ARCHITECTURAL RECORD

CHICAGO

New Architecture Sparks Revival and Spurs Debate

Commentary by
Blair Kamin, Joseph Giovannini,
and Stanley Tigerman

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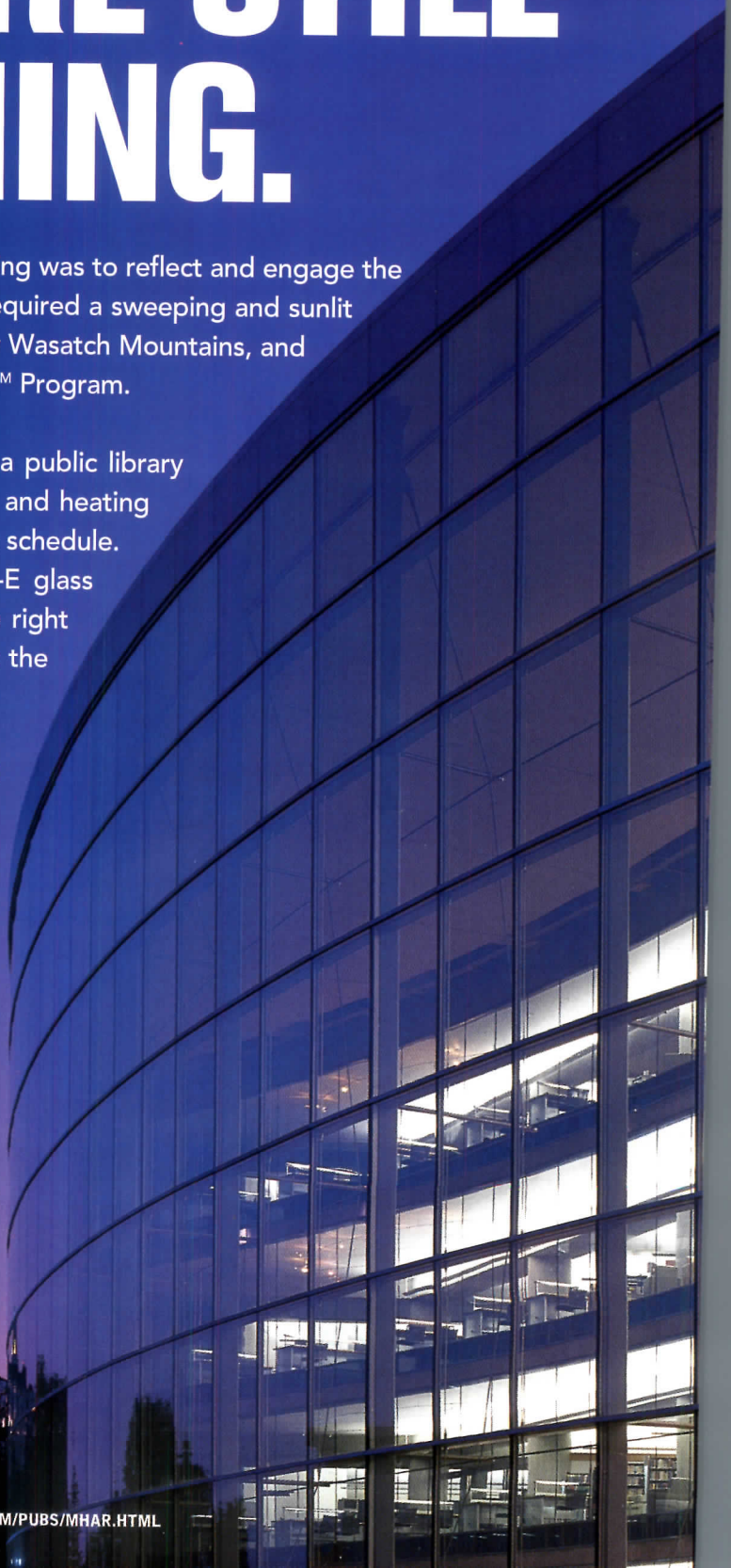

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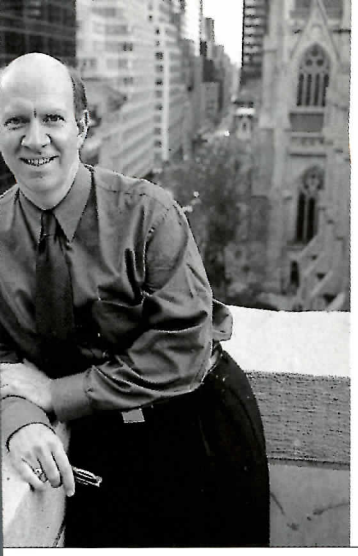


Editorial

By Robert Ivy, FAIA

This month, the Pritzker Prize will be given to architect Zaha Hadid in a ceremony at the Hermitage Museum in St. Petersburg. When she mounts the stage to claim her prize, she joins a worldwide panoply of tive giants. And, by the way, Zaha Hadid happens to be a British citizen n in Iraq, and a woman—the first to receive the accolade in the organiza- 's 26-year history. The 21st century has arrived.

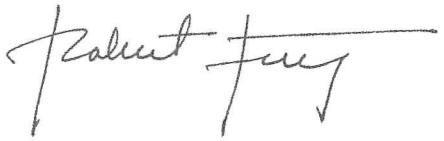
While it may be gratifying to see a leading architect so lionized, and for a woman to win, this particular adulation came with a headache: en the media's first wave of stories hit the stands, Hadid's gender domi- d the coverage. Writers insisted on treating the architect differently from nale predecessors. One article, particularly, stands out. It was striking that cupied the Style *section of* The New York Times Magazine *on March 28. ediately stigmatized, Hadid (and by association her architecture) had been relegated to the second-tier, and her achievement regarded as super- . The author, instead, reminded us of the quirks of her personality. She has he claimed with a kind of justifying pride, a "diva," as if that designation, ighted with the unstable artistic emotion (read female), accorded her star s. The story then went on to discuss the changes in personality that have npanied her increasing maturity. Would male architects be subject to such eur psychoanalysis? The author then treats us to a description of the tect relaxing, well-oiled, by a swimming pool in Miami Beach. Save us!*

When did the term "architect" include gender? Rather than id-talk, Hadid's elevation should be an opportunity for the critical com- ty to exult in a meaningful way. This architect communicates ideas lly, offering an opportunity for discussion and debate within the pro- n and with correlative intellectual communities. The informed public, y for architectural insight, craves solid food. Instead, we have all been d to condescension and ghettoizing of a prodigious talent, armed with s about her favorite designer (Miyake).

While any public figure is fair game for the journalist's pen (and has the magnetic persona to attract media attention), the timing is all. Can you imagine the leading practitioners in other professions treated to such personal scrutiny on receiving a major award? Marie Curie, for instance, subjected to fashion commentary. Or Nobel Laureate Toni Morrison appraised for her hairstyle. In receiving the Pritzker, Hadid joins those noble ranks and deserves better. Architecture deserves better.

Having learned what we did not care to know, regretfully we did not adequately learn why Hadid deserved the prize. (Although a report on the architect winning the award had appeared in the Times *on March 22.) While readers of the* Times *are acquainted with her first project in the United States, the Museum of Contemporary Art in Cincinnati, she has a growing roster of work in progress around the world. Passing mention was made of her vision, a fluid ability to reduce the post-Einsteinian precepts of space and time to images, blurring the boundary between here and there. In Hadid's graphic precociousness, she has taken place and turned it in on itself, creating compositions in which time and matter continually elide. Her perceptions come as close as feasible to a new way of seeing the built world, at a moment that this gifted architect has just begun to build. We all want to know more about Hadid.*

For most, Zaha Hadid has only been an alliterative name up to now. Sadly, the Hadid case underscores that we continue to treat women architects differently, in an age when such discrimination should be universally decried. The cult of personality she has been subjected to at a moment of major recognition diminishes her achievements and clouds our perception and understanding. Zaha Hadid, congratulations on winning the Pritzker. But you, and we, deserve better treatment at the hands of self-styled admirers.



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Letters

sign again, with feeling

pathy is one of the unheralded alities of those people I consider mpetent and gracious designers, d it seems unfortunate to me that Sorkin had to have a cast on his n foot to finally "get it" [Critique, il 2004, page 85]. The design ues that he raises in his column common problems for anyone hing someone in a wheelchair; one with a baby stroller; anyone luggage; and frankly, anyone has been seriously ill and vly recovers and tries to get k to their own life. One of the ential qualities of an empathetic gner is that they don't have to ally experience something to erstand the impact that it has omeone's life.

I'm a tall, fairly strong woman, even I have been buffaloed by closers that are set with too h resistance; oddly calculated s; or paper-towel dispensers are placed at precisely the nt that will guarantee that any r on my hands will run down lbow and stain the cuff of my se. I can't imagine how my ler, less hardy colleagues ion successfully in the same onment. Perhaps as we all age, ill find a way to design an onment that makes expansive res rather than meager mmodation.

ne Whitacre, Assoc. AIA
ciate, Zimmer Gunsul Frasca,
le

is not the time

e with your arguments in the ry editorial ["Hurry Up and page 15]. We must slow down llow peoples' perspectives on ents of September 11 to clear. nderstandable why everyone something built immediately, w is not the right time to act. hroughout history, the role of monuments and memorials has been to revisit the emotions and feelings of the specified event and to honor and mourn those who gave their lives. Through abstract and artistic ways—through use of light or water—each of the eight finalists honored the men and women who gave their lives, but they seem to fall short in exposing our memories and emotions.

Secondly, after viewing the eight finalists' designs, I felt that none of them was very inviting, but instead they left a large unresolved space in the fabric of downtown Manhattan. Your editorial was well planned, and I believe that we need more time until the right solution presents itself.

—Mark Trimbath
State College, Pa.

What of human rights?

While there's little doubt China will be an increasingly important venue for the profession in the 21st century, the March issue's editors seemed to have slept through their own "Wake Up!" call [Editorial, page 17] and missed some rather important facts. The issue was all but silent with respect to China's authoritarian regime and its record of human rights violations, including limits on freedom of expression, assembly, and religion outlined by organizations such as Amnesty International, Human Rights Watch, and even The Heritage Foundation. As for China's oft-mentioned savvy business advances, the editors neglected to list cost savings made possible by near slave labor, deathtrap factories, and a general disregard for natural resources and the environment. When the negative environmental effects were mentioned, they were mentioned in passing and promptly forgiven in subsequent passages. If indeed, as the editor writes, real radical change is supported with facts,

Letters

then the issue and its editors fell short in this apparently objective intention.

—Eric J. Jenkins, AIA
Washington, D.C.

Gorgeous Gorges

Concerns about the lake behind the Three Gorges Dam being "stinky and stagnant" [Correspondent's File, March 2004, page 57] are largely imaginary. The slope of the riverbed determines a river's maximum carrying capacity. As the water level rises, the colder water will continue to flow along the bottom of the lake until the water reaches its maximum density at about 40 degrees F. As the current slows, the heaviest items will be deposited first, with the lightest settling last. Sedimentation is part of the natural purification process. A total of 450 or more feet is a large gradient for cleaning the water. The resulting lake will be among the cleanest in the world.

The best of the new housing will be along the south-facing stretches of the lake. The worst will be along any north-facing slopes and at the highest elevations, offering the least protection from the cold. The wintertime death rates will see spikes for a few years, until residents learn to bundle up appropriately to the higher elevations.

"Great cities" is an oxymoron. Modern plumbing has largely eliminated, or at least masked, most of the detrimental effects of citification of smaller towns. Still, one of man's better instincts is to spread out. Communism, even as modified by China's family-oriented society, still committed the grossest of crimes in moving people off the land.

—John Edward Mahalo
Via e-mail

Landscaping escaping

Regarding current architectural development in China: Wow! Do the words "public realm" translate into Chinese? Clearly, 1960s planning principles and an incredible variety of big boxes do (every shape and form: perforated, undulated, repeatedly replicated, exfoliated). Compare the photos on pages 91 and 98 and tell me where you'd rather be. Given the speed with which change is occurring, as least the pain will be over quickly.

—Bob Close, ASLA
Close Landscape Architecture
Saint Paul, Minn.

Corrections

In the March article on the 2008 Beijing Olympics [pages 102 and 104], CSCEC+Design should have been credited as part of the design team for the National Swimming Center, with PTW and Arup. Also in March [page 115], Mr. Huang Zhi Jian's correct title is vice chairman of the Shanghai Construction and Management Commission. In the story on Team Twin Towers [News, page 36], Randi Warner's name is misspelled, and he is a TV/Film producer, not a journalist. The towers' memorials will be five, not 12, stories high. In the April Product Briefs [pp. 214 and 216], M2L's Web site should have been www.m2lcollection.com. In the April Correspondent's File [page 79], the Pharmacy Building is named for donor Leslie L. Dan, and its design is by Foster and Partners with Moriyama Kinoshita Architects of Toronto. In April, photos of Marcio Kogan's Du Plessis House by Arnaldo Pappalardo [page 140] were reversed. The correct orientation is shown below.

Send letters to rivy@mcgraw-hill.com

Record News

Zaha Hadid: Barrier breaker, conversation starter

e most recent figures on women in architecture in the U.S. reveal a idly cracking glass ceiling. In 2002, women made up nearly 21 percent firm principles, nearly double the number in 1999. The percentage of ensed female architects rose from around 14 to almost 20 in the me period. Women make up nearly 30 percent of all architectural ff, reflecting the growing ranks of female graduates for architecture hools (most schools are nearing or exceeding equal male/female rollment).

As reported in last month's issue, architecture's highest honor, Pritzker Prize, has finally caught up with reality, with Zaha Hadid coming the first woman to win the award in its 26-year history. Most led the decision, but some critics, pointing to Hadid's small body of t work, decried the choice as influenced by political correctness. gardless, Hadid's influence on the field extends well beyond her amic works, as leading architects told RECORD. Meanwhile, Hadid sts, "There still seems to be prejudice in the world of construction. all should be considered architects, no gender distinction should made!"

"I say hurrah. Her incredible drawings have changed the way people think about drawing and the way think about building. She's riginal. It can't help but be tive. One doesn't think about der differences in schools. still does in practice, but 's changing, too."
llie Tsien, Tod Williams Tsien & Associates, New York

"I see Zaha Hadid's recognition by the Pritzker Prize less as an achievement for gender politics one for independent archiral research and vision."
zabeth Diller, Diller Scofidio + o, New York

"She's the first woman to have won the Pritzker, and I think that's important. What it means to other women in architecture, I couldn't comment. I don't particularly think [the prize] was anti-woman. I'm sure if there were a woman that they felt was worthy, they would have given it to her. Women have stepped up, but not as a principal in a firm as Zaha has."
—Richard Meier, FAIA, Richard Meier & Partners Architects, New York

"It's intriguing because it suggests a change in criteria. It's a recognition of her Lou Kahn-like tenacity and vision. There have been enormous changes in the 30 years I've been working as an architect and urban designer, and I'm an optimist, but not a pollyanna. It's still tremendously challenging for women in this field."
—Marilyn Jordon Taylor, FAIA, Skidmore, Owings & Merrill, New York

"The Pritzker jury has a certain definition of architecture, an almost 19th-century notion of great men and of design that is generated through the genius of one mind. It's taken a long time to find a woman who appears to fit those notions. The real prize is having clients who trust you and seeing your buildings used as planned. That's success."
—Denise Scott Brown, Venturi, Scott Brown & Associates, Philadelphia

"To suggest that she is anything other than an exceptional designer only diminishes the prize. But the symbolism is there to be discussed. If it serves as an impetus for other women in the field, then that's wonderful."
—Eric Owen Moss, FAIA, Director SCI-Arc, Los Angeles

"I think that in my generation there were tremendous advantages because there were so few women in the field. I don't think things have changed all that radically. It takes a lot of perseverance to succeed as an architect.

I appreciate anyone who sticks to their aspirations."
—Patricia Patkau, Patkau Architects, Vancouver, British Columbia

"It's completely empowering. More than half of all our students are women. We are at a pivotal moment. We will achieve parity in the profession in this generation. Young ambitious women will face fewer barriers because of people like Zaha Hadid."
—Toshiko Mori, AIA, Toshiko Mori Architect, New York; Chair of Architecture, Harvard Design School, Cambridge, Mass.

"It's great, especially because people haven't spent a lot of time on the fact that she's a woman. It's expected at this point."
—Carol Ross Barney, FAIA, Ross Barney + Jankowski Architects, Chicago

"Her drawings extend and express the desire of architecture, a future of architecture. It's an encouraging sign for the prize and for architecture.

We should celebrate. Other things are more significant than the fact that she's a woman. I think we're over that. In that sense, it's long overdue."
—Steven Holl, AIA, Steven Holl Architects, New York

Interviews and text by Alan G. Brake

REBUILDING LOWER MANHATTAN

OFF THE RECORD

Mies van der Rohe's Farnsworth House is slated to open to the public as a museum on Saturday, May 1. The house was purchased at a Sotheby's auction by preservation groups last December.

The third and final building for Cesar Pelli's Pacific Design Center in West Hollywood received development plan approval. The new "Red Building," as it's being called, will join blue- and green-sheathed structures on the center's 14-acre site at Melrose Avenue and San Vicente Boulevard.

Daniel Libeskind has been selected to design a Salvador Dali Museum in Prague, Czech Republic. The 15.7 million museum will be in the center of Prague and will display 1,000 to 1,500 Dali works. It could be completed as soon as 2007.

Peter Walker and Mel Chin have been selected to design a public plaza for the Jack S. Blanton Museum of Art at the University of Texas.

Architecture critic Paul Goldberger has announced that on July 1 he will become dean of Parson's School of Design at New School University in New York.

Art Center College of Design in Pasadena, California, has canceled a collaboration with Portuguese architect Alvaro Siza for a major expansion of the campus.

The Kennedy Center Plaza project, which will add significant public space to the Washington, D.C., performing arts complex, cleared its first obstacle in March. The Federal Commission of Fine Arts voted 6 to 0 to proceed with the current design after a presentation by architect Rafael Viñoly.

Bates Lowry, founding director of the National Building Museum, passed away this March. He was 80.

Deutsche Bank Building coming down

The Lower Manhattan Development Corporation (LMDC) has announced that the Deutsche Bank Building on 130 Liberty Street, just south of Ground Zero, will be razed, after a settlement was reached between the company and its insurers.

The building suffered a 15-story gash after the collapse of the Twin Towers, and Deutsche Bank deemed its building lost. Several insurers, including AXA Insurance and Allianz Insurance, disagreed, fighting to salvage the building.

Under the settlement, brokered by former senator George Mitchell, the LMDC will purchase the land for $90 million and pay for building demolition. The plan caps demolition and cleaning costs at $45 million and projects five to seven months for this to take place.

Deutsche Bank Building.

The resolution to bring the building dow will increase open space in the area, opening up 30,000 square feet of land, a it will bring more roo for the World Trade Center Memorial.

"The resolution the Deutsche Bank Insurance Dispute pu the last piece in plac for rebuilding the World Trade Cer site," commented LMDC presiden Kevin Rampe. *Sam Lubell*

The Valeo Technical Center.

Davis Brody Bond to join WTC Memorial team

Michael Arad and Peter Walker have company at Ground Zero. New York–based firm Davis Brody Bond (DBB) has been chosen by the LMDC to work with the team on the design of the World Trade Center Memorial.

The firm, which has practiced for more than 40 years and has won the AIA firm award, brings a significant level of experience to the Memorial team. Projects include the renovation of the New York Public Library's Rose Reading Room, an addition to the Harvard Club of New York, the U.S. Census Administration headquarters in Maryland, the Valeo Technical Center in Michigan, and, significantly, a master plan for the World Trade Center's public spaces that was stalled in the wake of the 1993 terrorist attacks.

The LMDC could not be reached for comment, but some critics thought that it had appointed the firm to make up for Arad's relative inexperience as an architect.

"I don't agree with that," rebutted Arad. "I think that there going to be a great team here." DBB principal Steven Davis adde "Michael Arad is a very capable man," and pledged that his firm no intention of taking charge of project. "This isn't about our visi it's about their vision," said Davi "We're very much respectful of t role. They are the lead architect *S.L.*

WTC Briefs

Memorial Committee named
The LMDC announced the formation of a Memorial Center Advisory Committee, which will play a major role in guiding development of the Memorial Center at Ground Zero. The 24 members of the committee will include police and fire personnel, architects, curators, museum administrators, 9/11 victims' family members, and members of the preservation, academic, government, and business communities. *S.L.*

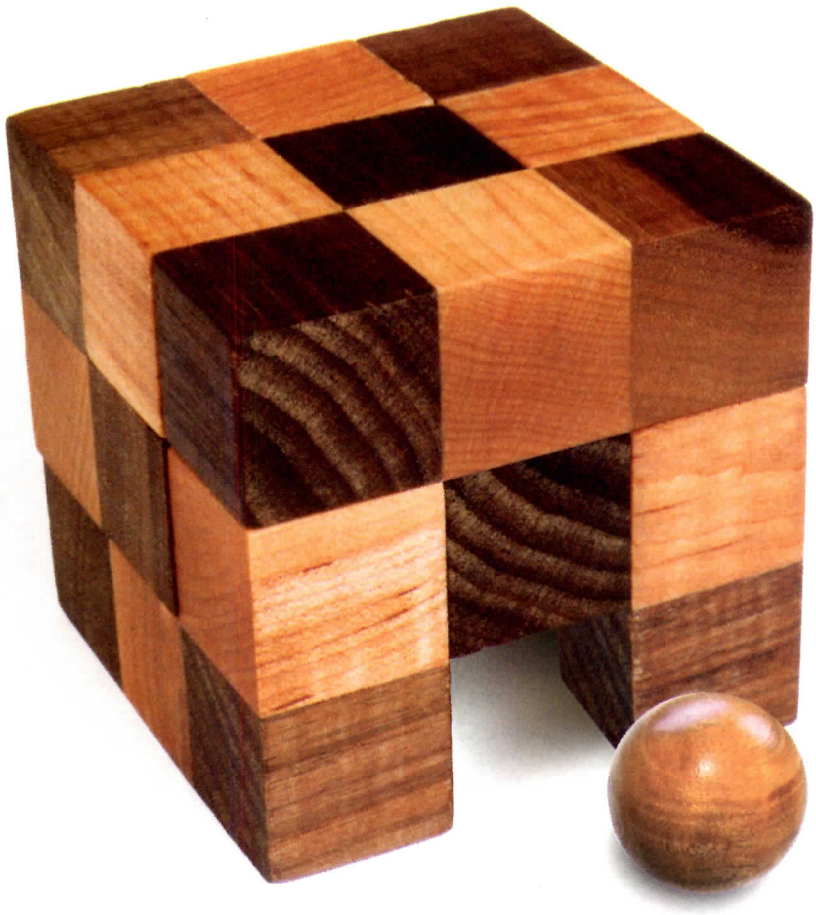
Carpenter to work on Fulton hub
New York designer James Carpenter has been selected by the New York Metropolitan Transportation Authority (MTA) to contribute to the new Fulton Street Transit Center in Lower Manhattan.

The selection of Carpenter, finalized on March 31, was made from a field of 215 artist proposals submitted last December. The designer said his contribution to the station, located on Fulton Street and Broadway, would be a roughly five story, "very delicate tensile structure," which will include a translucent glass exterior and an inner form of finely perforated metal.

Carpenter's Moiré Stair.

Carpenter's w explores interactio glass and light. Pas projects include a l cable-glass wall at Time Warner Cente New York and the M Stair Tower for Helm Jahn's Deutsche P in Bonn, Germany. designer is also creating a cable wall for the nearby 7 World Trad Center in New York. The MTA ha approved $340,000 for Carpen contribution, and $750 million f the entire complex, which is bei designed by Nicholas Grimshaw Partners of London. Completion expected in 2007. *S.L.*

Sure, you overcome puzzling design problems.



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A new, but still recognizable, face unveiled for New York's Lincoln Center

On April 13, Lincoln Center unveiled designs for the first phase of redevelopment of the area around West 65th Street in Manhattan, a futuristic image infused with midcentury Modern.

Plans conceived over the past several months by New York firm Diller Scofidio + Renfro (formerly Diller + Scofidio) include major renovation and expansion of the area's streetscape, public spaces, and virtually all of its cultural facilities. Total cost is projected at $325 million.

The spaces now being redeveloped make up one half of Lincoln Center's total area. Designs for the second phase of redevelopment, on Lincoln Center's south side (including the Metropolitan Opera and the complex's plaza) will likely be unveiled in about a year, said Diller Scofidio + Renfro principal Ricardo Scofidio.

The overall design concept, conceived in collaboration with Fox & Fowle Architects, displays Diller Scofidio + Renfro's gift for maximizing transparency, with copious amounts of glass, and for gaining the perception of fluidity, with the implementation of flowing contours. All the while, the scheme maintains the essence of Lincoln Center's Modernist aesthetic.

"There's something really interesting, even magical, about the space's '60s architecture. We wanted to amplify its most successful features and fulfill its unrealized potential," said firm principal Elizabeth Diller.

The redesign of 65th Street will include transparent building facades; dramatic lighting, such as LED light "mats" set in sidewalks; narrowing of the street; replacement of a bulky concrete bridge over 65th Street with a glass one; and the removal of underground parking entrances on the street.

Enhancements to the North Plaza will include a new sloping "campus green" built on the roof of a restaurant, the enlargement and resurfacing of the space's reflecting pool, and the addition of a closely clipped bosk of trees, reminiscent of a French garden, next to the pool.

Transparent facades and radical shapes along 65th Street (above), and at the North Plaza (right).

Facilities changes include an expansion of The Julliard School and the Lincoln Center Theater, a new facility for the Film Society of Lincoln Center, and a redesign of the Samuel B. and David Rose Building, which includes a new glass entry and lobby. Alice Tully Hall will get a complete overhaul, including a new glass entrance, whose roof shoots skyward at an abrupt angle and includes a donor facility suspended in glass above the hall's inner lobby.

While Lincoln Center is now embarking on a $325 million cap campaign to help finance the proj much funding will come from the "There will always be a reason wh not [to proceed], but if you study forever, you do nothing," commen Mayor Bloomberg. Construction is expected to begin in 2006. *S.L.*

New York's Jets Stadium and Javits Center expansion finally moving forward

Last month, at a long-anticipated ceremony at the Jacob K. Javits Convention Center in New York, Mayor Michael Bloomberg and Governor George Pataki announced plans for a new "Convention Corridor" in the city. The plan includes a greatly expanded Javits Center and a new sports and convention complex that will include a 75,000-seat arena for the New York Jets. According to Mayor Bloomberg, the project, located between the western edges of 30th and 42nd streets, will "catapult New York City into the 21st century," and provide abundant jobs as well as millions of dollars in tax revenue.

The existing Javits Center, designed by I.M. Pei and Associates, opened in 1986 and has long been criticized for its limited capacity. In 2002 alone, 63 shows were turned away due to the Javits's dearth of space, says Charles Gargano, chairman of the Convention Center Development Corporation. Hellmuth, Obata + Kassabaum (HOK) has been designing the Javits expansion, and if the project, which also includes a 50-story hotel, moves forward, the center will essentially double in size, from 760,000 square feet to 1,705,000.

Connected below grade to the Javits will be the New York Sports and Convention Center (NYSCC), designed by Kohn Pedersen Fox Associates (KPF). The NYSCC, in addition to hosting the Jets and holding new convention space, will also contain a public plaza, restaurants, a community theater, an a museum. The stadium itself, explains KPF senior associate principal Tren Tesch, will be constructed on a massive deck to be built above the west sid rail yards. The designs feature solar panels, wind turbines, and hydroelectri technology capable of generating a major portion of the complex's powe Developers are also offering up the space as evidence that New York City i capable and worthy of hosting the 2012 Olympics.

Community groups concerned about changes to their neighborhoo complain that the projects will lead to demolition of much of the area an displacement of locals, as well as diverting tax revenue from issues pressing concern. John Fisher, spokesman for the West Side Coalition, a organization of local groups, likens the proposals to "putting a 1,600 poun gorilla right in the middle of the neighborhood." Additionally, warns Fishe the project would inevitably create "more gridlock than the city cou absorb." City spokesperson Jennifer Falk notes that the Conventio Corridor plan includes no provisions for condemnation, although the neig borhoodwide Hudson Yards redevelopment plan may raze some 140 buil ings. Pending zoning and environmental approvals, both projects are slate to begin construction by 2005. Both have received financing commitmen from city, state, and private sources. The NYSCC is estimated to cost least $1.4 billion, and the Javits expansion's first phase $1.4 billion. *Ila Kayatsky and Randi Greenberg*

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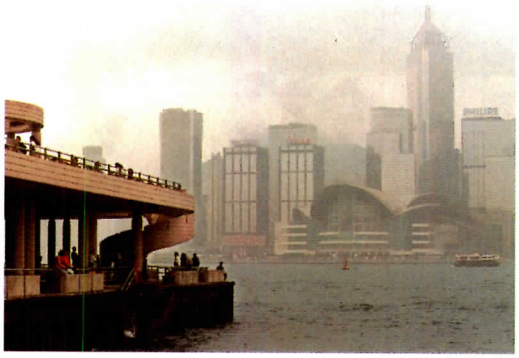


Landfill could replace much of Victoria Harbo

Hong Kong's Victoria Harbour faces serious landfill threat

A setback for advocates of Hong Kong's Victoria Harbour occurred on March 9 when a Hong Kong court ruled that the region's government can proceed on a landfill project that will reduce the size of the harbor to ease traffic congestion.

The Hong Kong skyline is known for its picturesque harbor, a natural symbol of the city's beauty, and in stark contrast to its crowded urban grid of skyscrapers and elevated roadways. In recent years, harbor protectionists and city planners have had an acrimonious relationship: The harbor has slowly been reduced to about half of its original size as the government continues to fill in the waterway for public works and lucrative developments, claims the Society for the Protection of the Harbour, a nonprofit organization, which was the plaintiff in the lawsuit.

The decision will allow city planners to continue a project in Central, which is a busy section of the island's central business district, which involves filling in an 45-acre area with a 2.5 mile underground highway and an extensio of a subway line. The government estimate that the highway will reduce the journey tin through Hong Kong's most congested area by 20 minutes.

The Housing, Planning and Lands Bureau of Hong Kong says that it has been sensitive to demands made by harbor advo cates. Other than several projects that are currently in the works, "there will be no mo reclamation within the harbor," says Carrie Lam, the bureau's Permanent Secretary. "W also see a lot of consensus on working togethe to create a vibrant harbor."

The March 9 ruling comes a little more th a month after the *Society for the Protection of* the Harbour was handed a victory in a final appeals court in a separate lawsuit. The court ruled that a government landfill project located the Wanchai district, near Central, was unlawfu because the waterway was a natural heritage that should be preserved, according to local ne reports. Work has stopped on the Wanchai sec tion. Winston Chu, the lawyer for the Society fo the Protection of Harbour, says he is "frustrate by the most recent verdict and notes that the planned highway was supposed to pass throug a section of the project that has been halted. "The government is now allowed to build half o the roadway. It is strange that this should hap pen," says Chu, who is planning to appeal the March 9 decision. *Jen Lin-Liu*

Foster designing atrium for two Smithsonian museums

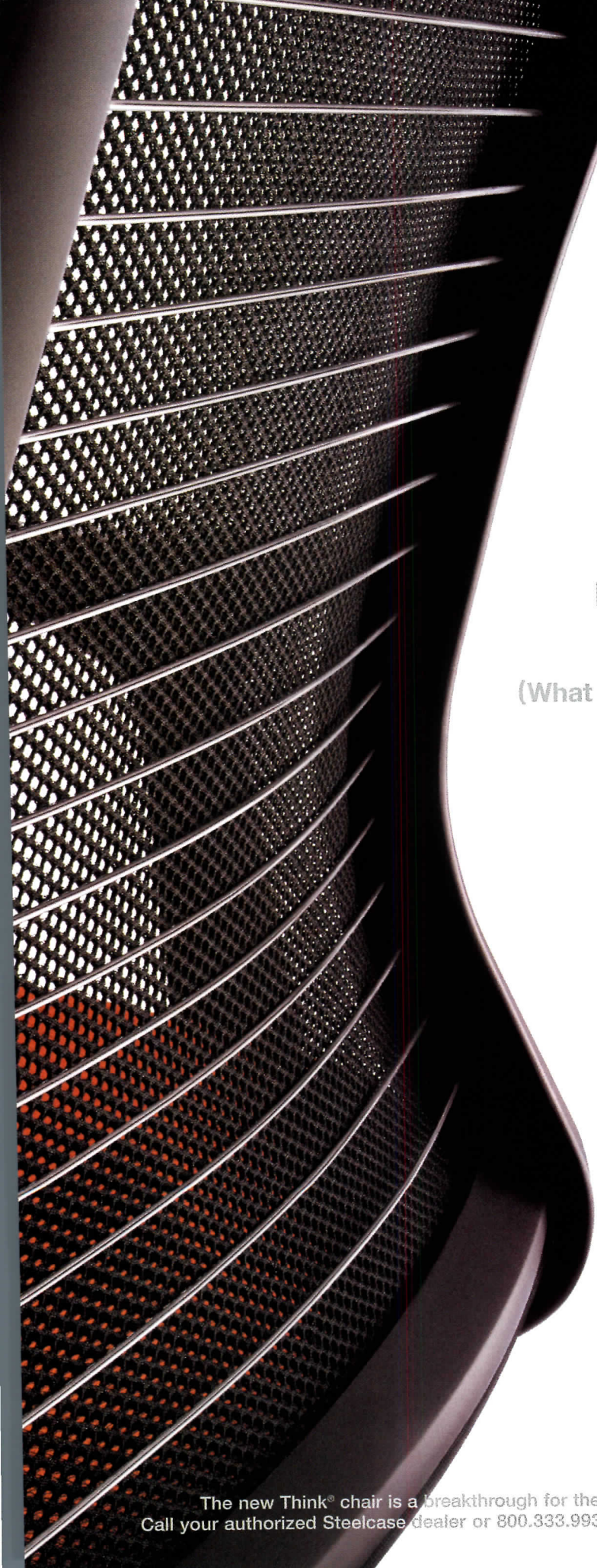
The glass enclosure will cover a 28,000-square-foot courty

Norman Foster of Foster and Partners in London has been chosen to design a courtyard enclosure for the Smithsonian's Patent Office Building in Washington, D.C., which houses the Smithsonian American Art Museum and the National Portrait Gallery.

The glass enclosure, estimated at $30 million, will cover the 1867 Greek Revival building's 28,000-square-foot courtyard and will be used as a gathering space for performances, receptions, installations, and special events.

The two museums—also undergoing a $116 million renovation, begun in 2001—are set to reopen in July 2006.

Lord Foster recently designed a similar enclosure for the British Museum in London a will be designing one of the World Trade Cente office towers. Foster was chosen for the Washington project over a field that included Ian Ritchie Architects, Toshiko Mori, Eric Owen Moss Architects, and Guy Nordenson & Associates with *Pei Cobb Freed Partners. S.*



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Effort aims to stop destruction of Iraqi architectural treasur

Prompted by the tragic destruction of cultural sites in Iraq both before and during the Iraq War, the World Monuments Fund (WMF) and the Getty Conservation Institute (GCI) have announced an initiative to help stem the tide of such activity.

Called the CGI-WMF Iraq Cultural Heritage Conservation Initiative, the program will mobilize money, expertise, technology, and attention to help support overwhelmed Iraqi cultural authorities.

"Iraqi professionals responsible for conservation and management of these sites have been isolated and demoralized," says Timothy Whalen, director of the GCI. "We are resolved to work with them to ensure maximum impact."

The movement comes none too soon in a country that has seen an inordinate amount of its vast cultural and architectural treasures looted or vandalized in the wake of civil disorder.

"Nearly all the archaeological sites in Iraq have been given to systematic looting by the local people," says Dr. M.R. Izady, a professor of Middle Eastern history at Pace University who was recently in Iraq. Architectural treasures under threat or already destroyed in what is called the "cradle of civilization" include sites of the ancient cities of Larsa, Isin, Fara, and Umma. Thousands of other buildings and sites, such as Nippur, the heart of ancient Babylonia, and Hatra, which h well-preserved temple precinct, are under sev distress.

Short-term measures include emergency grants for the reinstallation of protective roofin over the archaeological site at Ninevah, and fc protection of sites being looted in central Iraq. Longer term mandates include the developme

Nippur (above) and Hatra (le are among the threatened s

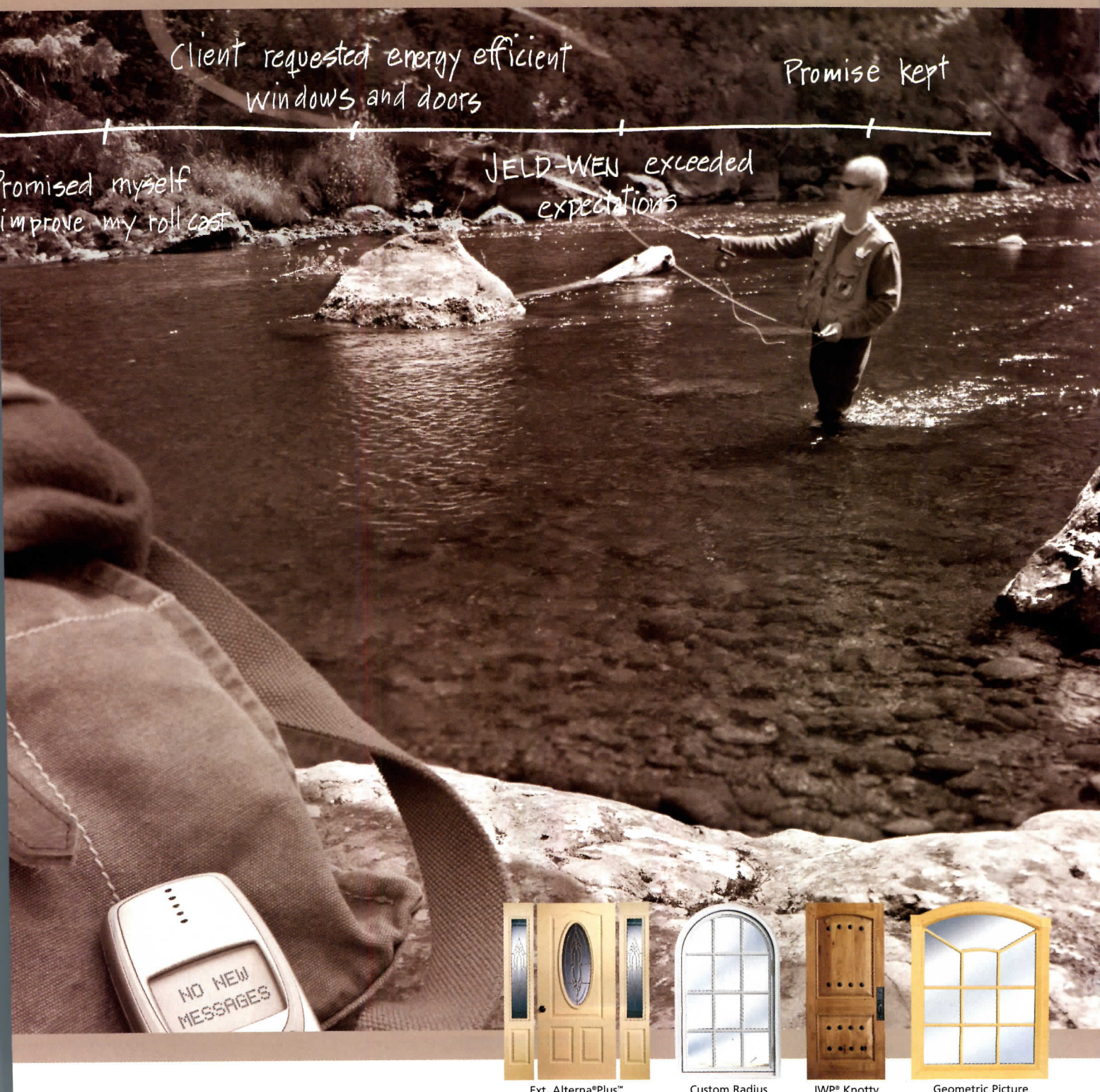
of a National Cultural Herita Information System and Database, used to documer site conditions, set priorities, and address thr According to the WMF and GCI, in the future– pending a safer environment for foreigners in country—advanced training courses for Iraqi cultural professionals will be established, as as emergency work at sites, large-scale cons vation, and planning assistance. *S.L.*

San Jose, California, to permit design-build public works

Taking a closely watched and controversial step, San Jose, California, is joining the ranks of ma cities permitting design-build public works projects. A charter amendment approved on March 2 voters in the nation's 11th-largest city authorizes design-build for projects valued at $5 million and when the city determines that the delivery method would save time or money.

Design-build is a highly flexible delivery method with many variations, but the basic character tic is that the owner selects a single team to provide both design and construction rather than reta ing the services separately. Design-build advocates tout the potential for on-time, on-budget delive But some architects question the city's ability to implement design-build and worry that they could forced to forgo their customary role as the owner's and public's advocate. On March 9, the city cour authorized the city attorney to draw up an ordinance, which could take months to develop and revi "We can take some time to make sure that we do it right," says David Vossbrink, spokesman for Ma Ron Gonzales, the charter amendment's chief backer.

In authorizing design-build for projects valued at $5 million and up, San Jose joins su California cities as San Diego, Oakland, Sacramento, and Stockton, notes David Vossbri spokesman for Mayor Ron Gonzales. The charter change reflects the city's determination "to ma sure we get the best job, the best talent, and the best price," says Vossbrink. The city's experience public works projects also informed its interest in design-build, Vossbrink says. *Paul Rosta*



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Skyscraper Museum finally gets its own home

After years of borrowing space, the Skyscraper Museum—dedicated to exploring the history and future of the tall building—finally opened its own facility on April 2.

Skyscraper Museum interior.

Located in the same building as the Ritz-Carlton Hotel on the southern tip of Manhattan, the 5,000-square-foot, one-story space, designed by Skidmore, Owings & Merrill, looks much taller than it is, thanks to mirrored stainless-steel ceilings and floors. The reflective spaces are designed, notes SOM partner Roger Duffy (who collaborated with artist James Turrell), to look like "you're above a city street, 40 stories up."

Moving through the museum, one first approaches drawings, materials, and photos of some of the earliest skyscrapers, like the Woolworth, Washington Life, and Singer Buildings, built around the beginning of the 20th century. Next come presentations of more recent skyscrapers, like the Sears Tower in Chicago and, of course, the World Trade Center in New York. Finally, one arrives at displays of current and future height behemoths like (current height champion) Petronas Towers in Malaysia, t upcoming Taipei 101 in Taiwan the Jin Mao Building in Shangh and the Hearst Tower in New Y

The Skyscraper Museum was conceived of in 1996, say its director, architectural histo Carol Willis. There followed thr temporary spaces and exhibi- tions in other museums, as well as delays afte the nearby 9/11 disaster. The building took on about a year and half to plan and build. Design engineering by SOM and construction manage by Tishman were pro bono; funds came from pri and public sources, and the space was donat by Millennium Partners and Battery Park City.

"A permanent home in Lower Manhattan was our dream from the start," says Willis. "Th buildings are really about urban life and the u condition. I hope we can allow people to inter their future from learning about their past." Fu exhibitions will include a dedication to the Wo Trade Center and a look at Frank Lloyd Wright skyscraper projects. *S.L.*

New York housing competition tests limits of affordable design

Some interesting projects weren't considered feasible.

The New Housing New York Design Ideas Competition, sponsored this past fall by New York City, the AIA New York Chapter, and the City University of New York, called upon architects to propose dynamic new housing models for three specific city sites—in Manhattan, Queens, and Brooklyn—that could serve as prototypes for similar locations throughout the city.

Jurors selected projects based on a combination of innovation, sustainability, transferability, economic efficiency, and feasibility. The top among the more than 150 submissions were on exhibition at New York's Center for Architecture.

Winners included the Texas team of Choi Law, Clinton W. Brister, and Melody Yiu, whose angular, boxy, seven-story building in Harlem would employ up-to-the-minute technologies for recirculating rainwater and storing and harnessing solar energy. Another winner was for a site in Brooklyn by Ohio's Blostein/Overly Architects and included a pair of mid-rise buildings connected by public stairs, stoops, and sky gardens that would encourage increased social contact among tenants.

Some of the most interesting designs w arguably more daring than those of the thre winners—including one design (for the Harle site) of a building whose facade is obscured strangely twisted, protruding, metal-bound v cal balcony. Some jurors wondered how feas and practical many of the ideas were, even among those that won. Nevertheless, one o competition's eight jurors, Hugh Hardy, FAIA, partner at New York's Hardy Holzman Pfeiffe Associates, suggests that the purpose of th competition "was not to produce building pl for buildings that would be built today, but t 'why not?' to new ways of looking at design. *Ilan Kayatsky*

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New use for Canada's former military bases: housing

Thanks to cuts in military spending after the cold war, traditional-style residential communities are being built in increasing numbers on decommissioned military bases across Canada.

These are former operationally obsolete bases throughout the country that the Canadian Department of National Defence (DND) has abandoned since 1997. They were acquired by Toronto-based Canada Lands Company Limited (CLC), which disposes of surplus federal property. It paid $60 million for the 2,429 acres.

New housing on a former military base.

CLC supervises the master planning and architectural control, and sells lots to home builders with strict design caveats. It will have invested about $149 million by 2010 in these conversions, says Gordon McIvor, the company's vice president for public and government affairs.

It works. At Garrison Woods, as the first phase of a project in Calgary unfolding on 455 acres is called, lot prices have doubled within five years, as buyers snapped up the new homes and 400 renovated cottages once occupied by military families living on the base.

Buyers are attracted by the diversity of housing types; designs (Craftsman or Prairie farm house, Tudor, Colonial, and Victorian styles); and prices, from $89,000 to $520,000; as well as 50-to-70-year-old trees preserved on the windi roads. Firms involved with Garrison Woods inclu Jenkins & Associates, The Cohos Evamy Partne IBI Group, and Stantec. All firms are from Calga

The most recent co versions are in Alberta, where a federal Crown corporation will start offe ing lots for about 5,000 new homes this spring. of them is on flat terrain where for about 60 year military training exercise and mock battles "raged"—less than 10 minut from downtown Calgary. The other is in Edmon Mark McCullough, CLC's general manager of re estate, describes it as "a New Urbanist, neotra tional community, with houses closer to the st lanes and garages at the rear, porches out fro and tree-lined sidewalks and boulevards."

While these bases aren't the greatest rep tories of Canada's heritage, many elements ar considered worth preserving. Kathy Milsom, C president and C.E.O., says: "We commemorate names of battles on streets and create comm orative walkways with plaques and monument wherever it is appropriate." *Albert Warson*

Los Angeles improves design of animal shelters

The City of Los Angeles Department of Anim Services is establishing new architectural sta dards for animal shelters in a concerted effort increase the adoption rate and minimiz euthanasia of homeless pets. The new center such as the South Central L.A. Animal Shelt (above), will be the first city-owned animal facilities in the country that integrate improved animal ca and architecture. With funding from Proposition F, passed by local residents in 2000, Animal Services w gain two new shelters, replace three, and expand and renovate two existing facilities. The number of d kennels will increase from 300 to more than 1,400 citywide, and all found and adoptable pets will housed in comfortable environments meant to appeal to visitors on an aesthetic and emotional level.

Borrowing concepts from retail merchandising, adoptable pets will be "showcased" by utilizi natural and artificial light, color, interesting materials, and landscape. Architect Tracy Stone (Tra Stone Architects), LEED consultant and design partner with Barton Choy (ChoyAssociates) on the Nor Central Animal Services Center, explains, "We want to show the animals in the best possible light a encourage interaction." Other improvements: Outdoor kennels will allow dogs and potential owners interact in a more natural setting; skylights will lend natural light; and interior and exterior water e ments, such as fountains, misters, and water walls, will create a more calming ambience and provide natural and healthier cooling system. *Allison Milionis*

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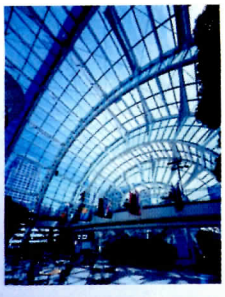

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Amsterdam converting gasworks into culture park

Space- and green-conscious Amsterdam is converting its long-closed Westergasfabriek (the Western Gasworks) into a "culture park" with a combination of cultural and community functions.

The gas plant closed in 1967, when the introduction of natural gas made the process of coal gasification obsolete. Ownership was transferred to the local district council in 1992, and in 1998 the city approved approximately $6 million for development of the gasworks as a culture park; a federal grant of 2.5 million dollars was secured for the renovation of the gas tank.

This gasworks hall will become a cultural space.

The 50-acre site, of which 12 acres are the original gasworks, contains 19 buildings, including an immense round gas tank. Thirteen of the buildings, constructed between 1885 and 1905 in a neo-Renaissance style, are protected landmarks. The renovation, expected to be completed within the coming two or three years, is being carried out by architect Yske Braaksma of Braaksma & De Roos, specialists in historic preservation.

The newest public ameni a newly opened park by Ameri landscape designer Kathryn Gustafson, winner of an invited competition in 1997. Her desig incorporates not only grass, w and an orchard, but also a stri wetlands, and changes charac as you move away from the ci from urban to garden to nature

Before decisions could b made about permanent uses tenants for the buildings, the contamination of soil had to be tackled. A complete cleanup wo have been prohibitively expensive, but by exclu ing residential uses and adding an additional l of soil, cost was reduced to about $15 million. The U.S. Environmental Protection Agency rec chose the Westergasfabriek as an exemplary of reuse of industrial heritage. *Tracy Metz*

New York dreams of future Olympic Village

In a grand gesture toward hypothetical possibilities, New York City's Mayor Michael Bloomberg in March unveiled the five finalists for a proposed New York Olympic Village, located in Queens West, along the East River, directly across from the United Nations.

MVRDV's proposal includes leaning triangular towers.

The finalists, chosen from more than 130 entries, included adventurous, avant-garde schemes that the city hopes will help direct the International Olympic Committee's attention toward the city's bid to host the 2012 games. The finalists were: Henning Larsens Tegnesture A/S (HLT) of Copenhagen, Denmark; MVRDV of Rotterdam, the Netherlands; Morphosis of Santa Monica, California; Smith-Miller + Hawkinson Architects of New York; and Zaha Hadid Architects of London.

The proposed site will house 16,000 people, mostly athletes, and if built will be used for permanent housing after the completion of the games. The project will be overseen by the Queens West Development Corporation and is a joint project of the state, city, and the Port Authority of New York and New Jersey.

HLT's design involves massive, twisting gl towers and canals that make the site a "little Venice." MVRDV, meanwhile, proposes triang towers, some of which lean on each other fo support. Morphosis's design involves both hi sculpted land and buildings, 43 acres of ope space, and the largest urban waterfront park i city. Zaha Hadid Architects utilizes liquid forms create almost translucent housing towers tha be monuments in themselves. Finally, Smith- + Hawkinson presents a more conventional (this competition) design that includes five sler river towers in an ecofriendly environment. The won't find out if it wins its Olympic bid until July 2005, but the winning design, slated for late M will be submitted to the Olympic Committee o November 15. *S.L.*

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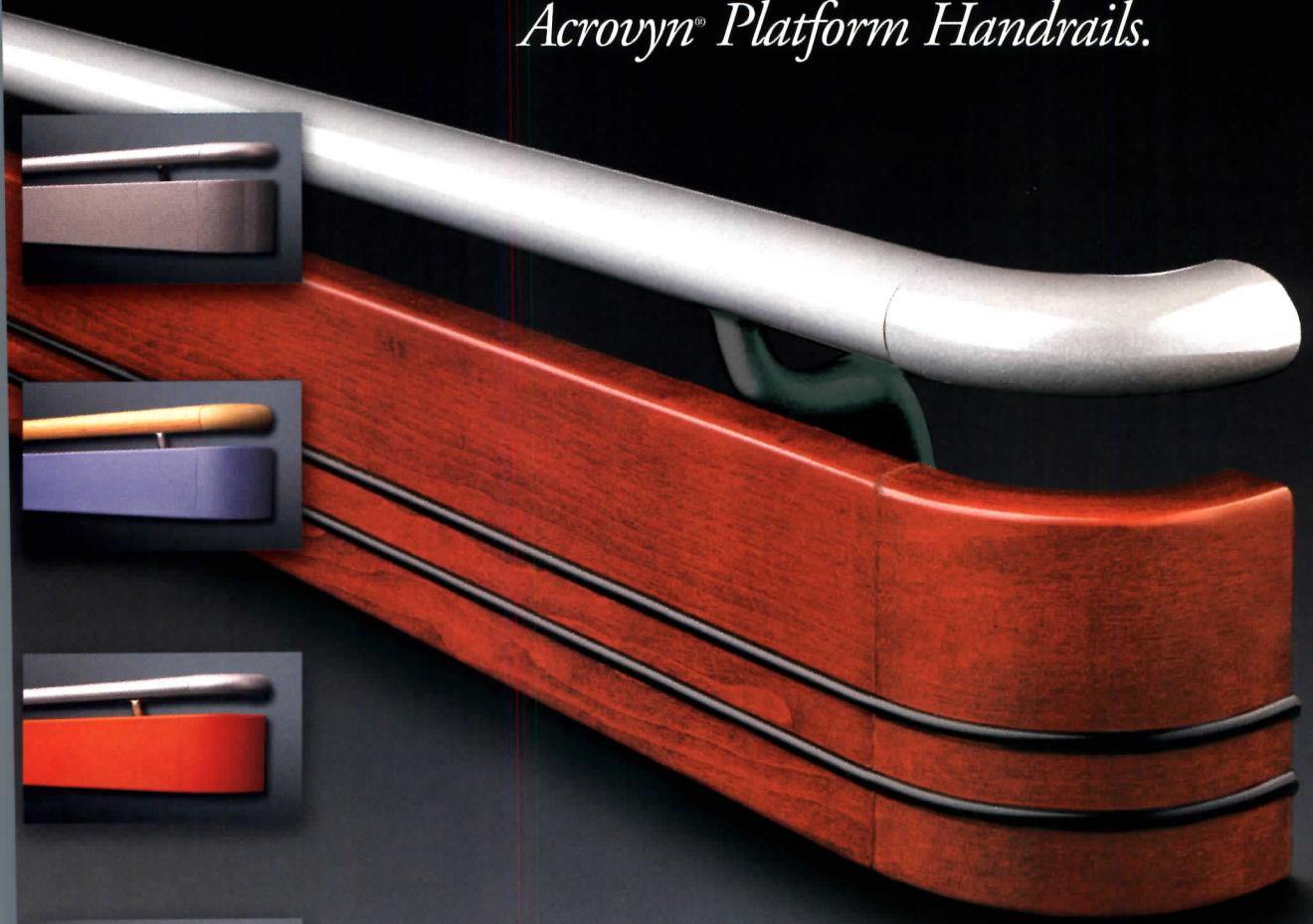

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Record News

The Royal Albert Hall (left) and the London Coliseum (right) were revamped inside and ou

Makeovers for two cherished London theaters

Two of London's best-loved performing arts venues—the London Coliseum and the Royal Albert Hall—have had major makeovers, restoring elements that had long been deteriorating while allowing the halls to compete technically with more modern theaters around the country.

The London Coliseum, home of the English National Opera, which originally opened in 1904, reopened on February 21 after a $75 million, four-year restoration. Architects RHWL have returned the building's imposing friezes and figures to their original 1904 color scheme of imperial purples, Italian reds, and shades of gold and cream. The front-of-house areas have been expanded by 40 percent, their marble and mosaics have been restored, and the original terra-cotta figures on the facade have been recast. A new curved glass roof creates an airy double-height space overlooked by a new Balcony Bar/foyer with views of Trafalgar Squar and the Coliseum's distinctive floodlit tower, whose globe will revolve for the first time

Meanwhile, a 10-year, $129 million program of redevelopment has restored the Roya Albert Hall—originally completed in 1871—to its original glory. Building Design Partnership was co missioned in 1990 to devise a master plan and h been the lead architect, engineer, and cost consu ant. The auditorium, gallery, foyers, and public circulation areas have been redecorated, restorin original tiled floors. The Dome's decorative plaste work, destroyed in the 1940s, has been replaced patent glazing installed, and its roof overhauled. T South Steps' stonework and balustrades have be restored, and circulation, landscaping, as well as ventilation and cooling have been improved. The acoustics now replicate those of the original hall. At the South Porch, 7,500 terra-cotta bricks of m than 800 shapes and designs were used, each hand-modeled to reproduce original details docu mented in the hall's archives. *Lucy Bullivant*

Architect Pierre Koenig dies

Pierre Koenig (far right), FAIA, renowned for his role as one of the Los Angeles–based Case Study Program architects, died on April 4.

Born in 1925 in San Francisco, Koenig later moved to Southern California, where in the late 1950s he became a designer for the Case Study Program, established in Los Angeles in 1945 by John Entenza, editor of the avant-garde magazine *Arts & Architecture*. Case Study became an effort to offer the public models for low-cost housing in the Modern style and produced masterpieces by Richard Neutra, Craig Ellwood, Thornton Abell, Charles Eames, and Eero Saarinen.

Koenig created the iconic Case Study Houses #21 (1958) and #22 (1960, above left), both simple elegant cubes of glass and steel. Perched in the Hollywood Hills, both came to represent the "glam orous" indoor/outdoor lifestyle of Los Angeles. Case Study House #21 was awarded the America Institute of Architects California Council 25 Year Award in 2001.

Prior to Case Study, Koenig established his own practice, in 1952, designing over 50 buildings. H also taught at the USC School of Architecture for more than 40 years and was named both a distin guished alumnus and distinguished professor in 1998. He received the Gold Medal from the America Institute of Architects/Los Angeles Chapter in 1999. "Pierre Koenig never wavered from his beliefs," say Robert Timme, FAIA, dean of the School of Architecture at USC. "He became a global celebrity. Graduat students from all over the world would come and ask if they would have the chance of meeting him." *S.L*

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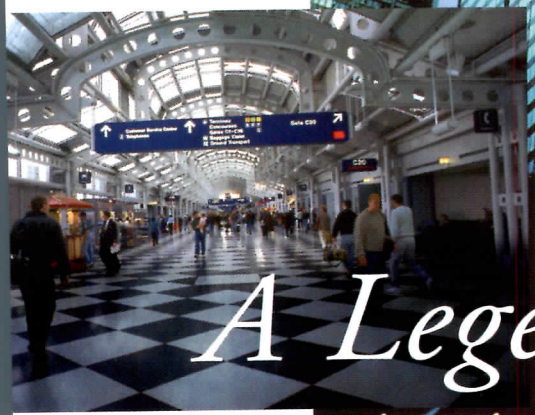
Sears Tower



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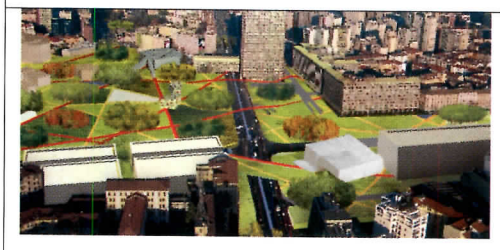
New arts venue to be built on site of famed Crystal Palace

Plans for an arts venue, the first new building on the long-neglected site of Joseph Paxton's visionary 19th-century Crystal Palace in South London since it burnt down in 1936, have been revealed by London-based Wilkinson Eyre Architects. At 490 feet long and elevated 175 feet above the ground, the innovative, mostly-glass scheme provides a vantage point for a planned sculpture park and will restore the name Crystal Palace to its position as an internationally renowned cultural focal point in the city.

The venue, which will be paid for by fund-raising from the Crystal Palace Campaign committee, will be positioned on the site of Paxton's original palace transcept. Visitors will enter via a moving stairway, from where they will experience a 50,0 square-foot exhibition space for changing displa mezzanine above will contain restaurants and b

Acknowledging the first Crystal Palace's makeup, the structural materials will be largely glass, with sculptural ribs supporting a laminat glass grid shell; steelwork will be used solely fo decks within the enclosed space. An intelligent of photovoltaic cells will provide solar shading a collect solar energy to power the building. *L.B*



New urban park set for downtown Milan

A competition for a new urban park in the center of Milan, held by the City Council, has been won by Dutch landscape and interior designer Petra Blaisse's Amsterdam-based practice Inside Out.

Sited between the Centrale (main) and Porto Garibaldi railway stations, the park was informally dubbed "the garden of the new door" by the competition board, as the area is a junction betwee business and cultural buildings and residential areas to the north. The winning concept renam the park Biblioteca degli Alberi (Library of Trees rich and varied mix of botanical gardens, orcha six public squares, pavilions for events, circular groups of trees, and areas of water will be inte laced with paths, six of them 14-feet-wide and 7-feet-wide. Each path is to be made of a diffe material, including asphalt, black concrete, an wood, with information about the park, shrubs local amenities printed on some of the surface

Ms. Blaisse says that the future park wi the "beating heart" of the district and will ser as a new community meeting point and cultu campus for festivals and fashion shows in thi style center. *L.B.*

Expansion of D-Day Museum unveiled

Bartholomew Voorsanger, FAIA, of Voorsanger & Associates Architects in New York, recently presented his firm's designs for the expansion of the National D-Day Museum in New Orleans.

The current 70,500-square-foot museum, which focuses primarily on the invasion of Normandy, began in a renovated brewery in the Warehouse District of New Orleans, not far from where the Higgins Boats—the landing craft that allowed U.S. troops to successfully attack from the sea—were manufactured. The more ambitious 300,000-square-foot project (rendering, right) will take over two additional city blocks to the south.

The existing structure will become just one of several connecting pavilions, each of which will present a different chapter in the long and complex story. The ions surround a raised open-air terrace, wh will be landscaped according to the varied rain faced by soldiers fighting at the differe fronts. Floating serenely over this outdoor s is a translucent, Teflon-coated canopy that vides shelter from rain and sun. Reminisce a dove's wing, it appears to offer solace an healing from the cacophony of war below.

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News Briefs

Walt Disney Concert Hall causing glare problems Neighbors of the Disney Concert Hall in Los Angeles are getting an eyeful—of glare, that is. Shortly after construction was completed on L.A.'s new premier project, Music Center officials received complaints from residents at nearby Promenade Tower about the intensity of the sunlight being reflected off the north side of the complex. While the main structure is sheathed in dull stainless steel, the panels covering the Founder's Room are polished to a mirror finish.

Temporary shield from the glare in L.A.

In an effort to provide temporary relief, a construction screen was installed over the troublesome area while a glare study is being conducted in a test environment. The study has been helpful in providing what appears to be the best solution: According to Terry Bell, a partner at Gehry Partners and project architect on the hall, sandblasting the panels should resolve the problem by greatly diffusing the glare. The process is relatively quick and inexpensive. "I'd like to see the study conducted at the June equinox," commented Dawn McDizitt of the Los Angeles County Chief Administrative Office, Capital Projects Division. "I just want to make sure it will work at all times of the year before we do the job." *Allison Milionis*

Green building gets star treatment The Natural Resources Defense Council's (NRDC) new Santa Monica office has attracted a star following. Named the Robert Redfo Building after its major donor, the building recently earned a top platinum LEED rating from the U.S. Gre Building Council (USGBC). Its ground-floor attractions, the David Family Environmental Action Center and the Leonardo DiCaprio e-Activism Zone, were dedicated in January actor DiCaprio and TV producer Laurie Davi wife of Seinfeld creator Larry Davi

DiCaprio (center) and David (right) at the NRDC opening.

Designed by Moule & Polyzoi Architects and Urbanists of Pasade the building has three atria to brin in natural light. It will use 60 perc less water than comparable build ings, and 20 percent of its electri is generated by rooftop solar par The ground floor features exhibits on issues like water pollution and global warming, and a small reta store for eco-friendly clothing an outdoor gear. "The value of this building as a demonstration pro ect cannot be overstated," said Christine Ervin, USGBC's preside at the January dedication. *Debo Snoonian, P.E.*

Sound and architecture merge in festival New York Community arts group The Kitch Cooper Union School of Architec and *Time Out* magazine helped h New Sound, New York, a six-wee festival of performances, public tures, and sound-art installation March and April. Architects were paired with musicians to discuss their fields' relationships. Particip included DJ Spooky and Greg Ly Phillip Glass and Thom Mayne, La Anderson and Martha Schwartz Moby and Bernard Tschumi. The tival also featured three-dimensi sound structures, such as Charl Morrow's Sound Cube—a multic nel playback environment provid 3D audio experience. *S.L.*

Dates & Events

ew & Upcoming hibitions

h/And 04-Shaping History: hitecture, Historic ıtexts, and the Cityscape nsformed ıttle
1–30, 2004
focus of this exhibition is to fea- modern architectural insertions storic contexts that, in one way or her, act to transform or affect the ounding cityscape and city life. At IA Seattle gallery. Call 206/448- 3 or visit www.aiaseattle.org.

e Burri Photographs York City
5–June 5, 2004
xhibition focuses on Burri's tectural photographs, including images of Le Corbusier and his work, such as the Chapel at Ronchamp; the structures of Mexican architect Luis Barragan; Oscar Niemeyer's buildings in Brasilia; and the preparations for the Montreal Expo in 1967. At the Gallery at Hermes. Visit www.hermesofparis.com.

Solos: Future Shack
New York City
May 14–October 10, 2004
Architecture for Humanity's Future Shack is a shelter that can be constructed anywhere, very quickly, to address the needs of refugees as well as of victims of natural disasters. Designed by Australian architect Sean Godsell, the prototype will be built in the Cooper Hewitt's Arthur Ross Terrace and Garden as part of the summer *Solos* series. At the Cooper-Hewitt, National Design Museum. Call 212/849-8400 or visit www.cooperhewitt.org.

Samuel Mockbee and the Rural Studio: Community Architecture
Washington, D.C.
May 22–September 6, 2004
Both a practical program for educating future architects and a vital force for improving living conditions in one of the nation's poorest regions, Auburn University's Rural Studio began with the drive and vision of Samuel Mockbee (1944–2001), who was posthumously awarded the 2004 AIA Gold Medal. The exhibition includes both models and photographs of the projects, as well as a number of Mockbee's paintings and sketchbooks from the Rural Studio. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Ongoing Exhibitions

From House to Home: Picturing Domesticity
Los Angeles
Through May 17, 2004
The exhibition reveals contemporary artists' varied investigations of home—the house structure, its material components, and the complex range of narratives embodied by its physical space. At MOCA at the Pacific Design Plaza. Visit www.pacificdesigncenter.com.

D.C Builds: The Anacostia Waterfront
Washington, D.C.
Through May 23, 2004

Dates & Events

This exhibition examines the great potential of the Anacostia waterfront to become a valued civic amenity. At the National Building Museum Call 202/272-2448 or visit www.nbm.org.

Cecil Balmond
Bordeaux, France
Through May 25, 2004
This show celebrates Balmond's inspiring solutions, which fuse architecture and engineering Visitors can view the engineering of contempo rary buildings designed by revered Modern architects—Koolhaas, Ito, Libeskind, and Siza- with whom Balmond has collaborated. At arc en rêve centre d'architecture. For informat visit www.arcenreve.com.

Italian Mosaic Design
Brooklyn, N.Y.
Through May 31, 2004
The history, innovation, and contemporary use glass mosaics will be the subject of this exhibi at UrbanGlass. The show focuses primarily on Italian mosaic design, in particular the creatio of Vicenza-based Bisazza Mosaico, considered to be the world's leading producer. At the Rob Lehman Gallery. Call 718/625-3685 or visit www.urbanglass.org.

Envisioning Architecture: Drawings f the Museum of Modern Art, New York
Washington, D.C.
Through June 20, 2004
The broad spectrum of 20th-century architectu and the depth of its artistic expression are reve in this selection of works from MoMA's extraord nary collection of architectural drawings. At the National Building Museum. Call 202/272-2448 visit www.nbm.org.

Lectures, Conferences, Symposia

Indoor Air Quality Symposium: Desig Construction, and Management of Buildings
Boston
May 7, 2004
A national symposium for architects, engine building owners, contractors, and public offi that will include addresses by a building scie and legal experts, nine workshops focused o indoor air quality, and an award for significa contributions to the control of indoor air qua At the Boston Society of Architects/AIA. For

Dates & Events

ion, visit www.architects.org/IAQsymposium.

lding with Stone: Granite and Marble Architectural Exteriors and numents
nbridge, Mass.
8–9, 2004
symposium will explore technical and prac- issues involved in the use, performance, care of granite and marble in buildings, uments, outdoor sculpture, tombstones grave markers, and similar structures. ures will focus on quarrying, selection, ifying, evaluating, fabrication, detailing, repair and maintenance of stone. Call 623-2253.

ard Rogers: Architecture and tainability
hington, D.C.
10, 2004
exclusive Washington lecture, Richard rs will discuss his firm's research and design elligent, energy-efficient buildings such as ordeaux Law Courts, Lloyd's Register of ing, and the environmentally friendly urban ns for Berlin and Shanghai. At the National ng Museum. Call 202/272-2448 or visit nbm.org.

Bruder
hington, D.C.
12, 2004
tect Will Bruder explores inventive forms ompositions while responding thoughtfully ch project's physical context and the client's . Principal of the Phoenix-based firm Will r Architects, he will discuss his award- ng work, including the Riddell Residence in n, Wyoming, the Phoenix Central Library, he Nevada Museum of Art in Reno. At the nal Building Museum. Call 202/272-2448 t www.nbm.org.

0th Annual Wright Plus House Walk
Park, Ill.
5, 2004
ring Frank Lloyd Wright's Harry S. Adams , visitors will also have access to seven private residences designed by Wright and ned contemporaries, as well as three ecturally significant public structures: the Lloyd Wright Home and Studio, Unity e, and the Frederick C. Robie House. Call 48-1976 or visit www.wrightplus.org.

The International Contemporary Furniture Fair (ICFF)
New York City
May 15–18, 2004
Raw: The Next Generation is an exhibition of emerging designers that will highlight many of the most promising talents to recently appear on the international design landscape. At the Jacob K. Javits Convention Center. Visit www.icff.com.

Linking Land Use, Transportation, Economy, and the Environment
Washington, D.C.
May 17, 2004
The Thomas Jefferson Planning District Commission in Charlottesville, Virginia, has successfully integrated grass-roots planning and the regional transportation process, incorporating lessons from smart growth, New Urbanism, and healthy communities to meet the goals of diverse partners. Harrison Rue, the group's executive director, will discuss these techniques and demonstrate how Charlottesville offers lessons to other communities. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lindy Roy
Washington, D.C.
May 17, 2004
Principal of New York–based ROY, the South Africa–born architect will discuss her studio's work, including a resort project in Africa, the Vitra showroom in New York, and the Wind River Lodge in Valdez, Alaska. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Great Chicago Places and Spaces
Chicago
May 21–23, 2004
The weekend celebrates Chicago's renowned buildings, structures, homes, parks, landscapes, neighborhoods, and hidden treasures with more than 160 free tours and programming geared to the city's architecture and design. Call 312/744-3315 or visit www.cityofchicago.org/specialevents.

Victor Gruen: Mall Maker
Washington, D.C.
May 24, 2004
The shopping mall has been criticized for much that is wrong with America—sprawl, conspicuous consumption, the loss of regional character, and the decline of "Mom and Pop" stores. Author M.

Dates & Events

Jeffery Hardwick will discuss how the mall was born of an idealized vision of America by immigrant architect Victor Gruen. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Introduction to the 2003 International Building Code for Design Professionals
Madison, Wis.
May 24–25, 2004
This course will benefit architects, engineers, planners- and designers-in-training, developers, builders, and others who use building codes in the planning and design of facilities for human occupancy. At the University of Wisconsin-Madison, Department of Engineering Professional Development. Call 608/262-0638 or visit www.epdweb.engr.wisc.edu/WEBF897.

Design Source New England
Boston
May 25, 2004
The American Society of Interior Designers (ASID) is holding workshops, lectures, and a trade show showcasing top providers of products and services to the design field featuring keynote speaker Michael Payne, host of *Designing for the Sexes*. At the World Trade Center Boston. Visit www.asidnewengland.com.

Keeping Housing Affordable in Washington
Washington, D.C.
May 25, 2004
The hot real estate market in the D.C. metropolitan area has led to skyrocketing home prices, making the opportunities for affordable homeownership increasingly more difficult. To complement the exhibition *Affordable Housing*, the show's cocurator Ralph Bennett, of the University of Maryland, will moderate a panel discussion that explores the challenge of creating and maintaining affordable housing in our highly volatile real estate market. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Sustainable Urban Design for the 21st Century
Washington, D.C.
May 27, 2004
In a recent competition, urban planners, architects, engineers, and managers from nine nations collaborated to create new models for sustainable community development. Doug Newman, manager of sustainable energy planning at the Gas Technology Institute and a member of the U.S.-Mexico design team, will present these models. At the National Design Museum. Call 202/272-2448 or visit www.nbm.org.

COTE: Top Ten Green Buildings 2004
Washington, D.C.
May 27, 2004
Each year, the American Institute of Architects Committee on the Environment (COTE) invites architects to submit sustainable designs for th annual Top Ten Green Projects competition. Ma David Rylander, AIA, the 2004 AIA COTE Chair, will present this year's winners. At the Nationa Building Museum. Call 202/272-2448 or visit www.nbmorg.

The 16th Montreal International Interior Design Show
Montreal, Canada
May 27–29, 2004
This show (SIDIM) will bring together the who Quebec interior design community, as well as architects, engineers, contractors, developers buyers, retailers, business people, governmer representatives, and a contingent of upscale consumers. Visit www.sidim.com.

On Both Sides of the Wall
Berlin and Potsdam, Germany
May 27–29, 2004
The Berlin Wall is perceived around the world an icon and metaphor of the cold war. This symposium aims at fostering a wider awarene of the diversity and significance of monument of the cold war in countries that belonged to NATO and to the Warsaw Pact, as well as in neutral states. At Cecilienhof Palace, Potsdan For information, visit www.tu-cottbus.de/coldv

International Greening Rooftops for Sustainable Communities Conference, Awards, and Trade Shov
Portland, Ore.
June 2–4, 2004
Experts in diverse fields from around the glot will network and share knowledge about the benefits of green roofs, new research finding policy developments, and the latest in green products and services. Topics covered in pan discussions will include LEED, plant performa policy initiatives, smart growth, biodiversity a agriculture, storm-water issues, and design. the Hilton Hotel. Call 416/686-5887 or visit

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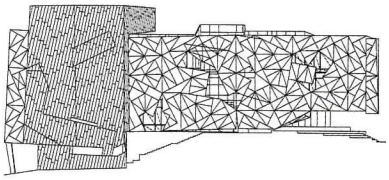

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www.greenroofs.ca/grhhc/conference.htm.

The 2004 Bruce Goff Centennial Celebration
Bartlesville, Okla.
June 5–8, 2004
The 100th anniversary of the birth of Bruce Go and the 137th of Frank Lloyd Wright will be cel brated by viewing buildings of both Goff's and Wright's design, films of Goff, architectural and other drawings of Goff's, and exhibitions of wo by those who learned from him. For further inf mation, call 404/237-8031.

Security Workshop
Franklin Park, Ill.
June 7–10, 2004
YSG Door Security Consultants, an architectur hardware and security solutions company, is offering a Security Workshop to provide partici pants a better understanding mechanical secu and electrified hardware to develop a fully inte grated locking security system. At the YSG Satellite Training Center. Call 800/438-1951 o visit www.ysgsecurity.com.

The Mediterranean Medina
Pescara, Italy
June 17–19, 2004
An International Seminar aiming at the study o the particular physical characters and the mai transformations of the Mediterranean City. The city has built up its identity through the reuse modification of the previous urban remains. At the Faculty of Architecture of Pescara. Visit www.unich.it/idea.

Competitions

Norwalk Housing Design Competition
Norwalk, Conn.
Deadline: August 13, 2004
In response to the need for below-market-ra housing in the city of Norwalk, the Housing Authority of Norwalk is sponsoring a housing design competition for exemplary site and unit plans for first-time home buyers, entry- and mid-level professionals, and fixed-incom seniors. Call 203/857-0200 or visit www.swinter.com/NorwalkHousingDesignCompetition.html.

E-mail events and competitions informatio ingrid_whitehead@mcgraw-hill.com.

For and about the new generation of architects

archrecord2

FOR THE EMERGING ARCHITECT

s month, archrecord2 zooms in on the life and work of Chicago-based architect Ammar Eloueini. esign, we explore Eloueini's Digit-all Studio. In Work, we move to another midwestern locale, neapolis, to learn about Mohammed Lawal's commitment to a volunteer program that inspires n school students to study architecture. Visit architecturalrecord.com/archrecord2 for more on ueini's projects, as well as recent graduation photos from the Architectural Youth Program.

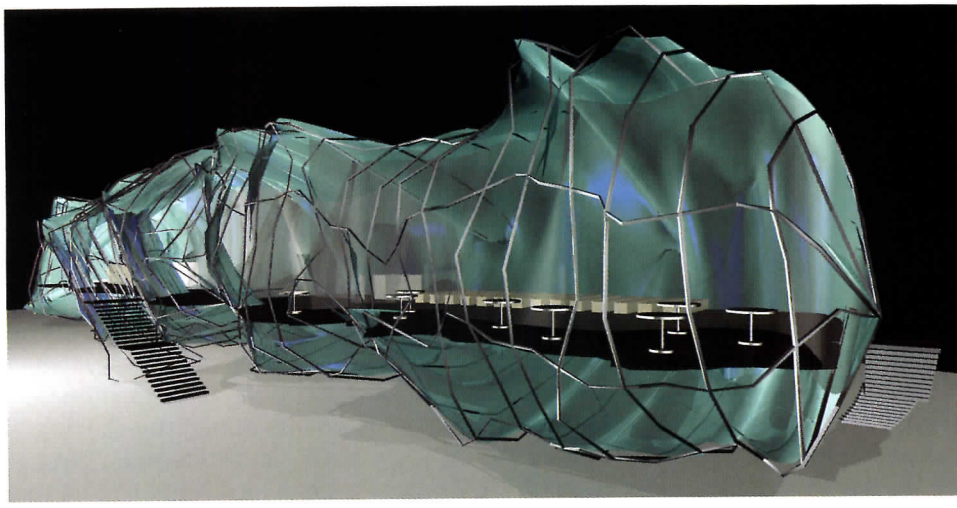
ESIGN

igit-all connection

Ammar Eloueini wants to prove that digital architecture is realistic in the nondigital realm. He explains, "There's been so much debate about the box versus the blob—but architects are now proving that architecture conceived on the computer can be completed successfully and completed in interesting ways." As chair of the Digital Media Program at the University of Illinois at Chicago's School of Architecture ounder of Digit-all Studio, Eloueini aims to demonstrate by example that rent architecture with different sensibilities" is capable of being built. Eloueini, originally from Lebanon, studied at the Ecole d'Architecture in Before his licensure in 1994, he traveled around the U.S. and became sted in the advanced architectural design degree offered by Columbia rsity. "Being part of the paperless program taught by Gregg Lynn and Hani d was a fantastic experience," relates Eloueini. "I was one of udents with varied backgrounds [who were] all interested in ring the new theory of digital media in architecture." After completing the Columbia program in 1996, Eloueini ed to Paris. "I found New York to be too congested," he ns. "Going back to Paris allowed me to bring these new and practices to Europe at a time when digital media was by practically no one else." He formed the Digit-all Studio 7 and made a name for himself as one of the few digital –savvy architects in Europe, by turns teaching, exhibiting his and entering international competitions for designs like the ork Cultural Exchange Information Center and the Sarajevo rt Hall.

When he was offered a teaching position at UIC in 1999, ni also received a grant from the French Ministry of Culture play his work, a coup that convinced him to maintain a nce in Europe and the U.S. His dual-continent firm has been awarded commissions since his move. In a fortuitous turn of events, the avant-fashion designer Issey Miyake opened a boutique next door to the an gallery where Eloueini had a solo exhibition. Impressed with

Issey Miyake store concept
Eloueini proposed the use of overlapping opaque and translucent strips of material, in varying widths, to create an adaptable retail space that could be implemented as a boutique within department stores.

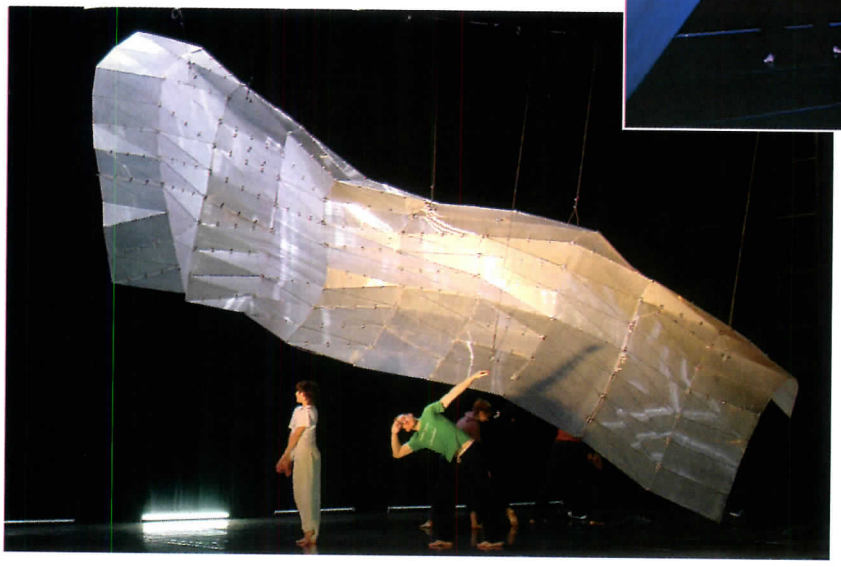


Cultural Exchange Information Center, New York City, 1997
With this submission, Eloueini strove to realize the viability of his computer-generated architecture. Engineers studied this entry and agreed it would be buildable and structurally sound.

Eloueini's work, Miyake initiated discussions with the architect, which led to a project to develop a new concept for his retail spaces. Since Miyake is known for his innovative use of fabrics, Eloueini is following suit by researching materials to be used in unconventional forms.

In 2001, Eloueini was awarded the prestigious Nouveaux Albums des Jeunes Architectes, the French Institute of Architect's highest recognition awarded to architects under 35. Since then, he has been creating projects that have leaped from the digital to the real world. Collaborating with New York–based choreographer John Jasperse, Eloueini created a stage set for the piece *California* that was not simply a backdrop but a structure that could morph and become part of the performance. The complex structure, whose form was generated by advanced CAD tools, took shape through the use of polycarbonate forms connected by zip ties. Its construction allows the touring company to easily disassemble and transport the set as they travel. Eloueini's work will also be seen this June at the Museum of Contemporary Art in Chicago, where he was commissioned to design an upcoming exhibition, *Skin Tight*, featuring the works of 10 international fashion designers. *Randi Greenberg*

Go to architecturalrecord.com/archrecord2 for more on Eloueini's projects and design entries. Also learn how to submit your own projects.



Stage set for John Jasperse Company, 2003–2004
This flexible, movable set becomes an interactive element in one of the dance company's pieces. The translucent polycarbonate panels absorb and diffuse light.

WORK

Encouraging architectural futures

When Mohammed Lawal was a child, he thought he would become an artist but realized that "with architecture, I could take my love of drawing and put it into this vocation." His choice has reaped benefits not only for the firm KKE, where he's a principal, but also for hundreds of inner-city youth in the Minneapolis area.

Lawal, who studied architecture in both Nigeria and the University of Minnesota, cofounded the Minneapolis branch of an outreach effort called the Architectural Youth Program (AYP) with colleagues Jennifer Anderson-Tuttle and Joshua Weinstein (who'd founded the pilot program in New York). AYP is an after-school course introducing high school students to architecture and related fields through lectures, field trips, and a charrette exercise. By the end of the 12-week class, students design their own project based on a theme, such as pedestrian bridges or trolley stops.

Financial support for AYP comes from the University of Minnesota's College of Architecture and Landscape Architecture, but as Lawal points out, other crucial support stems from the college as well—the students. "CALA students serve as mentors to the AYP students during the daylong model-making charrette. It's a great role reversal for CALA students to apply what they've learned, and the AYP scholars have the opportunity to learn from current architecture students."

The program has made inroads: Many of Lawal's AYP students have gone on to study architecture, and one of his first students is now an intern architect at KKE. It might seem that Lawal, after 10 years of intensive volunteering and having received the AIA's Young Architects Award in 2002, could ease up on his participation in AYP, but it hasn't happened yet. "I recently came back from our offices in California, where we're looking to start an AYP program," he says. "Every year I think I'm not going to be as heavily involved with the program, and every year I find myself greeting a new group of students." *R.G.*

For more on AYP's recent graduation, visit architecturalrecord.com/archrecord2

Will Chicago's long-awaited Millennium Park be fine art or spectacle? Perhaps a little of both.

Correspondent's File

By Blair Kamin

ago is famous, or maybe mous, for doing things big and noting them with blasts of s-agentry that would make "The Donald" blush. Before the city won the heated petition to host the 1893 d's Columbian Exposition, *York Sun* editor Charles Dana tagged it with the nickname "Windy City," a reference not to the breezes that blow off Lake Michigan, but to the gusts of hype with which Chicago's boosters were selling the Midwestern metropolis.

More than a century later, Chicago is still building—and talking—big. This July, the city will open Millennium Park, an ambitious, controversial, 24-acre combination of old-fashioned world's fair and new-fangled cultural spectacle.

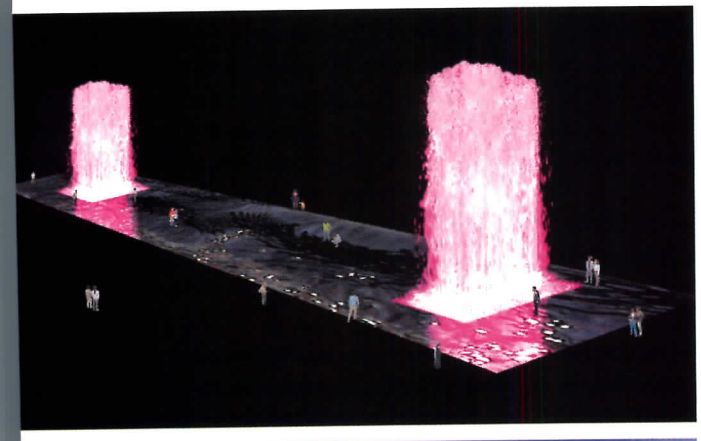
City officials expect the park, which sits along the cliff of skyscrapers that line Michigan Avenue, to attract 2 million to 3 million visitors a year. Costing $450 million (three times the original price tag), Millennium Park is funded by the city, major corporations, and Chicago's wealthiest families, including the Pritzkers and the Crowns. Its centerpiece consists of a Frank Gehry, FAIA–designed music pavilion and trellis-covered outdoor seating area, plus a snaking bridge, Gehry's first.

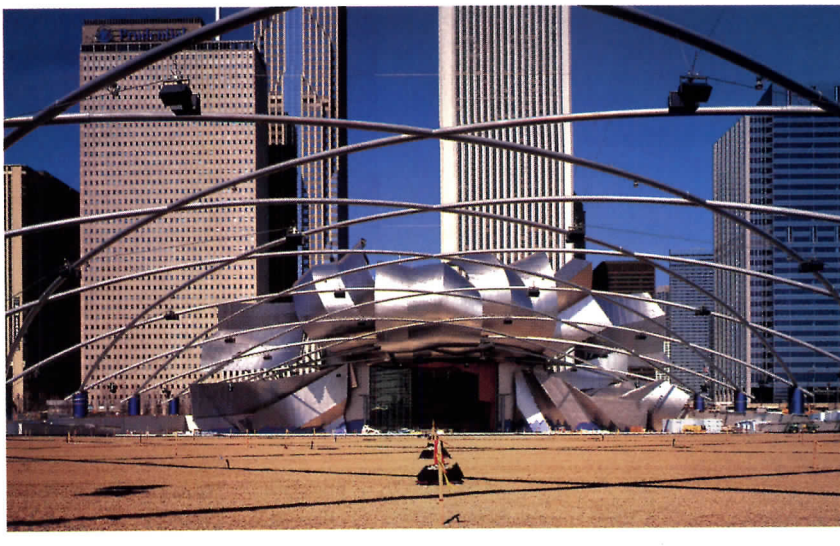
Among its other attractions: a monumental, jelly-bean-shaped stainless-steel sculpture by London-based Anish Kapoor; a fountain by Barcelona artist Jaume Plensa, which will have water cascading out of two steel towers; and a garden by Seattle's Kathryn Gustafson, with muscular hedges that evoke the Chicago tradition of "broad shoulders."

In a distinct echo of that Windy City boosterism of 1893, one press release calls Millennium Park "a monumental step toward continuing the city's renowned heritage as the architecture capital of the world." Maybe. I've also heard it described as a Disneyesque, donor-driven tourist trap and a colossal missed opportunity to advance the state of contemporary landscape design.

Who's right? It's impossible to assess the various pieces—and whether they all hang together—until the park is finished. Even so, it's a sure bet that Millennium Park will be the talk of the AIA convention in Chicago in June. By that time, much of the project will have taken shape, giving visiting architects something at which to aim their cameras as

Kamin is the Pulitzer –winning architecture critic of Chicago Tribune.





The park will include a luminous fountain by Jaume Plensa with Krueck & Sexton (above left), a highly reflective sculpture by Anish Kapoor (below left), and a twisting, metallic music pavilion by Frank Gehry (below right).

they indulge in the real point of coming to Chicago: eyeballing firsthand the city's architectural mother lode.

Since Chicago's mayor, Richard M. Daley, unveiled Skidmore, Owings & Merrill of Chicago's original plan for Millennium Park in 1998, its design has been drastically revised, along with its deadline and budget. The original completion date, the year 2000, proved wildly unrealistic. Meanwhile, the $150 million budget was quickly busted after city officials and civic leaders decided that Skidmore's plan—a Beaux-Arts park, outdoor concert venue, and garden to be built atop an underground parking garage—was, well, not very millennial.

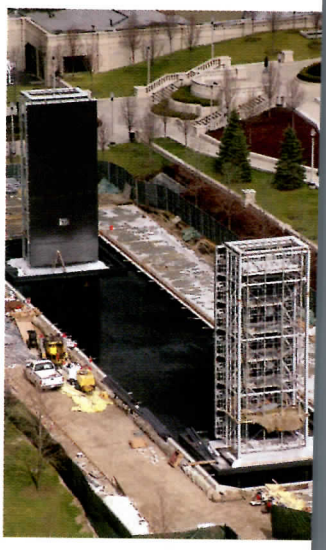
So the park was designed on the fly, with the contemporary elements plugged into the Beaux-Arts template. But some of these additions, including the Gehry pavilion and the heavyweight Kapoor sculpture (it weighs 110 tons), forced the city to bulk up the parking garage structure beneath the park, causing delays and millions of dollars in change orders. Jokes began: "In what millennium will they finish Millennium Park?" Project supervisor Edward Uhlir, who has become the park's de facto planner, acknowledges, "It was definitely a work in progress." Of the $450 million cost, he says, the city's share is $270 million, with private donors picking up the balance.

For all the controversy surrounding it, Millennium Park has helped spark a dramatic urban transformation. The park has eliminated a longtime eyesore, an open pit in the northwest corner of elegant, 323-acre Grant Park that offered passersby the incongruous sight of working railroad tracks and a surface parking lot. Now that the city has completed the engineering feat of building the greensward over the still-working tracks, new condominium towers are rising nearby. In another sign of the park's pull, the Art Institute of Chicago shifted a planned addition by Renzo Piano from its south flank to its north end, right next to Millennium Park and its 2,186-space garage.

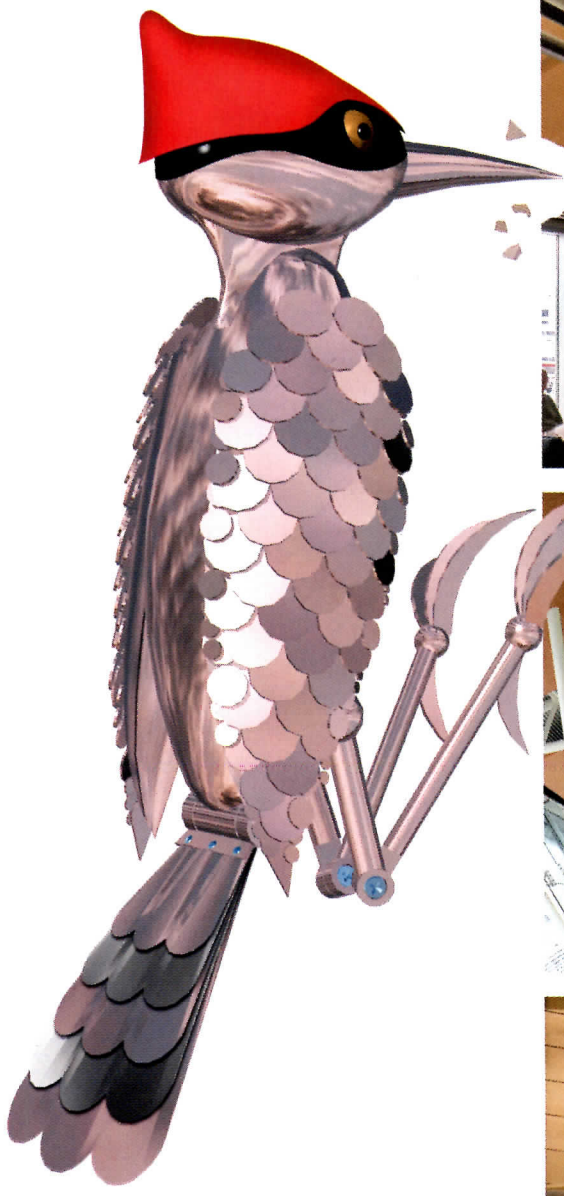
On a recent tour of the park, undoubtedly the first of many efforts to promote it, Uhlir led journalists past a completed skating rink along Michigan Avenue that provides a stunning view of the city skyline. Then it was on to unfinished attractions, such as Plensa's fountain, where video screens mounted on the two steel towers will project the faces of 1,000 randomly selected Chicagoans.

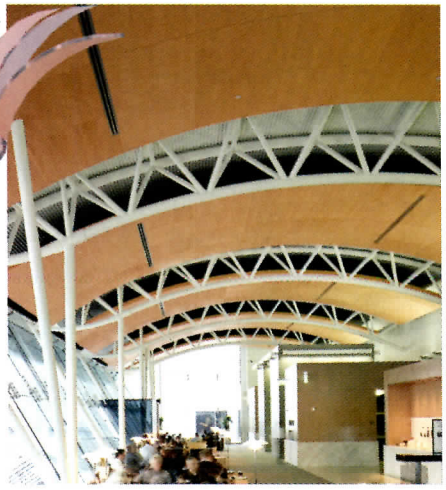
Next up: the Kapoor sculpture, which will measure 60 feet long by 30 feet high and sit on a raised plaza above the skating rink. The sculpture will have a convex, mirror-finish surface that will provide visitors with playfully distorted views of themselves, the park, and the city's skyline (I would not want to be the guy in charge of wiping fingerprints off this thing).

Then Uhlir led us to the site of Gustafson's garden, where, in addition to the broad-shouldered hedges, smaller linear groups of hedges will evoke the freight cars that once lined up along this stretch of the lakefront. Designed in association with Dutch garden designer Piet Oudolf and Los Angeles theatrical lighting designer Robert Israel,



A view from afar of the park under construction (top); rendering of the Gustafson Garden (middle left); the Plensa fountain, under construction (middle right); the Gehry band shell, under construction (bottom).





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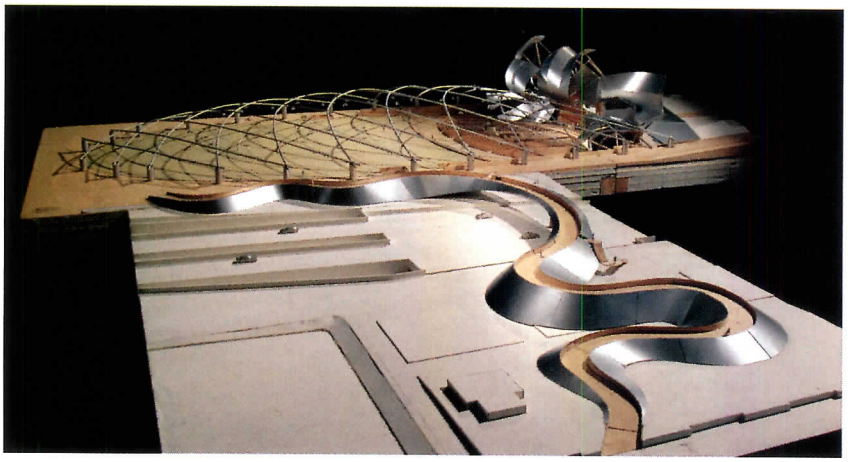
the project is conceived as a roof garden for the subterranean parking garage. The hedges on its north and west flanks will shelter its delicate inner zones from the crowds attending Gehry's music pavilion. The garden's interior will be split into two distinct planting areas—so-called "light and dark plates"—divided by a wooden walkway that will cut through the site, linking Gehry's bridge with Piano's Art Institute addition.

Finally came the pièce de résistance: Gehry's pavilion, which is topped by the architect's trademark stainless-steel curlicues and will be the new summer home of the Grant Park Symphony Orchestra.

The pavilion comes complete with an outdoor seating area for 11,000 spectators. This area is covered by a strikingly monumental, trellislike web of steel pipes that create a domelike outdoor room. Hanging from the trellis, which measures two-football-fields long by one-football-field wide, is an advanced sound system that eliminates the visual cliché of an open field with a bunch of speaker poles. Alongside the trellis is the Gehry-designed bridge, a snaking span that crosses a busy park road and links the music pavilion to the lakefront.



Gehry's pedestrian bridge will not only be ornamental, but it will shield street noise.

All this took more than 2 hours, and we hadn't even seen two other parts of the park. One is the rebuilt Neoclassical Peristyle, a project carried out by OWP&P Architects of Chicago, which forms a visual punctuation mark for t park's northwest corner—the Beaux-Arts equivalent of the co temporary fountain in the park' southwest corner. The other is Thomas Beeby's Harris Music ar Dance Theater, a supporting act to Gehry's leading man, with a modest, above-ground entry hal leading to an underground theat that shares backstage facilities Gehry's pavilion.

It's impossible to build anyt as ambitious as Millennium Park without annoying someone, part larly those who would prefer a m contemporary overall plan. But U defends the project, saying there nothing wrong with following the Parisian model of follies in a Bea Arts framework, especially becau many of the park's contemporar elements tweak the Beaux-Arts tradition. "A park should be fun," says. "It should entertain."

Come July, we'll have a bet idea whether Chicago's latest exercise in making no small plar deserves its gusts of adulation.

Okay, architects, lighten up—but don't lose your ideals in the process

Critique

By Robert Campbell, FAIA

onetime English major, I like to about architecture with the of a yin-yang pair of terms I ed from Northrup Frye, who one of the great literary critics e 20th century.

Frye said that a work of litera- can have two opposite qualities: be playful or it can be ethical. It can be a kind of inventive e, playing with words, ghts, and sounds in such a as to move or delight us. Or embody serious lessons t the world and how we ld live. Great literature, Frye ved, does both.

You can apply the same terms chitecture. Architecture, too, at its best unless it's both play- d ethical.

Too often we choose only one se qualities, then sneer at the e who choose the other one. Ethical architects and critics, are serious about the social se of architecture, may look contempt on playful architects, seem interested only in formal tions that shock or surprise us, coming up with fresh fashions pidly as clothing designers.

ng out the hot air

l architects, by contrast, think hical ones are pompous, , and self-deluding. They e architecture is merely play, and invention, a visual game istory of visual games—that it's "art," as they prefer to put it. Think of the later works and sayings of Philip Johnson.

We swing back and forth every few decades between the two poles. The late Victorian age was a period of playfulness, with its thickly layered ornamental flourishes, its battle of styles, its cultural references. Later, in the modern era, the Victorian period came to be seen as a time of overindulgence. A reaction set in, in favor of more serious, more idealistic, more political, more "honest" architecture—sometimes a little joyless, with its lack of ornament and its tilt toward socialism and "social housing."

Then, in the 1970s and '80s, came another turnaround. The Modern movement was superseded by the playful Postmodern era. Pomos valued the playful above all else, especially if it involved wit, irony, and cleverness. Still more recently, architects like Frank Gehry, with such works as his Experience Music Project (EMP) in Seattle, have created architecture that is little more than playful sculpture. The EMP, or some of the work of Zaha Hadid, is an architecture almost purely of formal invention, with no particular nod toward the ethical. (The EMP is untypical of Gehry, who usually balances the playful and ethical pretty well.)

Today, I think we're cycling back toward the ethical pole. People are getting tired of playful conceits, such as some of the idiotic recent proposals for the World Trade Center redevelopment. We're again asking architecture to help make a better world. But as we welcome the return of the ethical, we shouldn't lose sight of the playful. Architecture, whatever else it is, is always also about the joy of inventing form.

Frank Lloyd Wright's Taliesin West combines both the playful and the ethical in its design.

Writer Mary Catherine Bateson gets it right when she talks about food. "Human beings do not eat nutrients," she notes. "They eat food. Food with symbolic meanings, flavors, colors, and smells. Food in the form of traditional dishes, that fit the days of feast and fast and speak of the relationships of husband and wife, parent and child." Symbolic meanings, colors, and smells are the playful side of food. But the food should be ethical, too. It should be nourishing and not too fattening, and it shouldn't be grown or served by exploited labor.

Frank Lloyd Wright said, "The purpose of the universe is play. The artists know that, and they know that play and art creation are different names for the same thing." But Wright was just as strong in his belief that architecture is a shaper and embodiment of ethical human values.

Taking a stand

Like a lot of people, I think it's urgent that architecture address ethical issues today. We can do it in at least four ways.

Architecture can husband the earth's resources, instead of ravaging them. Anyone who reads the papers and doesn't live by the propaganda of petroleum companies knows that we are very near—if we haven't already passed—the point

ibuting editor Robert Campbell, is the Pulitzer Prize–winning ecture critic of The Boston Globe.

at which the earth can no longer replenish the resources we draw from it. Buildings that drink deep of the earth's resources are unethical. So are buildings that pollute. New buildings can be designed to save materials and energy. Old ones can be preserved and recycled. But here, as always, the playful and the ethical are inextricably mixed. That deeply layered facade, which shades the interior from the sun and reduces the energy load, is a more richly articulated, more playful surface that the flat skin of the air-conditioned box.

And, of course, architecture is about more than individual buildings. It is also about where we put them, about the settlement patterns by which human beings spread over the earth. An ethical architecture saves resources by clustering buildings close together and mixing many uses in one place, thus reducing the need to construct endless roads for the resource-consumptive, pollution-producing automobile.

Architecture can bring us together as a community, instead of dispersing us into private enclaves. Ethical architecture introduces us to one another. Richard Sennett defines the city as "the place where we learn to know one another." When we build gated suburban communities, each one occupied by people of similar age, ethnicity, and income, we create an architecture of isolation. Democracy can't thrive in a world in which we don't know our neighbors and can't empathize with their problems. And democracy, surely, is an ethical value. We all share the right and need to withdraw, at times, from diverse community experience into private sequestered worlds. But there must also be a public world, where we meet to enrich one another's experience face to face.

Architecture can promote difference, instead of homogeneity. All over the world today, the same Western-inspired architecture is being built. Soon almost every developed part of the world will look much the same; there will be little reason to travel. But diversity in itself is an ethical value. A differentiated world is better than a homogeneous one. As with flora and fauna, the more species, the richer the creation. Architecture can be ethical by preserving meaning—which is difference—in a world that is becoming a gray soup of homogeneity. We can design buildings that respond to local climate, materials, building skills, and traditions, and to cultural tastes and conventions. The Aga Khan program, which gives prizes for appropriate design in the Islamic world (but not for sentimental imitation of some image of the past), is a model for this approach.

Architecture can promote p
lic health, instead of enabling us
get fat and lazy. Changes in build
codes can encourage the use of
stairs instead of elevators, manc
daylight and air in the workplace
and reduce pollution. Compact s
tlement patterns—villages, town
cities, as opposed to sprawl—nc
only reduce the strain on resour
but also encourage walking and
biking and give everyone access
the world of nature.

Those are some ethical mo
we can make as practicing archi
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We can use our professional skil
to lobby for better environmenta
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We can work to improve codes a
practices.

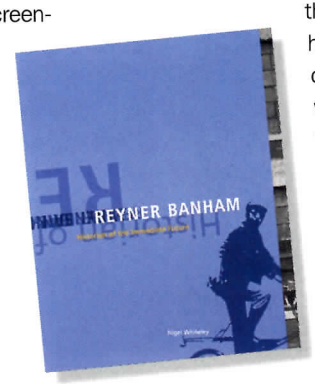
But ethical and playful are
a both/and, not an either/or.
It's dumb to get pompous about
being ethical. Nobody should
forget—as some of the Modern
did—that architecture is also a
sensual game we play for the
sheer joy of it. ■

Theory and design in the machine age, as well before and after it

Books

ner Banham: Historian of mmediate Future, *by Nigel eley. Cambridge, Mass.: MIT s, 2003, 514 pages, $40.*

re was ever an academic book vanted to be a screen- his is it. An nt of Reyner am's perpetu- teresting iates and gs seems to nd a more nic format than tandard printed can provide. theless, Nigel y does an excel- b of presenting the many ex layers of Banham's achieve- as a historian and critic, which ad a profound effect on con- rary design culture.



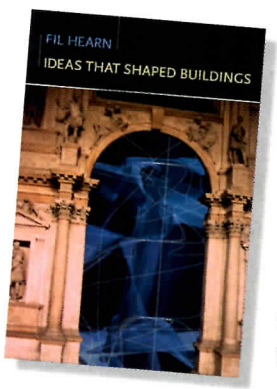
born in England in 1922 and d as a mechanical engineer, m worked in 1940 as an fitter in the Bristol Aeroplane y before deciding factory life t for him. In the 1950s, he ed as a design critic in two ngly disparate worlds. One e scholarly art-historical f the Courtauld Institute in , where his thesis with Pevsner, later published as *and Design in the First ne Age* (1960), was one of t books to subject Modernist g mythology to detailed What is less well known is nham's early rethinking of ginnings of Modern architec- erlapped with his influential role in the Independent Group (IG), a loose organization of artists and architects sponsored by the London-based Institute of Contemporary Art. His influence on the proto-Pop and Conceptual art preoccupations of the IG are examined here through his and other IG members' writings and exhibitions. During this period he became close to other IG members Alison and Peter Smithson, who were also the leaders of the English wing of Team Ten, and to James Stirling. All of them together led the way toward what Banham dubbed "The New Brutalism" in 1955, a movement that sought to expose the basic elements of building for what they were, without regard to canonical ideas of "beauty."

His close engagement with contemporary design directions continued with his advocacy of the 1960s futurism of the Archigram group and of what eventually developed into high-tech architecture. Even before his emigration to the U.S. to teach at SUNY-Buffalo in 1976, he had written the seminal *Los Angeles: The Architecture of Four Ecologies* (1971). This book focused long-overdue attention on the several layers of Los Angeles's vital design culture at a time when it was still considered a dystopian suburban wasteland by most East Coast and European designers.

By his own description, Banham was most interested in "what happens along the shifting frontier between technology and art." Whiteley takes issue with this, instead suggesting that Banham's real interest was in the interrelationships of "humans, technology, and environment." This theme provides the basis of his consideration of Banham's prodigious and influential writings. The context and implications of each of Banham's later and still valuable books, including *The Architecture of the Well-Tempered Environment* (1969); *Megastructure: Urban Futures of the Recent Past* (1976); *Scenes in America Deserta* (1982); and *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture* (1986), are carefully discussed in this book's 410 smoothly written pages. Given this incredible load of thoughtful detail, it is a bit frustrating to find that the book does not include a full bibliography of Banham's writings, only an addendum to the "almost full" bibliography published in *A Critic Writes: Essays by Reyner Banham* (Mary Banham, et al., 1996). One can also quibble about the lack of archival references in the notes, although it is clear that the author knows the material extremely well. *Reyner Banham: Historian of the Immediate Future* is a useful first place to look for anyone interested in the design cultures of the late 20th century. *Eric Mumford*

Ideas That Shaped Buildings, *Fil Hearn. Cambridge, Mass.: MIT Press, 2003, 368 pages, $19 (paper).*

Fil Hearn's engaging tour of the ideas that have shaped architecture over the past two centuries is not a straight, chronological stroll. Instead, the first part is a sprint through architecture's intellectual highlights, and it offers a great overview—for new students of architecture as well as for those who have not picked up a theory book since graduation. There are no surprises here. Hearn shows how theorists have used history to reinvent architecture through the ages, up through the Postmodernists, and he provides a lively demonstration of how certain architectural ideas led to others. For example, Violet-Le-Duc's passion for history led to a new concern for preservation, while the 18th-century Classicist Laugier's striving for clarity of structure and order led to Modernism.

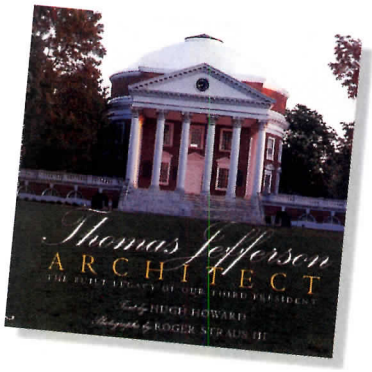


After this spirited jaunt, Hearn applies the brakes and throws his book into reverse. He spends nearly 100 pages talking about the development of the Classical orders and their influence on architecture for more than 1,800 years. I suspect that for most readers this stretch will be a struggle, and they will bail out. You may want to skip ahead to what happens after 1800, as Hearn discusses the rise of rational design and planning methods, the role of structure and

expression, modern concepts of space, and the role of symbolism. Here the writing is once again concise, and Hearn links ideas and developments up through the late 20th century. At the end of his book, he includes a helpful timeline of treatises, starting with Vitruvius in 30 B.C., that have shaped architecture. The list ends with Malcolm McCullough's *Abstracting Craft: The Practiced Digital Hand* of 1996. Hearn is a good tour guide. *Michael J. Crosbie*

Thomas Jefferson, Architect: The Built Legacy of Our Third President, by *Hugh Howard. New York: Rizzoli 2003, 204 pages, $40.*

Thomas Jefferson is perhaps America's most important architect. Monticello has graced the back of the nickel for many years, but although Jefferson's home is an



important house, his primary architectural contributions lie elsewhere. Beginning in the mid-1780s with the Virginia State Capitol in Richmond, continuing with his involvement from 1790 to 1809 with the plan and public buildings of Washington, D.C., and culminating with the University of Virginia from 1814 to 1826, Jefferson made Classicism the architectural language of the young nation.

His role is so crucial that it comes as a surprise to realize that for most of the 19th century and well into the second decade of the 20th, Jefferson was ignored as an architect. Fiske Kimball's *Thomas Jefferson, Architect* (1916), after which Hugh Howard's book is named, made the case for his importance and still remains the classic study of Jefferson as an architect. Later scholars have added information and reinterpreted aspects of Jefferson's designs, but as Howard acknowledges, Kimball's study was the beginning. The books are different: Kimball's was a scholar's examination of the evidence—primarily architectural drawings and documents—while Howard's book is, as he admits, aimed at a broad audience. He does include some architectural drawings and some vintage photographs, but most of the illustrations are color photographs by Roger Straus III. The photographs are in general very good, though there are a few lighting problems, including an odd tendency to photograph some buildings in shadow.

Howard covers Jefferson's buildings, along with some perso anecdotes about the third presid his family, and builders. In additi to a canonical list of Jefferson's work, Howard includes a group c Charlottesville-area houses in which Jefferson played a role. N photographs and treatment of the ongoing restoration at Popl Forest, Jefferson's retreat near Lynchburg, are especially welco Howard has done his homework and synthesized most of the pri sources and includes numerous quotes. There are no footnotes, a bibliography is provided. He al traces some aspects of Jefferso legacy; many who worked for hi Monticello and at the University Virginia would later design and in the piedmont region. Howard examines some 20th-century s cessors, such as Milton Grigg II Fiske Kimball.

The major problem with Howard's text is its low-brow ton and word choice: such as, "Hey, let's get classical"; "Palladio's br bio runs this way"; "To get what

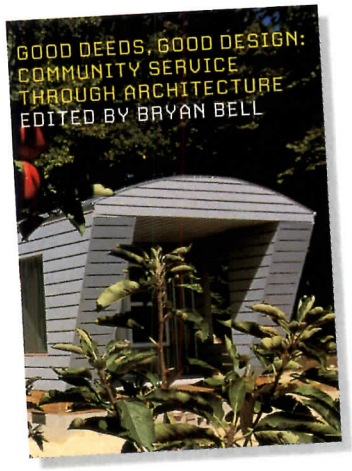
want, you gotta be there"; and, "Nevertheless, the description is as apropos as an olive in a martini." Maybe this is what the broad audience requires, but it doesn't seem appropriate for Jefferson's architecture. Yet Howard clearly understands the importance of Jefferson's architectural revolution; he makes the point that in *Notes on the State of Virginia* (1781–82), Jefferson bemoaned the low state of architecture and that "a workman could scarcely be found here capable of drawing an order." By the time of his death on July 4, 1826, he had trained a talented group and set American architecture on a new course. The above quibbles aside, this is a good introduction to Jefferson and the beginning of America's long love affair with Classicism. *Richard Guy Wilson*

Good Deeds, Good Design: Community Service Through Architecture, *edited by Bryan Bell. New York: Princeton Architectural Press, 2004, 240 pages, $30.*

"The substitution of critique for advocacy leaves out too much of the architectural endeavor … Humanism cannot replace humanitarianism," writes Princeton's Robert Gutman in the introduction to this collection of essays describing community-based design-build programs, including DesignCorps, founded by the book's editor, Bryan Bell.

We learn that the best projects grow out of collaborative efforts among architects, communities, nonprofits, and end users. A cautionary example: For a house in an Indian village, a well-intentioned designer built a solid granite mortar into the kitchen floor for grinding spices, only to learn that one of the owner's most prized possessions was a food processor. As the late Samuel Mockbee writes, "What is necessary is a willingness to seek solutions to the community in its own context and not from outside." Another lesson: Too much emphasis is put on physical planning and design and not enough on creating social and economic opportunities. Nearly all the authors stress the ability of participatory design to catalyze change.

Many of the essays are disarmingly honest. The authors claim progress, rather than success, and



are frank about their failures. Bell explains some of DesignCorps' mistakes and how it has learned from them. Kristine Renner-Wade, a former DesignCorps worker, admits he efforts to provide alternatives to the typical suburban home often weren appreciated and says unique desig catering to individual needs "were often looked upon with suspicion."

A broader message of these essays, writes Jason Pearson of th design-based nonprofit Greenblue is that community-based design-build offers opportunities to broad architectural practice to include community organizing and advocacy, tasks that can range from volunteer fund-raising to strategic leadership.

A 1996 report by the Carne Foundation found that 22 percen of architecture students chose architecture to "help improve communities." This book is a goo starting point for them and all designers interested in combinin good design with good deeds. *Andrea Oppenheimer Dean*

At the Art Institute, one Chicago that might have been and one that could be

Exhibitions

By Deborah Snoonian, P.E.

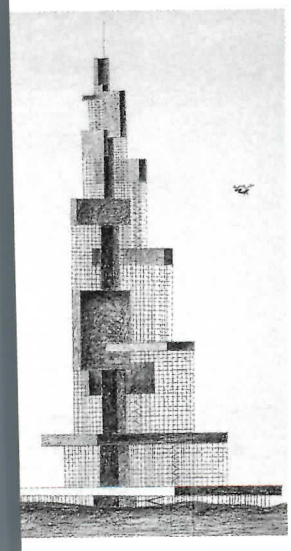
uilt Chicago. *Curated by Dan eeler. At The Art Institute of ago, through January 16, 2005.*

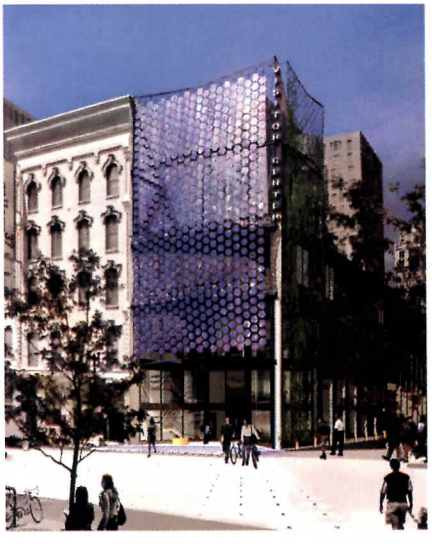
ago and buildings—perhaps ther American city's identity is ntwined with the profession of itecture. On April 4, the Art tute unveiled a hypothetical ne for the Windy City—one rded in pixels and on paper r than in concrete, glass, or steel. Chicago architect Dan Wheeler, of the firm Wheeler Kearns, drew from the Institute's collection of more than 130,000 architectural objects to showcase some 90 drawings, renderings, and models of never-built projects dating from 1880 to the present.

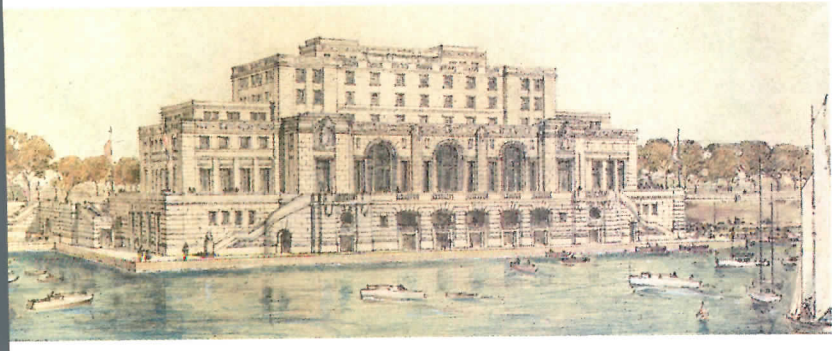
The show reveals Chicago's long history as fertile ground for design ingenuity at all scales. The theoretical work *Expanding Skyscraper* by Reginald Malcomson (1961), a tower to which cantilevered floor plates could be added over time, is an intriguing attempt to weigh the fluctuating demands of the city against the immutable nature of completed buildings. This and other sky-high aspirations by SOM; Voorhees, Gmelin, and Walker; and others rub shoulders with low-rise imaginings like Henry Harringer's Ziegfield Fashion Theater from 1930, whose zoomy curves typify Art Deco exuberance.

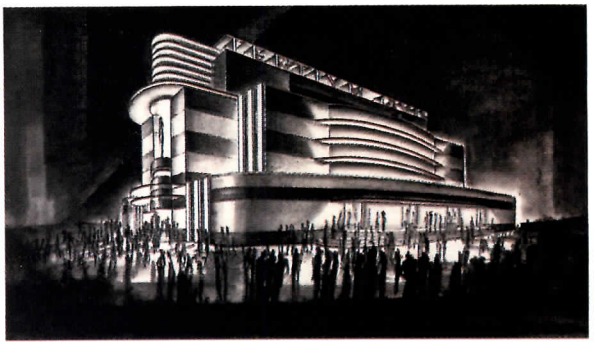
Wheeler has assembled a who's-who lineup of the city's practitioners of yesteryear (Mies van der Rohe, Daniel Burnham, Louis Sullivan) and today's bellwethers (éminence grise Helmut Jahn [see feature, page 96], Doug Garofalo, Jeanne Gang) in a show that celebrates the power of ideas and the pleasure of imagination. ■

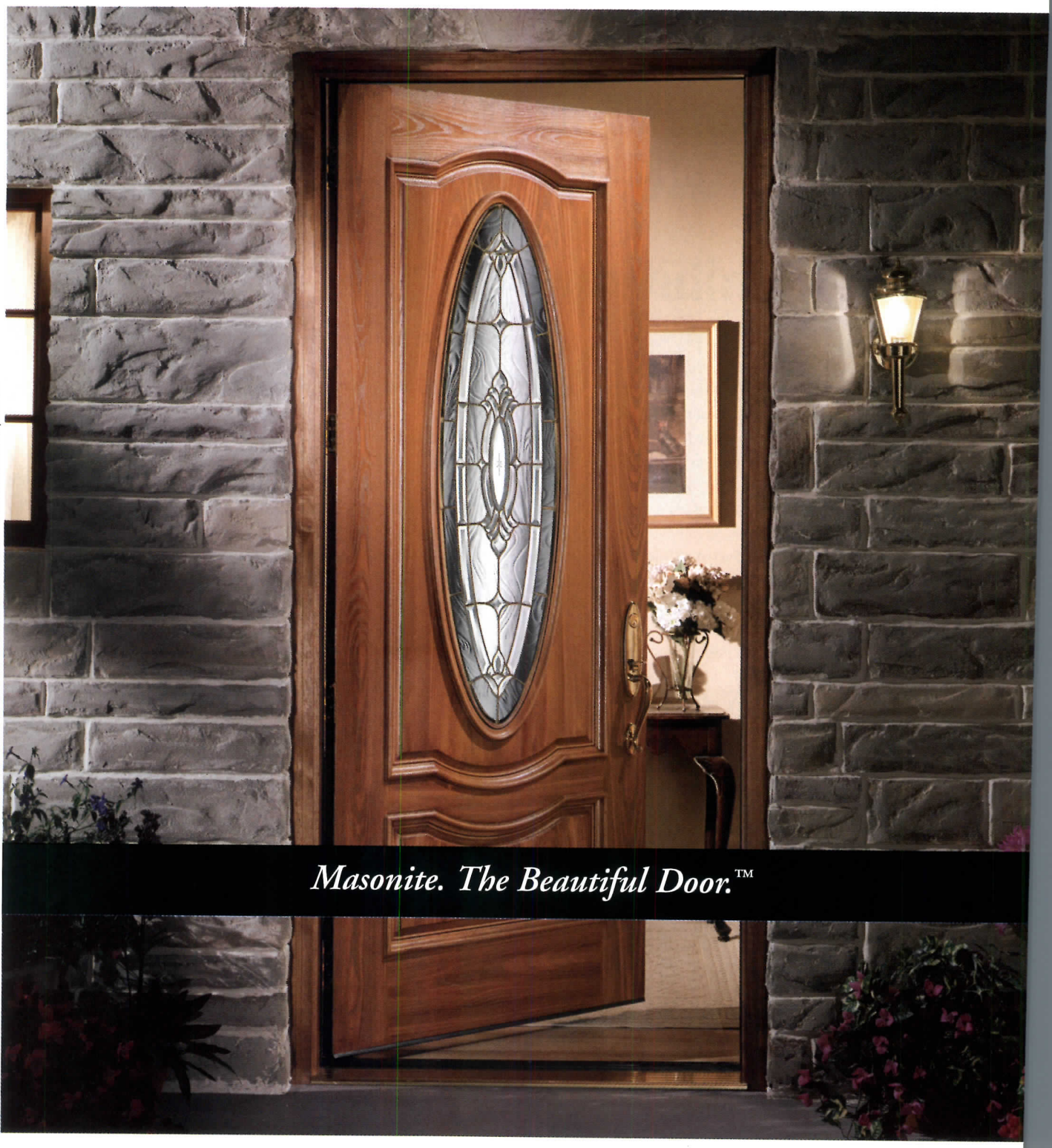
es from *Unbuilt Chicago* (clockwise, from top left): Reginald Malcomson, *Expanding Skyscraper*, 1961; Voorhees, Gmelin, and Walker, Chicago War orial, ca. 1931; SOM, 7 South Dearborn Street, 1999; Studio Gang/O'Donnell, Chicago Visitor Information Center, 2001; Henry Harringer, Ziegfield Fashion ter for the Century of Progress Exposition, 1930; Burnham Brothers with Nimmons, Carr & Wright, Chicago Yacht Club, 1928–30.











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Looking forward: Ten architects imagine new ideas for Chicago's future

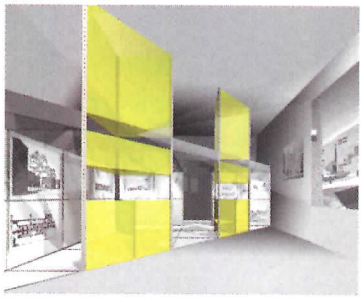
Exhibitions

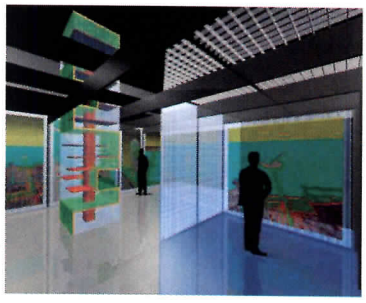
By Clifford A. Pearson

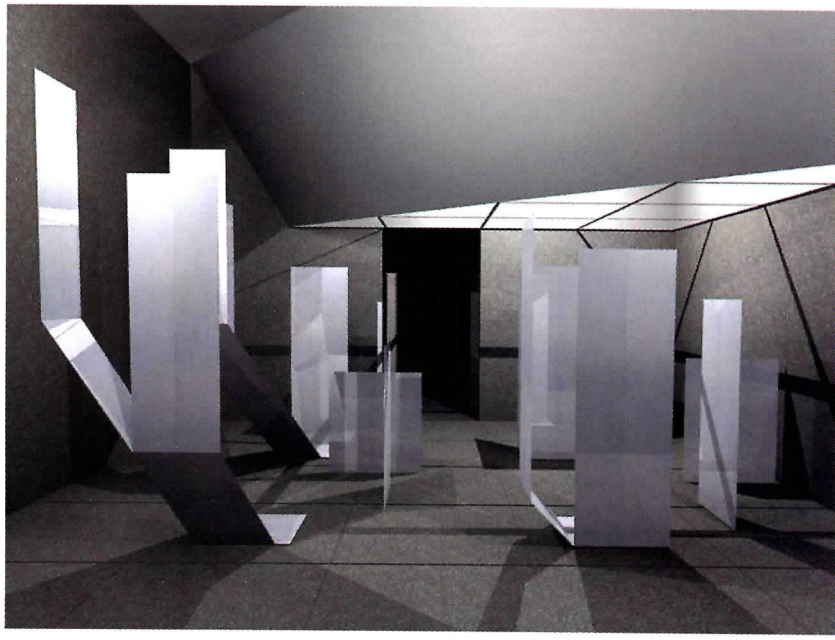
ago Architecture: 10 ns. *Cocurated by Stanley man. At The Art Institute icago, November 26, –January 30, 2005.*

he days of the Miesian party ng gone, Chicago architects peak in a multitude of voices. r than a cacophony, the ing sound comes across as a t, if somewhat irregular, buzz, ed by a range of accents and es. That's the sense one gets sketches by 10 Chicago archi- of their installations at a set to open at the Art Institute vember. "There's no overarch- sion that the achitects agree " says architect Stanley han, the cocurator of the exhi- (with a jury of three design ssionals). "And that's the point." All of the show's 10 partici- have designed installations ntical 21-foot-square rooms ed diagonally by a drop in g height from 15 feet to 8 feet. ry, composed of Tigerman; architect Henry Cobb; Martha Thorne, associate curator at the Art Institute; and John Zukowsky, curator of architecture at the museum, selected the participants from 20 architects invited to submit ideas.

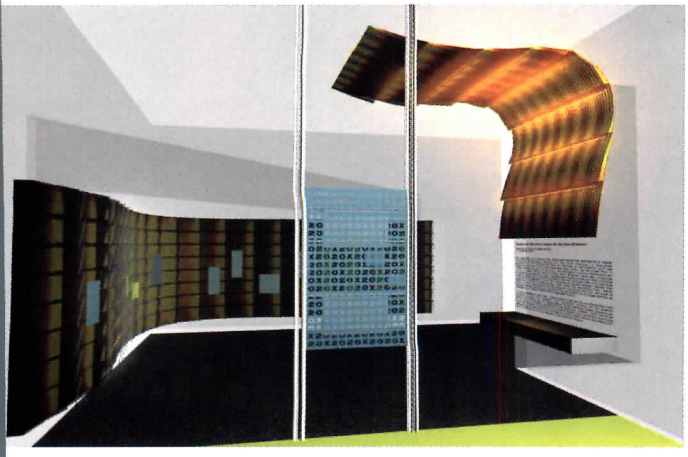
The architects selected range from provocateurs like Tigerman himself to younger practitioners such as Jeanne Gang and Doug Garofalo; from established figures, including Joe Valerio and Ralph Johnson, to less-well-known designers such as Katerina Ruedi and Xavier Vendrell. Other participants are Margaret McCurry, Eva Maddox, and Ron Krueck. The designs also represent a range of approaches, from Rubio's focus on process to McCurry's look at a particular building type (housing); from Krueck's use of abstraction to Johnson's vision of Lake Michigan. ■

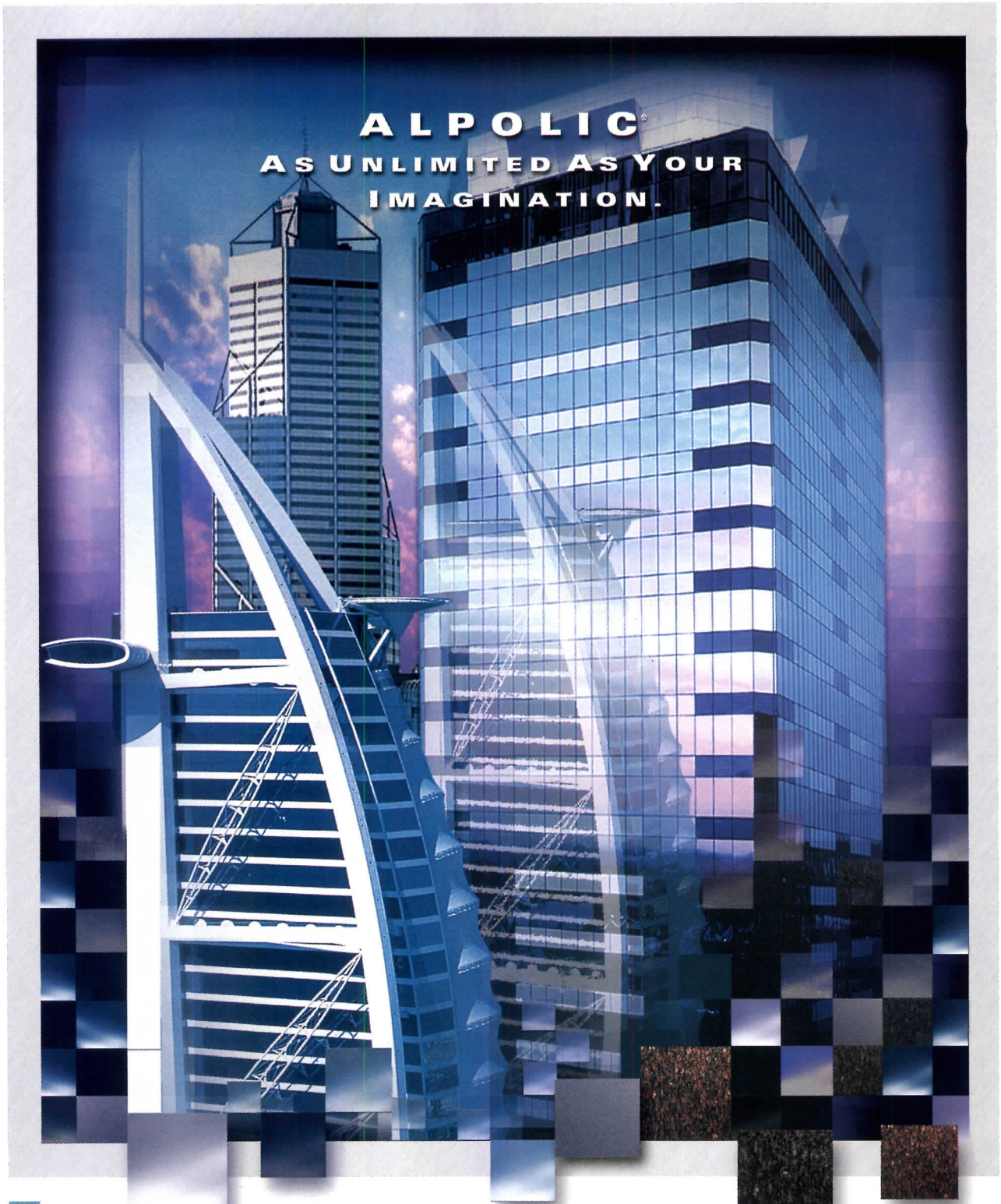






Picturing things to come for Chicago (clockwise, from top left): Margaret McCurry, Ralph Johnson, Joe Valerio, Xavier Vendrell, and Doug Garofalo.





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ick Olsen

Repackaging the office box in the Chicago suburbs

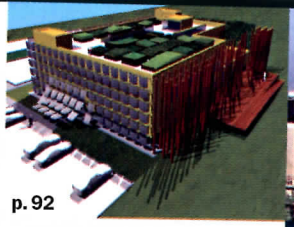
above the Edens Expressway on 3 acres in suburban brook, Illinois, the brick-clad headquarters of Lipson Alport Associates, a leading package-design firm, might give the ssion of a typical office box. On closer inspection, one finds its are deceiving. A second box, composed of glass, sits directly the brick structure, but is offset from it by 50 feet. The result evokes the meeting of two tectonic plates. The dramatic shift in the building often elicits a double-take reaction from passing motorists and has prompted its architect, Joe Valerio of Chicago's Valerio Dewalt Train Associates, to dub the structure a "rear-view-mirror building."

Yet the Lipson Alport Glass headquarters is hardly reducible to a single visual effect. Designed as an addition to a drab 18,000-square-

A sloping glass box affords sunlit studio space (above). Lobby staircases contrast with the horizontal displacement of the two volumes (right).

foot office building, the new structure doubles the floor space and accommodates a complex program. The original building was gutted to its steel frame and joined with the glass-and-steel addition to enclose a U-shaped plan and create a central courtyard. The airy ground floor provides interactive studio space for designers as well as administrative offices, while focus groups and research facilities occupy the quiet, isolated brick upper level. Open web trusses support a dramatic double-height lobby, with a gently sloping floor (4 to 5 degrees) and an oversize steel staircase that mitigate the horizontality of the 50-foot cantilever.

The result is a bright, dynamic, and functional play on the standard office building. As a packaging-design business, Lipson Alport Glass creates striking visual identity programs for corporate giants like Coca-Cola and Procter & Gamble. Here, Valerio Dewalt Train reexamines and ultimately subverts traditional office "packaging" to capture the vitality and ephemerality of brand design. ■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Strawn and Sierralta's Ford Calumet Environmental Center entry (above); SOM's Trump Tower (above right); Helmut Jahn's Deutsche Post (right).

Chicago moves on

By Clifford A. Pearson

Move over, Mies. The city is producing a new group of talented architects and awarding commissions to some of the world's stars.

The iconic views of Modern landmarks still impress us: Mies's 860-880 Lake Shore Drive standing proud at the water's edge (below); SOM's Hancock Tower rising above the crowded streets; and Sullivan's Carson Pirie Scott store bringing the sidewalk to life. But Chicago is busy moving forward, laying the foundation of its future legacy. A new generation of architects at the start of their careers is already making its mark in competitions around the country. Firms such as Strawn and Sierralta and 3D Design Studio are set to contribute to the city's rich tradition of building well. Established architects such as Helmut Jahn and SOM are back on track, too, after losing their way during the days of Postmodernism. And star architects from around the globe are flocking to work in the Windy City.

Young firms

bring a breath of fresh air to the Windy Cit

Darryl Crosby and Melinda Palmore of 3D Design Studio (above). Projects include the uniquely configured and variously clad Intergenerational Learning Center in Chicago (top) and a winning prototype for the Universal and Affordable House Competition (left).

By John E. Czarnecki, Assoc. AIA

It is easy to typecast Chicago as the Midwes City of Big Shoulders that had (past tens major influence on the planning of the moc metropolis and the development of tall building the architecture profession, Chicago is known large, prominent firms with storied histories, inc ing Skidmore, Owings & Merrill and Holabir Root, which helped to shape it. But who are em ing as the new architectural talents for an evol Chicago? RECORD found a handful of extraordi young Chicago designers who are forging ahea directions that a young architect may not thought possible even a generation ago.

Starting a new architectural practic Chicago can be daunting, considering the arch tural history of the city and the pedigree of son its most well-established firms. But for D Crosby and Melinda Palmore—Chicago natives friends since meeting in architecture school i mid-1980s—starting their own firm as Afri Americans in a predominantly white professio an even greater challenge. They began 3D D Studio in 1997 and now have two employees, competition wins, and a growing list of high-p clients. "It's difficult to move up in the struct you're not white," Palmore says. "But we had the uisite talent and courage to start our own firm."

Palmore and Crosby met at the Univ of Illinois at Chicago (UIC) School of Architec and both gained valuable experience in the Ch office of Skidmore, Owings & Merrill, Palmore worked on the design for London's C Wharf. Crosby got his start working for his prof Stanley Tigerman, FAIA, at Tigerman Mc Architects while still in school. "Darryl's work is clean, direct, and still innovative," says Tigerma

Crosby and Palmore began their own with a commission for administrative office re tions and a new outdoor terrace for Chicago's Museum of Natural History. A number of com tion entries also fueled their creative spark befo firm won the Universal and Affordable

John E. Czarnecki, Assoc. AIA, is an acquisitions ed architecture books at John Wiley & Sons and a f associate editor of ARCHITECTURAL RECORD.

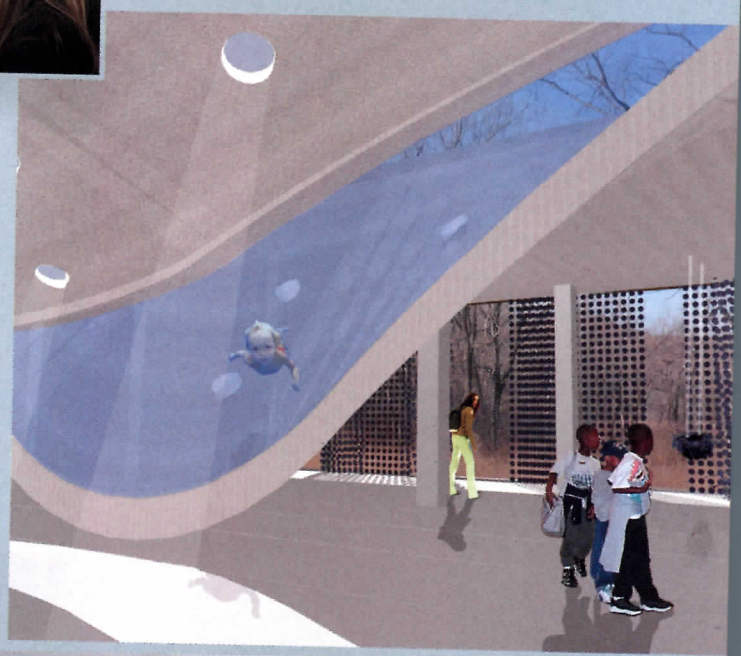
ɔmpetition, sponsored by the City of Chicago in 02, for universally accessible and adaptable using. Their design for three prototypes—all sed on 12-by-36-foot modules—clearly distinish living, circulation, and service spaces both in ın and through distinctive colors on both the erior and exterior. Now the team is designing new lounge that will open this summer in the ıovated Goodman Theater, and the $9 million ergenerational Learning Center in Chicago, a colul space clad in metal panels, plywood, aluminum, l spandrel glass, providing housing, education, l day care for children and seniors alike.

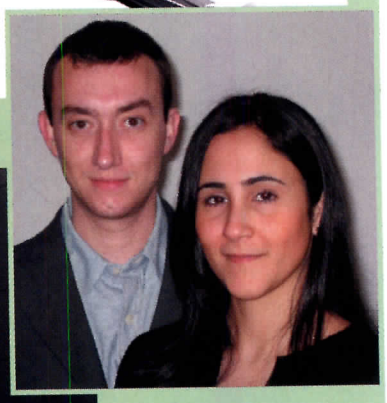
Neither Sarah Dunn nor Martin Felsen is ginally from Chicago, but as architects, they were racted to the city because "it seemed like a place ere you could build," says Dunn. Dunn met sen while both were earning master's degrees at umbia University in New York in the early 0s. She went on to three years at Rem Koolhaas's ice for Metropolitan Architecture in Rotterdam, ere she was project architect for the IIT Cormick Tribune Campus Center in Chicago. en, meanwhile, came to Chicago to teach at the School of Architecture, while Dunn joined him Chicago and, since 1999, has taught at UIC. ether, they have had their own practice, anLab, in a home-office storefront in the gened Pilsen neighborhood.

UrbanLab's work has been in a number of bitions, but its first major showing was the gn of a prototypical bus shelter for the Museum Contemporary Art's *Material Evidence: Chicago itecture at 2000* show in 1999. The shelter had a /GIS system embedded in the structure that ld inform transit passengers of the geographical tion and arrival time of buses. The firm won the Emerging Visions Competition, a portfolio petition sponsored by the Chicago Architectural , AIA Chicago, and Knoll, and its first significant project is a design-build venture: a new homee for themselves. Located a few blocks south of current storefront, the new home has a front e loft clad in Cor-Ten steel and a rear residential clad in aluminum. Both are built next to and e a grassy mound composed of the demolition s from the run-down grocery store that was ously on the site. "Instead of wrecking the buildnd removing the debris to a suburban landfill, hoose to recycle the demo on-site and mold it a mound," says Felsen. "Chicago has a culture e people care about architecture," he adds, ugh he acknowledges that UrbanLab's start—theoretical projects, exhibitions, and comon entries—is an anomaly in Chicago, where norm is to work for a larger firm and then go on own with clients that you had worked for."

Last month, UrbanLab was a finalist competition to design the Ford Calumet

Martin Felsen and Sarah Dunn of UrbanLab (above). Projects include their own studio/live space, which cantilevers over the demolition debris of a former grocery store (top), and an ecofriendly, highly unorthodox entry for the Ford Calumet Environmental Center (right and below).





Brian Strawn and Karla Sierralta (above). Their entry for the Ford Calumet environmental Center includes recycled car hoods and reclaimed telephone poles (top). Their *Dual Memory* (left and below), which featured victims' faces projected on clear surfaces, was a finalist at the World Trade Center Memorial Competition.

Environmental Center, a new environmental fac
ity for Chicago's far South Side. The firm's desi
calls for the building itself to work with the ecos
tem to actually help clean the polluted industr
site, with a wetland on the roof. Daylight will
integrated throughout the structure, which w
include exhibition space, classrooms, and labo
tories for environmental education.

A competition winner was to be nam
in late April, and other finalists included the exp
rienced Carol Ross Barney, FAIA; Jeanne Ga
AIA; a Japanese architecture student; and rec
architecture school graduates Brian Strawn a
Karla Sierralta. Strawn and Sierralta both gra
ated from the UIC School of Architecture in M
2003. While dating and beginning their care
with different firms (Strawn with Vinci Ha
Architects and Sierralta with Norsman Architec
together they have had a remarkable first year
of school. They've been named finalists in t
high-profile competitions: for the World Tra
Center Memorial in New York and the F
Calumet Environmental Center.

Strawn, who grew up in Alexander, Illin
and Sierralta, who is originally from Maracai
Venezuela, met while at UIC, but they had ne
worked on a project before deciding to develop
entry for the WTC Memorial Competition. To t
surprise, they were selected as one of the eight fi
ists for their entry, called *Dual Memory*, which ca
for 2,982 light portals over the footprint of the N
Tower and 92 Sugar Maples at the site of the for
South Tower (rendering, bottom left). Once na
finalists, Strawn and Sierralta refined their scheme
a computer at Strawn's apartment. In their imagi
tive entry for their next competition—
Environmental Center—Strawn and Sierralta in
porated remnants of Chicago past, including recy
car hoods, perforated train-car panels, and reclai
telephone poles in the skin of their building des

In suburban Illinois, Randall Deut
AIA, grew up dreaming of being an architect "f
day one." At 42, he is still young for architect
but he is no newcomer to the Chicago scene. P
to starting his own firm, Deutschwrx, in 200
had already worked as an associate with L
Associates and then with Jordan Mozer
Associates, both in Chicago. As a senior design
Lucien Lagrange Architects, also in Chicago
worked on more than 40 projects, including
new 840 N. Lake Shore Drive luxury tower, and
West Jackson, Chicago's fifth-largest office b
ing. For such efforts he was awarded the 1999
Young Architect Award for Chicago.

Since establishing Deutschwrx, base
Winnetka, Deutsch's work has been smaller in s
but still inventive. It includes commercial, reside
and religious projects. More radical designs inclu
proposed Pedway (pedestrian walkway) entry p

made of glass and steel for downtown Chicago's unswick Plaza that fits comfortably within the aight lines of the nearby buildings and comple-nts the curving Miro sculpture standing beside it. other project is a residential unit in 840 N. Lake ore Drive inspired by the client's admiration for Picasso painting called *The Dream*. Based on the nting, the spaces are divided into conscious blic) areas and unconscious (private) ones.

"Starting on your own helps you not only the project types, but also really allows you to get r hands around a project," Deutsch says.

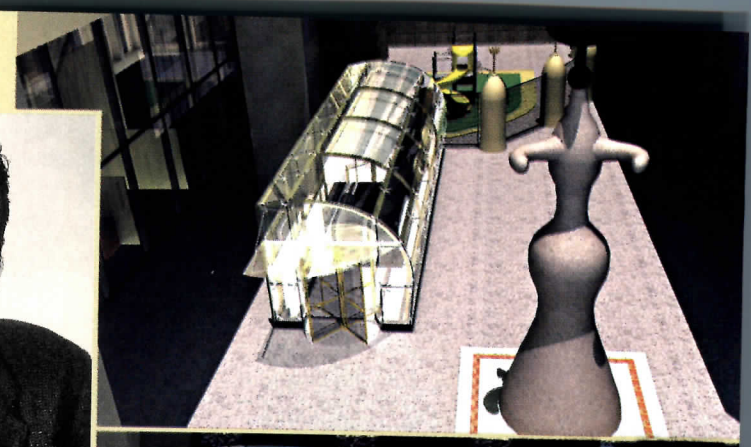
The demand for sustainability in all aspects design, from interiors to furnishings, is part of at drove Jill Salisbury to start her company, EL: ironmental Language (www.el-furniture .com), year. An interior designer by training, Salisbury interior design manager for Torchia Associates Chicago and saw a need for furnishings that e manufactured of green or ecologically ndly materials.

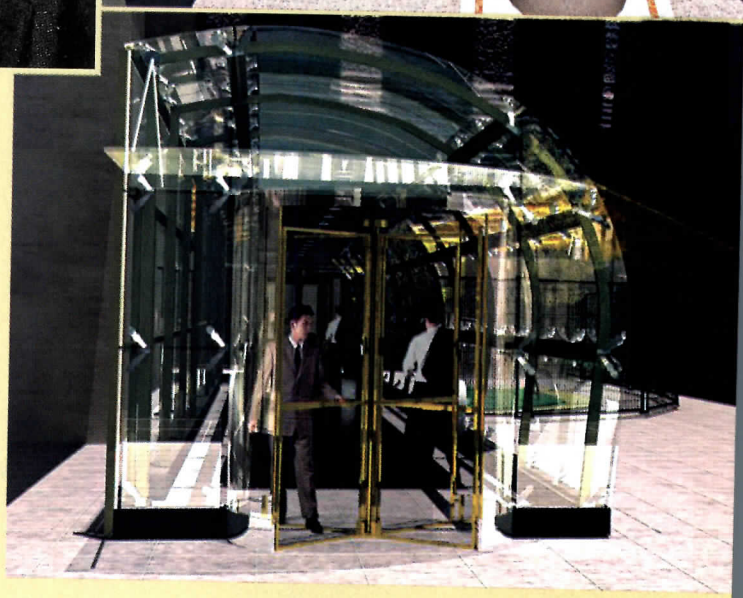
She left the firm in 2001 and, with envi-mental consultant Paul Clark of Eugene, gon, started researching materials and develop-conceptual designs for high-end biodegradable e furnishings. Her first line, constructed by two ufacturers in Chicago, debuted last fall.

From her home in suburban Barrington, bury designs her furniture line, which has 20 l pieces, including sofas, chairs, beds, and tables are made with natural or nontoxic materials manufactured with nontoxic processes. All of fabrics, including wool, organic cotton, and p, are free of chemicals. Rubber latex is used for ions, and leathers are chromium-free. Only estic hardwoods such as walnut or maple from fied sustainable forests are used, rather than l from clear-cut forests. Bamboo, which is wable, and palm wood from a coconut tree ation in Hawaii are both in a variety of pieces. bury seems most excited when describing her f the meat of the tagua nut from Ecuador, n she employs as an inlay in handles of pieces r Zen collection. As she says, "It's the size of a and looks exactly like ivory."

Environmental Language is focusing on Chicago area market initially, but Salisbury to have a greater presence on the West Coast n a year.

Salisbury and the other young designers ng a difference in Chicago are changing the built environment by taking the road less ed. Though, as Strawn and Sierralta showed their World Trade Center Memorial entry, mpact of their design talents can be far-ing. Says Deutsch, "It's worthwhile knowing are all these start-up firms that have taken es and done some great things. It's very y for Chicago." ■





Randall Deutsch (above) proposed a Pedway entry pavilion for Brunswick Plaza in Chicago (top right and right) that features curved glass and steel with a stone base. The steel has an anodized aluminum finish to match surrounding buildings.

Jill Salisbury (above) founded a company, EL: Environmental Language, that has developed biodegradable home furnishings (right two) made of natural and nontoxic materials.

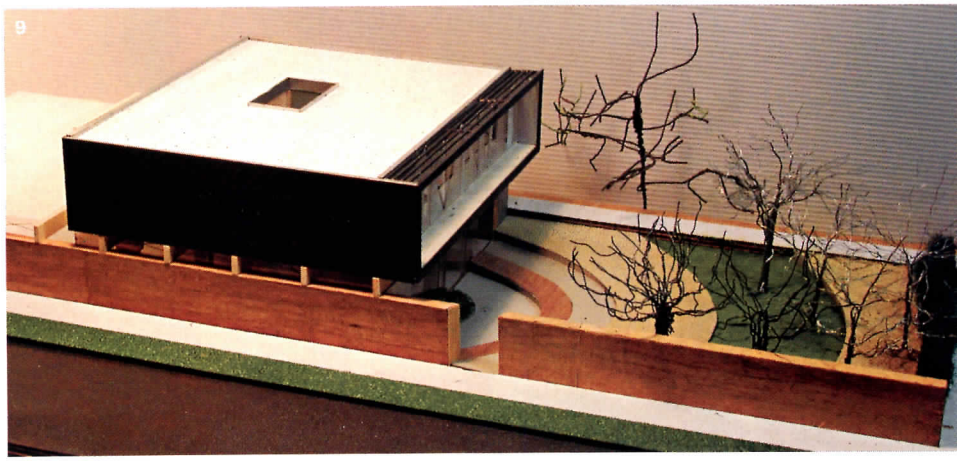
Upcoming building projects help establish a new design tradition

Firms are busy with designs in and around Chicago that continue to build on the city's legacy of innovative architecture. Many clearly demonstrate the influence of the Chicago Modern School, with its exposed structures and clean forms. Others are completely new and unpredictable, experimenting with novel concepts and geometries. Some will alter the legendary downtown skyline, while others will lend sophisticated design to areas once lacking it. The new Chicago School is still forming, but here's a glimpse of what it will look like. Sam Lubell

1. **Project:** *156 West Superior*
Location: *Chicago*
Architect: *Miller/Hull*
Program: *Seven-story mixed-use project in the city's River North district. Operable metal-slat screen walls and outdoor decks give the building a unique texture.*
Schedule: *Construction scheduled to begin in September.*

2. **Project:** *Addition to Shure Headquarters*
Location: *Niles, Illinois*
Architect: *Krueck & Sexton*
Program: *Addition includes testing laboratories, offices, and open space. High-bay, long-span, steel-frame loft construction, clad in glass and ste panels.*
Schedule: *Completion expected the end of May.*

3. **Project:** *Ray Harstein Techno Center Addition, Oakton Comm College*
Location: *Skokie, Illinois*
Architect: *Ross Barney + Janko Architects*
Program: *$12 million, 59,000-square-foot facility will include studios, computer labs, offices, a meeting spaces. The facade featu metal panels and masonry blend with the original structure.*



dule: *Completion is scheduled e end of 2004.*

ject: *Hyde Park Arts Center*
ion: *Chicago*
ect: *Garofalo Architects*
am: *Adaptive reuse of a two-story ry structure. The facade will be of glass and steel and equipped igital projection screens, scrims, ades that allow for electronic art.*
ule: *Construction set to begin in y 2005.*

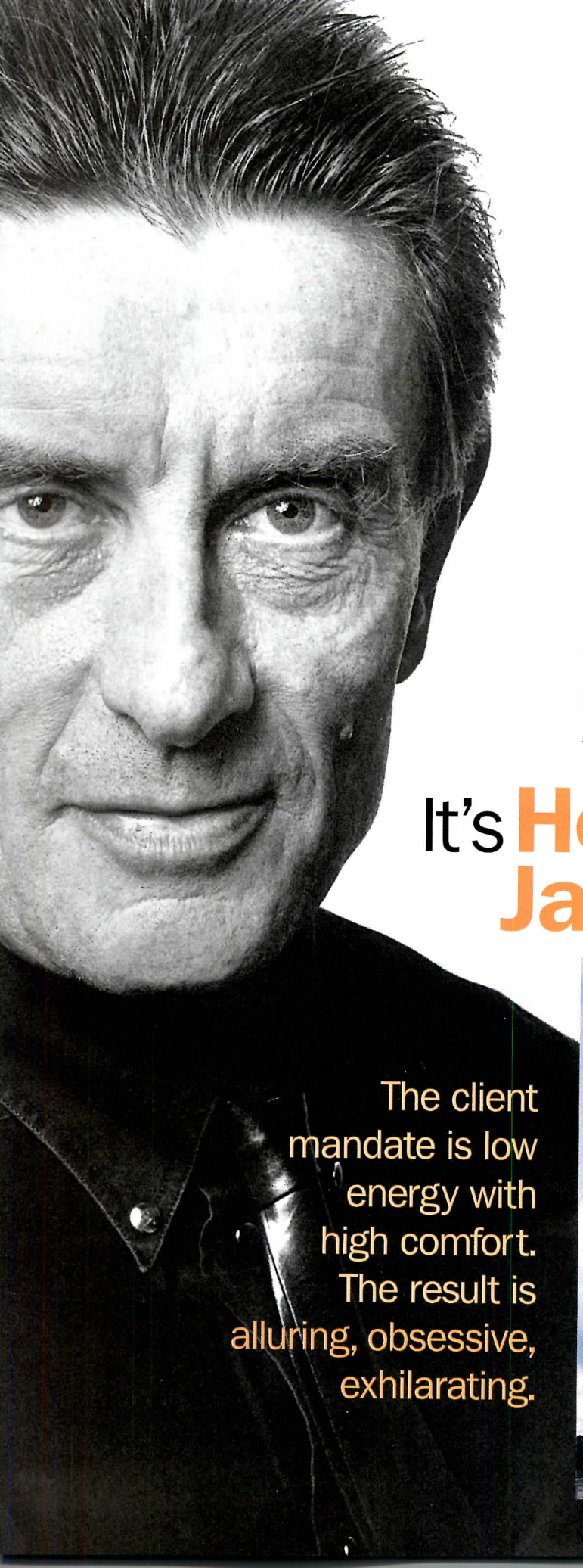
ject: *Lakefront Supportive g*
on: *Chicago*
Architect: *Murphy/Jahn Architects*
Program: *100-unit supportive-housing development bordering Chicago's once-infamous Cabrini Green housing projects.*
Schedule: *Construction set to begin in January 2005.*

6. **Project:** *Miglin Properties Hotel*
Location: *Chicago*
Architect: *Valerio Dewalt Train Associates*
Program: *Located at the edge of the city's Modernist core, the 216,000-square-foot, 200-room hotel will be made of huge, seemingly floating masses resting on a balanced structural skeleton.*
Schedule: *Completion set for fall 2005.*

7. **Project:** *Trump Tower Chicago*
Location: *Chicago*
Architect: *Skidmore, Owings & Merrill*
Program: *Tallest new building in the U.S. since the Sears Tower, the structure, built on the site of the former Chicago Sun-Times building, is designed to reflect its orientation along the river-front, while three setbacks provide connections to surrounding buildings.*
Schedule: *Completion set for late 2007.*

8. **Project:** *One South Dearborn*
Location: *Chicago*
Architect: *Richard Keating of DeStefano Keating Partners*
Program: *The 40-story office tower, located on the site of the scrapped Seven South Dearborn, will have a massive glass curtain wall articulated with horizontal bands.*
Schedule: *Completion set for late 2005.*

9. **Project:** *Crystal Street House*
Location: *Chicago*
Architect: *Studio Gang Architects*
Program: *The aggressively Modern-style house is organized around a light court, which is accessible through a glass enclosure.*
Schedule: *Construction set to begin in January 2005.*



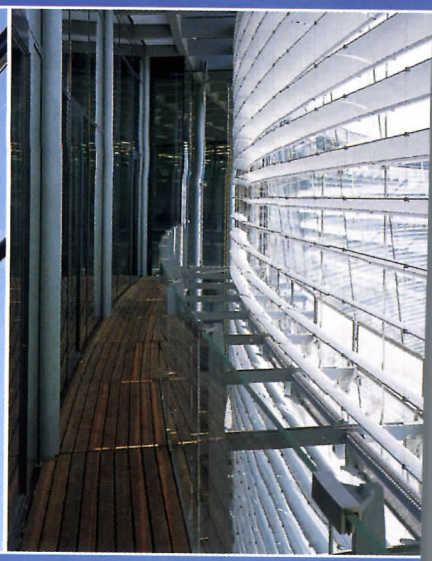
By James S. Russell, AIA

It's Helmut Jahn's Moment

Stand in front of the Deutsche Post Tower where its two airfoil-like curves cross each other, and peer in—especially at dusk. You will see a space of glowing light, crisscrossing struts, glassy gridded planes—all vanishing into an apparently infinite distance. It's alluring. It's spectacular. It's obsessive. It's high-rise existence liberated from cubicles, dropped ceilings, drywall, and sometimes floors. Agoraphobes beware. This is a particularly spectacular product of the relentlessly sketching pen of Helmut Jahn. Today he is not designing buildings; he's creating incredible worlds inside buildings: heady, disorienting,

The client mandate is low energy with high comfort. The result is alluring, obsessive, exhilarating.

ering of transparent plane on trans-
, walls, floors, ceilings, partitions,
-wall supports lose their materiality.



The Deutsche Post Tower (right) relies on such elegant details as the ventilating, shingled wall section (above far left), which is related to similar details at the Bayer project (above middle two), including a spring-weighted cable facade (above far right).

PHOTOGRAPHY: © ANDREAS KELLER, EXCEPT AS NOTED

exhilarating. When last seen in America, Jahn was restlessly penning spec office towers that were built in his firm's home city of Chicago, as well as in New York, Philadelphia, and Houston. He would drop conical tops or Deco spires on them, and drape them with streamlined curves. He personified the flamboyant and real estate obsessed 1980s, appearing on magazine covers in Al Capone–inspired double-breasted suits.

Both the look and the workload vanished in the commercial-building crash that extended well into the 1990s. While the commissions and the name faded in the states, Murphy/Jahn won large, complex projects in Germany, where Jahn grew up. Through them, the firm quietly transformed its design approach. For the Munich Airport Center and its Kempinski Hotel, which took nine years to complete, Jahn devised a glass-and-fabric canopy that lights and naturally ventilates a large train-arrivals courtyard. To provide a diaphanous facade, he hung a veil of glass from a weighted cable support structure—an early use of a glass-wall technology that has recently become au courant. In Cologne, Jahn simplified the programmatic complexity of the contemporary airport terminal with surgical elegance, reducing it to a light-filled shed supported by tree-form piers on a 99-foot-square grid [RECORD, August 2003, page 126].

These projects allowed Jahn to leave the work of "decorating buildings" behind, he said in an interview in his Chicago office. He has stripped down his look, too. It's now more Porsche Design than Perry Ellis. "With Postmodernism, I brought history into the buildings I was doing, but I still built in a modern way," he adds.

The European mandate to design workplaces that are simultaneously low-energy, low-carbon-emission, and high-comfort has played perfectly into Jahn's love of technology as an expressive means to solve problems. He described his current approach at the inauguration of State Street Village (page 130): "This building stands for an attitude that progress and new expression in architecture come not so much from form and style but through integrating architecture, engineering, and a straightforward expression

of components, materials, and parts in construction."

The idea that innovation and technology are innately progressive has taken a beating over decades of nuclear threat and the high-tech transport of terror. For Jahn, technology's allure is as fresh as ever. "I'm concerned with how a building works, the comfort of its users," Jahn says, but when he talks about how he achieves those goals, he speaks in terms of building technology, which imposes a rigor he welcomes. Architecture must assume responsibility for more than form

REFINEMENTS—WHICH MOST PEOPLE WOULDN'T NOTICE—ARE PERFECTED OVER YEARS.

and aesthetics, he has written. It will succeed "through engineering and performance, rather than design and styling."

While Jahn presides as the sole design eminence at Murphy/Jahn, his recent work relies on collaborating with two specialized outside practices. He's indebted to engineer Werner Sobek for the athletic detailing of specialized facade components and to Matthias Schuler, of Transsolar, which specializes in the emerging field of climate engineering. Schuler's work expands the border of traditional engineering by reducing mechanical air-conditioning, and its associated ductwork and equipment, and replacing it with a passive, low-energy design that relies on architecture and structural engineering. Both firms are based in Germany but now have New York offices serving a wide range of clients.

Sobek describes how the team focused on the intersection of facade and floor slab to increase transparency while reducing energy use: "We started by getting rid of the solid spandrel between floors. With Matthias, we avoided the dropped ceiling at the edge by integrating small, low-velocity displacement-ventilation devices in the floor slab instead. We narrowed the slab at the edge because it did not need to be thick there and integrated a tapered shape with the column location." Such refinement, which most people won't even notice, was perfected over several projects.

The double curtain wall in the headquarters of Bayer, in Leverkusen, Germany, takes the team's innovative insulating and ventilating concept to new levels of sophistication. Like Deutsche Post, the south side is shingled. To simplify the system and minimize the components, Jahn has made an external layer of frameless glass clamped only at the glass corners. The clamps are internally supported on every floor by a horizontal stainless-steel rod and braced by verti-

Daylight is abunda Bayer's lobby (abo but carefully modu for dramatic effec shading devices o scrims of metal m "Buildings are lum nous, not illumina Jahn has written.

eamless durable code-compliant renewable

PERHAPS THE FIRST TIME " " AND "STYLISH" HAVE BEEN UTTERED IN THE SAME SENTENCE.

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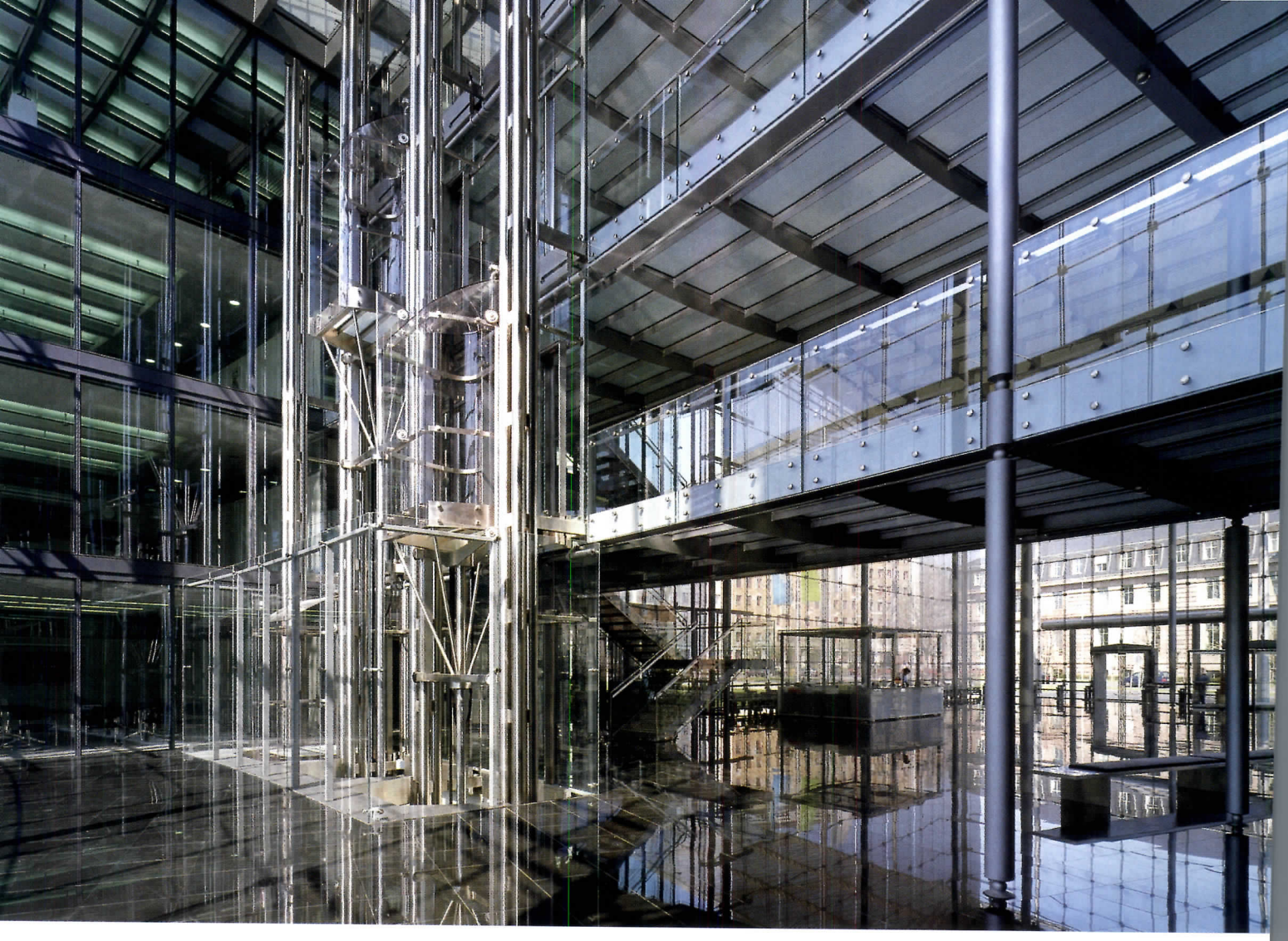

cal planes of glass (page 98). Thin metal bars carry the accumulated lateral loads across the full-building-height void between the inner and outer facades. Pivoting blinds hang between the two glass walls for additional light control.

What Jahn, Sobek, and Schuler share is a commitment to materials, especially new materials, and construction as generators of form. This sounds like the old functionalist argument, but it doesn't end there. Jahn argues for light as the essence of the design, too. "The facade acts as a fabric that moderates the natural and artificial light. It becomes a screen."

THOUGH RATIONAL, ELEGANT, MACHINED, THIS IS AN ARCHITECTURE OF AMBIGUITY.

Jahn has remained loyal to Chicago even though he's gotten little work in the U.S. This drought is beginning to end, especially after the warm reception State Street Village has received. Currently, he is working on an SRO project for a nonprofit Chicago housing provider. Although his scheme is low-budget, "I'm trying to extend the materials, systems, and typology of IIT," he says. He's hoping to use a full-height radiant panel for low-energy heating and cooling. He's investigating rooftop wind turbines ("I found the supplier on the Internet," he says). Murphy/Jahn is also refitting terminals at O'Hare airport, including those Miesian pavilions dating from 1961 by C.F. Murphy (the "Murphy" of Murphy/Jahn), and Jahn's own landmark 1988 terminal for United.

But the most exciting projects remain those outside the U.S. A vast oversailing trellis is being completed to shade the varied structures of the 5-million-square-foot first phase of the new Bangkok International Airport, for example.

Though the work is rational, functional, machined, and elegant, Jahn has created an architecture of ambiguity. When you look in, you are not sure what you are seeing. The vertical glass fins at Bayer read like cables; the multiple layers of glass pile on reflections and patterns so that these "weightless" facades may look solid or translucent, and of indeterminate thickness and depth.

Jahn looks only forward, anticipating future developments, especially in glass. He wants to approximate in building facades "the wonderful adaptability of the biological human skin." Adds Donna Robertson, dean of IIT's school of architecture, "Because of his leadership in using technology to green ends, I think he's in a very strong period right now. I think this will be his moment." ■

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CHICAGO comes back

From the lakefront to the plains, a burst of architectural energy

By Blair Kamin

There is nothing quite so pitiful as an ex–heavyweight champion who loses his punch and puts himself on an analyst's couch. But metaphorically speaking, that was the state of Chicago architecture five years ago. The titles of the symposiums were telling: "Has Chicago Lost Its Nerve?" Or, in a nod to globalism: "Where in the World Is Chicago?" Even before then, prized commissions once monopolized by Chicago's talented architects were going to visiting stars, lending new relevance to the writer Nelson Algren's arch observation that Chicago had progressed from being the Second City to the Secondhand City. The wave of self-examination and the "starchitect" invasion represented the ultimate comedown for a toddlin', tough-guy town that once proudly and justifiably regarded itself as America's architectural capital.

Yet, as the AIA prepares to convene in Chicago for its annual convention, a remarkable revival is under way. The aesthetic timidity of the 1990s is gone. Bold Modernism is back. And while some of it comes from the pencil of visiting stars like Frank Gehry, whose exuberant music pavilion opens this summer in the new Millennium Park, many of the finest projects bear the stamp of leading local lights such as Helmut Jahn and Ralph Johnson. No longer moribund, either in its thinking or its building, Chicago has reasserted itself on several fronts, from new buildings that reanimate the city's tradition of the building art to new faces, like Jeanne Gang, Brian Strawn, and Karla Sierralta, who promise to invigorate its architec-

Contributing editor Blair Kamin is the Pulitzer prize–winning architecture critic of The Chicago Tribune.

PHOTOGRAPHY: © BILL ROSS/CORBIS

DeStefano Keating Partners' One South Dearborn Tower (left) features a backlit, textured-glass curtain-wall facade. The sleek interiors of the Hard Rock Hotel (center top), by Yabu Pushelberg, breathes life into the landmark Carbon and Carbide Building (right), just renovated and expanded by architect Lucien Lagrange. Perkins & Will's clean, rectilinear condo-minium complex at 516 North Wells (center bottom) fits retail, residential, and parking spaces onto a tight site.

tural scene for years to come. Even Mayor Richard M. Daley, who long acted as a retro force, has publicly endorsed the cause of innovation and is pushing the envelope on green architecture.

Perhaps the surest sign of Chicago's improving health are the passionate arguments sparked by such controversial structures as the renovated Soldier Field, by Wood + Zapata and Lohan Caprile Goettsch, and Rem Koolhaas's McCormick Tribune Campus Center at the Illinois Institute of Technology. Mies famously said: "Build, don't talk." But Chicago long has been a city of great debates as well as great buildings, an exporter not just of drop-dead design but powerful polemics and ringing aphorisms ("Form ever follows function"; "Make no little plans"; "We don't invent a new architecture every Monday morning"). Five years ago, there wasn't much to incite a minor street brawl. Today, as Joseph Giovannini and Stanley Tigerman demonstrate in their debate over Soldier Field (page 114), the intellectual slugfest has returned and the gloves are off—fresh evidence that Chicago is again its volatile, cantankerous self.

Chicago is easily misunderstood, especially by those who swallow whole the Modernist myth that starts with the paradise of Louis Sulliv Eden, portrays Daniel Burnham as the snake v tempts Chicago to bite the Beaux-Arts apple, ends with the triumphal restoration of Mies Modernism after World War II. Yet, as Chic architect Jack Hartray has observed, Frank Ll Wright's romantic, organic oeuvre cannot be ne tucked into the rationalism and reductivism of International Style. And neither does the Moder myth adequately describe the work of such hum istic Chicago innovators as Harry Weese. To take the Modernist blinders is to realize that Chic does not obtain its extraordinary vitality fro rigid, monolithic continuum of styles. Rather, vibrancy arises from the clash of many styles their juxtaposition within a restless, ever-shift cityscape. Even Gehry has expressed his admirat for the civility of the Beaux-Arts connective tis with which Burnham sought to transform Chica Carl Sandburg's "Hog Butcher to the World," Paris on the Prairie. Daley, to his credit, has reest lished that tradition, using infrastructure beautification to "Martha Stewartize" the streets the process, he has helped stoke the nation's lar high-rise residential building boom.

Chicago **Insiders**

As notorious public-housing high-rises omplexes like the Robert Taylor Homes and rini-Green come down, new luxury condo- ium and apartment towers are going up along Michigan Avenue. Unfortunately, the vast ority of the new towers are exposed-concrete ostones beneath which the art of architecture buried. They exemplify capitalism unfettered, her Chicago tradition that historically has n architects and their hustling developer ts free reign to produce the best of the best the worst of the worst. It is not for nothing the historian Perry Duis has labeled Chicago great American exaggeration," expressing at r scale—and often in excruciating contrast— gn trends evident in smaller American cities.

Today's best include Johnson's Skybridge, tical village that explodes the cliché of the con- hulk, with its enormous, windowlike voids a bridgelike trellis that tops its pair of slim, connected towers. Skybridge firmly fits into Chicago tradition of bold, innovative architec- It is at once sympathetic to its urban context n the end transforms it.

The next big splash in the high-rise residential boom may come next fall, when Donald Trump has said he will begin tearing down the bargelike Chicago Sun-Times building along the Chicago River. It is to be replaced by a 90-story condo-hotel tower, by Adrian Smith of Skidmore, Owings & Merrill, that could be Chicago's second-tallest building after the 1,450-foot Sears Tower. The lack of adverse reaction to Trump's project, a handsome asymmetrical setback tower, speaks volumes about Chicago's take-it-in-stride attitude toward great height. Been there. Done that. Let the new Chicagos—the Shanghais, the Taipeis, the Kuala Lumpurs—build their trophy towers.

Jahn's spectacular evolution is another sign of Chicago's rising fortunes. He's no longer "Flash Gordon," the sexy superficial star whose buildings were as facile as the gangster attire he once sported on the cover of *GQ*. Instead, he has become a mature master who fuses technology and aesthetics to produce supremely elegant green architecture.

At IIT, the great citadel of Modernism 4 miles south of Chicago's Loop, he's one-upped Koolhaas's far more heavily publicized Campus Center with a 550-foot-long dormitory, sheathed in corrugated steel, that is a masterly exercise in ele-

Chicago **Outsiders**

At the University of Chicago, Rafael Viñoly's Graduate School of Business (model, top right) will surround his glass-enclosed Winter Garden (photo, top left), a modern evocation of the campus's Gothic Revival character. Also at the university, the roof of the Gerald Ratner Athletics Center by Cesar Pelli (bottom) rests on 125-foot-tall steel masts, a nod to Gothic flying buttresses.

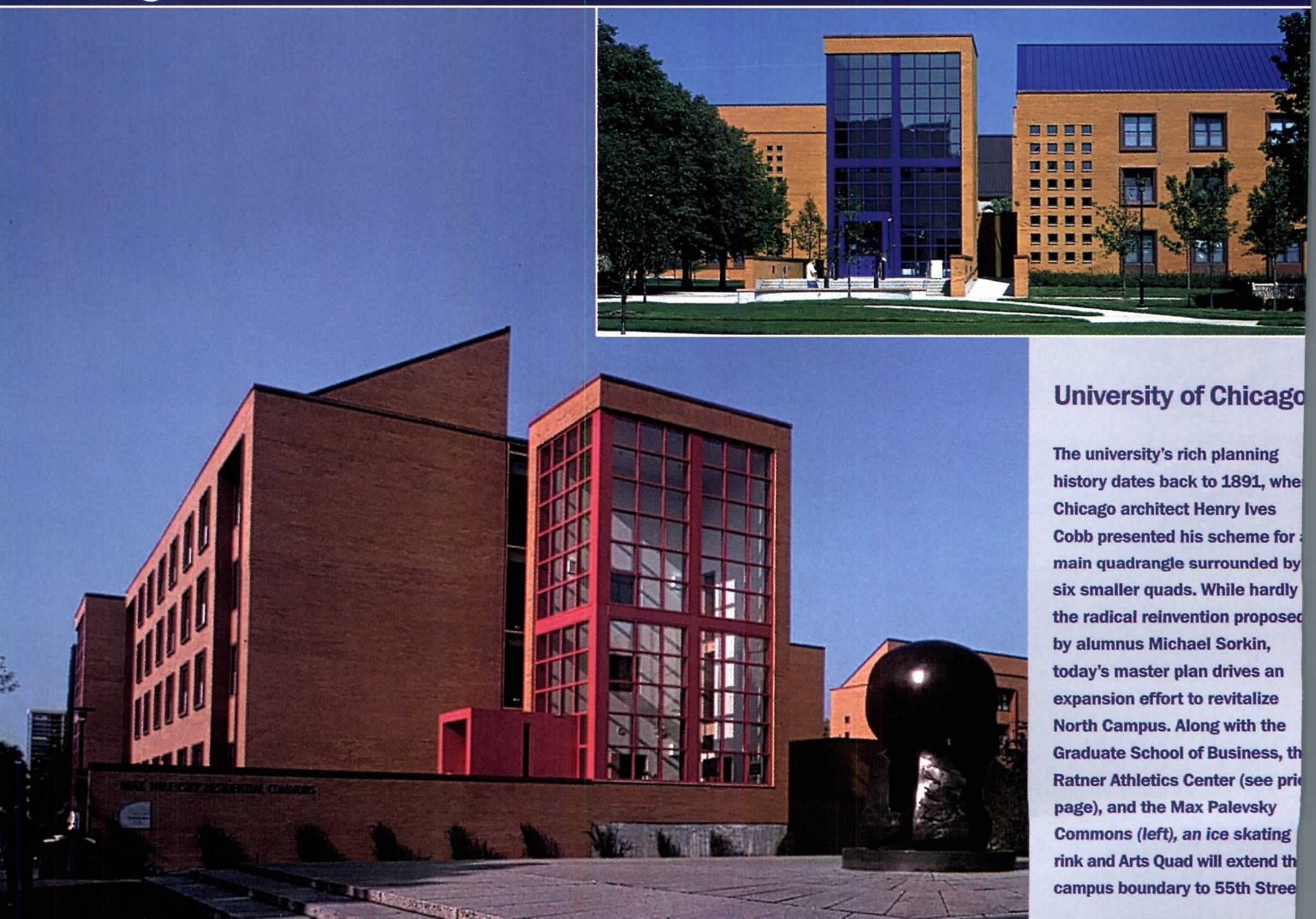
Ricardo Legorreta's new Max Palevsky Residential Commons (below) envelops Regenstein Library to form intimate courtyards within a new quadrangle. The Mexico City–based architect divided the facility into "houses" in a linear plan that matches the proportions and scale of the seven original quads.

vating simple construction to the level of art. The dorm freshens the Miesian ideal of *Baukunst*, in which the art is a refinement of the building. At Koolhaas's neighboring Campus Center, by contrast, the outcome is in many ways compelling, but ultimately less satisfying. The Center offers the flourish of a corrugated steel tube that wraps around the elevated tracks in order to muffle the roar of Chicago Transit Authority trains. It also has some remarkable interior spaces, which Koolhaas created by excavating the ground beneath the one-story building and by blurring the conventional boundaries between interior circulation paths and the activities they typically divide. Yet this is a building where the art is additive rather than integral and, in far too many, highly visible instances, God isn't in the details. There are "yes" buildings and there are "yes, but" buildings. The Campus Center belongs among the latter, falling short of the high expectations for it—and the Chicago standard of giving ideas extraordinary material realization.

Just as the side-by-side pair at IIT sharpens the argument over the future of Modernism, so the revamp of Soldier Field has emerged as a flashpoint in the ongoing debate about how to adapt old buildings to new use—and whether b Modernism has become too bold.

Buying into the old Modernist myth ogy, the avant-garde defenders of the stadium h labeled its critics neo-trad Luddites who worshi the altar of Beaux-Arts *Classicism*. They sho spare us this straw man. Yes, the renovated Sol Field has genuine merits, especially the styli athleticism of its remarkably intimate interior. it has impossible-to-dismiss demerits, notab bulbous grandstand that weighs down brutally the stadium's landmark colonnades—an eyes for thousands of passing drivers every The result mars Chicago's greatest public space lakefront, for the benefit of a privately owned p fessional football team. I wrote earlier, of cou that Chicago's downtown is enlivened by clash of skyscraper styles. Yet there is a differe between respectful contrast, as displayed Norman Foster in his Reichstag renovation addition, and this violent contrast, which imp an aggressive sculptural form on both a Nati Historic landmark and the landscape in whic sits. All the slick photography in the world ca mask the grotesque juxtaposition of scales

Chicago **Outsiders**



University of Chicago

The university's rich planning history dates back to 1891, whe Chicago architect Henry Ives Cobb presented his scheme for main quadrangle surrounded by six smaller quads. While hardly the radical reinvention proposed by alumnus Michael Sorkin, today's master plan drives an expansion effort to revitalize North Campus. Along with the Graduate School of Business, th Ratner Athletics Center (see pri page), and the Max Palevsky Commons (left), an ice skating rink and Arts Quad will extend th campus boundary to 55th Stree

rms the stadium's most visible public face.

While Chicago fumbled its tradition of lightened lakefront planning on Soldier Field, the orm of controversy over the stadium at least had a ver lining: It forced Daley, the stadium's prime litical backer and for years a conservative patron o put the kibosh on daring designs, to publicly fend innovative architecture. If he's serious about lowing through, there's a new generation of rising icago talents ready to respond. As John Czarnecki ites (page 90), many of them, like Brian Strawn d Karla Sierralta (finalists in the World Trade nter Memorial design competition), are attract- attention through competitions.

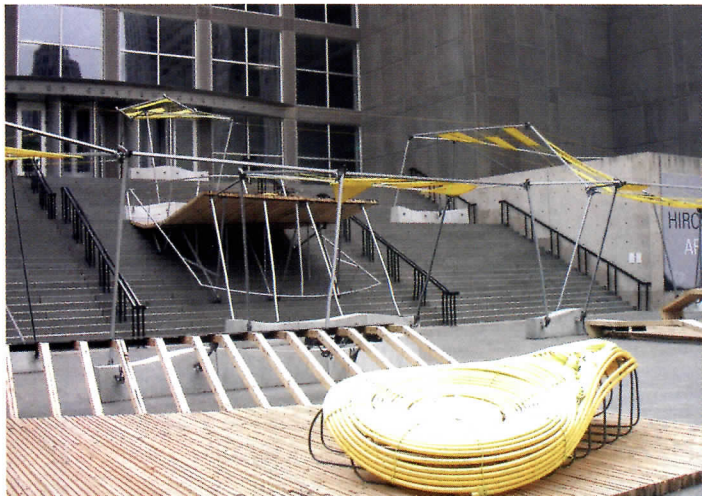
Others, like Studio Gang and Doug rofalo, move easily between academia and ctice and are creatively exploring computer hnology and materials, as in Gang's much- ised *Stone Curtain* (shown below) at the ent *Masonry Variations* exhibition at the tional Building Museum in Washington, D.C. eral of the rising stars were named finalists in city's competition for a new environmental ter in Chicago's industrial Calumet area, rking the first time Daley has put his political muscle behind cutting-edge green design.

When the AIA convened in Chicago in 1993, green architecture was largely viewed as the glimmer in the eyes of a few visionaries like Philadelphia architect Susan Maxman, then the organization's president. But in the past 11 years, the movement has built monuments like Foster and Partners' Commerzbank in Frankfurt and Swiss Re tower in London, and it has made significant inroads in the United States, where green building practices are increasingly widespread—everywhere, it seems, but among commercial developers who don't want to assume the higher first costs. Perhaps Chicago and the nation are at a threshold—ready to move from spectacle to sustainability as architecture's guiding force. Perhaps the city is again ready to export the archetypes of a new era. Perhaps Chicago can be in the vanguard of a truly progressive Modernism, one that is at once visually assertive and respectful of both the landscape and the need to conserve scarce resources.

But that's just dreaming. For now, it's a pleasure to observe that the old slugger is up off the analyst's couch and has regained its punch.

Chicago is back. ■

Chicago **Next Wave**



Studio Gang's "Stone Curtain" (top left), shown at the National Building Museum, is a puzzle of interlocking pieces that conveys surprising lightness. Gang's Chinese American Service Center (top right) features luminous titanium 'scales.' Last year, at the Museum of Contemporary Art, Garofalo Architects wove steel flyovers, fabric clouds, and other structures into a networked landscape on the plaza (bottom right). Yellow fiberglass ribbons achieve a similar effect at a house in Green Bay (bottom left).

Viewed from Lake Michigan, Wood + Zapata's Soldier Field breaks up the Classical symmetry of the original structure, designed by Holabird & Roche between 1922 and 1928.

Boston architects **Wood + Zapata** stir up controversy at Chicago's **SOLDIER FIELD**, inserting a Modern stadium into a Classically styled arena

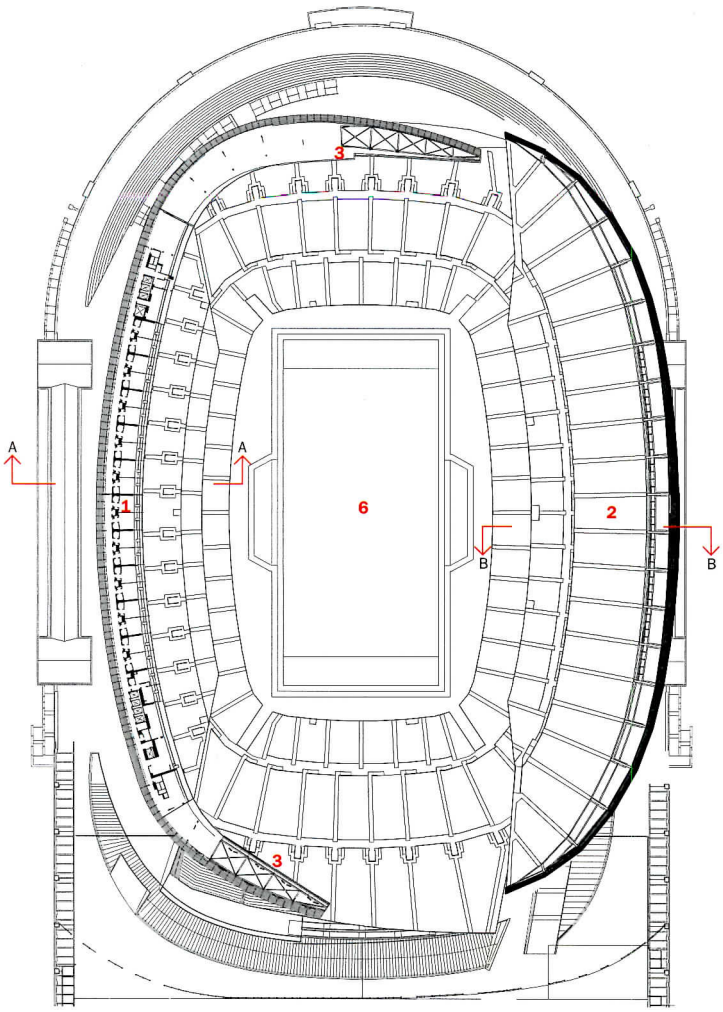
irony of ironies. The last time Chicago was invaded by East Coast archi-s was at the landmark World's Columbian Exposition of 1893. Back then, New York and Boston architects brought academic Classicism to a city ng birth to the spare, efficient, Modern architecture of its skyscrapers. v, Wood + Zapata of Boston is bringing edgy futuristic design to the city plopping it down in the middle of Soldier Field, a Classical-style stadium t by the Chicago firm Holabird & Roche between 1922 and 1928. The l act has created a brouhaha in the papers and engendered lawsuits from ervationists. To cover the outcome of the imbroglio, RECORD *has turned to York critic Joseph Giovannini for one point of view, and to Chicago itect and educator Stanley Tigerman for his take on the matter.*

By Joseph Giovannini

Optical reciprocities between ball and bleachers overwhelmingly determine the design of sports buildings. Architects typically derive the diagram for arenas from wrapping walls around optimal lines of sight to generate a box or a bowl. At Soldier Field in Chicago, however, Boston architect Wood + Zapata, working with Lohan Caprile Goettsch as the master planner, recently broke free of convention—scoring an end run into new precedent.

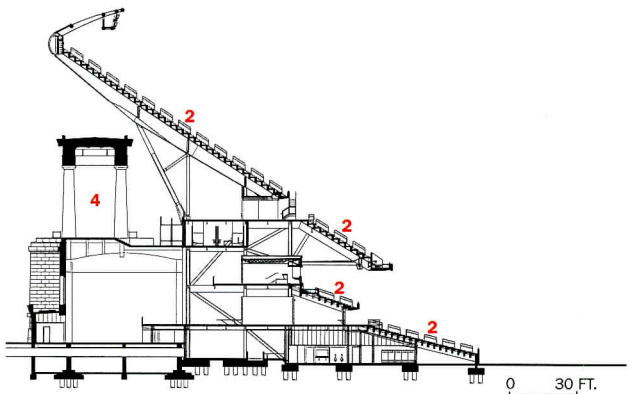
When Benjamin Wood and Carlos Zapata received the commission to update Soldier Field as a $385 million state-of-the-art venue for the

Joseph Giovannini is a practicing architect and critic for New York *magazine.*



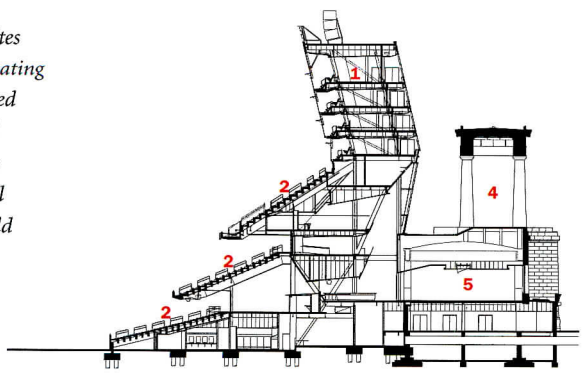
STADIUM PLAN

N 0 100 FT. 30 M.



WEST CROSS SECTION B-B

1. *Luxury suites*
2. *Bleacher seating*
3. *Cantilevered scoreboard*
4. *Colonnade*
5. *Dining hall*
6. *Playing field*



EAST CROSS SECTION A-A

Chicago Bears football team (which has been playing there since the ea 1970s), the architects faced the challenge of fitting a new, 62,000-seat bo within the old one. In the process, the existing stadium—a long configu tion originally devised for track and field—would lose seats, especially the end zone, but gain a valuable sense of intimacy, placing spectators clo to the field of play.

With potential for radical change, the new bowl's design co even depart from the Classical axial symmetry of the existing Soldier Fi completed between 1922 and 1928, and later dedicated as a World W memorial. The Chicago firm of Holabird & Roche had configured poured-in-place concrete stadium as an open-ended horseshoe with colonnaded, templelike entry gates crowning its perimeter wall. But the alized horseshoe barely acknowledged the specifics of its context and site a park on Lake Shore Drive), other than its obvious axial orientation to Field Museum's portico. The stadium and surrounding buildings emerged from the City Beautiful movement, launched in Chicago by World's Columbian Exposition of 1893, inspiring grand axes with Be Arts (and later, Art Deco) structures clustered in parks along Lake Michi

When Wood + Zapata analyzed the program to be inserted the 1920s stadium, functional necessities, teeming with potential asym tries, soon challenged the purified geometry, as did the particulars of p The media box, for example, would have to occupy the south sideline

FUNCTIONAL NECESSITIES, TEEMING WITH POTENTIAL ASYMMETRIES, CHALLENGED THE PURIFIED GEOMETRY.

give cameras optimal sun exposure. In its semicircular arrangement, zone seating would differ from the straight bleachers along the sidelines. In contrast to the sea of general seating, the luxury suites, site the north side opposite the media box, would require enclosure and c lean forward to optimize playing-field views.

The new bowl, then, started subdividing itself into bila asymmetries and discrete, localized neighborhoods. Two important inspired the architects to "crack open" the new arena's otherwise co uous rim, revealing the park and Lake Michigan to the south an Chicago skyline to the north, connecting the stadium with its larger ral and urban context.

The geometry of the Holabird & Roche scheme had domi and suppressed latent asymmetries that designers Carlos Zapata Benjamin Wood chose to cultivate. Unlocking such qualities in the b interior liberated its exterior from symmetry's girdle.

Conceptually, Wood + Zapata's strategy would set a high-rir soup bowl (the new arena) atop a dinner plate (the existing stadiu creating a nesting composite, leaving the two components separate an tinct, but enriched by association. The architects developed an intenti complex and dynamic language for the new bowl, playing it again static, bilateral symmetry of the "dish."

As built, the two structures complement each other, no formally, but also spatially. For the gap between the new and existing

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Project: *New Stadium at Soldier Field, Chicago*
Architects: *Wood + Zapata (design)—Benjamin Wood, Carlos Zapata, principals; Anthony Montalto, Joe Dolinar, project directors; Bretton Robillard, project architect; Lohan Caprile Goettsch Architects (master plan)—Dirk Lohan, Joseph Capr principals; Travis Soberg, project a*
Engineers: *Thornton-Tomasett (structural); Soodan & Associates (restoration); Ellerbe Becket, Environmental Systems Design (*
Consultants: *Peter Lindsay Sch (landscape)*

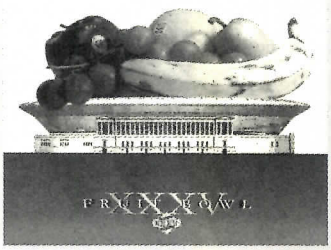
Like a soup bowl set atop a dinner plate, the new bowl nests within the old, juxtaposing a dynamic, 62,000-seat arena with the static, colonnaded stadium of an earlier era.

A CRITIQUE OF SOLDIER FIELD (AFTER THE FACT)

By Stanley Tigerman, FAIA

Many of us in Chicago first became aware of the extent of both the renovation as well as the new design of Soldier Field in 2001–2002. An elevation drawing of the proposal was published in the Chicago newspapers, amid growing criticism, right or wrong, of the way that the project appeared to be "shoved down the public's collective throat," as some have complained. Among the sample questions peppering the public outcry: "Who pays for it?" and "Who benefits from it?" None of this clamor did much good, and in any case had only a minor impact on the design. (As I recall, a couple of the topmost rows of seats were deleted in order to assuage dissidents concerned about the height of the project).

And, after the city spent nearly $700 million, no retractable roof was in sight. Did this mean that it would be impossible to have a venue for the Super Bowl in Chicago?



Collage by Stanley Tigerman.

The lawsuit brought by the Friends of the Parks and the Landmarks Preservation Council of Illinois against the project failed, but all the council seemed to care about anyway was the fate of the so-called historic colonnade dating to the 1920s. Still, the clearly out-of-scale fruit bowl jammed in the colonnade stuck with me like a wad of Wrigley chewing gum, resulting in my response via a collage (above). Meanwhile, the struggle to save the never particularly scintillating Depression-era Classical colonnade resulted in the design's overwhelmingly misproportioned aggregation of old and new architectural elements, which thousands of motorists would see driving along Lake Shore Drive. It made you wonder about the economic benefits for the few versus the visual burdens inflicted upon the unsuspecting many, and the reassuring way in which architects respond primarily to their paying clients.

But that was then, and this is now. Twice a weekend, my wife, the architect Margaret McCurry, and I drive by Soldier Field. The more that I have looked at this piled-up train wreck, the more I have realized that the result wasn't so bad after all. To be sure, the curtain-wall facade on the lake side of the eastern skyboxes is cheap. And I wish (and here I happily reveal my Chicago-based preconceptions) that the Emperor's underbelly of the westernmost stadia had been left undressed and not metallically clad. During construction, when the supporting structure was exposed, it had a familiar expressionism commensurate with Chicago's true architectural tradition, and reflected in both the first and second Chicago Schools of architecture.

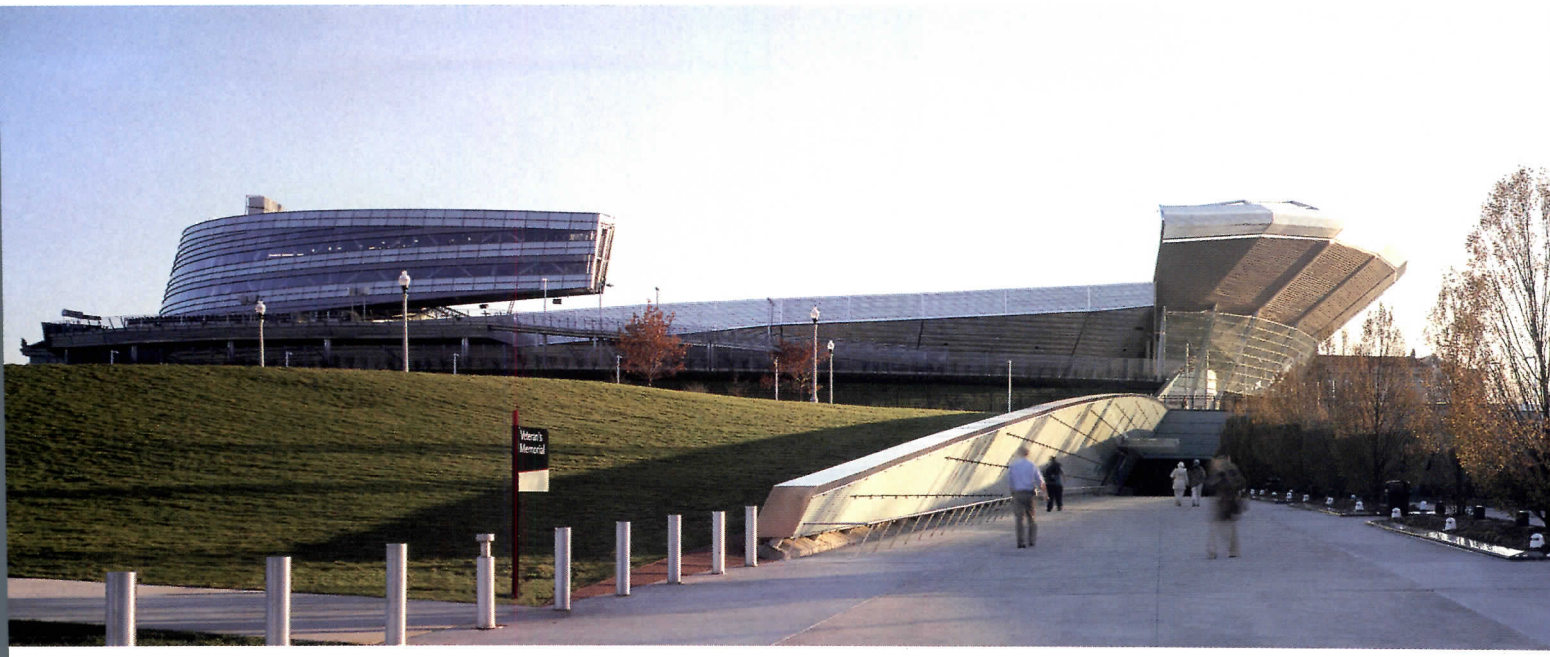
Particularly fascinating is the way that the skyboxes on the east, which protect the privileged few from the elements, don't actually collide or meet benignly with the seats on the west for the working class bravely suffering the harsh gales off the lake. After all, in real life, the two classes never meet anyway. The Eastern architects (Wood + Zapata) certainly got that right! The actual disjunction between the east and west seating accommodations is, in a way, a reiteration of the disunity between the colonnade and the spacecraft hovering above it.

The stadium has what some of us may call an "unresolved, asymmetric dialectic condition." This project demonstrates the authority that is possible when disparate elements are conjoined, however ungainly the results might appear in the eyes of cautious contextualists.

So, although Soldier Field isn't all that it might have been, it has the boundless strength and energy associated with the crudeness of Chicago's outdated uncivilized collective reputation (e.g., Stockyards/Al Capone). There's no way that a native-born Chicago architect would have had either the chutzpah or such a perverted sense of irony to have pulled it off.

Is there an architectural moral to this story? Yes, because it suggests a possible lack of backbone in the native born. And no, because it's just another example of Chicago politics. We didn't ask for this massive structure on an otherwise sacrosanct lakefront, but it's here, it's ours (warts and all), and we will, I assure you, come to love it no less than we once loved our smelly stockyards.

Stanley Tigerman, FAIA, is a Chicago architect.



led glass helps
ce shadows on the
ble gates, while
natic diagonal steel
mns convey upward
below). "Cracks" in
gestural, aerody-
namic top rim afford
lake and skyline views
(above). Beyond the
entry portals, interstitial
spaces provide sites
for circulation and
concession stands.

prints, the architects carefully calibrated distances and details so that the outside of their modern shell and the inside of the old one face each other and define piazzas in between, with mobile food and drink concessions. Along the edges of this circulation and gathering zone, colonnades, impeccably restored, oppose the new bowl's steel understructure and hovering volumes. Where the architects angled the glass to minimize shadows on the east temple gate, a sunny canyon forms between the solid old facade and new glass one, dynamized by the wall's incline. Fans enter the layered stadium through the original, restored portals and then pass through the space-compressing interim area, before entering the wide, open bowl. The complexity is Piranesian.

To capture as many seats as possible in a stadium shorter than the original, Wood + Zapata arched the sideline seating in a sweeping curve up and over the old stadium's west gate. Now, cantilevered bleachers, precipitously poised above exposed steel structure, follow an elliptical path unlike the original underlying shape—terminating in a top rim as gestural as a line drawing. The aerodynamically contoured bowl, floating over the temple form, charges the entire visual field with a sense of acceleration. Trusses at the south and north ends cantilever LED scoreboards daringly into space—like the arm of a quarterback releasing a pass—creating the gaps in the bowl's uppermost rim that reveal the long skyline, park, and lake views, far beyond the gridiron.

Rather than assume the language of Classical architecture through an arcuated or trabeated diagram system, the architects diagram gravitational forces, emphasizing horizontal thrust and diagonal lift, giving the bowl a sense of perpetual levitation. With sharply angled steel columns beneath the bleachers, Wood + Zapata perceptually minimize the structural role of these members and enhance the new arena's upward thrust, giving the hovering form a light presence. Structurally and visually, this bowl remains independent from, rather than seated on, the original colonnades.

THE ARCHITECTS HAVE DEVELOPED A DESIGN EMPATHETIC WITH THE SPORT, EVOKING THE PHYSICS OF THE GAME.

Unselfconsciously, the architects have developed a design empathetic with the sport, evoking the physics of the game. Here, minimal supports carry maximum weight with apparently effortless grace. The architects bypassed the mimicry of Classical language (not even in a Modernist idiom à la Mies). Instead, they lyrically nest a new structure within the old building—in dynamic contradistinction to its static and passive host.

With this reinterpretation of the sports arena, Wood + Zapata has challenged the tradition and logic of stadium morphology. The design also provides a convincing critique of Classicism. Whereas the myth of the ideal lies in immutable perfection, the new bowl posits change and movement as its philosophical basis. Just as science and the world have long since passed from Greek idealism into an Einsteinian age, Wood + Zapata has shifted architectural paradigms, transcending a Classical construct with a building that expresses contemporary thinking. Chicago has held front-row seats in the fight between the Classical and the Modern since the World's Columbian Exposition of 1893—where, according to Louis Sullivan, colonnades set the cause of architecture back a half-century. ■

Sources
Structural steel: *Hirschfeld Steel*
Curtain walls: *Permasteelisa; Josef Gartner USA*
Wide-vision panels: *Glas Troesch*
Storefront system: *Vistawall*
Architectural Products
Interior glazing: *Trainor Glass*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

grammatic analy-
generated the
mmetrical seating
as, which optimize
conditions and
t lines (right). In
stands, angled
mns support can-
ered bleachers in
veeping, visually
elerating motion
ow). Interior spaces
ommodate a variety
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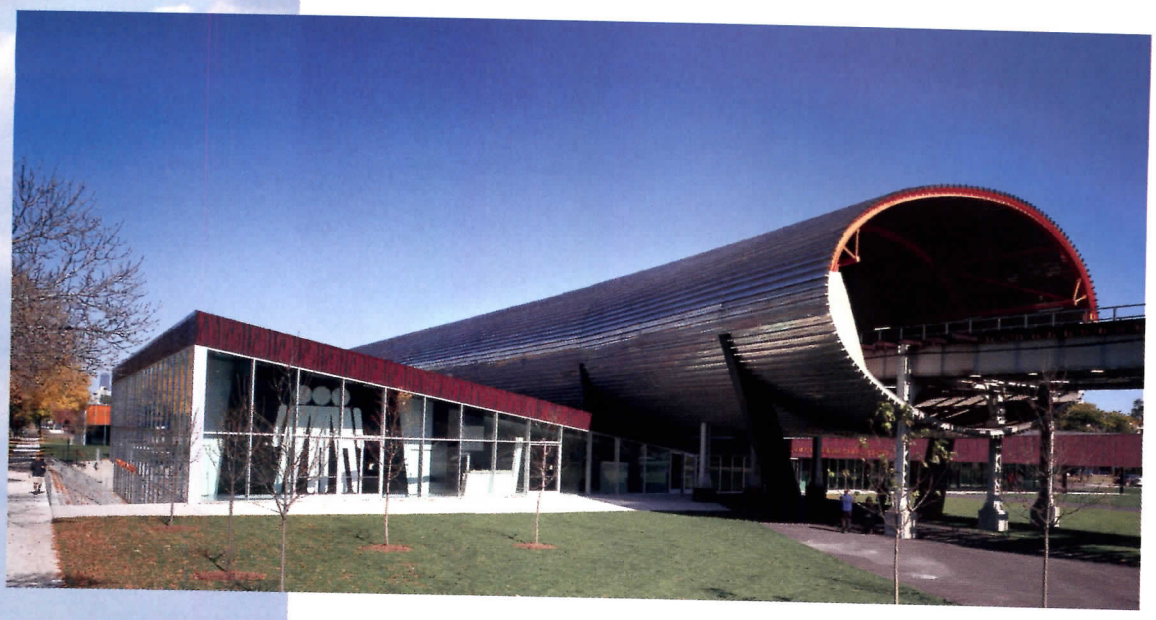
Iconoclasm invades iconic territory with Rem **Koolhaas's** design for the new **IIT CAMPUS CENTER** in Chicago

Koolhaas enbased the elevated train tracks in a stainless-steel-and-concrete tube and wedged the Campus Center underneath. "It takes 12 seconds for potential students to decide whether to apply," he says. "The building needs to catch their attention." State Street dorms by Murphy Jahn are in the foreground.



PHOTOGRAPHY: © RICHARD BARNES

By Suzanne Stephens

Mies without marble can be dry and sere. No matter how much Ludwig Mies van der Rohe's design for the Illinois Institute of Technology in Chicago exemplifies the highest and purest Modernism, 50 years after its construction (1945–68), the steel-and-concrete structures with brick-and-glass curtain walls look very quiet, almost lifeless.

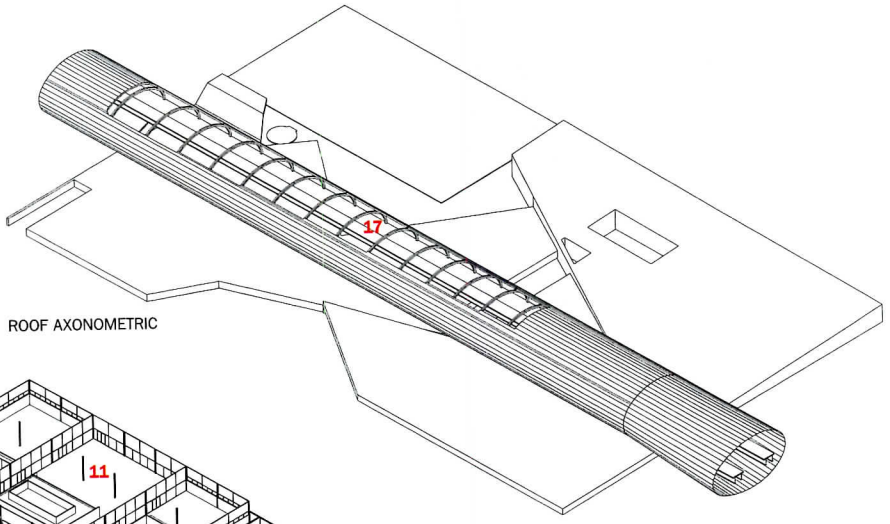
The McCormick Tribune Campus Center has altered the gestalt in one brash, bold blow. Designed by Rem Koolhaas and his Rotterdam-based Office of Metropolitan Architecture in association with the venerable Chicago firm of Holabird & Root, the exterior form looks almost like a one-story Miesian glass rectangle squeezed under—and deformed by—a 530-foot-long stainless-steel tube that stretches the length of its roof. Inside, diagonal circulation paths overlay a Miesian orthogonal plan, giving it a spatial dynamism. That vitality is bolstered by a slippery fusion of surface with section, where the ground level slides into a lower level, and spaces between ceilings and floors are compressed and expanded as you walk through the building.

Moreover, slickly gleaming planes for floors, walls, and counters add dramatic surface effects to the spatial ones. To counter these seductions, Koolhaas jolts the Center with juxtapositions of jarring colors and with slapdash insertions of rough-tech concrete or gypsum board on the exterior and interior surfaces.

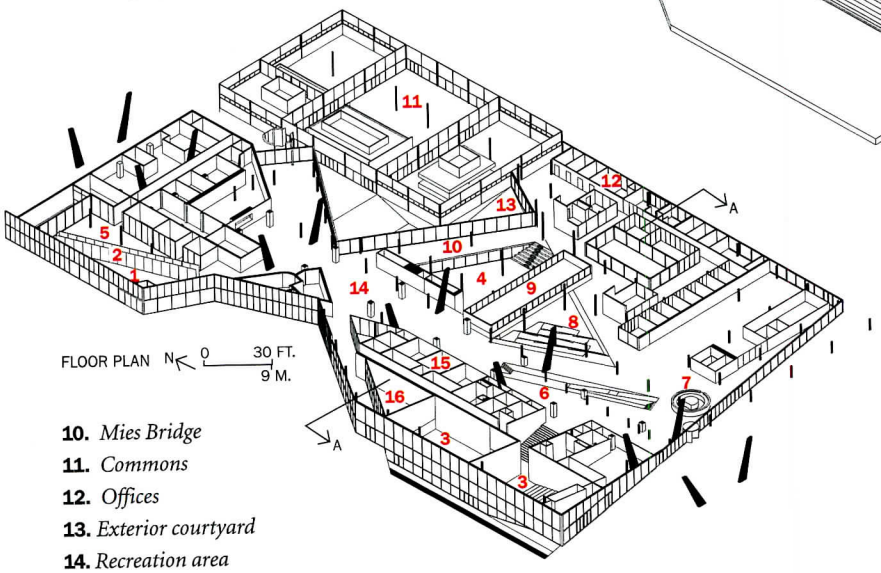
Aiming for the polymorphically perverse rather than the platonically perfect, Koolhaas mines architecture's potential for elegance and beauty, and then, sneering at its temptations, pushes it toward the subversive kitsch seen in the art of Jeff Koons or Damien Hurst or the purposeful frumpiness in the fashion design of Miuccia Prada or Helmut Lang.

Project: *The McCormick-Tribune Campus Center, IIT, Chicago*
Owner: *IIT*
Design architect: *Office for Metropolitan Architecture (OMA)—Rem Koolhaas, principal; Dan Wood project manager; Sarah Dunn, Jonilla Dorsten, Kristina Manis, Anne Filson, Jeffrey Johnson, project architects*
Architect of record and structural engineer: *Holabird & Root—Frank R. Castelli, AIA, principal; Dennis Vovos, AIA, project manager; Gred Gunloh, AIA, Michael Pancost, project architects*

1. *Main entry*
2. *Founders' Wall*
3. *Conference center*
4. *Center court*
5. *Faculty dining*
6. *Broadband (computer station)*
7. *Coffee bar*
8. *Ramp seating*
9. *Hanging garden*



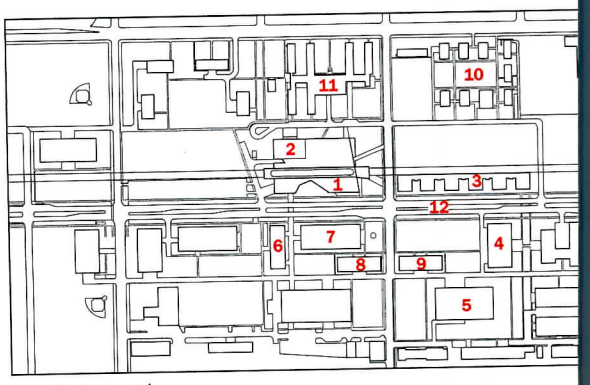
ROOF AXONOMETRIC



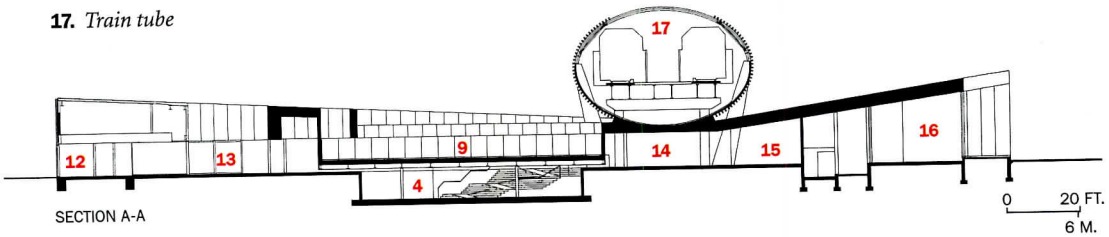
FLOOR PLAN N 0 30 FT. 9 M.

10. *Mies Bridge*
11. *Commons*
12. *Offices*
13. *Exterior courtyard*
14. *Recreation area*
15. *Meeting rooms*
16. *Executive conference room*
17. *Train tube*

1. *McCormick Tribu Campus Center*
2. *Commons*
3. *State Street Villag*
4. *Crown Hall*
5. *Galvin Library*
6. *Alumni Memoria*
7. *Perlstein Hall*
8. *Wishnick Hall*
9. *Siegel Hall*
10. *Greek Housing*
11. *McCormick Stud Village*
12. *State Street*



CAMPUS PLAN N



SECTION A-A

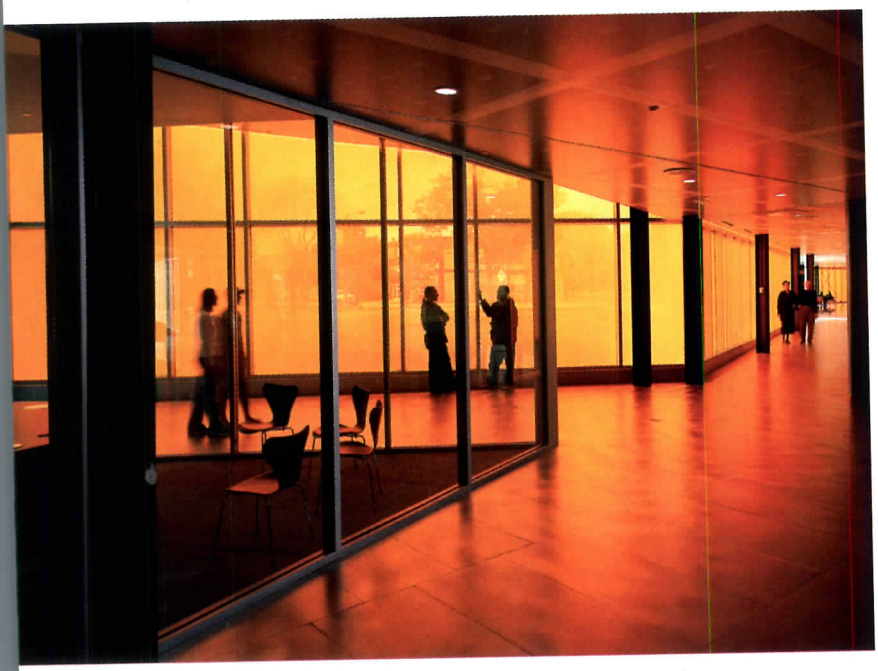
The location for the 110,000-square-foot Center couldn't be worse—where the elevated Chicago Transit Authority train track divides the academic campus from the residential one. Koolhaas says he figured that the best way to buffer the train's rumbles was to wrap the tracks in an elliptically shaped tube, the lower half of which is concrete encased in corrugated stainless steel, and the rest stainless steel. Then he wedged the $34.6 million rectilinear structure underneath the $13.6 million tube on its 5-acre site adjoining Mies's Commons. The buffer idea does work: Outside the building, the noise of the trains passing frequently above is 120 decibels, while inside it is cut down to 70 decibels. Although riveted steel piers support the train tracks outside, they are replaced by square concrete columns within, while the stainless-steel tube itself is carried on wedge-shaped concrete piloti. In addition, Mies's famous black I-beams appear as columns in a gridded regularity supplemented by steel decking and joists, with a poured-in-place concrete slab on grade.

The idea for a new campus center emanated from a master plan drawn up by Lohan Associates in the 1996. Although the Mies-designed Commons, completed in 1953, functioned as the student union, the glass-and-steel pavilion had long proved too small. While the Commons is now used primarily for dining, Koolhaas was asked to provide space for c puter terminals, pool tables and video games, a café, a faculty dining r a bookstore, and an auditorium and conference center. Donna Rober who had just taken over as dean of IIT's College of Architecture in (see Profile, page 264), helped formulate the parameters for a two- competition, which Koolhaas won in 1998, beating out Zaha Had London, Peter Eisenman of New York, Kazuyo Sejima and Ryue Nishi of Tokyo, plus Chicago's own Helmut Jahn.

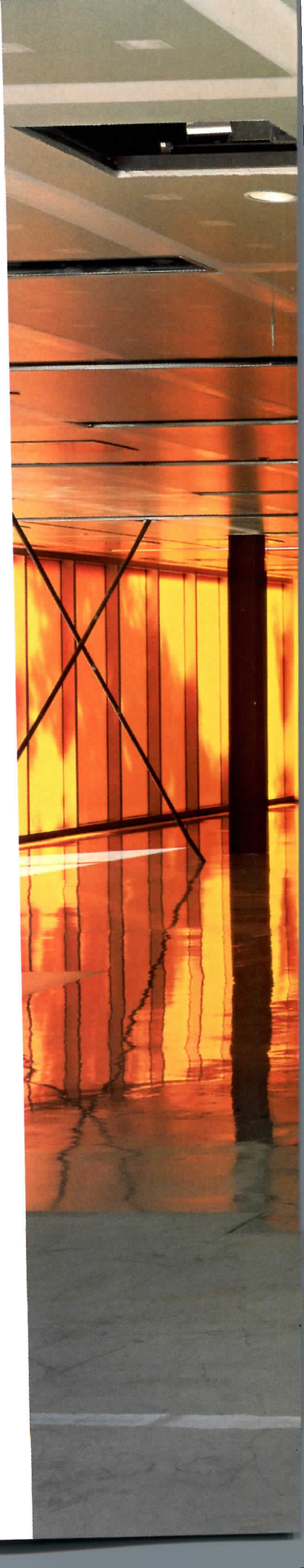
Koolhaas thinks he probably won largely because he had en sized one salient factor guiding the design: the students. He had tr the students' movements across the site of the former parking lot, meshed the diagonal patterns of those shortcuts with the orthogonal plate established by the Miesian campus plan. "The building is all moving," Koolhaas says. He extended this exercise to the section, rec in part OMA's earlier Jussieu Libraries competition in Paris (1993). the sectional play comes as a surprise because you enter a one-story ing to find spaces dropping down to light-filled areas.

The surface gleam visually heightens the kinesthetic experie walking through the shifting spaces. Students sip coffee or play billia

the west (main)
ade, a Panelite
ulating glass unit is
ed for the exterior
l. Here, a computer-
d image of Mies van
Rohe applied by
amic frit signals the
rance (right). Many of
double-glazed walls
e orange polycarbon-
tubular honeycomb
l, with orange PVB
ting on the inner face
ne exterior pane. An
ge lenticular wall
ering adds depth to
rear wall of the con-
nce center (bottom).



The "Founders' Wall," which includes an image of Mies in the entrance lobby (opposite), is formed from computerized pictograms applied by ceramic frit to glass. Behind this wall, a corridor descends to the faculty dining room (top left). Glossy epoxy-and-urethane poured flooring and plain gypsum-board ceiling. (middle left) appear throughout the Center, as does the orange glow from the Panelite system. A two-story dining area dropped below grade occupies the core of the Center (bottom left) between a bridge with a view of the Commons building and a suspended garden that brings in extra light.



The underbelly of th
stainless-steel tube
encasing the train
tracks is exposed i
the billiard area.
Concrete piers sup-
port the tracks, whi
the concrete wedge
shaped piloti carry
tube itself. A chann
of space for compu
is marked by an
illuminated polyme
honeycomb counte

s covered in shimmering aluminum panels or coated in a glossy green, or gray poured-in-place urethane-and-epoxy material. The orange with polymer honeycomb (Panelite) imparts a sunset glow even on cloudy days to areas where students mingle and talk. Elsewhere, pan- f expanded aluminum honeycomb with cast-resin facings partition ooms, and polymer honeycomb panels with cast-resin facings form tural counters, carrels, and café tables for those studying or dining.

In addition, a jazzily patterned, orange lenticular wall covering iated with kitschy, touristic postcards gives two-dimensional surfaces stract, three-dimensional life in the conference center. A sophisticated ic art program, conceived by Michael Rock of the New York City firm has added further punch. For example, the firm developed small pic- ms into large-scale computerized images of Mies and IIT's founders oldly dramatic glass wall at the main entrance.

Just as you are wowed by the glimmer, shimmer, and gleam of it olhaas cuts your taste buds dead with a massive intrusion of dully flat ials. Most assaulting is the red and black waterproofing on cement- roofing used as the exterior fascia for the rectangular building. This e-in-cheek rendering of wood laminate, totally kitsch-ugly, is applied ntentional sloppiness, and its color clashes with the orange-tinted glass Next to it, the unfinished gypsum board in off-white and light green for terior ceilings looks artful. (Another touch of Koolhaas's let's-make- roll-over-in-his-grave cheekiness can be found in an interior wall ng created from scanned zebra wood.)

The surface effects and the fascination with the ordinary brings to mind Venturi and Scott Brown, whose work Koolhaas particularly responds to. But Koolhaas's interest in spatial maneuvers sets him apart. (Venturi says in Koolhaas's latest book, *Content* (Taschen Press), that space is no longer "the essential architectural element of our time.") Koolhaas and Venturi Scott Brown do agree that architecture should be grounded in a casual and fast spirit. Koolhaas always asserts, "Architecture is too slow." He has a point, since the Center took five years to complete, what with the transit authority's need to maintain train service throughout construction.

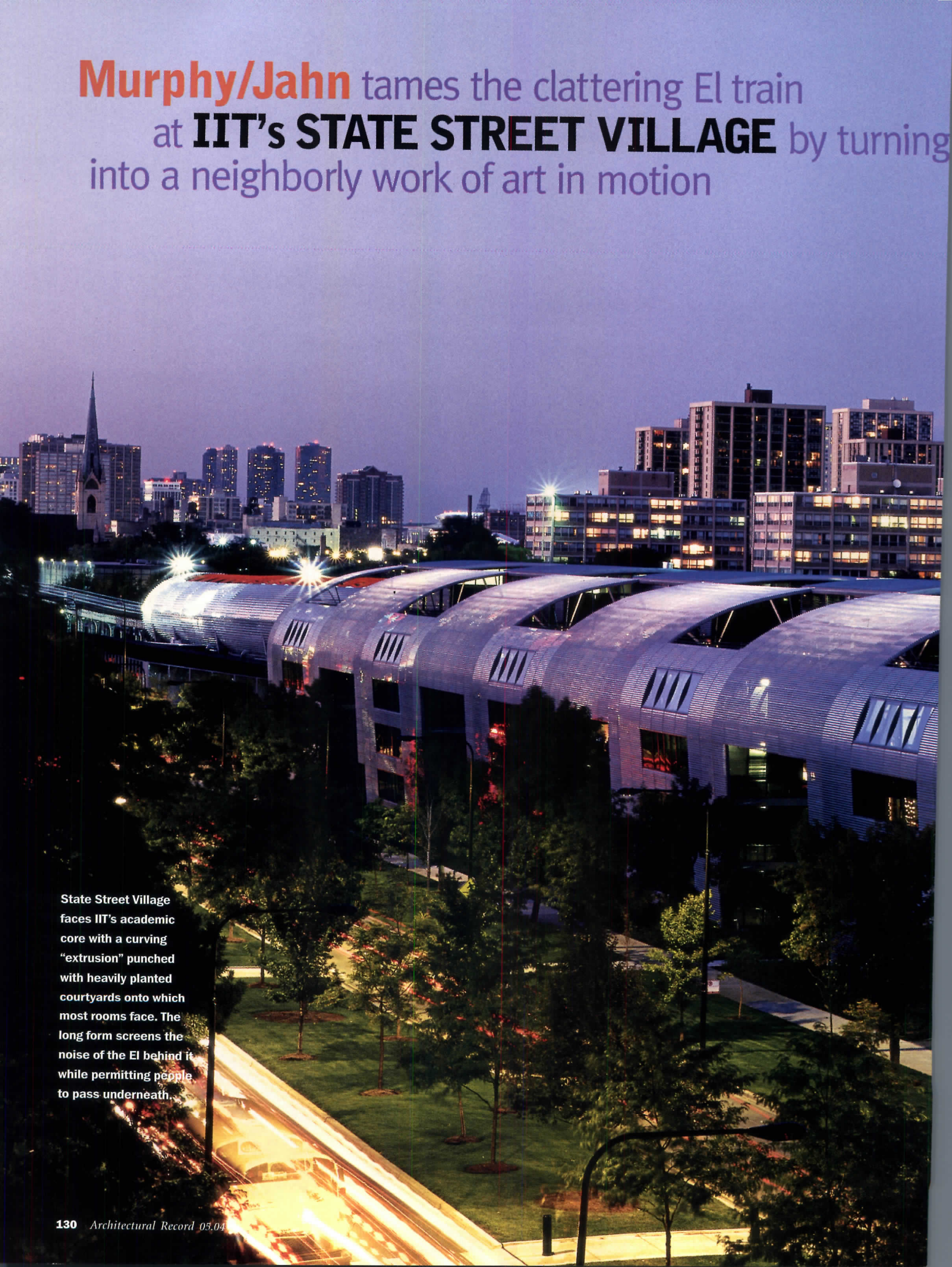
The cheap and fast parts of the Center challenge our long-held architectural values—of internal consistency, immaculateness of craft, elegance in material and detail. The building demonstrates that Koolhaas can give us these, but he wants to take architecture out of itself and join it with the worlds of commerce, certain kinds of art, and fashion. So what's wrong with that? Nothing, except that architecture does last longer. Or at least it has. There are those who still want to see it stand up in the rain, and be around for landmarking—especially when it has so much to offer. ■

Sources

CTA tube enclosure and SST decking: *Epic Metals Corporation*
Exterior and interior glass; partitions, carrels, counters, tables: *Panelite*
Aluminum curtain wall: *Wausau Metals*
Ceiling: *Tectum; USG*
Aluminum flooring : *Power Stretch*
Epoxy flooring: *Dur-A-Flex*
Lenticular wall covering: *DesignTex*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Murphy/Jahn tames the clattering El train at **IIT's STATE STREET VILLAGE** by turning into a neighborly work of art in motion



State Street Village faces IIT's academic core with a curving "extrusion" punched with heavily planted courtyards onto which most rooms face. The long form screens the noise of the El behind it while permitting people to pass underneath.

James S. Russell, AIA

The El train may be an emblem of Chicago—ugly, noisy, pragmatic—but for decades it has divided the campus of the Illinois Institute of Technology, clattering across acres of parking lots. For Helmut Jahn, who came to IIT in the 1960s, it was his cam- lifeline, the way to get to where he always wanted to be—the Loop its towers hovering Oz-like over the flat plane of the city.

He took the El from IIT in 1967 to join the Chicago firm of C.F. rphy, then run by Gene Summers, who would become a mentor. ited to compete more than 30 years later for an IIT dormitory project king up on the El, Jahn saw not an environmental menace to be allevi- ated, but an opportunity to pay homage to a work of civil engineering—however aesthetically challenged—that had meant a great deal to him.

Jahn's El love did not get him the job. Donna Robertson, the Dean of IIT's school of architecture (page 264), and a leader in the rejuvenation of its neglected physical plant, explains: "When we reached the end of Helmut's presentation, and we saw that terrace space on the roof and what kind of place it could be, that was it." She refers to the decks carved out of the curving arc of the roof atop the five-story structure (page 134). Though the elegance and power of the IIT buildings by Mies van der Rohe and other like-minded architects still commands respect today, the

The corrugated-metal cladding is perforated over the courtyards for afternoon shading. El trains silently pass behind the transparent lobbies and elevator.

sober image the old campus presented did not exactly promise a joyous student life. Both Jahn's State Street Village, housing 367 students, and the adjacent McCormick Tribune Center (page 122) address the student experience directly, though in almost completely opposed ways.

Both structures signal a rebirth for the campus and the neighborhood. IIT has hunkered as Chicago's South Side spiraled into deep poverty. Today, the turnaround in the city and in nearby Bronzeville (once Chicago's vibrant answer to New York's Harlem) is palpable, and IIT is revitalizing as well, in the process trying to tie itself more closely to its neighborhood. A $120 million gift in the 1990s by Robert Pritzker and Robert Galvin has boosted the school's academic and physical rebirth.

State Street Village was positioned on this difficult site according to a campus master plan developed by Lohan Associates. "So many of our students are in science and technology programs," explained Robertson. "They can seem happiest staring into a microscope for hours. But our campus too often looked empty." The plan put more activity on State Street, which—with the El—divided the campus, by proposing to line its empty eastern side with new buildings.

Jahn drew a long, linear building to echo the implied movement of the El. He curved the envelope in section "like an extrusion, a streamlined object," he says. In plan, he arranged the combination of suites (including a shared bath) and apartments around five courtyards, tw which punch through so that people can readily pass from reside facilities to the east to the academic core on the west. Adds Robert "Helmut cleverly negotiated between the master plan and the Kool strategy at the Tribune Center to keep space under the El open to m ment between the campus and the neighborhood."

Jahn achieves privacy, a clean appearance, and ample light i with floor-to-ceiling, deeply tinted glass supported by mullions as th the standard-curtain-wall budget would permit.

The layout of suites and apartments (rather than rooms rated from baths) responds to student preferences. Media lounges wireless-Internet connections and wall-mounted plasma screens

Project: *State Street Village, Chicago*
Owner: *Illinois Institute of Technology*
Architect: *Murphy/Jahn—Helmut Jahn, John Durbrow, Peter Hayes, Chad Mitchell, Dan Cubric, Naotami Yasuda, Salim Bou-Saab*
Engineers: *Werner Sobek (struc Transsolar (mechanical concept)*
Consultants: *Peter Lindsay Sch (landscape); Dorsser Raadgeven (acoustics)*
General contractor: *W.E. O'N*

stretched a plane
ss (a laminated
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the El side (far
, extending it
s the courtyards
e) and beyond the
s (right). It cuts
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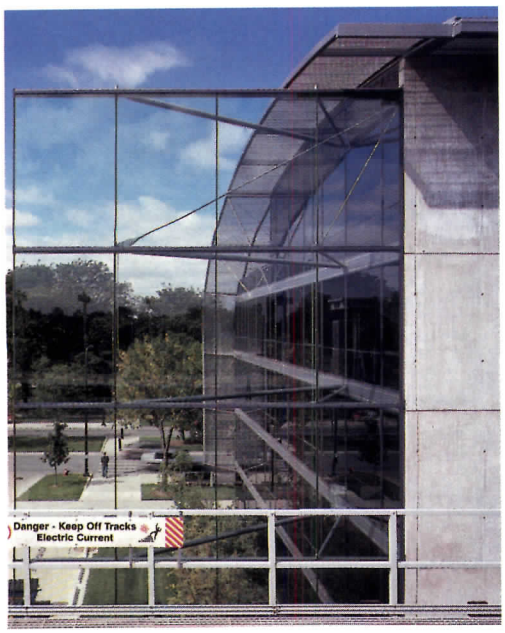
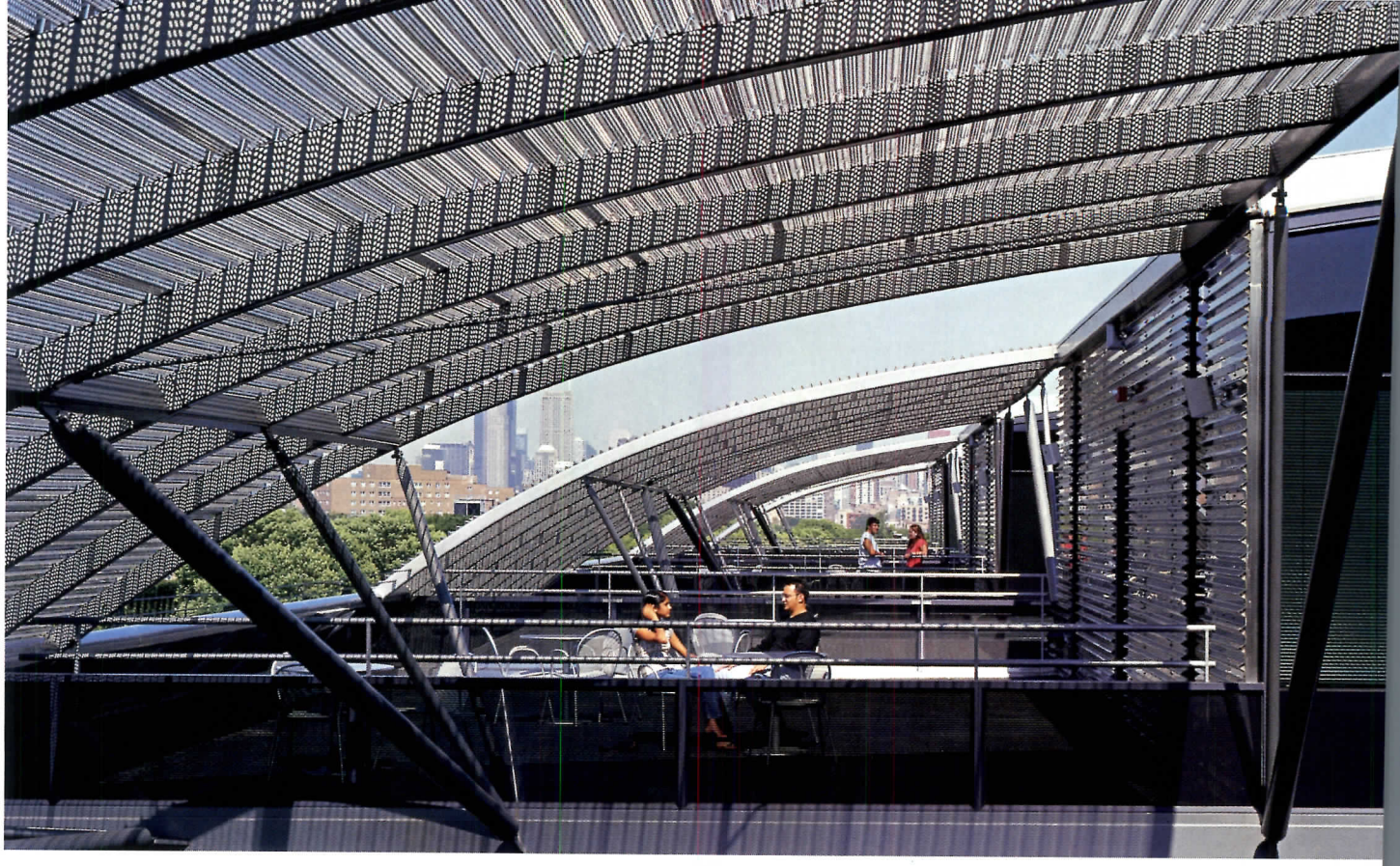
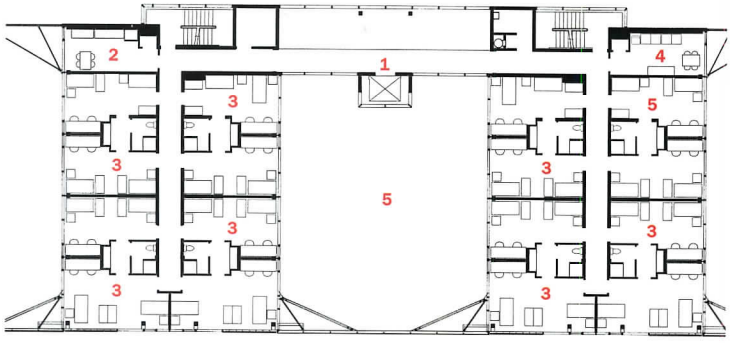
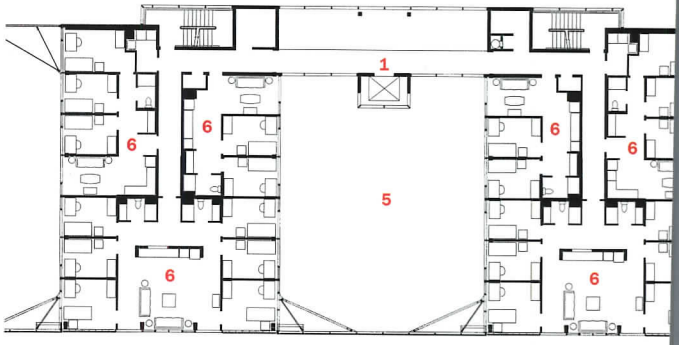
in motion.







TYPICAL FLOOR (SUITE UNITS)



TYPICAL FLOOR (APARTMENT UNITS)

1. *Lobby*
2. *Shared kitchen*
3. *Shared bath units*
4. *Laundry*
5. *Courtyard*
6. *Apartment units*

been popular, as is the ability to monitor clothes-washer progress via the Internet. The full transparency of the lobbies and elevators isn't merely elegant; it increases security by making the spaces visible inside and out. The openness also enlivens the street, especially at night.

Neither State Street Village nor the Koolhaas/OMA McCormick Tribune Center down the street could be thought contextual extensions of the singular artistic vision of the "classic" IIT campus. Koolhaas visually punches Miesian sobriety in the face by luridly squashing the Tribune Center under the El with a functionally gratuitous tube. Even the bows it takes to Mies are tinged with Oedipal aggression, like the Modernist curtain wall jokily tinted orange. The Murphy/Jahn village is temperamentally cool, akin to Mies, and possesses a reassuring gravitas compared to the Tribune Center. Somehow, the stripped-to-fundamentals grandeur of Crown Hall, right across the street, manages to make even the Jahn structure look a bit slick, its curve, screens, and braces almost frivolous. In no other context could one say that about State Street Village.

IIT has more construction planned, says Robertson, inclu restoration of several of the campus's Modern landmarks. But don new structures diminish the legacy of Mies? "We think of these as 'be Mies,'" says Robertson. "We needed to show a commitment to the S Side campus; we're responding to student desires and supporting a tectural excellence. Mies said architecture should be the will of the e translated into space. We're expressing the will of *this* epoch." ■

Sources
Structural system: *WSI; Mero Structures*
Curtain wall: *Arcadia*
Metal roofing: *G. & L. Associates*
Aluminum windows: *Moduline; Kawneer*
Glass: *Viracon*
Furniture: *Heltzer (Murphy/Jah designer)*
Elevators: *Mitsubishi*

For more information on this pr go to Projects at **www.architecturalrecord.c**

rated screens
cting the court-
open to rooftop
ces (opposite).
ar braces reduce
ickness of the
n's spanning sup-
(right). Similar
nal tube supports
narrow horizon-
ullions at the
yard's El-facing
walls (visible on
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with suspended
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op left) offer an
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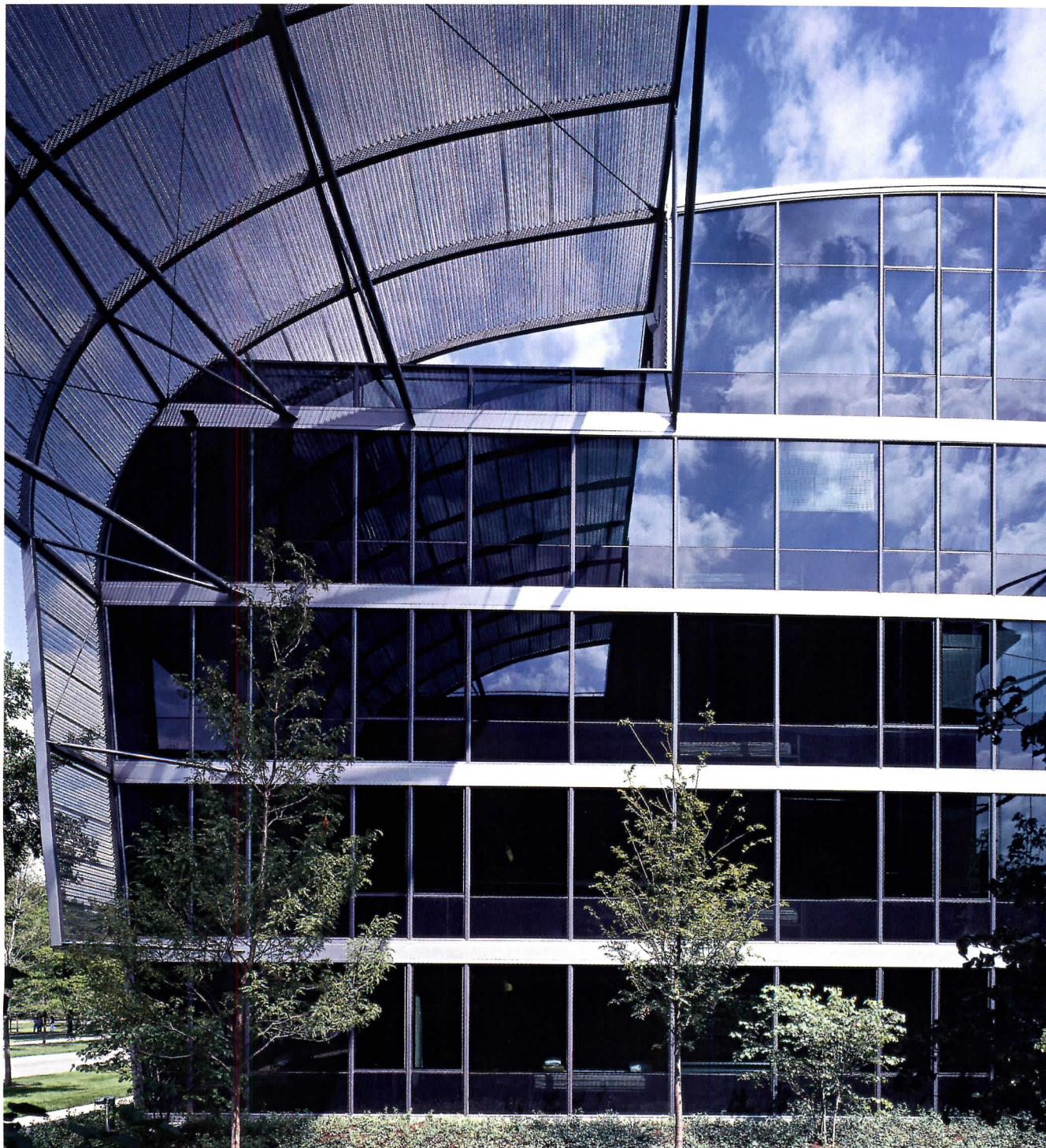
ortable with.



Ralph **JOHNSON** of Perkins & Will pulls apart the high-rise apartment building, then reassembles it at **SKYBRIDGE**

The $95 million project (right) rises above the Kennedy Expressway and enjoys great views of the downtown to the east (left spread).

PHOTOGRAPHY: © STEINKAMP/BALLOGG, EXCEPT AS NOTED; NICK MERRICK/HEDRICH BLESSING (RIGHT)

By Clifford A. Pearson

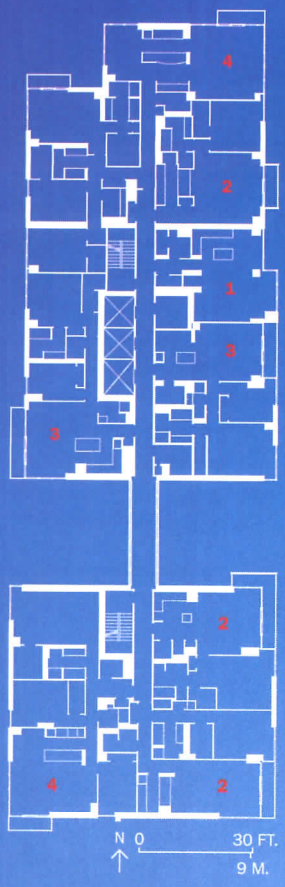
When asked why he thought Ralph Johnson of Perkins & Will won the competition to design Skybridge, a fellow Chicago architect familiar with the project shook his head and exclaimed, "He broke all the rules!" As every architect who has designed high-rise housing in America knows, the building type comes laden with a litany of rules and customary practices that have resulted in a limited number of design formulas favored by developers. Look around our cities and you'll find numerous apartment buildings shaped by cookie cutters.

Never having designed a residential tower before, Johnson brought a fresh perspective to the often hackneyed art of multifamily housing design. Instead of creating yet another monolithic vertical slab, he pulled the building apart so it reads as an assemblage of pieces separated by voids and glazed bridges. "We wanted to do a Modern apartment tower, one that made a statement," says Johnson. Rising above the Kennedy Expressway on the western edge of downtown, the 39-story building enjoys unobstructed views east to the city's skyline and serves as a gateway to the low-scale Greektown neighborhood at its feet. "The idea was to take full advantage of the site and the views downtown," states Howard Weiner, president of Dearborn Development, which developed the property. "I felt we could push the envelope architecturally with this project. We had gotten in a rut in Chicago and had not produced any really innovative towers in a number of years."

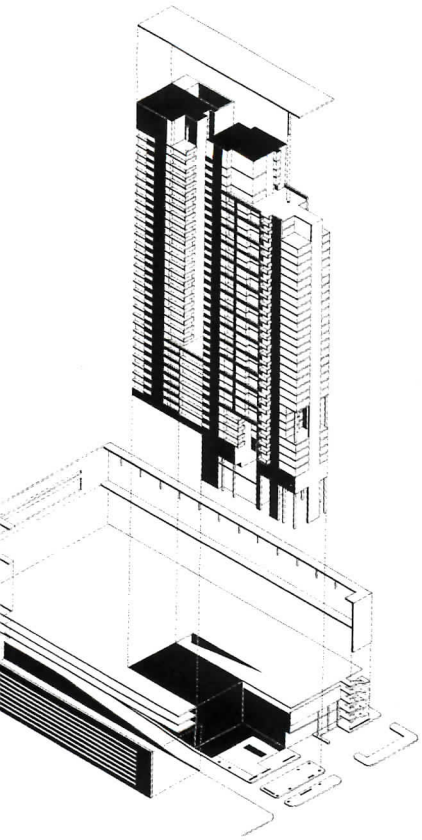
Dearborn, which had built low- and mid-rise housing, as well as retail and commercial projects, decided to solicit new ideas, says Weiner. So it invited Johnson, plus Murphy/Jahn and Nagle Hartray Danker Kagan McKay, to propose designs in a competition for the job. "Ralph did a great job with the massing," explains Weiner. "By breaking down the building into what's essentially two towers and creating multistory voids, he created an urban village."

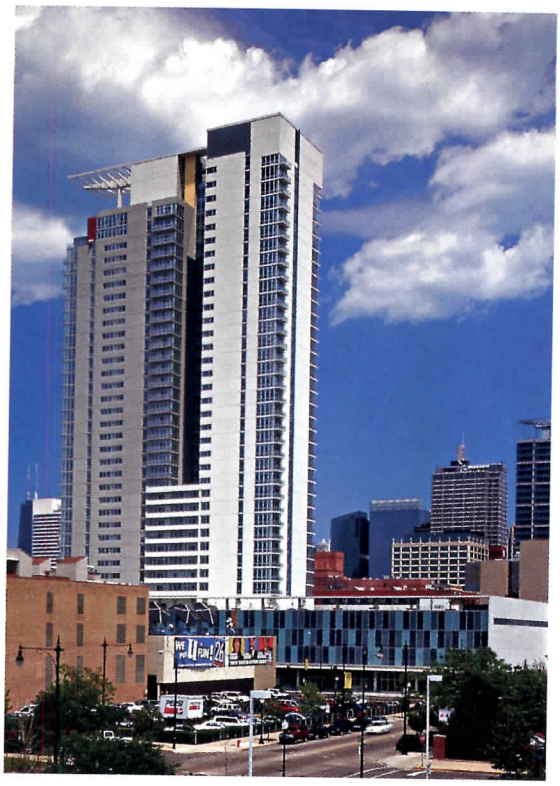
Johnson's initial scheme arranged apartments along a single-loaded corridor, so they all faced downtown, and featured a solid concrete roof plane dramatically cantilevered above the penthouse units. In the end, the single-loaded scheme didn't work. But thanks to the see-through bridges and glazed corners, many of the apartments on the western side

Project: *Skybridge at One North Halsted, Chicago*
Owner: *Moran Associates/Dearborn Development*
Architect: *Perkins & Will—Ralph Johnson, FAIA, design principal; Terrance Owens, AIA, G. William Doerge, managing principals; Fereidoon Afshari, AIA, technical principal; Curt Behnke, senior designer; Ken Soch, Bryan Schabel, Raymond Coleman, Monica Oller, Aimee Mosesson, Malaika Corsentino, Rick Reindel, Jim Skalla, Jack Bransfield, project team*
Engineers: *Samartano (structural); WMA Consulting Engineers (m/e/p, fire protection); Wolff Clements (landscape); Eriksson Engineering (civil)*
Construction manager: *Ameri-con Enterprises Services*
General contractor: *Walsh Construction*



1. *Duplex apartment*
2. *One-bedroom apartment*
3. *Two-bedroom apartment*
4. *Three-bedroom apartment*





The building addresses North Halsted Street with a retail and parking wing (below and above left). Every unit has a balcony or terrace (above right).

of the building can still catch glimpses of the downtown skyline. The architects also had to drop the idea of a solid roof plane, after studies showed that pressure from wind uplift would have been too great. So Johnson turned the roof plane into a steel trellis but kept the strong horizontal edge that gives the building a distinctive top.

Another strength of Johnson's scheme was the flexibility it offered in terms of combining dwelling units. By putting different size apartments next to each other—rather than segregating large ones from small ones—the floor plans accommodate many unit combinations and permutations. As it turned out, such flexibility was a big help in dealing with a market made skittish by the events of 9/11 and a sluggish economy. Originally planned to have 237 residences, the building will end up with about 200 after buyers combine units, reports Weiner. The apartments range from 950-square-foot, one-bedroom residences selling for $270,000

"I FELT WE COULD PUSH THE ENVELOPE WITH THIS BUILDING," THE DEVELOPER SAYS. "CHICAGO HAD GOTTEN INTO A RUT."

to a 4,000-square-foot penthouse for $1.6 million. City authorities had pushed the developer to include a number of three-bedroom apartments, hoping to bring families to the downtown area. Weiner reports, though, that these units have not sold well, because buyers have tended to be either empty-nesters or young couples.

Although designed to be seen from a distance, Skybridge also works hard to fit into its neighborhood. At the base of its west elevation, the building addresses North Halsted Street with a long, four-story structure housing a Dominick's supermarket and other retail outlets on the ground level and three levels of parking above. Translucent colored-glass panels screening the parking levels and a crisp, concrete frame echoing the design vocabulary of the tower help create an engaging urban anchor for the project. The architects slipped additional parking below grade and into a structure on the east side of the base, facing the expressway.

To carve multistory voids from the mass of the building create the project's distinctive 25-story-tall glass slot required some st tural gymnastics, but nothing outrageous. Concrete columns 30 inch diameter and concrete shear walls (mostly perpendicular to the leng the building) serve as the key members of the structural system, sup mented by the vertical circulation cores in the two towers. At the to the building, upturned structural beams help tie the towers togethe pulling columns inside the apartments, the architects maximized th of glass wrapping around the building. As a result, most of the build perimeter offers floor-to-ceiling glazing and many units have glazed ners. Every apartment has its own outdoor space, either a balcon terrace, some of which are quite generous in size. While the build fancy structural system cost more than a conventional design would it also creates more corner units, which sell for more. "The differ between innovative architecture and standard design is 5 to 10 perce construction costs," says Weiner. "If you can't handle that, then don't on a project like this."

To keep costs down, the architects used painted concrete fo exterior of the building and simple materials such as maple paneling ceramic floor tiles in the small, two-story lobby.

"The developer took a risk with this project," says Curt Bel the senior designer on Johnson's team. "It's a different kind of bui for the city," he adds. A year after the building opened, about 65 pe of the units have sold, says Weiner. Although the developer has had ects that sold faster, he is quite proud of Skybridge: "Twenty years now, this will be one of Chicago's landmarks." ■

Sources

Painted concrete: *M.A.B. Modac*

Anodized aluminum curtain wall: *Vista Wall*

Anodized aluminum windows: *Traco*

Insulated low-e glazing: *AFGD*

Color ceramic-frit glazing on garage: *Viracon*

For more information on this pr go to Projects at **www.architecturalrecord.c**

uilding's name-
bridge offers
east and west
w). Bringing struc-
columns inside

allowed glass to wrap around units (above and opposite, right). The lobby is small but tall (opposite, left).

Top to bottom
1. Florida Hospital Waterman
2. Cohen Stadium
3. David L. Lawrence Convention Center

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CONVENTION CENTERS

Civic Pride

THE LATEST GENERATION OF CONVENTION CENTERS REVEALS A BUILDING TYPE THAT HAS EVOLVED FROM EYESORE TO ICON.

By Sara Hart

One need only stand in the middle of Mount Vernon Square in Washington, D.C., and observe the juxtaposition of the capital's new convention center to the north and its predecessor a few hundred yards to the south to witness a paradigm shift in design. The former is a welcoming structure of transparency and elegance, the latter an ominous concrete tomb that suggests spectators go in, but they don't come out. The old convention center is a relic of the 1970s when developers of large, public venues were satisfied with blank containers that turned their backs on the cities that hosted them. The rationale for this was that exhibitors wanted black boxes in which they could create their own theatrics without daylight's intrusive reality check. The result was an experience not unlike a Las Vegas casino: no clocks, no sense of day or night, no external distractions.

Las Vegas hasn't fixed what in its case isn't broken, but developers of convention centers and similar building types—sports arenas and even shopping malls—are confronting new economic realities, not the least of which is increased competition for business. Every second-tier city from Raleigh, North Carolina, to Worcester, Massachusetts, is building such facilities, the theory being that their by-products—hotels, restaurants, and retail operations—will revitalize depressed urban areas or deliver architectural distinction to a bland context. To gain advantage in this competitive environment, city officials and private developers promote their projects as having unique amenities that will benefit the local residents as well as visitors. Then they chose architects who can produce the visual drama to make these behemoths desirable destinations.

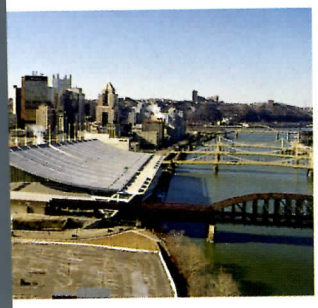
In all three projects discussed here, functionality in the exhibition halls remains an elemental priority. Regardless of the civic pride at stake, these halls are the financial nucleus of any convention center. Paradoxically, all three firms used transparency to hide these sealed internal containers. At the same time, transparency penetrates the massing and diminishes the bulk associated with this building type. Visitors remain connected to the outside world, and passersby are treated vicariously to the activities taking place inside.

Besides finely detailed curtain walls and soaring, light-filled atriums, the architects of each project succeeded in turning secondary spaces, clumsily referred to as "prefunction" areas, into destinations in their own right, deserving of another label. Here, the collaboration between architect and interior designer was crucial. In all three cases, the partnership paid off to the extent that these supersize volumes might actually be called glamorous. Another fabulous paradox. ■

1.

Washington, D.C.

Thompson, Ventulett, Stainback disprove conventional wisdom by elegantly reconciling building mass and residential scale.



2.

Pittsburgh

Rafael Viñoly applies sustainable principles on a large scale with an iconic beacon on the banks of the Allegheny River.

3.

San Francisco

In a joint venture, Gensler lifts the Moscone Center out of the ground with a sparkling addition.

ore information on these projects, go to Projects at architecturalrecord.com.

Washington Convention Center
Washington, D.C.

1 **THOMPSON, VENTULETT, STAINBACK & ASSOCIATES HAS GIVEN THE U.S. CAPITAL A NEW CONVENTION CENTER AND THE NATION A TOWN HALL.**

By Sara Hart

Architect: *Thompson, Ventulett, Stainback & Associates—Thomas W. Ventulett, FAIA, C. Andrew McLean, FAIA, R. Scott Sickeler, AIA, Liz Neiswander, AIA, Ken Stockdell, Jr., AIA, Mike Hagen, AIA, Kevin Gordon, AIA, Mike Azumi, AIA, Peter Green, AIA, Scott Morris, AIA*
Architect of record: *Mariani Architects Engineers*
Associate architect: *Deveroux & Parnell*
Client: *Washington Convention Center Authority*
Consultants: *James Madison Cutts, Mueser Rutledge Consulting Engineers, Ross Bryan Associates, Daniels and Associates (structural); Lee & Liu Associates (landscape); TVS Interiors (interior design)*
General contractor: *Clark/Smoot, Joint Venture*

Size: *2,300,000 square feet*
Cost: *Not available*
Completion date: *March 2003*

Sources
Curtain wall: *Advanced Structures; Kawneer*
Masonry: *Tyndal Brick*
Operable partitions: *Modernfold*
Elevators/escalators: *Fujitech America*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Contemporary Washington architecture is, as a rule, uninspiring. Because of the city's well-known and much-groused-about height restrictions, as well as its deference to L'Enfant's 1791 plan, developers have been forced to fill the allowable envelope of every site, often with mediocre results. Modernist bulk—frequently rendered in a Classical pastiche of stone or brick veneer—rules the blocks of downtown.

Enter Atlanta-based Thompson, Ventulett, Stainback & Associates (TVS) to challenge conventional wisdom. Although a diverse practice, TVS is best known for designing some of the most carefully crafted convention centers in 34 U.S. cities. Chicago's McCormick Place and the Pennsylvania Convention Center in Philadelphia set the standard for this building type and, as a result, they have received the highest honors from the American Institute of Architects. With its experience and expertise, TVS was the logical choice to design a landmark for Washington in the form of a convention center. Ten years in the making, including an approval process that required review by more than a hundred local and federal agencies, TVS has shown through perseverance and talent that stringent regulations need not preclude exceptional design.

Program

By definition, convention centers are enormous structures, but TVS was

faced with layers of complexity, including 700,000 square feet of exhibition space, a 230,000-square-foot assembly hall, 70 meeting rooms, and a ballroom with banquet seating for 3,000.

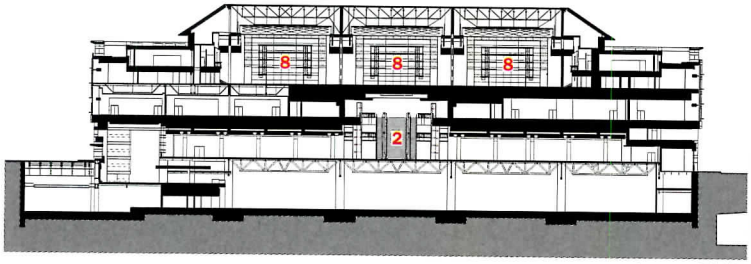
The task was further complicated by location. The six-block site is situated in a residential and light-commercial neighborhood with underrealized economic potential in sight of the Capitol dome and minutes from Union Station. Ambitious plans to develop a seemingly vulnerable neighborhood attracted serious scrutiny from numerous interested parties and, in this case, highly politicized ones. At the same time, the city had a desire to construct a high-profile symbol of prosperity and democratic ideals in uncertain times. Finally, TVS was charged with creating not just a commercial venue and tourist destination, but a new monument in a city whose identity is defined by large public monume

Commentary

A checklist of well-executed feat doesn't begin to describe the architectural achievements of th project: Functionality and securi are invisible; way-finding is intuit interior design blends seamless with the architecture; scale and proportion, the fundamental pri ples of architecture, are handle with authority and boldness. Init there was the problem of scale, as the complex is enormous. Th architects realized that the only to keep it manageable was to p two thirds of the program belo grade. Of course, this required removal of two million tons of e

And yet, boldness is balanc respect and a well-researched u standing of the area. For instanc

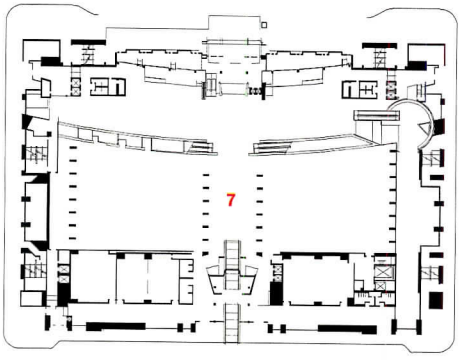
solidly anchored
corner at Mount
non and 7th Streets
n solid piers sup-
ting transparent
hering spaces with
views of the skyline.
The convention center
mixes well visually with
the old Beaux-Arts
Carnegie Library across
the street (opposite).

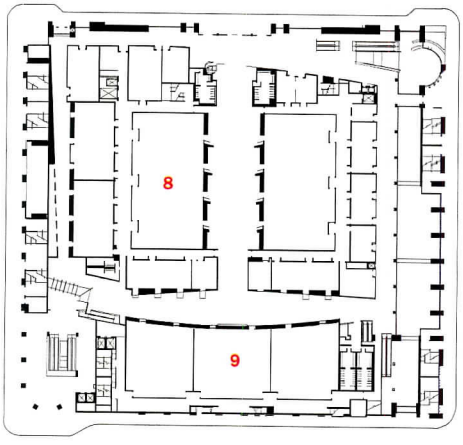


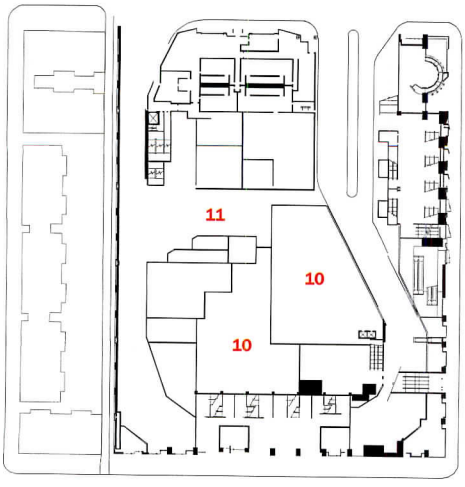
SECTION A-A

0 50 FT.
15 M.

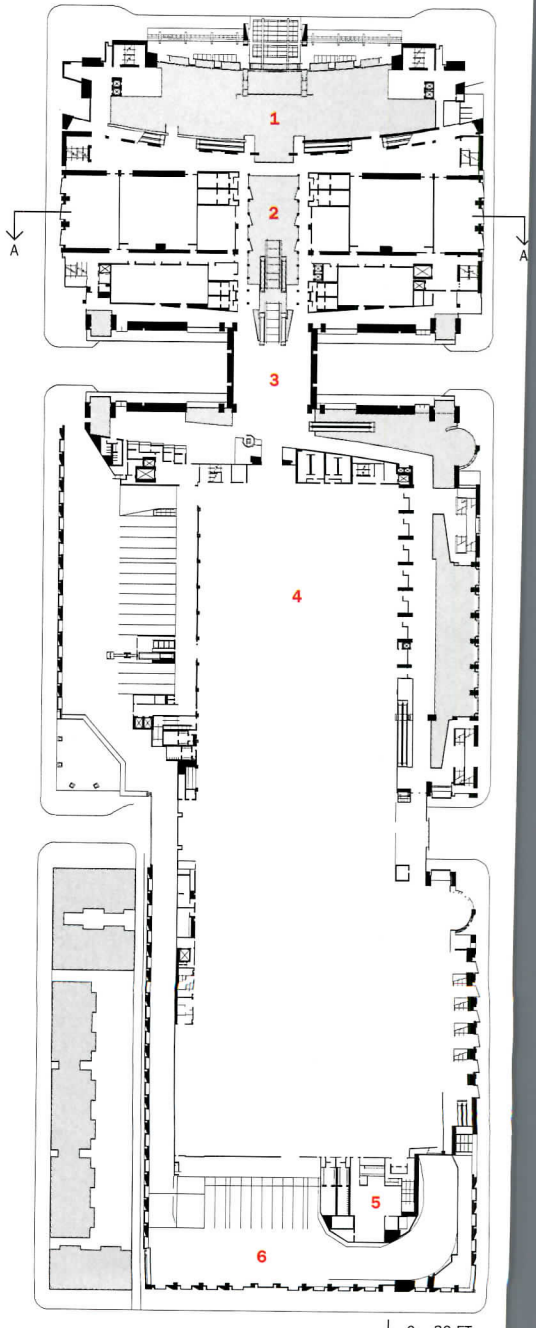
1. *Grand lobby*
2. *8th Street concourse*
3. *8th Street bridge*
4. *Assembly hall*
5. *Service area*
6. *Truck docks*
7. *Registration*
8. *Junior ballroom*
9. *Meeting rooms*
10. *Central plant*
11. *Service drive*







THIRD FLOOR



MAIN FLOOR

N 0 30 FT.
9 M.

...umental pylons
...s page) anchor
...entry facade and
...de to the contin-
...on of 8th Street,
...ch was part of
L'Enfant's original plan. TVS modulated the west elevation (opposite) as it marches into a residentially scaled area.

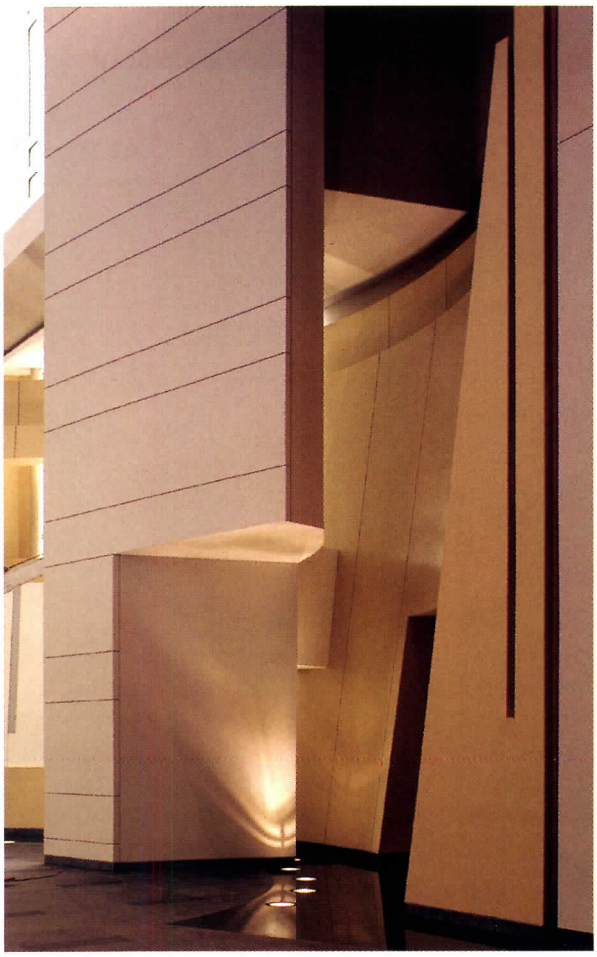
Skylights flood the main lobby with light (this page). One of two monumental staircases leads to the second level. A ramp and escalator are discreetly positioned behind the row of columns to the right the stair. The archite opened the interior planes (opposite, to to provide orienting through the spaces.

entrance on the north side of
nt Vernon Square looks at the
Museum of Washington (formerly
Carnegie Library), a much smaller,
ux-Arts gem, completed in 1902
still commanding a stately pres-
in the square. The architects
owledged its eminence by cen-
g the new building's main lobby
xis with the museum and mirror-
s symmetry. Massive stair towers
e corners match the museum's
stone cladding.

The architects modulated and
ed-down the facades as they
nce along three large blocks
into the heart of the neighbor-
. Limestone gives way to precast
rete, which then turns to an off-
e brick, which respects the
erials and scale of the neighbor-
while maintaining the language
e complex. It's a subtle and effec-
ransition. As a result, there is no
itecturally inferior back side to
complex. Retail spaces and sec-
ary entrances circumscribe the
lope. Seventy loading docks are
ed within the building with access
cross streets, which break the
s into three distinct structures at
e with pedestrian bridges above
connect the components.

TVS's fastidious attention to
ortion continues inside. Often
the architecture and interior
gn are developed independently,
two efforts compete. This short-
was avoided, because TVS and
qual sibling, TVS Interiors, col-
rated from the first day. A grid
veals and changes in material
tes a hierarchy of details.

Furthermore, TVS has saved
monumental staircase from
ction. Ceremonial procession is
hallmark of grandeur, and in
y large civic projects, the stair
been supplanted by the efficient
economical escalator. Two
d staircases lead, rather than
visitors through the public
es. While flanked by apparently
atory escalators, the staircases
he prevailing architectural ele-
, beacons in the vastness of
nterior. As the architects know,
everything else is equal, it's
xperience that counts. ■



The ceiling of the ballroom is a decorative, open, sectional scrim of glass-reinforced gypsum, which hides the lighting and mechanical equipment while providing easy access.

David L. Lawrence Convention Center
Pittsburgh

2 **RAFAEL VIÑOLY ARCHITECTS' BRIDGELIKE STRUCTURE ON THE WATERFRO REAPS ACCOLADES FOR ENERGY EFFICIENCY AND ENGINEERING INGENUITY**

By Deborah Snoonian, P.E.

Architect: *Rafael Viñoly Architects—Rafael Viñoly, FAIA, principal in charge; Jay Bargmann, AIA, project director; David Rolland, AIA, project manager; Charles Blomberg, AIA, Francesco De Fuentes, Tomomi Hayashi, Patrick Hwang, Julian Kinal, Edward LaLonde, Keisuke Nibe, Felipe Nistal, Aki Shimiz, design team*
Client: *Sports and Exhibition Authority, Pittsburgh*
Engineers: *Dewhurst Macfarlane and Partners/Goldreich Engineering (structural); Burt Hill Kosar Rittelman (m/e/p, fire protection)*
Consultants: *LAM Partners (lighting); Shen Milsom Wilke (A/V, telecom, acoustics); Chilton Engineering (civil engineering); Crystal Fountains (water feature)*

Size: *1.45 million square feet*
Cost: *$294 million*
Completion date: *September 2003*

Sources
Structural system: *ADF (steel); Birdair (cable roof system)*
Cladding: *AJAY (glass curtain wall); Alucobond (metal panels); Centria (corrugated metal panels); Overly Manufacturing (stainless-steel roofing); Birdair (tensile fabric membrane)*
Louvers: *Construction Specialties*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Longtime residents of Steel City remember the days when white-collar businessmen changed their shirts each afternoon after airborne soot had dirtied the ones they'd worn in the morning. But Pittsburgh has cleaned up its act since its flagship industry dried up, and city officials have embraced the tenets of green building. The new David L. Lawrence Convention Center embodies the aspirations of a city reinvigorating its downtown core as it strives to craft an identity around its universities and new industries in the medical and high-tech fields.

Program

In 1998, the Sports and Exhibition Authority announced a competition for an addition to an undersize convention center on the south shore of the Allegheny River. The program, conceived by local officials, required firms to incorporate sustainability strategies into their schemes. A nine-member jury winnowed through hundreds of entries to pick four finalists, and in February 1999, the jury announced the unanimous selection of Rafael Viñoly Architects over Arquitectonica, Cesar Pelli & Associates, and Skidmore, Owings & Merrill. An aura of high-stakes drama surrounded the contest, with local newspapers devoting many column-inches to its progression, all capped off by a television special that chronicled the evolution of each finalist's design.

Solution

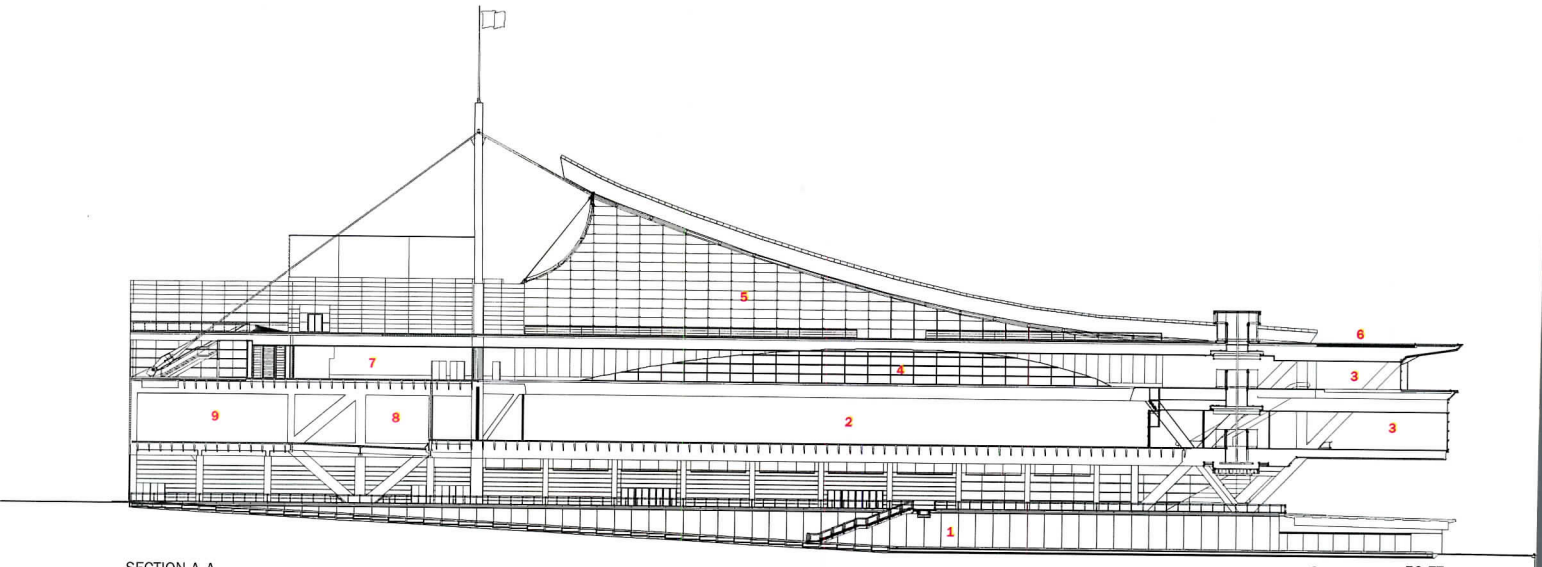
Clad mostly in heat-reflecting white aluminum, the new center stands out brightly against the dense concrete-and-brick palette of downtown. Its north elevation faces the river, and from the opposite shore it resembles nothing so much as a cruise ship ready to set sail for exotic waters. But seen up close, the structure reveals itself as what Viñoly calls "half a bridge"—a nod to the city's engineering heritage. The north side is cantilevered like a deck over the roadway below. Fifteen enormous cables, strung over tall masts, support the sloping roof. The cables terminate in exposed anchors inside and on the roof, where passersby inspect them like rare sculptures.

To the usual programmatic mix, Viñoly has introduced extensive glazing, river views, and outdoor terraces, bringing daylight and fresh air to what has historically been a sealed-off building type. These features, among others, earned the project a gold LEED rating from the U.S. Green Building Council last year. It's expected to consume a third less energy than comparable structures.

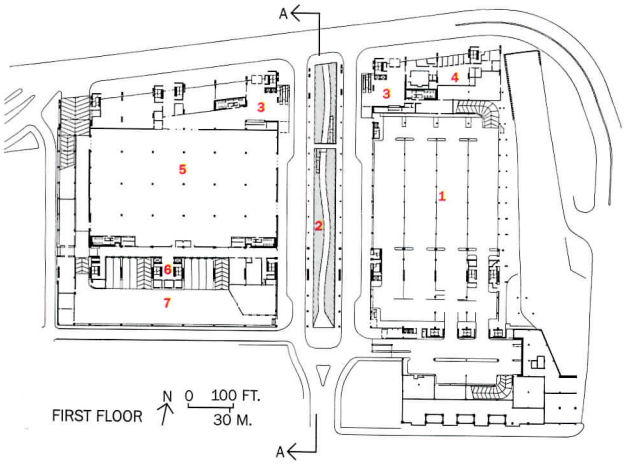
Visitors gain access on the ground floor alongside a bus-and-shuttle underpass, which is bisected by a man-made stream pumped from the subsurface aquifer that connects the building to its site (a riverfront park is in the works). Modest-size exhibition halls occupy the west end

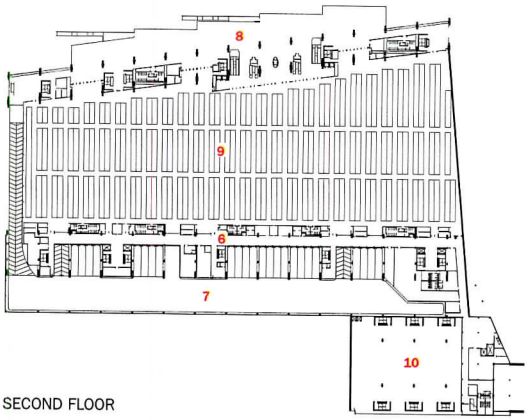
PHOTOGRAPHY: © BRAD FEINKNOPF, EXCEPT AS NOTED; ROMÁN VIÑOLY (OPPOSITE, TOP LEFT)

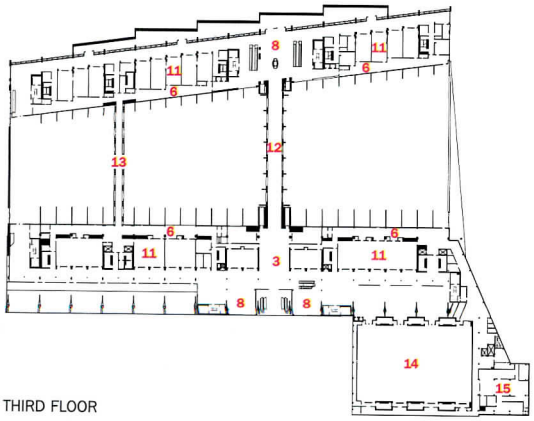
The sweeping form of the David L. Lawrence Convention Center (below) pays homage to the Three Sisters, the yellow-painted steel suspension bridges that span the Allegheny River (left). On the roof, huge supporting cables terminate in exposed anchors like those found on the bridges (above).



1. *Water feature*
2. *Main exhibition hall*
3. *Prefunction area*
4. *Pedestrian bridge*
5. *Promenade*
6. *Riverfront terrace*
7. *Entry lobby*
8. *Service corridor*
9. *Loading dock*

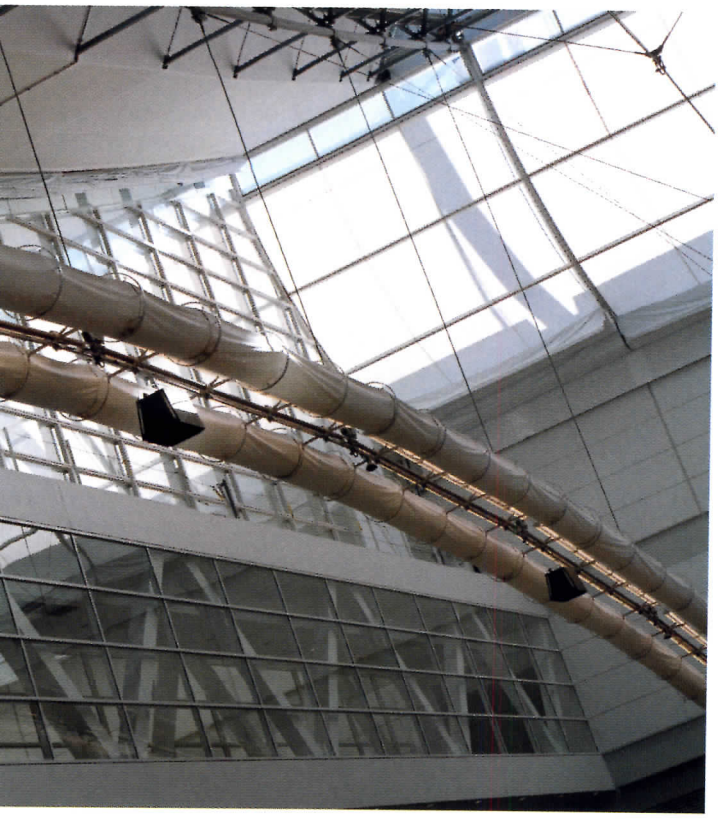


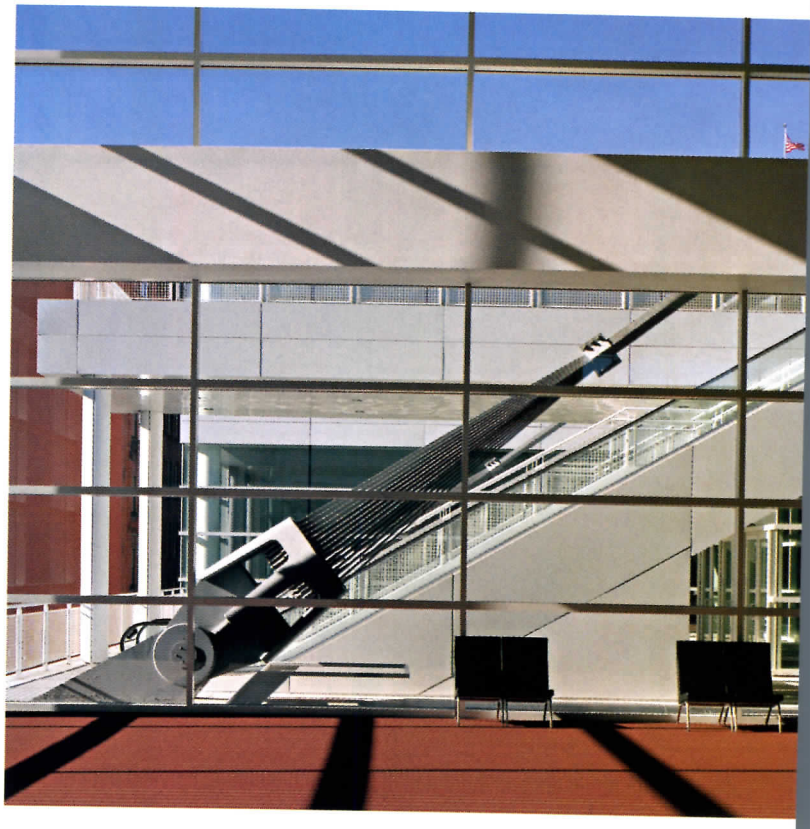




1. *Parking garage*
2. *Water feature*
3. *Entry lobby*
4. *Administration*
5. *Secondary exhibition hall*
6. *Service corridor*
7. *Loading dock*
8. *Prefunction area*
9. *Main exhibition hall*
10. *Junior ballroom (for future hotel)*
11. *Meeting room*
12. *Pedestrian bridge*
13. *Service bridge*
14. *Main ballroom*
15. *Kitchen*

A rooftop deck allows views of downtown Pittsburgh (above right). At the ground-floor level, water flows over concrete walls into a channel that points the way to a planned riverfront park (right).





ay of sunlight and
w animates the
f the main exhibi-
all and a circulation
above left and
Ample glazing
up river views on
rth side (below).

of this floor, with administrative offices located to the east.

On the second floor, nary a single column impedes the expa of the main exhibition hall—clea the grand achievement of this project. During temperate month fresh air cools the volume, intro- duced through louvers on the no and south sides. A glazed walkw that crosses over the hall puts visitors at eye level with the cab and-truss-supported roof. Viñoly wanted to maintain its airy feel, so engineers Burt Hill Kosar Rittelmann designed a system o fabric ducts with irregular perfor tions along their length that ens air enters the hall with a stable and velocity, key for thermal cor fort. According to David Linamer the engineer in charge, the duct easily accommodate structural shifts in the roof and were chea to install than metal ductwork, a well as less prone to condensat problems with the energy-efficie low-temperature HVAC system.

Between appointments, vis can enjoy river views on the sec and third floors. In warm weathe the rooftop deck and promenad afford vistas of downtown as we the bridges and hills that inspire the building's form. Meeting roo and circulation areas present a backdrop to the constant thrum human activity with their pure-w walls and interior finishes in qui tones of beige, gray, and burgur

Commentary

Viñoly correctly says the projec not fashionable," but that doesn mean it lacks flair: The center's superb unity of siting, structure form, and material make it a fit new icon for its host city. Reco nizing a community in need of destination that could support urban life for many years to co Viñoly eschewed flash-in-the-p architectural brio for a sophisti solution that's high on refined gance yet absent empty flouris needless sculptural gesture. In choosing, he has done Pittsbu great service. Fashion may be ing, but style is timeless. ■

s from the main
ition hall exude
gh glow to illumi-
he promenade
g to the riverfront
e (this page).
estrian bridge
site, top) lets
rs peer down into
and exhibition
pposite, bottom).

Moscone West
San Francisco

3 **IN A JOINT VENTURE, GENSLER ENSURES PROSPERITY FOR THE MOSCONE CENTER WITH A RADIANT AND PROMINENT ADDITION.**

By Barbara Knecht

Architect: *A joint venture of Gensler (design architect and joint venture manager), Michael Willis Architects (core and shell), and Kwan Henmi Architecture (interiors)*
Client: *City and County of San Francisco Convention Facilities Department*
Engineers: *Structural Design Engineers (structural); Ajmani & Pamidi, San Francisco (mechanical); Farber Energy Design (Title 24); The Engineering Enterprise (electrical)*
Consultants: *Patricia O'Brien Landscape Architects (landscaping); JS Nolan + Associates (lighting); Shen Milsom & Wilke/Paoletti (acoustics)*
Contractor: *Hunt Construction*

Size: *774,000 square feet (gross)*
Cost: *$182.1 million*
Completion date: *June 2003*

Sources
Low-e glass: *Viracom*
Curtain wall: *Enclos*
Concrete: *Clark Pacific*
Demountable partitions: *Advanced Equipment*
Resilient flooring: *Armstrong*
Carpet: *Collins & Aikman*
Elevators/escalators: *Thyssen Krupp*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

San Francisco's Moscone West does not follow the rules. Eschewing the black-box formula, Moscone West is a daylight-filled building that rises 110 feet on a crowded downtown street. It defies all the old rules of convention centers and yet has bookings 20 years out.

The original Moscone Convention Center (now Moscone South) opened in 1981 in an area south of Market Street, which was then considered the city's outskirts. As a single-story, windowless, underground hall with an automobile-friendly entrance, it followed all the rules. So did the first addition, Moscone North, which opened in 1992. Virtually all of it, including the passage under Howard Street that connects it to the original building, is below grade. Moscone proved the formula works by becoming one of the busiest centers for medium-size conventions in the country.

Program

By the mid-1990s, when the city needed to expand again, the neighborhood had become Yerba Buena Center, a vibrant cultural extension of downtown San Francisco, where land is scarce and expensive. To remain competitive, Moscone needed an adjacent site so that the entire complex could function as a single venue. The program called for a 45 percent increase in net usable area. The only suitable site, on a block to the west of Moscone North across Fourth Street, was 189,000 square feet, little more than 20 percent of the combined area of the two existing sites, but expected to add 45 percent to the net usable capacity.

Solution

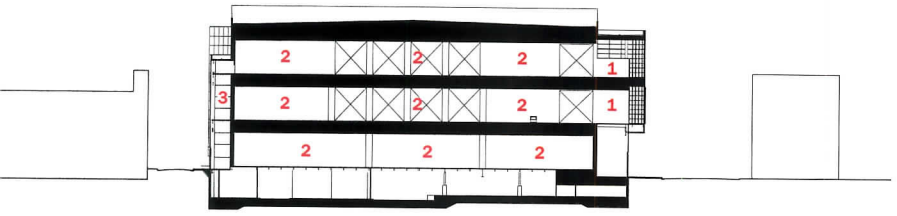
"We were confronted, on a highly visible site, with the conundrum of convention centers: public buildings that are not open to the public. Fourth Street is a major pedestrian corridor from downtown to the entire Yerba Buena area, and Howard Street is a major vehicle corridor," explained Kevin Hart, design principal for Gensler, the lead architect. "Moscone conventions average higher attendance because people want to come to San Francisco, and yet attendees have no interaction with the city during convention hours. The idea was to make the building as transparent as possible, to allow the public to see what is going on, to enliven the street, and to give the visitors a connection to the city."

Moscone West has its black-box interior that can be controlled and manipulated for exhibitions and presentations, but it is wrapped on its two public street sides with glass-enclosed spaces that offer conventiongoers daylight and city views, and even a terrace on which to step outside over Fourth Street. Passersby can see movement and activity through the glass curtain walls to three levels of 27,000-square-foot prefunction rooms along

PHOTOGRAPHY: © ROLAND HALBE PHOTOGRAPHY

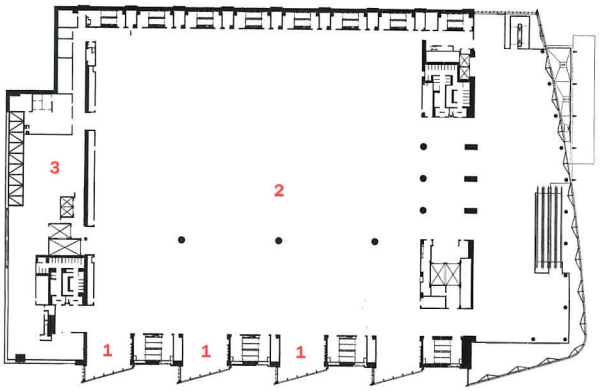
The center's transparent facades are glazed with high-performance glass, which is coated with ceramic frit above 8 feet to reduce glare and control heat gain. The curved corner focuses to the southeast and orients visitors to the rest of the complex.

1. *Prefunction and breakout*
2. *Meeting and exhibition*
3. *Service and egress*

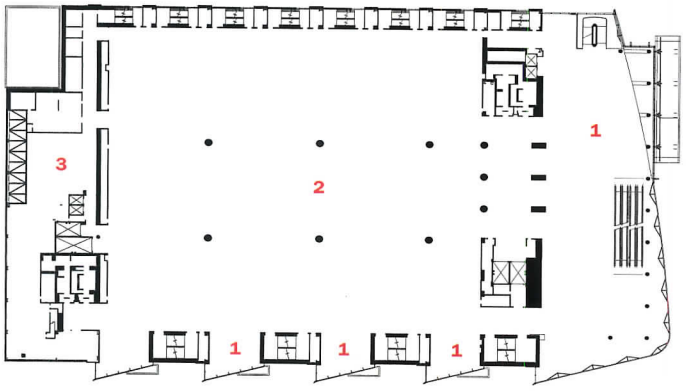


SECTION A-A

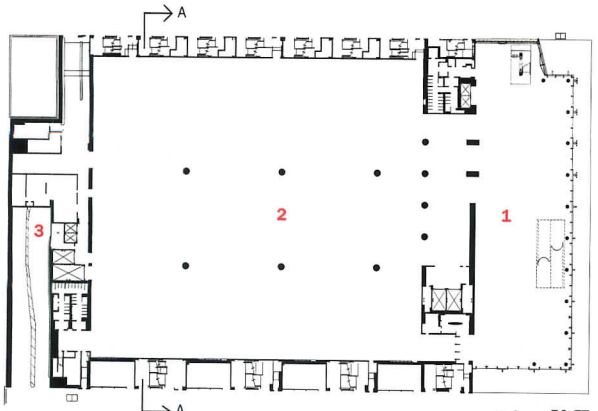
0 50 FT.
15 M.



SECOND FLOOR



THIRD FLOOR



FIRST FLOOR

N 0 50 FT.
15 M.

Tree **(bottom) is a redwood sculpture by Hilda Shum, Wang Po Shu, and David Gordon and is part of the city's Public Art Program. The entrance to the meeting areas (below) is finished in gold quartzite.**


ow trusses
he three-story
all, which
tors city views.

A grand staircase leads visitors from the main lobby to prefunction spaces on the next floor.

Fourth Street, and storefronts topp by two levels of multifunctional spaces in bays along Howard Stre

Flexibility is integrated throug out the building. The black-box interior is reconfigured using 5-foo wide-by-27-foot-high ceiling-hung panels that can be moved by a sin gle individual. They are stored in cabinets adjacent to exit stairs alo the south facade on the second a third floors. They move along a tra in a prearranged pattern that can create up to 19 meeting rooms pe floor. Between the exit stairs and partition cabinets are light-filled multifunction rooms for informal meetings or breaks. These eleme create the a scale-moderating rhythm along the south facade.

Commentary

At 774,000 square feet, it is the lit tlest Moscone, but this is not a sm building. With facade lengths of 3 to 500 feet and three stories with floor-to-floor heights of 37½ feet, t building had the potential to loom over this mostly low-lying district. Instead, several scale-mediating measures reduce the perception its size and create a new pedestr friendly face for the entire comple The projecting mass that follows t street grid is compatible with the adjacent building.

According to Julie Burford, th assistant general manager, "Mosc West has become the public face the entire center. Pedestrians inst tively stop here to orient themsel convention organizers are using t three lobbies for every use from g eral registration to social function They are the largest such spaces the complex, and they are rapidly becoming the most popular." She noted that flexibility was critical to Moscone's market competitivene Operations are designed to make space-configuration changes rap and with the least amount of labo The architects put together the elements to make a downtown convention center spreading ac three blocks work. It is pedestria friendly in a walking city. It has a urban scale without compromis the qualities that exhibitors see

lternative Energy Sources

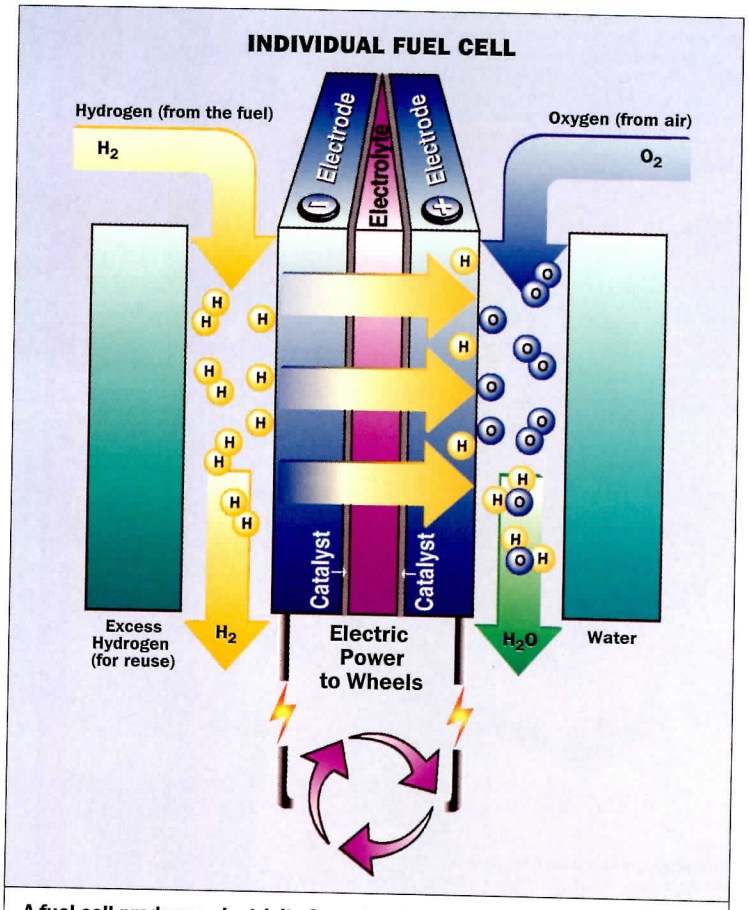
EL CELLS ARE THE ENERGY SOURCE OF THE FUTURE, AND SOME THINK THAT BECAUSE THE CHNOLOGY IS TOO COMPLEX, THEY ALWAYS WILL BE

Gerry Khermouch

ive years ago, advocates of fuel cells finally had a striking poster child for commercial building applications: an installation by a speculative developer in a high-rise being erected in Midtown Manhattan. The Condé Nast Building at 4 Times Square, put up he Durst Organization, was meant as a progressive statement about ainability, and the fuel cells—housed in a plenum right behind the tory building's signage—were an integral part of that vision. They ight to a real, commercial environment the promise of a nearly emis--free energy source that uses hydrogen and oxygen to yield electrical ut with only heat and water vapor as by-products. Quickly, the tower been nicknamed the Green Building and was seen as a milestone of d acceptance of fuel cells, photovoltaics [RECORD, January 2001, page , and other cutting-edge technologies. True, they supplied only a l fraction of the building's energy needs, providing hot water and ing the facade. And technical compromises made to accommodate high-density environment ensured that, when the lights would go n New York on August 14, 2003, the cells would not be available as a up power source. But as a gesture of advocacy by the Dursts, it was as d as any billboard blazing in the night sky above Times Square.

status of fuel cells today

orward to 2004 and ask architects or engineers where the action in ells is these days. Their answer? For most, it's still 4 Times Square. can be seen as deserved testimony to the farsightedness of the devel- and its designer, New York–based Fox & Fowle Architects, in pioneering the installation. Alas, it's also a sign that adoption of fuel cells has stalled, as the first-generation phosphoric-acid technology employed by the Dursts approaches obsolescence, with the migration path from there anything but clear. Meanwhile, those involved in 4 Times Square have largely moved on, at least for now. Neither Fox & Fowle, the Dursts, nor Cosentini Associates, the engineers, have any further fuel cells on the drawing board; rather, they are enthusing about the more practical benefits of microturbines for some of their new projects. Other architecture firms that are identified with a strong commitment to sustainable design have similarly found fuel cells a tough slog. McDonough + Partners, HOK Sustainable Design, Gensler—none can point to a completed project of theirs involving fuel cells. HOK, at its Canadian unit, Urbana Architects, does have a project currently in development that calls for fuel cells—a government building in Charlottetown, on Canada's Prince Edward Island, that is intended to be a showcase for the national govern-



A fuel cell produces electricity from the electrochemical reaction between hydrogen from a hydrogen-containing fuel (either fossil or renewable) and oxygen from the air.

ONTINUING 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 174 and follow the instructions. Other opportunities receive Continuing Education credit in this issue include the following nsored section: "Technological Developments in the Manufacture and finishing of Wood Windows and Doors," sponsored by Eagle Window d Door, Inc., page 183.

EARNING OBJECTIVES

er reading this article, you should be able to:
Describe the sustainable-energy theory of fuel cells.
Discuss the current state of hydrogen energy sources.
Explain why fuel cells are not currently being installed in architectural rojects.

story and more continuing education, as well as links to sources, apers, and products, go to **www.architecturalrecord.com**.

Gerry Khermouch, who has served as an editor at Brandweek, Business Week, *and* The Electricity Journal, *writes about energy, technology, and marketing.*

LOW-ENERGY DESIGN AND RENEWABLE ENERGY AT 4 TIMES SQUARE

Materials

4 Times Square designers emphasized environmentally responsible construction, choosing nontoxic and biodegradable materials as well as sustainably harvested wood and low-water-use equipment.

Resource conservation was also a priority. A structural steel **hat truss** at the top of the building significantly reduced the amount of steel used. The structure provides a rigid frame for resisting wind loads and reduces building sway. The introduction of concrete as a structural element further reduced the amount of steel needed. Also, to save materials, the existing footings at the corner of 42nd and Broadway were reused. Approximately 65% of construction debris was recycled.

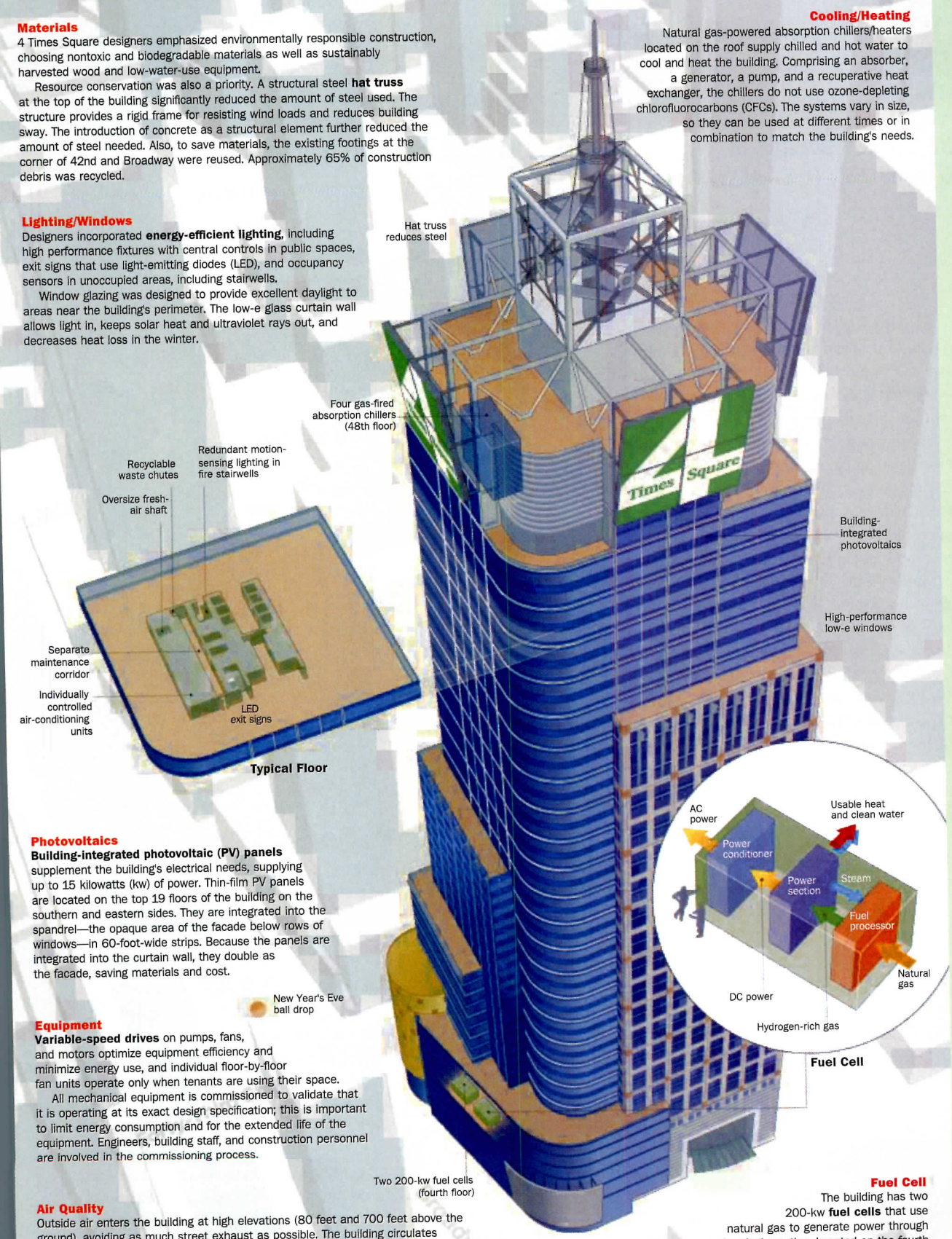
Cooling/Heating

Natural gas-powered absorption chillers/heaters located on the roof supply chilled and hot water to cool and heat the building. Comprising an absorber, a generator, a pump, and a recuperative heat exchanger, the chillers do not use ozone-depleting chlorofluorocarbons (CFCs). The systems vary in size, so they can be used at different times or in combination to match the building's needs.

Lighting/Windows

Designers incorporated **energy-efficient lighting**, including high performance fixtures with central controls in public spaces, exit signs that use light-emitting diodes (LED), and occupancy sensors in unoccupied areas, including stairwells.

Window glazing was designed to provide excellent daylight to areas near the building's perimeter. The low-e glass curtain wall allows light in, keeps solar heat and ultraviolet rays out, and decreases heat loss in the winter.



Photovoltaics

Building-integrated photovoltaic (PV) panels supplement the building's electrical needs, supplying up to 15 kilowatts (kw) of power. Thin-film PV panels are located on the top 19 floors of the building on the southern and eastern sides. They are integrated into the spandrel—the opaque area of the facade below rows of windows—in 60-foot-wide strips. Because the panels are integrated into the curtain wall, they double as the facade, saving materials and cost.

Equipment

Variable-speed drives on pumps, fans, and motors optimize equipment efficiency and minimize energy use, and individual floor-by-floor fan units operate only when tenants are using their space.

All mechanical equipment is commissioned to validate that it is operating at its exact design specification; this is important to limit energy consumption and for the extended life of the equipment. Engineers, building staff, and construction personnel are involved in the commissioning process.

Air Quality

Outside air enters the building at high elevations (80 feet and 700 feet above the ground), avoiding as much street exhaust as possible. The building circulates 50% more indoor air than is required by New York City code, with additional capacity in the system to purge any four floors simultaneously with 100% outside air. The air is 85% filtered and monitored, and floor-by-floor air-handling equipment allows individualized control and indoor air purge capacity.

A dedicated exhaust shaft is available to vent smoking and equipment rooms, and cleaning materials and building maintenance materials are nontoxic. Furniture, carpeting, materials, and finishes also affect air quality, but these are specified by tenants; a set of tenant guidelines encourages installation of the most benign furnishings and finishes.

Fuel Cell

The building has two 200-kw **fuel cells** that use natural gas to generate power through a chemical reaction. Located on the fourth floor, the cells provide 100% of the nighttime electric demand without combustion, and hot water and carbon dioxide are the only by-products. The hot water is used to help heat the building during winter and to help heat domestic hot water. In the United States, 42% of all energy produced is lost as waste heat in combustion and transmission; generating energy on-site and without combustion avoids substantial energy loss.

It's a beginning

At 1.6 million square feet, 4 Times Square is the first building of its kind to adopt standards of energy efficiency, including two 200-kilowatt fuel cells that use natural gas to generate powe

nt's recently announced sustainability initiative. Still, with working wings nearly complete and construction expected to begin this sum-, the obstacles in the way are so formidable that it is far from assured a fuel cell can be successfully designed in, at least at the initial stage of project. "It's more science than [practical] technology right now," says Brooks, senior associate at Urbana. "So far, we've been tantalized with possibilities, but bottom-line reality may put it some time away."

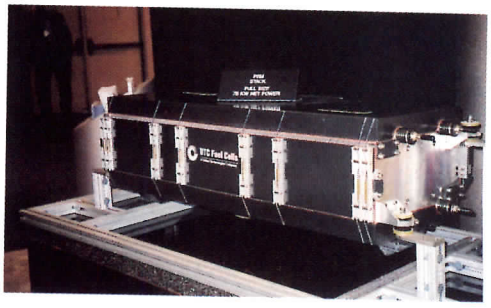
Fuel cells are tantalizing because they hold the promise of horing a clean and sustainable energy system that will lessen the mas- carbon dioxide and other greenhouse gas emissions that have been ed to climate change. At first blush, fuel cells seem nearly ideal energy rces—clean hydrogen and oxygen input yields water vapor plus elec- l output, and all of this is accomplished in a continuous, quiet, and ly efficient manner. The best analogy is to another, more familiar trochemical power device, the battery. Both convert the chemical gy of a fuel into direct-current electricity, but batteries contain lim- fuel, whereas fuel cells are replenished externally and so can supply rical energy over a much longer period of time. Like batteries, fuel strip electrons off chemical compounds and recombine them, send- he resulting electrical current out for use.

Fuel cells come in several flavors, starting with the phosphoric fuel cells (PAFC) that have comprised the vast majority of installa- over the past decade—including 4 Times Square—but are viewed as bsolete technology. Looking ahead, that leaves two principal types for onary applications: solid oxide fuel cell (SOFC) and proton exchange brane (PEM) types (see diagram, page 169), which is the variety now ed for automotive use. (Another variety, molten carbonate, is seen as ng only a niche market for data centers and hospitals.) The biggest rences between the two technologies lie in their operating tempera- and component materials. SOFC units, which are based on solid nics, function at anywhere from 700 to 1,000 degrees centigrade. devices, on the other hand, run at lower temperature (80 degrees C) polymer materials. Low temperatures reduce the chemical activity e fuels and the activity of catalysts, whereas high temperatures speed ation but can reduce operating lifetimes.

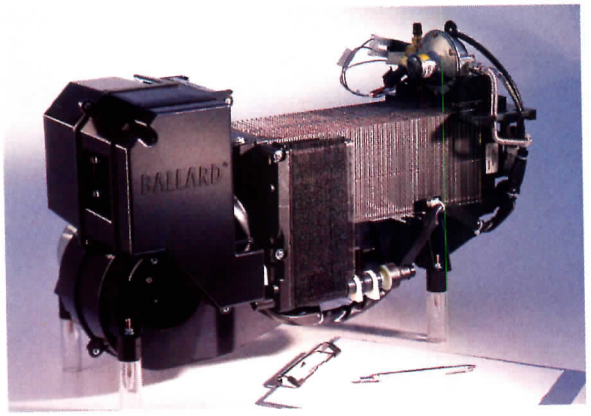
Current SOFC units burn natural gas as fuel. Although these r supplies are technically well developed, their manufacturers seem nt to offer them as commercial products. Meanwhile, PEM-based r supplies must surmount a fundamental barrier: They must run ly off hydrogen. United Technologies' UTC Fuel Cells division .utcfuelcells.com) in Hartford, Connecticut, which has installed 250 PAFCs, including two 250-kilowatt units at 4 Times Square, has d manufacturing those as it prepares to migrate to the more prom- PEM variety, but it is not ready to say when it expects PEM units to mmercially available.

So what's gone wrong? Well, everything, and nothing. After all, a new technology, and proponents have no doubt that it will even- deliver on its promise of clean energy. But costs have been ornly slow to come down, and the confusing welter of approaches ade it difficult for architects and developers to commit to a partic- pproach for a particular building. That has hindered adoption and ncouraged some fuel-cell proponents to look to transportation ations to move the technology to a more efficient scale. Not long seemed obvious that stationary applications would have to play this ard role, given the tougher requirements that propulsion cells must n terms of cost and weight.

"It's been much slower than anybody anticipated in terms of real cts," says Ashok Gupta, director of air and energy programs for the l Resources Defense Council (NRDC) in New York, which served



Fuel-cell power plants
A 250-kilowatt fuel cell (top) can power a large hotel. A 75-kilowatt hydrogen UTC PEM fuel cell (middle) can power an electric bus while charging backup batteries. A 250-kilowatt carbonate, high-temperature fuel cell (bottom) powers a Michelin tire plant in Karlsruhe, Germany. This fuel-cell power plant was manufactured by FuelCell Energy.



Small, portable, and flexible fuel cells
Fuel cells need not be gigantic and obtrusive. A microfuel processor, such as the one developed at Case Western Reserve University (top right), makes existing fuels with a cell. Ballard Power systems' new Nexa modular system (above) allows PEM units to be stacked and easily replaced. Portable fuel cells (top left) are small, light, and make good auxiliary power sources.

an advisory role in the design of the Condé Nast building. "People are still waiting for the next generation of technology to become available. In the meantime, there is little activity of the sort we saw at 4 Times Square."

Gupta notes that the NRDC remains bullish on fuel cells, and there are applications, such as sewage treatment and banking back-office operations, in which even the current generation of technology has proved commercially viable, albeit with a healthy dose of up-front incentives. Those tend to be applications with intensive, around-the-clock energy needs that can make use—say, for heating and cooling—of the intense heat that can be a by-product of fuel cells. For general commercial and residential applications, though, fuel cells are still a considerable way from being ready for prime time.

Still, the palpable promise of the technology has lately driven the fuel cell to the lofty status of Holy Grail for those promoting the hydrogen economy, a system in which hydrogen would replace fossil hydrocarbons as the world's basic carrier of chemical energy. Expectations for fuel-cell technology were raised further by President George W. Bush's 2003 State of the Union message in which he proposed spending $1.5 billion on hydrogen research and development. Unfortunately, producing hydrogen fuel without releasing carbon dioxide is either highly problematic, costly, or both. To date, most installations "crack" the hydrogen from another fuel source, usually natural gas, rather than relying on pure delivered hydrogen. So anyone contemplating installing "clean" fuel-cell power supplies must face the fact that most current stationary fuel-cell installations burn fossil fuels or derive hydrogen indirectly from hydrocarb
This abiding drawback certainly doesn't help the case for adopt
despite the financial incentives offered for installation.

Waiting for costs to come down

Then there is the difficult question of expense. Existing fuel cells are
viding power at an installed cost ranging anywhere from $4 to $6
watt, compared with $1 to $1.50 per watt for conventional gas turbi
The cost of microturbines, which are highly efficient but do not elimi
emissions, fall somewhere in between the two.

Hence, the current chicken-and-egg situation, as sympath
architecture and engineering firms eagerly wait for costs to decline so
can begin adopting the technology for their clients. "Expense is a
issue; $4 or $5 or $6 per watt installed is a really big number," says D
H. Nall, FAIA and P.E., senior vice president at Flack + Kurtz in New Y
which has installed fuel cells at a casino in Connecticut and perfor
remedial work at 4 Times Square. "People want prices to come down
prices have not come down because people haven't bought anything."
one manufacturer with a meaningful installed base, UTC, has not sh
an encouraging cost trend for the 250 PAFC units it has sold so far (
quarters of them funded in part by the Defense Department), at an
age cost of $4.50 per watt. Disturbingly, "the cost of PAFC units ha
decreased and in fact has increased from $3,500 per kilowatt," or $3.5
watt, according to a report issued in February by the National Acade
Engineering called "The Hydrogen Economy: Opportunities, C
Barriers, and R&D Needs." "These units are not cost-competitive
other DG [distributed generation] options, which can provide the
reliability and high-quality power efficiency," the report states. Acco
to Department of Energy projections, which some consider optimis
will take another five to 10 years for the installed cost of fuel cells to
to the $1-per-watt range.

As one example of the daunting complexities involved, tak
simple matter of efficiency. The most efficient fuel cells currently ava
in the marketplace, including solid oxide and molten carbonate, are
that operate at extremely high temperatures. To obtain peak effic
they need to operate as close to 24/7 as possible, at full power. Tha
purely technical grounds; of course, the need to amortize their hig
front costs provides a strong economic incentive to run flat out, too
might be all right for factories, data centers, or hospitals with int
energy needs and high demand around the clock, but it doesn't a
work for residential and commercial buildings—particularly sin

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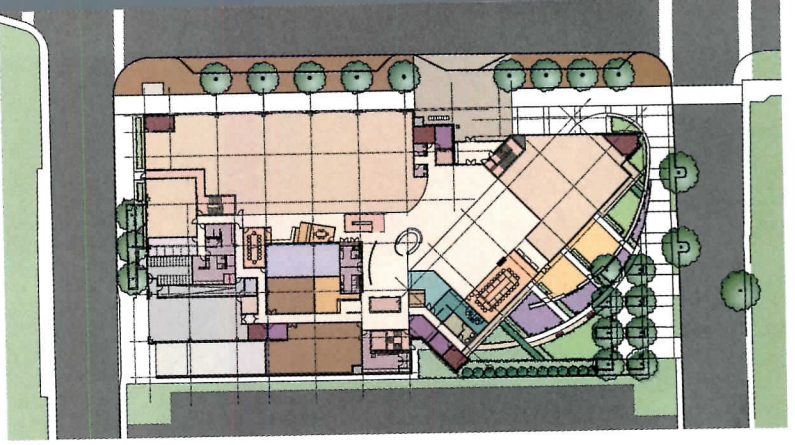

The struggle to mainstream fuel cells

HOK's Canadian unit, Urbana Architects, has a project currently in development that calls for fuel cells: a government building in Charlottetown, on Prince Edward Island, which is intended to be a showcase for the national government's recently announced sustainability initiative. However, the architects admit that practical applications are a long way off.

many places the local utilities make it difficult to sell excess energy back into the grid. Even where utilities are willing to purchase the energy, if that excess energy is being produced at a period of low demand—say, at night—it commands a negligible price in the marketplace anyway. And if the building can't make effective use of the heat thrown off, then another key dividend is being wasted.

Hence, 4 Times Square, while brilliantly successful as a statement of purpose and potential, is harder to justify on sheer economic grounds. "On-site generation as a model was very appealing philosophically," recalls Dan Kaplan, AIA, senior principal at Fox & Fowle, who runs its high-rise studio. "It's smaller, more flexible, more responsive. There are no line losses, and a fairly low level of emissions beyond carbon dioxide—no SO_x or NO_x [sulfur or nitrous oxides]." Those are by no means trivial benefits, but Marvin Lewin, vice president and project manager at Cosentini Associates, recalls that if it weren't for healthy rebates, the project would not have been a go under any circumstances. Several aspects of the project made it a far from ideal environment for fuel cells. For starters, "Times Square is not exactly starving for electricity," he notes. Further, the natural-gas-fed cells would not be available as an emergency backup source, because gas brought in from street lines is considered a fire hazard. (That's why 4 Times Square stayed dark during last year's blackout.) Although the 500 kilowatt of power was more than the building needed at night, safety requirements of the local utility, Con Edison, made it impractical to try to sell the excess power back into the grid. Not least, the PAFCs don't throw off intense-enough heat to be of great use—"not unless they've got a lot of dishes to wash," quips one observer. Indeed, remedial work was needed to disperse that heat—a completely saturated, 140 degrees C air stream that was creating a plume of steam right behind the Times Square sign. "They never really conceived what to do with the heat—and if it's used, it becomes a pain," says Flack + Kurtz's Nall. Eventually, the manufacturer did adapt the fuel cells to lessen that problem.

Of course, complications like that are to be expected in a pioneering application. But how do the numbers come out? Not so impressive, it turns out. With roughly $150,000 in rebates, the $1.5 million cost of the cells ($800,000 for the cells themselves plus installation costs) suggests a payback period of about seven years. But even there, there is a big catch. After six or seven years, the main fuel-cells' modules—the so-called cell stack—are anticipated to need replacement at a cost of close to $500,000. The solution to that quandary? "There's no payback unless you threw it out and put in a new one—with a new rebate," Lewin notes drily.

The math doesn't add up much differently for others who have essayed fuel cells. At a massive expansion of the Mohegan Sun casino entertainment complex in Connecticut, a pair of 250-kilowatt PAFCs engineered by Flack + Kurtz has been able to put its heat output to good use running a deaerator for water that enters the boilers there. That didn't put it over the top on economic grounds. Rather, it was among a batch of capital improvements that were mandated by the state to offset the environmental impact of the traffic that the casino *creates. The* return on investment? "I don't know that that's been calculated," says Nall.

The Charlottetown government office building, which is being designed by HOK's Canadian unit in concert with the local firm Bergmark Guimond Hammarlund Jones, reflects the difficult trade-offs that can be involved even where there is that magical combination of an eager client, progressive designer, and sympathetic local community

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Hydrogen's uncertain future

To serve a role as a source of emergency generation, the fuel cell would require "instant on" capability that generally calls for the use of direct hydrogen fuel. But while the government of Prince Edward Island has launched an initiative to develop a hydrogen infrastructure, that capability does not exist now. "This building could be one of the first steps in developing the hydrogen economy of the island," says Urbana's architecture practice leader Richard Williams. But there is no assurance at this point if or when that initiative will bear fruit. A more practical alternative would be to eschew a hydrogen-fed fuel cell in favor of one fed by natural gas. Those have the benefit of good efficiencies and a proven track record. But Prince Edward Island currently lacks access to natural gas, although that too has been under discussion in the province. Liquid propane would also work, but fuel-cell manufacturers are leery of going that route given their urgent need to focus on the broadest applications.

The bottom line: Even for the flagship building in Charlottetown, fuel cells may be a nonstarter, Williams acknowledges. He hopes a decision can be reached by the end of this year, but the building will be designed so fuel cells can be added at a later stage. "It's really been an eye-opener," he said. "The immediate future of fuel cells really seems to be more automotive than buildings, because of the sheer volume of production" anticipated once car applications kick in.

Given the stiff challenges confronting mobile fuel cells, that may be wishful thinking. Either way, the timeline of development adoption is likely to be extended. Thus, it's paramount for archite engineers, and their clients to maintain a realistic perspective and overweight the value of fuel cells over more established, cost-effec green applications, says NRDC's Gupta. "We're still positive and s portive," he says. "But we know we can't oversell it. We should not fo conventional technology—good old energy efficiency, daylight natural ventilation. That's where architects should look, not the s technologies first." In the meantime, space can be designed in for w fuel cells are commercially ready, as Cosentini Associates has done residential tower that the Dursts are putting up in New York's Bat Park City development, and as is being contemplated for Charlottetown building. Still, many architects and engineers plan to tinue to proselytize for fuel cells, without understating the challe involved in justifying them economically.

"Generally, we bring the understanding and interest in cells to our clients," says Jeff Barber, AIA, principal and lead build and campuses designer at Gensler, and a member of the firm's sust able design task force. Though Gensler has been unable to make cells a go yet for its own projects, Barber insists the experience has chastened him in the least. "Technologically, I have great hope for cells. But to be effective in the marketplace, they do have to be effective and with proven reliability. That's the Catch-22 of technology." ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "Alternative Energy Sources" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 242).**
- **Fill out and submit the AIA/CES education reporting form (page 242) or download the form at www.architecturalrecord.com to receive one AIA learning unit.**

QUESTIONS

1. Which type of fuel cell is the first generation?
- **a.** Solid oxide
- **b.** Phosphoric acid
- **c.** Proton-exchange membrane
- **d.** Molten carbon

2. Which type of fuel cell must run directly off hydrogen?
- **a.** Solid oxide
- **b.** Phosphoric acid
- **c.** Proton-exchange membrane
- **d.** Molten carbon

3. Which type of fuel cell is used only for around-the-clock operations, such as hospitals?
- **a.** Solid oxide
- **b.** Phosphoric acid
- **c.** Proton-exchange membrane
- **d.** Molten carbon

4. Which is not an advantage of fuel-cell technology?
- **a.** A low-cost energy source
- **b.** A sustainable energy source
- **c.** A quiet energy source
- **d.** A clean energy source

5. The promise of fuel-cell technology is that hydrogen would replace fossil hydrocarbons as which?
- **a.** The choice for developed nations' energy
- **b.** The world's basic carrier of chemical energy
- **c.** The least expensive source of energy
- **d.** Economical heating fuel

6. Which of these energy sources is currently the most expensive?
- **a.** Microturbines
- **b.** Gas turbines
- **c.** Fuel cells
- **d.** Batteries

7. On-site generation offers all except which of these benefits?
- **a.** More flexibility and responsiveness
- **b.** Low sulfur-oxide and nitrous-oxide emissions
- **c.** No line losses
- **d.** Low up-front costs.

8. Why is it difficult to sell excess energy from fuel cells back to the energy grid?
- **a.** The type of energy source is difficult to convert to a usable form
- **b.** The high temperature of fuel-cell energy makes it dangerous for power companies to transfer
- **c.** There is a low market-place price for energy produced at low-demand times of day
- **d.** There isn't enough excess energy to make a transfer worthwhile

9. In order to serve as a source of emergency power, generation fuel cells need to be able to do which?
- **a.** Convert gas into hydrogen fuel
- **b.** Be instantly available
- **c.** Have long-term storage capacity
- **d.** Convert easily to mobile fuel cells

10. Complications associated with switching to fuel cells include all of the following except which?
- **a.** There are no incentives
- **b.** The up-front costs are too hard for clients to justify
- **c.** Creating energy from pure hydrogen is still technically problematic
- **d.** Manufacturers are more inclined to focus their research and developme on the broadest applications rather than project-specific needs

Tech Briefs

Archiving: A museum study will help digital design files overcome historic problems • Sustainability: Coatings for cleanup? A new paint may absorb vehicle emissions

he Art Institute of Chicago examines how best to archive digital design data

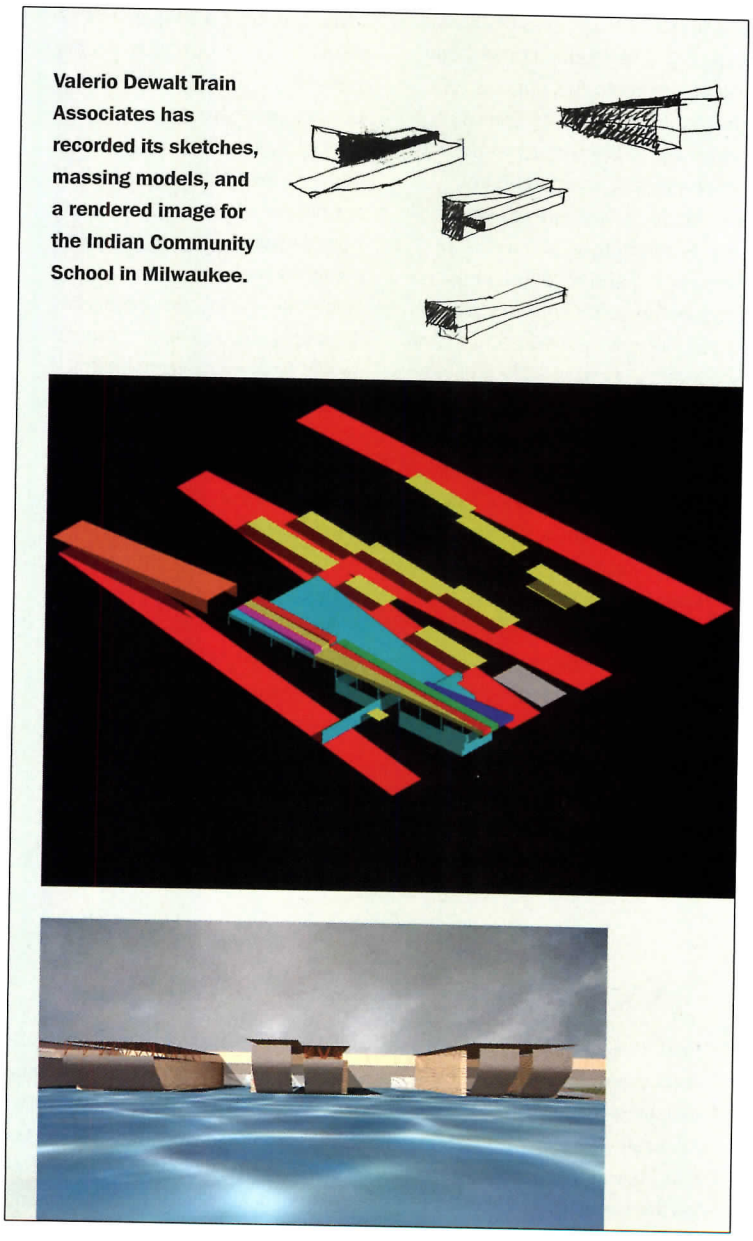
hiving project information was e merely a matter of collecting, nizing, and filing away paper vings, each one created anew esign progressed. But what ut records of the iterative steps illustrate a design team's think- and the creative prowess behind ccessful work of architecture? ng this sort of historical record s forethought to keep interme- digital documents files from ng overwritten in the crush of work. The almighty "delete" key es it far too easy to eradicate evolution of a design even e the project is completed. Archivists are now taking n to make sure these steps t lost to the ages. Early ear, the Department of tecture at the Art Institute of go began a comprehensive to find the best ways of col- g, archiving, and exhibiting l design data. Chicago archi- Kristine Fallon, FAIA, president stine Fallon Associates, heads roject, which involves a team hitects, academics, museum ors, and technology experts are reviewing the challenges of aining digital archives and will ately provide recommendations st practices.

Backed by grants from the Foundation and the Graham lation for Advanced Studies in sual Arts, the Institute hopes udy will have a direct impact w museums and other institu- preserve architectural work. nercial design firms will also t from the study's guidelines, says. Architects who don't ment digital-archiving practices ke artists using evaporating she believes. "Most archi- ike to be immortal. Not digital archives threatens mmortality."

Thorough archives also play an important role in expansions and additions to existing projects, and in the restoration and renovation of historic buildings. Even more pragmatically, past design elements are often reused in new projects, adds Scott Pratt, director of digital technology and senior vice president for the Chicago architectural firm Murphy/Jahn, one of the firms involved in the Institute's study. "Often, a project is an evolution of a prior work. It just makes sense to keep archives," he says.

Digital archivists face two hurdles in this effort. One is procedural: convincing firms to implement policies for documenting important project milestones. The other problem is technical: how to ensure digital files don't fall out of commission. "I can't bring back a word-processing file from 10 years ago—how are people going to read an architect's digital design data after 100 years?" Fallon wonders.

The Art Institute is one of many organizations addressing these challenges. The National Archives and Records Administration (NARA) in College Park, Maryland, the agency responsible for managing and preserving federal records and priceless historical documents like the Declaration of Independence and the Constitution, is spending $36 million annually in its Electronic Records Archives (ERA) program to find better ways of preserving digital documents. After working for years with other government agencies, as well as universities, other archives, and research facilities throughout the world, NARA selected a systems integrator earlier this year to design its electronic archives, the first phase of which could come online by 2007—but ERA officials don't expect their solution to be fully functional until seven years after that.



Valerio Dewalt Train Associates has recorded its sketches, massing models, and a rendered image for the Indian Community School in Milwaukee.

The Art Institute's study will set forth recommendations long before that. The first phase of its study, completed earlier this year, surveyed archiving best practices at 63 design firms throughout the world, ranging in size from a sole practitioner to those with thousands of employees. This survey will become the basis for guidelines to be included in the final study report this summer.

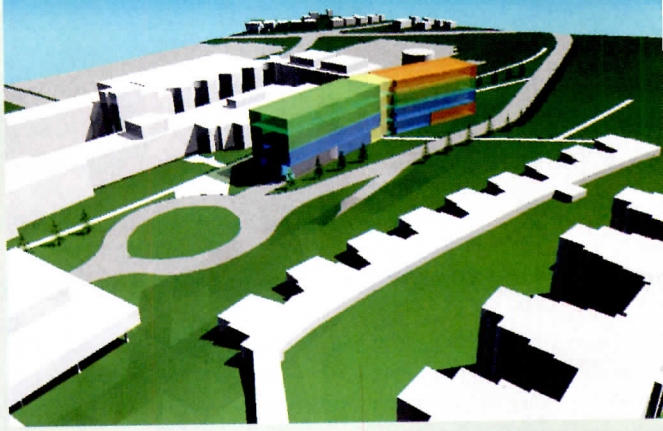
In March, the Institute sponsored a daylong exhibition—essentially a design charrette with three teams of museum staff, designers, and technology gurus. Each team examined a number of in-progress and completed projects with various types of digital information available. "The exercises raised a number of questions about the role of museums, curators, and architects regarding who collects or

saves information and how conservation of digital files is best carried out," Fallon says. "We also examined some wild ideas about using digital data as a source of exhibition material." The results of the study will be available this summer on the Institute's Web site and will be presented in September at the International Confederation of Architectural Museums in Venice.

Some of the study's preliminary results and recommendations are already surfacing. For instance, to combat obsolescence of archival documents, a proposed global registry could alert architects to digital file types that are in danger of disappearing and provide a way for architects to reformat their files.

Software vendors are also working to tailor existing file formats to improve them for archiving. Adobe Systems is now developing offshoots of its original and ubiquitous PDF format, including PDF-A (for archiving), envisioned to be a slimmed-down version of a standard PDF file that can handle text, raster images, and vector graphics. A second variant, PDF-E (for engineering) will accommodate large-format graphics and 3D models. And Autodesk is considering making its existing DWF format capable of capturing graphics elements of a file as well as creating a snapshot of associated design information, according to Jon Pittman, AIA, Autodesk's senior director of strategic research.

Architectural firms shouldn't wait for new technologies before starting to preserve their digital work, Murphy/Jahn's Pratt says. His firm keeps a small number of electronic photos, presentation drawings, elevations, and renderings of finished projects on its network. But most iterative design drawings and related documents are saved on DVDs about six months after a project's completion, Pratt says. The firm doesn't record every design change, but instead concentrates on important milestones, such as the completion of schematic designs or bid sets. CAD drawings remain in native AutoCAD format, whereas renderings and photos are stored as TIF or JPEG files. "For a project that's five years old or younger, we have between two to five or more DVDs, which have all of the CAD files, all the versions of renderings and presentations, as well as the PowerPoint shows created in the course of development," Pratt says. "Prior to the digital era, we may not have every presentation that was created along the way," he says. Once the technical challen of digital archives are ironed ou they may make historical record even more comprehensive than when paper ruled the design process—a big step toward arc tectural immortality. *Alan Joch*



Ross Barney + Jankowski worked with client teams to develop a total of four massing models for the James I. Swenson Science Building for the University of Minnesota at Duluth. The firm saves each digital alternative as part of the project record.

In the lab, paint makes NO_X gases harmless—but can field trials make the same claim?

Gasoline-powered vehicles are *"machinas non gratas"* as far as environmental protectionists are concerned, but one coatings company says they can now paint away tailpipe emissions. The makers of a new product called Ecopaint, Millenium Chemicals, claim that it can convert nitrogen oxides (NO_X) gases into harmless substances. The NO_X gases are a well-known trigger for smog production and respiratory difficulties. In March, the company began selling Ecopaint to the AEC community in Europe, with plans to extend to other markets soon.

Here's how it works: The paint's polymer base is embedded with nano-size spherical particles of titanium dioxide and calcium carbonate. In theory, NO_X gases would seep into a coating of the paint on a building or street bench or other surface and adhere to the titanium dioxide particles, which would use the sun's energy to break down the gases into nitric acid. The acid would then be either washed away by rain or neutralized by the calcium-carbonate particles to create carbon dioxide, water, and calcium nitrate, another soluble acid. In theory, the company says, a 0.3-millimeter layer of paint could neutralize NO_X gases for up to five years in a heavily polluted city, but no field tests have been conducted yet.

Paul Miller, an air-pollution expert and program coordinator for th Commission for Environmental Cooperation in Quebec, says field and cor parison studies are key for determining the paint's efficacy as a cleanu method. The claims are plausible based on the paint's chemistry, he say but "there's not much information on what happens with NO_X in the air in th absence of these painted surfaces." The proximity of vehicle emissions painted surfaces can also make a difference in how effective the paint is, adds. The gases may never come close enough to painted surfaces to rea in the way that's been demonstrated in lab tests. He recalls a catalytic coa ing once used on car radiators that was supposed to remove ozone as peop drove: "The ozone never came into contact with the radiator's surface at t right time for the reaction to be very efficient or effective in removal."

Above all, Miller questions whether painting buildings and park bench with an NO_X-removing paint is the correct approach toward environmen protection, since preventing pollution from being created at all should ta precedence over cleaning it up after the fact. "We don't need excuses make people feel good about driving more miles in their vehicles," he sa *Deborah Snoonian, P.E.*

Lighting

Art, light, space: Architects, artists, and lighting designers collaborate on wondrous works, from ice to LEDs

BRIEFS

Head to a trade fair in China to check out lighting in the Eastern Hemisphere. The China International Lighting Fair 2004 is October 18 through 23 in Guzhen, a capital of the industry there. The Guzhen Lighting Plaza is the main exhibition hall, with 2,400 booths covering 430,556 square feet, with more than 700 exhibitors. **An estimated 500,000 international visitors** and more than 50,000 professional buyers are expected to attend. The sponsors are the Zhongshan Municipal People's Government of Guangdong and a roster of Chinese trade and professional associations. For information, go to www.lightingcapital.cn, or e-mail gzlight@pub.zhongshan.gd.cn. *W.W.*

CONTENTS

Art is where you find it, someone once remarked. This month, we've collected reports on artfully illuminating works from as far away as Finland and as close to home as a streetfront gallery a short walk from our offices above Penn Station in New York City. Constructed to support an array of mandates, the projects show how light can enliven environments and visual media.

Regarding *The Snow Show*, which last winter brought together international architects and artists to build structures out of ice in the Lapland region of Finland, lighting designer Linnaea Tillett offers her perspective as a New York–based team member who worked through long days and nights in subzero weather—and learned to "love the experience." San Francisco photographer Richard Barnes also put on a parka to shoot arresting images of the finished follies shown in these pages (below).

This spring, in the thriving contemporary art scene of Manhattan's Chelsea district, Leo Villareal debuted his engaging new light works at the Sandra Gering Gallery. He has also collaborated on works for new buildings by leading architects such as Antoine Predock. Sara Hart takes us on a tour of Villareal's captivating pieces.

From the Pacific Northwest, Ed Carpenter creates sculpture on a large architectural scale. A Memphis library, a convention center in Richmond, and many other civic sites all benefit from his particular vision. Like the proverbial woodworker his family name invokes, Carpenter is a master of his medium, in this case illuminated steel and glass forms. John Peter Radulski finds out what inspires Carpenter's creations.

From Portland to Lapland, these spectacular or meditative works shine a light that changes our perceptions of the world we construct. *William Weathersby, Jr.*

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Creative Uses

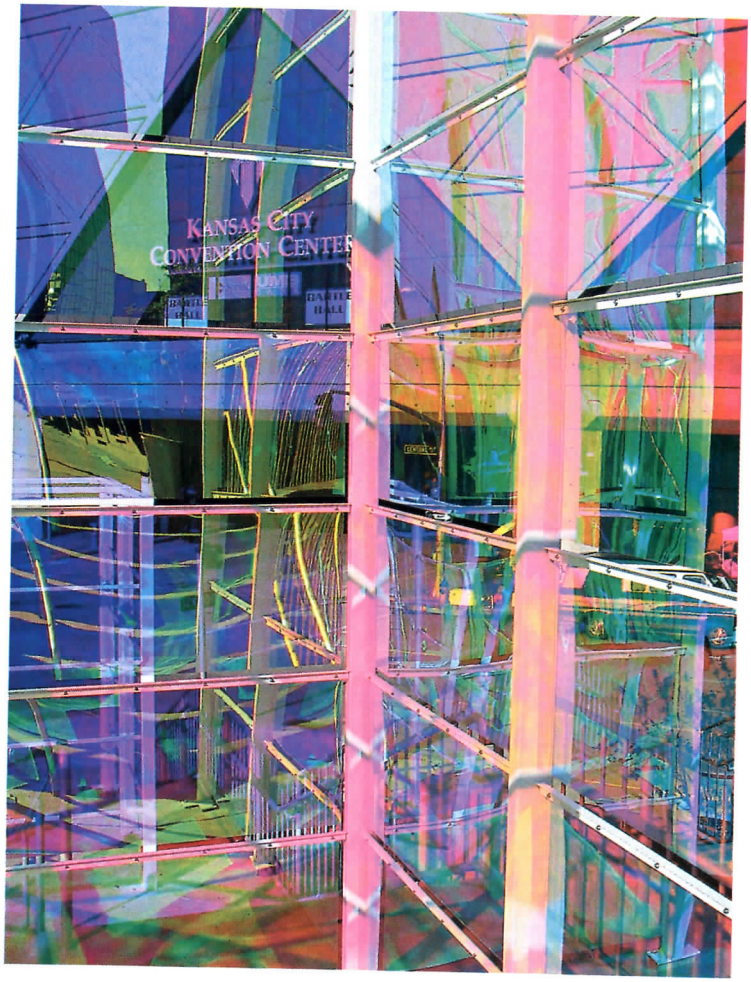
teel towers fitted with dielectric-film-coated panels dazzle without electric power

n summer in Kansas City, souri, the Avenue of the Arts ect sponsors the construction x temporary art installations g Central Avenue. Last summer, nstallation called *Dielectric en*, by Derek Porter Studio, made of two open-framed towers lined with acrylic pan- onded with dielectric film. As if emarkable colors that occur n sunlight strikes the panels not enough, light transmitted gh the panels produces mov- elds of polychromed sunlight all g the steps leading to Barney Plaza, a popular public gather- pace adjacent to Bartle Hall, as City's convention center. Derek Porter collaborated on esign with two of the studio's ners, Katrina Stullken All and Green. They kept the towers e so they could stay within a et that was as minimal as the ure itself. The team knew wanted to find a reflective or tive material for the installa- nd Green found the material e panels via a Web-site search. ade name for the material is ant Color Film," and it is man- ured by 3M. The film is bonded acrylic panels by Cyro ries, which markets its prod- Acrylite Radiant Sheet. The film acts like a dichroic Porter explains. "Some people describe it as like being inside a soap bubble. Others compare it to being inside a plate of Jello." The panels reflect a particular color of light, determined by the angle of the sun in relation to the angle of the panel, while at the same time transmitting the complementary color. Porter says, "The effect can be a little disorienting. The focus of the piece is on the interaction of daylight and color. As the sun shifts and the breezes move the panels, the appearance of the towers is constantly transformed."

The two towers are 16 and 10 feet tall, respectively, and 8 feet wide on each side. Fabricated by Cherry Tree Enterprises, they are made of welded steel tubes. The upper edge of each ⅛-inch-thick panel is sandwiched between two layers of neoprene rubber. These, in turn, are bolted between a piece of steel angle and another piece of flat steel. The bolts also secure a continuous piece of stainless-steel rod, the ends of which are inserted into the steel frame's columns, so the panels can swing freely in the wind. A local engineer checked the panels to ensure they could resist typical wind loads.

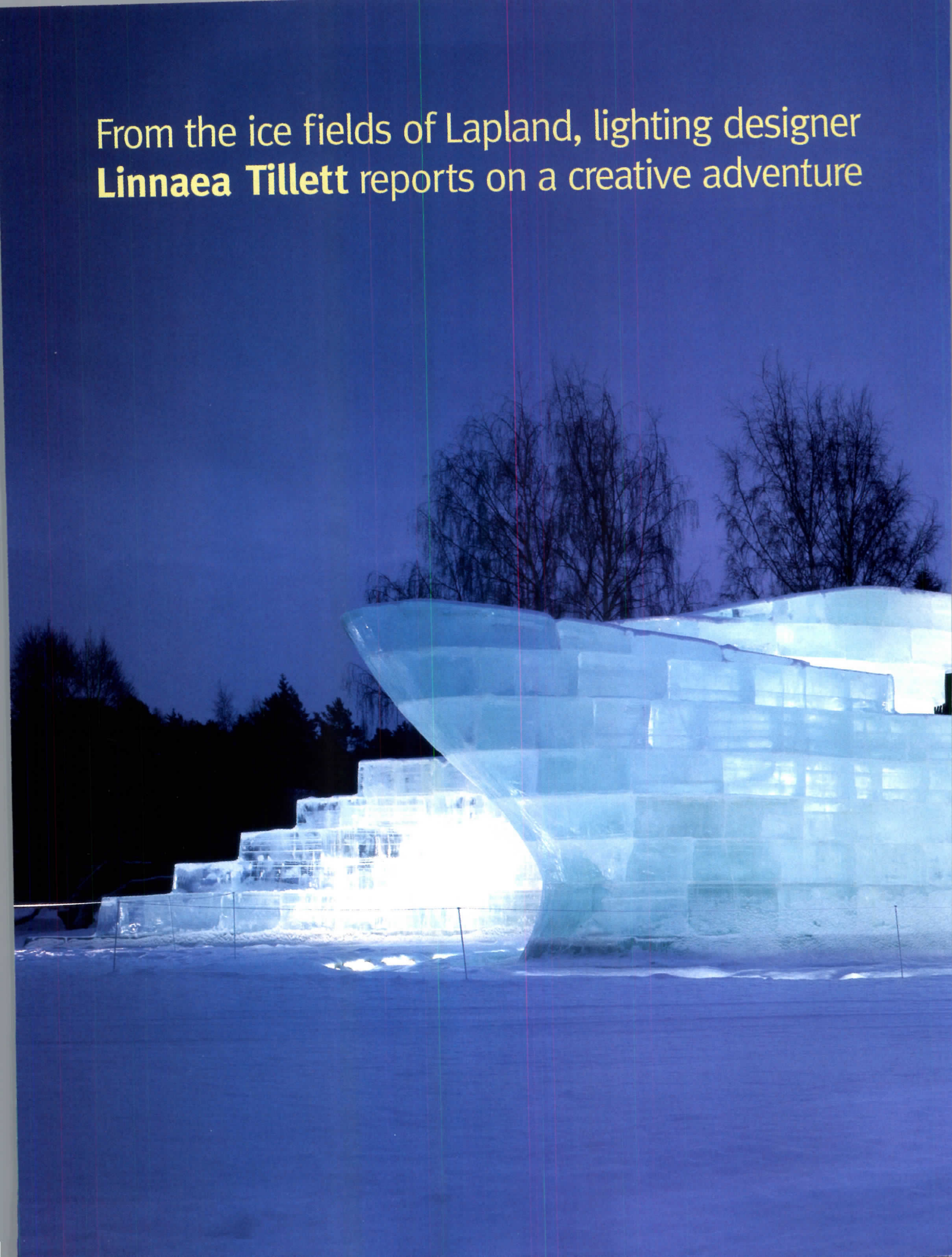
Dielectric Screen was dismantled last fall and is now in storage. Porter, Green, and Stullken hope that it will find a permanent home.

Charles Linn, FAIA



Last summer, visitors walking up the steps to Barney Allis Plaza in Kansas City passed through towers of brilliant, constantly changing color.

From the ice fields of Lapland, lighting designer **Linnaea Tillett** reports on a creative adventure

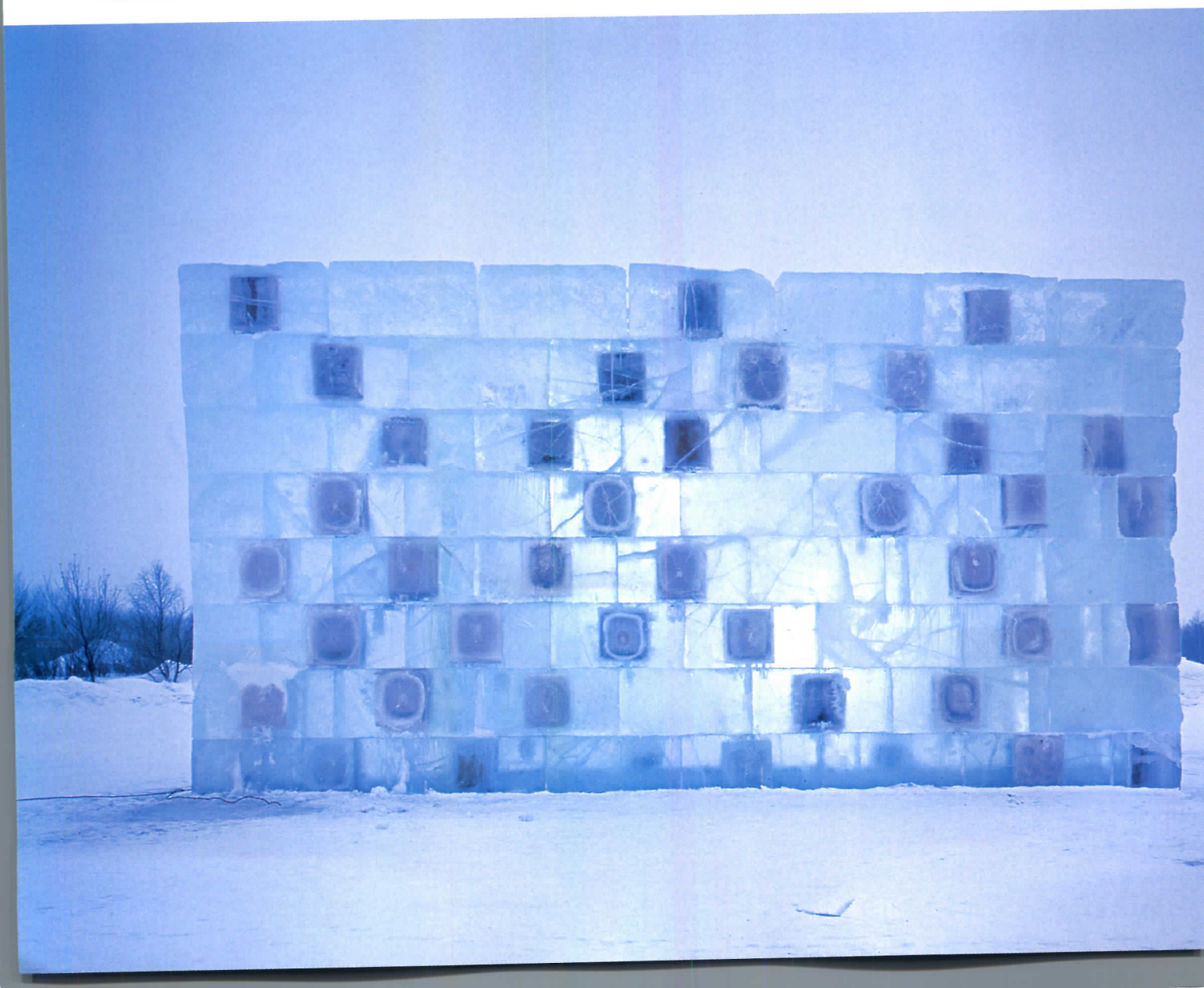


William Weathersby, Jr.

An elliptical tunnel of ice designed by Tadao Ando flickered with embedded bands of digital LED numerals by artist Tatsuo Miyajima. Nearby in the ice fields of Rovaniemi, Finland, bordering the Arctic Circle, sat the shiplike prows of ork (part iceberg or ski jump, part shimmering green float) created by a Hadid. At night, her twin landscape formations were set afire with hol by artist Cai Guo-Qiang, a Chinese pyrotechnical expert who ed her extrapolation of the architect's structure *Caress Zaha with ka*. Ninety miles south in the port city of Kemi, Enrique Norten and rence Weiner collaborated on a series of colored slabs of blue, green, white ice that rose on the horizon like a Nordic Stonehenge. At this, *Snow Show* exhibition held last February and March, 17 teams of sts and architects designed imaginative temporary structures. Volunteer Finnish engineering and architecture students wielded ice-thrashing chain saws in the subzero chill, constructing the works often beneath a canopy of heavy snow clouds. Local firemen began to resemble icicle-laden statues as they sprayed water to fill construction forms and the pondlike canvases of expression for the roster of international design talents. Clearly, this was no ordinary art event or design charrette.

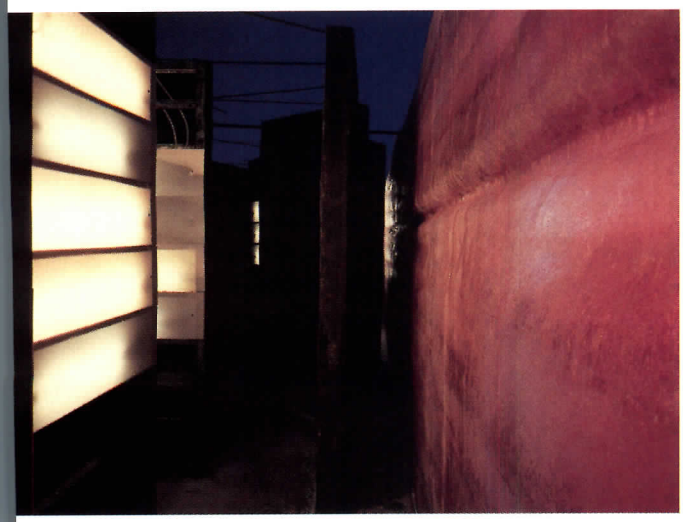
The brainchild of Manhattan art gallery owner Lance Fung, *The Snow Show* was underwritten by the Finnish government and commercial sponsors to promote winter tourism. For the project participants, "it was the design adventure of a lifetime," says lighting consultant Linnaea Tillett, who teamed with architect Lebbeus Woods and artist Kiki Smith on a frozen pond that at night unveiled sylphlike figures floating amid threads of light. Tillett, in fact, was the lead project participant on-site to

***Snow Show* in Finland, Zaha designed a two-part installa- ice and snow that hovered ice-bound ship. Artist Cai ang added pyrotechnics.**



patterns incised by the blade s of an ice skater, swirls of fiber- light (above) by Linnaea Tillett in inset at right, with aid Nicole cher) give a work by Lebbeus ls and Kiki Smith an added ethereal dimension. An ice tunnel by Tadao Ando (opposite, top left) featured integral LED numerals. Other works (opposite, right two and bottom; this page, below) were lit by the sun, LEDs, candles, or flaming liquids.

e the work. (Woods was unable to attend, and Smith arrived for ing night.) One of the only architectural lighting professionals oard (some works relied on artists for illumination, which led to d results, including one piece that imploded from its too-hot interior s), Tillett says the assignment helped her explore the difference een being a light artist and a lighting designer. "I developed a lot of hands-on skills and technical insights," she says. It brought lessons nits: of human physical endurance, product viability, and the natural erties of water and ice, not to mention the mercurial nature of ish winters. "The conditions were unusual," Tillett confirms.



"Masking and electrical tape shattered in the severe temperatures, for example, so we resorted to sprinkling water with small cans as the 'glue' that held the fiber-optic cables in place as we were plotting the design."

The Woods/Smith/Tillett project entailed a network of 1,438 feet of side-emitting fiber-optic strands of various diameters sandwiched between layers of ice overlaid with Smith's stainless-steel figurative cutouts, all set within a man-made pond 60 feet in diameter. "Lebbeus's concept was an imaginary landscape appearing in an electrical universe," Tillett says. "Kiki introduced the mythological, narrative component, and I managed the technical, production, and installation elements."

"It was important to all of us that the work invite participation and could be explored, even walked upon," she continues. "There was no one special viewing position, so every visitor experienced it differently."

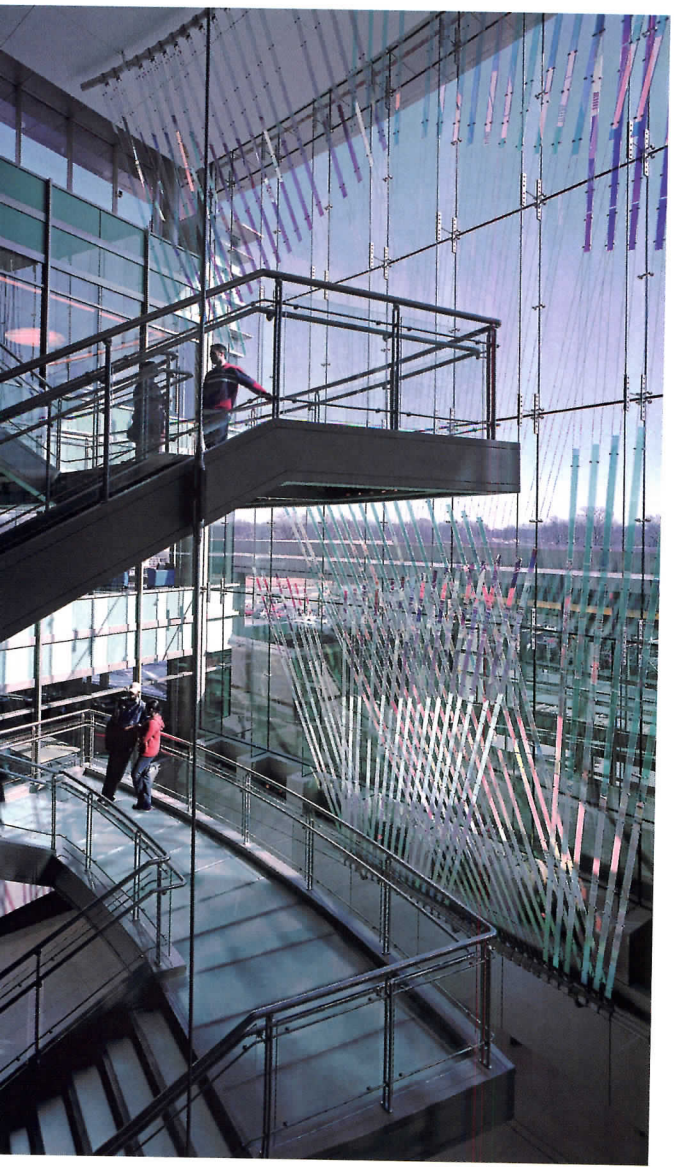
"Lapland was a brutal environment, but unspeakably beautiful," Tillett says. "If you are passionate about your work, cold doesn't seem to penetrate the same way it does when you are bored or alienated." ■

Project: The Snow Show, *Kemi and Rovaniemi, Finland*
Architects: *For a complete roster of architects, artists, and consultants, go to www.thesnowshow.net*
Lighting designer, project coordinator, Lebbeus Woods project: *Tillett Lighting Design—Linnaea Tillett, Seth Tillett, designers; Nicole Rauscher, Sevren Clay, project team*
On-site volunteers: *Stefan Cornelus; Jessica Sledge; Deidre Greaney*

Sources
Fiber optics: *ROBLON*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

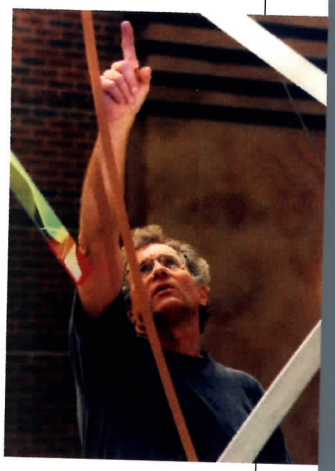
Artist **Ed Carpenter** manipulates daylight and electric light to spark his site-specific architectural works



Ed Carpenter's 60-by-36-foot *Light Veil* installation at the main public library in Memphis (opposite and above) offers a constantly changing array of color and shadow. The artist at work (above right).

By John Peter Radulski

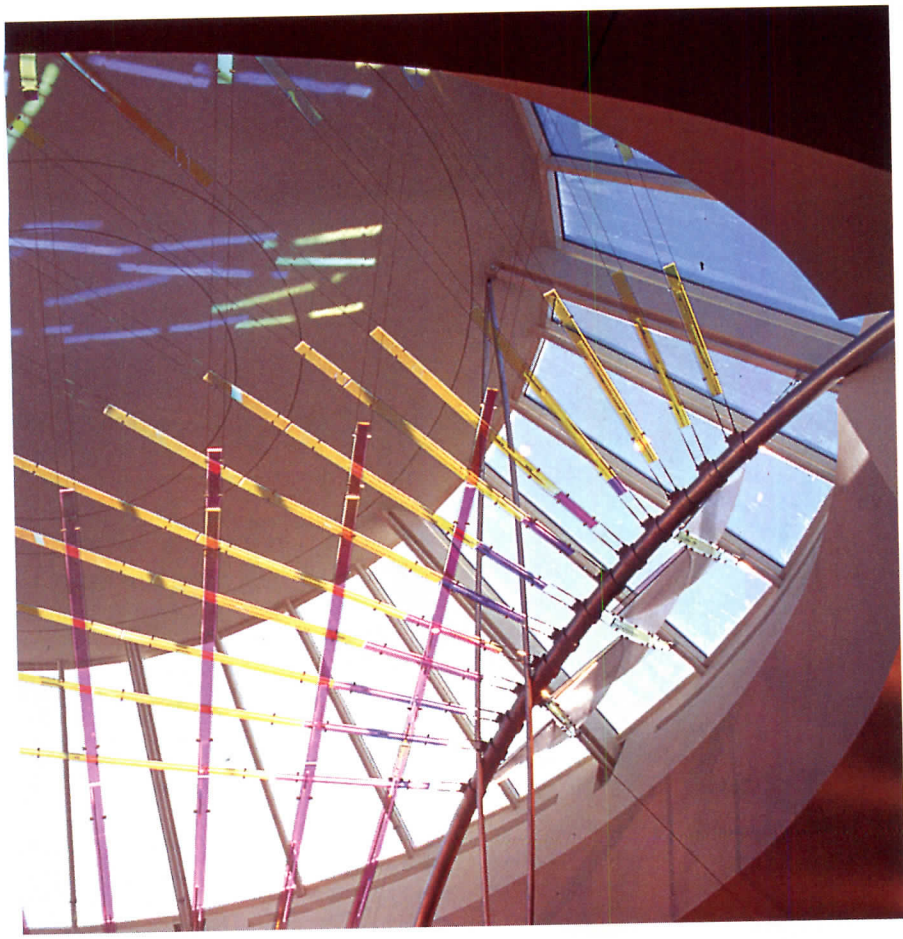
Breath of Light sums up Ed Carpenter's philosophy of working with illuminated glass-and-metal sculpture as his artistic medium; it's also the title of the monograph about his body of work (l'Arca Edizioni, 2000). Since 1973, Portland, Oregon–based Carpenter has completed more than 75 projects encompassing pedestrian bridges, interior and outdoor architectural sculptures, and stained-glass windows for a variety of public, corporate, institutional, and ecclesiastical clients. The cohesive element in such a broad body of work is an exploration of how light—whether daylight, electrical illumination, or a combination of the two—affects the built structure it falls upon, passes through, or radiates from.

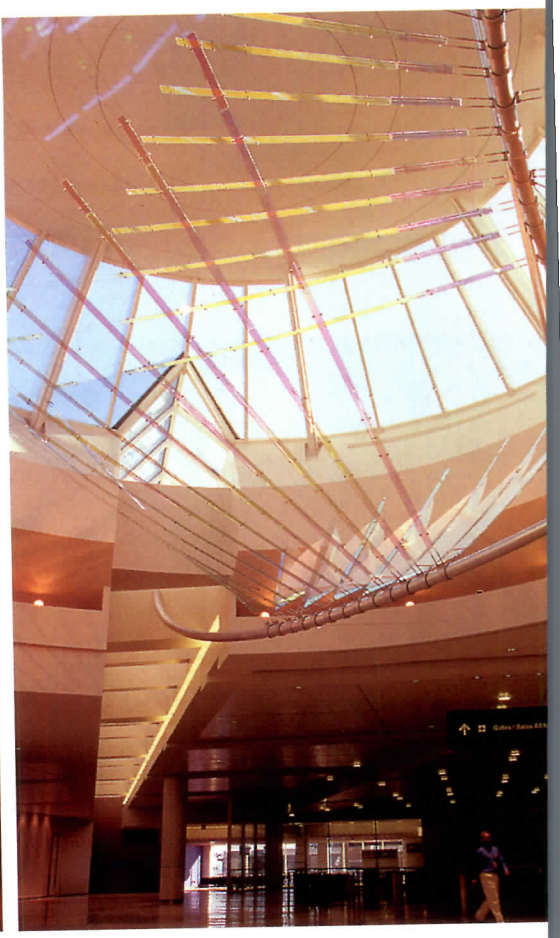


Carpenter points to his study of stained-glass artisanal history and hands-on experience with that craft as the genesis of his interest in the effects of light. While studying at the University of California, Berkeley, between 1968 and 1971, he became acquainted with a local stained-glass artist and later traveled to Europe to further explore the medium in apprenticeships with English and German masters. His evolution from a stained-glass artist—by his estimate, his first decade's worth of commissions were in that medium—to a more versatile artist who now designs a variety of installations was prompted by a growing curiosity about how light can be manipulated to create "a game of layering and texturing, obscuring and revealing, and allowing the movement of shadows and light patterns to animate a room, a wall, or a courtyard." Similarly, magnification, filtration, and the addition of kinetic elements extend the artistic possibilities, he says.

Many of Carpenter's later works, including a sculpture completed in 2001 for the main public library in Memphis, employ dichroic glass, a material created by applying thin layers of metallic oxides such as titanium, silicon, and magnesium to the surface of the glass in a high-temperature, vacuum furnace. These coatings transmit varying wavelengths of light while reflecting others, so that when viewed from even slightly different angles, various colors are visible. For the library, designed by Looney Ricks Kiss Architects in 1997, Carpenter was commissioned to install a sculpture in the 80-foot-high main atrium enclosed by a curtain wall of glass on the building's east side. His *Light Veil* measures 60 feet high by 36 feet wide and incorporates stainless-steel cables and hardware, aluminum armatures, and laminated dichroic glass. Visible from within many areas of the library, as well as through the eastern facade, the sculpture's colors and actual shape are perceived differently

John Peter Radulski is a writer and design consultant based in Westport, Conn. He studied art history at Vassar College and the Clark Art Institute.





depending on the location of the viewer and the intensity of the natural and electric light that passes through or is reflected off the overlapping layers of glass.

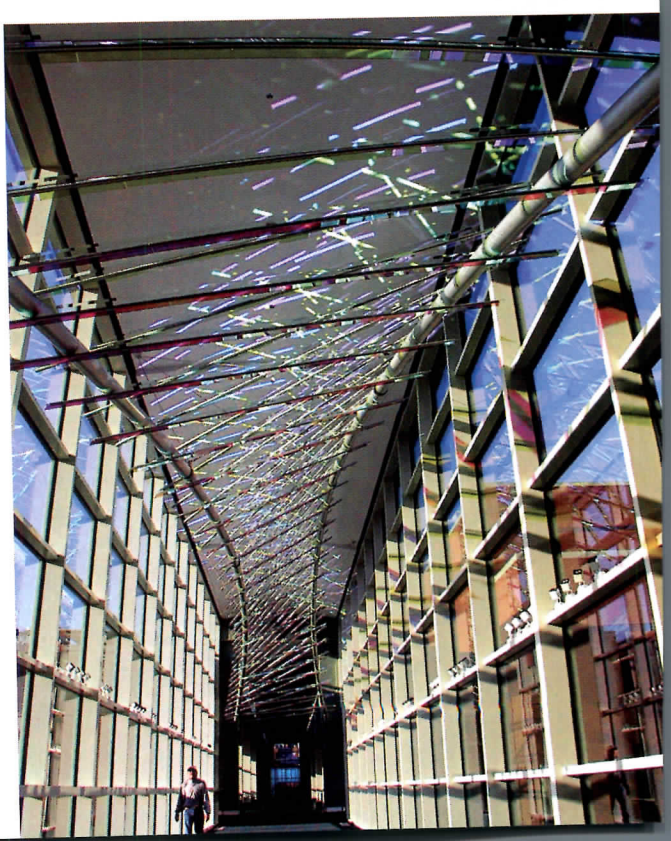
Carpenter explains his design process as deductive, letting the specifics of a site inform the installation. In Memphis, an open flight of stairs that connects levels had a highly sculptural presence, so he didn't want to compete with it visually, he says. The building's expansive glass curtain wall also provided Carpenter with a ready-made boundary for his proposed work. The result offers an expression of light that didn't need to overwhelm the stair atrium, he says, adding that central to all of his works is a desire "to create uniquely powerful spaces."

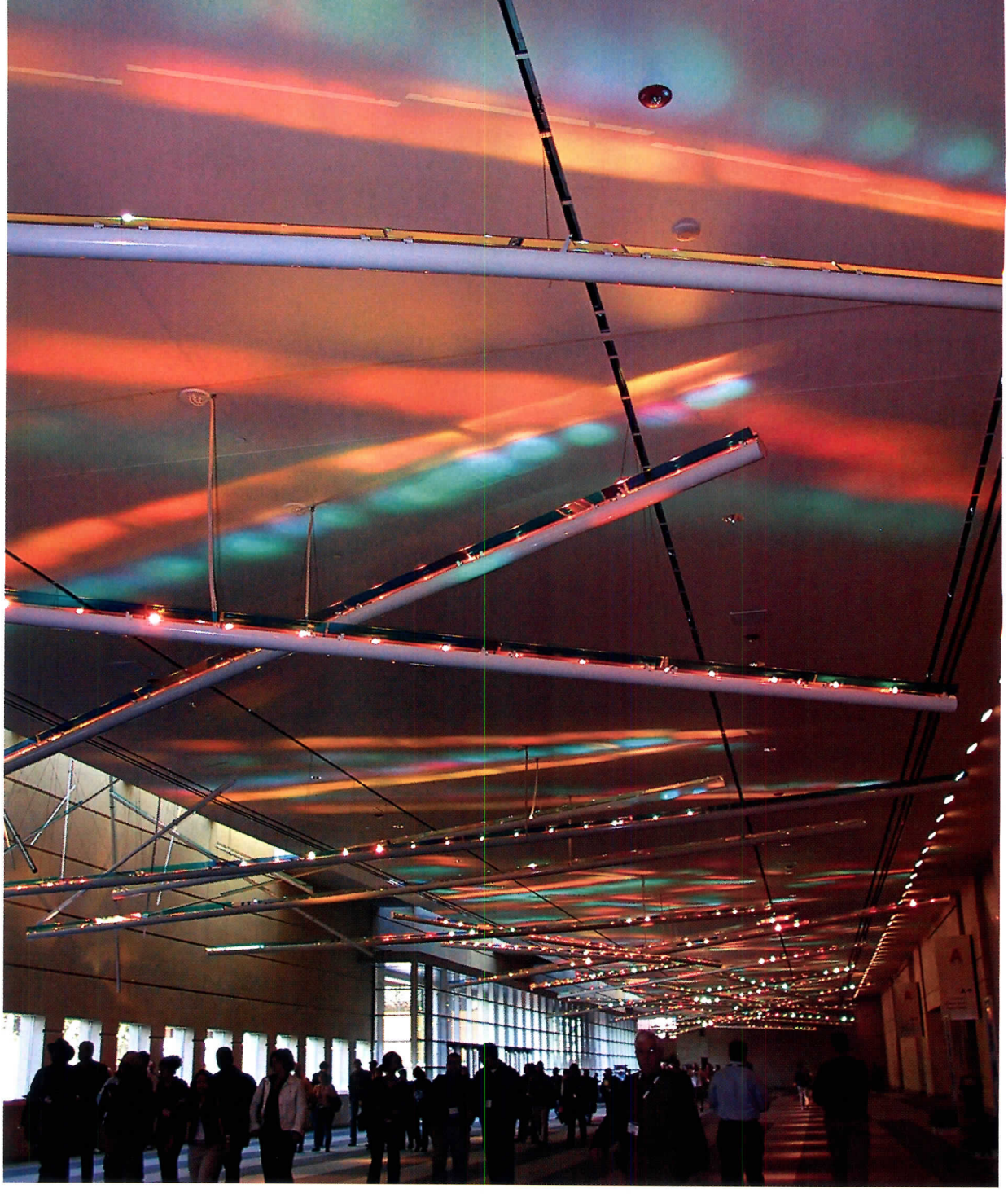
At the Dallas Convention Center, *Lightstream* engages event-goers traversing the 800-foot-long corridor that links entrances to the many meeting rooms and halls. While the suspended "light sticks" are illuminated to add "a sense of coolness in the hot Dallas climate," Carpenter says, the lamping is set on microprocessors so that it can be electronically controlled. The normal daytime program creates visual waves of color that wash from one end of the hall to the other—and at times meet or cross in the middle. The lamping can also be programmed as a subtle way-finding system indicating, for example, that there is certain activity occurring in one particular part of the center.

THE GRANDSON OF A SCULPTOR/PAINTER AND THE STEPSON OF AN ARCHITECT, CARPENTER BRIDGES THEIR TWO FIELDS.

With a full-time staff that includes Carpenter, studio assistant Oanh Tran, and office manager Arleen Daugherty, the artist has also established a circle of consultants, fabricators, computer modelers, and

Carpenter created *Light Wings* for the north concourse of the Houston International Airport in 2001 (above two). A pedestrian bridge links two components of the Richmond Convention Center in Virginia (below).





Scores of dichroic "light sticks" are arranged along an 800-foot-long patl in *Lightstream*, at Dallas Convention Center (left), 200

others that help facilitate design and installation. Widely known as an eager and open-minded collaborator and technical innovator, Carpenter carries on a cross-disciplinary family legacy: His grandfather was a painter/sculptor and his stepfather an architect. In the works are projects in Taiwan, Honolulu, and California that, like Carpenter's previous commissions, will be spatially complex, graceful, and undoubtedly grand. ■

Project: *Central Memphis Library*
Architect: *Looney Ricks Kiss Architects*
Engineer: *KPFF*
Glass fabrication: *Haefker O'Neill Studio; Standard Bent Glass*
Metal fabrication: *Albina Pipe Bending*

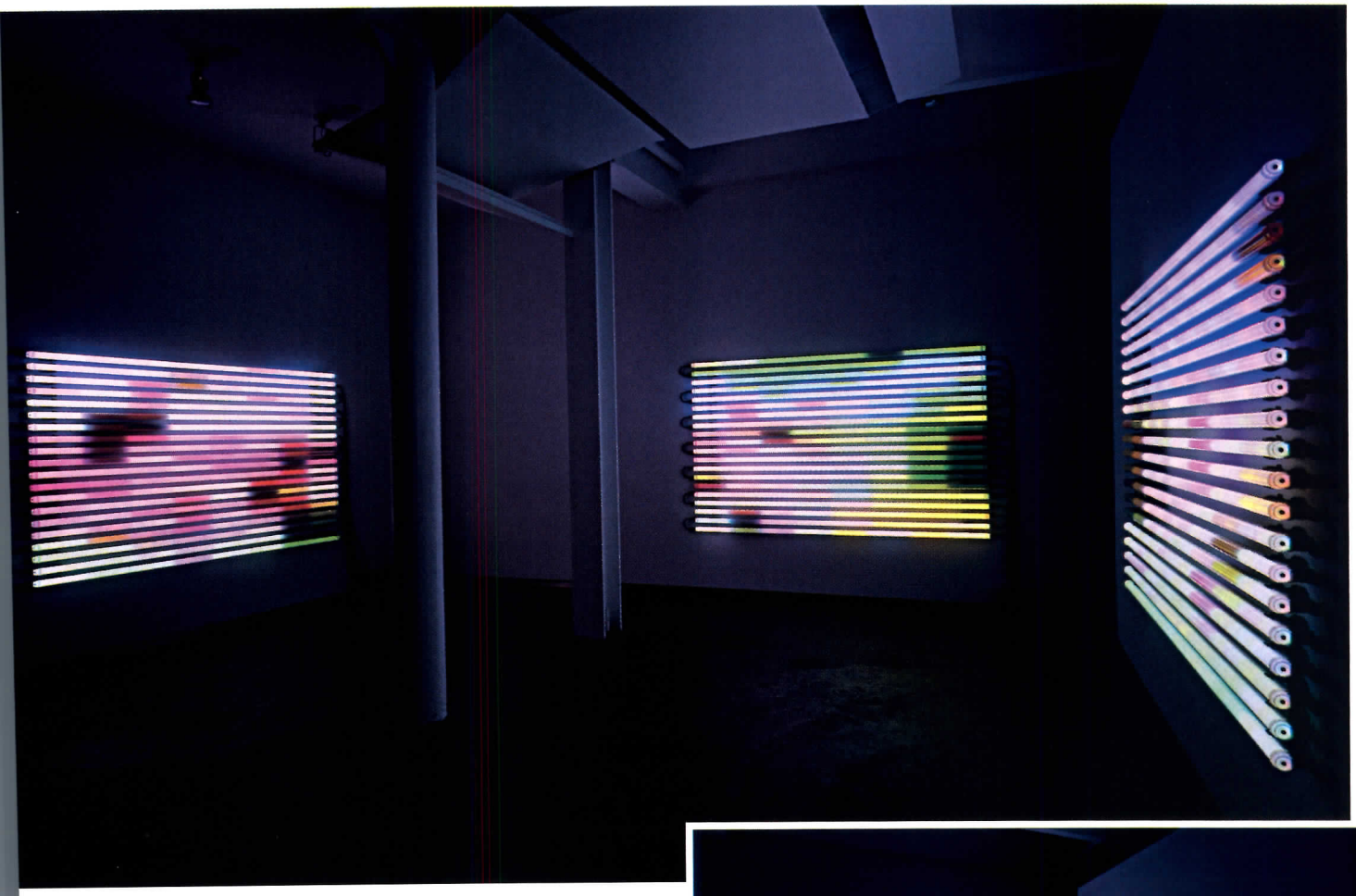
Project: *Houston International Airport*
Architect: *Gensler, Houston*
Lighting designer: *Bos Lighting Design*
General contractor: *Caddell*
Glass fabrication: *Haefker O'Neill Studio; Standard Bent Glass*
Metal fabrication: *Albina Pipe Bending*

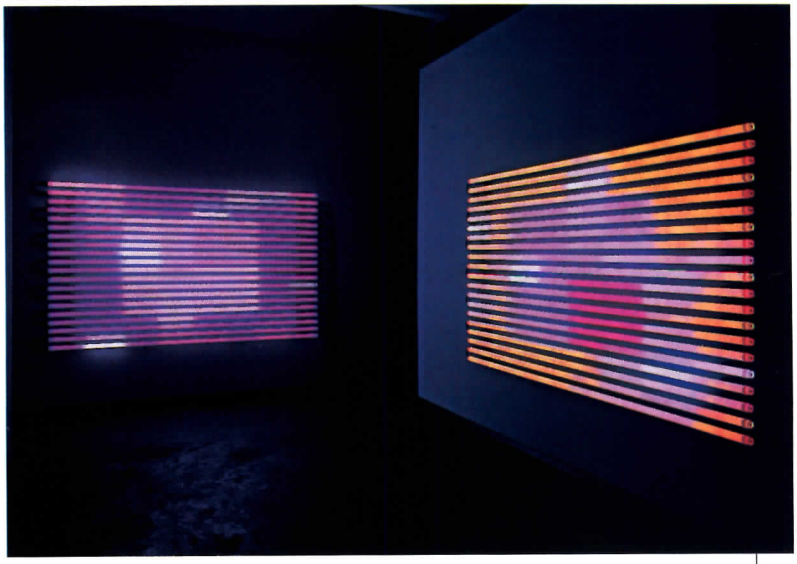
Project: *Richmond Convention Center*
Architect: *TVS, Atlanta; SMBW, Richmond*
Lighting consultant: *Craig Marquardt*
Lighting control system: *ETC/Barbizon*
Metal fabrication: *Haefker Studio*
Art consultant: *Jacqueline Holmes*

Project: *Dallas Convention Center*
Project manager: *John Rogers*
Architect: *SOM, Chicago; HKS, Dallas*
Lighting consultant: *Craig Marquardt*
Lighting control systems: *ETC/Barbizon*
Metal fabrication: *Albina Pipe Bending*
Glass fabrication: *Haefker O'N Studio.*

For more information on this pr go to Projects at **www.architecturalrecord.c**

The hypnotic light sculptures of **Leo Villareal** are precedent-setting for architectural design



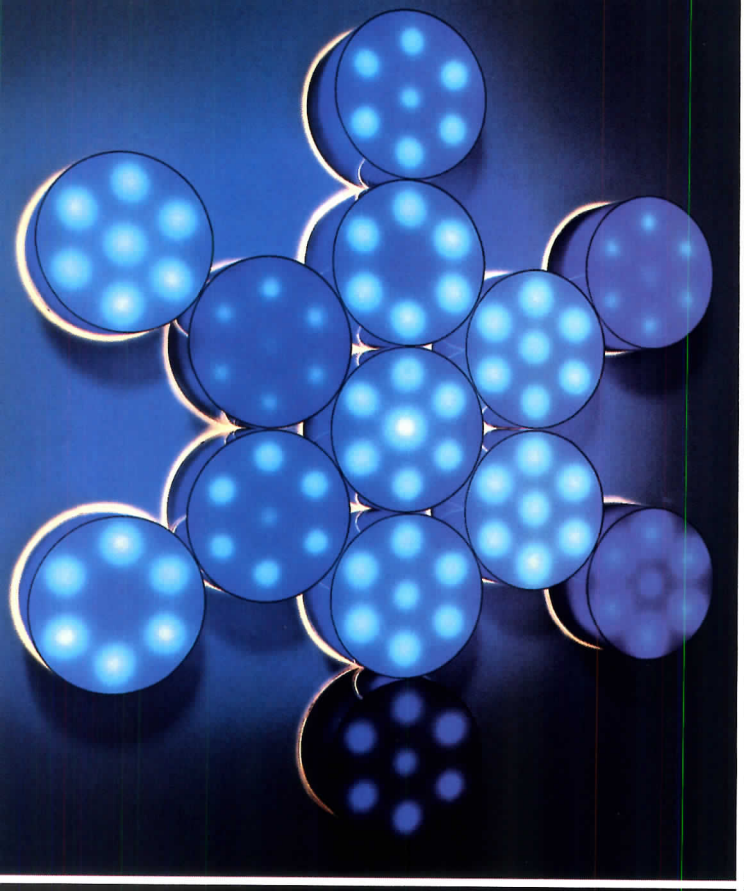


Sara Hart

ight as the primary medium, not just a component, of art has been on the fringe historically, due in large part to technical limitations its ephemeral nature, compared to ductile mediums typically associated sculpture and painting. Dan Flavin eered sculpting with light in the 1960s with his Minimalist fluorescent- compositions. More recently, James Turrell's mood-altering neon onments have made him the darling of the architectural vanguard. architecture as well, light traditionally plays a functional and, there- a supporting role in all but the most theatrical designs.

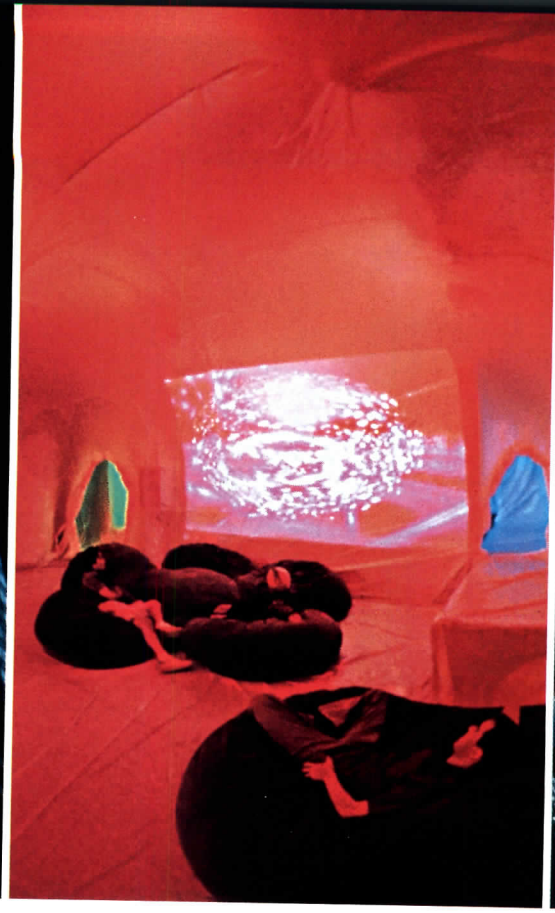
The technological innovation that precedes commercial applica- often finds its way onto the artist's palette. Advances in light-emitting s (LEDs) represents one development with great promise. In a recent ition at the Sandra Gering Gallery in Manhattan, New York light tor Leo Villareal (www.villareal.net) displayed three wall-mounted sculptures constructed of horizontal tubes containing thousands of

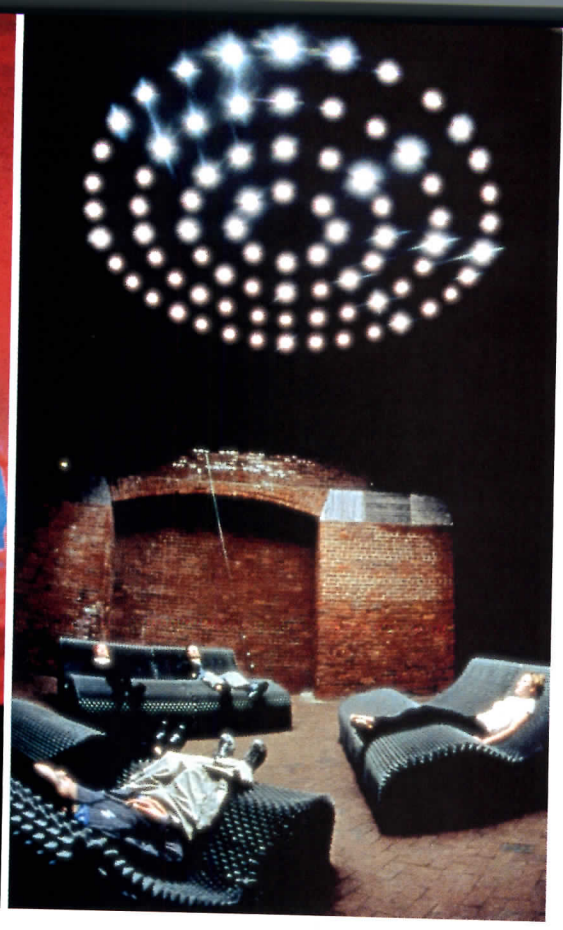
Chasing Rainbows **is an installation of 60 tubes arranged horizontally in three groups of 20. Villareal (left) programmed deep, shifting, virtual spaces within a matrix made up of thousands of full-color LEDs.**



Villareal's work
wildly in scale f
interiors such a
(opposite, midd
interactive perf
ance piece crea
with other artis
Firmament (op
right), a strobe
display viewed
gravity foam so
large flashing
on building fac
(opposite, left).

Villareal's experiments in light are varied. The pulsating white light of a gallery installation called *Metatron* (above) quietly recalls phosphorous in the ocean; flickering colored lights beckon pedestrians into a gallery (right). In contrast, *Supercluster* (below), the LED matrix covering the facade of P.S. 1, investigates complex light-programming issues.





olor LEDs, which, although based on only green, blue, and red, the artist a palette capable of producing an astonishing 16 million combinations.

With solid-state semiconductors as pigment, Villareal created a l reality more spatially complex and radiant than is typically asso- with kinetic art. As the viewer is absorbed into the matrix, the ontal tubes dissolve, and the darting shapes emerge as architectural . The mind begins to concentrate on the rhythmic ebb and flow of

MOVES BACK AND FORTH FROM MPUTER SIMULATION TO PHYSICAL CK-UP, TWEAKING THE DESIGN.

rms and patterns, looking for repetition—some evidence of a -that would provide a narrative to the story. One can stand and e the installation for hours and not find a way out, but the journey lling.

Villareal works much like an architect, first conceptualizing on mputer with software he writes. As with the design of buildings, the s is iterative. He moves back and forth from computer simulation to al mock-up, testing and tweaking the design until all issues are d. This process is important in his site-specific commissions in architectural scale becomes a critical component. *Supercluster* is y-120-foot matrix of 640 LEDs, which envelops the facade of . 1 Art Center in Queens, just across the river from Midtown ttan. Mounted on scaffolding attached to the south facade, the re is ordered by a grid within which light animations are governed t is known as cellular automata, a closed system in which grid cells in relation to neighboring cells. Hence, the cells take on a life of vn, "living and dying" according to the rules of the matrix.

The artist's own evolution began with work in set design at Yale. "I eventually ended up in the sculpture department and realized I could do the same thing I was doing, but didn't need plays, directors, or actors," Villareal explains. "I worked with light, sound, and video, finding site-specific locations for installations." Later, he went on to New York University's Interactive Telecommunications Program (itp.nyu.edu), a pioneering department in the Tisch School of the Arts for the study and design of new media, computational media, and embedded computing. Here, he learned the programming skills that now enable him to push LED technology far past familiar commercial applications, such as embellishment of commercial space and the transformation of facades into animated advertising and infomercial billboards.

It would benefit architects and engineers to consider the experiential and spatial potential of Villareal's work. There are a handful of precedents that prove genuine collaboration between lighting designers (if not artists) and architects can happen with neither being compromised, but the potential for innovation in space-making and facade design is far from fully realized. Villareal is taking a step in that direction with a commission to create a light sculpture for a new federal courthouse in Texas, which is now in design development by Antoine Predock. If design influence can flow in both directions here, then light may emerge as a true building material. ■

Project: Supercluster, *as part of* Signatures of the Invisible.
Client: *P.S. 1 Contemporary Art Center; Antoine Guerrero, director of operations; Cornelia Tischmacher, project manager*

Project: Chasing Rainbows, *three wall-mounted light sculptures constructed of horizontal tubes containing thousands of full-color LEDs*
Location: *Sandra Gering Gallery, New York City*
Lighting equipment: *Color Kinetics*

For more information on this project, go to Projects at **www.architecturalrecord.com**.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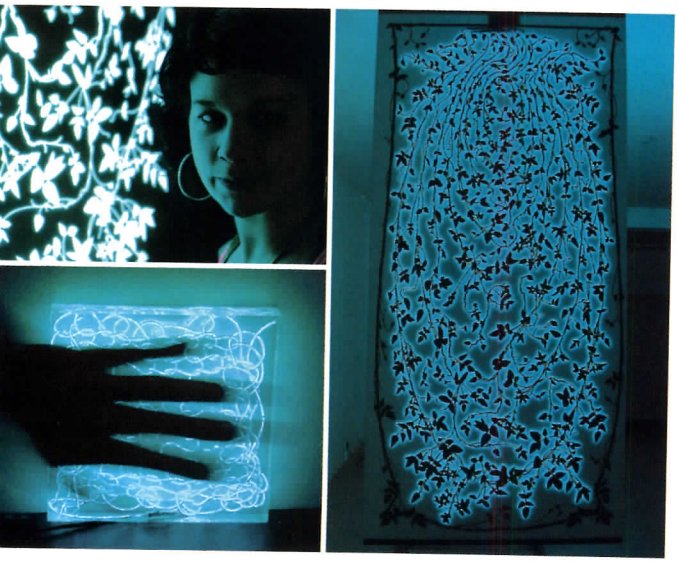
Lighting Products Sculptural Lights

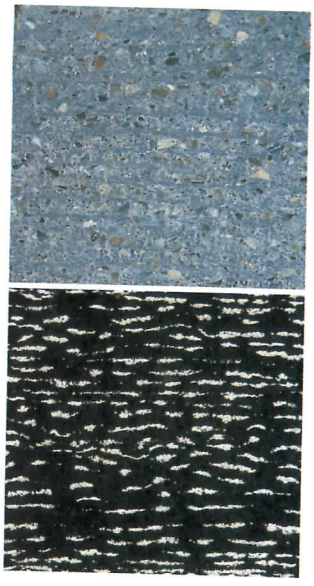


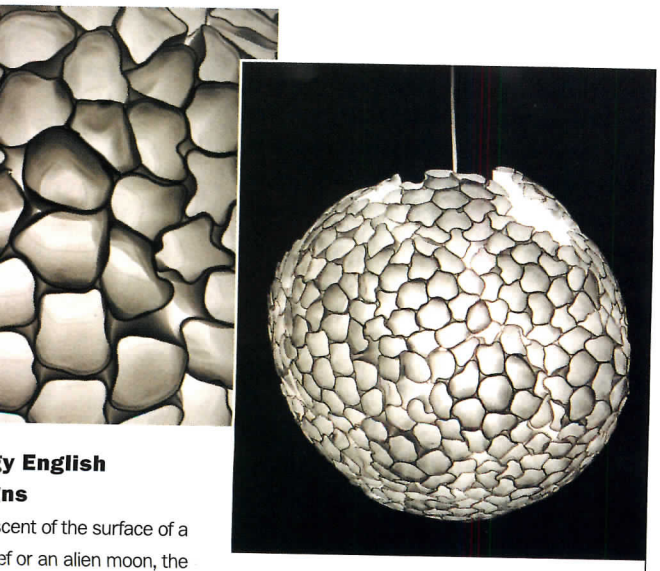
ght sources for cloudy days

was established last year by Royal College of Art graduate and textile designer el Wingfield. Based in London, Wingfield creates reactive, luminous surfaces and ts by applying electronics and display technologies onto textiles and interior sur- Wingfield's key interest is how light can be applied to relieve the suffering of those AD, or seasonal affect disorder. Wingfield launched Digital Dawn, a reactive win- amp (right)), at last year's 100 Percent Design in London. Digital Dawn illuminates onse to its surroundings—the darker a space becomes, the brighter the blind maintaining a balance in luminosity. Loop, London. www.loop.ph **CIRCLE 200**

▼ Light-transmitting concrete

Concrete has never been a material admired for its ability to transmit light—until now. Inspired by an art piece that featured concrete embedded with glass, Aron Losonczi, a young Hungarian architect, has invented LitTraCon, a translucent concrete building block that combines the material with thousands of optical fibers that run side by side between the two main surfaces of the block. According to Losonczi, the blocks are load bearing, provide the same effect with both natural and artificial light, and have the same strength and qualities as common concrete blocks. The blocks are currently undergoing testing. LitTraCon, Aachen, Germany. www.litracon.com **CIRCLE 201**



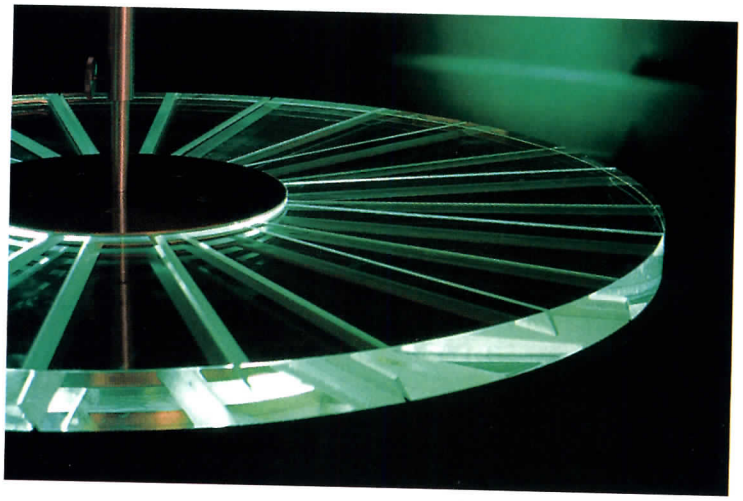


y English ns

cent of the surface of a ef or an alien moon, the lamp by designer Paul Cocksedge recycles an everyday object—the poly- cup—into an otherworldly light diffuser through the careful application of heat aterial. The Styrene pendants come in three sizes and will be produced in a lampshades. Cocksedge is one of four designers short-listed to win at the *r of the Year* exhibition currently at London's Design Museum. At the Bombay e exhibit at last month's Milan Furniture Fair, he introduced a lamp that a glass fixture containing Bombay Sapphire and tonic to UV light, creating a ving effect. Paul Cocksedge, London. www.paulcocksedge.co.uk **CIRCLE 202**

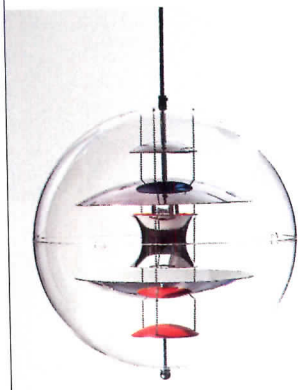
▼ A slice of light

All four members of the architecture and product design firm Liuhta studied together at the Technical University of Darmstadt in Germany, where they went on to practice in firms around the world. Liuhta has developed ambient and direct lighting in materials including Perspex acrylic, stainless steel, aluminum, and LEDs. The Segment ambient pendant light, shown below, is height-adjustable and features Perspex, stainless steel, and white and green LEDs. It measures 1' in diameter and 1" in height. Liuhta Architektur und Design, Darmstadt, Germany. www.liuhta.com **CIRCLE 203**



Lighting Products Sculptural Lights

▲ Sea of lights
The eerie luminescence of a school of jellyfish is captured by Dutch designer Dirk Rutten through his Jelly-Lights light sculptures. Developed with a proprietary process, the fixture's polycarbonate shell is bonded with a special heated liquid to a series of fiber-optic strands. The light's energy-efficient MHR 150-watt projector comes with an optional color wheel to create custom color scenes and can be placed a maximum of 26' away from the fixture. Jelly-Lights is produced in four sizes: 5', 6½', 8', and 10' in diameter, while custom sizes and shapes (including leaves and birds) can be designed on request. NXT Light, Neunun, the Netherlands. www.nxtlight.com **CIRCLE 204**



▲ Retro space-age designs
After more than 25 years out of productio Vernon Panton's space-age lighting desig will be reissued for the U.S. and Canadian markets by Copenhagen design firm 12Ti The collection, which will grow to about 2 objects within the year, consists of Fun (above left in chromed stainless steel), Sp (above right in opaque white plastic), Glo (left), and Spy, available as hanging lights and in some cases, table, floor, and wall-mounted versions. 12Timer, Copenhagen Denmark. www.12timer.com **CIRCLE 205**

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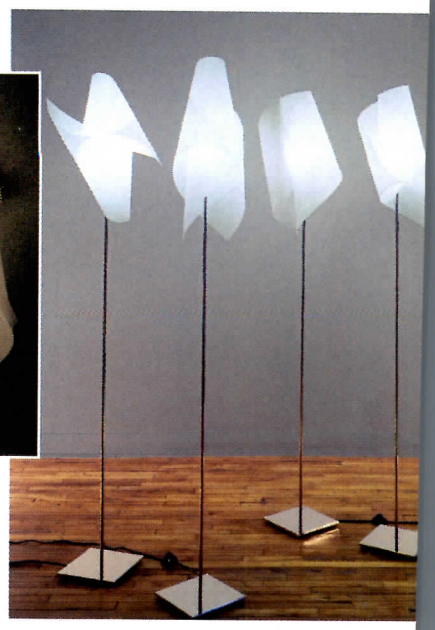
Lighting Products Sculptural Lights

▼ Reflecting light, projecting sound

Combining both light and sound, ViroSphere is the world's first outdoor IP65 loudspeaker based on NXT technology, according to Martin Architectural. Tested to withstand all types of weather, ViroSphere loudspeakers double as light reflectors and are manufactured from a fully UV-protected, full-colored polycarbonate material.

The system consists of two oval-shaped panel speakers mounted on a slim post and illuminated by two Martin Exterior 200 CMY color changers. Martin Architectural, Sunrise, Fla. www.martin-architectural.com **CIRCLE 206**



▲ Shade sculpting

Brave Design's award-winning FLX series of light fixtures is defined by a semirigid, diffusible polycarbonate sheet that can be twisted into different shapes. The shade on the FLX 100 table fixture and FLX 200 floor fixture has at least nine ways to be assemble and placed on the nickel-plated steel stand (four options shown above right). If t offers too much freedom of choice for the client, specifiers can have the shades configured by Brave Design. The FLX 300 pendant (left) comes with the option o three preconfigured shades in two shade sizes. All fixtures use recyclable materi and low-energy compact fluorescent lamps. Brave Design, Montreal, Canada. www.bravedesign.ca **CIRCLE 207**

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Products

Landscape Furnishings

Made of materials ranging from teak to polypropylene, **landscape furnishings** for cities, parks, and private spaces need to withstand the elements as well as heavy-duty client needs. For the latest outdoor products, check out the ASLA's Annual Meeting & Expo held from 10/29–11/2 in Salt Lake City. *Rita F. Catinella*

htweight *and lighthearted* outdoor furniture

ake 5 outdoor furniture tion is a major introduction Landscape Forms that will er the company's award- ng standard collection of out- commercial furnishings. The ing of several international n studios, including Marco , Philippe Starck, T. Yoshino, ominic Symons, Take 5's g, table, and planter line is ed to offer solutions for a of commercial outdoor and indoor spaces, including restaurants, entertainment venues, corporate and university campuses, and hospitality and health-care environments. Most of the products feature molded polypropylene, while chair legs are made of stainless steel or aluminum, and the Yummy table top and Cheap Chic table base are made of stainless steel. Landscape Forms is offering a Take 5 "test drive," allowing specifiers to try the line for 30 days before buying. The entire collection is offered with a one-year warranty for outdoor use, and since they are warehoused in Michigan, most orders will ship within 48 hours. For more information on Landscape Forms' new white paper on environmental design trends, see this month's Product Literature, page 228. Landscape Forms, Kalamazoo, Mich. www.landscapeforms.com

CIRCLE 208

Cheap Chic bar stool, Philippe Starck (left); stacked So Happy chairs, Marco Maran (center); Quadra planters (right).

aceous collection of teak shings

d Teak's award-winning ong collection of outdoor e is made of solid planta- k from Costa Rica, where pany has planted tens of ds of native trees certified orestry Stewardship Designed by Barbara and iffany, the line of benches, nd tables features thin, eak beams that are joined ess-steel rods and in undulating patterns ide balance while main- he illusion of fluidity. The pieces can be used indoors as well as out, and the benches can be made in different lengths and ergonomic shapes, including compound-curve or S-curve benches, long backless benches, and reverse-curve benches. The benches have been used in such projects as Battery Park in New York City and the Barney's Show Store in Hollywood, California, where Diamond Teak manufactured custom backless benches measuring 3' wide by 8' long. Diamond Teak, Sellersville, Pa. www.diamondteak.com

CIRCLE 209

A side view of the Spirit Song table.

Improved city-scape furnishings

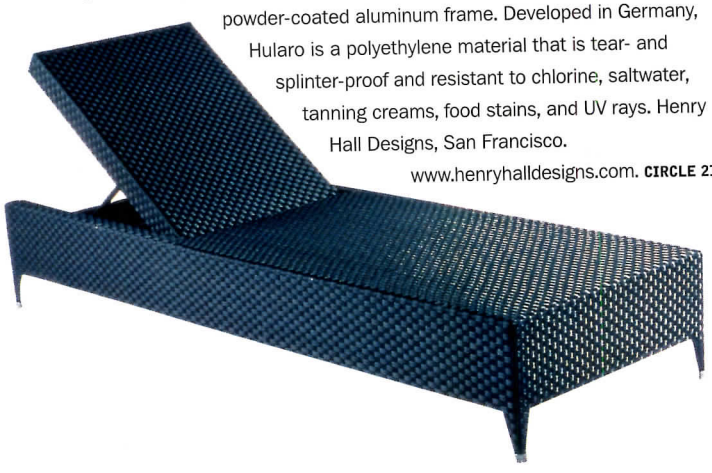
Citizens of New York City and Washington, D.C., will soon see a change in the street furniture that is a familiar part of their surroundings. In January, New York City announced an international competition for a new design for the more than 300,000 streetlights (above) within its five boroughs; a winner is to be announced on October 15. The city is also expected soon to release an RFP for an updated design for city-owned bus shelters and newsstands (top). Washington, D.C.'s transportation department issued an RFP for a bus-shelter program in March. Toulla Constantinou, North America C.E.O. for the street-furniture manufacturer Cemusa, plans to compete for both proposals. "I feel that cities are finally waking up and improving their designs," she says. "They are not simply utilitarian as they used to be". *R.F.C.*

▼ Turtle-friendly lighting, cushioned bench

Triada, the newest addition to Forms+Surfaces standard lighting product line, was designed and developed for the City of Miami Beach, Florida. The fixtures needed to integrate with the nautical environment as well as manage light output with directional shields to protect the local turtle habitat from light pollution. The company has also recently added an upholstered seat to their Bridge Bench site-furniture line. Forms+Surfaces, Carpinteria, Calif. www.forms-surfaces.com **CIRCLE 210**

▼ Outdoor furnishings to stand the test of time

Recalling an era when gardens became the center of leisure, the Sienna collection of armchairs, chaise longues, and table settings are made of Hularo hand woven on a powder-coated aluminum frame. Developed in Germany, Hularo is a polyethylene material that is tear- and splinter-proof and resistant to chlorine, saltwater, tanning creams, food stains, and UV rays. Henry Hall Designs, San Francisco. www.henryhalldesigns.com. **CIRCLE 212**



► Give passersby a double take

Double Visions has introduced large custom-designed screens made with high-quality photographic prints. The screens are designed to serve as wind barriers, to hide unsightly areas such as construction sites, to enclose a pool or parking lot, or to beautify facades of buildings and retaining walls. Twenty of the screens, printed with images of sculpted hedges, have been installed along a street in the city of Amsterdam (above). Double Visions, Murrieta, Calif. www.doublevisions.com **CIRCLE 214**

▼ Holier than other tables and benches

British designer Michael Young has trained with Tom Dixon and worked for world-cla companies such as Cappellini, Magis, and Sawaya & Moroni. Tölt, his new outdoor- furnishings offering for Extremis, combines the "classic" material of acacia wood wi a "high-tech" tabletop made of Corian. The wooden table legs feature a 70s and 80 retro feel, while the perforated Corian top allows for easier drainage and cleaning. Tölt is available in a round table with low stools or a rectangular table with matchin benches. Ideas for Living, Albuquerque, N.M. www.extremis.be **CIRCLE 211**

▲ Fountain of youth

The historic Albuquerque High School in east downtown Albuquerque has been transformed by the local firm of Dekker/Perich/Sabatini into an urban center that includes loft surrounded by a campus and retail shops. The pro also features a new publ fountain system designe 19 smooth-bore nozzles LED lights installed in a centric layout pattern flu the finished concrete de The spray heights are staggered "wedding cake" fashion with a hig center and lower outer tiers. Rom Fountains, Albuquerque, N.M. www.romanfountains.com **CIRCLE**

◄ Glare-free bollards

HessAmerica's new Valencia and Montego bollards complement the company's existing pole and wall- mount Designer Series models. Heavy-duty 7" diameter steel shaf provide a sense of security, while rior baffles direct light output to t walkway and eliminate glare. Vale is capped with a heavy-cast steep roof, while Montegro features a s dome roof. Both utilize either HID compact fluorescent lamps for a variety of applications. A selectio finishes is available. HessAmerica Gaffney, S.C. www.hessamerica.c **CIRCLE 215**

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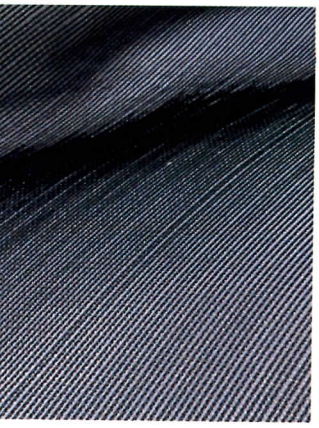
Product Briefs

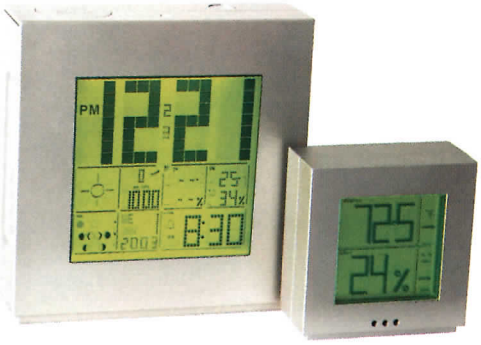


pholstery with lungs

llaboration with Dutch designer Ferdinand Visser, Designtex has launched an ual collection of breathable fabrics that feature the proprietary Airco System that s for air circulation and ventilation between pressure points. The first two designs ese structured fabric systems are In Space (right) and Drizzle (left). In Space res a crisp, chenille-like strip that floats on clear supportive threads above a asting color background. Drizzle's thinner rib style was a result of experimenting he In Space fabric structure. Designtex, New York City. www.dtex.com **CIRCLE 216**

was a dark, my night ...

to know if you d bring an ella? Why turn on Weather Channel you can check pe Starck's new Weather station, oped with Oregon ific. The four mod-



he collection may include a radio-controlled clock with an LED backlit readout of etric pressure, moon phases, date, indoor and outdoor temperature, or humidity. age of the current time and alarm status can be projected onto the ceiling of a oom. MoMA Design Store, New York City. www.oregonscientific.co.uk **CIRCLE 218**

fire night revisited

ape artist and sculptor Elena o has developed a line of outdoor bowl" features for clients including hotelier André Balazs, who commissioned firebowls for two hotels and his private residence. The firebowl is a 4' to 15' diameter sculpture fabricated in steel, bronze, copper, stone, or colored powder coat and fitted with a 300,000-BTU burner connected to propane or natural gas. Colombo Construction, New York City. www.firefeatures.com **CIRCLE 219**

Product of the Month Nippura Blue Ocean

If you've ever felt like you were watching a movie when looking at the exotic world on the other side of an aquarium tank, imagine looking at a flat-screen simulation of an aquarium and having the opposite feeling. The aquarium experts at Nippura have mastered such an illusion with the Blue Ocean rear-projection screen. Providing a 3D portrayal of digital video and graphics, and asymmetrical projection for viewing from both sides simultaneously, the Blue Ocean screen is finely cast in a high-grade acrylic between two ultra-clear, optical cell-cast-acrylic panels. Because the actual image plane is not on the surface like typical screens, it is practically impossible to scratch or damage. With standard sizes measuring 72", 84", and 100" in length (at a 16:9 ratio), and cinema models as big as 340' possible (at a 21:9 ratio), the system offers the largest seamless sizes in the world. Ocean Blue can be used in full outdoor weather conditions, as well as large-scale pool/aquarium applications, and it can be custom ordered for curved or all-encompassing hemispherical simulation screens. U.S. Nippura, Charlotte, N.C. www.usnippura.com CIRCLE 217

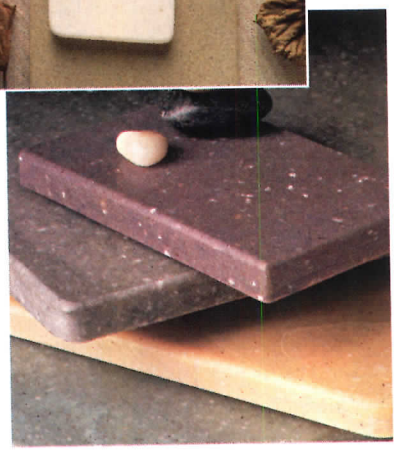
◄ Cement-based, ecofriendly materials

Coverings Etc. offers Eco-Cem and Eco-Terr, two ecofriendly product lines that can help earn LEED points for projects. Eco-Cem (bottom) is made from 20 percent wood pulp and 80 percent cement. It comes in six colors, in sizes measuring 4' x 10' or 4' x 8', and ranges in thickness from ½" to 1¼". Eco-Cem is for flooring, countertops, or wall surfacing for industrial, commercial, and residential use. Eco-Terr slabs and tiles (top) can be color customized and contain 80 percent materials using stone chips sourced from quarries near the manufacturing plants, recycled glass, and a natural cement binder. Coverings Etc., Miami, Fla. www.coveringsetc.com **CIRCLE 220**

Product Briefs

► The beauty of imperfection

Corian's six new colors were influenced by the Japanese aesthetic of "wabi-sabi"—based on the concept that there is beauty in nature's imperfections. Understated tones and textures and a random scattering of particles gives the colors, featuring organic names such as Green Tea, White Jasmine, and Rice Paper, a slight patina and weathered look (top). Also inspired by the wabi-sabi aesthetic is Dupont's top-of-the-line Private Collection. The collection's Artisan series (bottom) features bold background colors with multitone, feathery veining and is embedded with medium-size particles. Dupont Surfaces, Wilmington, Del. www.corian.com **CIRCLE 221**



► Marbleous choices

Cosentino, a Spanish company that has been quarrying, fabricating, and marketing marble for three generations, is launching a new line of marble in the U.S. The natural stone collection will include more than 20 colors in several finishes and formats. The fireplace and flooring shown here features Negro Marquina marble. Cosentino USA, Stafford, Texas. www.marmolescosentino.com

CIRCLE 222

► Here and now

The latest project from Italian designers, artists, and entrepreneurs Francesca and Guido Zwicker, qui new york, functions as a creative studio, showroom, and gallery in New York City. Tokyo-Pop, designed by Tokujin Yoshioka, is part of Driade's Atlantide collection of furnishings available through the studio. The polyethylene lounge chair can be used indoors or o and is available in a white, light orang and green-gray. Qui New York, New Yo City. www.zwickercollective.com

CIRCLE 223

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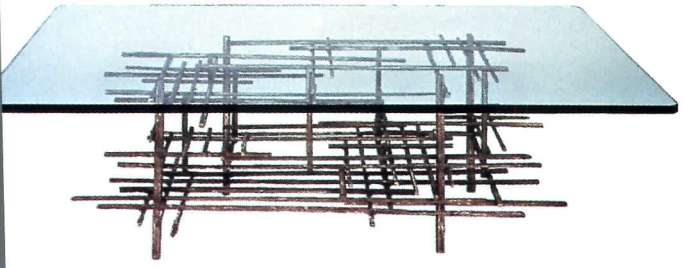
laster of metal furnishings

N.Y.C. coffee table is one of the handmade pieces on display in the Chelsea io of designer Silas Seandel in Manhattan. Cast in bronze, and standing 16' high a 60" x 30" glass top, N.Y.C. can also be reconfigured into a dining table. Seandel been designing sculptural furnishings since 1963 in solid metals such as brass, nze, steel, and copper. In addition to tables, his collection includes wall sculptures, ors, and fountains. Silas Seandel, New York City. www.silasseandel.com **CIRCLE 224**



late-style shingles

arite Slate Composite Shingles feature exture and contours of real slate but are r in weight, more resistant to cracking, equire less maintenance, according to o Roofing Products. The fire-resistant les come in four colors and measure all x 12" wide. Tamko Roofing Products, , Mo. www.tamko.com **CIRCLE 225**

▲ Get down with Boogie

Boogie Woogie is the latest design from custom carpet maker Edward Fields. Featured here in a black and red profile, the rug suggests the shapes of treble and bass clefs, guitar strings, and musical notes. Available in any custom size, shape, or color, Boogie Woogie is crafted in 100 percent virgin wool. Edward Fields, New York City. www.edwardfieldsinc.com **CIRCLE 226**

▼ Silver welding anniversary

In honor of Valli & Valli's 25th anniversary, the manufacturer has reintroduced its Ornate Collection of traditional door and hardware based on archival designs and molds from the 1940s. The company was recently commissioned to provide hardware for the fire-damaged Teatro La Fenice in Venice. In addition to utilizing its archival collection, the firm created new hardware using a template of a handle recovered from the theater. Valli & Valli, New York City. www.vallievalli.com **CIRCLE 227**

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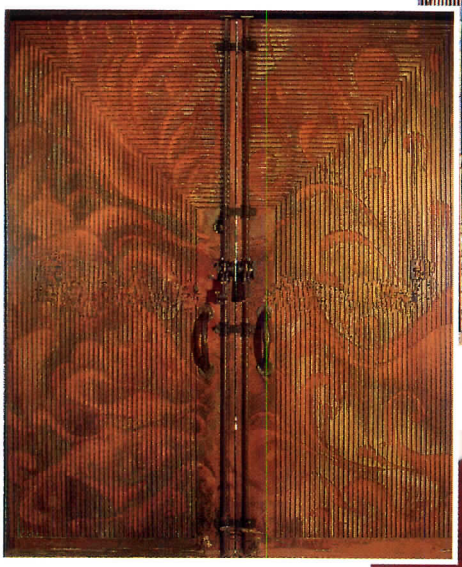
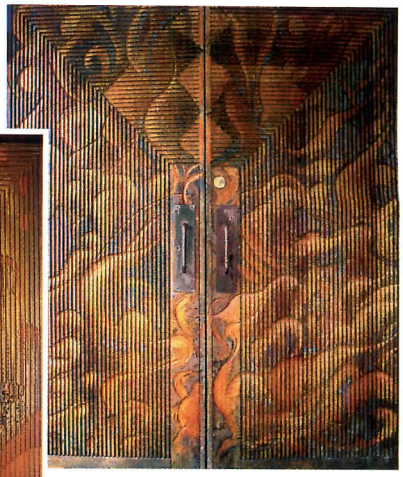
Product Briefs





► Joe of all trades

For 20 years, Joe Ginsberg has created and produced a range of custom finishes and surface treatments for the residential and commercial A&D world as well as the entertainment and advertising communities—his client list includes Dreamworks, Sony, IBM, and MTV. His full-service studio works in a range of mediums, including all specialty plasters and cements, fresco, metal, glass, gilding, wood, ceramics, resin, mosaic, and mural. For a current project, he has developed a proprietary mix to create seamless limestone and Carrara marble walls. "Every medium has its distinctive characteristic and beauty, which leads me through the exploration," says Ginsberg. "Nature, the elements, grit, decay, industry, and light inspire me when I approach the design of a new space." Shown are (clockwise, from left) hand-carved and acid-etched entry doors; custom steel radiator covers and a dyed-concrete floor; and a hand-carved sapele wood bed against a plaster wall. Joe Ginsberg, New York City. www.joeginsberg.com **CIRCLE 228**

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Product Briefs

▲ A more affordable shake-style tile

Introduced at the National Roofing Contractors' Show held in San Diego in February, MonierLifetile's Madera concrete tile offering is intended to be the most authentic replication of cedar shakes on the market. A more affordable version of the firm's lightweight Cedarlite tiles, Madera also features the fire protection and durability of the company's standard-weight products. Madera comes in three integral brown colors designed to replicate wood shake roofs on homes in mountain regions, and a pale green color to look like a mossy wood shake roof. MonierLifetile, Irvine, Calif. www.monierlifetile.com **CIRCLE 229**

► Stain- and mildew-safe grout

Laticrete now offers the SpectraLock Grout product with Microban. This stain-blocking epoxy grout material is reinforced with Microban to inhibit the growth of stain-causing bacteria, mold, and mildew. SpectraLock is applied like Portland cement grout and is ready for foot traffic in 12 hours. Laticrete, Bethany, Conn. www.laticrete.com **CIRCLE 230**

▲ Making the rounds

An interpretation of Alexander Calder's mobiles, the Cirque ceiling fan is the the newest award-winning functional ceiling sculpture from designer Mark Gajewski. The fan offers good air-moving performance due to the upsweep of the small blades and the gentler pitch of the large ones. The fan features a halogen downlight and a wall-mounted, radio-frequency remote control. G Squared Art, Avila Beach, Calif. www.g2art.com **CIRCLE 231**

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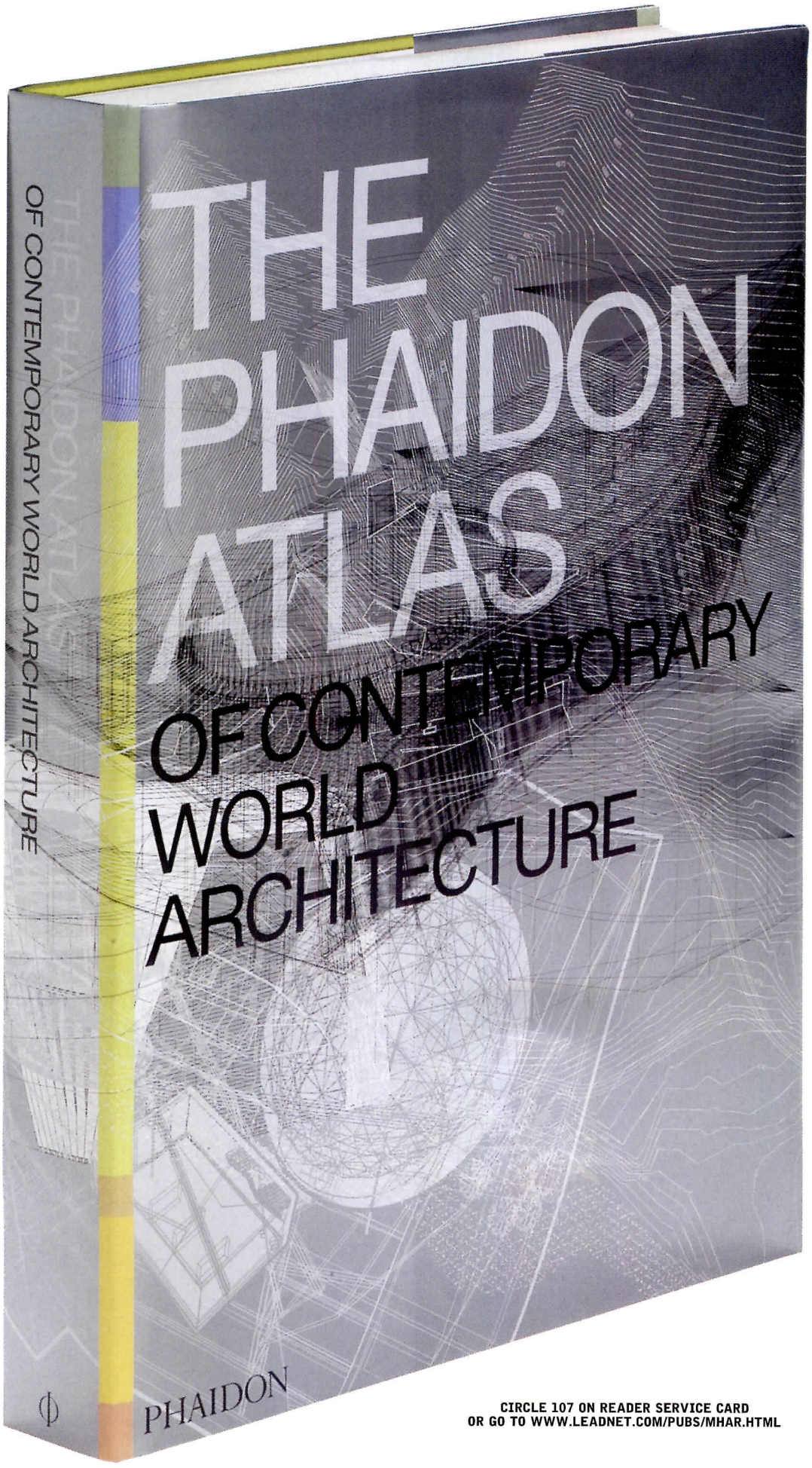

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Product Literature

Ceiling system catalog

The new 2004 Armstrong Ceiling Systems catalog showcases the company's entire ceiling and suspension system portfolio in one comprehensive selection and specification reference tool. The 248-page catalog utilizes tabs to call out individual ceiling categories, including new Infusions accent canopies, i-ceilings Sound Systems and Wireless Systems, mineral fiber/fiberglass ceilings, MetalWorks, WoodWorks, and suspension systems. Armstrong World Industries, Lancaster, Pa. www.armstrong.com/ceilings **CIRCLE 232**

Stainless-steel selection

A new set of case studies and stainless-steel-grade selection guidelines are available from the International Molybdenum Association (IMOA) and the Stainless Steel Information Center of the Specialty Steel Industry of North America (SSINA). The materials review the importance of selecting the most appropriate stainless-steel grade, surface finish, and design for successful exterior applications of stainless steels. PDF files of the materials are also available. Specialty Steel Industry of North America, Washington, D.C. www.ssina.com. **CIRCLE 233**

NEW SITES FOR CYBERSURFING

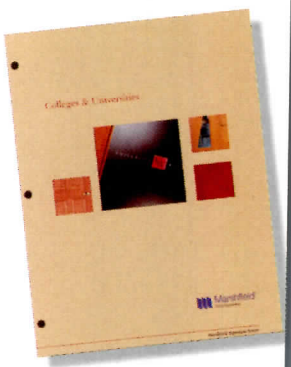
Belgian site offers Modern furniture a lighting for rent or sale
www.flowermountain.be

Library of "eco-smart" products from t "Rematerialise" research project out o Kingston University, Surrey, England
www.kingston.ac.uk/~kx19789/rematerialise/html_and_flash/searchwelcome.htm

New site for manufacturer of thermo-plastic roofing and waterproofing systems **www.sarnafilus.com**

College and university doo

Marshfield DoorSystems offers a new brochure on interior wood doors for colleges and universities. The brochure highlights Marshfield doors' ability to create multifunctional environments t honor privacy, building codes, and acc bility requirements. The doors are idea classrooms, conference rooms, lavato residence halls, and other application Marshfield DoorSystems, Marshfield, www.marshfielddoors.com **CIRCLE 234**



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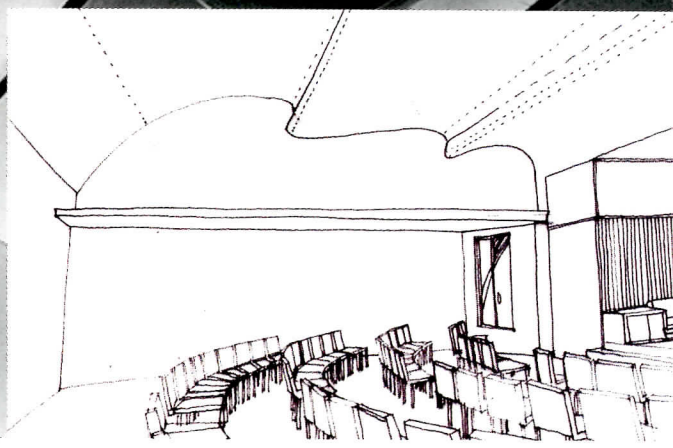

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Speech privacy issues

A new brochure from USG Interiors and Lencore Acoustics Corporation details how architects and other building/construction-industry professionals can design and/or upgrade office acoustics to improve speech privacy. The 20-page brochure, *The Acoustics Solution*, illustrates types of sound (direct, reflected, transmitted, and diffracted) and how it is measured and controlled. USG Interiors, Chicago. www.usg.com **CIRCLE 235**

Environmental research

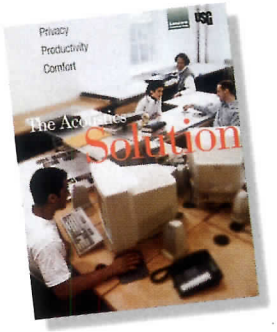
Landscape Forms has produced a white paper titled *Creating the Built Environment: Issues and Trends in Design* with the internationally renowned design firm frog design. The two firms collaborated for a year to study the shape of emerging trends in environmental design. The content of the research focused on behavioral patterns and social interactions in outdoor environments and integration of architecture, landscape architecture, and interior design. A result of the collaboration is the development of the next generation of furniture for the outdoor environment that Landscape Forms will be introducing at the American Society of Landscape Architects annual meeting/expo in Salt Lake City in October. Landscape Forms, Kalamazoo, Mich. www.landscapeforms.com **CIRCLE 236**

Precious storage

A new brochure on museum collection care is now available from Spacesaver. The color brochure illustrates many of the different storage options available from Spacesaver and its partner, Delta Designs, experts in security, preservation, and conservation of museum collections. Storage choices range from high-density mobile systems to specialty cabinetry for storing objects of virtually any size or shape, including historic documents, rare books, and textiles. Spacesaver, Fort Atkinson, Wis. www. spacesaver.com **CIRCLE 237**

Rolling-door catalog

Cornell Iron Works has introduced its *2004 Rolling Door & Grille* catalog. The 24-page catalog is a guide to roll service doors, fire doors, counter doo and grilles, plus a selection of operat and control devices. Cornell Iron Wor Mountaintop, Pa. www.cornelliron.co **CIRCLE 238**



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Donna Robertson: IIT's architecture dean as client

Interviewed by Suzanne Stephens

Since 1996, Donna Robertson, AIA, has found herself in the bastion of Miesian Modernism as the dean of the College of Architecture at the Illinois Institute of Technology in Chicago. (The campus was designed from 1945 to 1968 by Ludwig Mies van der Rohe, who ran its architecture school until 1958.) Yet Robertson graduated from Stanford University with a B.A. in English and received her M.Arch. from the University of Virginia in 1978. She directed the architecture program at Barnard College from 1985–92 and then became dean of the Tulane University School of Architecture, a position she held through 1996. She is also principal of the firm Robertson McAnulty Architects.

Q: *Someone said that IIT eats its architect deans for breakfast. How's it going?* I've been dean eight years, and I'm still here. Yes, I have a n Miesian, non-IIT background, and I am female. Th have been rough moments. But enrollment in the Coll of Architecture went from 368 in 2002 to 472 in 2003. hope to keep growing and not soften our standards. N with Rem Koolhaas's McCormick Tribune Campus Ce (page 122) and Murphy Jahn's State Street Village (p 130), with which I was involved in the role of a cli architecture is again drawing attention to the school. *What have been the most difficult things about y post?* The issue over pedagogy. The faculty has been v ried about the status of Mies's curriculum. It had ero over the years and needed to be updated if it was t fully implemented.

What was the basis of Mies's curriculum? In the cla Miesian format, you didn't design a building until fourth year of your undergraduate education. The year was devoted to developing visual literacy and c the second year to constructing with brick and wood third year, steel and concrete. Then the fourth and years were focused on building design. I am interest teaching construction technology through studio– central tenet of Mies's principles—but I want to be that any time a student is asked to produce a bui form, he or she can take design into consideration.

What about the new generation of architects? Is th place for them? Yes—for example, we have Ron Krue Krueck & Sexton, Jeanne Gang and Mark Schenc Studio Gang, and Martin Felsen of UrbanLab teachi the school. There are still former students of Mies c faculty, and they are invaluable. We all realize we ca stale Mies, however, and so we try to create a ba between construction technology and design. It delicate to maintain. And we have to keep finding bu forms that are of our time, not of Mies's.

What about Koolhaas's effect on the school? We some of the old guard has not been all that happy with the Campus Ce brash, not-too-detailed approach. It was fascinating to see Rem go toe- with Mies. We like to call our educational and architectural program "Mie Beyond." We are making the studio the locus of experimentation, and th buildings by Koolhaas and Jahn embody that idea. We want to keep g and plan to expand by moving upper-level studios and research classe building—3410 S. State Street—south of Crown Hall. It too was desig Mies—so his presence is still felt physically and pedagogically.

Photograph by Saverio Truglia

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