for optimal daylight exposure and modular desk layouts; sunlight falls well short of the building's deepest recesses. This climate is too easygoing to settle for only LEED Silver. Public buildings should set higher standards.

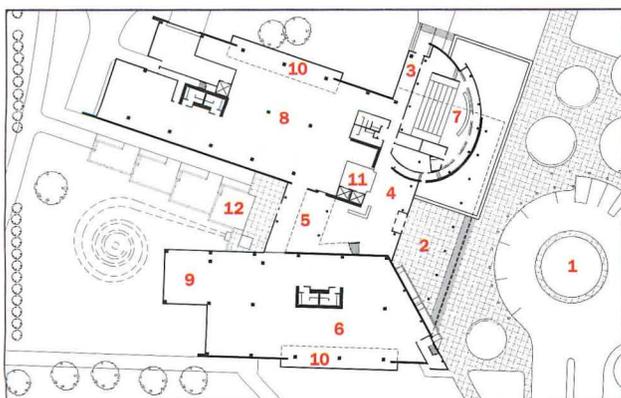
MulvannyG2 pushed hard—and in many ways succeeded—in giving Redmond a 21st-century city hall. But performance-wise, the developer-led process produced a 20th-century building. Redmond's lease term lasts 30 years—impressively long by commercial office standards, but far too short for a city hall. Other municipalities interested in pursuing similar leaseback deals should demand longer payback horizons. ■



1. Public plaza
2. Main entry
3. Side entry
4. Reception
5. Gathering space
6. Cafeteria
7. Council chamber
8. Offices
9. Loading dock
10. Atrium
11. Elevator lobby
12. Public courtyard
13. Roof terrace
14. Roof

A glazed curtain wall wraps the curving southeast edge of the council chamber, allowing views out to a fountain at the building's main entry—and symbolizing governmental transparency (above). This drum-shaped volume energizes the floor plan.

THIRD FLOOR



FIRST FLOOR



MulvannyG2 splayed the building plan into two wings, locating the main entrance lobby at their junction (below left). The council chamber abuts this volume; copper cladding on its exterior presents a formal face toward the entry (below right). Glazed on both sides, the lobby draws visitors through the building to a public garden (right); from there, a zigzag path leads people slowly to the Sammamish River. MulvannyG2 designed only the main building and its public spaces, including the landscaping; another architect, Perrault Interiors, designed the office space.



Three: LIMERICK COUNTY COUNCIL

Dooradoyle, Ireland

Bucholz McEvoy Architects creates a contemporary, green county seat in the suburbs near one of the Emerald Isle's largest cities.

By Raymund Ryan

Architect: *Bucholz McEvoy Architects—Karen McEvoy, Merritt Bucholz, project directors; Graham Petrie, project architect; Sabine Klingner, Jana Scheibel, Jim Luke, Mary Louise Kelly, design team*
Client: *Limerick County Council*
Consultants: *Michael Punch and Partners (structural); Buro Happold (building services, acoustical); Pritchard Themis (lighting); RFR (atrium enclosure engineer)*

Size: 76,424 square feet

Cost: \$30.9 million

Completion date: September 2003

Sources

Atrium structure: *Seele Austria*
Curtain wall: *Duggan Systems; Schüco*
Timber trusses: *Wiehag*
Metal roofing: *Kalzip*
Windows and skylights: *Seele Austria; Schüco*
Doors: *Seele Austria; Dorma; Skelly Doors; Gem Manufacturing*
Hardware: *D-Line; Dorma*
Acoustical ceilings: *British Gypsum*
Paints and stains: *Keim Paints*
Paneling: *Gem Manufacturing*
Stone floors: *Carlow Stone*
Floor and wall tile: *Top Cer*
Resilient flooring: *Marmoleum*
Raised flooring: *Hewetson Floors*
Lighting: *ERCO; Concord*

For more information on this project, go to Building Types Study at archrecord.construction.com.



The Limerick County Council Headquarters belongs to an impressive series of new local government buildings erected throughout the Emerald Isle during the past decade, structures that gather council offices together, for the first time, in signature buildings. It was designed by the American/Irish duo Merritt Bucholz and Karen McEvoy. This husband-and-wife team established their practice in Dublin after winning a competition to design Fingal County Hall [RECORD, August 2001, page 98]. Just before the completion of that, their first building, Bucholz McEvoy Architects was awarded the Limerick commission through an interview process.

Program

Limerick's new county hall gathers together nearly 300 local govern-

ment officials working in nine departments that were previously scattered across several locations. In addition, the building provides a council chamber for 29 locally elected representatives. Computerization, increasing informality, and a less homogenous society suggested a more open architecture than in the past.

Located in Dooradoyle, a suburb of Limerick, the County Headquarters is surrounded by the vast parking lot of a shopping center, across a busy road from tract houses. Like many places in Ireland, the site was rural until 15 years of the Celtic Tiger's rapid economic growth transformed it. Bucholz McEvoy considered its project in the context of this evolving landscape. The resulting design focuses at the scale of both the suburban context and that of individual workstations. Natural ventilation, lighting, and climate control all aim for

new environmental standards in Irish governmental architecture.

Solution

The architects set the bulk of the building back from the road, dividing the interstitial ground into parallel strips. Alternatively landscaped or used for parking, these striations tilt up and down, partially concealing the automobiles within this new terrain. A pierlike entry pavilion juts toward the road from the building's primary mass; an adjacent volume, clad in terra-cotta tiles, houses the council chamber at the southernmost corner of the site.

Rising from its bipartite base, the bulk of the council headquarters presents itself as a four-story, concrete-framed structure clad in an expansive glass curtain wall. Facing southwest, the upper three floors are screened by an external assemblage of steel and laminated Scots pine that



The main entry projects from the southwest elevation (opposite) into parking and landscaping set perpendicular to the main road (above). A public atrium, open at both ends, spans this facade behind a wooden screen (at left).



Parallel to the glazed main entry, the terracotta-clad council chamber volume projects perpendicular to the building's vertical bulk (left). The tax service offices, located at the southeastern corner, are covered in the same, brightly colored material.

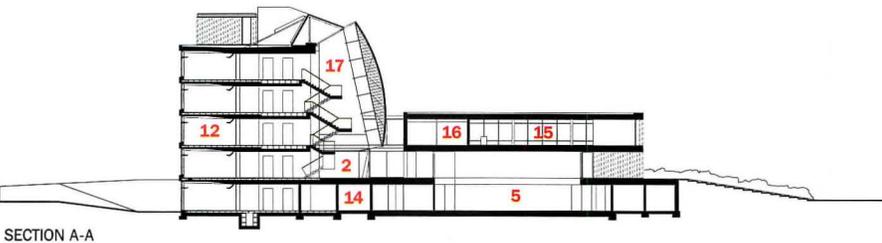
folded, in plan, to protect the interior from summer heat and solar glare. The facade system tilts inward so that the sky is reflected in unexpected ways; it rests, above, on steel prongs whose shape inspired Bucholz to nickname them "hockey sticks."

A linear atrium runs the length of the southwest elevation and is open through four floors of office space. Bucholz McEvoy situated departments with the greatest need for public interface along the floor of this crystalline and invigorating space. An open staircase connects to hallways on each level; high-backed oak benches line these corridors and push out into the void. Functional as well as formal, the atrium acts as a heat chimney and enables a ventilation flow from strip windows on the building's northeast side.

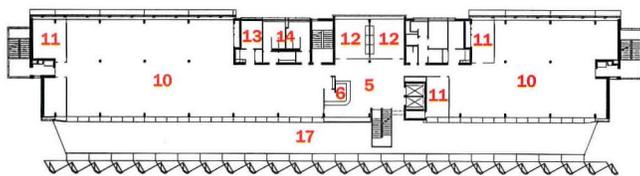
Exposed concrete floor slabs are kept extremely thin and molded into tapering sections that, together with glazed horizontal reflectors, bounce daylight into the workstations. The architects designed these areas with sycamore desks, linen partitions, and suspended fabric panels that allow each worker to manage solar glare independently.

Commentary

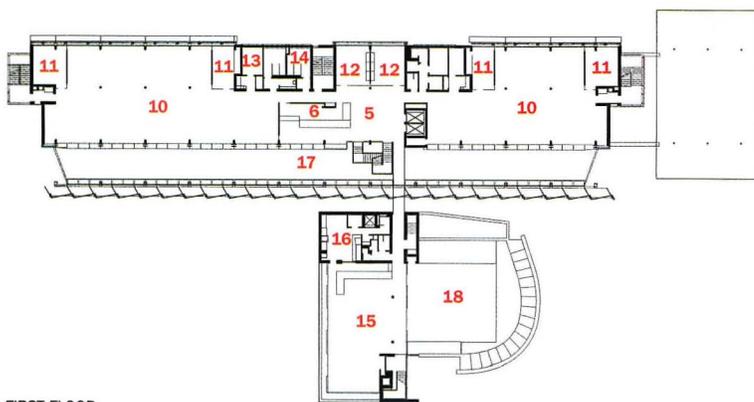
Limerick County Council Headquarters presents an assemblage of components gathered from around Europe—symbolizing Ireland's embrace of globalization and technology. (The "hockey sticks," for instance, were fabricated in the Czech Republic, and Paris-based RFR engineered the iconic facade.) Walking through the southwest atrium one is awed by the remarkable outer screen and the quality of space and light that government employees and elected officials enjoy. This innovative facade—"leaning back to catch the sky," as the architects say—achieves a new civic symbolism for Ireland, one that is green in a progressive environmental sense. It also shows the architect's consciousness of place, highlighting Ireland's changeable and dramatic maritime climate. Yet Bucholz McEvoy's real achievement is its integration of design across all scales of the project. ■



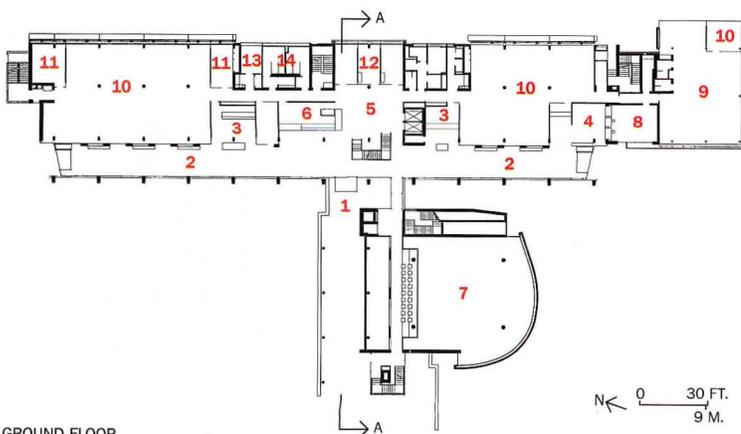
SECTION A-A



SECOND FLOOR

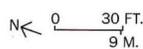


FIRST FLOOR



GROUND FLOOR

1. Main entry
2. Civic space
3. Public counters
4. Waiting area
5. Lobby
6. Reception
7. Council chamber
8. Cash service
9. Tax service
10. Open-plan office
11. Enclosed office
12. Meeting room
13. Copy center
14. Toilet
15. Canteen
16. Kitchen
17. Atrium
18. Roof deck





A public atrium runs from north to south along the west elevation (top left). At its midpoint, a stair connects all four floors (top right), flanked by wood-backed benches. Fabric ceiling panels above individual workstations

allow employees to regulate solar glare (above). Walnut-framed accent lights punctuate white marble tabletops in the council chamber (right). A recessed skylight illuminates the southern wall, which curves in plan.



Four: U.S. POST OFFICE AND COURTHOUSE

Brooklyn, New York

R.M. Kliment & Frances Halsband Architects restore a gem in the heart of Brooklyn, while making sense of complicated security needs.

By James Murdock

Architect: R.M. Kliment & Frances Halsband Architects—Robert Kliment, FAIA, partner/lead designer; Frances Halsband, FAIA, partner/collaborating designer; Michael A. Nieminen, AIA, partner in charge; Richard L. McElhiney, AIA, project manager; Karl A. Lehrke, AIA, project architect

Client: U.S. General Services Administration

Consulting architect: Wank Adams Slavin Associates

Consultants: Flack + Kurtz (m/e/p, fire protection); Severud Associates (structural); Vollmer Associates (civil); Brandston Partnership (lighting); Cerami & Associates (acoustical, a/v); Kroll Schiff & Associates (security); Integrated Conservation Resources (historic conservation); Walter H. Sobel, FAIA & Associates (courts)

Size: 575,000 square feet (including 85,000 square feet of new construction)

Cost: \$200 million

Completion date: October 2005

Sources

Curtain wall: LBL

Skylights: UAD; Fisher

Paints: Benjamin Moore

Stains: Minwax

Marble: Nine Stone Marble Tile

Lighting: Rambusch; Neoray; Linear; Zumtobel

For more information on this project, go to Building Types Study at archrecord.construction.com.

Brooklyn was the nation's third-largest city, still a few years away from joining New York City, when the U.S. Post Office and Courthouse opened in 1892. Almost immediately, the government began expanding the building—which housed Brooklyn's main post office and a federal district court—filling the entire block by 1933. But when the court left in the 1960s, the building entered a steady decline, hastened after the Postal Service transferred its sorting facilities to Long Island in the 1980s. The U.S. General Services Administration (GSA) eventually acquired the complex and, after considering its demolition or sale to developers—both plans opposed by community groups and the late Senator Daniel Moynihan—decided to restore it for a diverse group of federal tenants.

Program

The GSA paired the U.S. Bankruptcy Court—which initially needed courtrooms, judges' chambers, and offices for a staff of 60 clerks—with the U.S. Trustee Office, which provides pre-bankruptcy services to litigants. The U.S. Attorney's Office (USAO) also received space. And, although it was no longer the landlord, the Postal Service wanted to maintain a retail branch in the building.

Decades of neglect and makeshift alterations had marred interior spaces. In the 1892 portion, an atrium skylight was blocked, and the detailing—which reflected

both Richardsonian Romanesque and Beaux-Arts styles—moldered behind drop ceilings and drywall. The GSA hired R.M. Kliment & Frances Halsband Architects to restore the atrium and reconfigure other spaces. Only the landmarked exterior facades, which belong to a typology of federal buildings erected during the late 1800s, was left untouched.

Solution

Rather than subdivide large, 1892-vintage courtrooms, or add levels onto the roof, Kliment & Halsband built into the 1933 structure's central courtyard in order to create extra space. The architects clad their steel-framed, four-story addition in a glass curtain wall, providing nearly all of the USAO offices with access to daylight and forging a strong visual tie to the conjoined 1892 structure. Below it, they added two courtrooms and a law library, all illuminated by skylights punched into the courtyard's floor.

Inside the Bankruptcy Court, which occupies the oldest structure, the design team restored two court-



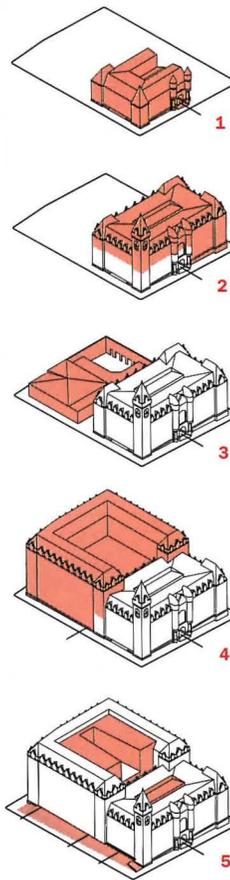
1. U.S. Courthouse and Post Office
2. U.S. Courthouse
3. N.Y. Courthouse
4. Brooklyn Borough Hall
5. Cadman Plaza Park

rooms and judges' chambers, as well as the atrium. In addition to recreating the original paint finishes, they reinstalled a glass deck that spanned this volume between the first and second floors; below it they located a glass-enclosed clerk intake facility and public records room.

The building's south elevation had contained its main entry. Security requirements mandated that each tenant access its space separately,



Along the building's west elevation (opposite), a ramp defines a new entry sequence facing a plaza. In the atrium, the previous space (above) was completely restored to its 1892 appearance, right down to the paint scheme and moldings (right). The architect uncovered a skylight and reinstated a glass deck that covers the first floor.



Sequence of construction

1. Original design
2. 1892
3. 1916
4. 1933
5. 2005

but the architects succeeded in creating a new, unified entry sequence along the west elevation, facing a public plaza. A granite ramp now flanks this facade, gently rising with the grade from south to north, allowing ADA access to each of three entrances: beginning with the Bankruptcy Court, then the post office, and finally the USAO.

Commentary

Klimint & Halsband performed a commendable job restoring the 1892-era atrium. The marble floors and gold and ocher paint scheme—all bathed in soft daylight that makes artificial lighting unnecessary—fairly gleam. Brooklynites were unable to enter this space for 40 years, and so many lack a point of comparison for its rebirth, but they now can reclaim ownership of a polished gem.

It's a shame, though, that a restored stair at the atrium's eastern end is now restricted to use by the Bankruptcy Court's staff; the architect carefully detailed a new public stair next to the lobby, but this space lacks

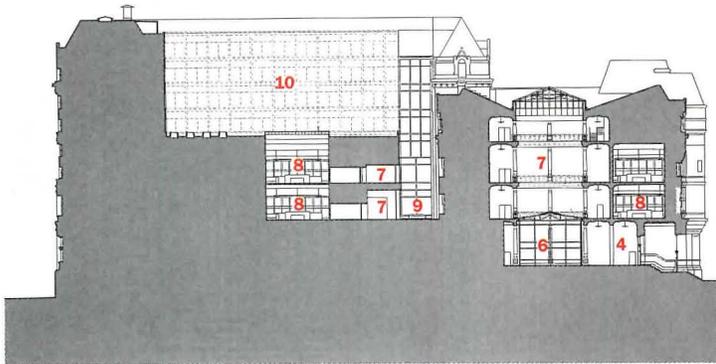
In the main atrium, glazed ceilings and walls enclose a public records room (left). The architects partly filled in a 1933-era courtyard to create new offices for the U.S. Attorney, cutting skylights into its floor (below two).



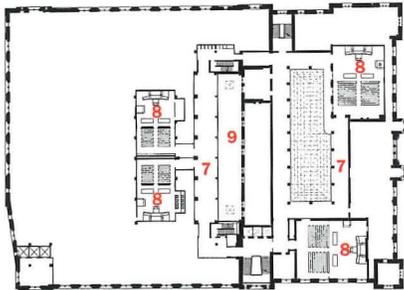


A new stair abuts the Bankruptcy Court entry (above), while a public gallery spans the post office (below right). Skylights illuminate a law library (below left).



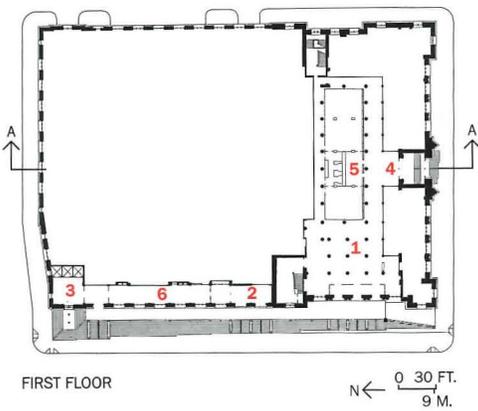


SECTION A-A



SECOND FLOOR

1. Courthouse entry
2. Post office entry
3. USAO entry
4. Original entrance
5. Bankruptcy intake
6. Post office gallery
7. Waiting area
8. Courtroom
9. Light well
10. Courtyard



FIRST FLOOR

Skylights draw daylight into a law library (below left) as well as new courtrooms in the 1933 building (top right, above ceiling at rear). The architect restored an 1892-era courtroom (right), adding a mahogany screen, at left in the photo, to give judges private access to their chambers.



the older one's warmth and intimacy. A bit too barren are twin stairs inserted into the 1933-era courtyard. Although they are open only to the USAO staff, their curiously raw aesthetic, exemplified by uncovered concrete floors, seems unnecessary.

But the project's real shortcomings stem from the client, which was hampered by bureaucracy and bad luck throughout nearly a decade of design and construction. Delays, ironically caused when the first general contractor went bankrupt, coincided with the rise of the Internet, which revolutionized the flow of information in bankruptcy courts and led to staff reductions—in

turn creating redundant and obsolete program items. And while the building's facades and roofs were inspected before interior work began, crumbling stone and leaks have since become a serious problem—so much so that the USAO delayed moving into its offices, and the entire complex was surrounded with scaffolding to protect pedestrians.

Hopefully, the GSA will engage Kliment & Halsband anew to restore the exteriors and convert underutilized interior spaces, such as the public records room, for other functions. The architect's successes elsewhere in the building leave no doubt it is up to the task. ■

Less Than Zero (or how to design a carbon-neutral world before it's too late)

CONTENTS

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- 166 Toyo Ito builds a concrete cloud**
- 169 Tech News and Reviews**



The city of Dongtan, China, aims to be carbon neutral (page 162).



Toyo Ito's concrete roof in Japan appears to float (page 166).

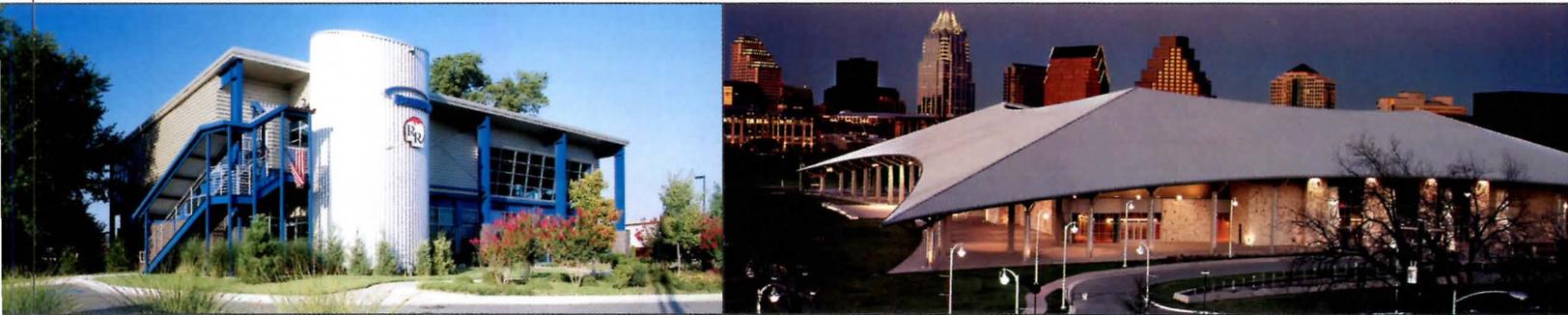
Niall McLaughlin
Architects' Hull
Architecture Centre
runs on colorful solar
photovoltaics and wind
turbines (page 153).

Zilch. Nada. Zip. Nil. Architects don't exactly demand this kind of breathlessly flattering description for their latest project, but most of the following pages of our Architectural Technology section all come down to one question: How can a building eliminate its carbon dioxide emissions? The architects, engineers, and consultants we have talked to this month like the idea of zero energy architecture. Or call it zero carbon. Or carbon neutral. Whatever you call it, it has quickly become the single metric for gauging the sustainable seriousness of any design project. So many people in our industry talk of carbon dioxide emissions, greenhouse gases, and global warming, we wanted to focus on putting some definition to the topic in terms of architecture. After all, the U.S. Energy Information Administration estimates 48 percent of U.S. carbon dioxide emissions come from buildings. It's our problem.

If you haven't read the Intergovernmental Panel on Climate Change's recent report, *Climate Change 2007*, by all means, finish reading *RECORD* and check it out (www.ipcc.ch). It's a downloadable PDF, and it's certainly heavy reading. But its unbiased and conservative estimates of what humans have done to the planet—like rising sea levels, increased heat waves, and more intense tropical cyclones—are the best imperative to adopt sustainable design methodologies since John Denver sang *Rocky Mountain High*. We recognize there is no single way to address this issue, but we want to get this conversation about “achieving nothing” under way. *Russell Fortmeyer*



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The Zero Effect

THE FUTURE OF SUSTAINABLE DESIGN INCREASINGLY MEANS ELIMINATING CARBON DIOXIDE EMISSIONS, THE MOST PREVALENT GREENHOUSE GAS. BUT WHAT DOES THAT DO TO ARCHITECTURE?

By Russell Fortmeyer

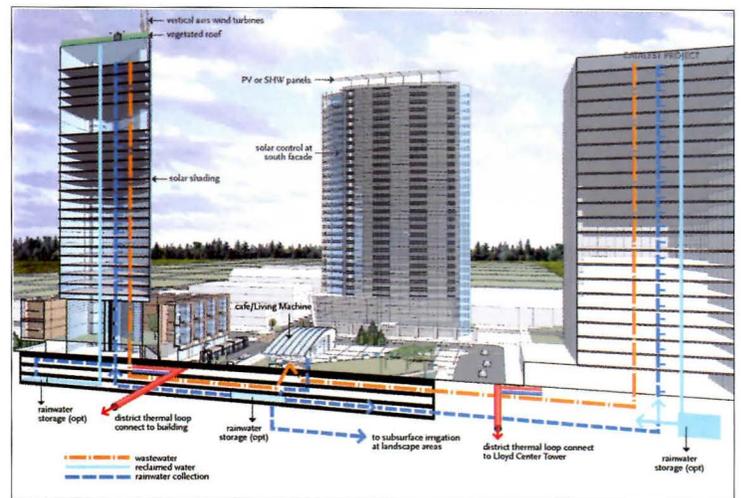
Today you've exhaled, on average, 2.2 pounds of carbon dioxide (CO₂), the greenhouse gas poster child for our current fascination with global warming. Just by breathing, you've entered a cycle of carbon emission and sequestration, an environmental chess game with consequences that are well documented, if little understood. Americans will emit roughly 44,000 pounds of CO₂ per capita this year, an amount over three times the per capita average for the world. And if you're thinking of planting a forest to offset your last trip to Las Vegas, keep in mind the U.S. Department of Agriculture estimates a healthy tree can consume roughly 13 pounds of CO₂ in a year.

Truth be told, human breathing contributes nothing to global warming. We each eat plenty of plants, which act as carbon sinks since they absorb carbon dioxide from the atmosphere, and thus by eating we remove a great deal of carbon dioxide from the environment on a daily basis. If anything, we can breath easier knowing respiration qualifies as a carbon-neutral activity. Such calculated explanations underscore the complications of accounting for carbon emissions across the broad spectrum of our lives—the food we eat, the places we go, the energy we consume, and increasingly, the buildings and cities we create.

Bert Gregory, FAIA, thinks about these kinds of things a lot. As president and C.E.O. of Seattle-based Mithun, an architecture and planning office with a sustainable design specialty, Gregory has literally gone back to nature. In his work on Mithun's *Lloyd Crossing Sustainable Urban Design Plan and Catalyst Project*, a 2004 master plan for a downtrodden section of downtown Portland, Oregon, Gregory and his team began its work by conceptually recreating the native ecosystem of the site's 54 acres to determine exactly how much CO₂ would be absorbed and emitted annually if no human development had ever occurred. The redevelopment plan would then have to match, if not beat, this carbon footprint.



Lloyd Crossing, Portland, Oregon Mithun prepared a comprehensive urban-planning document for the revitalization of this downtrodden neighborhood into a carbon-neutral development with districtwide systems (below).



"We couldn't analyze everything because the project resources weren't there, so we focused on high-level things," Gregory says, referring to the plan's key issues of energy and water.

When setting up its predevelopment metrics, Mithun's team found that the yearly baseline of the native Northwest conifer forest landscape would have produced 32 million gallons of groundwater recharge out of 64 million gallons of total precipitation. Calculating that 8 million kilowatt hours (kwh) of solar energy contributed to photosynthesis per year, the team determined that 153 million kwh remained as reflected, absorbed, or re-radiated energy. For the site's carbon balance, the team found that annually the forest consumed 681 tons of CO₂, released 495 tons of oxygen, and fixed 186 tons of carbon as biomass (such as new tree growth). The team now faced the question of how over the four decades of the plan's premise

CONTINUING EDUCATION



Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/AIA Continuing Education article. To receive credit, turn to page 160 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Define what contributes to carbon emissions.
2. Explain the differences between the types of net zero concepts.
3. Discuss the status of the zero-energy home market.

For this story and more continuing education, as well as links to sources, white papers, and products, go to archrecord.construction.com.



Main Station, Stuttgart, Germany Ingenhoven Architekten, of Dusseldorf, Germany, designed a zero-energy train station for the heart of Stuttgart. The building relies on passive ventilation through the train tunnels. The “light eye” scoops (right) transport daylight into the subterranean train platforms below (above) while also serving the additional duties of providing exhaust air louvers and smoke removal in case of fire. The eyes were digitally modeled to optimize their efficiency in directing light as well as funneling air out of the station. The project, now under construction, will be completed in 2013.



you develop an existing infrastructure into an economically viable district that would be a forest in function, if not appearance.

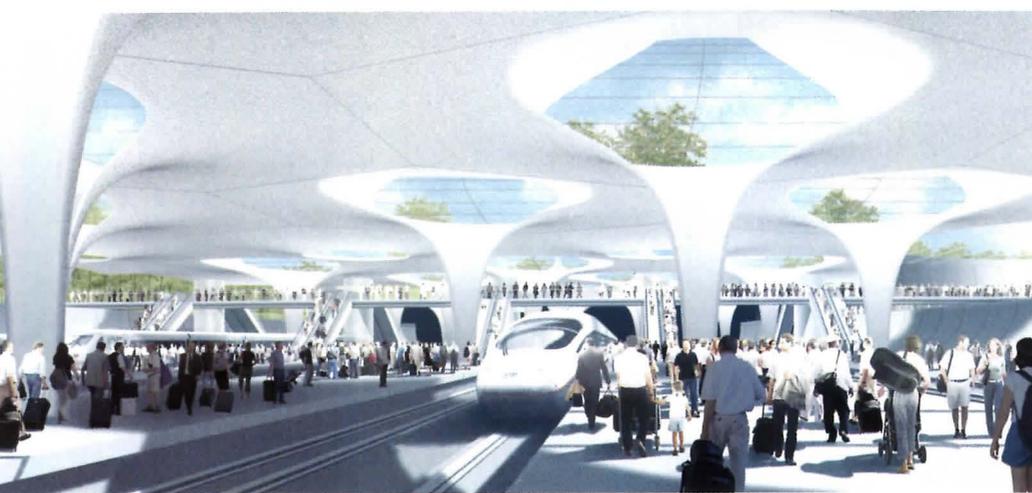
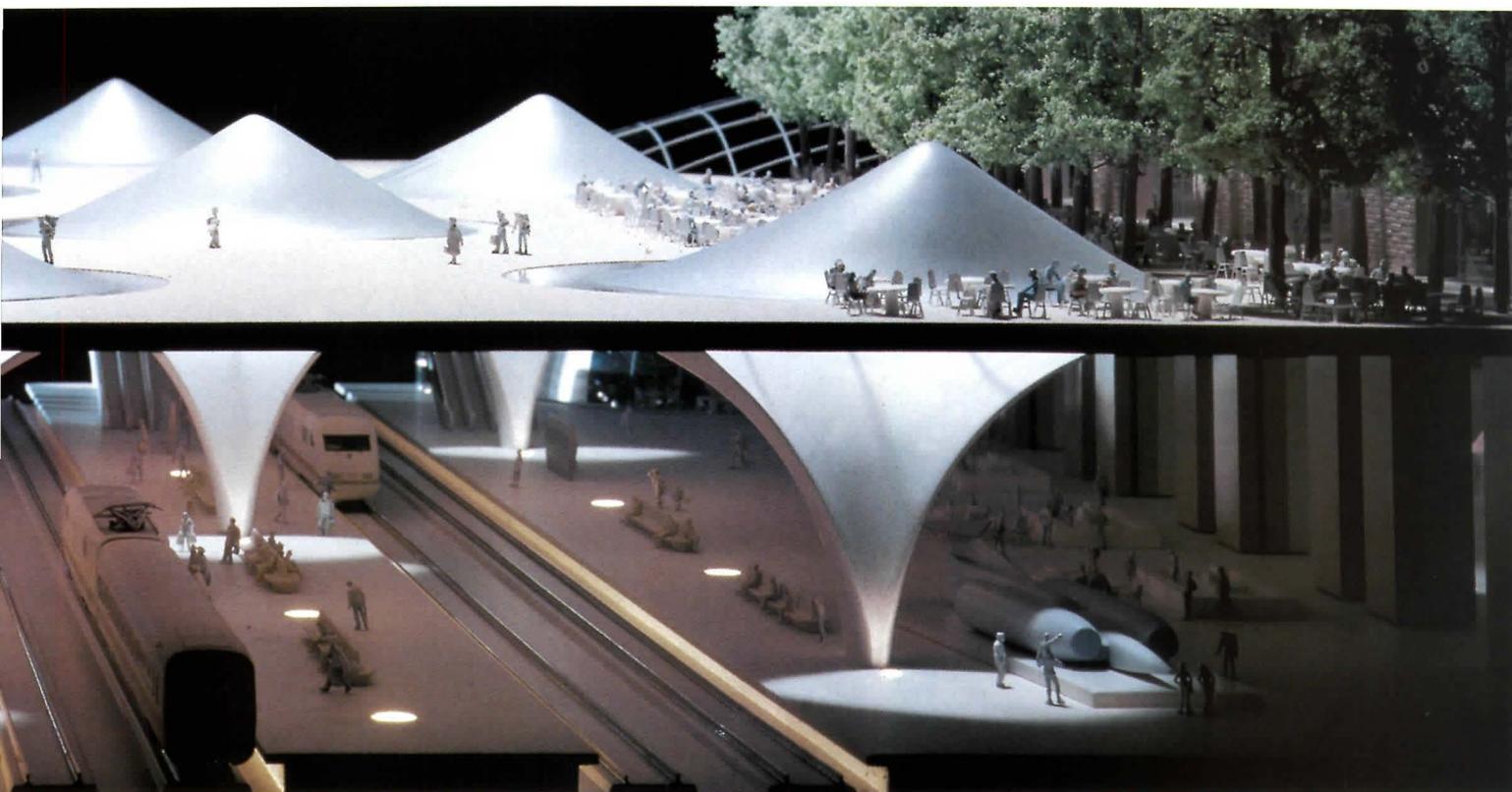
The plan, which won an AIA Honor Award in 2006 and is available on the firm’s Web site (www.mithun.com), represents an attempt to define carbon-neutral design. While the term “zero carbon” gets bandied about, most designers mean “net” zero, where absorption of carbon is equal to or greater than emission, hence the neutrality argument. And when talk turns to carbon, more often than not the discussion concerns energy and its parent, fossil fuels. The Department of Energy (DOE) attributes 98 percent of America’s carbon dioxide emissions to the combustion of fossil fuels. It’s pretty straightforward to determine a building’s energy use, to trace it to its source (probably a coal or natural gas-fired power plant), and to make a rough estimate of how much CO₂ finds its way into the atmosphere every year when you turn on your lights or tweak your thermostat (see the EPA’s quick calculator based on kilowatt-hours usage at www.epa.gov/cleanrgy/powerprofiler.htm). Past utility bills or electricity-demand-consumption predictions by electrical engineers,

environmental consultants, and utility companies—all of which are likely based on previously known consumption patterns—form the baseline for any discussion of a building’s energy reduction or generation. But what do we mean when we set out to make a building “zero energy”?

Zero-sum games

The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) provided one of the more concise statements on zero-energy buildings in “Understanding Zero-Energy Buildings,” which appeared in its September 2006 journal (www.ashrae.org). The authors, Paul Torcellini, an engineer at the National Renewable Energy Laboratory (NREL), and Drury Crawley, with the DOE’s Office of Building Technologies, subclassify the concept for buildings in four schemes: net zero source energy, net zero site energy, net zero energy cost, and net zero energy emissions.

Net zero source energy compares the building’s energy consumption and production to that of the utility source. Since utilities rely on



multiple generation plants and transmission systems, this concept generally proves too difficult to quantify and is therefore rarely used in architecture. The net zero site energy concept measures energy consumption within the boundaries of the building's site, ignoring whether the utility source is coal or wind. This applies more generally to what architects try to achieve, since even so-called "off-the-grid" buildings loaded with photovoltaics (PV) and wind turbines still typically connect to utility transmission lines for backup power. Skidmore, Owings & Merrill's design for Pearl River Tower [RECORD, December 2006, page 172], in Guangzhou, China, exemplifies this approach. The third element, net zero energy cost, relies on volatile energy rates—a notoriously difficult metric—to reach a balance between the energy generated on-site and sold to the utility versus the energy supplied by the utility. Finally, the concept of net zero energy emissions only measures the emissions produced by the generation of power to meet the building's total energy needs, which can also prove difficult with a utility company dependent on multiple sources at any given time.

Architects approach this topic in multiple ways, but the

ASHRAE article stresses the need to define the project's goal from the beginning to guide the design team in its decisions. The Dusseldorf, Germany-based firm Ingenhoven Architekten established a net zero site energy constraint on its competition-winning scheme for the Stuttgart Main Station, an expansion and upgrade to the city's train station. The design of the building, for completion in 2013, essentially amounts to a roof to cover below-grade train tracks, a public park, and some interior circulation space. Christoph Ingenhoven, the firm's principal, describes the design as a 21st-century response to a 19th-century problem. "It's very difficult to get a zero-energy building," he says, noting that although his own house is nearly zero energy, he still purchases some power from a renewably sourced utility company.

With the program of the train station, Ingenhoven's firm focused on passive strategies—a popular tactic of *energy reduction first*, followed by an investigation of on-site generation to make up the difference. The design includes 28 so-called "light eyes," which serve multiple purposes: daylighting the underground station, relieving exhaust air, and passively removing smoke in the case of an emergency. (Ingenhoven observes that architectural systems serving more than one purpose are a hallmark of sustainable design.) Computational fluid dynamic modeling, as well as conventional wind tunnel tests, proved that a natural ventilation scheme would work since the station's tracks slope nearly 16 feet across its length and trains push air in and out. And since Germany has a relatively temperate climate, expected interior temperatures range from 46 degrees Fahrenheit in the winter to 78 degrees in the summer—not uncomfortable temperatures for passengers seasonably dressed. PVs and renewable power purchase agreements make up the station's only electricity needs for elevators and lighting.

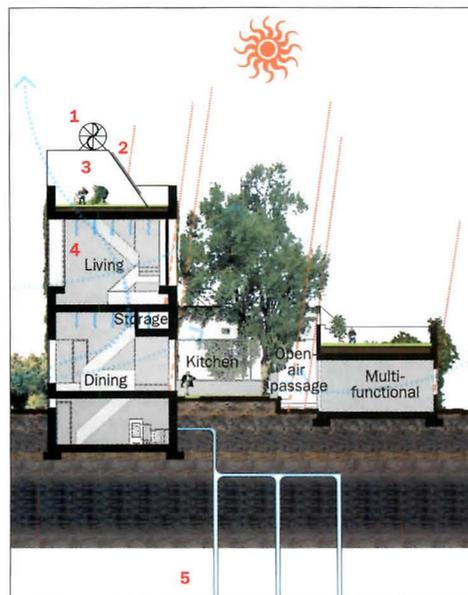


Zero-energy house, Chicago Zoka Zola, AIA, has designed a site-sensitive single-family home for an inner-city lot that takes advantage of passive heating and cooling strategies. The house, which goes into construction this spring, will eventually support a rooftop PV system.

Public, private, power

It's conventional wisdom that public institutions have been in the forefront of adopting most design and technology supporting sustainable goals. City train stations, built to last decades, must meet higher operational standards and can afford to take a longer view than the classic developer model building that requires a pay-back in a handful of years. At least, developers have conditioned architects to expect this.

The Los Angeles Community College District (LACCD) has adopted an ambitious plan to transform its nine campuses with a net zero site energy policy. With an existing building base of 5 million square feet and plans to add 3 million more, the LACCD worried it wouldn't have money for increased energy costs for new building. Larry Eisenberg, executive director of LACCD's facilities planning and development department, says the district decided to just eliminate its \$9 million annual energy bill. "A com-



- 1. Wind turbine
- 2. Solar photovoltaics and solar-heated panels
- 3. Stairwell ventilation shaft for exhaust air
- 4. Radiant cooling concrete slabs for occupied spaces
- 5. Geothermal system tubes down to bedrock

prehensive strategy is key," Eisenberg says.

For the nine campuses to reach zero energy, the LACCD has implemented a three-part plan: improve, reduce, and generate. First, the district intends to convert each of its campuses to a central plant model, an improvement that allows systems to operate more efficiently with fewer maintenance costs. Second, the district has enlisted a third-party contractor to perform an efficiency study of its campuses and to install energy-saving technology, such as occupancy sensors, low-E glass, and better insulation. The district pays for this service out of the money the technology saves on its annual energy bill. These two preliminary strategies ensure the success of the third: the generation of power through a 9-megawatt (mw) photovoltaic installation (or 1 mw per campus).

What's more, the district will subcontract out the system cost and installation to a contractor/supplier (requests for proposals are due back



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Zero-carbon beach resort, Nungwi, Zanzibar Richard Hywel Evans Architecture and Design have planned to use photovoltaics and wind turbines to power a beach resort for ecoconscious tourists (left). The resort will offset the carbon emissions associated with guest travel.

Hull Architecture Centre, Hull, England Níall McLaughlin Architects created a zero-energy temporary structure (top two) to raise design awareness in Hull. Wind turbines and photovoltaics mounted in a plaza supply the building's energy and feed back into the city's grid.

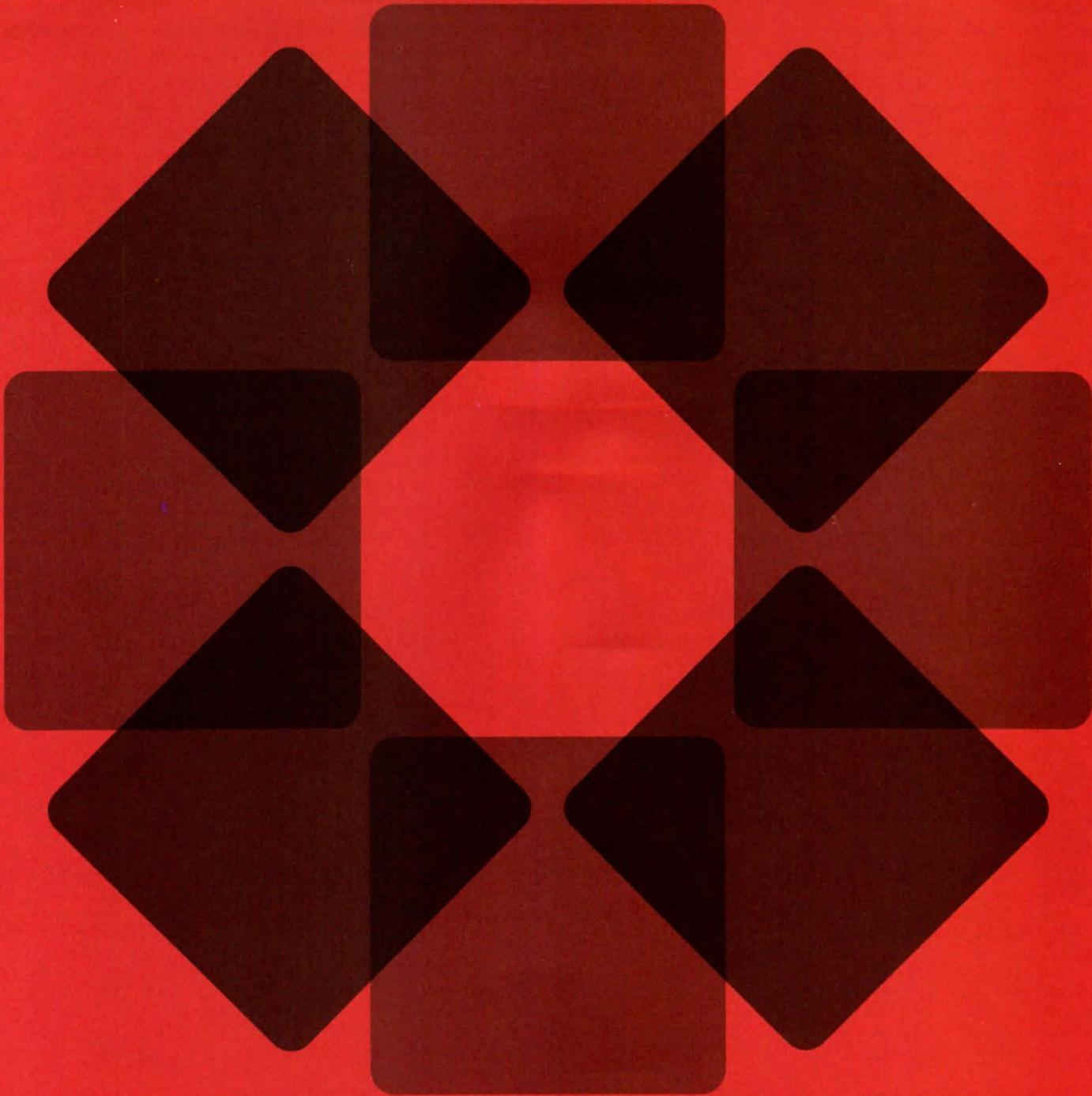
this spring). That third party supplier could then reap federal and state tax credits to eliminate an immediate 20 percent of the PV installation cost. Further, in tax parlance, rapid depreciation of the PV system will pay for another 20 to 25 percent. Green tags—renewable energy credits—can sell on the open market to generate another 5 to 10 percent of the cost. Adding it up, Eisenberg estimates the 9 mw system will cost between 10 to 20 cents on the dollar. With these incentives, Eisenberg projects 1 mw of PVs costs between \$1 million and \$2 million, which translates to a one to two year payback for a campus with a \$1 million annual energy bill. Eventually, the LACCD will buy the system back from the contractor. To skeptics who point to the erratic performance of PVs, which need good sunlight exposure, Eisenberg says the district is exploring a few promising options in energy storage technology, such as hydrogen-powered fuel cells.

Decarbonated living

Large-scale projects garner attention and offset the most CO₂ emissions in a single gesture, but zero-energy single-family homes represent a growing market in nearly every corner of the country. A February 2006 report for the

NREL prepared by the National Association of Home Builders (available at <http://www.toolbase.org/pdf/casestudies/zehpotentialimpact.pdf>) found that the concept of zero-energy homes would be part of the mainstream residential building market by 2012, and by 2050 could result in reducing by 17 percent the electricity demand for the entire U.S. single-family-home sector. Many of the homes referred to in the study, however, appear business-as-usual, incorporating PVs with higher-performance building materials in a conventionally designed tract home on a cookie-cutter subdivision site. As any sustainable-building consultant will tell you, 90 percent of your opportunities for designing a zero-energy home begin with site orientation.

Zoka Zola, AIA, who practices in Chicago, says unless an architect can decide where to place windows and how to take advantage of natural ventilation on a site, reaching a zero-energy goal through passive strategies becomes difficult, if not impossible. "The discussion should be how to make the building as efficient as possible through its general configuration," Zola says. With her design for a zero-energy house in Chicago, she included south-facing windows, specified 25-percent-fly-ash concrete to provide thermal mass, and devised a layout with courtyard gardens to combat heat island



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effects. She also helped the client pare his space needs, avoiding the desire to build out the maximum allowable square footage for the inner-city site. Zola planned infrastructure for the eventual installation of PVs on the roof, but advised her client to wait until PV efficiency reached a higher level to bring the house to full zero-energy status.

May contain hazardous materials

Embedded energy or carbon, which takes into account the energy used to manufacture a construction material or product, constitutes an altogether trickier component of the zero-sum game. Zola did not consider the embodied energy in the house, simply because the material information and tools to quantify such things are sketchy at best. For the Lloyd Crossing plan, Mithun did not consider the occupants or the furnishings of a building and only encouraged the use of construction materials with low embodied energy levels. Mithun's Gregory says any master plan undertaken today should consider occupant and operational factors for individual buildings. "This is an emerging issue," he says, noting that most clients interested today are college campuses and other tightly focused building constituencies.

Ingenhoven began the design process for the Stuttgart station with simple models to test structural solutions. "We wanted to minimize the amount of concrete used, so we needed to find a purely pressure-loaded structure," Ingenhoven says. With Frei Otto and Buro Happold as consultants, as well as a team of German university researchers, Ingenhoven used experience to shape the structure with the models prior to building a digital

model that could optimize it. The work paid off in a slim, 14-inch, reinforced-concrete slab across the tracks (compared to Toyo Ito's 7.8-inch slab roof for the Kakamigahara Crematorium, on page 166). Saving concrete cuts down on cement plant production, a notorious source of CO₂ emissions.

Although accounting for embodied energy in our buildings represents a challenge (see the related story at the top of page 170), raising awareness of architecture's effects on carbon emissions has reached a fever pitch. The U.S. Green Building Council announced in November that it would require all buildings going for commercial certification to achieve a 50 percent CO₂ reduction over current levels [RECORD, January 2007, page 127] through stricter enforcement of the energy and optimization points in the LEED rating system. As exhaustively noted in the February 12 issue of *Engineering News-Record*, there is no shortage of CO₂ emissions news—such as the January call from an unlikely industry coalition, including Alcoa, General Electric, and Dupont, for instituting national-emissions limits or the release of the Intergovernmental Panel on Climate Change's *Climate Change 2007* report—helping architects wade through the competing claims, various options, and unwieldy concepts remains a daunting challenge. Mithun's Gregory stresses the combined wisdom of multidisciplinary teams as the short-term solution. On the Lloyd Crossing project, the Mithun team included architects, energy engineers, civil engineers, economists, landscape architects, and even a branding company to help the team communicate its ideas to the community. While meaningful change will take time, Gregory notes, "There aren't enough carbon offsets for the entire world." ■



AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- ◆ Read the article "The Zero Effect" using the learning objectives provided.
- ◆ Complete the questions below, then fill in your answers (page 215).
- ◆ Fill out and submit the AIA/CES education reporting form (page 215) or download the form at archrecord.construction.com to receive one AIA learning unit.

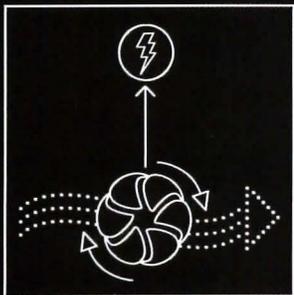
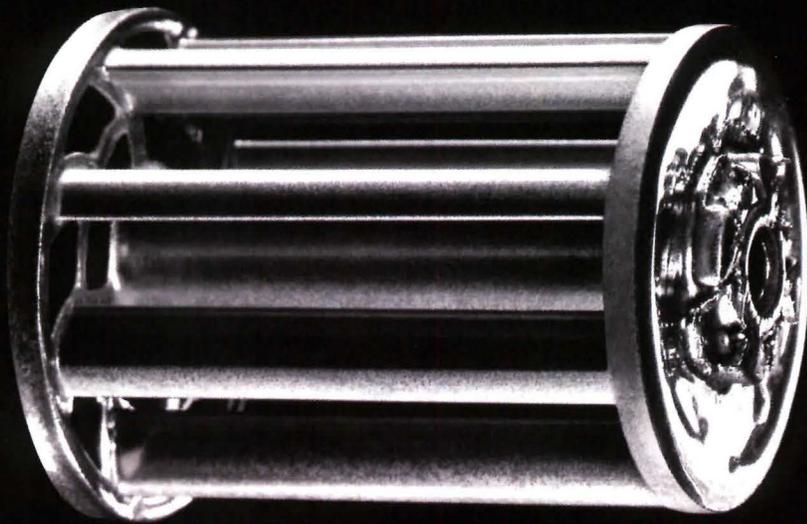
QUESTIONS

1. Which of these do not emit carbons?
 - a. creating concrete
 - b. driving a gasoline engine car
 - c. human breathing
 - d. healthy trees
2. Net zero energy emissions measures which?
 - a. emissions produced from generation of the energy a building needs to buy
 - b. emissions produced by the generation of a building's total energy needs
 - c. difference between the energy sold to the utility versus the energy supplied by the utility
 - d. comparison of the building's consumption and production to that of the utility source
3. What percentage of America's carbon dioxide emissions are due to the combustion of fossil fuels?
 - a. 32 percent
 - b. 68 percent
 - c. 82 percent
 - d. 98 percent
4. Most often architects try to achieve which concept since buildings still typically connect to utility transmission lines for backup power?
 - a. net zero source energy
 - b. net zero site energy
 - c. net zero energy cost
 - d. net zero energy emissions
5. An example of the tactic "reduction first" is which?
 - a. making the square footage of the building as small as possible
 - b. taking advantage of all the possible tax credits first
 - c. find ways to reduce energy consumption first
 - d. generate energy on-site, reducing the reliance on utilities
6. Renewable energy credits are also known as which?
 - a. green tags
 - b. photovoltaics
 - c. passive strategies
 - d. sustainable design
7. Why have public institutions been the early adopters of most technology supporting sustainable goals?
 - a. they must meet higher operational standards
 - b. they can afford to take a longer time to pay off the building costs
 - c. private developers want a quick payback time frame
 - d. all of the above
8. The Los Angeles Community College District intends to convert each of its campuses into a central plant model for which reason?
 - a. it will more easily support a photovoltaic system
 - b. it will cost less to maintain
 - c. it will operate more efficiently
 - d. b and c only
9. By 2050, zero-energy homes could result in reducing the electricity demand of the U.S. single-family-home sector by how much?
 - a. 2 percent
 - b. 10 percent
 - c. 17 percent
 - d. 33 percent
10. Zoka Zola included all except which as passive strategies to reach a zero-energy goal?
 - a. east- and west-facing windows
 - b. courtyard gardens
 - c. 25-percent-fly-ash concrete
 - d. south-facing windows

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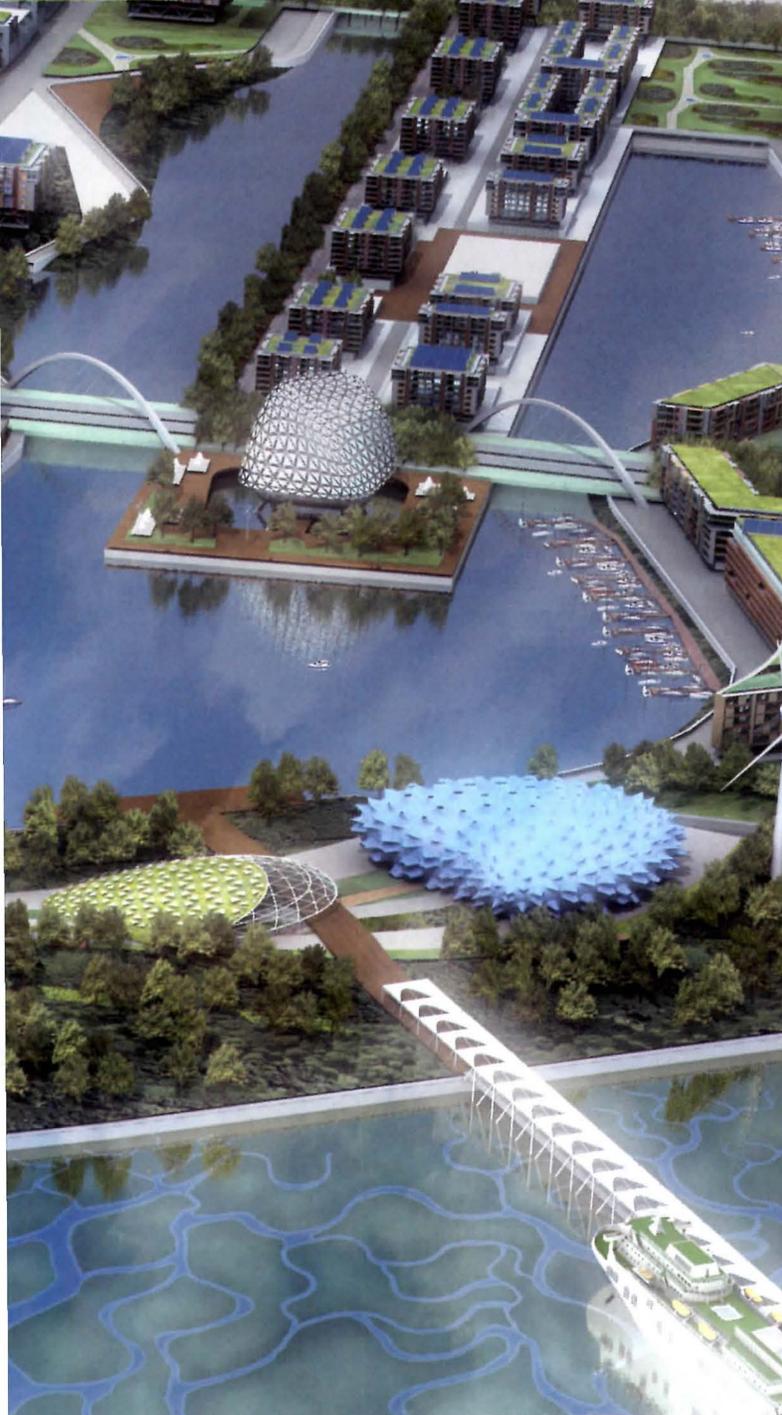
Zero-Carbon Cities

WITH CITIES WORLDWIDE FACING DAUNTING ENVIRONMENTAL CHALLENGES ON A GLOBAL SCALE, A MULTIDISCIPLINARY TEAM AT ARUP SEEKS TO CREATE A MODEL FOR HOW CITIES CAN DEVELOP CARBON NEUTRALLY





Dongtan is expected to eventually be home to more than 500,000 residents, which is a drop in the bucket for a country of 1.3 billion people. But the ambitious carbon-neutral experiment of Dongtan is meant to be a model for development worldwide.



By Sara Hart

Once upon a time, when the world's population was a fraction of the 6.5 billion it is today, environmental issues were thought of as local problems. Writers, politicians, scientists, and activists have recorded the polluted, disease-producing conditions of urban centers for centuries. Benjamin Franklin petitioned the Pennsylvania Assembly in 1739 to stop dumping waste and remove tanneries from Philadelphia's commercial district, citing foul odors, lower property values, and disease. And yet, even the proto-environmentalist Franklin could not predict that centuries of local industrial recklessness would one day endanger the entire planet.

In 2007, environmental issues are literally global in that the carbon emissions of every industrialized country have accumulated to create the present damaging climate changes. From Al Gore's 2006 documentary *An Inconvenient Truth* to the release last month of "Climate Change 2007," a six-year study about global warming from the Intergovernmental Panel on Climate Change, there seems to be little doubt that the by-products of industrialization—greenhouse gases, particularly carbon dioxide (CO₂)—are responsible.

Even before the latest reports, a new model for confronting global warming has gained traction. The new model, variously referred to as *zero-carbon*, *carbon-neutral*, or *fossil-free* development, is a revolutionary attempt to stop and, where possible, reverse the damage. Whereas there are currently no such zero-carbon cities in the industrialized world, an experiment is unfolding that attempts to create a carbon-neutral city from scratch and provide a prototype for the future of all cities in one of the world's most environmentally distressed countries, China.

China syndrome

Adjacent to booming Shanghai, plans are coming together for the prototypical city of Dongtan, which designers argue would be the world's first truly sustainable new urban development. London-based Arup and the Shanghai Industrial Investment Corporation (SIIC), the city's investment branch, have partnered to create a master plan for Dongtan, an area three quarters the size of Manhattan. The brief calls for integrated sustainable urban planning and design to create a city as close to carbon-neutral as possible within economic constraints. Located in sensitive wetlands on Chongming Island at the mouth of the Yangtze River just north of Shanghai, Dongtan's first phase, a marina village of 20,000 inhabitants, will be unveiled at the 2010 World Expo in Shanghai. By 2020, nearly 80,000 people are expected to inhabit the city's environmentally sustainable neighborhoods.

Sara Hart, a former editor at *RECORD*, is a New York-based freelance writer.



Wind turbines are integrated into everyday community spaces in Dongtan.

As a strategic partner, Arup is responsible for a range of services, including urban design, sustainable energy management, waste management, renewable energy process implementation, architecture, infrastructure, and even the planning of communities and social structures. Peter Head, director of Arup's sustainable urban design, leads the project for the firm from its London's office (during design, Arup is offsetting the emissions of its team's travel to and from the site in cooperation with emissions brokerage firm CO2e). "Renewable energy will be used to reduce particulate CO₂ emissions. Transport vehicles will run on batteries or hydrogen-fuel cells and not use any diesel or petrol, creating a relatively quiet city," he explains. Other priorities include recycling organic waste to reduce landfills and generate clean energy.

Head insists development won't affect the wetlands. "First of all, water usually discharged into the river will be collected, treated, and recycled within the city boundaries," he says. "There will be a 2-mile buffer zone of eco-farm between city development and the wetlands." While farming is water intensive, relatively small amounts of water reach the plants themselves. Head says Dongtan "will capture and recycle water in the city and use recycled water to grow green vegetables hydroponically. This makes the whole water cycle much more efficient."

There are, of course, questions about what kind of sustainable industries will provide jobs for Dongtan residents. City officials and their consultants anticipate jobs in education, including an Institute for Sustainable Cities. They expect to attract companies pursuing new technologies, food research and production, and health care. Of course, ecotourism will become a significant industry. The plans for the development have already garnered their fair share of press in the design world [RECORD, March 2006, page 46].

Dongtan's ecological footprint

The Stockholm Environment Institute (SEI) describes the global environmental imbalance succinctly: "Sustainability requires living within the regenerative capacity of the planet. Currently, human demand on the planet is exceeding the planet's regenerative capacity by about 20 percent. This is called 'overshoot.'"

Arup is developing an ideal ecological footprint for Dongtan to guide the master plan and prevent overshoot. The new city's ecological footprint will be determined by a modeling program called the Resources and Energy Analysis Program (REAP), developed by SEI and the Center for Urban and Regional Ecology at the University of Manchester. Unlike the traditional focus on air and water pollution, REAP concentrates on measuring the amount of resources consumed by the number of individuals occupying a defined area.

The best ecological footprint, of course, balances (nature's) supply and (human) demand, which is the goal at Dongtan. Head and his team are using REAP to determine the effectiveness of their planning decisions in achieving sustainability, as well as Arup's own sustainable design assessment tool, the Sustainable Project Appraisal Routine (SPeAR). The footprint will

reveal how much productive land and sea is needed to provide the energy, food, and materials for daily consumption, and how much land is required to absorb human-generated waste. The program also calculates the emissions generated from the oil, coal, and gas burned, and determines how much land, air, and water is required to disperse these emissions.

Ecological footprinting is not without critics. Some experts argue that by applying generalizations and averages to per capita analysis, while not accounting for multiple usages of the same land, for instance, oversimplifies the conclusions. SEI claims that REAP is "the only software tool that can convert household [and commercial] expenditure at the national level into its associated environmental impact," rendering its forecasts more accurate at the product level with the inclusion of "bottom-up" data.

The U.K. has a short, but intense, history of ecological footprinting. For years prior to Dongtan, British architect Bill Dunster and Arup had pursued the viability of harnessing renewable resources, achieving closed-loop material use, and creating site-resource autonomy. In 1999, the Peabody Trust, one of London's largest affordable housing providers, selected Arup, Bill Dunster Architects (since renamed BDa ZEDfactory), and the BioRegional Development Group to test their ideas creating the Beddington Zero (fossil) Energy Development (BedZED). The goal of the 83-home, mixed-income housing development in South London was to prove that carbon-neutral projects were cost-effective, practical, and therefore ready for the mainstream marketplace.

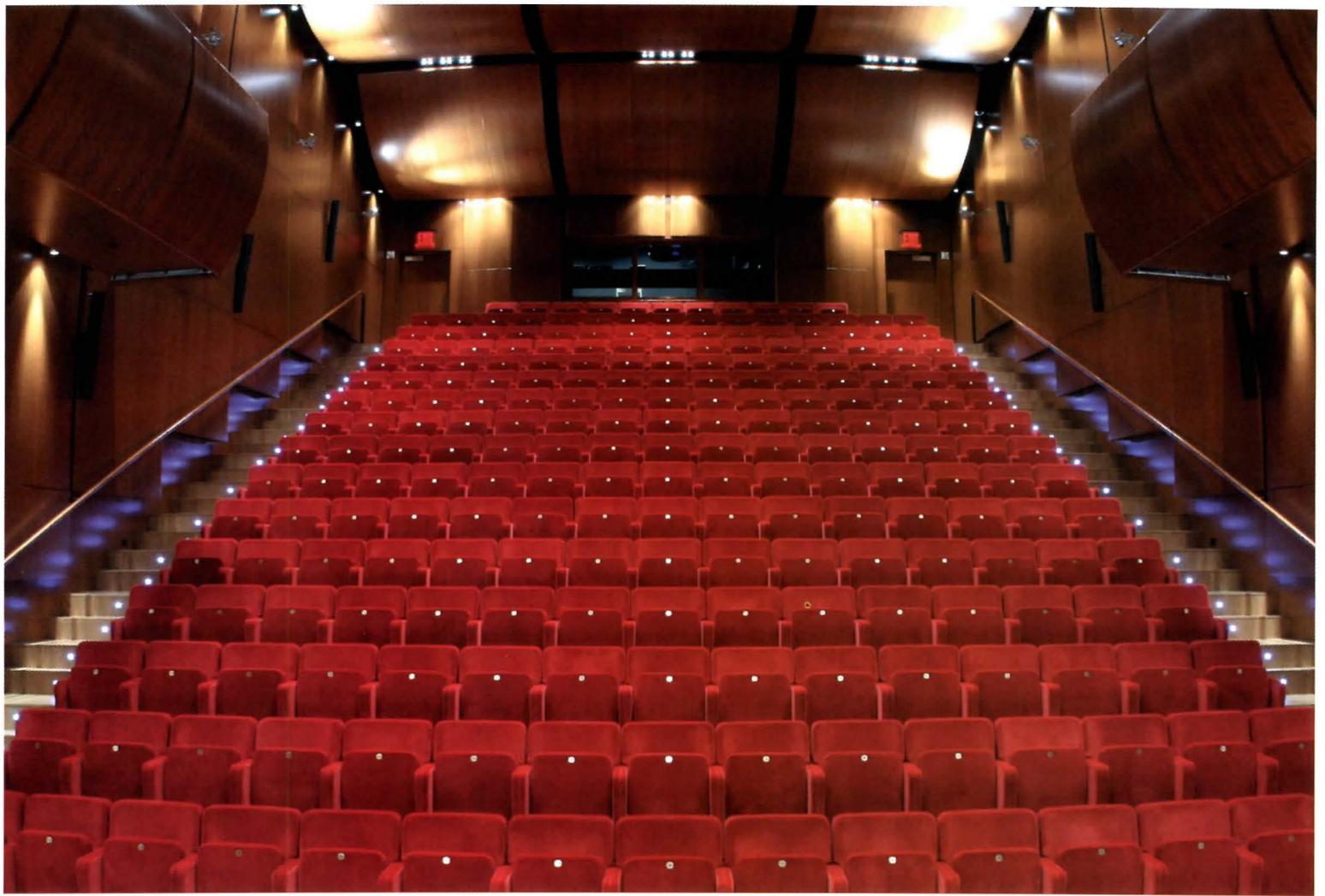
For the Dongtan team, BedZED's most important lesson was its holistic design approach, which eliminated obsolete systems from the beginning, rather than tacking on sustainability features in an effort to increase performance. Arup is applying total design integration to the project through a series of design specifications for architects. While construction on infrastructure is slated to begin this year, no architects have been engaged for the building program.

Think globally, act locally

Innovation should not be conceded entirely to the U.K. or Europe. Progress can be seen domestically at the local and state levels, as federal guidelines are now being fortified with legislation. With much fanfare, Governor Arnold Schwarzenegger of California recently established a groundbreaking Low Carbon Fuel Standard (LCFS) for transportation fuels sold in the state. Elsewhere, cities are concentrating on buildings and land use, confronting the fact that U.S. buildings annually consume 43 percent of the nation's energy and generate 35 percent of its CO₂ emissions.

Nine years ago, Austin, Texas, recognized the impact that residential construction was having on the local environment and established a Green Building Program to provide financial incentives—not just voluntary guidelines—for all residential, commercial, and multifamily projects. Austin Energy, the city's community-owned utility, has developed renewable energy sources, including wind turbines, landfill methane gas recovery projects, and solar energy sites. Seattle's public electricity utility has adopted a policy of zero-net greenhouse gas emissions by selling its stake in a coal-fired steam plant and mitigating emissions from its remaining fossil-fuel plant. These aren't new strategies, but they are now being widely embraced by a design community that is more engaged in the bigger regional picture of each individual architectural project.

A zero-carbon nation will undoubtedly take more generations to achieve, but the political will to do so is gaining momentum and having Dongtan as a model will certainly help matters. This growing interest reveals a commitment to long-term goals, which has effectively been missing since Benjamin Franklin argued that the public has a right to live in environmentally healthy communities. ■



Morgan Library, New York - Project Renzo Piano Building Workshop
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Technicalities

Toyo Ito builds a concrete cloud

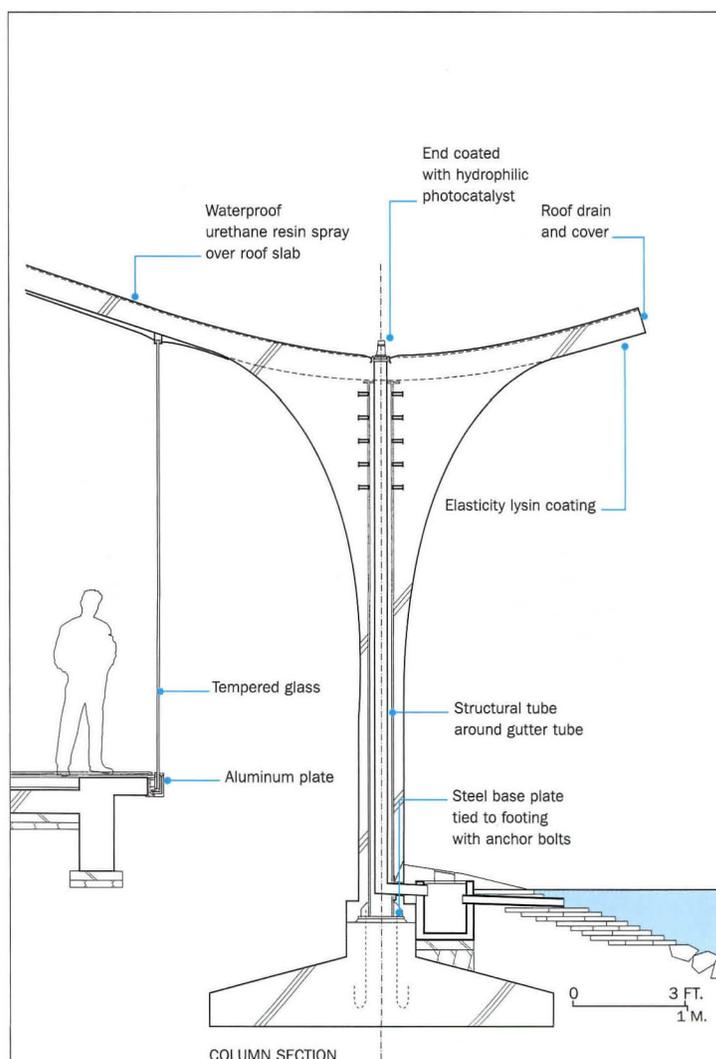
By Russell Fortmeyer

Nature creates clouds by condensing water onto dust—an explanation as unsatisfactorily simplified as saying Toyo Ito designed a new crematorium in Kakamigahara, Japan, with some algorithms and a little poetic inspiration.

Working with Sasaki Structural Consultants, Tokyo-based Toyo Ito and Associates used a process it terms “evolution” to digitally optimize the structural design of the building’s billowing, reinforced-concrete roof, a seeming landscape of convexities and concavities that integrates a roof-drainage system at each of the 12 cone columns. Ito has explored roof topography before, in a lattice-embossed steel roof for the 1996 Nagaoka Lyric Hall.

Ito likens the crematorium’s roof to a cloud—a characterization that seems to defy the material properties of reinforced concrete—but one need look no further than the pioneering work of Swiss engineer Robert Maillart for an earlier example, albeit less sensuously realized. Sigfried Giedeon, in the 1941 edition of his *Space, Time and Architecture*, credited Maillart with achieving the “building conceived as a unit,” or what we might call the appearance of a *single pour*, with a particular emphasis on the Modern preoccupation with lightness. Maillart’s Cement Hall for the 1939 Swiss National Exhibition in Zurich balanced the roof’s practical concerns with a concrete-shell thickness of a mere 2.4 inches. Ito’s roof does it in 7.8 inches, correcting for Japan’s seismic conditions.

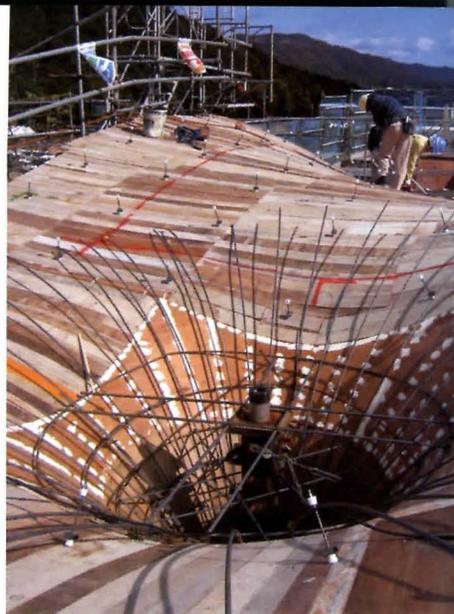
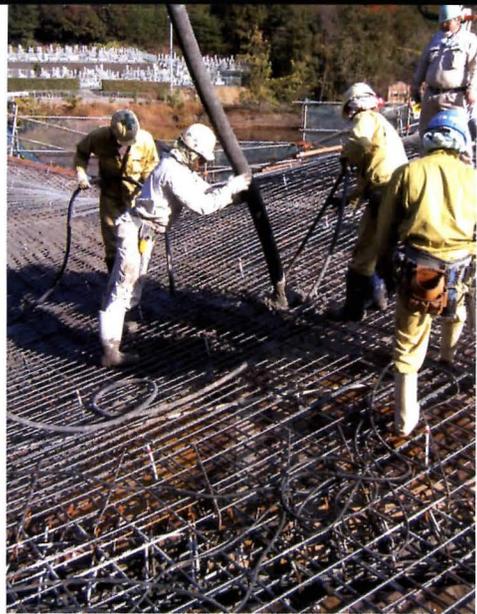
Contractors poured the crematorium’s roof in five steps and, with grinding machines, smoothed the joint lines to heighten the form’s continuity. Workers maintained the roof’s tolerance of 0.4 inches with a laser level finder and readings at 3,700 precise points. A hard cement mix kept the concrete from sliding down the sloping formwork. Even after smoothing, some rougher parts were covered with mortar and ground again. Finally, contractors sprayed a flexible, waterproof urethane layer of 0.2 inches across the entire surface. So while the building may look like a cloud, water does not fall from its underside. ■



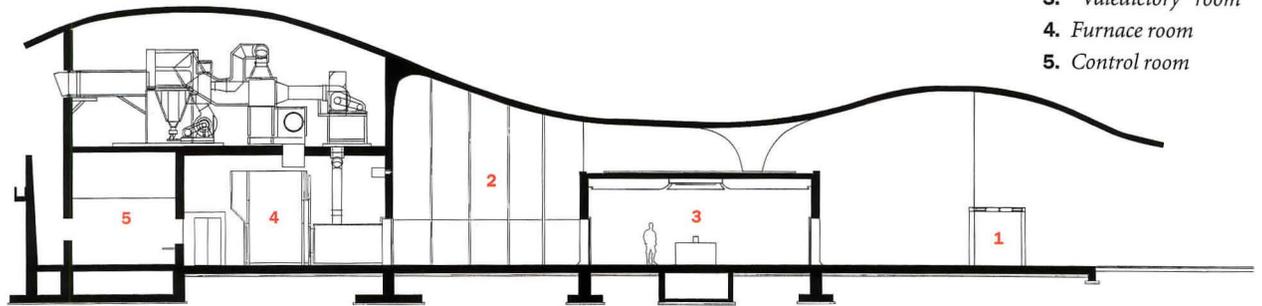
From a distance, the crematorium appears tethered to the ground (left), while a view from a nearby hill suggests

a landscape (top). Intense grinding following each pour helped achieve a seamless look.





Contractors first constructed a wooden formwork (above), laid down a mesh of steel rebar (middle), and then poured the concrete in five batches. The top of a cone column (above far right), shows the integrated roof-drainage system.



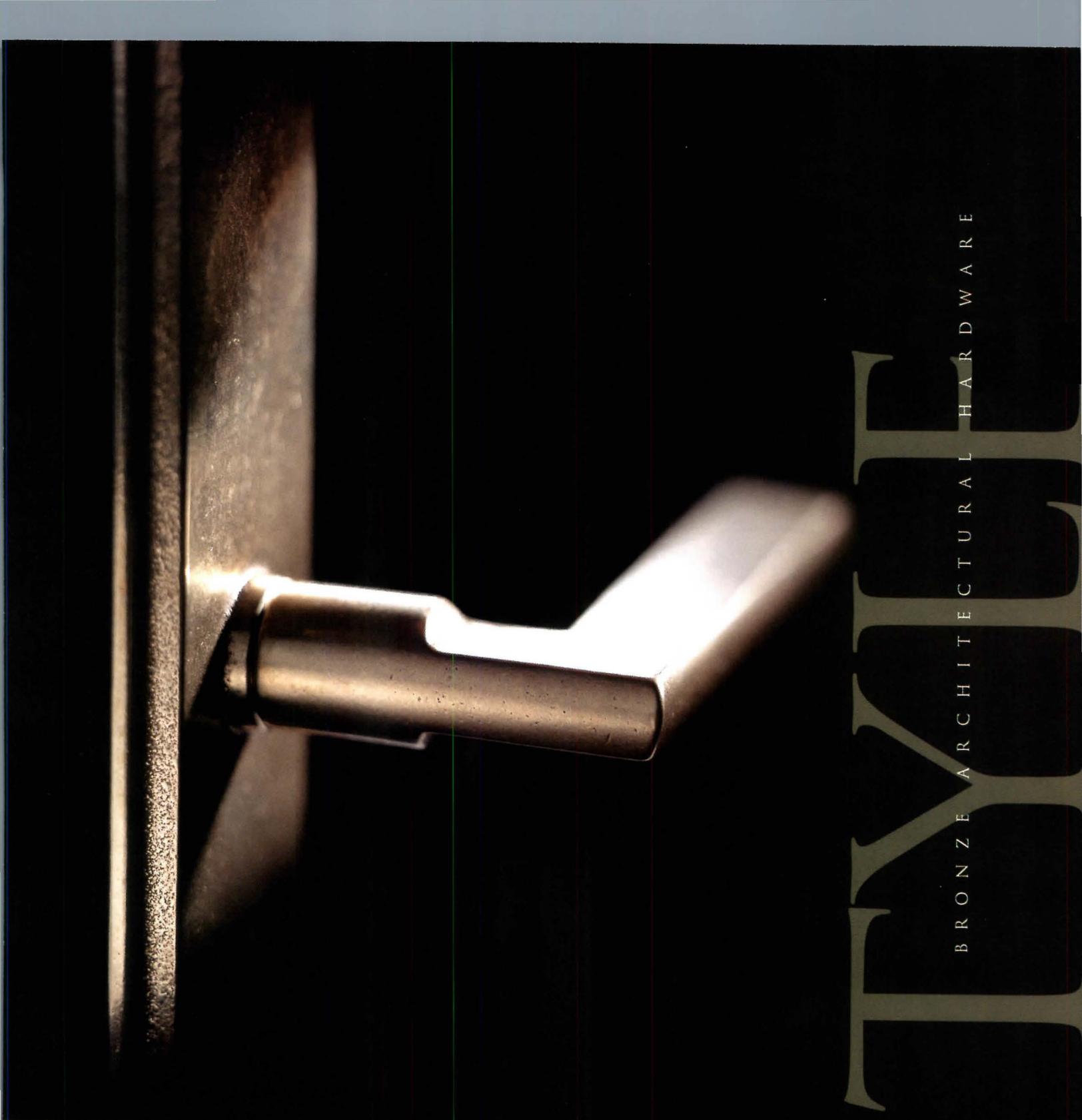
EAST-WEST SECTION

1. Vestibule
2. Corridor
3. "Valedictory" room
4. Furnace room
5. Control room

COURTESY TOYO ITO AND ASSOCIATES (THIS PAGE, TOP THREE)



Unlike traditional crematoriums that invoke solid, monumental construction, Ito says he wanted this building to create a soft field that integrated landscape.



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Tech News & Reviews

Following carbon footprints leads architects and consultants to their own doorsteps

Last month's declaration by a United Nations panel that global warming is "unequivocal," and that fossil fuel use is "very likely" to blame, should intensify discussion of the already hot topic. Of course, many "green" architects and their consultants were already focused on the issue, not only in relationship to the buildings they design, but also in regard to their own business practices.

Several firms have developed, or are developing, sustainable operations plans for their offices that include minimization of greenhouse gases, primarily carbon dioxide (CO₂), as part of their larger missions. "It fits with our mindset and philosophy," says Rebecca Tannebring, New York City office manager for environmental consultant Atelier Ten.

To shrink the CO₂ footprint of their own work spaces, architects and their consultants rely on many of the same strategies they employ in the buildings they design, including daylighting, energy efficient office equipment, and lighting controls such as occupancy sensors. Many firms reduce transportation-related sources of greenhouse gases by eliminating unnecessary business travel and by a variety of programs aimed at making commuting by mass transit a more attractive option.

After reigning in the operational activities associated with greenhouse gas emissions, to come closer to the brass ring of carbon neutrality firms typically participate in "offsets." This process entails investing, through a third-party provider, in projects that reduce greenhouse gas emissions, such as tree planting, or construction of wind and solar energy facilities.

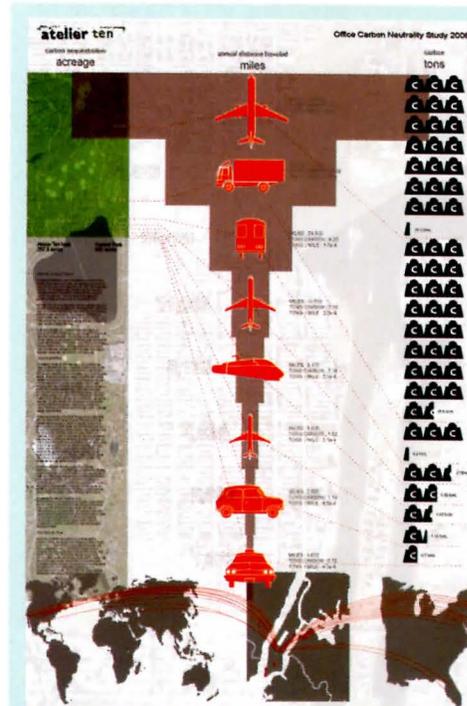
In order to determine how many offsets to buy, businesses

typically conduct an inventory of emissions. And, as part of this accounting task, they must decide which greenhouse gas generating activities to include and which to exclude. A CO₂ inventory could conceivably take into account the carbon embedded in office supplies, such as paper and toner, and that generated by outsourced activities, such as printing and shipping. But few, if any firms, are conducting inventories so fine-grained.

Although the boundaries of greenhouse gas inventories vary from firm to firm, among those interviewed for this article, it was common to include electricity use, fuel associated with heating and cooling, and business-related travel. Some go even further. Cook+Fox includes employees' home electricity consumption estimated through a sampling of staff utility bills, according to Alice Hartley, a member of the firm's "green team." The firm purchases renewable energy credits for this electricity use and for that used by its New York City office.

However, including employees' home power use within the boundaries of a greenhouse gas inventory is highly unusual. Most firms track only that electricity consumed by the operations of their office spaces. This bookkeeping task, especially for large, multilocation practices with a variety of tenancy situations, can be demanding. Perkins+Will, for example, has been following electricity consumption at its 20 North American locations for 18 months. The firm owns some of these spaces and rents others. Some have dedicated meters and others do not. The diversity of arrangements "adds a layer of complexity," says Chicago-based Gavin Smith, AIA, a project architect with the firm.

For keeping track of air travel,



For its New York City operations, Atelier Ten, an environmental design firm, recently completed an inventory of office activities associated with carbon emissions that spanned a 12-month period.

which can account for a huge share of a firm's emissions, sources have different approaches. Some depend on employees to report air mileage and tie the process directly to the expense-reporting system. Others, like Seattle-based Mithun, depend on one agency for both travel arrangements and for managing the related record keeping, according to Bert Gregory, FAIA, president and C.E.O.

The protocols for determining the amount of CO₂ associated with power use, air travel, and other activities, are still not mature. "It's an emerging area," says Smith. Perkins+Will, along with many other firms, depends on a greenhouse gas accounting standard developed by the World Business Council for Sustainable Development and the World Resources Institute (www.ghgprotocol.org).

Sources point out that inventories are not static and that regular updates and adjustments are

important, especially for quickly growing firms. "It's a continuous process," says Atelier Ten's Tannebring. The firm recently completed a calculation of its CO₂ emissions for the 12-month period ending in April 2006, and is now investigating offset options.

None of the firms interviewed would discuss how much the reduction, record keeping, and offset process adds to overhead. However, some of the expenses can be treated as reimbursable, as any project-related expense would. Cook+Fox, for example, uses a car service with a gas-electric hybrid fleet when travel by mass transit doesn't make sense. The service, which comes at a slight premium over taxis, is identified as a reimbursable in contracts, helping develop awareness among clients about greenhouse gases and global warming, says Hartley. Joann Gonchar, AIA

Tech News & Reviews

On the greenhouse gas trail, one engineer aims beyond “carbon neutral”

Carbon dioxide (CO₂) emissions trading, a market-based strategy for mitigating climate change, has been steadily growing over the past few years, and furnishing and building-product companies are among the industries adopting the practice.

U.S. furniture systems manufacturer Hayworth announced late last year that its Zody task chair had earned “Planet Positive” certification. The designation is the brainchild of Guy Battle, the London-based environmental and building engineer. He has been working with Hayworth since before the chair’s release in 2005 to examine procurement and manufacturing processes with the aim of reducing and managing the CO₂ emissions associated with Zody and the company’s other products.

To deliver these services, Battle has created dcarbon8, a consultancy

separate from Battle McCarthy, his engineering and landscape practice. “As a designer, there are only so many buildings I can touch,” says Battle. “This has a wider impact.”

After reducing CO₂ emissions as much as is practical, dcarbon8 clients purchase vouchers for 110 percent of the remaining embedded CO₂. These certificates are passed on to the product’s buyer so that the end user can invest in a carbon offset project of their own choosing.

The production of the Zody is responsible for approximately 200 pounds of CO₂, or about 30 to 40 percent fewer emissions than that of a similar task chair, according to Battle. Therefore, Hayworth provides vouchers worth 220 pounds for each chair it produces. Because the value of the offsets is greater than that of the emissions associated



Hayworth’s Zody chair, on the market since 2005, has been designated “Planet Positive.” It had already earned gold Cradle to Cradle certification.

the potential for components to decompose or be reused and the quantity of energy and water consumed in manufacturing. “The two initiatives are complementary,” says Franco Bianchi, Hayworth president and C.E.O.

In addition to Hayworth, dcarbon8 clients include manufacturers of products such

as cladding and flooring and industrial real estate developer ProLogis. The company is building a super-market distribution center in the Midlands region of the U.K. that will incorporate technologies such as cogeneration, photovoltaics, and solar heating. It is expected to be the world’s first Planet Positive building when it opens in August. J.G.

with the product, the net result is carbon negative rather than carbon neutral, explains Battle: “There is a net positive impact on the planet.”

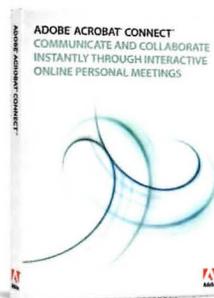
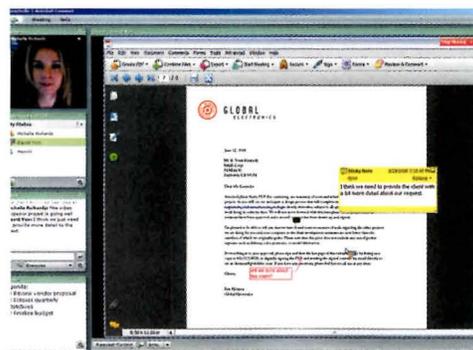
The Zody had already earned certification under the Cradle to Cradle protocol created by William McDonough, FAIA, and chemist Michael Braungart (see page 82). That program examines factors like

Adobe launches a new Web-based conferencing platform and a fine-tuned version of Acrobat

The PDF file format continues its dominance of the portable file market with the release of an updated version of Adobe’s Acrobat, now in version 8, and the launch of a reconstituted edition of the Internet conferencing software Breeze, now called Adobe Acrobat Connect.

Acrobat 8 Professional fine-tunes many of the software’s standard features, adding the ability to create a single PDF out of multiple files, as well as streamlining the software’s look. Additionally, you can add comments to files in a shared review setup, when files are located on shared servers, and garner instant feedback from collaborators who may only be using Adobe’s Reader 8.

While conferencing software and Web sites are nothing new, Connect’s reliance on a backbone of Adobe’s Flash Player—a free, down-



Adobe Acrobat Connect’s user interface (left) is intuitive and straightforward.

loadable program Adobe recently acquired—means only one party actually needs the Connect software to host a meeting. Patrick Aragon, an Adobe representative, says the acquisition of Flash Player was key since the program already exists on most computer desktops.

Connect operates over the Web, so videoconferencing is instantaneous; the professional version

even delivers Voice over Internet Protocol capability. You simply type in a conference URL and join the meeting. Adobe offers two different cost structures, depending on whether Adobe or your company hosts the connection. If you host, the fee depends on the number of users and overall usage. If Adobe hosts, it’s a yearly fee of \$395 with \$39 monthly charges per virtual

meeting URL. Having Adobe host the site frees your company’s bandwidth, which makes this particularly helpful for smaller offices.

Like Acrobat, this version of Connect isn’t specifically tailored to the a/e community, but both programs include a number of bells and whistles for designers. For example, you can take a DWG file, and even without AutoDesk’s AutoCAD on your computer, you can drop the file into Acrobat 8 and create a PDF that would be viewable in Connect. That’s handy for project managers with laptops on the road. Still, Connect isn’t the program to use if you’re interested in revising drawing files in a live process, but since making a PDF is now push-button fast in everything from CAD programs to Microsoft Word documents, hashing out the details of an expansion joint with your contractor would be well within your reach. Russell Fortmeyer

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Tech News & Reviews

Three very different books about sustainable design stress the need for a collaborative approach and an integrated process

Sustainable Commercial Interiors, by Penny Bonda and Katie Sosnowchik. Hoboken, New Jersey: John Wiley & Sons, 2006, 305 pages, \$70.

ASHRAE Green Guide: The Design, Construction, and Operation of Sustainable Buildings, Atlanta: ASHRAE/Butterworth-Heinemann 2006, 394 pages, \$79.95.

Design on the Edge: The Making of a High-Performance Building, by David W. Orr. Cambridge: MIT Press, 2006, 272 pages, \$27.95.

Collaboration among the various members of the project team is critical to the success of any building. But the design and construction of a high-performance building, in particular, demand close coordination and clear communication among the owner, the design consultants, and the builders because so many elements, including the building's orientation and configuration, the mechanical systems, and the materials, are dependent on their integration with each other. Three recent publications about green design—two reference manuals and a book that chronicles the planning and construction of the first substantially sustainable building on a U.S. college campus—acknowledge the importance of this integrated approach.

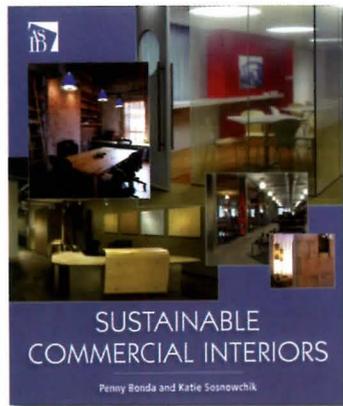
As its name suggests, *Sustainable Commercial Interiors*, by Penny Bonda and Katie Sosnowchik, is targeted at a particular professional audience engaged in a very specific type of project. It is full of practical information about carpet recycling initiatives, product certification programs, and the toxins found in many standard building

materials. It includes sections contributed by well-regarded members of the design community on subjects such as daylighting, life cycle assessment, and specification writing. In addition, the book also examines topics that are typically outside most interior designers' scope of responsibilities. For example, one chapter is devoted to site, water, and energy issues, in order to provide interior designers with "the knowledge they need to work effectively with the architect and engineers on their project teams," according to the authors.

Like Bonda and Sosnowchik's book, the updated version of the *Green Guide*, published by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), was conceived with a particular audience in mind—in this case, mechanical engineers. However, the book contains information that would also be helpful to other members of the design and construction team.

A set of so-called "green tips" pinpoint the safety, occupant comfort, and energy issues unique to specific building types. Another set of tips explains key technologies, such as ground source heat pumps, thermal energy storage, and gray-water systems, in an accessible way, useful to architects, owners, and building managers. It explains in what circumstances the use of a certain strategy would be most appropriate, and its potential benefits and drawbacks.

One important chapter is devoted to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, discussing point-by-point those credits that fall directly or indirectly under the purview of the mechanical engineer. It makes a convincing case for the HVAC con-

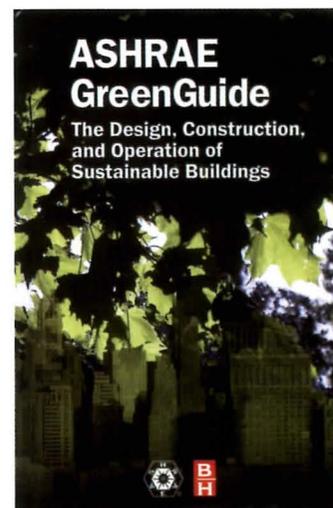
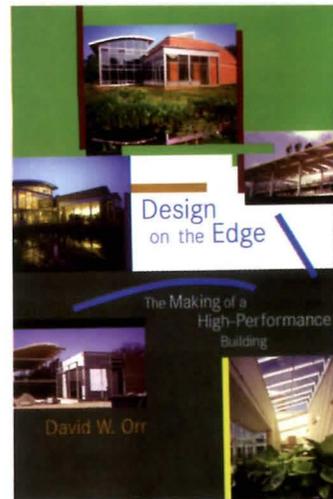


sultant's central role in the making of LEED-rated and sustainable buildings, and for his or her early involvement in the design process.

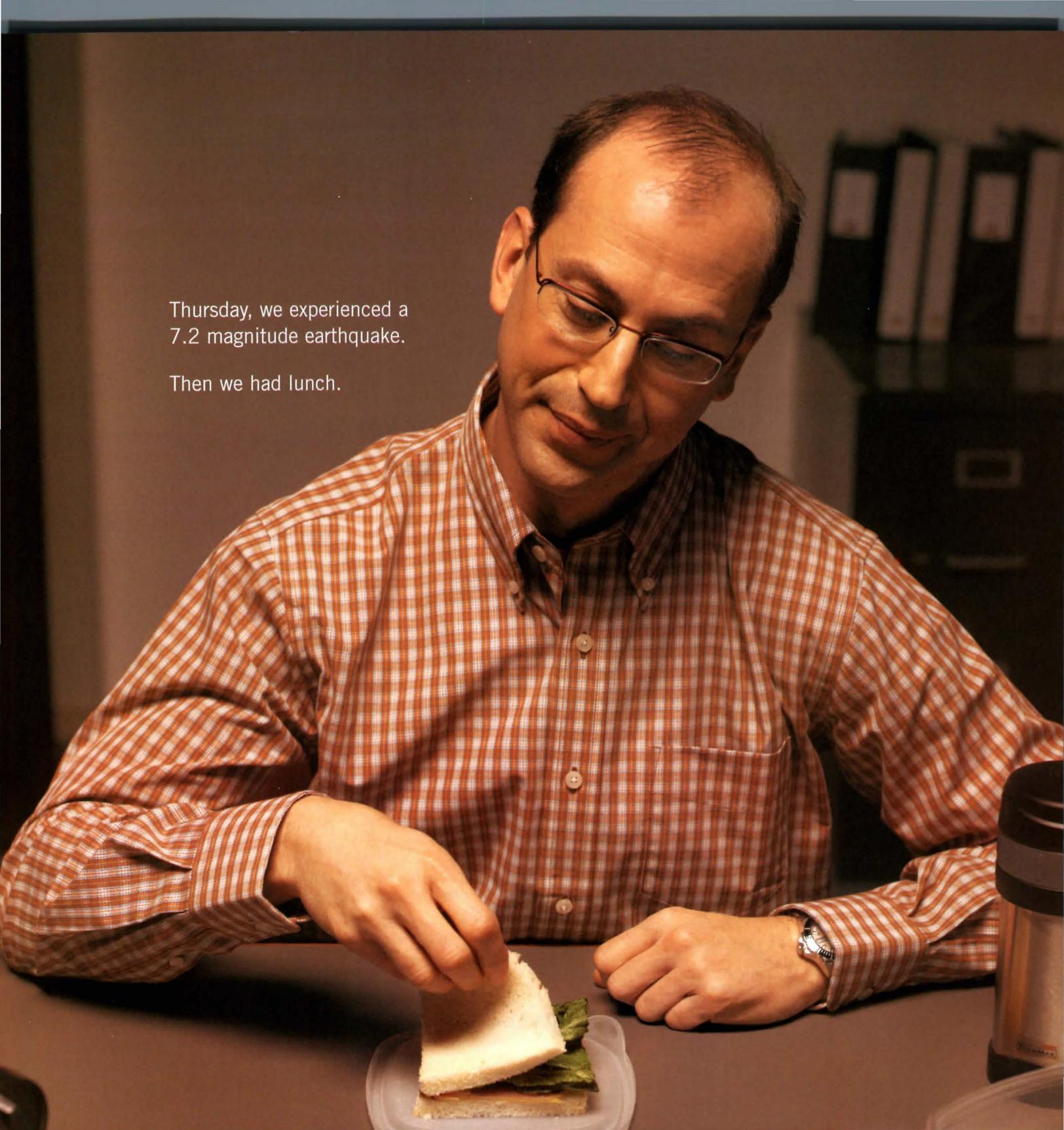
Although it is a very different kind of book, people and process also play a central role in David Orr's *Design on the Edge: The Making of a High-Performance Building*. Orr chronicles the story of the Adam Joseph Lewis Center built to house Oberlin College's environmental studies program, which he chairs. The book follows the center, which received national attention as an early model of ecological design, through planning, fund-raising, design, and construction. The story spans a decade, starting when the idea for the building was developed as part of a class that Orr taught in the early 1990s.

The book is part memoir, part sermon, and part sociological study. Orr weaves his own very personal account of the challenges encountered while trying to translate the vision for the building into reality with the history of environmental design, commentary about contemporary consumer culture, and observations about the politics of academia. The book also includes a plea not only for a revamp of campus construction, but of operations and curricula, as well.

Although it is more than a sim-



ple case study, *Design on the Edge* does provide insight into the obstacles and the considerable achievements of the Lewis Center. Despite ambitious performance goals and features such as a living machine for treatment of wastewater and photovoltaics, technological complexity was rarely to blame for the project's pitfalls, according to Orr. Instead, when it faltered, the cause was most often lack of communication among administrators, the architects, and the consultants. Naturally, every project has its own unique circumstances and accompanying set of human dynamics. Nevertheless, Orr's book is an important resource for architects, planners, and administrators contemplating a building project on a college campus or in any institutional setting. *J.G.*



Thursday, we experienced a
7.2 magnitude earthquake.

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Tech News & Reviews

SmartGeometry conference marries form with function (digitally, that is)

The holy grail of integrated design still lies just out of reach. The idea of an all-in-one software package that would optimize such seemingly disparate elements as a building's structure, energy performance, and form has yet to advance beyond the conceptual phase.

The four directors of the group SmartGeometry (www.smartgeometry.org), a nonprofit educational charity interested in digital modeling, would like to change that. Started four years ago in London by a group of friends—Robert Aish, Lars Hesselgren, Hugh Whitehead, and J. Parrish—SmartGeometry organized a conference and workshop this January in New York City (the day-long conference, which followed a five-day workshop at the Hudson Hotel, was hosted at the Cooper Union by RECORD). The workshop focused specifically on teaching

Bentley Systems' Generative Components (GC) software (Bentley sponsors the group). Algorithms form the basis of GC's parametric design tools, where users assign equations and rules to condition the creation of subsequent forms. For

SMARTGEOMETRY'S CONCERN IS NOT SO MUCH TO GENERATE NEW FORMS, BUT TO MAKE COMPLEX FORM-MAKING EASIER.

example, a rule could be as simple as defining a line as always occurring at the midpoint of another line, and regardless of how a designer may manipulate the overall model, that rule would always hold forth.

The workshop participants were primarily architects and structural engineers from such firms as Skidmore, Owings & Merrill; Arup; SHoP; Buro Happold; and Grimshaw Architects. However, mechanical engineers and contractors, who

could potentially represent significant constituencies for this software, were notably absent.

Aish, who is also a director of research for Bentley, said the GC software "facilitates the representation of ideas that are already a natural occurrence in architecture."

Among the two dozen presenters at the January 31 conference, Rob Whitlock, AIA, discussed his work at Kohn Pedersen Fox Associates (KPF) on the proposed CSCEC Tower in Pudong, China. Describing it in plan as an unfolded

paper clip, Whitlock said KPF depended on GC, as well as other tools, to reconcile the building's complex forms into planar surfaces and ease a panelized construction process. Whitlock's example revealed the difficulty in current modeling techniques, since the tower was modeled in Rhino and then further developed with a combination of programs, including Autodesk AutoCAD, GC, and Microsoft Excel, to produce the

design documents. Although this is not yet a seamless process, the fact many competing firms were participating in the workshop as an open collaboration illustrates how anxious designers are today to implement a smooth, all-encompassing design, analysis, and production software.

Matthew Herman, a member of Buro Happold's Computational Simulation and Analysis Group, said CAD software doesn't efficiently interface with thermal modeling programs. "We need to link the design tools to the analysis tools," Herman says. For example, Herman said there's no easy way to feed information on variable states like pressure and temperature into the form-making design considerations of parametric modeling programs. And although many firms use the beta version of GC, which Bentley intends to officially release as part of its standard MicroStation platform at its annual BE users conference in April, firms will likely continue to use the program in combination with many other tools from a variety of vendors. RECORD video interviews with SmartGeometry's facilitators can be found on www.archrecord.com. R.F. and J.G.

A new Web site simplifies finding green architects, builders

As sustainable design concepts increasingly infiltrate the lucrative residential design and construction market, homeowners looking for reliable information on local architects and contractors with knowledge of the field can encounter a frustrating process. That situation is the impetus behind the new Web site, www.greenbuildingblocks.com, which had a soft launch at GreenBuild 2006, held in Denver in November.

Now in beta form, the website hosts a growing number of professionals on pages that provide firm information and project portfolios. The site also functions as a network for local designers and contractors to connect. Need a sustainably minded



mechanical contractor in Stillwell, Kansas? Not a problem. The interface is straightforward. Consumers can access resources as diverse as energy auditors, real estate agents, and modular home manufacturers. While it doesn't yet cover the nation, it launched with 2,000 listings.

Prices for listings range from \$249 to \$1,195 for a full project portfolio, but the Web site has a special introductory offer. R.F.

Digitizing on the fly

Cliché or not, you've probably doodled the solution to a design problem on a cocktail napkin. And you've likely wanted to take the idea back to the office, but not necessarily the napkin. The Docupen RC800, a handheld scanner, will let you do just that the next time inspiration strikes in a bar or airplane.

Because users roll the 2-ounce, 9-inch-long, cordless device over the documents they wish to scan, rather than feed individual sheets through a slot, architects may find the Docupen helpful in situations in which pass-through-type portable scanners would be impractical. For example, it could be used during on-site meetings to digitize details sketched on a portion of a standard contract drawing sheet. The device produces reasonably

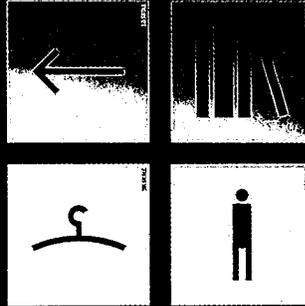
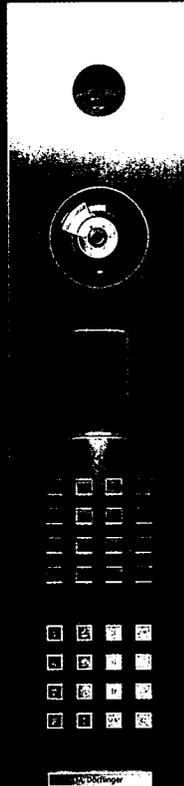


legible documents, although the quality does not approach that of flatbed scanners.

The Docupen connects to a PC or Mac via a USB port for downloading and for charging the gadget's lithium-ion battery. It is capable of scanning in four color or black-and-white modes. According to RECORD's not-so-scientific testing, the 8-MB memory can hold only two, full-color, 8½-by-11-inch images at maximum resolution. But it has the capacity for about 40 napkin doodles at the lowest black-and-white setting. Memory can be added with a MicroSD or TransFlash card.

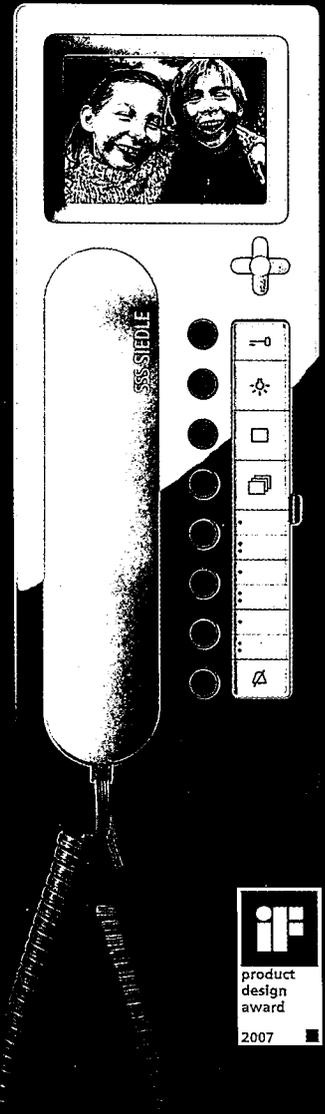
The Docupen's list price is \$299.99. Visit www.planon.com for more information. J.G.

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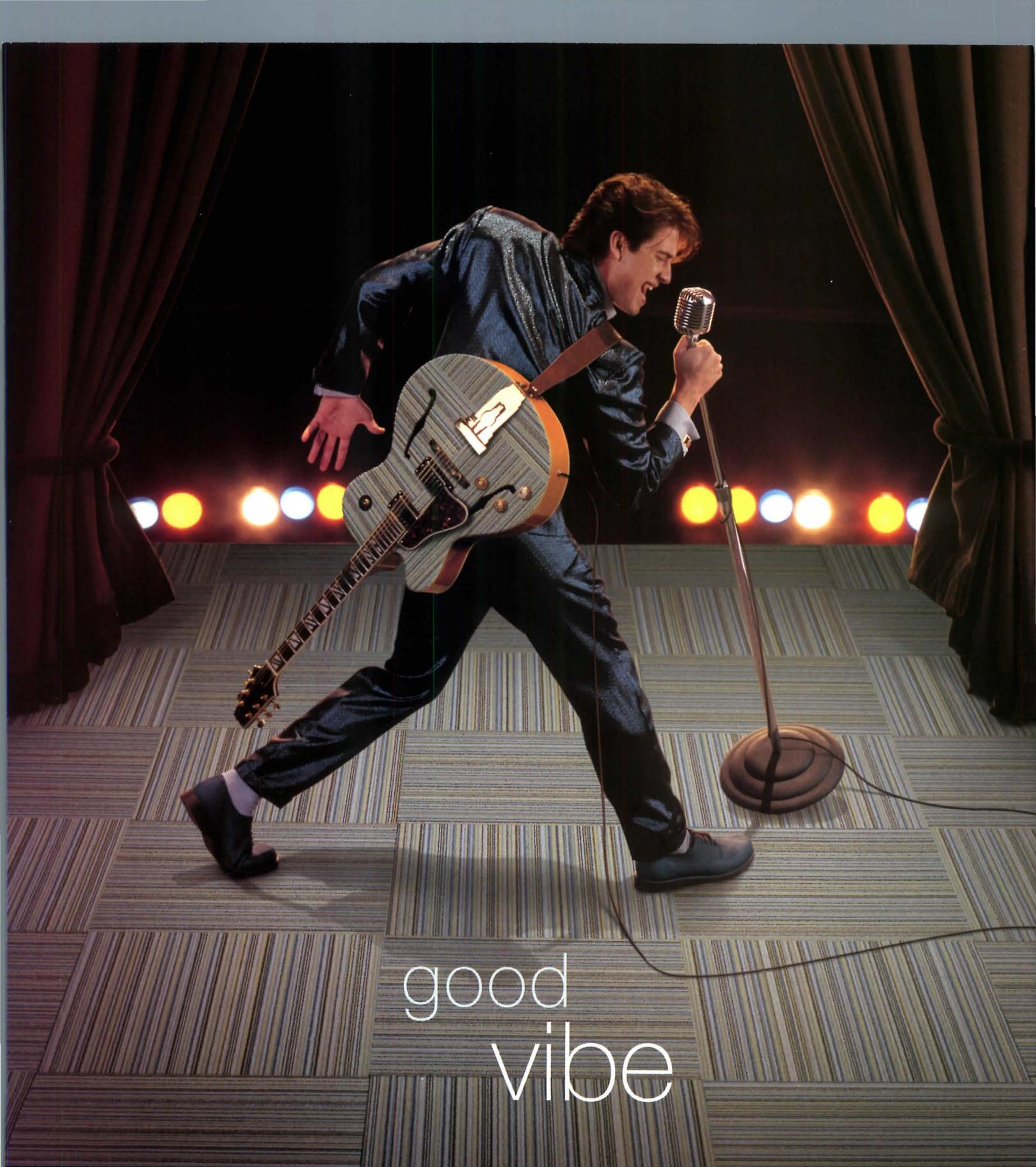


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I N V I S I O N

WHERE CREATIVE
MEETS CARPET

Interiors

In the new math practiced in three projects, architects perform conversions by subtraction

BRIEFS

Super Potato Design is a new monograph, written by Mira Locher and published by Tuttle, on Takashi Sugimoto, the Tokyo designer whose firm, Super Potato, has created an impressive roster of restaurants, shops, and hotel interiors. The book features photography by Yoshio Shiratori of 41 projects, many of which combine inventive use of new and old materials with sculptural spaces and dramatic lighting. At the Grand Hyatt Hotel in Tokyo, Sugimoto designed not only two restaurants and a spa, but a pair of wedding chapels (one Shinto, the other Christian) that offer strikingly different yet complementary takes on shaping space and creating architectural poetry with severely limited palettes of materials (mostly wood and stone). C.A.P.

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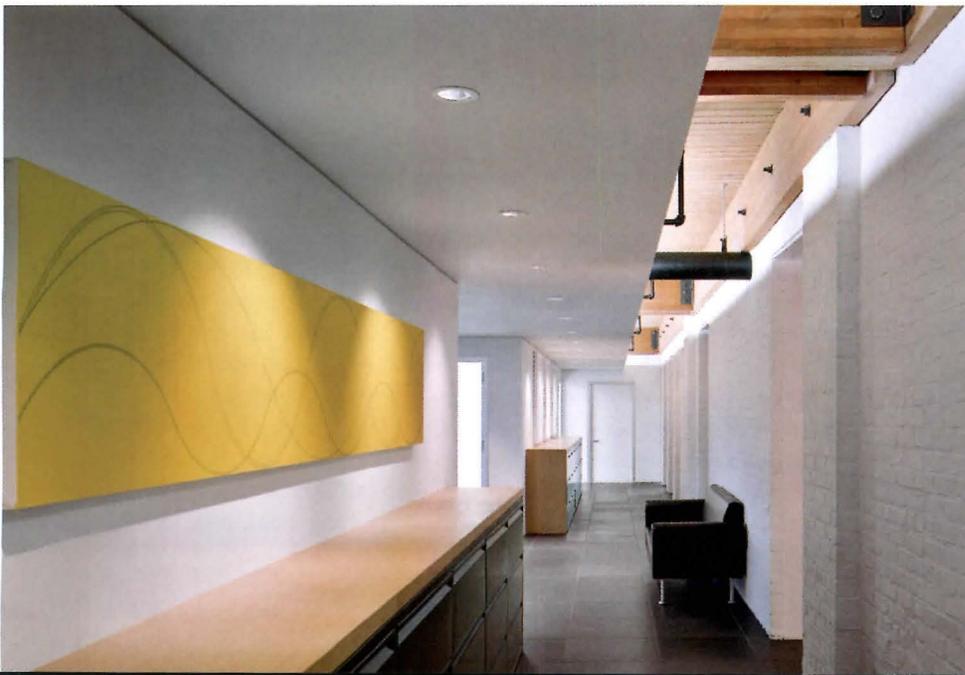
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Roger Ferris + Partners
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Kanner Architects
- 186 Miyake Madison**
*Gordon Kipping Architects/
G TECTS*
- 190 Interior Products**

Some designers push the envelope. But here we present a trio of architecture firms that decided to reveal the envelope. Stripping away years of accretions and layers of insertions, these designers have created interiors that draw much of their impact from the integrity of their containers. Hung ceilings and interior partitions come out, while structural frames and roof trusses assume leading roles in establishing the character of a place. When handled properly, such a strategy has many advantages—including maximizing space and volume, bringing more daylight inside, and creating visual connections. This approach also initiates a dialogue with the past that can enrich the present.

At the new offices of his firm, Kanner Architects (right), in Santa Monica, California, Stephen Kanner, FAIA, turned the lamella-truss ceiling and industrial framing of an old airplane-parts factory into the stars of his design. While he exposed the building's great bones, he didn't just defer to the original architecture. Instead, he played off it like a good actor responding to the lines of a fellow performer. On the opposite side of the country, in Westport, Connecticut, Roger Ferris, AIA, took a similar approach while creating a very different kind of work environment for his growing architectural practice. Ferris stripped away paints and stains from the timber framing of an old warehouse on the Saugatuck River and exposed floor joists to areas below, creating a rougher but warmer set of spaces than the cool, elegant setting Kanner designed for his firm. In New York City, Gordon Kipping performed a different kind of striptease with the envelope of his Issey Miyake store on Madison Avenue. Set inside the base of a nondescript post-war apartment building, the store didn't have any glorious trusses or muscular timbers to expose—only I-section steel columns—so Kipping played a jazzy kind of visual game with its ceiling. Revealing and obscuring strips of what lies above it, the checkerboard ceiling acts as a dynamic element, both energizing and unifying the space.

All three of these projects use an economy of means to maximum effect. By revealing all or portions of the fabric containing them, these designs can keep everything else fairly simple. *Clifford A. Pearson*





The architect stripped the old building of its interior finishes, exposing brick walls and timber framing, including the fir joists (above and left). Black slate in the reception area (above) complements recycled materials used on the patio.

The new headquarters of Roger Ferris + Partners in Westport, Connecticut, revives a waterfront warehouse

By John Peter Radulski

Whether it's a cozy restaurant designed for one of the town's film notables (Paul Newman), a 1.5-million-square-foot corporate headquarters in Stamford, Connecticut, for an international financial giant (The Royal Bank of Scotland), or his own offices, Roger Ferris, AIA, approaches each architectural and design program with an eye focused on client needs and expectations.

Ferris, who had lived in New Canaan, Connecticut, from the age of 14, then studied at Columbia and Harvard, returned to the state in 1986 when he established his own firm, Roger Ferris + Partners, in Westport. With a team of 12, he moved into a 1908 building that was once the town hall. As the firm expanded, it stayed in the building, but leased two ancillary spaces. Finally, Ferris decided to bring his staff of 55 under one roof. For the new headquarters, the architect transformed 2,200 square feet on the top two floors of 285 Riverside Avenue, a four-story, 1910-era warehouse, beside the Saugatuck River.

The new offices layer public and private areas. Ferris says that it might be "unusual" for clients to enter the reception area and then pass a stainless-steel kitchenette and seating area on the way to a conference room—all the while glimpsing the large, adjacent patio overlooking the Saugatuck. But, he adds, "For me, the quality of the office space is important to not only attract clients, but also to attract and maintain a great staff."

To achieve this, Ferris removed the "cosmetic" materials that had covered almost all the interior surfaces from a previous renovation. Newly exposed brick walls were painted white and the fir joists and beams sandblasted. In the fourth-floor reception area, where visitors enter via elevator, honed, black-slate floor tile measuring 18 inches square complements the wood and the patio surfacing made from recycled automobile tires. Suspended ceiling and wall panels, variously fabricated from Sheetrock and acoustical plaster, bring the 12-foot ceilings and a row of windows into a personal scale. Here, Ferris introduced a part of his extensive private collection of contemporary art. "I've collected for a long time," he says, noting that the pieces, hung throughout the two floors of the offices, are always "debated" by the employees. "The revolving selection of artwork infiltrates the dialogue about architecture" among the staff. Damien Hirst, Jenny Holzer, Robert Mangold, Edward Ruscha, and Vera Lutter are among the artists whose work is displayed in the Ferris offices.

The design studio, accommodating about 30 workstations, is on the third floor, as are the principal's office and those of other partners and support staff. An addition to the building, dating from the early 1970s,

John Peter Radulski often contributes to RECORD's lighting and interiors sections.

Project: 285 Riverside Avenue, Westport, Connecticut

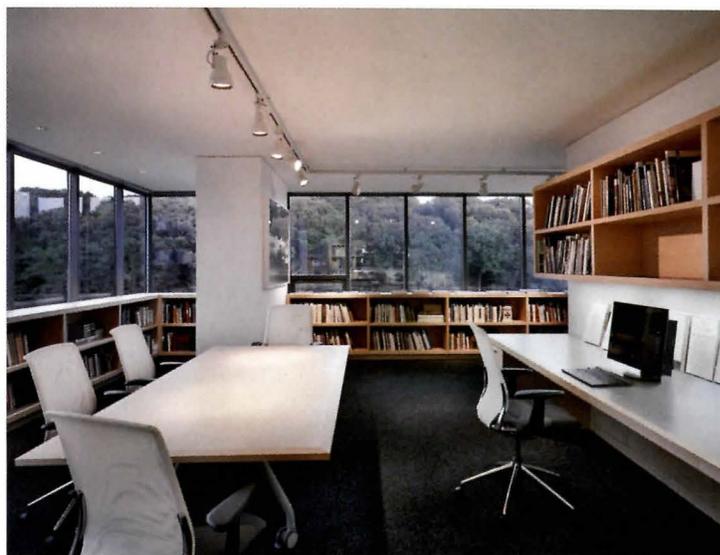
Architect: Roger Ferris + Partners—Roger Ferris, AIA, Phil Hubbard AIA,

Stuart Garber, AIA, Dan Radman, AIA, Myron Mirgorodsky, design team

General contractor: Pappajohn Construction



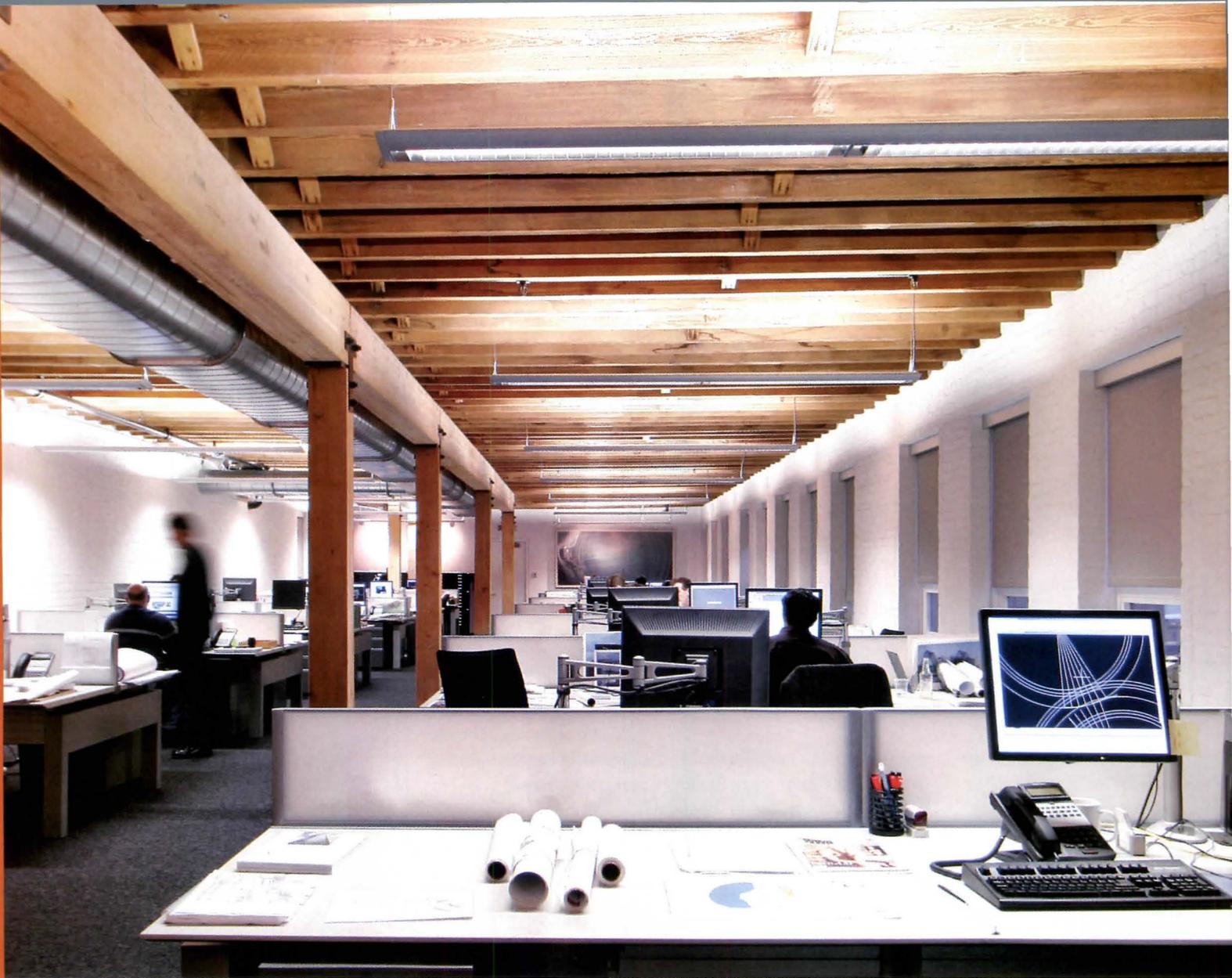
The offices feature art, including work by Jenny Holzer (above). Shelves are made from recycled wood (below).



adjoins this level. Ferris made an almost seamless transition between the two by continuing the finish materials: sandblasted wood structural elements, white brick walls, and piers demarking the original building's walls.

As he does for his roster of corporate, private, and institutional clients, the architect looked for energy-efficient materials and building methods for his own offices. Carpeting throughout is fabricated from recycled fiber; paint is highly light reflective; and the patio flooring is an exemplar of reused product. Casegoods, including bookcases and cabinets, are constructed from recycled wood veneers previously destined for waste.

Currently, Ferris is developing a design prototype that can convert the bottom two levels of the ubiquitous transmission towers dating



Private and public spaces are woven together, so that visitors walk past a stainless-steel kitchenette (right) after checking in at the receptionist's desk. The design studio accommodates 30 workstations (above).





from the WPA-era into low-cost, low-impact houses. “You can buy [the bases separately] and inexpensively,” he says. Each provides a 25-foot-square floor plate that is readily adaptable to residential purposes, the architect says. Other projects on the boards are a hospital in Memphis, an office building in Stamford, and a hospice on Long Island. He admits to “readily subverting the classical ideas of a golf clubhouse” for a project about to open on the east end of Long Island.

Twenty-one years after starting his practice in Westport, Ferris’s new offices, just about a mile away from his first one, provide an expansive and flexible space to carry out these projects. The former warehouse also serves as a plant for the architect’s continuing exploration of the relationship between contemporary art, interior design, and architecture, as well as a stimulus for their creative interplay. ■

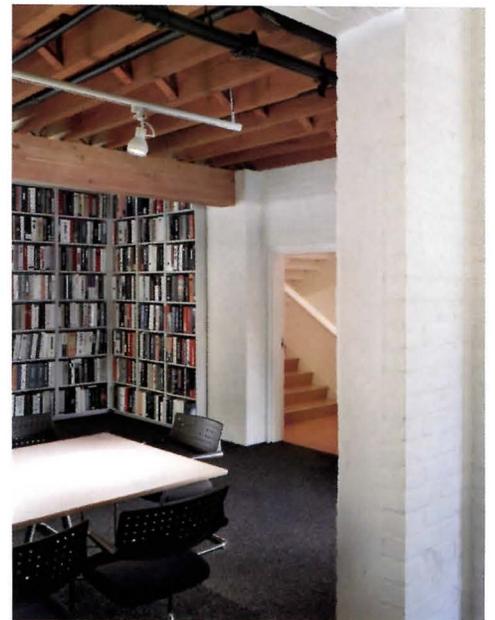
Sources

Carpet: Interface (*Huega*)
Kitchen: Legere Woodworking
Lighting: Zumtobel (*pendants*); IRIS (*downlights*); ERCO (*track lights*); Winona (*wall-mounted uplights*)

Furniture: Knoll (*Crinion tables*); Vitra (*Meda chairs and airline seats*)

For more information on this project, go to Interiors at archrecord.construction.com.

An environmental ethos directs much of Ferris’s work. In this project, he specified carpeting made from recycled fiber (above and right) and a patio surface made from reconstituted tires.





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Kanner preserved the existing building's 30-foot-high, lamella-truss ceiling and installed new glass roll-up doors.



Architect Stephen Kanner converts an airplane-parts factory into the new **Kanner Studio** in Santa Monica

By David Sokol

Success has been bittersweet for Stephen Kanner, FAIA. Expanding Kanner Architects meant that Kanner, the third-generation principal of the firm, would have to move out of the Los Angeles office where he had worked since joining his father, Charles, in 1982. “It was leaving a place where I grew up. But we needed to grow and communicate better with each other,” says the architect. “And the space we found was so beautiful.” His scheme for the new workplace stresses continuity with the past by highlighting the character of the historic interior—and by reinterpreting some of the best elements of the firm’s former home, too.

The architects at Kanner previously worked in one of the oldest buildings in L.A.’s Westwood section, occupying 5,600 square feet divided evenly among storefront and mezzanine levels. The predominantly white space was “spectacular,” Kanner remembers. Its ceiling, for example, was lined with bowstring trusses the firm uncovered while reinforcing the masonry structure. But the two-story arrangement obliged the designers to run up and down the stairs throughout the day. “That was somewhat inconvenient,” Kanner admits, “and the two ground-floor spaces were separated by a tall bearing wall.” Moreover, the busy Westwood site sat just around the corner from a pair of the city’s largest old theaters, so

David Sokol, former acting news editor of ARCHITECTURAL RECORD, regularly writes for publications such as Azure, Interior Design, and Metropolis.

Hollywood premieres would often hinder access to and from work.

In 2002, several years after his father passed away, a threat of displacement, though ultimately unsubstantiated, forced Kanner to seriously consider a change of address. His mother, an interior designer, happened across a furniture showroom in Santa Monica, and after piquing her son’s interest in the spot, she asked the owner if he was willing to vacate and sublease the space. He was.

The single-story, 1930s building, measuring 100 by 100 feet and featuring a single, curved corner to mark a street intersection, had been an airplane-parts factory, auto-repair shop, and home to several retailers. Kanner was particularly smitten by the 30-foot-high, lamella-truss ceiling, which spans the building from front to back and eliminates columns. Other characteristics elicited less enthusiasm: “It had no air-conditioning, and very little infrastructure. We had to completely redo the space from the standpoint of networking, electrical drops, air-conditioning, and fitting in our storage areas, bathrooms, and desk systems.”

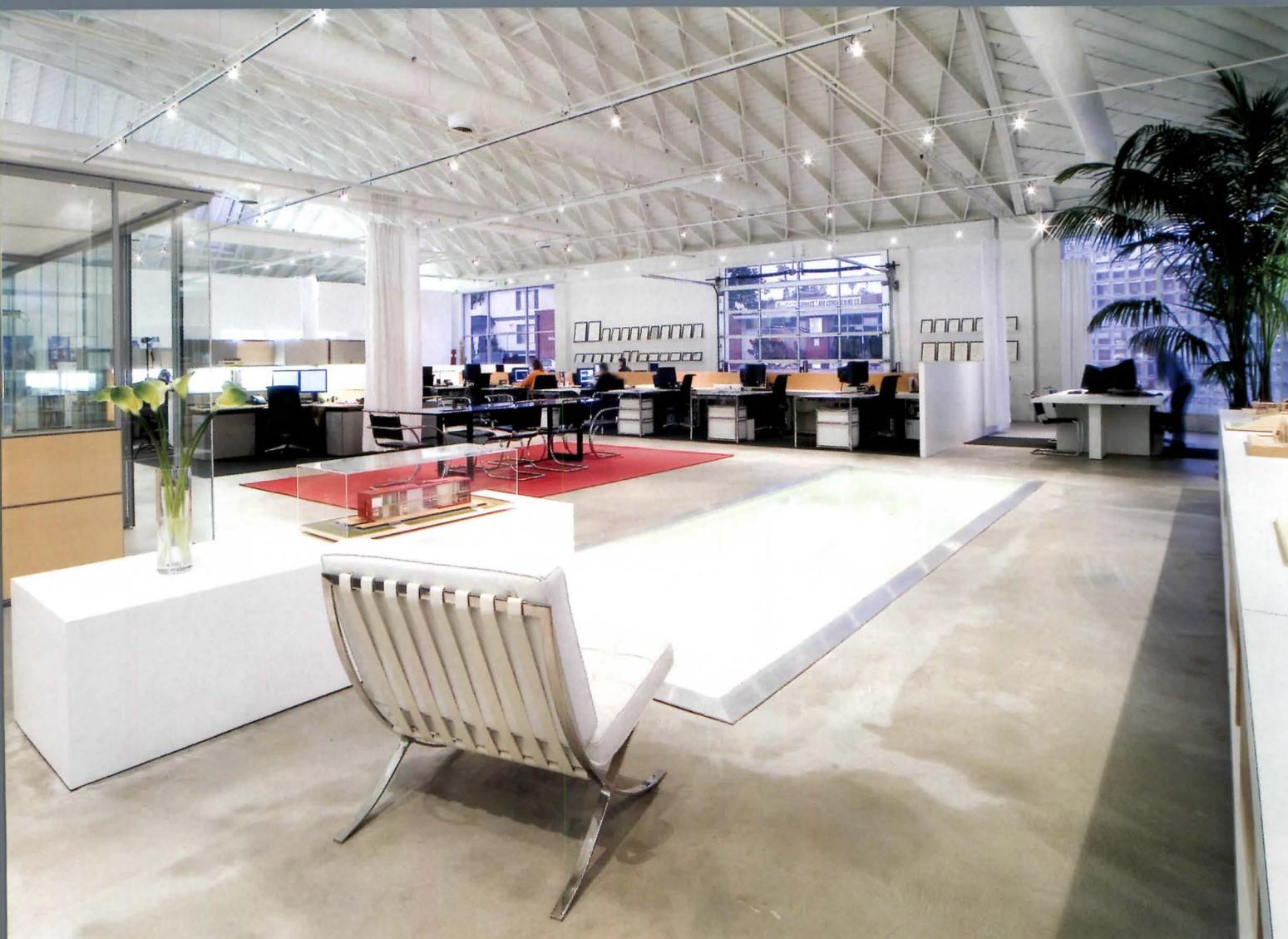
Remedying these shortfalls would require major surgery. Still,

Project: Kanner Studio, Santa Monica, California

Architect: Kanner Architects—Stephen Kanner, FAIA, design

principal; Claudia Wiehen, John Mebasser, David Ellien, Erin Nies, design team

General contractor: MT Construction



Kanner highlighted the building's large, open volume, using glass for the few partitions. Fabric curtains hung from ceiling tracks can be pulled to divide the space into a number of different zones or used as screens for projecting images.

desks, we did wire management," Kanner adds. "It's really very tidy. When you get a chance to do this once or twice in your life, you want to get it right." To install air-conditioning, two 5-ton cooling units were placed on adjacent buildings' flat roofs. Inside, spiral ducting, also painted white, hangs from stainless-steel cables. "They add a lot of visual interest to the space," Kanner comments.

Except where necessities were layered on, Kanner maintained the openness of the original, hangarlike volume. Visitors and clients cross a threshold bounded by a reception desk and a row of workstations, while beyond it, conference areas and less dense working zones occupy various parts of the cavernous room. Movement among these vignettes is easy and gracious, accurately suggesting the firm's nonhierarchical organization.

Kanner wanted this open rhinoplasty to look more like a quick outpatient visit. "There's so much inherent beauty in the building. We really wanted to keep our design very pure, very simple."

The original brick walls and lamella trusses received a fresh coat of white paint. In a more complicated process, electrical and networking conduit was laid by saw-cutting the concrete floors; an Ardex topping layer establishes visual consistency between the patch jobs and untouched concrete. "Even after we put in our

When privacy or a video-projection surface is needed, employees can draw any of a series of curtains hung from ceiling tracks to create various zones.

Kanner did treat his patient to a few contemporary flourishes. A storage room wrapping behind the interior in an L shape includes uplights that, at night, transform the textural lamella-truss ceiling into a highly dimensional pattern of diamonds. In an amped-up version of the old Westwood office's storefront windows, a glass sectional roll-up door replaced a sheet-metal, overhead-coiling door at the front elevation. And like all good nip-and-tuck artists, Kanner highlighted the attractive features he found—such as a 10-inch-deep, rectangular pool lined with white glass mosaic tile near a central conference area—by matching it with a rejuvenated setting.

The 30-person staff no longer enjoys glimpses of the occasional movie-launching celebrity. Instead, daylight and fresh Pacific breezes stream through the new office, and so does an implicit mission statement. "We believe our architecture has this kind of Southern Californian, optimistic quality to it," Kanner explains, "and I think our space absolutely portrays that inspirational, uplifting nature." ■

Sources

Long workstations: *USM Modular (Haller Systems)*

Workstation pods: *UNIFOR*

Custom cabinets: *Formica*

Paints: *Frazee*

Eames aluminum management chairs: *Herman Miller*

For more information on this project, go to Interiors at archrecord.construction.com.



To create a link with the firm's past (and save money), Kanner brought most desk chairs, glass tables, and some flat files from the old office in Westwood (above). A mosaic-tile-lined pool provides a tranquil note to the common area (right).





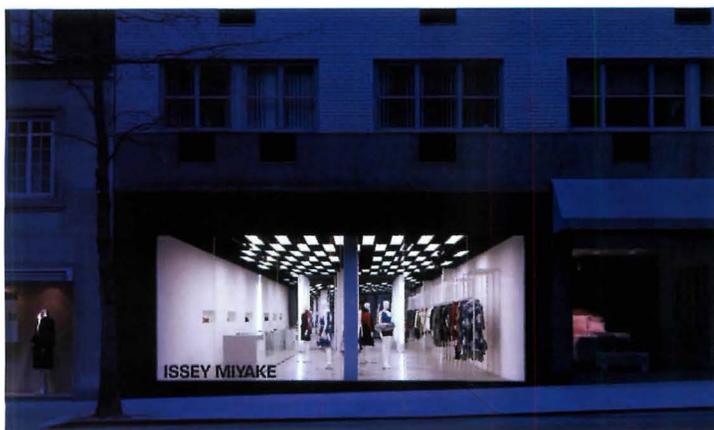
Gordon Kipping delivers a powerful optical punch to **Miyake Madison** on New York's Upper East Side

By **Suzanne Stephens**

The downtown boutique aesthetic that emerged in New York City's SoHo loft district in the late 1970s caught on—and stuck around—largely because it showed off arty clothes to striking effect. Architects and designers blithely stripped the deep and narrow loft spaces to their bare bones, leaving only cast-iron columns, concrete or wood floors, and white walls and ceilings, the latter often revealing ducts, pipes, and light tracks. Against this setting, clothes, sparsely arrayed as if in an art gallery, easily stood out.

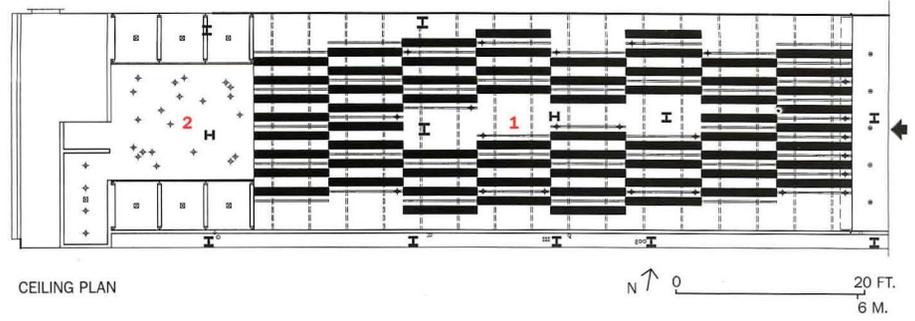
A new shop for Issey Miyake on Madison Avenue at 68th Street illustrates that the loft style also works in the ultra-chic purview of Manhattan's Upper East Side. In an area known for its lacquered look (both shops and shoppers), a bit of a downtown feeling can juice up the ambience. When Issey Miyake changed locations on Madison last fall, it asked Gordon Kipping Architects/G TECTS, an architectural firm that worked with Frank Gehry on the titanium-infiltrated Miyake flagship store, in the Tribeca neighborhood, to design a small, 2,600-square-foot outpost.

To draw shoppers into the boutique, Gordon Kipping, AIA, glazed the entire 24-foot width of the storefront, framing it in black solid surface material. He then energized the interior by focusing on the ceiling plane. Here, backlit fluorescent panels, 10 feet long and 10 inches wide, alternating with black voids of the same dimension mounted with metal-halide spots, create a syncopated, elongated checkerboard pattern. The muted floor is 2-inch-thick concrete deck. I-section steel columns, painted white, run down the middle of the space. With a \$400,000 budget,



A deep, narrow space in a 1960s residential building turns into an optical art environment by night (opposite, bottom) with the help of a fully glazed storefront. In the retail space (1 in ceiling plan, right, and

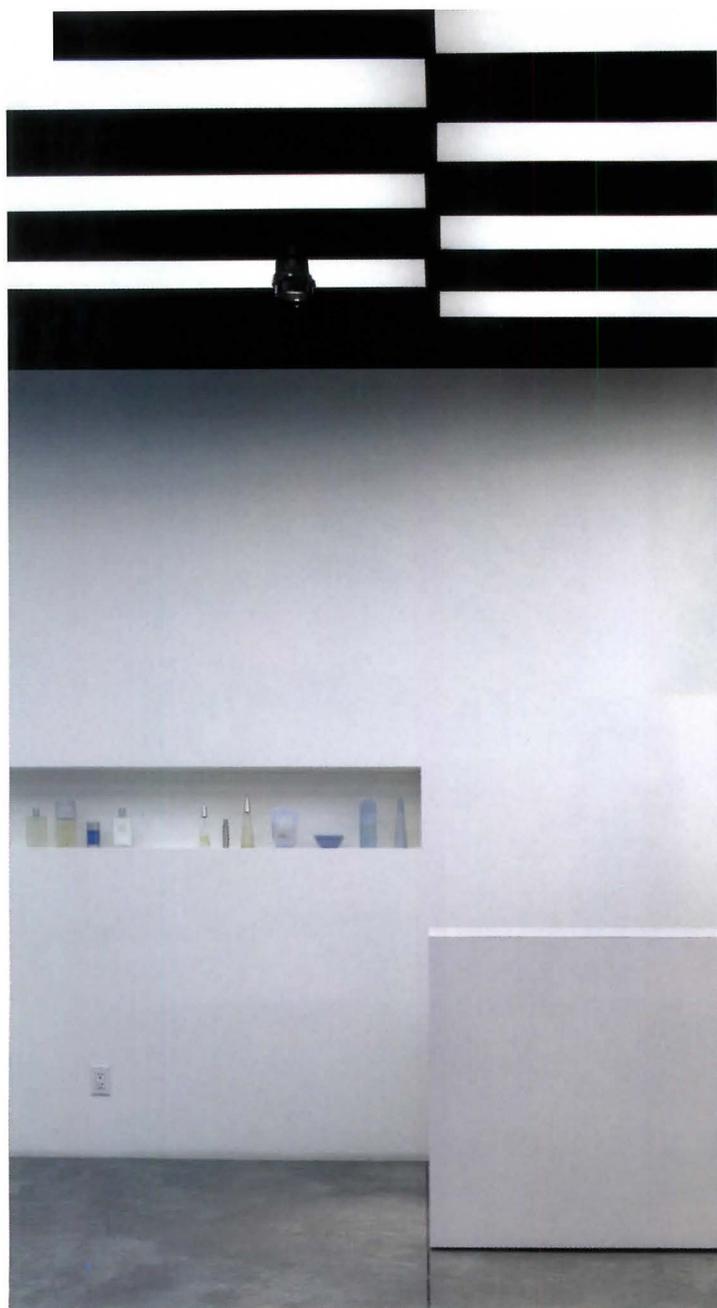
photos, below and opposite, top), elongated light panels and black slots of exposed ceiling create a jazzy checkerboard pattern drawing visitors to the rear fitting rooms (2 in ceiling plan, right).



PHOTOGRAPHY: © MIKIKO KIKUYAMA

Beneath the high-voltage ceiling, serenity reigns, with a muted backdrop of white walls, a concrete floor, and I-section columns painted white. On the south wall of the shop (below), the architects created a Minimal white-on-white composition using recessed shelves and freestanding, plastic-laminate

counters. At the rear of the store is the fitting area, where dressing rooms are concealed by four layers of a gauzy fabric (right). The fabric is pulled over vertical fluorescent light tubes at the front of the booths, while other fluorescent fixtures are hidden by mirrored partitions dividing the booths.



the architects installed plastic laminate counters, glass vitrines, and recessed shelves along the white south wall, and displayed the clothes—the only note of color—on white steel racks along the north wall. In the fitting area at the back, four-layered curtains of diaphanous, white fabric almost conceal bright, white, vertical fluorescent tubes. Fluorescent lighting, tucked behind the mirrored partitions dividing the dressing rooms, adds to the luminous, if surreal, effect.

Acknowledging the well-known fact that fluorescent light casts a deathly pallor on clothes, art, and people, Kipping explains that the fluorescent lights chosen for the ceiling are mixed with warm halide spots. “We needed a high light level inside,” he says. “When you walk down the street, it is usually hard to see the merchandise because of storefront reflections and outdoor light levels.” About the dressing-room wattage, Kipping admits, all is revealed in this eerie lighting. Obviously, under these lablike conditions, textures of fabrics, color dyes, and craftsmanship need to be of the highest quality. Fortunately, the Miyake clothes can more than withstand the test. ■

Project: *Miyake Madison, New York City*
Architect: *Gordon Kipping Architects/G TECTS—Gordon Kipping, principal; Nora Peyer, project architect; Maria Stefanidis, Brooks Atwood, Styliani Daouti, project team*
Lighting designer: *Lightfield*

Sources
Solid surface exterior: *Dupont Corian*
Plastic laminate: *Formica*
Paint: *Benjamin Moore*

For more information on this project, go to Interiors at archrecord.construction.com.

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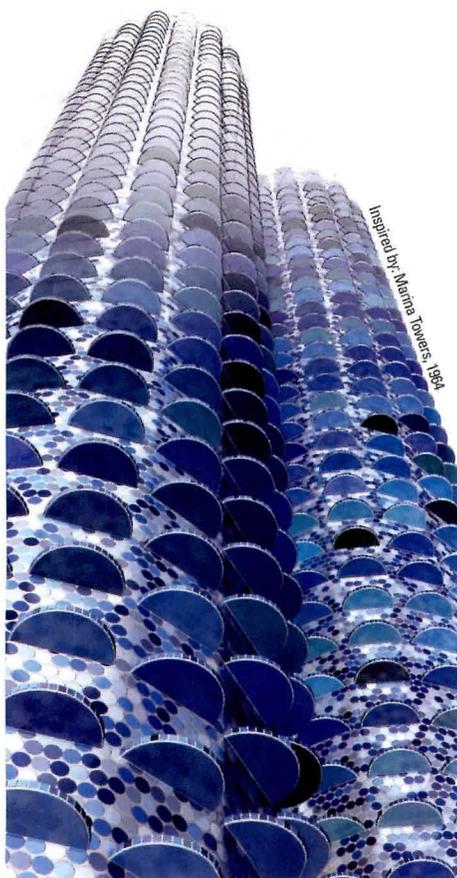
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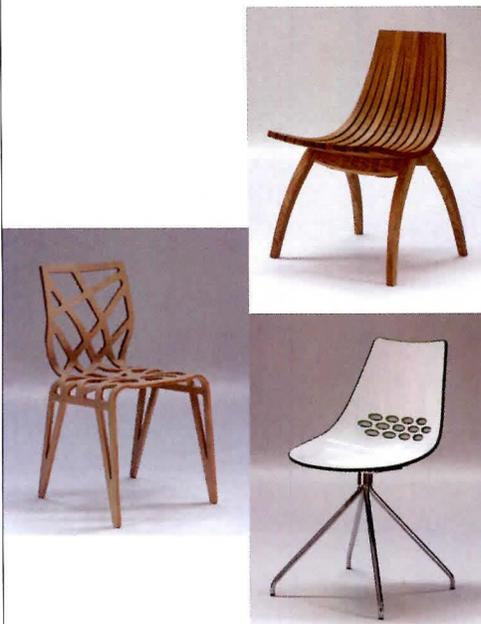
► Prints and perforations

The Rossoprint and Rossoacoustic panel systems from Rosso Objekte can open up or screen off niches from larger spaces or serve as window coverings. The company offers 13 hanging materials including films or fabrics. Rossoprint panels can be custom printed with company logos, graphics, photos, or other motifs. A motif can also be distributed over a series of panels to produce a large image when they are placed together. Optional microperforations on the surface of Rossoacoustic panels have a sound-absorbing effect and are available on translucent screens, clear screens, and textiles. It is possible for panels to have both printed images and microperforations. Rosso Objekte, Stuttgart, Germany. www.rosso-objekte.com **CIRCLE 210**



◀ Seating standouts

These three designs were among the Top Ten Chairs of the Year displayed at Promosedia, the international chair exhibition held last September in Udine, Italy. Voted Residential Chair of the Year, Laguna (near left top) was designed for Malina by Adriano Balutto in slats of eco-friendly oak. Studio Archirivolto designed Jam (near left bottom) for Calligaris. The acrylic seat and metal-alloy pedestal are available in a range of configurations and colors. Elliptical holes puncture the backrest. The weblike Spider chair (far left), designed by Daniel Rode for P.S.M., is made of laminated veneer oak with a wax finish. Spider is also available in wengé or bleached oak colors. Promosedia, Udine, Italy. www.promosedia.it **CIRCLE 211**



► Welcome back, Mr. Nelson

The latest reintroduction from Herman Miller is the Nelson Swag Leg Group originally designed by George Nelson. First introduced in 1958, the group's chairs, tables, and desks can be used individually or together in the home or office. The Swag Leg Desk (shown) features colorful cubbyholes at the back, including one large enough for a laptop. It is finished with a white laminate top and walnut-veneer edge banding that coordinates with a solid walnut stretcher. Swaging—applying pressure to taper and curve a metal tube—is used to produce the 16-gauge chrome steel legs. The group also includes a molded plastic chair, work tables, and dining tables. Herman Miller, Zeeland, Mich. www.hermanmiller.com **CIRCLE 212**



For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service.



◀ **Stick up some privacy**

dVider is a new company as well as the name of its signature room partition system. The vertically and horizontally adjustable partitions use support poles with a fabric sail stretched in between measuring 4' wide x 6' high or 6' square. Chrome steel tubes slot together on either side of the fabric and have a height



range of 7'5" to 12'5". Plastic feet support the vertical poles, and manually applied pressure between the floor and ceiling hold up the room dividers. The sail can be decorated with a line of vinyl decals; two examples of the Nature group are shown.

dVider, New York City.
www.dvider.com **CIRCLE 213**

▶ **A comforting classic**

The New York City-based environmental design firm WalkerGroup applied Elexium Pod Technology to retrofit vintage Eames Aluminum Group Executive chairs, originally manufactured by Herman Miller, as part of a larger project for a leading global advertising agency. The chair features translucent Elexium cushions that mold to body shape and allow at least three seconds of displacement before returning to their original form. The technology can also reduce fatigue and repetitive-stress syndrome. The chairs are available through special order from Willat Design Works, the creator and designer of the Elexium system. Other chair designs can be customized as well. Willat Design Works, Los Angeles.
www.elexium.net **CIRCLE 214**



◀ **Create a little tension**

Transformit's proprietary tension fabric system includes modular components that create space dividers, temporary walls, privacy bays, conversation nooks, and dressing rooms. The lightweight, tension-fabric structures are suited to hospitality, retail, pop-up store-display, and event applications. Frames in the system accept up to three layers of fabric, enabling the use of custom layering, lighting, and graphic techniques.

Transformit, Gorham, Maine. www.transformitdesign.com **CIRCLE 215**

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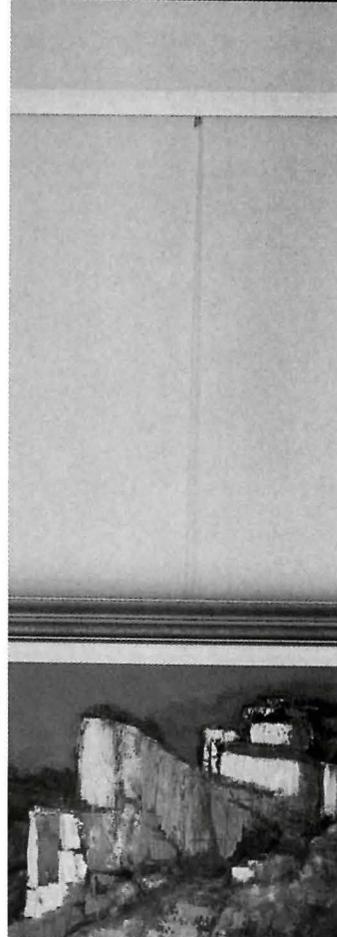
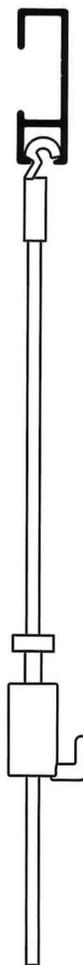


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Product Focus **Green Choices**

Building product manufacturers continue to make strides in the green arena, from “leasing” materials they will recycle at a later date to pressuring suppliers to follow sustainable practices. For the latest options, check out the GreenBuild Expo from 11/7 to 11/9 in Los Angeles. *Rita Catinella Orrell*



Clockwise from top left: Certified, rough-sawn, and seasoned timber ready to prepare for an order; a garden room designed to connect two houses; a conservatory greenhouse; logs of certified sapele wood from the Republic of Congo.



Glass building manufacturer helps create first sustainable forests in West Africa

Marston & Langinger, a designer and producer of conservatories, garden rooms, and other glass buildings, has helped to create the first “green” forests in West Africa, and attain certification from the Forest Stewardship Council (FSC). Company founder and design director Peter Marston personally lobbied the Republic of Congo government to ensure reforestation and helped to gain FSC certification for hardwood suppliers in the region.

“We pressed suppliers in Ghana, Cote D’Ivoire, and Cameroon to develop FSC forestry manage-

ment [as well], but they were serving a market that, even now, sees sustainable forestry as little more than fancy marketing. We believe that by publicizing that we’ll only buy FSC, we’ll change attitudes,” explains Marston. Prior to FSC intervention in the region, hardwood from West Africa had been illegally or irresponsibly logged.

The company typically harvests about one million dollars of sapele hardwood from the world’s second-largest rain forest, the Kabo forest in the Republic of Congo. The trees will

be carefully felled with a minimum of damage to the surrounding woodland, and new trees of the same species will be planted to replace them. The company also imports certified American tulipwood when durability is not a priority.

In addition to its FSC-certification requirement, Marston & Langinger has other environmentally-friendly policies in place. These include using sawdust and shavings from the manufacturing process to heat the company factory; developing water-based, nontoxic paints that

comply with VOC levels for 2007 and 2010; using high-performance insulated glass; issuing salesmen-only hybrid cars for business use; and adhering to a strict, company-wide recycling policy.

“A good, well-managed environmental policy has less impact on profitability than generally claimed,” says Marston. “[You need to] make it work for your organization. Everybody needs to follow suit.” Marston & Langinger, New York City. www.marston-and-langinger.com

CIRCLE 216

Products Green Choices



◀ To buy or lease?

Chroma resin from 3form has been reinvented so it can be reprocessed for a second life. Developed in conjunction with Bayer Material Science, Chroma features Aura, a proprietary color-infusion process that allows 3form to infuse nontoxic colorant at a depth of 250 microns. To encourage recycling, 3form will buy back the panels and reprocess them through its Reclaim program. The material can also be "leased" for a defined period of time and then returned for reprocessing. 3form, Salt Lake City. www.3-form.com **CIRCLE 217**



◀ From curb to counter

Composed of a patent-pending formula that includes recycled glass, cement, additives, and pigment, Vetrazzo surfacing can be used for countertops, tabletops, flooring, and architectural cladding. All of the glass used in the product is recycled, and it makes up to 85 percent of the final material. Glass sources include curbside recycling programs and a range of postindustrial sources. Fourteen design options are currently available. Vetrazzo, Richmond, Calif. www.vetrazzo.com **CIRCLE 218**

▼ Dissolving solution

Shaw's EcoWorx Performance Broadloom is the commercial carpet industry's first "cradle to cradle" carpet backing for broadloom, according to the manufacturer. The product utilizes a process where the carpet and backing (below at top) are introduced into a biobased dissolving solution that melts the backing and separates it from the fiber (below at bottom). After the solution evaporates, the polymer can be recovered and recycled. Shaw Contract Group, Calhoun, Ga. www.shawcontractgroup.com **CIRCLE 219**



▲ System to keep roof green

The Advanced Vegetative Roof System is a water-efficient green-roof system that incorporates Zebra-branded moisture-release technology for faster, fuller vegetation establishment and lower maintenance costs. Zebra's cornstarch-based granules work like a sponge, holding and releasing water as needed and reducing the need for irrigation systems. The system weighs 15 lbs. per square foot when fully saturated. Columbia Green Technologies, Wilsonville, Ore. www.columbiagreenroof.com **CIRCLE 220**

▼ Cooler PV system

The SolarWall photovoltaic/thermal system includes PV panels placed over SolarWall transpired collector panels that balance the air flow behind each PV module. In addition to converting sunlight into electricity, the system collects the residual heat energy and delivers both heat and electricity in usable form. The manufacturer claims the system can raise total solar efficiency to 50 percent and reduce payback periods by as much as half. Conserval Systems, Buffalo, N.Y. www.pvthermal.com **CIRCLE 221**



► Atypical green washing

Bosch has added an EcoWash option to its latest collection of Energy Star-qualified Nexxt washers. Introduced at last month's Builders' Show, the EcoWash option will be added to other Bosch products in the near future. A single push of the "green" button optimizes heating cycles for greater efficiency, without affecting cleaning results. All Nexxt washers exceed the strict 2007 federal regulatory standards for energy. Bosch, Huntington Beach, Calif. www.boschappliances.com **CIRCLE 222**



► Ecopolymeric flooring

Stratica ecopolymeric flooring emits virtually no VOCs and will not compromise indoor air quality. The PVC- and chlorine-free floor features a Dupont-engineered Surlyn polymer surface that requires no harsh chemicals to maintain. Stratica is lightweight, but tough and abrasion-resistant, even in high traffic zones in health-care, education, airport, and retail environments. Amtico, Atlanta. www.stratica.com **CIRCLE 223**



Product Briefs

► Seeing double

The first two panoramic Twin elevator systems in the world have been installed and put into operation in the Main Triangel building in Frankfurt, Germany, by ThyssenKrupp. The Twin system offers two independent cabs running in one shaft, taking up less room than conventional elevators and freeing up valuable space. The glass cabs running in an open shaft allowed the architects to maintain the light, open concept of the largely glass facade. In addition, none of the switches or cables are visible. ThyssenKrupp Elevator, Dallas. www.thyssenkrupp-elevator.com

CIRCLE 224



► Tougher texting

OtterBox offers a complete line of rugged cases for technology products, including tablet PCs, laptops, iPods, and handhelds. The OtterBox 1930 and 1931 cases are designed specifically for BlackBerry brand handsets, and allow access to phone and data functions right through the case. Ideal for construction sites, the cases provide grip and drop protection and water-resistant access to keypad, scroll wheel, and buttons. The cases are constructed of a polycarbonate/ABS shell and a molded rubber interior that cradles the handset. Optional accessories include a standard swivel belt clip. OtterBox, Fort Collins, Colo. www.otterbox.com CIRCLE 225



▼ Resilient roof board

Invisa is a new, resilient, lightweight roof board designed as a cover-board component of a new or existing roof system. Invisa provides a protective layer for the insulation while adding stability to the membrane above. A patent-pending high-density polyisocyanurate technology is bonded in-line to coated fiberglass-reinforced facers, providing resistance to water and hail. Invisa has been tested in PVC, TPO, and EPDM single-ply systems as well as JMCleanBond SBS modified bitumen roof systems. The product is lightweight enough to cover existing materials rather than requiring that they be ripped out, and allows for easy and efficient scoring, cutting, and snapping. Johns Manville Roofing Systems, Denver. www.jm.com CIRCLE 226

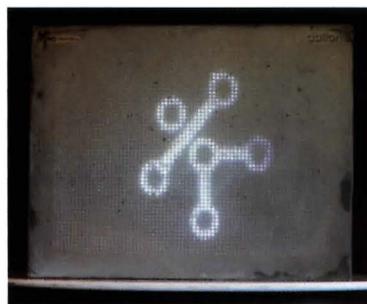


▲ Seal of approval

Spanning across the 29th floor of New York City's new Hearst Tower, the Good Housekeeping Research Institute includes 2,800 square feet of brilliant white CaesarStone quartz countertops. Designed by Lord Norman Foster, the 16,000-square-foot Research Institute serves not only as a test kitchen, but as a tour destination for readers and advertisers. The countertops' custom color complements the institute's custom white cabinetry and stainless-steel appliances. Made of 93 percent quartz and 7 percent polyresin, the countertop is backed by the Good Housekeeping Seal. CaesarStone, Sun Valley, Calif. www.caesarstoneus.com CIRCLE 227

► Concrete cinema

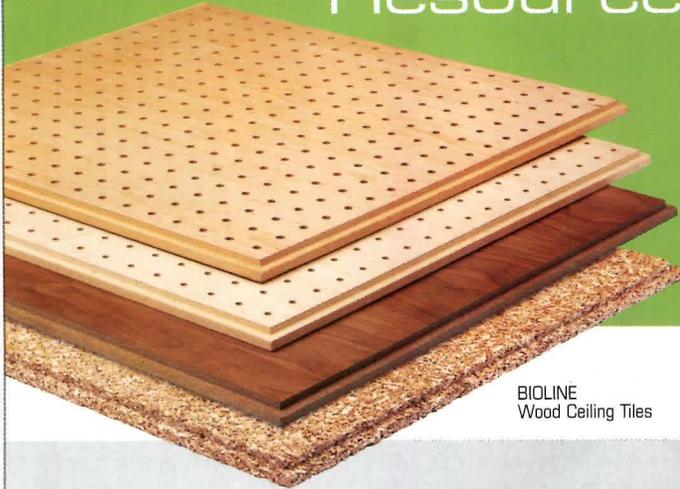
In cooperation with students Christoffer Dupont and Line Langballe and Danish concrete component manufacturer Dalton Beton, Innovation Lab has developed a transparent concrete screen that can be used to animate exterior and interior walls. The heavy screen consists of concrete with embedded optical fibers, arranged as pixels that are capable of transmitting natural as well as artificial light. The light-admission points are located on the back of the screen where the fibers are positioned, and the light or picture (shown is the Innovation Lab logo) will then be displayed in pixels on the front. The light source can be a projector emitting either pictures or film footage. Innovation Lab, Arhus, Denmark. www.innovationlab.dk CIRCLE 228





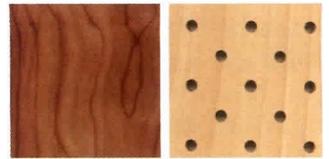
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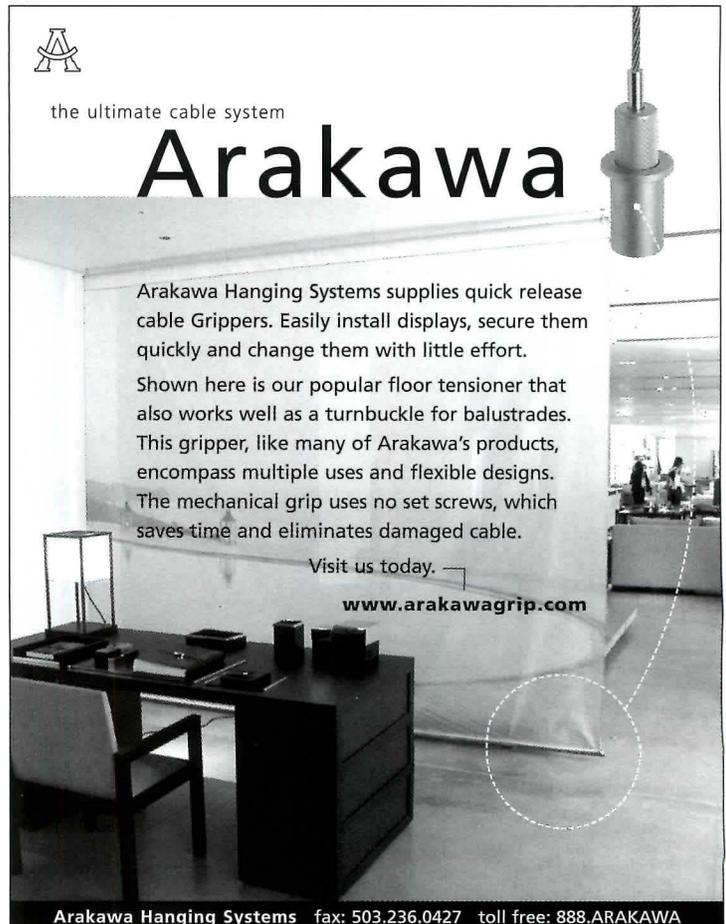
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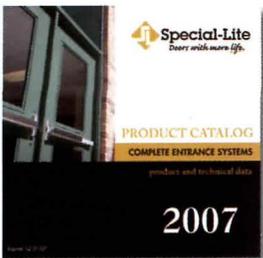
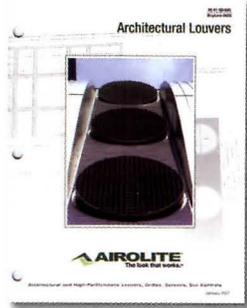
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Product Resources: Literature

New in the louver collection

This 2007 catalog features Aiolite's line of architectural louvers. Introducing 17 new louver types, the catalog provides photographs, CAD details, and performance ratings for more than 40 customizable louvers, including storm-class, stationary, drainable, acoustic, sightproof, adjustable, combination, and fabricated metal louvers. Aiolite, Marietta, Ohio. www.airolite.com **CIRCLE 229**

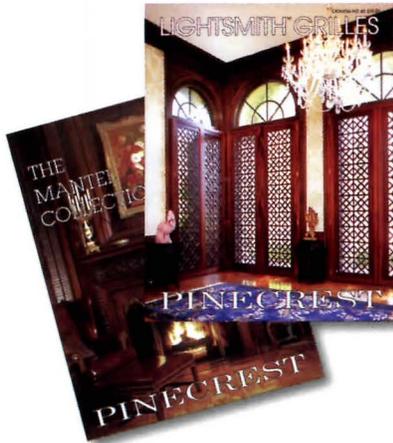


Doorway to another kind of catalog

Special-Lite's commercial entrance system products for 2007 are now available by CD catalog. The Windows-based CD provides a photo gallery; exportable CAD drawings; brochures; sales sheets; order forms; charts for color selections, windload, and deadload; and information on warranties, product training, door handling, and cleaning instructions. Special-Lite, Decatur, Mich. www.special-lite.com **CIRCLE 230**

A mantel of one's own

New catalogs from Pinecrest illustrate the largest selections in the mantel and grille industries. A total of nearly 400 pages contain color photography and drawings of 300 mantel designs and more than 150 grille designs. The Pinecrest custom design department will even carve personal designs on over-mantels. Pinecrest, Minneapolis. www.pinecrestinc.com **CIRCLE 231**



The color nothing

With 60 2" x 2" swatch cards, the Pantone View Colour Planner reveals "minimalism" and "nothingness" as the ideals behind color trends for Summer 2008. The forecasting tool provides specific breakdowns of each palette for harmonies, suggested color combinations, and suitable patterns and fabrics according to end use. Pantone, Carlstadt, N.J. www.pantone.com **CIRCLE 232**

For more information, circle item numbers on Reader Service Card or go to archrecord.construction.com, under Products, then Reader Service.

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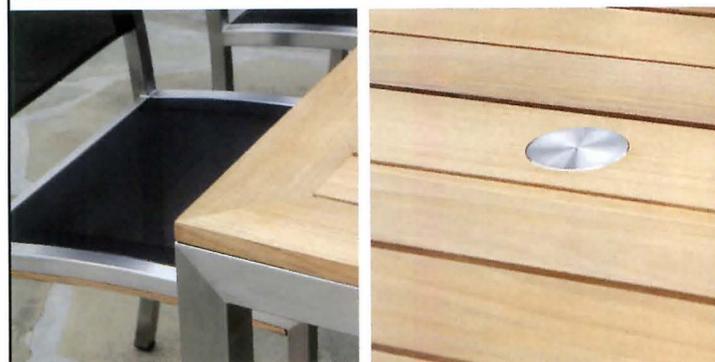
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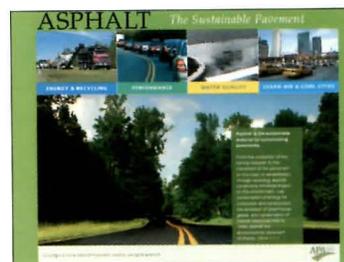
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KB1062

Product Resources: On the Web

www.pavegreen.com

Four simple pages outline asphalt's contribution to energy and recycling, performance, water quality, clean air, and cool cities with information as impressive as the EPA's announcement that the asphalt industry is America's largest recycler. Although devoted solely to the green aspects of the material, a discreet link to the Asphalt Pavement Alliance puts further information within reach.



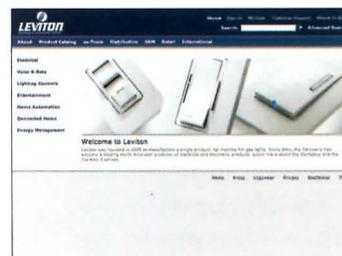
www.moderntots.com

ModernTots has made a strong impression as one of the modern design industry's underrepresented niche markets—children. Boasting bold images of their designs with large color and texture samples, the site can be explored by design and/or age categories. The effort required to keep your eyes on the site's infant-sized font, however, is a stress most visitors could do without.



www.leviton.com

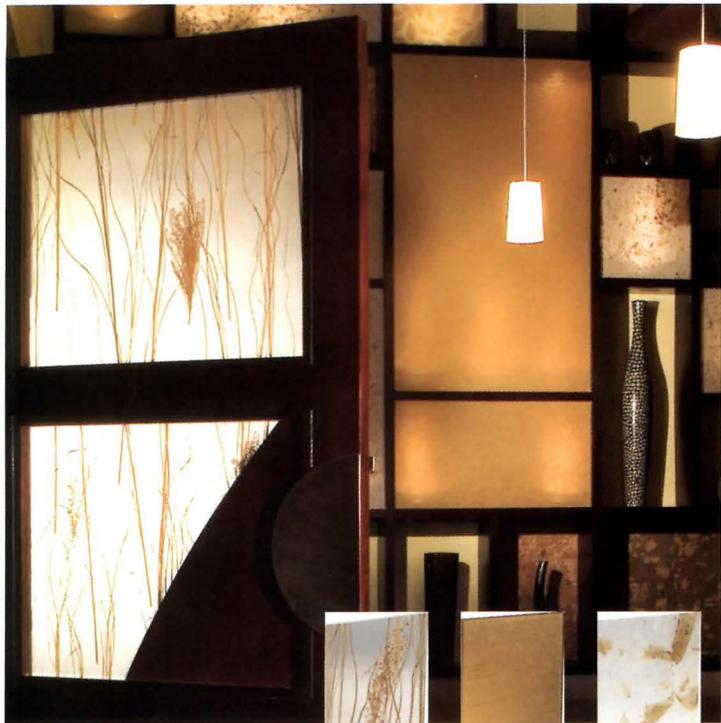
Beginning this year, Leviton's electrical and electronic product and service information is now consolidated at a single URL, having previously been divided among four Web sites. The new site is neatly organized and provides a trade-show schedule, news, and a 24/7 electronic "Ez-learn" classroom for electrical training. The only thing users will wonder about now is why it wasn't always like this.



www.boschappliances.com

The new *Green Resource Center* microsite, accessible via link from the Bosch homepage, is a valuable tool for consumers and trade visitors alike. An energy-savings calculator by energy and water cost specifications, a rebate finder by zip code, and outlines of the certification points Bosch appliances earn on applications for nine green building rating systems make these clean, fresh-looking pages worth a visit.





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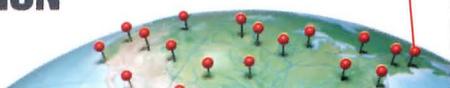


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SOURCES/RESOURCES PROJECTS



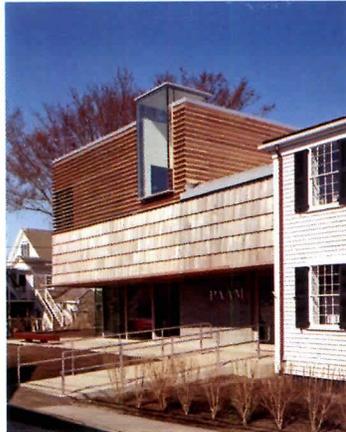
WAYNE LYMAN MORSE U.S. COURTHOUSE

Eugene, Oregon
(page 94)

Sources

Glazing: *Viracon*
Doors: *Grandview Aluminum* (sliding)
Acoustical ceilings: *Baswaphon; Ecophon; Armstrong; Ultima Tiles*
Suspension grid: *Armstrong*
Wall coverings: *Maharam*
Paneling: *Maharam*
Special surfacing: *Richlite* (countertops)
Floors: *Dodge Regupol* (resilient); *Bentley Iconic* (carpet); *Tate* (raised)
Lighting: *Prudential, Light Control, Lumascape* (interior ambient); *Gotham, Delrey, Jewel* (downlights); *CustomCove, Hydrel* (exterior)

For more information on these projects, go to Projects at archrecord.construction.com.



PROVINCETOWN MUSEUM

Provincetown, Massachusetts
(page 102)

Sources

Wood shingles: *Acella Construction*
Roofing: *Carlisle* (built-up); *GAF* (shingles)
Windows: *Duratherm*
Glazing: *PPG Solarban 60* (glass); *Modern Glass* (skylights); *Kalwall* (insulated-panel or plastic)
Doors: *Duratherm* (entrances); *Eggers* (wood)
Hardware: *Schlage* (locksets); *Assa Abloy* (hinges); *LCN* (closers); *Von Duprin* (exit devices); *Hafele* (pulls); *Grass* (cabinet)
Cabinets and custom woodwork: *Chilmark Architectural Millwork*
Paints and stains: *Sherwin Williams*
Floor and wall tile: *Daltile*
Carpet: *Lees*
Lighting: *Edison Price* (interior ambient); *Lightolier* (downlights); *BK* (exterior); *Lutron* (controls)
Accessibility: *Garaventa*
Plumbing: *Filtrine*
Photovoltaic panels: *Schott Applied Power*



JANELIA FARM RESEARCH CENTER, HOWARD HUGHES MEDICAL INSTITUTE

Ashburn, Virginia
(page 116)

Sources

Curtain wall: *Enclos*
Concrete: *Shockey Precast Group*
Wood: *Corev*
Roofing: *Sarnafil*
Glass: *Eckelt; St. Gobain; Rochester Insulated Glass*
Doors: *Enclos* (entrances); *Jefferson Millwork & Design* (wood); *Blasi* (sliding)
Hardware: *Schlage; Hager; LCN; Rixson; Blumcraft; CRL; Von Duprin; Rockwood; Doug Mockett & Company*
Acoustical ceilings: *USG Halcyon; Hunter Douglas; Novawall*
Suspension grid: *USG; Bosch*
Cabinets and custom woodwork: *Lab Crafters' Jefferson Millwork & Design*
Paints and stains: *Sherwin-Williams*
Wall coverings: *Knoll; Pallas; ArcCom*
Paneling: *Jefferson Millwork & Design*
Floor and wall tile: *Lorton Stone* (balsatina); *Daltile; Innovative Marble* (porcelain tile)
Resilient flooring: *Stonehard* (epoxy rubber terrazzo)
Carpet: *Constantine*
Raised flooring: *Haworth* (TecCrete)
Office furniture: *Halcon; dTank; Alea; Omnia*
Auditorium chairs: *Theater Solutions*
Chairs: *Dauphin; Allsteel; Tella*
Tables: *dTank; Hawthorne Galleries*
Upholstery: *Pollack; Omnia; Montis; Arflex; Brayton; David Edward*
Lighting: *Monarch Industries*
Controls: *Lutron*
Elevators: *ThyssenKrupp*



INSTITUTE OF CONTEMPORARY ART

Boston, Massachusetts
(page 108)

Sources

Curtain wall: *Wausau; Pilkington*
Rain screen: *Bendheim* (glass component); *Design Communications* (vinyl component)
Stucco: *Sto*
Wood decking and ceiling: *RDA; Environmental Interiors*
Glazing: *Oldcastle*
Metal paneling: *Karas*
Doors: *Oldcastle* (glass entrances); *Doorman* (sliding); *McKeon* (security); *Total doors* (pocketed hollow metal)
Fire grilles: *McKeon*
Ceilings: *Bergamo* (scrim); *Environmental Interiors* (aluminum support system); *Baswaphon* (acoustical plaster)
Flooring: *Robbins Sport* (sprung); *Lonseal*
Interior finishes: *South Shore, Maharam* (upholstery)
Theater: *High Output* (rigging, curtains); *MechoShade* (scrim, shades, acoustic banners)

Dates & Events

New and Upcoming Exhibitions

AIA 150

AIA National 150 Best Buildings Exhibition Opening Washington, D.C.

April 11, 2007

Visit www.aia.org

Open House: Architecture and Technology for Intelligent Living Pasadena

April 14–July 1, 2007

This exhibition will offer glimpses into the house of the future as a place for new spatial experiences, systems of sustainability, and sensory enhancements through recent technologies and material developments. It will feature specially commissioned “intelligent houses” by 10 teams of emerging architects and designers from the United States, Europe, Australia, Asia, and Mexico. The research aspect of the design process will be highlighted and will encourage visitors to explore their own ideas about the future in a public forum. At Art Center’s South Campus in Pasadena. Call 626/396-2380 or visit www.artcenter.edu.

Snapshot 007: Current Houston Design on View Houston

May 18–June 16, 2007

The fifth open-call exhibition showcasing architecture, urban planning, preservation, landscape architecture, interiors, furniture, and graphics by over 100 Houston architects and designers. At Lawndale Art Center. Call 713/348-4876 or visit www.rda.rice.edu.

Architecture Camp Pittsburgh

June 25–August 17, 2007

Architecture Explorations, a series of one- and two-week camps dedicated to architectural design, construction, form, and function, and presented in collaboration with Carnegie Mellon University’s School of Architecture, are available for children ages four to 13, as well as high school students. The architecture camps are held at Carnegie Mellon University’s architecture studios and in the Carnegie Museum of Art’s Heinz Architectural Center. Call 412/622-3131 or visit www.cmoa.org.

Ongoing Exhibitions

AIA 150

Visual Echo New York City

Through March 10, 2007

This interactive light installation acts as a meandering ribbon of light by remembering the colors visitors wear. While also recording the rhythm and frequency of visitors, the ribbon transforms the

viewer’s perception of space. Using cutting-edge LED tiles, this work, by Jason Bruges Studio, demonstrates exciting new potentials, and questions how light, space, and color can interrelate in architectural space. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

The Last Four Miles Chicago

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Dates & Events

Chicago's 26-mile lakefront is world-renowned for its beauty, and unlike many urban waterfronts, Chicago's shores are mainly public park land, accessible to everyone. However, two stretches of the shoreline (totaling approximately 4 miles) on Chicago's South Side remain in private and quasi-governmental hands. This exhibition, presented in conjunction with Chicago's Friends of the Parks, unveils the plans for redeveloping this land to complete the shoreline park system from Evanston to the Indiana border. Call 312/922-3432 or visit www.architecture.org.

Some Assembly Required

Los Angeles

Through March 13, 2007

For this innovative new show, architects and home buyers unite to support a variety of modern modular dwellings that refute the commonly accepted image of "prefab" homes as cheap, cookie-cutter structures. This exhibition presents various approaches to prefab houses: those built with a kit and an instruction manual or the diminutive, one-room version. At the Pacific Design Center. For more information, call 310/657-0800 or visit www.pacificdesigncenter.com.



Schools of the Future: U.S. Case Studies New York City

Through March 17, 2007

What is the relationship between pedagogical visions and spaces for children? This question is pivotal to understanding good school architecture. Currently there is widespread emphasis on innovative approaches to education that reflects a more personalized conception of learning than prevailed during the 20th century. This exhibition presents a selection of significant school designs from across the U.S. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

Modernism in American Silver: 20th-Century Design Miami Beach, Fla.

Through March 25, 2007

This show charts the stylistic design history of modern American production silver while exploring the economic and cultural factors that influenced silver design, manufacture, and marketing across more than seven decades. At the Wolfsonian-FIU. For more information, call 305/535-1001 or visit www.wolfsonian.org.

Architecture Interruptus Columbus, Ohio

Through April 15, 2007

The Church of Saint Pierre, in Firminy, France, was designed by Le Corbusier and Jose Oubriere, in the early 1960s. Now, after years of interruptions, Oubriere is bringing the project to fruition. Featuring historical and contemporary photographs and drawings, the exhibition strives to bring the experience of the building to life. At the Wexner Center galleries. Call 614/292-3535 or visit www.wexarts.org.

The Home House Project: The Future of Affordable Housing New York City

Through April 21, 2007

The project challenged artists and architects to design single-family houses using Habitat for Humanity's basic plans as a point of departure. This exhibition presents 100 innovative housing designs that explore affordable housing. At the 69th Street Gallery of New York School of Interior Design. Call 212/472-1500 or visit www.nysid.edu.

Zaha Hadid Architects and Eric Owen Moss Architects: Adventures in Kazakhstan Los Angeles

Through April 22, 2007

This exhibition features the design entries of London-based Zaha Hadid Architects and Los Angeles-based Eric Owen Moss Architects for an invitational competition for Republic Square in

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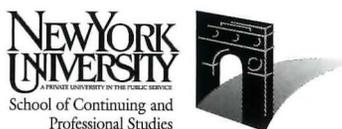
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Almaty, Kazakhstan, which consisted of a multi-use building complex on a prime lot with a five-star hotel, luxury residences, and office spaces. At SCI-Arc Library. Call 213/356-5329 or visit www.sciarc.edu.

**Grounded: Eisenman Architects
Los Angeles**

Through April 22, 2007

An installation by world-renowned Eisenman Architects. Most of Peter Eisenman's work has sought to overcome the traditional idea of architecture as a figure on a ground by "figuring the ground": making ground a figure. Some projects carve into the ground, while others manipulate the surface to create a figured ground. This installation considers Eisenman's "groundwork" from one of the earliest projects, the Cannaregio Town Square in Venice (1978), to the Wexner Center for the Arts in Columbus, Ohio (1989) and the City of Culture of Galicia, in Santiago de Compostela, Spain (currently under construction). At SCI-Arc Gallery. Call 213/356-5329 or visit www.sciarc.edu.

**Prairie Skyscraper:
Frank Lloyd Wright's Price Tower
Chicago**

Through May 4, 2007

The Price Tower Arts Center in Bartlesville, Oklahoma, has the distinction of being the only fully realized skyscraper Frank Lloyd Wright ever designed. Built in 1956 and inspired by a tree, at 19 stories tall, the building transformed the flat prairie on which it was built, altering the horizon with Wright's bold architectural statement. This exhibition celebrates the 50th anniversary of this milestone in American architecture and features drawings, photographs, building components, and some of the original furnishings designed by the architect. Call 312/922-3432 or visit www.architecture.org.

**Growing Country, Growing Needs—
Federal Architecture and Art
Richmond, Va.**

Through May 27, 2007

This one-time exhibition will showcase the new Richmond courthouse, a series of new U.S. border stations, and a selection of other Design Excellence Program projects that illustrate the government's goal to commission inspiring, contemporary civic architecture that reflects and promotes American ideals. At the Virginia Center for Architecture. Visit www.aia.org.

**Gritty Brits: New London Architecture
Pittsburgh**

Through June 3, 2007

In recent years, a new generation of architects has emerged in London, operating mostly from the postindustrial East End and intimately engaged with the city's contemporary urban condition. *Gritty Brits: New London Architecture* presents the work of six practices: Adjaye/Associates, Caruso St. John Architects, FAT [Fashion Architecture Taste], Níall McLaughlin, muf, and Sergison Bates architects. At the Heinz Architectural Center. Call 412/622-3131 or visit www.cmoa.org.

**AIA 150
NY 150+: A Timeline: Ideas, Civic
Institutions, and Futures
New York City**
Through June 23, 2007

To commemorate the 150th anniversary of the founding of the American Institute of Architects in New York City, the AIA New York Chapter will feature an exhibition charting the transformation of the city and the profession from 1857 through the present and into the future. Genetic lines tracing the founding of the institute will intersect with various democratic and social movements and the architecture of New York's civic structures. Fifteen buildings and public spaces will be presented with a factual overview and commentary by architects, critics, journalists, authors, and others to illustrate the ideas that define the city's history as well as its future. A preamble will frame the social, cultural, and historical discourse, giving special emphasis to

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Dates & Events

the directions of architecture in the city as imagined within a puritan pastoral democracy. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

Open House: Architecture and Technology for Intelligent Living Los Angeles

Through July 1, 2007

This exhibition includes nearly 100 teams of emerging designers whose work focuses on technology and domestic architecture. The teams were invited to submit new designs that offer real-life solutions that incorporate the concepts of connectivity, well-being, flexibility, and sustainability. At Art Center College of Design's South Campus Wind Tunnel. Call 626/396-2380 or visit www.artcenter.edu.

The 2006 National Design Triennial: Design Life Now New York City

Through July 29, 2007

Inaugurated in 2000, the triennial seeks out and presents the most innovative American designs from the prior three years in a variety of fields, including product design, architecture, furniture, film, graphics, new technologies, animation, science, medicine, and fashion. On view throughout the museum campus will be the work of 87 designers and firms, ranging from established design leaders such as Apple Computer, architect Santiago Calatrava, and Nike to emerging designers like Joshua Davis, Jason Miller, and David Wiseman. At the Cooper-Hewitt, National Design Museum. For more information, call 212/849-8400 or visit www.ndm.si.edu.

Lectures, Conferences, and Symposia

2007 Emerging Voices New York City

March 1, 8, 15, and 22, 2007

The Architectural League created the annual *Emerging Voices* lecture series in 1982 to recognize and encourage architects who are beginning to achieve prominence in the profession. Now celebrating its 25th anniversary, the series focuses primarily on built work, at a variety of scales, and is structured to reflect the diversity of contemporary practice—geographically, stylistically, and ideologically. At the Scholastic

Auditorium and Urban Center. For more details, call 212/753-1722 or visit www.archleague.org.



AIA Design-Build Summit 2007 Kansas City, Mo.

March 8–9, 2007

This conference will feature keynote presentations by award-winning architects who will discuss best practices in design, using the design-build project delivery method. Tours will be arranged and sessions will focus on outstanding design, bridging, integrated firms, architecture education, leadership, K-12 schools, and sports architecture. At the Kansas City Conference Center. Call 800/242-3837 or visit www.aia.org.



AIA Historic Resources Committee 2007 Spring Conference Philadelphia

March 8–11, 2007

The conference, titled "Fresh Air," will feature sessions on historic preservation and provide a window into the future of architecture education and practice, which is the future of preservation. At the historic Lowes Philadelphia Hotel (in the landmark PSFS building). Call 202/785-2324, visit www.aia.org or www.acsa-arch.org.

Women in Architecture: Histories, Herstories, Reappraising the Legacy of American Architecture Washington, D.C.

March 15, 2007

What is involved in recovering the lost histories of 20th-century architecture? What criteria can architects and historians adopt that will more equitably evaluate architecture? How can women architects create and preserve their own legacies? This forum discusses these questions, as it celebrates women's history month. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

NESEA's Building Energy 07 Conference and Trade Show Boston

March 13–15, 2007

The Northeast Sustainable Energy Association (NESEA) Building Energy 07 includes in-depth workshops on a wide range of green building topics with leading architects, engineers, designers, product developers, builders, manufacturers, policy makers, planners, educators, utility executives, and green marketers. The trade show offers the latest in green building products and services. At Seaport World Trade Center. For additional information, visit www.buildingenergy.nesea.org.

Competitions

2007 Aurora Awards

Deadline: March 9, 2007

Builders and architects who have demonstrated excellence and creativity when designing hurricane-resistant structures are invited to submit proposals to this design competition recognizing projects in the southeastern United States. Solutia, a manufacturer of polyvinyl butyral (PVB) interlayers for impact-resistant glass, is sponsoring a new category in the competition: The Safe & Secure Award will recognize builders, designers, architects, and other home-building professionals who incorporate—and meet or exceed code requirements for—impact-resistant windows and doors for safety, and who use other design elements that minimize the effects of hurricanes and other disasters on residential structures. For more information, visit www.theauroras.com.

ACADIA International Design Competition 2007

Registration Deadline: March 15, 2007

Final Deadline: June 30, 2007

ACADIA, the Association for Computer Aided Design in Architecture, is pleased to announce its third international design competition. As in previous ACADIA competitions, this one will be held entirely online and the contestants themselves will serve as the jury. It is open to student, academic, and professional designers. The competition is designed to encourage dialogue among peers via an online forum, voting sessions, and e-mail. Visit www.acadia2007.org.

Beverly Willis Architecture Foundation Fellowship

Deadline: March 15, 2007

A new fellowship, hosted by the Library of Congress, that will help highlight the work of women architects represented in the library's collections. The Beverly Willis Architecture Foundation (BAAF) in New York City will administer the fellowship. Call 212/577-1200 or visit www.bwaf.org.

Jesse J. Wilkerson Architecture Design Competition: Design Matters: 50 Years in the Future

Deadline: March 26, 2007

This annual competition is open to all high school students in Madison County, Indiana, with the mission to design a home for the future. Submissions should push the envelope of the current housing industry. For info, visit www.ijwadc.org.

Designing Politics: The Politics of Design

Deadline: March 31, 2007

IFG Ulm Promotion Program 2007 is inviting entries from architects, designers, and researchers for its promotional program on the topic of "Designing Politics: The Politics of Design." Award money of 50,000 euros is available, and the winning projects will be supported by mentors at IFG Ulm. Visit www.ifg-ulm.de

Grangegorman Architectural Competition

Competitions Deadline: April 2007

An international architecture competition for the development of a modern new campus, along with health and other facilities, at Grangegorman, a 30-hectare (74-acre) site close to Dublin's city center. This invitation is open to all architectural firms, joint ventures, or consortia of architects, as eligible under EU Directive 2005/36/EC or comparable registration recognized by a national government. Visit www.grangegormandevlopmentagency.ie.

Shelter Me

Deadline: June 17, 2007

In the past two years, widespread catastrophic events have called forth large-scale relief efforts throughout both urban and rural areas of the world. Shelter Me challenges designers to present a cost-effective short-term shelter that is affordable, lightweight, strong, and easily deployed. Visit www.design21sdn.com.

Project New Orleans Call for Submissions

Ongoing

Project New Orleans is seeking to compile a record of all architectural and planning proposals created for the post-Katrina rebuilding of New Orleans. Submissions are welcome, both written and graphic, from the architectural to the regional, and from all engaged in thinking about the future of the city in physical terms. Visit www.project-neworleans.org.

E-mail event and competition information two months in advance to elisabeth_broome@mcgraw-hill.com.

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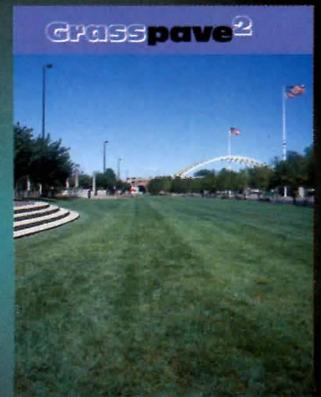
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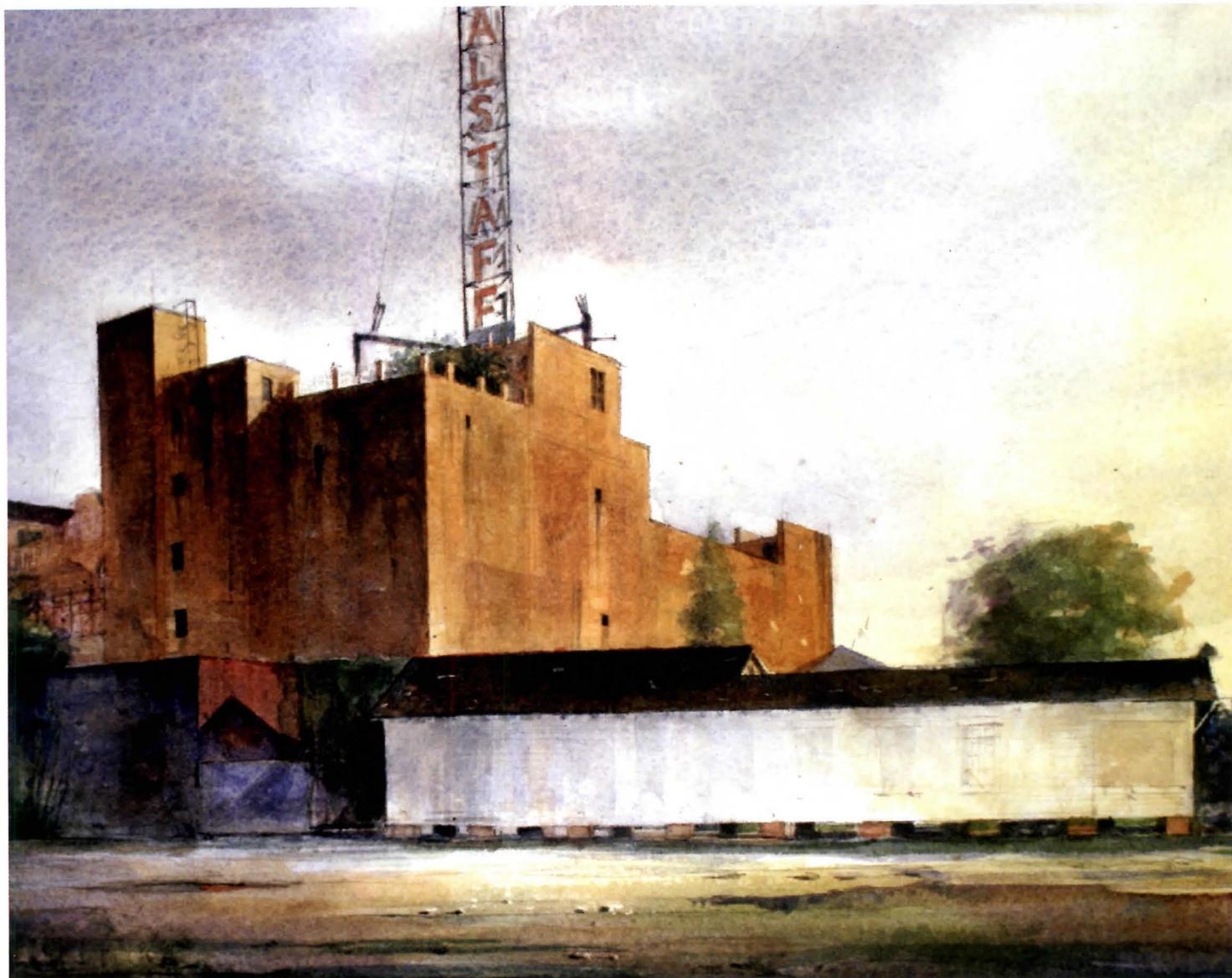
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The Architect's Hand



"Falstaff," New Orleans, graphite, watercolor, gouache, colored pencil, saliva, 2004.

Errol Barron renders volumes in light

Errol Barron, FAIA, a New Orleans architect who teaches at Tulane University, has long been fascinated by the hulking, masonry-walled Falstaff Brewery in the city. Since its closing in 1978, the building has moldered on its downtown site a few blocks from the city's prison and courts. Barron noticed that its west side, which was absolutely sheer, was exposed when structures were cleared around it. "As the sun sets," he says, "the wonderful play of light on this huge wall animates the building in a way that is quite moving." Barron sketched the massive pile sitting in his convertible, then created a mixed-media work 11 by 14 inches in size, using graphite, watercolor, gouache, colored pencil, and saliva. Drawing by hand, he says, is "the reverse process of design: I take things apart to understand them." The work adorns the cover of *Observation: Sketches, Paintings, and Architecture of Errol Barron* (Alexandria Museum of Art/Louisiana Endowment for the Humanities, 2005). Meanwhile, the brewery, listed on the National Register of Historic Places, may be turned into a residence and job-training facility for freed prisoners and juvenile delinquents. *Suzanne Stephens*

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