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Letters

Tanking globally

the pyramids to the Uffizi Gallery to the Hong
Shanghai Bank to the Cincinnati Center for
Art to the Disney Performing Arts... and to a country, ours, the United
States of America, that is inclusive to all, of course
have a focal issue on Chinese Architecture
and of course Zaha Hadid
cognized for architectural achievement.

When I am putting together that next wall
ion or listening to the needs of the client, it is
to know from the micro to the macro level
our profession in America does extend itself
and its walls.

I find inspiration in a profession where every
k, I see, think, or hear something architect-
ically related that moves or inspires me.

Anzey A. Harper
Albuquerque, N.M.

Extended Architecture

I wish to take great interest Robert Campbell’s cri-
e “Okay, architects, lighten up—but don’t lose
ideals in the process” [Critique, May 2004,
67], in particular the point that architectural
opment has been characterized by mutually
easive shifting foci. This is certainly true.

What we need is an architectural concept that
asses the totality that comprises the architec-
problem and that unifies two poles—on one
the architect’s personal capacity for insight,
igation, and imagination, and on the other the
ral reality of the site comprising its unique his-
, humanistic, and ecological characteristics.
concept defines an “Extended Architecture”—
architecture that takes its initial formal cues
the unique or particular historical, humanistic,
eological characteristics of the project area as
ple. That applies both to the neighboring con-
the case of a new building and to the existing
ng as the context for an interior/exterior reno-
ah/or rehabilitation. While taking its cue
the cultural reality of the site, Extended
nenture goes beyond simple contextualism and
uctive derivation of form from consideration of
straints of local context resulting, at best, in
ative architecture of good fit and perceptual
ity. Extended Architecture, on the other
 juxtaposes the architect’s personal (this is
the “playfulness” can come in!) reinterpre-
tion of underlying principles as deductive idea

adding a universal or abstract dimension to archi-
tecture that supercedes the immediate
vironment—it is a poetic dimension that evokes
ings that are both related to the unique con-
text from which they originate and are universal in
that they touch on meanings and memories that
are shared by other places. Extended Architecture
is thereby a “lens” dialectically related to its con-
text—an architecture that is both poetic and
arrative—that is historically sensitive, ecologically
ound, and reflects the special and unique charac-
ter of the place and the people that it serves.

Val Zarro, AIA
Pittsburgh, Pa.

Bringing down the house

I was both impressed and disturbed by the “feast
of houses” offered in the April 2004 Record
Houses issue.

On the one hand, I was impressed by the deli-
cious collection of mouth-watering images. The
stunning panoramas of ocean, desert, and sylvan
scapes were very appealing—dare I say “sexy.”
Upon closer examination, however, I wonder if this
plate was served up empty. Do the seductive
images obscure a troubling and continuing trend in
the architectural press: promoting image over sub-
stance? I also wondered if the photogenic sites
made these projects that much more publishable,
and if creating beautiful architecture in a “high-end
enclave... along a precipitously steep sandy cliff
clad in a secluded beach” isn’t a bit facile.

I was disturbed by this focus on “high-end
enclaves” in exotic locations. Of the nine offerings
in the 2004 Record Houses, only one was displayed in
an urban context, and only one integrated energy-
efficiency into its design. The program was typically
a “vacation house” (i.e., not a primary residence),
typically in a semirural locale, on several acres of
land. The houses average over 3,000 square feet,
accommodate an average of seven occupants, for
an average of nearly 500 square feet per person. In
lieu of the excesses of the 2004 Record Houses, it
is ironic that one of the houses is praised “in its
unadorned simplicity... in counterpoint to... mul-
gabled McMansions.” I suspect that in the final
analysis, few McMansions use as many resources
to construct or maintain as do many of the 2004
Record Houses. My suspicion is that the bourgeois,
late-20th-century architectural ideal of the private
house in the country needs to be reevaluated.

It goes without saying that I am left with an unpleas-

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Disc: Balmoral granite, honed
Scale: 11,000.000
Artist: Timm Ulrichs,
Münster, Germany
Polar Axis of the Earth

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Letters

How can we serve a more palatable dish that is both tasty and visually appealing? Is it possible for architects to create innovative design solutions that are both socially responsible and environmentally sustainable? Now is the time for our profession to reevaluate our responsibility to educate ourselves, and our clients, and to promote truly integrated, sustainable architecture. By this I mean more than paying lip service to "green" architecture, and LEED certified architecture. As a profession, we should critique whether each and every project we do is sustainable. As shepherds of the built environment, we need to develop sustainable practice through legislation, activism, and our actions. I challenge ARCHITECTURAL RECORD to lead the way by publishing more work that is truly innovative, socially responsible, and environmentally sustainable. Then we will truly feast on a banquet of architectural delights.

—Kent Hikida, AIA
Via e-mail

Chicago on my mind

Just wanted to let you know how much I enjoyed reading last month's [May 2004] issue. I appreciate the way in which the articles were arranged to enliven the debate the issues raised; at least it appeared to be purposeful.

I cannot help but comment on the Soldier Field [Projects, page 114] and IIT [Projects, page 122] articles. First, I think that Mr. Giovannini does an excellent job of positing the issue, that is, Classical vs. Modern ideals vis-à-vis public space. The fact that the debate in this case is over a major sporting venue makes it even meatier. The contrast of Mr. Tigerman's opinion just adds flavor. I have to admit that my first take on his "collage" was that it was a commentary on professional sports.

Although I think that his views, strangely enough, sound like those of a past era, it does reflect the opinion of the average citizen shackled with the visual and financial weight of these massive projects. His comments regarding irony in this context brought to mind some of the sexualized floor plans by Robert A.M. Stern that I was introduced to in college.

Also, as it relates to the IIT projects, I could not help but think about the criticism of "American arrogance" that we are constantly banded with from Europeans. Placing Rem Koolhaas next to Murphy/Jahn was terrific. Here we have the intellectually cool European shamelessly wagging his artistic arrogance around on American soil. Is it me, or does it appear that this project is a cross between a night club and a 1970s-era bowling alley?

—Chris McCray
Associate Architect
Fitzpatrick.Butler Architects
Tyler, Tex.

Cities making their mark

I really enjoy it when RECORD focuses on a particular U.S. city in a single issue, such as May's Chicago issue or last year's November issue about Los Angeles. This seems like a new tactic for the magazine, and I'm happy that when you've covered all the biggies, you'll move to some of the smaller U.S. cities that are making their marks with good solid design and innovative solutions to housing, transportation, and sprawl. Hopefully once you've covered San Francisco, New York, Dallas, and others, you'll move on to Portland, Seattle, and favorite, San Diego.

—Rayne Adley
San Diego

Fans across the water

I have been reading ARCHITECTURAL RECORD for more than five years. Since I have an architecture background with a bachelor's degree in architecture, I need sources for my designs and research.

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Letters

tecture, RECORD helps me explore the latest designs of famous architects such Steven Holl, Tadao Ando, Zaha Hadid, and others.

I accidentally discovered back issues of the magazine at the library, which I have also found fascinating.

I will become a faculty member of Thammasat University's school of architecture in Thailand, the most prestigious and innovative school of architecture in Thailand. The magazine is very valuable to me, but with shipping, the subscription cost is very high. I wonder if there is a way for me to get the magazine without paying such high costs?
—Non Arkarapraserthkul
Bangkok, Thailand

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Corrections

The cover photograph of Soldier Field in the May 2004 issue should have been credited to Doug Fogelson (photo shown at right). Also, the Soldier Field and North Burnham Park Redevelopment project was completed as a joint venture between Lohan Caprine Goettch Architects, with primary responsibility for the master plan and North Burnham Park project, and Wood & Zapata, with primary responsibility for the architectural design of Soldier Field. Joe Dolinar was the project manager for Lohan Caprine Goettch on the assignment. A May News item about new designs for Los Angeles animal shelters (page 36) omitted Rossetti Architects, of Southfield, Michigan. The firm worked on the South Central Los Angeles Animal Shelter. The curator of Unbuilt Chicago [Exhibitions, May 2004, page 77] is actually Martha Thorne, associate curator of architecture at the Art Institute of Chicago. Dan Wheeler is the installation designer of the exhibition. To clarify, in the May News section (page 42), the winning team for the new urban park in Milan is Inside Outside (landscape/interior designer—Amsterdam, Netherlands); Mirko Zardini (architect/urban theorist—Milan, Italy); Michael Maltzan Architecture (architect—Los Angeles); Irma Boom (graphic designer—the Netherlands); Piet Oudolf (botanist—Hummelo, the Netherlands); and Technical College—the Netherlands). In the April Correspondent's File (page 79), the correct credit for the National Ballet School is: Kuwabara Payne McKenna Blumberg Architects, Goldsmith Borgal and Company, architects in joint venture. Also in April, we like to clarify that the April News article on San Francisco high-rises [page 44], the comments of John Parman, AIA, cochair of Line, the online journal of AIA San Francisco, was his own and do not reflect the opinion of AIA San Francisco, its board of directors, or Line.

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Silverstein’s court loss could put Trade Center plans in jeopardy

In April, there is widespread disagreement about Silverstein’s ability to raise the estimated $7 billion that it will cost to build the five office towers. Some speculate that Libeskind plans to have the Libeskind plan might have to be modified to include slimmer residential towers, and that Silverstein could even lose control of a part of the Trade Center site. “I think that [Governor Pataki] is going to be able to ease him out,” says Peter Slatin, a Manhattan real estate analyst. “There is no such thing as a master plan without money,” adds Mitchell Moss, director of the Taub Urban Research Center at New York University.

Some argue that scaling back the overall master plan and incorporating more use, including residential, on the site would help ease Manhattan’s housing crunch and address the concerns of those who wanted Ground Zero to have a more 24-hour-a-day atmosphere. “If the demand isn’t there for office space, I’d expect that they’d consider a broad mix of uses,” says Jeremy Soffin, director of public affairs at the Regional Plan Association.

Some New York City real estate analysts, however, say that Lower Manhattan should easily be able to absorb the 10 million square feet of office space envisioned in the Libeskind master plan even though it may take more than a decade to build all of it. “I don’t think even if there was $7 billion available, that [Silverstein] would be building it now,” says Michael Slattery, senior vice president for research at the Real Estate Board of New York. “I think that everybody always understood that the pace of development was going to be tied to market demand. Would it have been easier if Larry Silverstein had $7 billion than $3.5 billion? Without a doubt, but it still wouldn’t have resulted in buildings being built with no tenants.”

While there has recently been a relatively large amount of empty office space in Lower Manhattan, the recent uptick in the economy looks promising for Silverstein. The increase in new office space occupied in Lower Manhattan for the first four months of 2004, 701,000 square feet, is on track to equal the increase of 2.9 million square feet for 2000, when the city’s economy was booming, according to Robert Sammons, director of research at Colliers ABR, a real estate services firm. “With the economy showing signs of recovery, I think that we will need to be prepared to get these buildings up and running, because in the last boom the reason that we lost a lot of people and businesses to New Jersey is that we couldn’t put buildings up fast enough.”

Alex Ulam

TC Briefs

Freedom Tower ahead of schedule, and becomes a partner On May 5, New York Governor George Pataki announced that the 1,776-foot World Trade Center Freedom Tower bid break ground on July 4, two months ahead of schedule. He added that the dismantling of Deutsche Bank tower, adjacent to the Trade Tower site, would begin in the fall and be completed by 2005.

Meanwhile, in late April, World Trade Center Memorial designer Michael Arad joined New York-based Gary Edward Handel + Associates as a partner. “I felt that this was a group of people that I could work with very well,” says Arad, who adds that the company’s skills and resources will help him best “serve the memorial.” Firm principle Gary Edward Handel firmly maintains that the new partnership will not change Arad’s vision for the memorial. “We have no desire but to help Michael with his vision,” says Handel. Handel meanwhile brushed aside suggestions that Arad was too untested to be a firm partner. “I think if you spend time with Michael, he’s remarkably talented and mature and has an incredibly clear vision of what he wants to accomplish. We have faith in his ability to perform not just on this project, but on ongoing work with the firm.” Sam Lubell
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REBUILDING LOWER MANHATTAN

Libeskind's World Trade Center guidelines raise doubts

While perhaps the biggest uncertainty at Ground Zero is whether the new World Trade Center will take shape, the questions loom large. They revolve around Daniel Libeskind's World Trade Center Commercial Design Guidelines, which were issued in February in a "confidential" form and were recently revealed by RECORD.

The guidelines are 267 pages long and, as their purpose is to "describe the scale, character, and standards of development that support the master plan," are separated into 10 thematic chapters focusing on areas of development, including "overall site development guidelines" and "open space guidelines." But a few members of New York New Visions V, a group helping establish design principles for Lower Manhattan, have argued that the guidelines are too vague and weakly worded to make Libeskind's plans for the Trade Center. Members Bruce Fowle, FAIA, of Fox & Fowle Architects in New York, and a member of the executive board, "There are lots of 'shoulds' but very few 'shall,'" and there is no real

There is no obligation to do anything, a most defining characteristic of the guidelines. The only thing is, better, while others have called them too rigid. The intention is to strike a fair medium." Other building officials stress that the guidelines are still being developed and are not yet ready for scrutiny.

Meanwhile, Fowle also charges that Libeskind's designs for the site are starting to look similar to those originally proposed by Beyer Blinder Belle and Cooper Robertson. In summer 2002. Those plans were widely derided for a lack of imagination. All three plans, he points out, include an "assemblage of individualistic towers with a radial spiraling effect." The only difference, he says, is the Freedom Tower. Libeskind again begs to differ: "That's like saying a man and a woman are the same because 98 percent is the same," he says. "It's that small difference that makes it radically different—the architecture, spirit, culture, space, design, and its meaning. The earlier plan was basically just an abstraction. There are so many subtle differences. How you articulate streets. How you make streets more important than the buildings themselves, and so on." S.L. and A.U.
9/11 memorials, not just in Manhattan

As the highly scrutinized designs for the World Trade Center and Pentagon memorials continue to progress, several smaller, more specific 9/11 memorials of interest have also been developing. In at least one case, even construction has begun.

On Staten Island, contractors working for New York City’s Economic Development Corporation broke ground for Staten Island’s memorial, which its architect, Masayuki Sono, calls “Postcards.” Sono has been working to refine the design with another architect, Lapshan Fong, since he won the open competition in June 2003.

“When I started working on the competition,” Sono said, “I thought the most important thing was to connect the victims back to us.”

That led Sono to develop his design, which is an abstract representation of two curling postcards. Individual Staten Islanders who died on September 11 will each have individual profiles on “commemorative stamps.”

North of New York City, Frederic Schwartz was a competition to design a memorial for Westchester County. Schwartz’s design incorporates 109 steel rods, one for each Westchester victim, that swoop up from the ground to form a single spire.

Schwartz is also a finalist in a competition to design a memorial for a pier on the Hoboken, New Jersey, waterfront. His entry, designed in collaboration with landscape architect Brian Tse, would put a framed ramp on the pier.

“arne doubles as a lens through which to observe [the World Trade Center site] and reflect,” Schwartz said at a public presentation at Hoboken City Hall in late April.

The FLOW group, comprising architect Jean Gang, artist Janet Echelman, and others, proposes an artificial island in the Hudson River, with a kina sculpture on top of 75-foot fiberglass columns. Architect Ralph Lerner and landscape architect Kate Orff propose a series of 53 lights (one for each Hoboken victim) on top of 60-foot copper poles, along the south side of the pier. A path along the edge of the pier would lead to what Lerner described as an “ear of personal contemplation that focuses the sound of the river and orients viewers back to the World Trade Center site.” The fourth Hoboken finalist team of Krzysztof Wodiczko and Julian Bondar showed a commemorative path along the pier. Wodiczko cited his Polish ancestry as part of the background of his and Bondar’s design. “In Poland,” Wodiczko said, “we say that somewhere between the memorials, there is Poland.”

Two sculptors are also adding materials to the New York area. Anish Kapoor, the Turner Prize–winning artist, has designed a monolithic sculpture to an American memorial to the 67 Britons who died in the World Trade Center. The garden will be Hanover Square in Lower Manhattan and has been designed by landscape architects Julian and Isabel Bannerman. In Brooklyn, Robert Ressler has designed an abstracted speaking trumpet that will serve as a beacon on the 69th Street in the Bay Ridge Section. Kevin Lenz,
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MIT's Stata Center opens, raising issues about cost control

Last month, MIT officially opened Frank Gehry's much-anticipated Stata Center for Computer, Information, and Intelligence Sciences, the keystone of the school's ambitious billion-dollar campus expansion.

The sprawling deconstructivist complex, which includes asymmetrical forms, interconnected interior spaces, and alternating titanium and brick surfaces, was at one point projected to cost $200 million. The final cost was $300 million. While Steven Holl's award-winning 2002 Simmons Hall dormitory, once estimated at $60 million, came in at $95 million. Both serve as case studies of institutional investment in serious architecture, with its potential for cost overruns and expensive program changes.

MIT's experience is hardly unique. Rem Koolhaas's Illinois Institute of Technology campus center ran into similar problems. Works by the likes of Gehry and Holl come at a premium and increase the risk of overruns, employing costly materials and often introducing techniques unfamiliar to most contractors, notes MIT executive vice president John Curry.

The projects also ran into a perfect storm of national and regional economic conditions, according to MIT officials, Gehry, and Holl's project architect Tim Bade. Having been planned during the go-go 1990s, MIT put several major projects up for bid just as the dot-com bubble burst and Boston's Central Artery Tunnel project tied up much of the area's construction capacity. The "Big Dig" drove up costs 25 percent in the Boston area, according to Gilbane Construction Company's 2000 review of MIT's construction plan, Curry says. Current trends in materials and fuel prices point to higher project costs, according to analysts, who blame the high cost of steel on a global shortage and U.S. import tariffs.

The Stata Center evolved from an early-1990s scheme for a 150,000-square-foot, roughly $160 million building in keeping with MIT's Neoclassical main complex. A 1997 revision called for a 324,000-square-foot structure, at about $200 million.

The tight market and MIT's addition of below-ground parking, a pedestrian thoroughfare and day-care and fitness centers dramatically increased costs. As of May, the official total for the 730,000-square-foot complex was $283 million, of which about $31 million went to delays, according to project manager Nancy Joyce, who notes that much of the project's contingency funds have gone to cover construction costs.

Nonetheless, the Stata Center project was "in the norm for this type of lab funding in the U.S.," says William Mitchell, head of the Med Arts and Sciences Program and architectural adviser to MIT president Charles Vest. "We were grandfathered, cut things, bit bullets," Gehry adds.

Legal delays, MIT's rush to occupy Sim Hall by fall 2002 and its addition during construction of kitchen and dining facilities, contributed to project's runaway costs, according to department. As of early May, MIT was reviewing Holm Sim Hall project for "errors and omissions," which are covered under the school's insurance policy, according to Curry.

In riding the late '90s investment wave and persevering through the downturn and project overruns, MIT's strategy has been one of principled opportunism," says Mitchell. "It's an investment for a hundred years at the very least. You can't let short-term economic exigencies deter you." Ted Smalley Bowen
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New plans making London a skyscraper capital

In 1991, London had only two skyscrapers, by global standards: the 800-foot Canary Wharf Tower, designed by Cesar Pelli, and the 600-foot National Westminster Bank Tower. The city has strict rules on building height, and permission to build skyscrapers is granted on a case-by-case basis—meaning the ones that get through are notable landmarks, like Norman Foster’s Swiss Re tower (page 218). Swiss Re’s transformation of London’s skyline unleashes the prospect of a new picture-postcard image of London as skyscraper development is set to catapult it into a new era.

Renzo Piano’s London Bridge Tower, for instance, dubbed “The Shard of Glass,” is as slim and sharp as Swiss Re is tubby and textured. At 1,016 feet, it will be Europe’s tallest building. Its steeply sloping facades of white glass will make the tower seem partly to disappear into the sky. The building’s design sparked controversy and claims that it would spoil the skyline; others have praised it for the elegant, tapering shape that prompted its nickname. The tower will house offices, a hotel, restaurants, apartments, retail, and three viewing areas.

The tower’s approval last fall represents a triumph for Mayor Ken Livingstone’s support of tall buildings. One year ago, Livingstone announced plans to add up to 15 new skyscrapers in the city by 2013, and immediately came under fire from government inspectors; he has defused their criticism by saying they’re necessary to ensure London’s economic health. “The Corporation of London needs to ensure that demand for office space can be met within the Square Mile [where much of the city’s financial industry is located],” says Judith Mayhew, who heads up policy and resources for the Corporation of London, the municipal governing body of the city. “In this context, tall office buildings are becoming increasingly necessary as a result of the efficient use that they make of the limited land available.”

Numerous other projects point to the emergence of skyscrapers as a reality in the U.K.—the result of client demand for floor space as well as the iconic glory of their street presence. Recent tall buildings include Richard Rogers’s 122 Leadenhall Street, whose slender, tapering form is strikingly similar to Piano’s “Shard.” The 48-floor glass tower’s transparency reveals its structural steel frame, with color and light adding depth and animation to the north-facing facade. It rises to a height of 736.5 feet in the eastern cluster of tall buildings in London, which also includes the Heron Tower in Bishopsgate, designed by Kohn Pedersen Fox and approved in 2002. The 727-foot, 37-story tower arranges workplaces around a series of 11 triple-height atria. When completed in 2005, it will be one of the tallest buildings in the city. Mayor Livingstone reportedly joked “go back and make it bigger” when KPF initially presented a 590-foot tower.

Another skyscraper, the Minerva Building by Grimshaw Architects, also won recent planning permission. At 712 feet and 50 stories, it will provide more than one million square feet of office space. Its design is described by the architect as four open books standing with their spines erect, facing another. Its facade, which enables natural ventilation, is projected to cut energy use by two thirds and eliminate the need for air-conditioning most of the year.

Even the architects of the London Eye have proposed a skyscraper design. Marks Barfield 72-story Skyhouse would house shops, health clubs, nurseries, restaurants, and gardens. Yet most of the city’s proposed skyscrapers are designed for purely commercial rather than residential or mixed-use needs.

Convincing evidence of the need for new skyscrapers in London will come as they fill up with tenants, theoretically. Meanwhile, the vigor of the mayor’s policies and the Corporation of London’s advocacy of good design will act in concert to ensure, with luck, that only exceptional projects are realized. “Our skyline has seen exciting and rapid change,” says Peter Rees, chief planner for the Corporation. “The public can find that hard to accept, but it has been poorly served by architecture in the postwar period. Size isn’t the thing, I want to see buildings with flavor.”

Lucy Bullivant
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New plans forming above and around Boston’s “Big Dig”

Only a few hulking remnants of the I-93 platform clutter Boston’s Surface Artery as the “Big Dig” wraps up, giving this swath of downtown the air of a movie lot at the end of a production. The next feature, something of a revival, is generating major buzz.

While much has been made of the above-ground projects capping the Big Dig, little has been done to clarify how they will work as a whole and mesh with the surrounding city. With this in mind, Boston officials have weighed in with a district-level scheme for the property along the fringes of the roughly 30-acre arc of reclaimed land, the new Rose Kennedy Greenway.

Urban planner Ken Greenberg of Toronto-based Greenberg Consultants presented the program at a public meeting recently, which also marked the kick-off of a 7-to-10-year public/private capital program to fund planning, improvements, and maintenance for areas adjacent to the artery. Construction of the Greenway’s parks, cultural institutions, commercial, residential, and mixed-use projects is due to begin next year. The city has earmarked $1 million in its 2005 budget for the effort.

The district boasts access to the South Boston’s new redevelopment zone (left) includes needed green space (in green, below).

Bay/Fort Point Channel, Boston Harbor, the new Harbor Island National Park, and the Charles River.

“Boston is becoming a waterfront city again, but in a profoundly different way” than in its maritime and industrial past, says Greenberg.

The evolving plan calls for improving pedestrian access, integrating the transitions into the Greenway and throughout the waterfront area, widening sidewalks, planting trees, improving signage, and adding mixed-use and affordable housing to its waterfront. The integration scheme also promises nighttime uses and year-round activities throughout the district and envisions connecting the area’s multiuse trails to the waterfront district.

The Massachusetts Turnpike Authority is overseeing the $1 billion federal-state Central Artery/Tunnel Project and is heading up the development of the state-owned surface artery. Nearby property owners and business tenants, whose real estate values and quality of life stand to benefit, will be tapped for contributions toward improvements and upkeep and the city will seek philanthropic support for events and activities to be staged in the Greenway, and projects like the proposed fountain, according to Maloney.

The city and the Massachusetts Pike Authority have agreed on the broad outlines of plans for parks along the Greenway, particularly Chinatown and the North End, and are hammering out differences over the central wharf development parks, according to Maloney. The parks are expected to be finished in 2007 at the earliest.

Complicating matters, ownership and maintenance of the Greenway parks is under dispute between Governor Mitt Romney and the state, and the Massachusetts Turnpike Authority for long-term control.

“The city [wants] to have a governance structure that can be responsive to the mayor,” says Mark Maloney, director of the Boston Redevelopment Authority, the city’s planning and development arm. Ted Smalley Bowen
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National World War II Memorial opens in Washington

With little fanfare, the National World War II Memorial opened to the public in Washington, D.C., on April 29. Designed by a team led by Los Angeles–based architect Leo A. Daly, FAIA, and Rhode Island–based architect Friedrich St. Florian, AIA, the memorial honors the 16 million people who served during the Second World War, and the more than 400,000 who died.

Located between the Washington Monument and the Lincoln Memorial, the design is dominated by the Memorial Plaza, a round granite space lined with bronze plaques, and the Rainbow Pool, a curvilinear pond adorned with fountains on either end. Two 43-foot arches, signifying hostilities in the East and the West, mark entries on the north and south ends of the plaza, while 56 granite pillars, representing each state and territory, surround the plaza connected by bronze oak and wheat wreaths.

The space is meant, describes St. Florian, to provide contemplative quiet, with simple stone looming above the tranquil (yet celebratory) façade. “I didn’t want to have any ornaments. I wanted just the details of the stones to speak,” he says. Classical architecture, meanwhile, evokes the aura of stability and reason felt throughout most of the Capital, he adds. Critics have complained that the memorial blocks the vista between the Washington Monument and the Lincoln Memorial, and that the design is too austere and unrefined.

The memorial was conceived in 1993, and construction began in September 2001. More than $195 million in cash and pledges have been received for the project, with $16 million from the federal government. At press time, an official dedication was scheduled to take place on Saturday, May 29—the Memorial Day weekend. S.L.

Paris unveils new ideas for Les Halles

The City of Paris recently unveiled four projects in competition for a complete redesign of the area known as Les Halles. For centuries, Les Halles had been the city’s central market. By 1969, the neighborhood was choked by traffic, and the market was moved near Orly airport. In its place, the Forum des Halles, a half-buried commercial center, was built as the entrance to an important transportation hub. Then, in the 1980s, Paul Chemetov designed an extension to the underground complex, while a 10-acre park was created above. The result is a warren of disconnected spaces that together form the city’s largest mall.

The city’s main objectives for Les Halles are to create fluid and rapid access between underground levels and the city, to add value to the surrounding historic structures, and to improve security and the quality of the architectural landscape. Work must be phased to allow the 200 Forum businesses to stay open or be relocated.

The four finalists are A/JN/Jean Nouvel, MVRDV/Winy Maas, OMA/Rem Koolhaas, and Seura/Mangin. Seura/David Mangin. Nouvel’s project covers the most area, adding buildings along both sides of a park and out into the neighborhood. Koolhaas created transparent “control towers” that evoke from the underground layers like volcanic eruptions, while his “canyon” opens the view to the train concourses below. All four projects used the idea of a dynamic vertical opening leading to the trains. Maas has then added a layer above ground with alternating areas of garden and transparency. Mangin’s plan creates a central axis leading to the old commodities exchange built converted into a new cultural and restaurant.

Projects are on display within the Forum and Parisians have been encouraged to vote their favorite. A winner will be chosen in late first phase construction is to be complete by 2007. Claire Downey
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Adjaye to design Denver Contemporary


The 15,000- to 20,000-square-foot structure will provide the museum—which currently has no permanent home—with spaces for galleries, education, lectures, and movies, as well as an outdoor sculpture center.

Adjaye was chosen among an impressive field that included TEN Arquitectos of Mexico, Snohetta of Norway, Rick Joy Architects of Arizona, Predock_ Franke of California, and Gluckman Mayner Architects of New York. The selection process included extensive interviews from not only museum officials but from the public, in the form of open discussions.

“We asked for an architect who would build a building that supports rather than defines the mission,” notes curator and director Sydney Payton. “David had a direct relationship to the mission, and he had a clear understanding of contemporary art.”

Adjaye/Associates, formed in 2000, has designed buildings for the Nobel Peace Center in Oslo, Norway, the Idea Store libraries in London (scheduled to be opened by the end of the year), and two libraries in Tower Hamlets, England.

Founded in 1996, the Contemporary is located in a temporary space in Denver's Sak Square. Daniel Libeskind’s upcoming Denver Museum of Art is located less than a mile away, and the two buildings will be the city some of the most dynamic architecture in the country. “We hope it brings attention to Denver. It’s part of an ongoing architectural dialogue with what’s happening here,” says Payton. The building is scheduled to open in late 2006. S.L.

Libeskind’s Denver Museum will be just minutes away.

Piano’s Los Angeles County Museum of Art Design approved

Renzo Piano’s design (rendering, below) for an estimated $100 million upgrade of the Los Angeles County Museum of Art (LACMA) recently received board approval. Unlike the previous scheme, presented by Rem Koolhaas in 2001 and later abandoned due to cost, Piano blends old buildings with new ones while still creating a cohesive architectural experience.

Plans call for a new three-story, 80,000-square-foot Broad Contemporary Art Museum, plus 20,000-square-foot, glass-enclosed entry pavilion along the axis of Ogden Drive. Additionally, there will be an 800-foot-long pedestrian concourse that cuts through the entire site, linking the new structures to the LACMA West, the former May Company building at Fairfax Avenue and Wilshire Boulevard, and the existing complex to the east. In order to create more visual unity, the building will all be wrapped in lightweight fabric screens.

Museum officials hope to break ground on the improvements by December 2005, and finish by summer 2007. Tornillo
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Record News

New Entrance Completed for Brooklyn Museum of Art

The Brooklyn Museum of Art finally reopened its front doors in April, thanks to New York–based Polshek Partnership's front entrance and public plaza.

The $63 million project uses an elaborate roof of stepped, shingled glass to create a 15,000-square-foot entrance pavilion, projecting a modern face in front of the McKim, Mead and White Beaux Arts masterpiece. The glass steps recall the building's original, tall entrance stairway, while the space, notes Polshek principle James Polshek, will be used for gatherings and fundraising events. But its main function, he adds, will be as "a meeting space for the community," like similar areas at the British Museum in London and the Louvre in Paris. "It's part of an emerging redefinition of the modern museum," says Polshek.

The redesign also reshapes 82,000 square feet of public space, with new trees, plantings, and pavings organized in a formal semicircular configuration. Already a highlight of the space for visitors is a new fountain, designed by Los Angeles firm WET Design (which designed the Bellingham fountains in Las Vegas), which uses "dancing" water jets to create a kinetic show.

Other improvements include upgraded public amenities, a new floor surface and air-conditioning for the lobby, and a restoration of the Eastern Parkway facade of the building. The project's final phase took place from 1998 to 2000, while the most recent phase began in 2000. S.L.

Ford Calumet winner announced

Studio Gang Architects, led by Jeanne Gang, AIA, and Mark Schendel, AIA, were announced winners in April of a two-stage international competition for the $6.8 million Ford Calumet Environmental Center in Chicago.

The proposed building's setting on the city's far-southeast side is an undeveloped wetland surrounded by heavy industrial uses that have ravaged the area's natural landscape for the past century. Sponsored by the Chicago Department of Environment, the Illinois Department of Natural Resources, and Chicago's Environmental Fund, the building will utilize LEED standards for sustainable building.

The 26,800-square-foot, single-story structure (rendering, above) will be built on a seed-shaped plan with a glass wall along its south facade. Shaded by a porch constructed of steel rebar and other discarded man-made materials found near the site, the building is intended to sit lightly on the land. Salvaged bundles of steel columns will be driven into the marshy site to support the structure. Slag will be used as a surface material in the exterior garden and as aggregate for terrazzo in the interior floors.

"We're weaving discarded materials into something more refined, like a basket," explains Gang. The firm's design was chosen from an original field of 108 architects representing seven countries.

Questions were raised after the announcement, when it was revealed that Studio Gang, predecessor firm, Studio Gang/O'Donnell, had prepared the initial program statement for the project but David Reynolds, first deputy commissioner of the Department of Environment, points out that the draft was three years old, had changed in scope, and was for a different site. The jury's commendation is currently being reviewed by the City's Public Building Commission. The building is scheduled to open in 2006. Ed Keegan
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Record News

AIA names the top 10 green projects for 2004

On Earth Day, April 22, the AIA's Committee on the Environment (COTE) named its seventh annual Top 10 Green Projects, a diverse collection of structures ranging from new construction to renovations, a single-family residence built in modular form to a large office building for a pharmaceutical company.

The top projects hail from seven states and Canada, representing more geographic diversity than last year's winners, half of which were located in California. The winning projects are The Solaire in New York City, by Rafael Pelli of Cesar Pelli & Associates Architects; the City of White Rock Operations Building in British Columbia, by Busby + Associates Architects; Factor 10 House in Chicago, by EHDD Architecture; the Genzyme Center in Cambridge, Massachusetts, by Behnisch, Behnisch & Partner; Greyston Bakery in Yonkers, New York, by Cybul & Cybul Architects and Maya Lin; the Herman Miller Building C1 in Zeeland, Michigan, by Krueck & Sexton Architects; Lake View Terrace Library in Los Angeles, by Fields Deveraux Architects & Engineers and Greenworks; the Pierce County Environmental Services Building in University Place, Washington, by the Miller/Hull Partnership; The Plaza at PPL Center in Allentown, Pennsylvania, by Robert A.M. Stern Architects; and the Woods Hole Research Center in Falmouth, Massachusetts, by William McDonough + Partners.

The variety of designers and projects signifies a nascent mainstreaming of sustainability notes COTE chair Mark Rylander, AIA. "Our emphasis has moved from nature centers and buildings are clearly trying to accomplish environmental goals to a broad spectrum of building types whose programs include strong social and environmental commitments. We want to ensure that COTE isn't viewed as the solar energy wing of the AIA rather represents the core mission and values of all architects."

Deborah Noonan

Preservationists lose fight for Two Columbus Circle

A planned redesign of Edward Durrell Stone's legendary but long-vacant 2 Columbus Circle moved one step closer to reality on April 15, when New York State Supreme Court Justice Walter Tolub dismissed a suit brought by local preservation groups. The suit sought to block the planned May 12 opening of the building by New York City to the American Museum of Arts and Design (formerly the Craft Museum), contending that the City Landmarks Preservation Commission, by not holding public hearings, had failed to produce the comprehensive environmental impact review required for such property transfers.

Portland architect Brad Cloepfil, AIA, has proposed a renovation for the structure, the form Huntington Hartford Museum of Art, that replaces the existing monolithic marble facade with a series of translucent cladding of terra-cotta tiles and geometric glazed incisions. The interior would feature a new atrium and circulation space, while a basement auditorium would be restored. Kate Wood, executive director of Landmark West, one of the groups that brought the suit, says they are considering their options, which include an appeal, additional lawsuits, and intervention or advocacy from the National Register of Historic Places and the National Trust for Historic Preservation. "The legal story for the building is not over," she says, but "the ultimate venue might be the court of public opinion." Thomas De Monchaux
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Holocaust Center's design conjures up difficult memories

The Holocaust Memorial Center in Farmington Hills, Michigan, outside Detroit, opened its controversial new building last month.

The structure, designed by Neumann/Smith & Associates of Southfield, Michigan, uses steel cable wrapped around a redbrick facade to evoke imagery of a Nazi concentration camp. Furthermore, glass and brick towers along the building’s periphery give the impression of guard towers, while alternating grays on the facade of some buildings in the complex are meant to remind visitors of the uniforms of Holocaust prisoners.

“I think you need a building that is strong enough to at least make people wonder and to make people want to come inside,” says Ken Neumann, a principal at Neumann/Smith. The 50,000-square-foot, two-story building, designed in 2001, replaces the museum’s former location in West Bloomfield, Michigan; it was the country’s first Holocaust museum. Inside the Memorial Center stand exhibits depicting the horrors of time to the post-Holocaust period. The museum campus also includes a Museum of European Jewish Heritage, and the International Institute of the Righteous meant to publicize altruistic acts throughout history.

While Neumann acknowledges the design has prompted some consternation for its brutal and difficult imagery, he says that, overall, people are quite supportive. “It’s a shame we’ve hurt people with the design, but it’s violent because that’s the time was violent. Most have felt this positive thing. It tells their history. You don’t want to show young people the resuming of a culture not caring about their fellow man.”

McGraw-Hill hosts construction summit in Beijing

As word spreads that China is undergoing the world’s largest construction boom, many more people are taking an interest in the Middle Kingdom. It was in this spirit that professionals from around North America, China, and the world gathered at Beijing’s Kempinski Hotel from April 14-16 for the 20th Annual Global Construction Summit. The conference, convened by McGraw-Hill Construction, ARCHITECTURAL RECORD’s parent company, was the first of its kind, bringing more than 500 contractors, developers, designers, and officials together to discuss the opportunities and challenges that lie ahead in this burgeoning Chinese construction market.

The summit’s plenary meeting addressed the issues facing the Chinese market in the face of unprecedented growth. Other sessions dealt with how to get work and how to get paid, breaking in the market, creating successful results, and balancing the needs of development and sustainability. ARCHITECTURAL RECORD’s editor in chief, Robert Ivy, AIA, led two panel discussions with architects and engineers with considerable experience in China. They shared their experiences, discussing the opportunities, their hopes for the future, and the foreboding challenges, from regulatory differences to the large cultural chasm between China and the West. Daniel Elsas
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A third New York high-rise for Meier

Fresh off the completion of his luxury condominiums on Perry Street along the Hudson River, Richard Meier is planning a similar luxury hi-rise (above photo, far right) next door.

The 16-floor, 31-unit tower, at 165 Charles Street, will very closely resemble the architect's two designs at 173-176 Perry, just adjacent. All will be tall, Minimalist luxury buildings made primarily of glazed glass and steel. Unlike the Perry Street project, Meier will also be designing the 11- to 22-foot-tall interiors of the new building. These will include leather seats similar to those Meier designed for the Getty Center in Los Angeles. The tower’s ground floor will also feature more than 1,500 square feet of commercial space.

“Charles Street gives us the opportunity to further develop and evolve the design of my first two towers,” says Meier. “It's like music. One note is nice, but as you add notes, you can create something different.” Completion is scheduled for spring 2005. S.L.

Chipperfield planning museum in Iowa

British architect David Chipperfield is designing his first museum project in the continental United States: the Figge Art Museum (FAM) in Davenport, Iowa (above, at right).

Founded in 1929, FAM, formerly known as the Davenport Museum of Art, has transformed itself from a small-scale local space to an ambitious institution. The new museum, located on the city’s downtown Mississippi River waterfront, reflects the change. The building, and its desirable location, will allow it to continue to expand, museum officials say.

The $34.5 million, 100,000-square-foot museum will be surrounded almost completely with opaque and transparent glass surfaces and fritted with horizontal banding to define the formal elements. It will have an inner and outer skin: The inner will be composed of double-glazed glass and perforated-metal panels, and the outer will be made of fritted and clear glass and will act as a rain wind screen. An outdoor plaza will provide a sculpture garden and public space. The museum highlights $113.5 million initiative to revitalize the city's downtown area. Open scheduled for July 2005. S.L.

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Renovation for Yale Art Gallery
Yale University Art Gallery, the oldest college museum in the U.S., has begun restoration of its main building, originally designed by Louis Kahn and opened in 1953. The Gallery was Kahn's first significant commission, and is considered one of his masterpieces. The renovation is being undertaken by Polshek Partnership Architects in New York, which is also working on the master plan for the Yale Arts Area. The building, known for its intensely quiet, spiritual atmosphere and signature tetrahedral ceiling, will be closed for the restoration until spring 2006. The gallery will display its collections of American paintings, sculpture, and decorative arts in the Gothic-style wing.

The restoration will address much-needed structural issues, such as window and wall repair and upgrading of the roof, and it will open the building up by removing partitions scattered throughout.

“I was a student of Louis Kahn’s in 1954,” says partner Jim Polshek in a written statement. “The opportunity to restore this early masterpiece to the architect’s original vision and to protect it for the future is extraordinary.” S.L.

Workers begin to install Olympic Stadium roof
After long delays, contractors recently began to install the roof of the Olympic Stadium in Athens. Designed by Santiago Calatrava, the roof covers 269,000 square feet and is made of massive white steel and tinted Plexiglas. Assembly was completed in mid-April, and now builders are sliding the tubular steel arches into place on top of the stadium.

The stadium was first employed in 1982 and has since been refitted for the games. Calatrava is also designing the roof for the Olympic Velodrome, and landscape and sculptural elements, such as the “Nations Plaza” public space and the undulating “Nations Wall.” S.L.

Finalists named for Vietnam Veterans Memorial Education Center
Four teams have been selected in the second round of competition for the Vietnam Veterans Memorial Education Center, which will complete the assemblage of structures on Washington, D.C.'s National Mall.

The four teams are Ann Beha Architects, Architectural Research Office, Michael Graves & Associates and Polshek Partnership.

According to Jan E. Scruggs, president of the Vietnam Veterans Memorial Fund, the teams are awaiting completion of site analysis before submitting final designs. The 20,000-square-foot facility of exhibition and support spaces is expected to be dug into an elevated area halfway between the memorial and Constitution Gardens. In June, the jury will choose the winning team. The fund hopes to raise $25 million for the center's construction within three years, break ground in 18 months, and complete the building in 2009. Andrea Oppenheimer
Dates & Events

New & Upcoming Exhibitions

Zaha Hadid
York City
July 15–October 14, 2004
Drawings, drawings, and indoor and outdoor objects by the recent Pritzker Prize–winning architect will be on view at Max Protetch Gallery. Call 1/2/633-6999 or visit maxprotetch.com for more information.

 עוד Кане: New Architecture in Concrete
Washington, D.C.
September 19, 2004–January 23, 2005
A survey of cutting-edge architecture in which the use of concrete is central to the design. More information can be found at the National Building Museum. Call 212/244-1900 or visit www.nbm.org for more information.

Petra Blaisse: Harvey S. Perloff Chair Workshop
Los Angeles
Through June 11, 2004
Amsterdam-based designer Petra Blaisse explores a fascination with unique materials through wall coverings and built projects created since 1991 with her firm, Inside Outside. Blaisse holds the Harvey S. Perloff Chair for spring quarter in the UCLA department of architecture and urban design. She conducted a five-day workshop with students, creating a site-specific work that is included in this exhibition. At the Perloff Gallery. Visit www.aud.ucla.edu or call 310/267-4704.

Ongoing Exhibitions

Rene Burri Photographs
New York City
Through June 5, 2004
The exhibition focuses on Burri's architectural 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. For information, visit www.hermesofparis.com.

Subway Style: Architecture and Design in the New York City Subway
New York City
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Celebrating the 100th anniversary of the New York City subway system, the exhibition explores the aesthetics of the subway, featuring a broad range of historic artifacts, archival documents, drawings, and vintage and contemporary photographs from the collection of the New York Transit Museum. At the UBS Art Gallery. Call 212/713-2885 or visit www.ubs.com.

Drawn by the Architect
Amsterdam

Through June 19, 2004
Now that the computer is changing the way drawings are produced and filed, do architects still sometimes put their ideas down on paper and, if so, in which phases of the design process do they do that? ARCAM collected spectacular original sketches ranging from doodles, notes, and travel impressions to detailed drawings and presentation sketches—sketches done with pencil, paint or felt-tip pen on paper, in notebooks or still on the roll, made for oneself, clients, or a book. At Architekturzentrum. Call 020/620-4878 or visit www.arcam.nl.

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

City Works
Los Angeles
Through July 1, 2004
An exhibition organized by Cityworks Los Angeles, Communities Under Construction with participation by all L.A. design and architecture school. At A+D Museum. Call 310/659-2445 or visit www.AplusD.org.

Vienna
Through July 12, 2004
The exhibition examines this Austrian avant-garde and attempts to come close to providing an overview of the conceptual and experimental tendencies that emerged in Vienna and Graz between 1958 and 1973. At Architekturzentrum Wien. Call 00431/522-3115 or visit www.azw.at for information.

Material Trends in Modern Italian Furnishings
New York City
Through July 14, 2004
The region of Lombardy is the center of Italian design ingenuity, with unparalleled excellence in creativity and manufacturing values. The exhibition features recent products in furniture, consumer electronics, and fixtures from Alias, Artemide, Pierantonio Bonacina, Brionvega, Bticino, Caimi Brevetti, Con&Con, Danese, Flexform, Futura, Gruppo Industriale Busnelli, Kartell, Luceplan, Merati, Nemo, Paoletti, Porro, Regia, Tronconi, Serafino Zani, and Zucchi. This exhibition coincides with the 18th Annual International Contemporary Furniture at Material Connexion. Call 212/842-2050 or visit www.MaterialConnexion.com for more information.
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Dates & Events

202/272-2448 or visit www.nbm.org for further information.

Solos: Future Shack
Washington, D.C.
Through 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. For further information, call 212/849-8400 or visit www.cooperhewitt.org.

Unbuilt Chicago
Chicago
Through January 16, 2005
Featuring approximately 90 drawings, plans, and models for architectural projects in Chicago that were never built, the exhibition provides a cross section of projects from the 1980s to the present. Many notable architects are represented, including Dankmar Adler, Daniel Burnham, Alfonso Iannelli, Ludwig Mies van der Rohe, Louis Sullivan, Harry Weese, and Helmut Jahn. At the Art Institute of Chicago. For more information, call 312/443-3600 or visit www.artic.edu.

Lectures, Conferences, Symposia

Forum Barcelona 2004
Barcelona
May 9–September 26, 2004
Forum Barcelona is an innovative and creative platform through which to explore and analyze the major cultural and social challenges facing the world of the 21st century. It is a festive journey designed to bring three main themes to life: cultural diversity, sustainable development, and conditions for peace. For 141 days, it is a place where visitors can experience cultures and entertainment from around the world. Performances, lectures, exhibitions, workshops, games, and marketplaces make up this major event. The various activities and events take place all over the city of Barcelona. For more information visit www.barcelona2004.org.

Life, Liberty, and the Pursuit of Landscape Architecture
Washington, D.C.
June 1, 2004
In a free society, security concerns and other challenges can compromise our ability to live in safe environments. Leonard Hopper, FASLA, past president of the American Society of Landscape Architects and chief landscape architect for the New York City Housing Authority, will address how landscape architects help shape the world and improve the quality of our lives. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

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Dates & Events

International Greening Rooftops for Sustainable Communities Conference, Awards, and Trade Show Portland, Ore.
June 2–4, 2004
Experts in diverse fields from around the globe will network and share knowledge about the benefits of green roofs, new research findings, policy developments, and the latest in green-roof products and services. Topics covered in panel discussions will include LEED, plant performance, policy initiatives, smart growth, biodiversity and agriculture, stormwater issues, and design. At the Hilton Hotel. For further information, call 416/686-5887 or visit www.greenroofs.ca/grhscconference.htm.

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

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

Wolf D. Prix
Washington, D.C.
June 8, 2004
Coop Himmelblau creates deconstructivist architecture that provocatively breaks away from traditional structures to expose inherent aesthetic and technological tensions. Wolf D. Prix, coprincipal of the Vienna, Austria–based studio, will discuss the firm’s award-winning work, including the UFA-Cinema Center in Dresden, Germany; Vienna’s SEG Apartment Tower; the Musée de Confluences in Lyon, France; and the Art Museum in Ohio, their first major U.S. commission. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org for more information.

Inspire Customer Loyalty: What Clients Have to Say
Chicago
June 9, 2004
A one-day seminar being held prior to the start of the AIA Annual Convention. Marcy Steinberg, researcher and author of The Inside Scoop: Proposals and Interviews from the Client’s Perspective, will provide insight into what triggers customer loyalty and outline research findings from both a national and regional perspective.
At the Metropolitan Club in the Sears Tower. Visit www.smp.org.

The AIA 2004 National Convention and Design Exposition
Chicago
June 10–12, 2004
The premier design and construction industry event with firsthand industry updates and cutting-edge products and services that will shape the future of architecture. At McCormick Place. For further information, call 800/242-3837 or visit www.aia.org.

40th IMCL Conference: Building Cities for Community & Identity
London
June 13–17, 2004
Topics will include traditional town planning, civic values, the built environment and the healthy city, and celebrating the European square. At the University of Notre Dame Loeb Centre. Visit www.livablecities.org for more information.

The First Northeastern Regional Scrap Tire Conference
Albany, N.Y.
June 15–16, 2004
The goals of the conference are to improve the efficiency of the scrap-tire industry and promote regional cooperation on scrap-tire programs. Topics to be discussed include:
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**Antoine Predock**  
**Washington, D.C.**  
**June 16, 2004**

To celebrate the opening of Liquid Stone: New Architecture in Concrete, architect Antoine Predock will discuss his work, which responds in many ways to both the natural and the cultural landscapes. Practicing in Albuquerque, New Mexico, for more than 30 years, Predock is an internationally acclaimed architect who draws from the elemental forces of a site, as well as its history and myth, to create an “architecture of ritual.”

Predock’s Shadow House in Santa Fe, New Mexico, is featured in the exhibition. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

**The Mediterranean Medina**  
**Pescara, Italy**  
**June 17–19, 2004**

An international seminar aiming at the study of the particular physical characters and the main transformations of the Mediterranean City. The city has built up its identity through the reuse and modification of the previous urban remains. At the Faculty of Architecture of Pescara. Visit www.unich.it/idea.

**Building Green**  
**Washington, D.C.**  
**June 21, 2004**

To celebrate the summer solstice, Helen English, executive director of the Sustainable Buildings Industry Council, will discuss ways to help home builders, architects, home owners, and others better locate general information about such topics as community and site planning, energy, energy-efficiency, the building envelope, water use, indoor environmental quality and green materials. This lecture draws on material from Green Building Guidelines: Meeting the Demand for Low-Energy, Resource-Efficient Homes, which was developed by homebuilders for homebuilders, the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

**Their Last Battle: The Fight for the National World War I Memorial**  
**Washington, D.C.**  
**June 30, 2004**

A casual conversation between Congressman and one of the constituents in 1987 grew into an epic struggle to build the National World War II Memorial—an effort that lasted more than four times as long as it took America to fight the war itself. Nicolaus Mills, Sarah Lawrence College, will recount the struggle and chronicle the development of the Washington Mall, from its origins as swampland to Maya Lin’s controversial Vietnam Veterans’ Memorial. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

**2004 SMPS/PSMA National Conference**  
**New York City**  
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Dates & Events

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**Houston Mod: Leo Marmol**
**Houston**
August 19, 2004
Leo Marmol, AIA, managing principal of Marmol Radziner + Associates of Los Angeles, will be the second annual speaker of the Houston Mod August lecture. He will give a talk about the preservation of Modern architecture. His firm is responsible for the restoration of Richard Neutra’s Kaufmann House in Palm Springs and has been recognized in many national publications. At the MFAH Brown Auditorium. Visit www.marmol-radziner.com or www.houstonmod.org.

**NeoCon East**
**Baltimore, Md.**
October 6–7, 2004
This year’s NeoCon East promises to attract thousands of attendees representing regional architects, designers, and facilities management communities, as well as federal government designers, buyers, and specifiers. New to NeoCon East 2004 is a lighting pavilion and Architectural Stone and Ceramic Trade Exposition. For information visit www.merchandisemart.com or call 800/677-6278.

**ARMA 2004 Summer Meeting**
**Kansas City, Mo.**
August 24–26, 2004
The Asphalt Roofing Manufacturers Association (ARMA) is the North American trade association representing the manufacturers and suppliers of bituminous-based residential and commercial fiberglass and organic asphalt shingle roofing products, roll roofing, built-up roofing systems, and modified bitumen roofing systems. At the Fairmont Hotel. Call 202/207-0917 or visit www.asphaltrooﬁng.org.

**Introduction to the 2003 International Building Code for Design Professionals**
**Las Vegas, Nev.**
September 27–28, 2004
The University of Wisconsin, Madison, Department of Engineering Professional Development offers this course, which will provide a broad overview of the key nonstructural components of the International Building Code, focusing primarily on those requirements that deal with fire and life-safety concerns.

At the University of Wisconsin. Contact Jeffrey A. Lackney at 608/262-0638 or visit epdweb, leng.wisc.edu/webG022.

**Urban Waterfronts 22: Gathering by the Water**
**Milwaukee, Wis.**
October 14–16, 2004
The annual international conference on waterfront planning, development, and culture will convene 300 people from around the globe from all the varying disciplines involved in this dynamic field. More than 30 speakers will cover a wide range of issues. Visit www.waterfrontcenter.org for more information.

**ISH North America**
**Boston**
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Competitions

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Green Tent Design Competition
Los Angeles
Deadline: August 11, 2004
The preregistration required by July 30, 2004, at www.greententcompetition.com. EcoShack announces a competition to design an environmentally sustainable camping shelter—a new tent—for use in the Mojave Desert and Joshua Tree National Park. The competition is open to anyone with innovative designs inspired by Southern California’s green lifestyle: architects, interior designers, product designers, furniture designers, graphic designers, artists, design students, and campers. Collaborative and interdisciplinary design teams are encouraged. The competition is sponsored by David M. Wolf, SKDP graphic designer Stephen Lee, EcoShack founder Stephanie Smith, and artist Andrea Zittel. Winners will be notified on Aug 25, 2004. Winning entries will receive prizes and be prototyped on EcoShack’s demonstration site in Joshua Tree, Calif. All entries will be exhibited at the White Desert Test Site event Oct 23-24.

Home Design and Construction Competition
Registration: July 15, 2004
Deadline: December 15, 2004
On will lead to actual construction. Judges will be William McDonough and Randall Stout. Entries will be built with a goal of achieving the standards of sustainability set up in Cradle to Cradle: Remaking the Way We Make Things. Information regarding submission guidelines can be found at www.c2c-home.org.

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Dates & Events

of Multiple Dimensions Competition
Deadline: September 3, 2004
Judged by Steven Holl, this competition is looking for the design of a small house of 250 square meters which can act as an experimental probe into an architecture of more than four dimensions. The experiential phenomena of the house will be a crucial factor. The house should also be habitable. Materials, from molecular aspects to geometric properties, will be important, as will space and time. The house will act like a "thought experiment." For more information about submitting, visit www.japan-architect.co.jp.

Emerging Professionals Guest House/Studio Design Competition
Registration Deadline: October 1, 2004
Submission Deadline: October 18, 2004
This competition is a special project intended to encourage and recognize the design skills of emerging architectural professionals. The award-winning projects will receive recognition and cash awards. Finalists will become part of a case study demonstrating cooperative projects between industry, schools, and professional practice. This competition is a partnership between EPICOnnection.com, the AIA National Housing Committee, and the sponsor, the Whirlpool Corporation. For information and submission requirements, visit www.epiconnection.org.

Zhui Jia Jiao Competition
Registration Deadline: May 30–August 30, 2004
Submission Deadline: September 30, 2004
International Open Competition for new Jiangnan Canal Town. Organized by the City of Shanghai Qingpu District Government, this competition hopes to inspire a new manner of urbanization, one that is neither urbanism nor suburbanism; it intends to provoke a lasting dialogue between Chinese city and contemporary architecture. For more information and submission requirements, visit www.shzji.com

E-mail events and competitions information two months in advance of event or competition submission deadline to ingrid_whitehead@mcgraw-hill.com.
For and about the new generation of architects

In Design, get to know the architects, their leadership in design, and their service to profession. In Work, architect Chantal Aquin builds a project with modest financing but bold niveness. Learn more by visiting architecturalrecord.com/archrecord2.

David Jameson Architect
Examples of David Jameson’s award-winning residential designs: (1) Church Street Residence, Washington, D.C.; (2) Push Pull House, Chevy Chase, Md.; (3) Model of Maison Bois Chamois, Suwannee, Fla.

Great start in architectural careers

This year, the American Institute of Architects awarded five tects the 2004 Young Architects Award. Recipients of this award, regardless of age, are at an early stage of their careers, with exceptional leadership in design, education, and/or service to the profession are all taken into consideration when chosen. The five individuals honored this year each by characteristics that show a promising future in architecture. The winners will be presented with their awards at the 2004 National Convention and Design Exposition in May this month.

Licensed to practice architecture in the states of Virginia and Maryland, architect David Jameson, AIA, has made a reputation for himself as a remarkable and imaginative residential architect. With the formation of David Jameson Architect six years ago, the Virginia Tech graduate has had the opportunity to design projects at both small and large scales. His ability to juxtapose texture, shapes, materials, and colors have become his trademark. With conservative Washington, D.C., as the backdrop for many of his projects, he has been able to successfully create modern in a traditional setting. The architect’s work has garnered attention from local and national magazines and has been featured on several programs on Home & Garden Television. His designs have also been recognized by more than 15 local, state, and national awards.

Janis LaDueceur, AIA, has brought her and her Arizona-based firm, Barbour/LaDueceur Design Group, much acclaim. LaDueceur believes that the art of architecture is to tell a story, and she achieves each project with this philosophy. Many of her community-based projects - cultural centers, memorials, and museums - reveal her desire to incorporate her clients’ culture into the design. Attention to such detail can be seen in LaDueceur’s design of projects like the proposed Ojibwe Cultural Center and the Richard I. Bong World War II Heritage Center in Superior, Wisconsin. Another project, the Science House at the Science Museum of Minnesota [RECORD, August 2003, page 170], is an addition whose form was...
intended to recall the nearby river tugboats. As one of the first outdoor science installations in the nation, the building, which will serve as a greenhouse, a laboratory, and classroom space, will also be an exhibit in itself, as it produces more energy through solar strategies than it uses.

Architect Kevin Sneed, AIA, is a respected figure in the AIA Northern Virginia (NOVA) chapter, and his service and contributions to the chapter have become invaluable. The architect has taken part in numerous NOVA committees and also served on the board in several positions: treasurer, president, and the 2003 president. As a founding member of the NOVA Young Architects Committee, he developed programs that are now used as models for other AIA chapters. Currently the director of architecture at OTJ Architects in Washington, D.C., Sneed's leadership has created bonds with related industries and with surrounding AIA chapters in Virginia and Maryland. His enthusiasm for design can be seen in ventures such as his promotion of the profession at elementary schools and his aid in the organization of Virginia Architecture Week. When Sneed worked with BBGM Architects/Interiors, his client list included Chevy Chase Bank and the U.S. Marine Corps.

Donna Kacmar, AIA, is balancing a career that involves design, teaching, and community service. As founder of architect works in Houston, Texas, she has designed residential and commercial projects that have been widely published and received numerous awards. Kacmar is assistant professor at the Gerald D. Hines College of Architecture at the University of Houston, where she is also the Level I Graduate Design Coordinator, and for the past eight years she has taught at the university's Summer Discovery Program for high school students. She also has a long and varied history in community-based service activities. Since 1998, Kacmar has worked with the Avenue Community Development Corporation, a nonprofit, low-income-housing-development corporation for rebuilding Houston's inner-city neighborhoods.

After graduating from Syracuse University with a B.Arch. degree, John Burse, AIA, moved to St. Louis and now promotes urban renewal in his own community. A senior associate with

Barbour/LaDouceur Design Group
Projects include: (1) The Environmental Experiment Center, Minneapolis; “Science House,” Minneapolis; (2) The Richard I. Bong WW II Heritage Center, Superior, Wisconsin, Ill.; (3) Battle Point Ojibwe Cultural Education Center, Leech Lake, Minn.

BBGM Architects/Interiors
Examples of Kevin Sneed’s interior designs: (4) Trizec Regional Headquarters, Washington, D.C.; (5) PHH Arval/Highland Office, Baltimore County, Md.
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John Burse combines a personal passion for revitalizing the city with urban planning: (1) Future vision for the Old North St. Louis; (2) An example of Burse’s award-winning watercolors.

Mackey Mitchell, Burse’s work focuses on urban design, using this skill not only to fulfill his work but also to fulfill his passion—revitalizing the Old North St. Louis community, a once-bustling neighborhood. The architect has gone beyond what one might expect in this planning project. Using his personal time to create drawings and renderings of what he foresees for this area, Burse also holds workshops and meets with residents of the neighborhood to explain his vision. His zeal for the project has been contagious, as he has prompted local leaders, developers, and lenders to support this effort to make the area a livable community once again. Burse’s design and planning skills have also been essential to his work on other projects, including the Concordia Seminary, the Central Institute for the Deaf, and master plans for international resort communities. Randi Greenberg

For more projects and photos of these award-winning architects, go to architecturalrecord.com/archrecord2

WORK
High design hits the spot

When Los Angeles-based architect Chantal Aquin was asked to design a new service center for the Skid Row Housing Trust, she was faced not only with a low budget, consistent entirely of a HUD grant, but limited practical experience as well. Nothing to sacrifice design, Aquin translated these limitations into assets, marrying resourcefulness with ingenuity to a lot of plain old hard work.

Jim Bonar, director of the Skid Row Housing Trust, an organization that provides permanent housing and supportive services for residents of Los Angeles’s Skid Row neighborhood, wanted something different for their new Service Spot. Located on the ground floor of one of the organization’s resident-occupied hotels, Service Spot was to be a “user-friendly” center that would offer case management, support-group meetings, educational opportunities, and service refer
Just completed work on another project with Aquin, Bonar knew he would be the right person to service Spot into that “something different” he was looking for. When it comes to designing for the homeless or mentally ill, there’s a very distinct separation in public and private spaces,” Aquin. “There is a sense of place, since it’s sometimes difficult to replicate their behavior—so many service centers are designed with barriers. Instead, Jim wanted users to feel a sense of ownership of these spaces. We also wanted the residents to feel as though they were given something precious, not just services contained within blank walls.”

To stretch her limited budget as far as it could go, Aquin, just a couple of years out of SCI-Arc, enlisted help from current students as well as fellow alum Rocio Romero and former SCI-Arc instructor Randall Wilson.

Wilson led an intensive summer studio in which students designed and built the seating, workstations, filing trolleys, and cabinets for the refurbished storefront. Though Bonar was skeptical of their ability to furnish the space, students received material donations from Home Depot, Anderson Plywood, and Häfele and were able to outfit the entire 2,000-square-foot space.

The reception area is designed as a light box visible from the street to welcome visitors. Inside, the standard syntax of public-to-private space confronted by users of most public service agencies is twisted to create an interweaving of private with public spaces—allowing users to walk freely from one activity to another with no physical obstacles. Transparent and translucent materials allow users to see the activities in which they will ultimately participate with no fears of being engulfed by authorities or institutions. Josephine Minutillo

For more information on other projects like this, go to architecturalrecord.com/archrecord2

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Hang on to your old cameras: 
For some purposes, film is still better than digital

Practice Matters

By Charles Linn, FAIA

y, practically everybody uses digital technology to make and print photographic images. Some renderings of a scene are made for spot, using digital cameras; others are made indirectly by pasting existing photographs or transparencies that were made in an old-fashioned way, using film. The advantages of photographs with digital cameras are obvious. They can be previewed on a spot. Desktop printers can make copies that are as good as photographs for some purposes. They don't need to buy film or have it processed by a lab.

40 MEGAPIXEL DIGITAL FILE

Digital images have advantages: They can be e-mailed quickly and inserted into documents and spreads. Adobe's Photoshop can add color to a certain extent and a host of special effects. An archive of photos can be saved on a few CDs or a single hard disk and sorted and indexed using image-management software. Storage is theoretically perfect, although CDs and disks get damaged and hard drives crash.

The advantages of digital are overwhelming, and the new technology is so easy to use, that architects have begun documenting their finished projects and giving up using film and professional photographers entirely. There are still times when conventional medium- and large-format or transparencies are better images made with point-and-shoot cameras, particularly large prints are needed or the photos will be viewed up close. Professional-grade, high-resolution digital cameras that accept interchangeable lenses currently cost from $1,500 to $15,000.

At least for the moment, there are some applications where film cannot be replaced by digital, such as when long exposures are needed for night scenes. And digital cameras that can correct perspective are still relatively rare. So, don't take the phone number of your trusty architectural photographer out of your Rolodex yet, and hang on to your old camera. True, some professional photographers are switching to digital for some jobs, but most are sticking to film.

"It doesn't matter if you are using a file from a digital camera or something that was scanned. It's the quality of what came out of the camera that determines the quality of the final product," says New York photographer Elliott Kaufman. "Photoshop can do amazing things, but one thing it can't do is make a mediocre image from any source look like an image from a four-by-five," he says, referring to the large negatives and transparencies still favored by many. (See the last page of this article for an illustration of three different film formats.) Kaufman still shoots exclusively with film. So when should an architect choose film over digital? It helps to get an understanding of why the two are so different.

Digital or film?

Digital and film cameras record patterns of light in entirely different ways. Which do you want in your portfolio? Pixels are starting to show in the enlargement of the digital picture. The 35mm shot is grainy and less sharp. The detail of the medium-format photo is clearly the best of the three.
Practice Matters

ways. When the chip inside a digital camera is momentarily exposed to a burst of light, millions of bits of information are gathered and recorded as a grid of minute colored squares called pixels. Although some digital cameras allow the user to preview such an image, it doesn’t really exist in physical form until it is printed out. The more information captured by the chip, measured in megapixels, the better the image will be.

The film in a camera is analogous to the chip. When light is focused on it, microscopic crystals of silver halide embedded in the film are altered in such a way that a representation of the image is left on it. This becomes fixed during development. The type of film selected by a photographer certainly affects the sharpness of a photograph, as does the physical size of the film. The larger the film, the more “information” can be captured in a single exposure. And, obviously, large negatives do not have to be enlarged as much as small negatives to get a usable picture. Whether one is talking about digital or film, the quality of the camera’s lens and the stability of the camera during an exposure also influence the sharpness of the images they make.

Some photographers believe that because people don’t naturally see the world rendered in pixels, film will always capture an image in a more realistic manner than a digital camera. When enlarged, the colored squares that make up a digital photograph can be seen, just as the grainy appearance of the halide crystals on the film become visible. New York photographer David Sundberg, who often uses a digital camera says, “With digital there is somehow a different overall look or feel to the image. There is often what I would describe as a colder, harder quality to the photograph.”

As a point of comparison, some say five-megapixel cameras, which currently cost about $500 and up, can produce images with a resolution that closely approximates one made by a professional-quality 35mm camera. That is, they can both make acceptable 8-by-10-inch prints. But when the images are enlarged much beyond this point, or especially if they must be cropped and magnified even more, either grain or pixels will become noticeable. Does it really matter? That depends on what the image will be used for.

Books and magazines

People supplying images for publication in magazines or books should still expect to supply either large format transparencies, or prints made from large-format negatives, says Douglas Curran, associate editor at Rizzoli International Publications: “I encourage all of our authors and photographers to supply us with transparencies or flat art, rather than digital art, whenever possible. Consistently, the final printed image, when made from a transparency, is stronger, more vibrant, and more accurate in terms of representing the original than a printed image as made from digital art.”

Many art directors prefer to work with original transparency so that they can see and modify the final color to the original or proof supplied by their printers.

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Most photographers agree that even the best digital cameras can’t match the sharpness of the 4-by-5-inch negative.

Several art directors say that in recent years they have been plagued by contributors who submit digital photography that is unusable because images were scanned at the wrong resolution or supplied on damaged CDs. These problems can be avoided when film originals are submitted instead of digital files.

Another situation where film seems to have an edge over digital is in awards-program submittals. National AIA Awards director Robin Lee says that recently she’s seen many promising award entries fail because their binders relied on poor quality digital printouts instead of large color prints or slides. She says, “Jurors have been simply appalled at the low quality of some of the submissions that have relied on digital prints.” Lee still recommends slides for their brilliant color, sharpness, and because they are easy for groups to view. “Slides are an important form of presentation that juries consistently appreciate.”

**What about PowerPoint?**
Almost any mention of slides will bring up one application where digital photography has been quite successful in superceding film, and that is when they are used with presentation software like Microsoft’s PowerPoint and Apple’s new Keynote. Either digital images, or for that matter digitized slides, can be dropped into presentations in seconds.

The clarity of the image is probably not as important as it is for other applications, because the amount of resolution that digital projectors are currently able to achieve is quite modest. But the images are usually viewed at a distance, so sharpness doesn’t matter as much. Still, if you are doing a presentation where accurate color and sharpness are crucial, go with a slide.

**More changes to come**
There is no doubt that high-megapixel digital cameras are going to keep getting cheaper and better. One day a columnist in this magazine may report that in terms of color and sharpness, they truly have superceded medium- or large-form film, but it will be awhile before that kind of equipment is affordable. Until then, architects should carefully consider whether digital photography is sufficient for all of their purposes, or whether they’d be better off shooting a few slides of each project with their old camera or, the big jobs, hire a photographer.

**ART DIRECTORS STILL PREFER ORIGINAL FILM BECAUSE ITS COLOR CAN BE CHECKED AGAINST COLOR PROOFS.**

Record editor Jane F. Kolleeny contributed to this article.

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A new event, the Universal Forum of Cultures, helps Barcelona transform an ailing district

Correspondent’s File

By David Cohn

The latest recipe for Barcelona urban renewal, as seen at the site of this summer’s Universal Forum of Cultures, a UNESCO-backed international festival, goes something like this: Take the last stretch of recovering seashore on the northeastern limit of the city—a zone crowded with a sewage treatment plant, a power plant, a garbage incinerator, and decades of pollution—clean it up, and upgrade the infrastructures with state-of-the-art, environmentally friendly technologies. Span the now-odorless sewage plant with a 27-acre public park that connects the new waterfront recreational facilities, and crown it with a monumental photovoltaic pergola to underscore the environmental theme. Stir in a landmark auditorium and exhibition hall designed by Jacques Herzog and Pierre de Meuron, hotels, and a convention center, and set the whole thing to boil with the Forum, invented specifically for the occasion, with debates, exhibitions, performances, and hundreds of other events that attract millions of visitors to the site from May through September. The result? Voilà! A major eyesore and environmental disaster area has been transformed into a new motor of future urban development, and a model for the principles of sustainable design that the Forum advocates.

Opening in May and running until September 26, the Forum differs from traditional World’s Fairs by offering a meeting of cultures rather than nations, explains Mayor Joan Clos. It proposes a platform of debate in which the problems of environmentally sound economic growth, cultural understanding, and world conflict are treated as interdependent issues, a debate shaped by Barcelona’s particular perspective as a center of regional cultural identity and economic power within the mosaic of European city regions. Organizers expect five million visitors.

The urban operation of the Forum occupies three landfills reclaimed from the sea: a marine wetlands artificially created for a marine branch of the Barcelona Zoo, still on the drawing boards; the central platform of the Esplanade; and to the northeast, a coastal park with a new beach, designed by Madrid architects Iñaki Ábalos and Juan Herreros, which features artificial hills that buffer the impact of the power plant, incinerator, and a new garbage sorting and recycling facility.

The major buildings of the Forum are confined to the landward side of the operation. Here, the city has built a convention center, hotel, and office building designed by local architects.
architect Josep Lluís Mateo, which features a 120,000-square-foot exhibition hall, and the Forum Building, which boasts a 3,200-seat auditorium and 50,000 square feet of exhibition space.

In architectural terms, the Forum is conceived as a territory of activities rather than a conventional urban development. Mateo, who participated in the early sessions of urban design, together with Barcelona chief planner Josep Anton Acebilo, and architects Enric Miralles and Eduardo Bru, among others, describes the early concept for the project as a “magmatic territory that spills across the site.”

This idea of a lava-like extrusion is present in the irregular form of the Esplanade, designed by architects Elias Torres and J.A. Martínez-Lapeña, which seems to spread out from the Diagonal (a major cultural thoroughfare) arching over the coastal highway and the sewage treatment plant to end at the sea in a series of escarpments up to 60 feet high. With its surface finished in a patchwork of multicolored asphalt and lawns crisscrossed with expansion joints, the Esplanade establishes the artificial ground plane or geography on which the events of the Forum take place. It will also contain outdoor restaurants and cafés and host future activities such as flea markets, fairs, and public festivals.

To the southeast, an area of artificial dunes and amphitheaters designed by the London-based Alejandro Zaera brings the platform down to the water, where Barcelona architect Beth Galil has designed a paved bathing area, like a swimming pool open to the sea. While crowning the Esplanade on a high point jutting into the Mediterranean is the expressive form of the photovoltaic pergola, the size of a football field, also designed by Torres and Martínez-Lapeña, which produces 1.3 megawatts of electricity, roughly the consumption of 1,000 Spanish homes. As seen from the water, the Esplanade and pergola, which reaches a height of 200 feet, take on the proportions of an artificial geographic event that marks the northeastern limits of the city, mirroring at a smaller scale the mount of Montjuic that frames Barcelona to the southwest. The Esplanade also marks a departure from the usually staid and conservative Modernism of Barcelona architecture, as seen, for example, in the 1992 Olympic Village [see RECORD, August 1992, page 100], and an opening toward a more earthy, ludic, and dynamic use of form, closer in spirit to Antonio Gaudi and the Catalan artist Joan Miró.

Herzog & de Meuron’s Forum Building is the architectural star of the show, a massive horizontal slab in the form of an equilateral triangle measuring nearly 600 feet to a side. Due to its size, the architects have conceived the design not in the traditional terms of composing facades or volumes, but rather as if the building formed part of the Forum’s peculiar artificial landscape. The upper mass containing the hall seems to float over the Esplanade to create an unusual shaded plaza, with spectacular cantilevers on all three sides. Its supports and ground-floor enclosures are hidden behind mirrored glass that dissolves in the reflected light of the surrounding plaza. The brilliant contrasts of reflected light and shadow are enhanced by the dark metal ceiling tiles, conceived as a watery surface covered with bubbles, which draw dappled light deep into the space. The auditorium is also partly finished in these liquid tiles; it spills down from the upper mass through one of the plaza’s glass volumes to end below grade. A plane of water literally covers the roof, and water trickles down to the plaza through crevices opened in the volume, while the jagged mirrored windows resemble rivulets of spilling water. The rough, sprayed cement facades, painted Yves Klein blue, have disappointed some for their apparent cheapness, but the detailing is actually very fine, and the volume reads like a bright, sophisticated cartoon.

Ascan Margenthaler, the partner in charge of the project for the firm, comments, “We used the water theme to bring the Mediterranean a little closer. The ceiling had to be attractive, lively, and playful, not this oppressive plane hanging over you. The bubble patterns are computer-generated, and they have direction, like the sea, flowing around the cores.”

Jean Nouvel’s Agbar Tower is rising near the Forum site in Barcelona. At 474 feet, it is another example of the city’s aggressive urbanism.

The Forum was master planned by Barcelona Regional public authority which oversees strategic long-term planning for the city and its surroundings. Acebilo, who is its director, explains, “The Department of Urbanism deals with the daily problems of the city. It leaves them little margin for speculation about the future. What we do is this kind of forward vision.” The Building on the experience of the 1992 Olympics, when planners by Oriol Bohigas used the gamut to push for major urban improvements, Barcelona Regional has
developed into a remarkable planning instrument, producing comprehensive, integrated programs that cover all aspects of urban and economic development, and that use local and specific actions to achieve general goals.

The Forum, for example, is part of a global strategy to draw future commercial development to the eastern half of the city, away from the prosperous but saturated western districts, and to promote the growth of new high-tech businesses. The Forum stands at the far edge of this area, known as BCN and comprising 120 blocks of underused industrially zoned land that has been updated with the latest communications services and seeded with investment incentives. To reach the Forum, planners extended the Diagonal to the site, effectively opening the area for development. At the head of the new Diagonal, Jean Nouvel's spectacular Agbar Tower for the Barcelona water authority will open this winter, "a landmark that locates the operation in the public mind," explains Acebillo. Nearby projects include a cinemaplex and plaza by Zaha Hadid, a city museum by Oriol Bohigas, and a district city hall by Madrid architect Federico Soriano.

Further to the north, a third node of development will focus on the upcoming high-speed-train station at Sagrera. "Almost all our projects originate in infrastructural problems, to which we add an urban dimension," Acebillo concludes. In the immediate area of the Forum, the poor residential neighborhood of La Mina will be restructured with new housing, public spaces, and municipal services, and a technical university is being planned to encourage research and development in new technologies.

Barcelona Regional is also overseeing the restructuring of La Mina. Acebillo calls the city's "logistical services located on its western flank. Plans include an expanded...
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industrial park associated with the commercial port; Ricardo Bofill's expansion of the airport, with connections to the high-speed train; a second Trade Fair campus designed by Toyo Ito; and a City of Justice being built by David Chipperfield. This area, located outside the city limits in Hospitalet, has attracted commercial developments, including the City Metropolitana office park by Nouvel, the District 38 mixed-use development by the team of Arata Isozaki and Alejandro Zaera, and a hotel by Richard Rogers.

Barcelona is not the only city in Spain with big ideas. In Valencia, construction will finish this fall on Santiago Calatrava's City of the Arts and Sciences, his most spectacular collection of buildings to date, including the soaring, skeletal Science Museum; a planetarium in the shape of an eye, complete with a movable "eyelid" brise-soleil; and a reptilian opera hall with a swooping cantilevered tail. In Bilbao, Zaha Hadid has been tapped to master plan a 350-acre urban district on the riverfront in Zorrozaurre. Workers have finished excavating through solid rock for Peter Eisenman's City of Culture in Santiago de Compostela, a multi-building complex largely buried under a hill. In Madrid, additions to three museums forming the city's "cultural axis" are nearing completion: the Reina Sofia Museum of Contemporary Art, by Jean Nouvel; the Prado, by Rafael Mone; and the Museum Thyssen-Bornemisza, by the Barcelona team of BOPBAA, Manuel Baquero Briz, and Robert Brufau Niubo. A fourth museum, a Madrid branch of the Caixa Forum Foundation, is being built by Herzog & de Meuron, and Álvaro Siza heads a team that is restructuring the streets and public spaces of the axis. All across Spain, public authorities are using innovative architecture and planning to bring distinction and vibrancy to the public realm, visible testimony to their commitment to cultural and material progress.

But few can rival Barcelona in the scope and ambition of its urban initiatives. The development of the city is historically linked to major international events like the Forum of 1888, the International Exposition of 1929, and the 1992 Olympics. Pascual Maragall, the city's former mayor and current president of Catalonia, once described Barcelona as "a capital without a country," and the city appears to seek in these periods of self-definition and poets to compensate for the lack of the cultural and economic advantages of centrality that other European capitals take for granted. If this diagnosis is correct, it has produced a powerful instrument for bringing vitality and innovation to the public realm, and made Barcelona a model for other capitals worldwide.
In a city whose political terrain is treacherous, a Gehry project comes up against a wall

Critique

By Michael Sorkin

Daily Ha'arets: "It is difficult to imagine a project so hallucinatory, so irrelevant, so foreign, so megalomaniac as the Museum of Tolerance. The mere attempt to stick the term tolerance to a building so intolerant to its surroundings is ridiculous. Others have already referred to the extravagant arrogance expressed in the geometric forms that can't be any more dissonant to the environment in which it is planned to put this alien object. There's no need to waste words on the absurdity of a Museum of Tolerance planted on part of an ancient Muslim cemetery, some of which has long since been turned into a parking lot and will now be topped by spaces in which people are meant to learn about tolerance, mutual respect, and religious coexistence."

Benvenisti's skepticism is echoed by Esther Zandberg, the architecture critic for Ha'aretz, who wonders why Kikar Hatulot, a "highly popular urban plaza" that currently supports an ethnic market and a range of informal social activities on the site, is being eliminated for the building. Zandberg takes special umbrage at the Wiesenthal Center's refusal to make plans and images of the project public—despite their having been published in 2002 in the Japanese magazine GA—an embargo she claims is designed to forestall opposition and humor potential funding sources. Zandberg also shares Benvenisti's sense of the irony of erecting a "temple of tolerance" in a city so mired in fanaticism.

What better place, it might be argued, for a museum of tolerance? Certainly, the architectural component of Benvenisti's argument is dubious, a matter of taste, especially given the stultifying monotony of so much of modern Jerusalem. Indeed, there was a faction in Bilbao that took the same line about the Guggenheim's aesthetic inappropriacy. But the center of Benvenisti's objection is telling: Can this building have anything to do with promoting understanding between Israelis and Palestinians? That the answer might
be "no" was dramatically reinforced for me during a trip to Jerusalem in April, when I visited the Israeli "security fence" where it passes through the Abu Dis neighborhood, less than a mile from the site of the new museum. Here was intolerance materialized, a 30-foot-high wall of concrete barricading Palestinians from the center of the city, from jobs, from friends and family, from medical care, and enclosing Israeli Jerusalem in a terrible illusion of security.

The two expensive constructions cannot be separated: Their conflict is clear. A community cannot simultaneously repress its neighbor and proclaim its love of tolerance without hypocrisy. By identifying tolerance with an enormous building with a vaguely defined program, tolerance becomes an object of consumption rather than an act of conscience. More, the idea of constructing a beautiful center in which people—those invited by the institution—can discuss their differences short-circuits obvious matters of the inequality between those building it and those with whom they might have discussions, furthering the imbalance of power and rights that fuel the conflict. As Herbert Marcuse observed, tolerance can also repress, an effect literalized in the substitution of a controlled environment for an existing public place, a place of both accidental and elective encounters rather than the scene of purely orchestrated and mediated events.

This museum, above all, is a rhetorical project in which a building is substituted for the harder processes of bridge-building, for the myriad acts of fairness that characterize a tolerant society. Gehry's building, in particular, with its familiar fragmentary style, uncomfortably evokes the "deconstruction" of Yasser Arafat's headquarters in Ramallah into a pile of rubble by Israeli security forces. The painful contrast between these two places makes the absurdity of the new construction (we build shining monuments to our sense of tolerance while we blast your institutions to bits) so much more profound.

Co-opting tolerance?
But my questions are for the architect. Will an extravagant building advance the cause of tolerance or simply stoke resentments? Is any sectarian attempt to co-opt the idea of tolerance for its political armamentarium worth supporting in an atmosphere as riven as Jerusalem's? What is the real purpose of this project? If it is to try to heat up the Bilbao effect with a museum of genocide, is this really a project an architect of conscience should participate in? Does Gehry think that describing the central hall of the complex as being "like a mosque" will really establish the tolerant credentials of this project?

Although Gehry is generally[gnomic in his political utterances, an interview in GA revealed that he is not altogether unaware of the political geography of this undertaking. He speaks of his satisfaction that the project was moved from its original site in a more peripheral location because it was opposite a proposed Israeli jail. The new site is opposite a courthouse, a distinction probably lost on most Palestinians who pass through the judicial system, the same Palestinians who will be prevented by the wall—their permanent jail—from visiting the Museum of Tolerance erected to stimulate friendly discourses of difference.

Eminence has its responsibilities which extends beyond the realm of professional practice: We have high expectations of our best artists because their work and words carry special weight. It is not possible to build this project without an opinion on larger issues—real issues of tolerance—in the region. What is Gehry's? This is not a question of the use of titanium versus Jerusalem stone. It is one of justice.
Art Center College takes design discourse public

Commentary
By Joseph Giovannini

James Dyson (left), inventor of a see-through vacuum cleaner, spoke of honesty in design. The Art Center, known for training car designers, held the conference in a wind-tunnel-turned-school-building by Daly Genik (right background).

James Jefferson, who extolled the virtues of the land over what he considered the evils of the city, restated the idea of the American dream at the University of Virginia. He later established a lasting tradition of academic freedom from the city in a purer place, Design conferences followed suit, famously in Aspen, and, lately, at the TED conferences in Monterey, California places where clean air provides that extra burst of clarity.

In March, the Art Center College of Design in Pasadena, California, challenged the world to design a better way of the future. With its own design conference, "Design... and the Ivory Tower," the Art Center, the epicenter of American suburbia, invited speakers to design out of their privileged design position in the city. The conference celebrated the first building of the school's new South Campus, designed by architects of the future.

In the midst of shaping a new design agenda for the design of the future, the Art Center, known for training car designers, held the conference in a wind-tunnel-turned-school-building by Daly Genik.

This conference, no such controlling hierarchy exists in design, which has been completely balkanized.

The Art Center is famous for training car designers, and appropriately, General Motors was the main conference sponsor, providing one of the most pointed speakers, Bob Lutz, GM vice president. A legendary design executive, he stated that Detroit lost its passion and market in a postmodern era no longer focused on abstraction. But few people sustained the topic beyond lip service, and the occasional references did not add up, even in a Pointillist way, to a larger picture transcending independent disciplines and portraying, as the brochures promised, "design as the core of innovation and the medium in which the stories of our time are told."

Without tight focus, the conference took off with a refreshing, provocative nonlinearity, producing an unpredictable sequence of figures. It was a big tent of designers representing different disciplines and m.o.'s. Japanese polymath Eiko Ishioka, who has designed everything from TV commercials to Olympic sportswear and sets for the play M. Butterfly, displayed a heroic yet surreal sensibility. In an almost confessional talk, Maira Kalman escorted the audience into her small
Commentary

studio, where she snuggled up to her subject with the warm introversion that permeates her children's books and New Yorker covers. Her subject, in its way, was the sensibility of subjectivity—a far cry from the objectivity of the amphibious robots, for example, created by Berkeley professor Robert Full, who demonstrated that the design of the muscles and skeletal parts of his robots (and by extension, living creatures) themselves determine patterns of movement, not the brain.

Standouts included Cameron Sinclair, charismatic founder of Architecture for Humanity, which organized a design competition for transitional shelters whose very construction builds communities through the training of local labor forces. Lee Clow enchanted the audience with TV ads that were filmic haiku. Clow is the man who created the Think Different campaign for Apple after Steve Jobs took back the company and needed to announce its change of ethos—back to creativity—before any new products were developed. Peter Girardi, founder of Funny Garbage, detailed his intellectual biography, from Mad Magazine—"vital to my survival"—through cereal boxes and his career as a graffiti artist roaming New York's subway yards. What he calls "crap culture" is the grist for his art.

The great value of the conference was the presentation of a huge amount of material in a raw, virtually unedited flow, sometimes with serendipitous juxtapositions. The downside was an inability to develop chance intersections of serious ideas. Lutz noted that in car design the "passion and emotion essential to good design" belong to the "skilled designer with a skilled clay modeler," but escape computer modeling with its emphasis on a surface vocabulary. Greg Lynn beggared to differ, noting that he had a passionate relationship with his computer. He spoke of new digital technologies coming together as a crucible for "new kinds of synthesis," forging a new moment: "Computers have leveled the field," he said. Other than Lynn's commentary, the computer as the ur-instrument across disciplines was never discussed, even though it provides design a potentially unifying technology, and a consolidated narrative.

Soft-spoken James Dyson, who invented the see-through, bagless, cyclone vacuum cleaner that has humbled Hoover, also took on Lutz implicitly. Dyson champions honesty in design as a direct expression of engineering, not styling.

Thom Mayne advocated design generated by systematic operations rather than composition, a position that theoretically eliminates the author. Yet no one took up the argument, not even Gehry, a master composer. Simmering just below the surface of all the talk was the issue of subjective versus objective design, the emotional versus the rational.

Graphic designer Bruce Mau delivered perhaps the only overdesign in a talk about massive change. He spoke of the abandonment of traditional disciplines like graphics, architecture, and industrial design in favor of a globalized design culture based in broad economies. But his potentially explosive observations remained self-contained. The inability of the event's format to develop these idea intersections across stand-alone talks condemned the event as a whole to the anecdotal. The conference left the impression that it was about ideas than everything else, not a synthesis of thought but a confuscle of figures designing parallel universes. Chee Pearlman said she conceived the conference like a magazine, trying for the stimulating mix. She succeeded. But sometimes you want, and need, a book.
Design_Shift: How computers and the architects who love them are changing the world

Books


The pervasiveness of computers and other digital technology is, for Colin McCullough, not a curse but a design challenge. In this well-written book, McCullough, associate professor of architecture and design at the University of Michigan, leads a well-reasoned argument for embracing good design as a means of offsetting many of the intrusions of computers in our lives. There are more of them than any of us are aware of. A decade ago, the number of microprocessors (those chips that run all kinds of electronic gadgets) surpassed the human population. Today, computers and other electronic devices are ubiquitous, McCullough writes, because they are now embedded in our world, everywhere we can’t see them. They have electricity itself—surrounding us, yet invisible, and just entitled. Omnipsntent computation changes the places and ways we form and interact—it can happen anywhere, anytime—and need daily living. This is just one of the reasons that the blabbering, always-on phone user next to you on an or on the sidewalk is so appealing—the context for digital living is now public.

For McCullough, this is the crux situation: The placelessness of digital lives (access from anywhere, to anywhere) makes it even more important for our bodies to be situated in an identifiable space, in a nurturing place. Reading McCullough, I was reminded of Alvin Toffler’s observation more than 25 years ago that high tech increases the need for high touch. The more estranged we become from the material here-and-now, the more need grounding in it.

McCullough’s answer is “digital grounding,” an approach to architecture that emphasizes a place-centered design. He explores these ideas most fully in Chapter 8, the heart of his book. McCullough does not see place as a nostalgic throwback. Instead, place is purposely designed for social interaction. It gives our digitally dominated lives a locus, in which the new conventions of living can be performed. It is not a retreat from technology, but an attempt to balance the unstable digital realm with our need for stability. “In our age of technological saturation,” he observes, “response to place becomes the most practical adaptation strategy of all.” This book offers architects, designers, and everyone else a way to think about how we might intelligently respond to the digital kudzu without letting it take over the garden. Michael J. Crosbie


Next Generation Architecture looks at the range of work being shaped, rendered, and fabricated by digital technology—work that includes folds, blobs, and morphed boxes. Rosa traces blob construction from its predigital forerunners—Frederick Kiesler, John Lautner, and Buckminster Fuller—to Frank Gehry and the younger blobmeisters (including Greg Lynn, Doug Garofalo, Iwamoto Scott, Jakob + MacFarlane, Kolatan/MacDonald, William Massie, SHoP, and UN Studio). Rosa credits Bernard Tschumi for disseminating digital design by establishing the first paperless design studios at Columbia University in 1994. Rosa notes that most digiters either taught or studied there. He cites Gehry’s Experience Music Project in Seattle, completed in 2000, as a “model for what digital blob architecture can be in the 21st century” and Eisenman’s 1997 scheme for the Staten Island Institute of Arts and Sciences as a model for the digital fold building.

Digital design, rather than being reductive, writes Rosa, is fusing with other media to generate new types of buildings that can respond to the human voice, other sounds, and/or physical movement. He observes that digitizing the design process has allowed architects to explore a sort of critical digital regionalism that incorporates conditions of site, program, and culture. Among Rosa’s examples are the landscapes and urban design work of Field Operations (Stan Allen and James Corner). Not surprisingly, digital architecture exhibits optimism about architecture’s possibilities and is changing the architectural office, which can now exist anywhere designers have access to hard drives.

Many of the projects in this book are unbuilt. Among built exam-
surroundings. As examples, they cite Shigeru Ban's Curtain Wall House and his Naked House, both in Tokyo, and OMA's Prada Store in New York.

The book's strength lies in overturning received ideas, but its logic requires some assembly. Its title is inclusive, yet it feels incomplete: Discussions about Minimal architecture during the 1980s and '90s took place primarily in Europe and Japan, so the book includes only the work of 20 European and Japanese Minimalists. One wonders where American architects—such as Gwathmey Siegel, Antoine Predock, and Richard Meier—who remained committed to a Minimal vocabulary during the 1980s and '90s, would fit. The book's logic implies a progression from Essential Minimalism through Meta-Minimalism to Trans-Minimalism, but you wouldn't know it from the authors' text, and their chosen projects don't show an evolution.

One thing is certain: Minimal Architecture is provocative, and after closing its covers, you're likely to look at many buildings not included in its pages with a fresh eye. A.O.D.


This expansive compendium of Chicago architecture highlights the built and unbuilt legacy of a city long renowned for bold achievements in design. Culled from the collection of the Art Institute of Chicago's Department of Architecture, drawings and images narrate the contributions of Chicago architects past and present, including Daniel Burnham, Stanley Tigerman, and Jeanne Gang, while acknowledging the iconic works of Louis Sullivan, Frank Lloyd Wright, Mies van der Rohe, and other masters.

Art Institute curator John Zukowsky's introduction is an unabashed celebration of the department's efforts to acquire, organize, and exhibit the most significant examples of architectural representation. Indeed, the author and his colleagues have much to celebrate. In a little over two decades, their permanent collection has grown to more than 130,000 drawings, several hundred building fragments and architectural models, and invaluable oral histories.

The bulk of this tome presents a straightforward, chronological look at the built and imagined works of Chicago's architectural canon. Alongside classics such as Sullivan's Schlesinger and Mayer Store and Mies's IIT campus lie refreshing novelties like Buckminster Fuller's Dymaxion Car, which was designed for the Century of Progress Fair in 1933. Tucked into the mix are STP McDonald's Floating Restaurant (1983), Tigerman's The Titanic, a 1978 photo collage commenting on the fall of Chicago's Miesian Modernism, and Dan Wheeler's nautical-inspired North Avenue Beach House (1999). Hand-tinted photographs, watercolor renderings, and digital views all support this broad range of architectural innovation.

In her epilogue, associate curator Martha Thorne addresses Chicago's reputation for conservation but insists on a millennial move toward nonconformity. Citations of Rem Koolhaas's new campus at IIT, as well as work by rising stars Jeanne Gang and Doug Garofalo, Thorne continues the book's forward trajectory. If the current spate of projects is any indication, the department will soon require more architectural space. Nick Olsen
Sitooterie: sculptural folly in the English countryside

I have been compared to a glowing hedgehog, a spacecraft, and in the
her's own words, "a fakir's bed of nails," yet it is one of the most
futuristically inventive follies ever to grace the English countryside. Now sited
at Howard's Farm, a privately owned sculpture garden in Essex, Thomas
Herwick's anemone-like aluminum form is, he says, "an experiment in
re and in using many thin pieces to make something strong that could be placed any way up."

Some of the quirkiness is perhaps explained in the origins of the commission, a competition sponsored by
the Heritage in 2000 to create a gable-like structure known in Scottish parlance as a sitooterie, or a place to
pit" in. The winning designs were constructed as temporary buildings in the wooded landscape of Belsay House
in Northumberland. One of the most remarkable to spring, almost literally, from that competition was the fantastical
me wrought by the young, London-based Heatherwick and dubbed "The Hairy House": a wooden cube perfo-
by 5,000 slender oak staves that lifted the structure off the ground, surrounded it in a prickly shroud, and in
some cases penetrated to the interior to provide wall texture and support for furnishings. It was this toothpick-style version that inspired the owner of Barnard's Farm to commission the permanent structure that now graces his farmland garden.

Wood turned to aluminum, and production moved from timber-milling techniques to metal-fabrication technology. The essential cubic core, with thousands of predrilled holes and a mass supported on a brushlike agglomeration of extruding members, remains. However, the staves have been replaced by long, thin, hollow rectangular pieces that had to be individually machined by an aeronautical engineering company in Southampton before being assembled on-site. The tubes are of different lengths and all point to the center of the cube. Capped with translucent colored acrylic, they effect an orangey glow in daylight and are lit from within at night by a single bulb. The designer admits, “The lighting is very low-tech.” However, precision was essential. The aluminum skin is 0.6 inches thick and is pierced by 4,704 tubes adhered to the central 8-foot cube (which can hold about half a dozen adults) through finger joints that are formed at the end of each piece. With each tube having a hollow area of a mere 0.7 inches square, the designer ensured that the overall impression would be of a fuzzy, though tactile-seeming solidity that, on closer inspection, reveals an even more tactile multiplicity. Heatherwick, who is in the process of building the U.K.'s tallest sculpture in Manchester, has not just achieved a tale of design virtuosity. The Sitooterie is a demonstration of skilled, cutting-edge craftwork—the artful marriage of imagination and technology.
excitement was palpable the evening of March 3rd at the National Building Museum, where a festive Accent on Architecture Gala dinner hosted by the AIA was attended by more than 1,000 guests—the largest turnout in the history of the AIA. They came to celebrate the AIA 2004 Honor Award winners for the Old Medal, 25 Year Award, and Firm Award in the museum's Hall, a marvelous setting of open archways, light, and height for this special occasion. When Samuel Mockbee, FAIA, was announced as the Medalist posthumously, his wife, Jackie, received the award behalf in a deeply moving speech.

She outlined his life and vision, and spoke of his legacy, both continued activities of the Rural Studio and in the careers of his children. In particular, his youngest daughter, Carol, who works at the Rural Studio as an Outreach Fellow, is completing an unfinished project dear to Sambo’s heart: a memorial called the Subrosa Pantheon, a place for contemplation “under the roses.” It is a fitting legacy of an illustrious career and will be completed in December 2004.

I.M. Pei, FAIA, then received the 25 Year Award for the East Wing of the National Gallery of Art, focusing his comments primarily on the beauty and force of John Russell Pope's adjacent 1941 West Building, which was the inspiration for Pei’s contemporary contribution to the National Mall.

Ted Flato, FAIA, and David Lake, FAIA, of Lake/Flato Architects, which received the Firm Award, offered inspired speeches, then invited their entire partnership to the stage for congratulations. On the following pages, these top honorees are joined by 16 architecture, 8 interiors, and 5 urban design project winners, all of which provide stunning and intelligent examples of design excellence. Jane F. Kolleeny
From a tiny chapel that contemplates traditional style to high-rise megastructures monumentalizing Western culture to houses celebrating the simple virtues of nature, 16 winning projects provide examples of stunning design. Architecture jury chair Adrian Smith, FAIA, describes the projects as diverse in typology, scale, context, economic means, and materiality. Common themes include energy conservation, cultural relevance, client identity, clever use of materials, and seamless integration of building services and structural systems into the fabric of the architecture. In this year’s AIA Honor Awards program, young emergent talent and mature repeat winners join together in demonstrating that architecture is alive and well in every generation. Jane F. Kolleeny

1. Seaside Interfaith Chapel
Seaside, Fla.
Architect: Merrill and Pastor Architects

This charming chapel transforms the town of Seaside from an experiment in New Urbanism into a community. Becoming the physical focal point of the town, the chapel conveys a strong sense of place, coherence, and spiritual unity. An elegant example of design and construction detail, it exhibits a sensitivity to form, incorporating traditional style into a modern framework. Natural light floods the predominantly white-washed wood interior, with altar walls stained to match the dark floors made of pine wood salvaged from north Florida rivers.

“Constructed of concrete and wrapped in wood, the chapel is a metaphor of inner strength with a humble exterior and a spiritual core.”
A very personal space full of elegant moments of whimsy—a place that is meant to be used and enjoyed.

2. The Brain
Seattle
Architect: Olson Sundberg Kundig Allen Architects

Aptly named The Brain, this film studio provides office, darkroom, and library space so the owner, a filmmaker, can use it as a retreat from his adjacent residence to think and create. The cast-in-place concrete box nestles in the woods of a suburban site, providing intimacy and privacy. Floor-to-ceiling industrial steel windows allow plentiful light, modulated by theatrical curtains. The finely tailored building fits the spirit of the owner.
“Clear planning and exquisite detailing of materials combine to produce a project of incredible richness.”

3. The Point House
Polson, Mont.

Architect: Bohlin Cywinski Jackson

Superbly sited on a secluded peninsula that extends into a large Montana lake, the house establishes a dialogue between land and water. Part of a year-round family compound, it melds gently with the unspoiled natural beauty of the land. Resting among evergreens, the house extends from the rock spine to the edge of the dense wetlands. Building elements are organized along a wall of Cor-Ten steel that slices through the site. Distinctions between inside and out become intentionally blurred with tall walls of glass and large sliding panels.
Chicken Point Cabin
inden Lake, Ind.

Architect: Olson Sundberg

A lakeside shelter has a large low wall that literally opens entire living room to the is and lake beyond. The simple and durable low-maintenance materials—concrete floors, concrete block, plywood, steel—remain unfinished to age naturally, merging seamlessly with the surrounding landscape. Sleeping 10, this weekend country "cabin" retreat makes big moves with a small palette.

“There is a clarity and elegance in the detailing of the humble and modest materials that ennobles the project with richness.”
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Center of Gravity Foundation Hall
Taos, N.Mex.

Architect: Predock_Frane

Extensive 3,000-square-foot meditation hall serves as the private teaching and practice space of the Zen Buddhist compound. The ceiling, folded metal roof, sits on purlins that cantilever over exterior walking meditation areas. Beams span over the hall, resting on steel columns. Delicate translucent polycarbonate walls intersect massive rammed earth walls. Sliding wood panels open onto the garden, extending the austere interior space out to the landscape, creating a serene but dynamic sanctuary for contemplation.

Spare and mysterious, the organic materials and fine detailing melt the building form and the mission together.”
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Northeastern University West Campus Residence Halls

Architect: William Rawn Associates

Establishing these three new residence halls to accommodate students helps fulfill the university’s transformative vision, rejuvenating its threatened urban presence. The facilities create an exciting environment for students’ personal growth; contribute to the university’s goal of achieving a higher academic standing; and energize an urban area that has long been unappealing. Opening to the front edge of a new west campus, the dorms engage and unify the university with the city.

“Tremendous sensitivity, skill, and creativity are shown in the shape and arrangement of the buildings and the assignment of the portals.”
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NeoCon showroom 10-118
Steelcase - Project MAC
Traverse Township, Mich.

Architect: Thomas Phifer and Partners

To accommodate an accelerated construction schedule, the architect chose prefabricated components to build this two-story spec building. To be flexible, the steel frame-shell structure allows interior spaces to change in size for a wide variety of uses. Abundant natural light and localized climate control contribute to the amenities. The ventilating roof unifies the building with a lightweight canopy. Spatial connectivity of the open-plan interior encourages a more egalitarian workplace, promoting hard work and creativity.

"This project shows that it is possible to design a beautiful and elegant spec building on a modest budget."
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“An icon for the city, the building’s sloping, curving, leaning wall delights all. Walking to the roof garden provides spectacular views of the city and the surrounding mountains.”

8. Salt Lake City Public Library
Salt Lake City
Architect: Moshe Safdie and Associates

This new, $78 million library features a five-story administration block next to a triangular main building for the book stacks, with a glass-enclosed public Urban Room and adjoining piazza serving the city. The building contains many dramatic features, notably the glazed curved wall that borders the stacks, accommodates vertical circulation, and overlooks the outdoor plaza. Reading areas for patrons and remote places for study are accessible by bridges. The building provides a gathering place for study as well as a lively destination for public events.
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Powerful in concept and beautifully executed, a glass room emerges from time-worn wooden barn.”

9. DoMa Gallery
Baltimore County, Md.
Architect: W Architecture and Landscape Architecture
[Record, July 2003, page 126]

Two art collectors transformed a historic farm into a place to entertain, live, and display their growing contemporary art collection. A barn ruin with weathered slats sitting on a stone foundation became the centerpiece of this domestic compound comprising a charming group of outbuildings, cultivated gardens, and meadows. A glazed volume inserted within the original barn structure creates transparency and opens up the interior to the landscape beyond.

Aghkanic House
Prescott, N.Y.
Architect: Thomas Phifer and Partners
[Record, April 2003, page 140]

High on a knoll at the edge of woods, this house emerges dramatically as a pavilion of steel and set on a plinth. The site borrows meadow to the south, while spectacular views open to the Hudson River valley and distant mountains to the west. Finely detailed, the residence provides 360-degree views. A system of operable exterior sunshades modulates sun and shade. The house takes advantage of the topography by tucking the quiet spaces into the land, which forms a base supporting the light-filled areas of the public functions of the house above.

“There is a seamless flow of outside and inside spaces from the skillful integration of the building into the hill.”
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Los Angeles Design Center
and Cisco Brothers Showroom
Los Angeles

Architect: John Friedman Alice
Techn Architects
[ARCHD, July 2003, page 142]

Transforming this furniture design cen-
ter in South Central Los Angeles
marks off a plan to revitalize the
area, home to many of
the city's furniture manufacturers.
Simple, utilitarian materials, color,
and signage cheer up this cluster of
down brick warehouses. A for-
ter auto court has been
reformed into a rich outdoor
and public event space for the
plex. Hiding, revealing, and/or
ring aspects of the original
buildings and environment an-
thes the character of the site.

"A project with great energy and bold, artful
gestures. A creative way to breathe new life into
what are otherwise forgettable fringe buildings."

This highly refined synthesis of architecture and engineering
fines the state-of-the-art office tower for Germany.

12. Deutsche Post
Bonn, Germany
Architect: Murphy/Jahn

This modern and sustainable
office tower consists of two
crescent-shaped halves sepa-
rated by an atrium and rising
around a series of nine-story
sky gardens, which serve as
communication floors and ele-
ator crossovers. A glass outer
shell on the building enables
natural ventilation and abun-
dant light in all work and
circulation areas. Individually
controlled, mechanically
operated solar shades give this
building a human scale and
exterior animation that varies
throughout the day. In essence,
the skin of the building modu-
lates its own climate.
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“There is a wonderful informality about the composition that encourages creative thinking and discussion.”

“Simple materials, elegant proportions, sophisticated colors, and skybridges make this tower a delight on the Chicago skyline.”

14. Skybridge at
One North Halsted
Chicago
Architect: Perkins & Will
[record, May 2004, page 136]

An icon for urban living in Chicago, this mixed-use project incorporates practical community amenities with an elegantly articulated residential tower. The flexibility afforded residents by intelligent planning provides opportunities for customization of unit size and layout. The glass-enclosed skybridges break up the massing of the building while increasing the number of corner units and views of downtown.
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State Street Village, ITT
Chicago
Architect: Murphy/Jahn

[ARCHITECTURAL RECORD, May 2004, page 130]

across the college's
quadangle and Mies van
Rohe's legendary Crown
this student residence con-
veys a clear response both to the
urban context on one side and
the campus on the other. The
building successfully and ele-
gantly uses its site restrictions
and tight linear space to ad-
tage, connecting separated parts
of the campus by becoming a
pass-through.

Bayer
Erlangen, Germany
Architect: Murphy/Jahn

semi-elliptical office build-
engages a park forming an
ior courtyard; the opposite
side features a pergola over
the transparent main entrance.
The building appears like a
crystal case wrapped around the
occupied floor plates. Energy-
efficient design combines with
unparalleled engineering expert-
ise to make the building both
stunning and practical.

“Rather than designing an innocuous background building, the architect responded with a bold new statement.”

“Every element of this building is about glass. Where floors, walls, ceilings, and even ductwork could be glass, they are.”
This year’s AIA Interiors Honor Award winners share the common thread of renovation and adaptive reuse. These eight projects perform similar transformations, either reinvigorating a historic building or brightening an industrial one. Interior Architecture jury chair Lee F. Mindel, FAIA, remarked that [the jurors] “saw a lot of ‘flying schreprels’ and ‘blobs,’ but the projects with simple, bold, elegant ideas stood out.” Solutions range from inventive and high-tech to traditional and rigorous. From the clever transformation of a historic church into a performance space using acoustic panels to augment the existing design (below), to relocating and enlivening a modern, welcoming library in a formerly uninviting space, these projects sought and found a high level of personal expression beyond the trendy and predictable. Jane F. Kelleen

1. Carol and Carl Montante Cultural Center Buffalo Architect: Cannon Design

With a sensitive series of gestures, the architect adapted this 1926 historic church into a 600-seat, multipurpose performance space at a liberal arts college campus. Building systems were upgraded for contemporary use and acoustics retooled to meet performance criteria. Sound-reflecting surfaces inserted within the domed volume improve the acoustics without detracting from the design. New forms and materials are articulated cleanly and simply to enhance the old.

“Masterfully handled; the technology becomes a new ornament in an intricately embellished space.”
“Christo’s installation of blue tents in Japan became a metaphor for the project’s master plan and an expression of the client’s mission.”

2. Pallotta TeamWorks New Headquarters

Los Angeles

Architect: Clive Wilkinson Architects

This inventive solution resulted from an inspired vision for a new workplace tempered by radical budget constraints. Tent environments personalized a large warehouse space, creating intimate and distinct work neighborhoods and providing containment for cooling, heating, and lighting. Alleviating the need to build structures, the tents, suspended from the roof-support column grid and stretching in different directions according to programmatic needs, are anchored down by inexpensive, prefabricated shipping containers.
3. New York City Public School 42, Queens, Library
Arverne, N.Y.
Architect: Weiss/Manfredi Architects

The architect moved the existing library from its former location on the fourth floor to the first floor, adjacent to the school's main entrance and cafeteria, redefining its place and purpose within the school. Formerly removed from students and remote from community-based activities, the library's new central location makes it visible to pedestrians on the street and within easy access of students. A curvilinear wall shaped by lapped plywood winds through the space, defining it and providing shelving, while deep windows with seats invite users to curl up with a book. A silkscreened transparent curtain can be opened or closed and rolling bookshelves moved to reconfigure the space in various ways.

"Organized and funded by the Robin Hood Foundation and built by the school board, this pro bono library is part of a pilot project to improve New York City's urban schools."
"The asymmetry in the architect's response relieves the pressure of compliance to the existing, A-frame church."

First Presbyterian Church of Sunnyvale, Calif.

Architect: Trevor Abramson, Abramson Teiger Architects

A unique intervention in an existing 1950s church served goals—to bring light into the interior and to create a sense of openness and reverie for the congregation. The pews were organized in the round and the altar of the chancel was brought forward and lowered to bring pastor and choir closer to the congregation. Religious symbolism unifies the design. Light as metaphor is shaped by irregularly shaped volumes that provide illumination from multiple directions. The two facing curved spaces that shelter the sanctuary give the primary form to the worship space that resemble hands in prayer. Other features of the design are key elements of the service.
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“Conventional notions of ceilings and walls are challenged in this high-tech and poetic exploration of the architect’s process.”

“A sensitive interior interpretation shows a sophisticated reading of the original building.”
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The architect transformed a historic barn and carriage house previously used for storage and staff meetings to new offices for the company's editorial staff. A brick structure topped by a timber roof supported by thick square beams and rafters became host to a modern insertion that is both rustic and refined. Materials such as plywood, structural lumber, fiberglass panels, and unfinished steel complement the character of the existing structure.

"Love of detail is celebrated; this looks like it was built by a master carpenter."

"A dramatic, undulating, wood-paneled wall runs the length of the building, enhancing the light and separating the main area from the darkened editing spaces."

American Meteorological Society Editorial Offices

Architect: Annahian Winton Architects

CORD, June 2002, page 203

Pop Editorial

a Monterey, Calif.

Architect: Pugh + Scarpa

CORD, September 2003, page 7

The architect converted a single-story structure, designed by Gehry in 1963, into a editing facility for the. Three distinct, freestanding rooms house a conference room, the executive producer's office, and bathrooms, all of which float in the rough space, placed on a neoprene pad above the floor. The architect used color and materials to distinguish each room. Bright rubber sheeting lines the conference room, while the bathrooms feature white interiors and multihued acrylic panels.
Perhaps the least glamorous of the AIA Honor Award-winning projects are those for urban design. But what they lack in swagger, they possess in importance—without planning, architecture becomes vacant of contextual meaning. The jury sought and found projects combining practicality and invention; restraint and proactivity. The winning plans all demonstrate the possibility of creating compact, pedestrian-friendly, sustainable communities. Transportation also plays an important role in each of the projects, encouraging architects, clients, and communities to consider the automobile as less central to the planning effort. Jane F. Kolleeny

1. Chicago Central Area Plan
   Chicago
   Architect: Skidmore, Owings & Merrill

Chicago’s downtown area experienced tremendous growth in the 1990s, with businesses prospering, residential neighborhoods emerging, and tourism flourishing. Along with success comes the need to ask new questions about density, amenities, transportation, buildings, and jobs. SOM’s plan addresses these issues, strengthening the downtown economy, improving and extending the transit systems, increasing open spaces and parks, creating new waterfronts areas, and encouraging new mixed-use neighborhoods.

“This project reveals an understanding of the city as a growing organism.”

2. Mission Bay Redevelopment Plan
   San Francisco
   Architect: Johnson Fain

This 303-acre area, the largest undeveloped site in the city, establishes a new neighborhood along the bay adjacent to downtown. Former plans failed to address the real needs of the city. The beauty of this one is that it incorporates Mission Bay into the structure of San Francisco, seamlessly extending its physical, economic, aesthetic, and cultural life. Creating a mixed-use neighborhood of housing, retail, entertainment, and commercial-industrial properties, the plan integrates the site into the historic fabric of the city.

“Urbanistically, the plan relates to the city as a whole, establishing it’s own grid and carrying it forward clearly.”
3. UrbanRiver Vision
Architect: Goody, Clancy & Associates

In an attempt to respond to the decaying waterfronts in many of the cities of Massachusetts, a state agency created and funded a program to provide local riverfront planning, with the input of key federal, state, and local agencies. This project addresses environmental, economic, residential, transportation, and preservation issues, so all the cities have the tools they need to address their historic waterfronts and the adjacent downtown development areas.

"Fifty years ago, the river was viewed as undesirable, but now it’s seen as the center of the community."

4. Getting It Right: Preventing Sprawl in Coyote Valley
San Jose, Calif.
Architect: WRT/Solomon E.T.C.

Coyote Valley consists of 6,800 acres of prime farmland and watershed on the southern edge of San Jose targeted for future commercial and residential development. An environmental advocacy group contracted this plan to show how the city can accommodate projected growth in a manner that sustains its urban economy, community, and infrastructure, promoting an alternative to sprawl.

"They took a complex problem, disassembled it, and then reassembled it with great results."

5. The Confluence: A Conservation, Heritage, and Recreation Corridor
St. Louis
Architect: HOK Planning Group

This plan creates a 40-mile-long conservation and recreation corridor that reinforces the confluence of the Missouri and Mississippi Rivers, one of the world’s largest systems. It links St. Louis and other nearby communities to the rivers from which they rose, creating an industry of sustainable ecotourism and providing a plan for comprehensive growth in the future.

“A nationally significant park will serve as a lasting legacy to the region and to Lewis and Clark.”
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Modern masterpiece on the Mall

It's not easy being Modern on the National Mall, especially next to John Russell Pope's 1941 West Building of the National Gallery of Art—considered by I.M. Pei to be an exemplar of Neoclassicism. Transforming its proportions and materials into a contemporary idiom for an expansion was a stunning achievement for Pei and a gift to Washington and the nation. Ada Louise Huxtable cried "elitist" when the East Building opened, but she got it wrong. It's our capital city's Modern masterpiece—as powerful an achievement of the 20th century as the artwork it celebrates.

In the 26 years since President Jimmy Carter dedicated it, the East Building has thrived as an art museum while growing into eminence as an elegant, refined example of Modernism. The dual triangles, nestled within the trapezoidal site, remain programatically intact—one for exhibitions, one for administration and research—and, unlike critics initially feared, the gallery spaces have proved highly flexible, says Victoria Newhouse, author of the forthcoming Art/Power/Placemont (Monacelli Press). The airy atrium ("one of the most resplendent rooms of all time," RECORD noted in 1978) enjoys instant recognition, with its tetrahedron lights that echo the geometry of architecture, as well as Alexander Calder's colorful mobile spinning slowly overhead.

Sometimes a blemish connotes reverence. The permanent ring of discoloration surrounding Pei's name on a marble wall in the atrium owes its existence to the millions of visitors who have touched the inscription, says the NGA's director, Earl A. Powell III. The tinged stone makes explicit how indelibly Pei's identity is entwined with this well-loved project. Deborah Snoonian, P.
his icon of contemporary architecture in a city of traditional monuments continues to delight and impress visitors from all over the world."
American Institute of Architects

Winners and Jurors 2004

WINNERS

Architecture (page 140)
Seaside Interfaith Chapel: Merrill and Pastor Architects; The Brain: Olson Sundberg Kundig Allen Architects; The Point House: Bohlin Cywinski Jackson; Chicken Point Cabin: Olson Sundberg Kundig Allen Architects; Center of Gravity Foundation Hall: Predock Franke Architects; Northeastern University West Campus Residence Halls: William Rawn Associates; Steelcase - Project MAC: Thomas Phifer and Partners; Salt Lake City Public Library: Moshe Safdie and Associates; DeMa Gallery: W Architecture and Landscape Architecture; Taghkanic House: Thomas Phifer and Partners; Los Angeles Design Center and Cisco Brothers Showroom: John Friedman Alice Kimm Architects; Deutsche Post: Murphy/Jahn; Telener Headquarters: NBBJ/HUS/PKA; Skybridge at One North Halsted: Perkins & Will; State Street Village, ITT: Murphy/Jahn; Bayer: Murphy/Jahn

Interiors (page 160)
Carol and Carl Montante Cultural Center: Cannon Design; Pallotta TeamWorks New Headquarters: Clive Wilkinson Architects; New York City Public School 42, Queens, Library: Weiss/Manfredi Architects; First Presbyterian Church of Encino: Trevor Abramson, Abramson Teiger Architects; NAI Exhibition - Silent Collisions: Morphosis Retrospective: Morphosis; Academic Center for Student Athletes at Louisiana State University: Trahan Architects; American Meteorological Society Editorial Offices: Anmanian Winton Architects; C00p Editorial: Pugh + Scarpa

Urban Design (page 168)

25-Year Award (page 172)
National Gallery of Art - East Building, Washington, D.C.: I.M. Pei

Firm of the Year (page 176)
Lake/Flato Architects: David Lake, FAIA, and Ted Flato, FAIA

Gold Medal (page 184)
Samuel Mockbee, FAIA

JURORS

Architecture
Adrian Smith, FAIA (Chair), Chicago; Seth Cohen, Assoc. AIA, Philadelphia; Steve Durall, AIA, New Orleans; Rand Elliott, FAIA, Oklahoma City; Robert W. Jorgensen, FAIA, Newport Beach, Calif.; Robert D. Loversid, Jr., FAIA, Columbus, Ohio; Cheryl McAfee, Fayetteville, Ga.; Sarah Peden, Washington D.C.; David Thurim, New York City

Interiors
Lee Mindel, FAIA (Chair), New York City; Annie Chu, AIA, Los Angeles; Sarah Grant, Hutchison, Des Moines; Mary L. Oehrlein, FAIA, Washington, D.C.; Arthur Smith, FAIA, Southfield, Mich.

Regional and Urban Design
Ray L. Gindroz, FAIA (Chair), Pittsburgh; George Crandall, FAIA, Portland, Ore.; We Evans Joseph, FAIA, New York City; Elizabeth Chu Richter, AIA, Corpus Christi, Tex.; Sus Williams, Indianapolis
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This Texas firm blends Modernism, regionalism, and sustainability to create architecture that responds to the sun, the shade, and the breezes, collaborating successfully among themselves in the process.

By David Dillon

David Lake, FAIA, once described himself as a romantic, and his partner, Ted Flato, FAIA, as a rationalist. “I prefer eccentricity, and he doesn’t,” he explained, which Flato replied that he had “a great fear of doing something trendy that I won’t like after 10 years.”

Lake/Flato Architects of San Antonio, winners of this year’s American Institute of Architects Firm Award, celebrates its 20th year. That delicate balance between reason and romance, tradition and invention is intact.

The architects remain physically and imaginatively attached to Texas by virtue of what the late William Turpen called their “specifically Texas insights,” meaning responsiveness to the imperatives of sun, heat, and wind, the challenge of a vast landscape, and the richness of local building traditions.

“We believe in an organic architecture that speaks from its place,” says Lake, “one that acknowledges precedents and that solves basic problems simply and elegantly. I think that’s what Bill was getting at. Architecture should be portable and easy to live with, rather than just eye candy.”

From a familiar and unapologetically rural base of barns, silos, stone walls, and metal roofs, their interest has grown steadily more refined and abstract in ways that show how to make Modernism come to terms with history without lapsing into empty nostalgia.

In the late 1970s, Lake and Flato went to work for O’Neil Ford, the master of midcentury Texas Modernism. They taught them the importance of materials and construction, and knowing how things go together instead of how to make trary shapes. “Architecture isn’t sculpture,” he’d preach.

Contributing editor David Dillon is the architecture critic for The Dallas Morning News.
Estrella Ranch House,
Hill Country, Texas, 1989

Carraro Residence
Kyle, Texas, 1990
Consequently, instead of theorizing, Lake/Flato builds, or perhaps one could say they build based on theories about earth instead of air. Like their mentor’s, their houses, schools, and churches are intensely sensory and tactile; the first impulse on entering them is to run your hands across walls and doors, to read the architecture through the pores.

Lake started out designing Modern sodbuster houses in the Texas Panhandle, followed by adobe houses in northern New Mexico that evoke dense historic prototypes while remaining remarkably open and bright. In the 1980s, he and Flato teamed up on a series of evocative ranch houses, mostly in South Texas, that combine simple forms and homely materials—corrugated metal, oil-field pipe, cattle fencing—to create culturally and climatically appropriate designs. The individual pieces typically form courtyards with big porches and deep overhangs that offer protection from parching Texas sun and wind.

Attractive, appropriate, skillfully detailed, yet not enough to justify the Architecture Firm Award. The breakthrough came in 1990 with the Carraro residence outside Austin, an abstracted, almost skeletal version of a Texas farmhouse that uses steel salvaged from an abandoned cement plant to create a series of light, airy pavilions for living and entertaining.

“The client had this very romantic notion of a stone barn out in a field, with an old Butler building as the frame,”

recalls Flato. “We didn’t want to get involved with that, so we convinced them to buy this 40-by-180-foot shed and break it into three pieces, with a little stone cube in one for the living quarters. It was a case of using the limitations of budget and the original idea to create a more interesting project.”

This combination of light steel frame and heavy stone appears frequently in Lake/Flato’s later work, giving the reason/romance paradigm a new tension and edginess. The Carraro house won an AIA National Honor Award, the first of three, and dramatically elevated the firm’s profile.
Air Barns
San Saba, Texas, 1999

Texas State Cemetery
Austin, Texas, 1997
Lake/Flato now employs 45 people, half of them architects, who collaborate as a matter of course. This is another gift from Ford, who gave young designers extraordinary freedom and also surrounded them with a repertory company of craftsmen—masons, weavers, furniture makers, ceramists—who softened and enriched his special brand of Modernism. The difference between real collaboration and a facsimile is the difference between bringing a covered dish to the supper and cooking together. Lake/Flato cook together.

They also get out of the studio to teach, lecture, and serve on design juries. They sponsor a residency program at the University of Texas at San Antonio and have helped the city's mayor come up with a Smart Growth Plan. A belief in good design as a public responsibility as well as a private passion lies at the heart of their practice. As the firm has expanded, so has the range and complexity of its projects. In the past decade, Lake/Flato has designed museums, churches, libraries, and corporate headquarters, along with a cemetery, a botanical garden, and a school of nursing.

Scale remains their ally and occasionally their albatross. The sprawling Burlington Northern Santa Fe headquarters in Fort Worth (with KVG Gideon Toal), for example, gets a bit heavy-handed in its evocation of the railroad vernacular. Likewise, the SBC Center, home of the San Antonio Spurs basketball team, is festooned with structural Texana that comes across as forced rather than inevitable. Understatement is their game.

Considerably more successful is the Trammell Crow Visitor Pavilion at the Dallas Arboretum, which opened in 2003 and in many respects epitomizes their earlier work. Here, rugged Texas limestone walls meet light steel and glass pavilions to form a small village with an open central plaza. The pavilions are contemporary abstractions of traditional barns and sheds, their appeal residing in the intimate scale and honest craftsmanship, rather than in bold architectural gestures. And the entire project blends seamlessly with its natural surroundings, enhancing rather than overwhelming them.

The new University of Texas School of Nursing in Houston is Lake/Flato's most ambitious exercise yet in sustainable design. Using 50 percent recycled materials and consuming 40 percent less energy, the building attains a LEED Gold rating without compromising architectural integrity or turning technology into a fetish.

Economy, pragmatism, simplicity, comfort without pretension, elegance without irony, these features distinguish Lake/Flato's best work. Their architecture shows respect for materials and construction, for the values of place and precedent and the needs and aspirations of its users.
Harry Ransom Center
Austin, Texas, 2003

University of Texas School of Nursing and Student Community Center
Houston, 2004

Trammell Crow Visitor Education Pavilion at the Dallas Arboretum and Botanical Society
Dallas, 2000
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Before there was a Rural Studio, there was an architect named Sambo. He grew up in the heady milieu of Mississippi, a place redolent of earth and growing things, of social disparity, and great literature. Coming of age during the contentious 1960s, Sambo absorbed the world surrounding Meridian, Mississippi, played football, attended Auburn University, and joined the army. Then his worldview shifted.

After a stint working in Georgia, he returned to Mississippi, where, in conjunction with a series of partners, he began to make architecture suited to the geography and culture of the nation’s poorest state. Using the simplest materials and familiar forms, he wrested newness from a people struggling to emerge from a rich but historically oppressive past. Great writers from William Faulkner to Walker Percy had succeeded in moving on; uniquely, Sambo took architecture to a new Southern frontier.

While early projects smacked of Postmodernism, very quickly a bevy of buildings, from houses to simple chapels, proclaimed a refreshed, empathetic sensibility. Soon Sambo & Company were redefining what it meant to live and work in the South. Publications took notice, as did the universities.

Ultimately, he found his full voice through other people, particularly at Auburn’s Rural Studio, where he and collaborator D.K. Ruth cofounded a residential architectural program that offered a total immersion in the art of building, engaging all of the arts in the service of a specific community. That work continues to flourish to this day.

In naming Mockbee as the 2004 Gold Medalist, the American Institute of Architects not only recognized his gifts, but also espoused Sambo’s values, which fiercely and unsentimentally addressed basic human needs. Robert Ivy, FAIA
By Andrea Oppenheimer Dean

Both Samuel Mockbee and Frank Lloyd Wright often tongue-lashed their profession. Wright once called architects “high-grade salesmen”; Mockbee labeled them “house pets to the rich.” Yet the American architectural establishment conferred its highest honor, the AIA Gold Medal, on both Wright and Mockbee. That’s not all they had in common: Both were charismatic teachers who pried open the minds of their students with evocative stories and practical lessons instead of dry theory. Wright spoke of Taliesin in Wisconsin as having “simply shaken itself out of my sleeve.” Mockbee told his students at Rural Studio in southwest Alabama, often called Redneck Taliesin—“screw theory; choose the more beautiful.”

But the comparison pretty much ends there. Wright, a surpassing ego, saw himself as the Welch magician of the baronial Taliesin and gathered apprentices to rural Wisconsin for his own greater good. Mockbee, humble and unassuming, wanted to do good for others. Wright was domineering, while Mockbee applied a light touch, cautioning students that goodness was more important than greatness, compassion more eventful than passion. Wright was the elegant, autocratic Mr. Wright. Mockbee, a bearish, bearfoot sixth-generation Mississippian, was egalitarian and a populist who preferred being called Sambo and drove around in a pickup truck.

Andrea Oppenheimer Dean is a record contributing editor and author with Timothy Hursley of Rural Studio: Samuel Mockbee and an Architecture of Decency (2002).
Mockbee was convinced that everyone, rich or poor, deserves a shelter "that touches the soul" and that architects should lead in procuring social and environmental change. But he believed they had lost their moral compass. The profession needed reform, he believed, and education was the place to start. "If architecture is going to nudge, cajole, and inspire a community to challenge the status quo into making responsible changes, it will take the subversive leadership of academics and practitioners who keep reminding students of the profession's responsibilities," he said. He wanted to get students away from the academic classroom into what he called the classroom of the community.

In a letter nominating Mockbee for the 2004 Gold Medal, Frank Gehry, FAIA, wrote, "There have been few programs as radical as the Rural Studio in helping students to believe in their role for the future." Peter Eisenman, FAIA, commended the studio for stressing "the ethical dimension of building." Michael Rotondi, FAIA, wrote, "Mockbee represents all that we aspire to be as individuals and as a profession."


Mockbee’s ideas and his aesthetic evolved while he was in private practice, first in a partnership he formed with Thomas Goodman in 1977, then with Coleman Coker in 1983. He described his architecture as contemporary Modernism grounded in Southern culture and drew inspiration from such vernacular sources as overhanging gable-roofed structures, rusting metal trailers, dogtrot forms, and porches. “I’m drawn to anything that has a quirkiness to it, a mystery to it,” Mockbee said. His designs tended toward asymmetry and idiosyncrasy, as seen, for example, in his Madison County, Mississippi, Barton House (a 1992 Recorded Texas Houses Award winner) and his Oxford, Mississippi, Cook House (a 1995 AIA National Honor Award winner).

By the early 1980s, convincing that addressing problems and trying to correct them is “the role an artist or architect should play,” Mockbee sought opportunities to follow Leon Battista Alberti’s injunction that an architect must “choose between fortune and virtu.” In 1982, he helped a Catholic nun move and renovate condemned houses in Madison County, Mississippi, and then built his first “chateau” there for $7,000, using donated and salvaged materials and volunteer labor—a model for the Rural Studio. In 1987, his firm won a 1982 P/A Award.

**1988–1991**


Mockbee's prototype dogtrot-type charity house was unable to get a construction grant to build it. Hoping to convey to possible patrons the reality of poor people ("like you and me, only poorer"), Mockbee painted strong portraits of some of his indigent clients. The final piece for the Rural Studio fell into place in 1990 when Mockbee visited the University of Pennsylvania University's architecture program in Genoa, Italy.

In 1992, Mockbee, together with architecture professor D.K. Ruth, ended the Rural Studio, which Mockbee directed until his death in late 2001. But instead of planting Auburn's study abroad program in a foreign country, they rooted it in the hollows and flat fields of Alabama's second-poorest county, Hale. Mockbee was drawn there partly because of the poverty: The residents obviously needed help, and coming to Hale would force students to test their abstract notions about poverty by "crossing over into that other world, smelling it, feeling it, experiencing it," he said. He was also attracted by the isolation, which, combined with Mockbee's prohibition of television, would concentrate students' minds on their building projects. Students would also be exposed to the region's architectural history, read its literary giants, and absorb Mockbee's lectures on responsibility, fairness, and decency.

Each semester, the Rural Studio brought about 15 second-year students to Hale County to help design and build a house. Fifth-year students stayed for a year, working on a community building, their thesis project. Two years before


Mockbee's death, the studio launched an outreach program, accepting a handful of students from other universities and other disciplines to undertake a variety of design and social-work assignments.

Mockbee’s Rural Studio represented a vision of architecture that embraced not only practical architectural education and social welfare but also the use of salvaged, recycled, and curious materials and an aesthetics of place. "I want to be over the edge, environmentally, aesthetically, and technically," Mockbee said. His students used hay bales to build walls for the studio’s first house, worn-out tires for the walls of a chapel, salvaged Chevy Caprice windshields for the roof of a community center, and waste corrugated cardboard for a one-room dwelling. Transmuting ordinary materials into extraordinary objects, the studio’s buildings were obvious relatives of the Mockbee designed for his private client.

For his work at the Rural Studio, Sambo Mockbee was awarded the National Building Museum’s first Appurtenance Award for Excellence in 1998, and in 2010 he won a MacArthur "genius" grant.

The influence of the Rural Studio is hard to quantify. Dan Friedman, FAIA, dean of the University of Illinois, Chicago’s architecture program, says it has changed architectural education. Bill Carpenter, author of Learning to Build: Design and Construction in Architectural Education, observes that in 1992 there were eight or 10 university-based design-build programs, while today there are 30 or 40. He says, "a lot of it [increase] had to do with Sambo."
ismic Mockbee and his Rural Studio were featured on network television, including CBS This Morning and in various national magazines. “It was the time the public was captivated by an architectural model,” Carpenter says. 

OCKBEE TOLD HIS STUDENTS, CREW THE THEORY; CHOOSE THE MORE BEAUTIFUL.”

This influence, he says, is gradually—about 450 by now. Many become voyers of the Rural Studio’s approach.

After a founder’s death, venues like the Rural Studio rarely flourish. Much of Taliesin’s vitality and creativity, instance, died with Wright.

I am pleased to report, however, Mockbee’s baby thrives, a tribute to his ideas. The studio isn’t quite the same and isn’t without criticism, including from within. “I suspect Sambo would just think it was different and regret being dead and not being there,” David Buege, a professor of architecture at Mississippi State University and a friend of Mockbee’s, told me. Mockbee understood change and welcomed it. He created the studio as a moving target.

There was almost no transition period, Buege recalls, and there was never a doubt about who should succeed Mockbee. At the time of Mockbee’s death, 34-year-old Andrew Freear, a native of Yorkshire, England, and a product of London’s Architectural Association, taught the fifth-year program. “Sambo and I were good together,” Freear says. “I was a

Interior of Harris (Butterfly) House,
Mason’s Bend, Ala., Rural Studio 1997.
sort of utilitarian socialist and he was the artist who said make it pretty."

Freear was the obvious successor—the only person, really, who could take over. The studio formed ranks behind him, and Freear carried on, adopting one of Mockbee’s slogans, "Proceed and Be Bold."

Freear is “a bulldog,” says Buege. “Andrew is smart, brash, ambitious, always on the edge, often over-the-top, assertive about not being Sambo and Rural Studio being more than Sambo and Mockbee: Freear lets students realize themselves, has a pragmatism combined with poetry, doesn’t entertain long discussions grounded in abstractions, and has a penchant for the outrageous. Shortly after Mockbee’s death Auburn committed $400,000 a year to the studio, endowing it with stability for the first time and in 2002, Freear was appointed codirector of the studio, with Bruce Lindsey, head of Auburn School of Architecture. Freear, however, continues a laser concentration on first-year projects, and during his wa
studio's focus has shifted more dramatically from the rural house to community-oriented buildings.

At the same time, the Rural Studio's community buildings have grown larger, more complex, more significantly, and more numerous. During the early years, students built one and, at most, two modest community buildings a year. In the two years following Mockbee's death, the studio completed 17 projects. Lindsey thinks tackling so many assignments at once might have been "a bit of therapy in dealing with the loss of Sambo." By now Frear, new and young, needed something about the studio in which to tuck Mockbee, and about himself.

The year Mockbee died, the studio was working on a house plus five community projects: the Antioch Baptist Church in the countryside south of Newbern, the studio's base; a senior center in Akron, 25 miles west of Newbern; a storefront in downtown Greensboro, the county seat; and in Perry County, Hale's neighbor to the west, the studio completed a pavilion in the newly reopened Perry Lakes Park. In addition, a group of outreach students reinterpreted and built one of Mockbee's last designs, called Lucy's House for its owner.

Frear says that if the Rural Studio has changed, "it's because I said we can make the craft better. I want to have high expectations for the students and the client. If we're going to make a glass box [as at the Thomaston Rural Heritage Center], the finish is going to be fantastic." Frear has also honed the
programming of buildings and has encouraged communities to find their own funding, believing that if they provide payment they are more likely to take ownership. Fifth-year students once

"I'M DRAWN TO ANYTHING THAT HAS A QUIRKINESS TO IT, A MYSTERY TO IT," MOCKBEE SAID.

chose their own projects, but now community leaders come to the studio seeking design and construction help. As a result, students have become more engaged with town and county leaders.

Freear's stress on craftsmanship has led him away from Mockbee's tendency toward improvisation and letting design evolve during construction. Freear insists on getting things right first. Drawing, he says, saves time on-site and creates better communication among team members and between the team and client. "Design-build should not be a set of responses to screwups made earlier in the project," he says. "I believe in precision, not artful camouflage of sloppiness."

Ratcheting up the level of craftsmanship has stretched out schedules. At the end of the academic year 2002–2003, three of four thesis projects remained unfinished; that summer fall graduates returned to finish their work, on their own penny.

Another change, since 2002, has been increased use of steel in construction. John Forney, the outdoor program professor, worries that the students may lose out, because steel req
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fabrication by professionals. The problem solved itself: In 2004, students rejected the steel and glass of the past two years. "The students don't want to do something that's already been done, and they saw how much of the construction process was taken out of their hands last year and the year before," Freear says.

The thesis projects completed under Freear use some recycled materials, but you'll find no hay bales, no waste corrugated cardboard, no windshields. He is more interested in durable buildings that require minimal maintenance. A decline in the use of unconventional, scrappy materials would seem to hand-in-hand with raising the bar.

As materials have changed, so has appearance. The Rural Studio buildings under Mockbee were known for their striking angles, winged roofs, and wacky details. The new thesis projects, some of which are stunning, tend toward a more traditional, Minimal Modern vocabulary that wasn't Mockbee's.

Remember, however, these are not Freear's buildings. The students listen to Freear's critiques and may unconsciously absorb his preferences, but students were always the authors, that's still the case. Freear says he and the students engage in few conversations about how things look. "We talk a
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materials and the sustainability of materials, that our clients have no money or time to paint, that we shouldn't use a metal that's going to rust."

Unlike the community buildings, which show an ever-increasing level of sophistication, the outreach program still produces projects with Mockbee-era quirkiness. One example is Cynthia Freear carried on with the Rural Studio, adopting one of Mockbee's slogans, "PROCEED AND BE BOLD."

Connolly's organic vegetable stand of 2003, which has movable walls of hog wire, a patchwork of chicken wire and assorted metal leftovers. John Forney, the program's instructor, has tried to avoid what he characterizes as the "death march struggles" of the fifth-year projects.

Mockbee's expressive yet relaxed approach also lives on in the houses designed and built by the second-year program, which has changed much less than the fifth-year program. The first house completed since Mockbee's death, Travis Shiles's house of 2002, suffers from an overabundance of ideas, form, materials, and finishes, but the second, completed in 2003, Jimmy Lee Matthews, aka Mr. Man, returned the studio to its roots. As with the studio's first house for Shepard and Alberta Bryan, a middle-class white student and an impoverished black client worked closely together. They bonded, and the studio crossed a threshold to enter a previous.


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feared and unfamiliar world. The students found many of the materials—timber, chicken wire, colored bottles—for the tall, narrow, house with the big tin roof on

MOCKBEE PAINTED PORTRAITS OF SOME OF HIS INDIGENT CLIENTS ("LIKE YOU AND ME, ONLY POOR").

Music Man's property. Boochie Patrick's 1,000-square-foot, modular house of 2004 was conceived as a possible replacement for the region's omnipresent housing form, the trailer. It has a steel frame with bays that can be enclosed with any material at hand, and, as at the Patrick's, can be tailored to a family's needs and the site.

The Rural Studio's accomplishments pose questions: How can the studio balance its more ambitious, big-tent projects against a wish to remain intimate and retain its rural soul? How can it maintain Sambo Mockbee's childlike sense of fun and adventure while laboring on more adult, multi-million-dollar high-pressure projects?

Jay Sanders, the second-year instructor from 2002–2003, observes that "Sambo never had a master plan for this place. Maybe his legacy is that it will live on without him, without me, without Andrew, without the studio that knew him. If it continues to move forward, in 10 years it may not feel anything like it does today."

For now, Freear and his staff continue to proceed boldly. Sambo would love it.
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At the twilight of his career, **I.M. Pei** shows few signs of slowing down

Modernism’s elder statesman looks back over 50 years—and forward to finishing new museums on three continents
At dusk, the transparent helical staircase glows in the new wing (known as the Schauhaus) of the German Historical Museum in Berlin. Pei’s addition provides some 29,000 square feet of space for temporary exhibitions.

By Robert Ivy, FAIA

I.M. Pei’s agility with the Modern form has garnered him prestigious commissions for museums and cultural institutions throughout his career, from the East Building of the National Gallery of Art (winner of this year’s AIA 25 Year Award, page 172) to an addition and renovation of the centuries-old Louvre to a new wing for temporary exhibitions at the German Historical Museum in Berlin (pictured at left). Although he’s been “officially” retired for more than a decade, Pei still has projects on his plate and a twice-a-week-at-the-office habit. Shortly after the AIA Accent on Architecture dinner on March 3 in Washington, D.C., editor in chief Robert Ivy visited Pei at his office in Lower Manhattan, where they discussed the evolution of Pei’s design thinking, the importance of working abroad, and his current slate of projects.

AR: You say you have retired, but you continue to be involved in projects. What are you working on right now?

IMP: I haven’t taken any new projects in the past three years—I told myself, if I cannot live long enough to finish it, I don’t want it. So I have three projects now. The first one is the Musée d’Arte Moderne in Luxembourg, which is under construction right now. The museum will be located on top of an old, old fortress, Fort Tüngen, which the Austrians built in the 1800s. The client is the State of Luxembourg. I accepted the commission for the project in 1990 or 1991, after I retired, but it began only six months ago—it was stopped altogether five or six years for various reasons. The second project is a museum
in my hometown of Suzhou, China. And I am also designing the Museum of Islamic Art in the Middle East, in Qatar.

**AR:** So do these projects involve design work, or development work and decisions about construction?

**IMP:** It's a little bit of each. I just completed the design for the museum in Qatar, which I accepted about two and a half years ago. It's now under construction, but that's an exceptional one, because usually it takes longer than that. I'm doing most of the work on the Suzhou Museum on my own.

**AR:** That's a very active, demanding schedule.

**IMP:** I've been active all my life. In 1990 I retired from my firm, I.M. Pei & Partners, and for two years I didn't do much. Then I started to get kind of antsy, so I decided, I'm going to do some more work. And I chose to do work outside the U.S. because I've spent 45 years here and I wanted to learn more about what's happening in the rest of the world. So I travel to the Middle East. I travel to China. I travel to Europe. It's all very rewarding—the only problem is the travel is getting more and more difficult for me now. Ten years ago I would have enjoyed it a lot more.

And my projects have typically taken a long time to complete. Buildings might take on average about five to seven years to finish, but in my case it's been longer, because the projects I have accepted within the past 15 years have been mostly government projects, and those involve some politics and funding issues, and approvals and so forth. So they're slower.

**AR:** Tell me about the museum you're designing in your hometown in China.

**IMP:** When this commission came, it was very special. I was born in Suzhou, a city not very far from Shanghai. It's a very interesting town—there is a long artist's tradition there, especially during the Ming and Ching dynasties, which produced many, many scholars and painters and so forth. That's where my family lived for 600, 700 years. When the mayor first came to me about designing a museum, I said no, it's too far away. They invited me to go back six or seven years ago, and I always tried to say no. But finally, a couple of years ago I accepted it. The location could not be more exciting. It's a very special site, surrounded by a wonderful garden. I thought the project would touch on my relationship with my past, my ancestors, my old home. The building is now under construction. It has two more years to go before it's complete.

**AR:** How about your other projects? Say, the museum in Luxembourg?

**IMP:** That project came to me after I had completed the Louvre. I was approached by the prime minister of Luxembourg and asked to design a museum for modern art, near the fortress (Fort Thüngen), which is being turned into a museum as well. It wasn't as big of a challenge as
the Louvre, but I was very interested in it. For instance, I wanted to know why the building would be located on top of a fortress. Luxembourg was and still is today a crossroads, the place where Germany meets the rest of Europe. The country lost part of its territory to Belgium in the 1800s, and during World Wars I and II the German military overran it. The fortress was the natural symbol, the physical symbol of the country. Very few people have visited Luxembourg—when I went there and looked at it, I said, my God, it’s built on a rock. And within the rock they had a castle, and within the city there’s a network of tunnels so the residents could move around and defend themselves. That was of great interest to me. I was curious to know how Luxembourg remained an independent country—that’s why I accepted the commission.

AR: Let's go back and talk about a few of your past projects. Your work at the Louvre represented one of the first instances of an architect being employed by a major government agency in a way that gave you a prominent role in the country's self-image. Could you talk about that? Were you consciously aware of how important the Louvre was to them at that time?

IMP: It was a total surprise that they approached me to do the project. You know the French, not to mention the Parisians—they see the Louvre as their monument, so to come to an American for a project like that is something I never expected. I thought perhaps they were just trying to show interest in different architects to try out the idea. But when President Mitterand asked me to see him, I knew that it was serious. Mitterand was a student of architecture, he had done a lot of research before he called me. He said, “You did something special at the National Gallery of Art in Washington—you brought the new and the old together.” But John Russell Pope finished the West Building in 1941, so when the East Building opened it was only about 40 years old. But the Louvre is 800 years old! A much bigger design challenge.

I didn’t accept the project right away, excited though I was. Instead, I told Mitterand that I needed four months to explore the project before I could accept it. I wanted that time so I could study the history of France, because what is the Louvre? The first portions were built in the 12th century, and a succession of rulers came, added on, built something, demolished something else. For 800 years the Louvre has been a monument for the French—the building mirrors their history. I thought by asking him for this time it might make him say no, thank you very much, because he was in a hurry—he’d been elected in 1981 and his term would last only seven years, and this was 1983—so there was some pressure for him to accomplish something.

In those four months, I studied. I asked for four visits to the Louvre, one visit each month. And I asked the Louvre to keep things confidential at first, without revealing the fact that I was asked by the president to be involved, so that I could go to France unencumbered and visit the Louvre, assess what’s wrong with it, what’s right about it, what had to be destroyed or must be saved, that sort of thing. Mitterand agreed to all this. You cannot defend your design without knowing what you’re designing for. When I was being questioned by the press about the design later on, all this preparation was very useful.
AR: The scope of the Louvre was so vast. You literally went through layers of history as you exposed and joined its lower levels, as well as designing an immense addition, and all with as little disruption as possible to the institution. No one ever focused on that—everyone just talked about the glass pyramid.

IMP: You're absolutely right. Everybody points to the pyramid, but the total reorganization of the museum was the real challenge. Mitterand understood that. Few people know, for instance, that the French Ministry of Finance used to occupy the Richelieu Wing [north wing] of the Louvre. Mitterand was very aware of the importance of the Richelieu Wing, because without it, the Louvre is just a long L-shaped building instead of a U-shaped building. Soon after he became president in 1981, Mitterand commissioned a competition for a new building for the Ministry of Finance in Paris. That gave him justification to move the agency to a new location, and therefore enabled us to claim that space. Without it, I would not have been able to do the project. I probably would not have accepted the commission—I could not have done anything for the museum.

And the biggest challenge of the Louvre was beyond merely architecture. When I first went there in 1983, it was divided into seven departments, and each was totally autonomous. The department directors would not even talk to each other. They were very competitive for space and money. So, architecturally we had to change this situation—make seven departments into one and unify them as a single institution. I'm not so sure Mitterand realized how big a challenge this was; I certainly didn't. But the result worked out. Today the departments are all unified under one president, and they're also unified architecturally. The fact that people don't realize this huge challenge of the Louvre is totally mind-boggling to me.

AR: Let's discuss form for a minute. We talk a lot about form—it dominates the discussion of architecture in the media these days. You yourself are a master of form—the East Building of the National Gallery, for instance, is a superior example of your skills, as the AIA recognized this year. But everything you've talked about so far is about the programmatic, complex, deeper issues that reside within projects. How do your formal skills interplay with this programmatic thinking?

IMP: Ever since 1990, I haven't been all that interested in form, not at all. To create a work of architecture that looks exciting and different is not the challenge for me anymore. The challenge is for me to learn something about what I'm doing. I've been more interested recently in learning about civilization. I know something about the civilization of China, with my background, obviously, and I think I know something about American history. But that's about all. And I've traveled all over the world, and for a long time I didn't know very much about it, really. When I got the opportunity to do the new wing [the Schaumhaus] for the German Historical Museum, for instance, I didn't see it as an opportunity for my own ego, to do something so exciting that every architectural publication would want to put it on the cover. I accepted it because I knew it was going to be a very difficult project, and I wasn't sure I could do something exciting there. Originally the building was to have
been located near the Reichstag, a very prominent site. But ultimately they decided to site this tiny little building behind an enormous military museum [the Zeughaus] dating from the early 18th century, which is very Prussian. I visited that museum, and you'd think that any collection of military artifacts would be all guns and cannons and whatnot, but there's a lot more than you'd expect there—a lot about Prussian history, which of course is the foundation of Germany. [The Zeughaus, a weapons depot before becoming a museum, is now undergoing renovation to house the permanent collection of the German Historical Museum]. This location has much less visibility. I had the idea to do something helical and transparent with the new wing, something that would be symbolic of the unification of East and West Germany. The prime minister personally asked to see some sign of this in the building. When you're asked that by a client, it's an opportunity you just don't waste. So, while it was an exciting challenge, form-making is not the reason I'm still engaged in projects. One of the reasons I took this on was that I wanted to find out as much as I could about Germany's architectural history. The name that kept popping up was Karl Friedrich Schinkel. I've seen his museum, the Altes Museum in Berlin, but I hadn't visited any of his other work until I began designing the new wing. I think his greatest skill was the diversity of projects he achieved, from the very monumental, like the colonnade at the Altes Museum, to the small, domestic skills he brought to the villas he designed in Berlin and elsewhere.

AR: How did your museum project in the Middle East come about?

IMP: How do I begin? Qatar does not have much history, it's a new emirate. So I couldn't draw on the history of the country; its history is really just being a desert. But I thought, the one thing I must learn about for this project is the Islamic faith. So I read about Islam and Islamic architecture, and the more I studied the more I realized where the best Islamic buildings were. At the beginning, I thought the best Islamic work was in Spain—the mosque in Cordoba, the Alhambra in Granada. But as I learned more, my ideas shifted. To begin with, the climate of southern Spain is not at all like desert, where most Islamic architecture is built. I kept searching. I traveled to Egypt, and to the Middle East many times. I saw early Islamic architecture in Damascus, Syria, where they took some early Christian churches and transformed them into mosques, so they were not pure Islamic—just as in southern Spain, it's no longer pure Islamic architecture either, because it gets mingled with Christianity. Or in Turkey, where the Ottoman influence is felt, too—it's Islamic but not pure Islamic.

I found the most wonderful examples of Islamic work in Cairo, it turns out. I'd visited mosques there before, but I didn't see them with the same eye as I did this time. They truly said something to me about Islamic architecture. The museum I'm designing is more influenced by the Mosque of Ibn Tulun than any other building. This mosque is very austere and beautiful, its geometry is most refined. You think of Gothic architecture, it's so elaborate. This is the opposite—so simple.

AR: It's inspiring to see that you're so engaged with these issues. You're still a student!
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Building the Future
IMP: Yes, I am. You always should be. That's what makes life interesting.

AR: We've talked a lot about museums, but there are other building types that you've been involved with. The Bank of China building, for instance, in Hong Kong—a tall building. The issues you faced with that project are a very different set of concerns from those of museums, aren't they?

IMP: That's very true. Actually, many of the projects I'm most proud of are tall buildings, especially the housing projects. In New York I have two: one in Kips Bay and one at New York University. At that time, those projects were most challenging, architecturally—how do you enable redevelopment, foster urban renewal with a tall building? For Kips Bay, I had a wonderful client, William Zeckendorf, who was willing to gamble with me on using concrete and not brick for a high-rise apartment building. That was very innovative at the time.

AR: How old were you when you got the Kips Bay project?

IMP: I came to New York and worked with Zeckendorf in 1948. I was 30 years old. Kips Bay came to me two years later, in 1950. Later I got my first museum project, the Everson Art Museum in Syracuse. That was about 1960, 1961. I was very busy back then. You don't really get a chance to do anything until your mid-40s. I told my sons that: Don't expect to accomplish too much in the early part of your life. I was fortunate—after the war, I left China, in 1944; there was nothing going on for me at the time. I went back to Harvard to teach and to get my master's degree. I thought teaching would give me the most flexibility in case I had to return to China to be with my family. I didn't really practice architecture until I got to New York; I didn't have many qualifications or much experience at all. Becoming a designer is a long process of learning. You make mistakes when you're young. It's important to have the opportunity to make mistakes.

AR: What are your days like when you're not at work?

IMP: At home, I have a wife, fortunately, and my children are all grown, and I have many grandchildren. I spend weekends with my grandchildren; I adore them. On a daily basis, my home life is very simple. I spend about 2 hours every morning reading the newspaper. As my two assistants will tell you, I don't come to work in the mornings, for two reasons. First, I want to be informed—that means I go through The New York Times every day, and then I watch some news on television. The second is, mornings are the best time to communicate with my clients abroad. So I communicate with Luxembourg, with Berlin, with Paris—I continue to do work on the Louvre, it didn't end in 1993. So I'm on the phone a lot to my international clients in the mornings, after I get through the news.

Two afternoons a week I come to my office. If I'm not here, I go to my sons' office. I still have two of my projects working through them—the Museum of Islamic Art in Qatar and the Suzhou Museum.

AR: Did you do any conceptualizing for the redevelopment or the memorial in Lower Manhattan?

IMP: No. That project probably will take 10 years, and I didn't want to think about a project that I couldn't finish. That's a kind of temptation. It was the same reason I declined to submit an entry for the U.N. addition in New York, the one that [Fumihiko] Maki is now working on. I thought I wouldn't be able to finish it. One has to realize one's limitations. Why kid yourself?
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In a city averse to towers, 30 ST. MARY AXE, the “towering innuendo” by Foster and Partners, is a big ecofriendly hit

By James S. Russell, AIA

Londoners were once skeptical of 30 St. Mary Axe, the tapered bullet that has clambered into the skyline over the past two years. It’s usually called the Gherkin, a title standing in for a variety of unprintable descriptions, or the Towering Innuendo. But as its sleek, now-complete form bobs and weaves into view around the city, locals have reportedly developed a fondness for the first tall building to be erected in the City of London (its financial district) in 25 years.

At 40 stories, it would not be regarded a large tower in most of America’s downtowns, but in the low-rise, finely grained cityscape of London, its 500,000 square feet look gargantuan. How could a tower so unconventional in nearly every respect look like a big, friendly alien rather than a menacing intruder?

This is no airplane-napkin sketch fast-tracked into reality. Formerly, the site was filled by the Baltic Exchange, a low-rise pile that was severely damaged in 1992 by a bomb planted by the Irish Republican Army. A debate about whether the building could be saved went on for a few years. Thanks to its client, Swiss Re, when Foster and Partners came on the scene in 1997, both recognized that a replacement could be proposed only if it was clearly superior. Extensive local consultation led to an approval process that nevertheless consumed another two years.

The curving profiles that have become a signature of Foster’s work in recent years, as in London’s City Hall [Record, February 2003, page 110], respond to local environmental conditions—and the ability of the architect and its consultants to deploy sophisticated computer-aided

Project: 30 St. Mary Axe, London
Owner: Swiss Re
Architect: Foster and Partners—Norman Foster, Grant Brooker, Paul Leadbeater, Michael Gente, Stuart Milne, Rob Harrison, Jacob Narlov, Robin Partington, Tim O’Rourke, Paul Scott, Ben Puddy, Ken Shuttleworth, Jason Parker, Francis Aish, Simon Reed, Gamma Basra, Narinder Sagoo, Geoff Bee, Sebastian Schoell, Aike Behrens, Michael Sehnsdorf, Ian Bogle, John Small,

Thomas Brune, Robbie Turner, Julian Cross, Neil Vandersteen, Joel Davenport, John Walden, Ben Dobbin, Tim Walpole-Walsh, Paul Kalkhoven, Hugh Whitehead, Chris Kallan, Richard Wotton, Jürgen Küpper, Helen Yabsley

Consultants: Arup (structural, fire safety); Hilson Moran Partnership (mechanical and electrical); BDSP (environmental engineers)

General contractor: Skanska

Construction UK
Who could blame London for resisting tall towers, considering the dourness of the few that are there. Now 30 St. Mary Axe has put a striking new shape on the skyline, portending many more, pundits say.
modeling and analytic tools. In this case, the Foster team, including Shuttleworth, who recently left the firm, came to the circular plan tapering section because it lets wind slip by, according to Rob Harr, an associate partner, which reduces lateral loads on the structure. More important, the shape minimizes the tendency of tall buildings to be gale-force winds on unwitting pedestrians at street level. While the 123-put the largest floors above the prevailing 10-story-high norm, views open across the city in all directions. Foster slimmed the tower, the lower floors as well, which opened the dim, surrounding street daylight. The trim ground floor left space to carve out a handsomely portioned plaza, offering a shortcut through the City’s twisting block cell-phone wielding dealmakers headed to the Tube. Such sensitivity the public realm helped the building survive the tough planning re The diagonally gridded exterior binds the building formally. (Imagine the bulging-gut look it would have with vertical mull It actually emerged as Foster and his team worked out the most reusable feature of the building, the six-level light wells, six per floor, spiral continuously upward. According to John Brazier, the project architector at Arup, reconciling the 5-degree-per-floor rotation in the light generated the diagonal grid of the structure and the cladding “Building a Tower on the Bias,” page 222). Foster has long designed to achieve a more humanely work environment. In the Commerzbank tower (record, January page 69), he pioneered the use of skygardens—restful oases for informal meetings, for sipping a coffee, or just thinking—hovering high above the city. While conventional real estate wisdom might deem the light well frill, they are integral, in Foster’s hands, to a strategy that addresses chief criticisms of tall buildings as work environments: that the big cakes of space neither offer the amenities highly valued staff war encourage collaborative work. For Swiss Re, Foster offset each level light wells to offer terrace overlooks. The advantage is simple, if abstract: If you see people on other floors of a tall building, you are more likely to feel they are part of your group, and that you are i
30 St. Mary Axe pops into view from vantages all over London. Its anomalous form and intricate, beehive-like skin change the notion of skyscraper scale. In coming years, it may anchor a cluster of new towers.
Light wells divide the building vertically into six-story modules. To suit tenants, individual floors can be isolated.

BUILDING A TOWER ON THE BIAS

The engineers devised a two-story-high triangular structural module for the building: tubular columns running up the exterior that are fireproofed and clad in faceted, painted metal. (Because cross bars are painted dark and diagonal members painted white, the structural grid only looks like a four-story diamond when it can be seen through the glass from outside.) Computer analysis helped to locate fixing points in three dimensions (diagrams, bottom left). Special fittings at the diagonal intersections align adjacent panels to follow the bidirectional faceted geometry. The lattice-like structure and curved surface efficiently resist wind forces, which means that floor beams could be sized smaller and the core did not need to be braced, freeing up interior space. (The occupied area is column-free.)

The diamond-shaped glass lites look normally sized but are actually quite large, each spanning a full floor, top to bottom. The glazing mullions are triangular in section as well, to reduce their visual bulk. The structural diagrid ends at floor 38; slim sections of curtain-wall framing continue upward, arcing delicately into a domed, glazed roof at the top (below), where the glass units are both tinted (to avoid glare) and argon-filled (for insulation).

Inside the column diagrid, an inner membrane of glass leaves an insulating air layer between the outer curtain wall and the occupied space (heated by building-exhaust air as needed). A tapered, horizontal spandrel divides floors. J.S.R.
Tinted glass cladding the light wells forms dark spiraling stripes on the otherwise transparent facade. White metal clads the structural diagrid inside the glass, traced by external white-painted mullion caps.
business endeavor together. You'll feel invited to move from floor to floor rather than remaining psychologically sealed in your own area.

On this much tighter site, the social spaces are narrower, more intimate than at Commerzbank. "Everyone's conscious that the balcony areas are the best spaces in the building, with great views up and down the well," said Sara Fox, who has directed the building project for four years after working to build the firm's innovative American branch in Armory New York [Record, June 2000, page 144]. These areas are reserved for c.v., bars, copy centers, and other informal-gathering functions, rather than devoted to departments. "We spent a lot of time with staff talking about interconnectivity this makes possible," she said. As people move into the building, she adds, "they come up to me and say, 'Oh, now I get it.'"

Workplace quality and energy conservation are inextricably woven together in the building. "We wanted an environmentally responsible building," explained Fox. "We didn't have a checklist; we asked our team to explore what was possible." The commitment was meaningful for the company well beyond corporate altruism. "We are in the reinsurer business," Fox explained. "For us, sustainability makes excellent business sense because we pay claims on behalf of clients for floods, heat waves, and droughts. To the extent that these claims are related to global climate warming, it is only prudent of us to contribute as little to it as possible."

The light wells bring daylight deep into the space, even to offices positioned closest to the core. ("That's a lifestyle issue—quality of place for staff," explained Fox.) The quality of daylight from floor-to-ceiling exterior windows is also high, because heat gain from the sun is trapped in the space between the external curtain wall and a series of glass wall placed just inboard of the external column diagrid. The
A taper of the tower brings sun to a generous plaza that opens up dark, radial streets (site, top). The slim skin of a wall forms a diagrid roof over a rooftop restaurant nearing completion at press time (opposite, bottom). The diagrid structure opens to a recessed space leading to the lobby (right).
lating layer not only saves energy, it permitted the use of clear glass, tected by blinds in the thermal layer. By contrast, the glass in the ells needed to be deeply tinted (visible on the exterior as dark, spir stripes). The triangular light wells divide the floors into six 2,500-sq foot (on average) rectangular wedges, offering an efficient shape for layout offices or open-plan workstations.

With automatically opening windows, the light wells con fresh air. The interior glass wall is left out at the balconies, so that fre penetrates the entire floor (one much deeper than the naturally vent norm) without mechanical assistance. Air warmed by occupant equipment rises up the chimney-like light wells, drawing in outside The round floor plate aids airflow by molding a distinct zone of neg air pressure on the leeward side, which draws in more windward-side. Although the building is mechanically heated and cooled, the nat ventilation scheme should leave the systems idle much of the time accounting (with the daylighting) for much of the building's red dependence on climate-altering fossil-fuel combustion. (Local handling units allow mixed-mode use by zone and by floor, as v)

According to Brazier, current local guidelines for low-energy offices e electricity use of 175 kilowatt hours per square meter (10.76 square He expects Swiss Re's new building to knock up to 25 kwh off that.

Swiss Re occupies about half the building; the remainder ha to be tenanted in a moribund real estate market. Nevertheless, the ession of 30 St. Mary Axe—and its acceptance—portends a delu new office buildings, according to pundits. As they vie for height towers announced to date compete on the basis of amenity, en responsibility, and aesthetics (the designers are all household na Piano, Grimshaw, Kohn Pedersen Fox, Rogers, Wilkinson).

None of the long-announced towers has yet begun construction. Fox echoes their developers in claiming that more towers willi. "London is really the financial center of Europe. Most firms, in particular in financial services, want to be at the heart."

London and Lower Manhattan, both seeking dominan of global finance, now offer a study in contrasts. "Location is so much important in the U.K. than in New York," explained Fox, noting the consensus has developed that London's City must grow to remain. New York, which perfected the skyscraper downtown, has ceded building innovation to Europe and Asia. It is far less sure that proximity enabled by tall buildings still pays off. Will tenants balk at vations that raise rents? Is a horizontal, dispersed business model prudent in a world wracked by terrorism?

The next few years will tell which model comes out on top stakes are certainly high. If a great number of American financial f start taking meals in Swiss Re's "nose cone" restaurant (it's pro sorry), where breathtaking city panoramas open through the spefretwork of the building's diagrid crown, you can be sure London's Foster's) lessons won't be lost.

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**Sources**

- **Curtain wall:** Schmidlin; Waagner Biro
- **Glass:** Eckelt; Okalux
- **Acoustic wall panels:** Decoustics
- **Lighting:** Wila

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**Security gate:** Marzorati Ronco

- **Ginnebo Mayor**

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com)
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Roger Duffy of SOM weaves together art, architecture, and landscape in a crystalline new upper school at Greenwich Academy

Clifford A. Pearson

Some architects celebrate architecture as a provocative act, forcing people to experience buildings in radically new ways. (Think Rem Koolhaas or Peter Eisenman today or Adolf Loos 100 years ago.)

Duffy, AIA, a design partner in the New York office of Skidmore, Owings & Merrill (SOM), has a very different way of perceiving his work, even though it pushes the boundaries of architecture. “A lot of my projects are about resolving tensions,” he explains while touring his new upper school at Greenwich Academy. Instead of the shock of new, he delivers bold architecture with manners, a foreign-exchange student with great social cachet, his buildings stand out but earn high grades for doing along well with others.

A 45,000-square-foot addition to a private girls’ school in one of the country’s most affluent communities, the new building at Greenwich Academy must fit between a nondescript middle and lower school from 970s to the north, a 1990s performing arts center and gymnasium to the south, and a Georgian mansion to the east that originally housed the school but now serves as its administrative center. In addition to an awkward mix of eras and structures, the new upper school had to mitigate a 23-foot drop from the campus’s entry level to that of its playing fields and pond to the west. “We decided to use our building to weave between the two topographies,” explains Duffy. “We saw the project as a landscape connecting the campus.”

Sharon Dietzel, the head of the upper school, admits that SOM and SOM associate architect Peter Magill, AIA, design partner; Peter Magill, AIA, managing partner; Walter P. Smith, AIA, education specialist; Scott Kirkham, senior designer; Christopher McCready, AIA, project manager; Marie-Christine Bellon Manzi, Thibaut DeGryse, Nayareen Chapra, Jon Mark Capps, Javier Haddad Conde, project team Collaborating artist: James Turrell Engineers: DiBlasi (structural); Atkinson Koven Feinberg (mechanical) Landscape: Brown and Sardina General contractor: Turner Construction

The new building connects two landscapes (rendering, left): an entry level that is a green roof punctuated by glass pavilions (opposite, two) and the playing fields and pond that sit 23 feet below.

created a grassy lawn on the building’s roof, which serves as the entry level. Glass pavilions (or “light chambers”) emerge from this artificial landscape, bringing daylight into the building, which tumbles down the hillside. As visitors enter the upper school through the largest light chamber, they see only grass, glass, and the woods beyond. Low stone walls, made from rock dug from the site, offer places to sit in good weather and help create the new building to the earth and the old mansion’s stone base. The new school elegantly fits into place here.

The light chambers—clear glass boxes supported by exposed glue-laminated timbers 4 inches thick—organize the school into its four main components: math/sciences, art, humanities, and learning center (library). Classrooms, faculty offices, and other spaces for each discipline cluster around their particular light chamber, creating a critical mass of activity and a sense of identity. But common spaces flow
The entry pavilion (above and opposite) also serves as the hub for the math/science department. A translucent glass floor around the entry stairs brings light to the level below. An elegant curtain wall rises above the green roof to become a glass balustrade (left). Shades on the building’s perimeter walls let users control the amount of sun that comes inside (far left top and bottom).
tack at Greenwich Academy, designing a building so light that it almost disappears in the landscape. To do this, the architects devised a steel-frame structure with a glazed curtain wall for the bulk of the building and glue-laminated timber frames for the light chambers. “The wooden members soften the sharp edges of the boxes,” says Duffy. “We didn’t want a hard Modernism.”

All classrooms enjoy floor-to-ceiling glazing on the outside and daylight coming in from the light chambers on the inside. A translucent glass floor on the upper level of the entry pavilion adds to the sense of light everywhere. Interior and exterior shades allow people to control sun coming in or views from interior common spaces.

The building’s architecture has affected the way people behave in it, says Dietzel. “We have 150 adolescents here, but it’s always quiet. All the light has a physical and psychological affect on people; it relaxes them.” At the same time, the transparency of the architecture has made people less territorial, she notes. Teachers and students interact with each other all over the building, not just in the more formal settings of the classroom and teacher’s office. She also reports that attendance is up, even for seniors who have the option of spending some time off-campus. “This building celebrates the potential of children, and so few schools ever do that.”
To show how art can be integrated with a learning environment, SOM collaborated with James Turrell on the design of the school's light chambers, turning them into glowing boxes whose colors change slowly during a programmed time cycle. Fiber optic lights set into channels at the threshold of each chamber and the perimeter of the floor create planes of colored light, while bands of light-emitting diodes (LEDs) on the walls and timber purlins produce 'clouds' of color. Each of the four chambers has a different colored frit on its glass, providing a subtle range of hues from pink to blue, green, and white. A computer program controls the changing colors, so light seems to move from one chamber to the other. Due to budget constraints, only two of the glass pavilions are fully equipped with the fiber optic and LEDs, though all have the columns needed to accommodate the lighting. Photographs (left) show the math/science light chamber, which is the school's main entry, during phases of the color cycle. C.A.
Duffy sees Greenwich Academy as "a limning," the first in a series of projects that explore the nature of collaboration and draw a sense of unity out of programs pulled in many different directions by many different forces. And his studio at SOM are currently finishing work on a public elementary school in Middletown, Connecticut, that opens in August, they are collaborating again with James Rennell on a building at Deerfield Academy, which will be completed in summer of 2005. "Instead of bringing him in during design development, we've been working together from the very beginning of the project," notes Duffy with pleasure. Other projects he sees as exploring ideas include a performing arts school in Camden, New Jersey, the Skyscraper Museum, a small but dazzling interior space that recently opened in New York's Battery Park City.

Duffy talks about design that unifies different forces, bringing new, upper and lower, indoors and out, into equilibrium and harmony. When discussing collaboration with artists and other designers, he speaks of “conciliation,” a word not found in many architects' vocabularies. “The kind of work I'm interested in requires a level of trust between collaborators and doesn't involve the master stroke of the great architect.”

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A glittering counter-point to the dour jumble of Birmingham's downtown, Selfridges rises voluptuously next to the prim neo-Gothic form of St. Martin's Church.
Future System's curvaceous outpost in Birmingham has helped turn the dowdy SELFRIDGES department-store chain into a must-shop destination.

James S. Russell, AIA

A clay model in Future Systems' London office could be titled *Reclining Woman's Torso*. It is rough and barely suggests architecture. But it has come to life as the four levels and 240,000 square feet of a Selfridges department store. Sensuously true to early study, its rump gently swells outward and upward. And it looks bit squished at the bottom, creating the same effect the weight of ash would.

The building has become an instant landmark since it opened in Birmingham, the U.K.'s second-largest city. In the retailing industry, which had resigned itself to the inevitability of department-store decline, it's a sensation—compared often to the Bilbao Guggenheim. In London, Selfridges flagship store remains a columned, city-block-size palace (designed by Daniel Burnham) on Oxford Street. But Birmingham is the crowning achievement in the transformation of a dowdy, middle-of-the-road chain to a hip, must-shop destination.

Vittorio Radice, an Italian retailer inevitably described as "visionary," refashioned the chain, focusing on younger shoppers who had regarded Selfridges and many of its competitors as the kinds of places...
to be visited only with doting relatives determined to find something practical. Radice brought back the theatricality that had historically defined the department store, turning the London flagship into a shrine to Bollywood, for example. “Body Craze,” another promotion, featured 600 nude volunteers riding up and down the escalators.

In the heyday of the department store, celebratory architecture was part of the appeal. In Birmingham, Radice restored that tradition, too. A developer offered him an à la carte package: a site in a new urban mall at the center of Birmingham’s knot of twisting shopping streets, including a ready-to-go design for a boxy volume wrapped in a queasy mix of Tuscan stripes and Modernist steel beams. Like the rest of the mall, it was a design intended to appeal to everyone by offending no one. It was

Project: Selfridges Department Store, Birmingham, U.K.
Engineer: Arup (structural, mechanical, fire protection, facade engineering)
Project manager: Faithful + Gould
General contractor: Laing O’Rourke
Attached to a generic mall (visible at left in this photo), the undulating building form follows the street pattern and a two-level change in grade. Arup devised an underfloor box beam so that Kaplicky could keep a footbridge (connecting the store to a parking structure) visually light in weight (opposite, top). Cable stays suspend it from the frame of a flying-saucer oculus straight out of a comic book (opposite, bottom).
exactly the retail image that Radice had spent years erasing. "He didn't think it was good enough," explained Jan Kaplicky, a partner in Future Systems. "How would you get people there?"

Radice invited Future Systems and two other firms in a process that fit somewhere between an interview and a competition. Going in, Kaplicky and partner Amanda Levete were anything but a sure thing. They had designed much, but built little, though their expertise includes small designer boutiques in New York and London. They did have a "commercial" profile in a retailing industry ruled by last month's sales data. But they proved to have the shopping-culture gene. Levete and Kaplicky prepared sketches and the evocative model to suggest possibilities for Radice. "He understood very well that the image could do what was wanted, which was to draw people from a 30-mile radius," said Kaplicky. It wasn't the building alone, he added, but the promise it signaled of what would be found within.

The memorable exterior is not pure image. It works as it because it follows the contours of the streets surrounding the site, which dates from medieval times. "The challenge with the skin was to get a curved profile done for a standard-cladding price," explained Ed Clark, the project manager for Arup. Since the exterior curved both vertically and horizontally, it couldn't be conveniently broken down into panels or "unscrewed" for conventional geometric engineering analysis. The team eventually devised a means to spray concrete over metal lath one-story-high ribbons. The lath was framed to arms projecting scaffolding and hung permanently from brackets extending from brackets at the floor edge. Contractors sprayed waterproofing on top of the concrete, then attached an insulating layer, and a finish skin of sync stucco painted what Kaplicky calls Yves Klein blue. The 15,000 anodized aluminum disks that cover the surface—giant sequins inspired by glittering, form-fitting Paco Rabanne dress—attach to fasteners and in sockets cast into the sprayed-concrete substrate. Their shiny chenness protects the painted surface and disguises substrate imperfections.

The curving shop windows and entrance openings at the front also pose an anatomical tease: Are those openings lips? Eyes? Can trim be seen as lipstick? Mascara? The shopper doesn't have to separate this spangled exterior as a female form or anything else. Its tactile activity bypasses the brain. From a distance, the fish-scaled skin looks as stretched tautly over that swelling shape, rising tantalizingly out of

FUTURE SYSTEMS HAS BUILT AN ANATOMICAL TEASE: ARE THOSE OPENINGS LIPS? IS THAT TRIM MASCARA?
Selfridges may have the massive and amorphous floor plates of the usual mall anchor store (plans, opposite), but it eschews the rack-choked, fluorescent-lit norm. Instead, there is spatial fluidity, a techno-nightclub ambience dashed with color, and simple but artfully brash and ingratiating store fixtures.
city’s prosaic dirty-brick jumble. No sign screams Selfridges.

Conventional retailing wisdom deems daylight a no-no, since it could lure buyers’ eyes away from the merchandise. But Kaplicky Levele proposed the skylighted, boomerang-shaped atrium from the ceiling—and the interiors are by others: Eldridge Smerin, Stanton Williams, and O & Partners. Also, Selfridges rents a considerable amount of its store space to brand concessionaires. It is a testament to the chain’s merchandising that the store personality is so distinct and so consistent in spite of design diversity. It has traded in the conservative, polished-woodwork nity and the labyrinthine, rack-choked floors of the old-line department store for a clean, crisp spaciousness. There’s an endless inventiveness in design of display racks and low tables, and in the theatrical use of light.

**RADICE’S STRIPPED-DOWN DEPARTMENT STORE APPEALS THROUGH ITS FRESH, NERVOUS, INFORMAL YOUTHFULNESS.**

which is far more appealing than the unvaried field of fluorescents that characterizes the conventional department store. The large, unimpeded floor levels tend to blur the borders between brand concessions.

Overall, the spirit is unabashedly contemporary. Radice stripped down the department store to the degree that its appeal lies almost solely in its fresh, nervy, informal youthfulness. There are lots of kicky blazers and t-shirts, but few ties and only name-brand business wear in the “classic” lines like Burberry and Ralph Lauren have gone light on contemporary for this store. Furniture? Midcentury Modern, only interesting the 18-year-old by not being stuffy,” says Kaplicky.

In the 19th century, department stores thrived as one of the destinations where women were permitted to enter unaccompanied by a male chaperone. Now men and women who work long hours have supplanted the lady shopper, and they have short attention spans. Radice caters to these customers by crafting the same kind of recognizable image that specialty retailers have created. Those who strongly relate to the store’s contemporary feel will probably find what they’re looking for. Radice’s style leaves everyone else to competitors. That’s where the risk lies, and the strategy—for all the hoopla—has yet to definitively succeed. In a tough economy for retail, Selfridges was recently reported to outperform declining less than its competitors.

Radice himself has been lured to Marks & Spencer, where he is expected to work his magic again. A John Pawson–designed furniture has opened. Other M&S projects are said to be in the works by Herzog & Meuron, Ian Ritchie, and John McAslan. The Selfridges chain was sold to Wittlington Investments of Canada, which cancelled Radice’s plans for a store in Bristol by Toyo Ito and one by Terry Farrell in Newcastle. An expansion of the London store by Foster and Partners is still planned, however. There’s no major retail executive who has not pacted Selfridges’ line, but the future of Radice’s trailblazing vision—and the role inside architecture can play in it—has yet to be assured.

**Sources**

Spray-on concrete: Shotcrete
Metal discus: James + Taylor
Fiberglass, glass-reinforced plaster: Diespeker

For more information on this project, go to Projects at www.architecturalrecord.com
The theatrical heart of the building is the atrium, lit by the movement of people (right) and bathed in daylight from the site (top). The atrium's generous size and its height above retail conveys a sense of space by depriving visitors of the glare of selling displays, but it pays off by allowing unobstructed views to other floors (site, bottom), making the appealing display spaces not only a place of retail but also a place of gathering. The atrium is clad in glass and glass-reinforced plaster.
“Some people want you to believe these two walls are equal! What are they thinking?”

Not all fire walls are created equal—even if they have the same fire rating. When a hose stream of water is applied to walls after two hours of exposure to heat from a furnace, the real difference becomes clear. Which 2-hour rated wall assembly would you want for protection of building occupants and property?

Choose concrete masonry!
PEDESTRIAN BRIDGES

Iconic Connections

ARCHITECTS ARE PRODUCING STUNNINGLY DESIGNED BRIDGES WITH RADICALLY DIFFERENT SHAPES AND MATERIALS.

By Suzanne Stephens

One of the most dazzling examples of architectural form-making today is without doubt the bridge. True, the bridges of Robert Maillart have long been a staple of courses in the history of Modern architecture, as has the Brooklyn Bridge, designed by John and Washington Roebling—which Montgomery Schuyler praised in RECORD's pages a hundred years ago. Yet those bridges so admired by architects were executed by engineers. Usually, when architects have been involved in bridge design, their role has been to aestheticize the engineering, a tendency still current. However, many architects are often more involved integrally in the design, bringing a sense of scale, proportion, and elegance to spanning space. They collaborate closely with engineers or, in the case of Santiago Calatrava, are engineers as well.

Pedestrian bridges in particular have lured the architect, as seven of the eight bridges on the following pages attest. (The exception is a railroad bridge.) As Hugh Pearman points out in the introduction to 30 Bridges, by Matthew Wells (Watson-Guptill, 2002), such bridges, intended for people on foot, cycle, or wheelchair, are designed with an eye to the particular experience of moving relatively slowly through space. This kinesthetic experience makes the most of an architect's contributions in matters of detail, use of materials, and composition of elements.

The bridges shown here serve other functions, as well. In several examples, bridges act as symbolic markers for an urban area undergoing rejuvenation or, in the case of Corning, as a gateway to a corporate complex. In one case, in Rijeka, Croatia, the bridge plays a dual role as both a war memorial and a link. Certain bridges, such as the Floral Street Bridge in London, are almost hidden in their natural or urban contexts, which makes their discovery all the more captivating.

Technical advances enable most of these bridges to be ever lighter and more evanescent, notably those designed by Santiago Calatrava and Wilkinson Eyre Architects. Others were assembled in unusual ways: The Webb Bridge in Melbourne, Australia, was floated on barges to its site, while major portions of a bridge in Boudry, Switzerland, were flown in by helicopter. (For more on the arresting technical accomplishments of certain bridges, see Building Science, page 279.)

This building type continues to proliferate, often resulting from competitions, especially in Europe, and from an ever-increasing awareness of its power to attract attention to a site. After Calatrava's first bridge in the U.S. opens in Redding, California, in July, we will be able to see how successfully this architectural form inspires additional arresting connections in the American landscape. ■

[additional images of bridges mentioned in the text]
Webb Bridge
Melbourne, Australia

DENTON CORKER MARSHALL AND ARTIST ROBERT OWEN SPARK UP THE DOCKLANDS WITH A SERPENTINE PEDESTRIAN AND CYCLIST BRIDGE.

By Suzanne Stephens

Architect: Denton Corker Marshall Architects (architects have policy of not naming team members)
Artist: Robert Owen
Client: Mirvac Corporation/VicUrban (Melbourne’s urban development agency)
Consultants: Arup—Peter Bowtell (structural); Arup Lighting—Paul Beale (illumination)

Span: 361 feet
Cost: $1.75 million
Completion date: November 2002

Sources
Steel: Geelong Fabrications

Sometimes a bridge is as much a destination as a passage. This seems to be the case with the slinky, glimmering, steel-lattice Webb Bridge in Melbourne, Australia. The pedestrian bridge, designed by artist Robert Owen with architects Denton Corker Marshall (DCM), obviously does not provide the most direct path from the Docklands on the north side of the Yarra River to new residential development taking shape on the south side. But it enhances the transit experience for bicyclists, pedestrians, and the disabled.

Program
As part of the redevelopment of Yarra’s Edge, former wharves and docks near Melbourne’s central business district, the Docklands Authority required the developer of the residential complex, Mirvac, to contribute 1 percent of the budget to public art. In this case, the money went for the bridge. Robert Owen, an Australian artist known for his mixed-media installations, and Denton Corker Marshall, architects of the Melbourne Museum (RECORD, January 2001, page 70), won a competition with a writhing, tubular structure that incorporates two segments of the former Webb Railroad Bridge. In addition, the design offers access to the disabled via a ramp linking higher and lower elevations without a steep incline.

Solution
Owen’s and Denton Corker Marshall’s

For more information on this project, go to Projects at www.architecturalrecord.com.
It doesn’t breathe, but the Webb Bridge does come alive by night and day, when its yawning mouth disgorges visitors from the north side of the Docklands to the south side.
From afar, the elliptical hoop-frame bridge glints by day and glows by night. The tubular web takes visitors from the south entrance (opposite, top) to the north side of the Yarra River.

Design recalls an aboriginal eel trap except that it is fabricated with a hooped steel frame tied by flat, laser-cut steel straps rather than woven sticks. DCM used computer-aided three-dimensional modeling to arrive at the 20-foot-high hoops of various sizes and spacing, while the Melbourne office of Arup engineered it. The new structure came up with a structural solution of steel box girders, cranked to allow a curved form to take shape. The box beams, covered with a concrete slab and encased in perforated steel cladding, and the loopy, weblike casing were fabricated on two barges in Victoria Harbor, then floated up the river and dropped into place during a low tide. The new structure was then linked with the remaining concrete box girders of the old railroad segments.

By day, the coiled bridge glints in a reptilian fashion against the Yarra River; by night, illumination conceived by Arup Lighting causes it to glitter like a silvery roped necklace reflected against a dark mirror. To create an eerie glowing atmosphere within the walkway, Arup backlit the floor with white cold-cathode lights mounted under the side edges. To keep the light from being cast too high in the space, it installed pairs of 35-watt, PAR38 metal-halide lights at the head level that bounce up against the inner surface of the arches.

Commentary
A curving bridge shared by both pedestrians and bicyclists suggests that bicyclists may have to move more slowly than they may like. Nevertheless, the biomorphic shape presents a symbolic marker for Docklands area, as well as a meeting place, and a memorable connection from one area to another. The collaboration between artist, architect, and engineer clearly demonstrates the vital public contribution of a well-arranged marriage.
Architect: GD Architectes—Laurent Geninasca, Bernard Delerfortrie, partners; Christine Perla, collaborator
Consultants: Chablis et Poffet (civil engineers)

Span: 90 feet
Cost: $117,000
Completion date: April 2002

Sources
Metal fabrication: Steiner
Wood fabrication: Tschäppät

This heavily wooded site in western Switzerland lies so far from paved roads that architects Laurent Geninasca and Bernard Delerfortrie had to prefabricate the main components of their footbridge and fly them in by helicopter. Yet the gorge's wild and remote character was exactly what their firm, GD Architectes of Neuchâtel, sought to maintain.

Program
Having won an invited competition for the commission, GD Architectes had to reconcile two very different banks along the Areuse River in Boudry: one formed by steep, craggy rocks, and the other by a low, open field. The hikers' footbridge needed to span about 90 feet and arch high enough to accommodate rising water.

Solution
Working with engineer Laurent Chablis of Chablis et Poffet, the architects created a sinuous span that narrows in width, from 11.5 to 3.8 feet, and constricts sectionally as it approaches the more vertical bank. The structure, a gentle S-curve in plan and elevation, appears to emerge organically from the forest. Finely slatted with blades of dark-stained fir, the bridge’s sides and top transparently screen views, rather than obstruct them. The parallel boards filter the sun’s rays, much as the branches of trees cast dappled light. With the delicacy of a cricket cage, the thin wooden blades converge toward the

For more information on this project, go to Projects at www.architecturalrecord.com.
The curving form and converging slats, accentuated by the effects of perspective, give the bridge a gentle dynamism that remains compatible with the woodland setting and rushing water below.

Given the variable section, the footbridge was designed, says Kias, with "no two identicals." The act of assembling it—a physical challenge in itself—required the choreography. As the engineer recalls, the process started with laying two electrical lines out of the path followed by a Tamov Russian trivet delivering the structure's major components on provisional scaffolding. Then, miraculously, the prefabricated footbridge was assembled in a single day.
Puente de la Mujer
Puerto Madero, Buenos Aires

IN ARGENTINA'S CAPITAL, SANTIAGO CALATRAVA GRACEFULLY COMBINES PIVOTING SPAN WITH A SINGLE-PYLON SUSPENSION SYSTEM.
By Sarah Amelar

Architect/Engineer: Santiago Calatrava
Client: Grupo González
Lighting: Santiago Calatrava

Span: 525 feet (overall); 335 feet (rotating section)
Cost: $5 million
Completion date: December 2001

Sources
Reinforced concrete: Galtieri Constructions
Steel contractor: URSSA, Spain
Mechanical tower: DEMAG/Manesmann, Spain (supplier)

Though many of Santiago Calatrava’s bridges—nearly 40 built so far—feature inclined pylons or arched forms, each example pushes the limits of structural ingenuity and sculptural grace in a different way. Following his innovative, harp-like 1992 Alamillo Bridge in Seville, Spain, for example, this architect/engineer has repeatedly reinvented the possibilities for asymmetrical, single-pylon, cable-stayed suspension systems—most recently with his Sundial footbridge, under construction in Redding, California, and the pivoting Puente de la Mujer at Puerto Madero in Buenos Aires.

Program
In 1992, Buenos Aires launched an ambitious and strategic city-planning initiative to reclaim its neglected waterfront—focusing in part on the late-19th-century port of Puerto Madero. The city’s phased plan for this district encompasses the preservation of existing warehouses and wharves; the creation of a mixed-use complex with museums, art galleries, and university facilities; and the erection of five new bridges, including the Puente de la Mujer by Calatrava. Here, he needed to span 525 feet across the Rio de la Plata, providing a pedestrian crossing and linking piazzas on either embankment while retaining full access by water to a nearby dock.

Solution
Although Calatrava has designed a wide range of kinetic structures in the past—including the Mâdoc Swingbridge in Bordeaux, France, and the Milwaukee Art Museum (RECORD, March 2002, page 9)—the Puente de la Mujer marks first integration of a rotating span with an inclined, single-pylon suspension system. Set between segments, the 335-foot-long
Time-lapse photography (this page) shows the bridge's potential for multiple positions as it swings open. The span provides a wood-planked crossing for pedestrians (opposite).
The bridge rests on cast-concrete supports with a rotating mechanism directly below the pylon's base (left). The V-form widens toward newer, higher part of the city (opposite, bottom and top left). The structure's completely open position (opposite, top right) allows all river traffic, including tall ships—to flow freely through the central span of the Buenos Aires bridge. It can turn 90 degrees to allow tall boat traffic to flow freely. Though it's rarely necessary to open this bridge—"maybe several times a year," according to the architect—he says he designed the structure "to rotate whenever it's needed, even every day."

Dynamic in its sharp, arrow-like precision, the pylon, holding taut strings of cables, reaches a height of 128 feet. Its great triangulating V-form leads with a crescendo from the axis of a major avenue, gesturing toward the new, higher part of the city on the opposite bank. In contrast to Seville's Alamillo Bridge, where a stationary, canted-steel vertical element contains concrete to counterbalance the weight of the deck (and eliminate the need for a second set of stay cables), here the steel pylon remains hollow, keeping it relatively light. Where the cable-strung V creates an obtuse angle in Seville, it forms an acute angle in the Buenos Aires' structure, with concrete inserted as a counterweight just behind its apex. The resulting silhouette, supported by a wood-planked pedestrian walkway, appears remarkably minimally and deceptively simple.

**Commentary**

Occupying a rare position in the architectural world, Calatrava has simultaneously performed as an engineer who is enlightened as an architect who builds bridges (among other structures) prolifically. In the process of revisiting this spanning form, he has managed to distill its essence, providing a creative and poetic—yet fully functional—essay on the meeting of static and dynamic forces.
Memorial Bridge
Rijeka, Croatia

3LHD ARCHITECTS CREATE A FORCEFULLY MINIMAL MONUMENT THAT ALSO SERVES AS A FOOTBRIDGE.

By Sarah Amelar

Architect: 3LHD—Sasa Begovic, Marko Dabrovic, Silvije Novak, Tanja Grozdanic, principals in charge; Sinisa Glusica, project architect; Korajka Brebric, Milan Srhac, designers

Client: City of Rijeka

Consultants: Jean Wolf, Zoran Novacki, Dusan Srejic, Berislav Medic (structural engineers); Osram—Aljosa Sribar (lighting)

Span: 123 feet
Cost: $1.8 million
Completion date: December 2001

Sources
Aluminum planks: Sapa, Sweden (decking)
Cast glass: Ciril Zlobec (prisms)

After violent conflict in the Balkans, the Croatian town of Rijeka, some 30 miles south of Trieste, held a competition for a structure both symbolically charged and functionally efficient: a monument to Croatian defenders, a memorial to an era of death and destruction that would also serve as a footbridge. With a strikingly abstract yet contemplative scheme, the Zagreb firm 3LHD won first prize.

Program
As the city continues to evolve, this pedestrian bridge/memorial will occupy an increasingly important position, connecting Rijeka’s historic center with its former port, an area to the east slated to become a public park. The structure needed to span at least 123 feet across a canal. And a small plaza, or gathering area with benches, at the bridge’s east end also comprised part of the program. But the greatest challenge lay in maintaining a balance between the form’s utilitarian role as bridge and its commemorative qualities as monument.

Solution
The architects devised an elegantly thin and distinctive L-configuration that equates the horizontal walking surface with the vertical slab (or memorial) in both importance and materials. The upright leg, rising 29.5 feet on the east bank of the canal, forms a wall with a slot just wide enough for the passage of one person. Reminiscent of a tombstone, the tall, geometrically pure wall confronts you, demanding that you sidestep or penetrate it, single file. Boldly blocking views, the slab prompts reflection on the nature of a place psychologically transformed. Visually, the monument’s stripped-down Minimalism plays starkly against the backdrop of the old city.

3LHD gave the L-form strong continuity by covering both its legs in aluminum-alloy planks, offering a relatively non-skid surface with corrosion resistance. The horizontal component, measuring 154 by 16 feet and a mere 21.6 inches thick, features a steel girder structure, while the vertical element relies on reinforced concrete. Pilotis, also of reinforced concrete, support the walkway, edged by panels of safety glass with teak handrails.

The steel girder, fabricated in a local shipyard, arrived as a single 150-ton piece on a barge especially designed to sink down and release its cargo with changing tides. So the very act of erecting the Memorial Bridge became a major event.

The architects enhanced the structure’s floating effects and created a mystical glow at night by inserting LEDs under the handrails and behind cast-glass prisms in the edges of the upright slab.

In the plaza, cantilevered, L-shaped benches of steel and teak echo the bridge form, while a strip of crushed brick and epoxy resin, incised in the ground, extends from the wall slot—symbolizing Croatia’s blood-soaked earth.

Commentary
While serving as a footbridge, the span is hardly one to hurry across. With its tall, imposing end wall, structure encourages slow walking and contemplative lingering and gazing, day and night. 3LHD expanded the project’s scope by inviting artists from other disciplines to continue exploring concepts of memorialism, patriotism, and war. From this participatory process came three films and a book.

For more information on this project, go to Projects at www.architecturalrecord.com.
With abstract geometry and inventive use of LED lighting, the bridge’s character evolves over the day (below) and into the night (above).
Floral Street Bridge
London, England

WILKINSON EYRE HAS GIVEN COVENT GARDEN A SYMBOL OF ARTISTIC ASPIRATION LINKING THE ROYAL BALLET SCHOOL AND THE ROYAL OPERA.

By Sara Hart

In spite of its diverse practice, London-based Wilkinson Eyre Architects has solidified its reputation internationally as a designer of spectacular bridges. Its Floral Street Bridge at Covent Garden is a fraction of the scale of its award-winning Gateshead Millennium Bridge spanning the Tyne River, but just as powerful.

Program
Because the bridge spans a mere 30 feet across an unassuming street in London's Covent Garden, one would assume that the program would call for a modest functional footbridge connecting the back sides of two buildings. But these aren't just any buildings. Floral Street separates the Royal Ballet School from the landmark Royal Opera House. Ballet students, faculty, and staff of the school needed a direct link to the stage of the opera house. The client wanted a strong architectural statement—one that would provide an integrated link between the buildings while giving Floral Street a prominent identity.

Solution
The openings between the buildings are not aligned, making a straightforward orthogonal resolution seem like a jerry-rigged collision between two architecturally distinct structures. To avoid that trap, Wilkinson Eyre conceived a deceptively simple, yet

Architect: Wilkinson Eyre
Architects—Jim Eyre (director in charge); Annette von Hagen (project architect); Martin Knight
Client: The Royal Ballet School
Engineers: Flint & Neill Partnership (structural); Buro Happold (environmental)
Consultants: Speirs and Major (lighting); GIG Fassadenbau GmbH (bridge subcontractor)
General contractor: Benson Limited

Span: 31 feet
Cost: $1.42 million
Completion date: March 2003

Sources
Lighting: AcDc Lighting (LED units); Design Architectural Lighting (low-voltage downlights)

For more information on this project, go to Projects at www.architecturalrecord.com.
ed out of aluminum, glass, wood, the footbridge, in the form of a concertina, twists from facade to the other, becoming sculpture than architecture.

An immediately legible design. An aluminum spine beam supports a glazed deck and a series of square hoop columns. Between the open hoops, each hoop rotates 4 degrees relative to its neighbor and shifts inward to accommodate the skewed alignment of the facade openings. The whole structure twists a quarter turn from one end to the other.

A structure as pure as this presented a challenge for the lighting designers. With no soffit in the fixture locations, the lighting team had to find other solutions. The solution incorporates fixtures in an L-shaped form attached to the top corners of the hoops. As a result, the bridge glows gently in darkness without blurring the lines of the delicate spiral.

**Commentary**

Sing the form of a concertina and the design of it, Wilkinson Eyre fused structural and architectural geometries into a single unit. The bridge appears to be frozen into an object, yet palpable, symbol for the school. It literally marks passage from the practice studio to classrooms to the stage, why it's informally known as the Bridge of Aspiration.”
Central Street Bridge
Worcester, Massachusetts

CENTERBROOK ARCHITECTS CONQUERS GRIDLOCK AND CAPTURES THE SPIRIT OF INVENTION IN A NEW RAILROAD BRIDGE.
By Nick Olsen

Architect: Centerbrook Architects and Planners—William H. Grover, FAIA, James C. Childress, principals in charge; Padraic H. Ryan, Roger U. Williams, AIA, Michelle R. Lafoe, Jonathan G. Parks, project team
Client: Worcester Redevelopment Authority and the City of Worcester, Mass.
Consultants: Maquire Group Connecticut (engineering); Warfel Schrager Architectural Lighting (lighting)

Span: 178 feet
Cost: $4.5 million (bridge only)
Completion date: October 1999

Sources
Brick: Endicott Clay Products
Stainless steel: The Henry Group

Home to Robert Goddard, the inventor of the rocket, the city of Worcester, Massachusetts, also lays claim to breakthroughs as diverse as the Valentine’s Day card and the birth control pill. When faced with a problematic railroad crossing on Central Street, its main vehicular artery, the city sought a solution that would reflect its inventive character.

Program
In recent years, new developments along Central Street, including a civic center and hospital, have brought additional congestion to this busy main corridor, which connects to Interstate 290. The prior on-grade railroad crossing created a traffic nightmare, effectively blocking access to the city with each passing train. Following a master plan by Alex Krieger of Chan Krieger & Associates, Cambridge, Massachusetts, city officials decided to lower the road, raise the tracks, and erect a road overpass. This was to be no ordinary work of infrastructure, however. On Krieger’s recommendation, local officials enlisted Centerbrook to stretch a limited budget and make a statement about Worcester’s rich past and promising future.

Solution
The formal expression of such a statement sparked contention in the community. Centerbrook architects William H. Grover and James C. Childress designed more than eighty proposals, some appealingly traditional in style, and each reflecting Worcester’s many inventions. Ultimately, a modern expression of a historic novelty prevailed: The winning bridge design takes its inspiration from the calliope, a steam pipe organ developed in the city in the 1850s. The bridge, which spans 178 feet, features broad arches of gleaming stainless steel with radial supports accompanying the traditional safety railings. The steel matrix imitates the alignment of the calliope’s pipes and creates a graduated screen for the city that contrasts sharply with the brick-clad reinforced concrete piers and the abutments emerging from surrounding earth berms. The steel railings feature three different levels of polish to vary their reflective face. At night, a kaleidoscopic play of lights and signs against the metal heightens the effect, hinting at the city’s energy of the city ahead. In fact, the railing structure was constructed on the flat ground of Greenville, Texas, disassembled, and shipped piecemeal to the site.

For more information on this project, go to Projects at www.architecturalrecord.com.
to Worcester—ironic for a bridge
problematic of its setting.

Commentary
Beyond their charge to "deco-
railroad bridge," Grover and
less mined Worcester's history
distinctly forward-looking design.
Parting from the monolithic pres-
most railroad overpasses, the
sparkling steel web alludes to
speed of transportation and
an appropriate gateway to a
innovation. ■
Sail Bridge
Swansea, Wales, United Kingdom

WILKINSON EYRE’S SAIL BRIDGE SIGNALS TO ALL COMERS THAT THIS PORT CITY IS IN THE MIDST OF AN ENERGETIC ECONOMIC REVIVAL.

By Charles Linn, FAIA

Architect: Wilkinson Eyre
Architects—Jim Eyre, Martin Knight, Ben Addy
Client: Welsh Development Agency
Consultants: Flint & Neill Partnership (structural engineering)
General contractor: Balfour Beatty Construction

Span: 465 feet
Cost: $5,300,000
Completion date: June 2003

Sources
Cable-stayed, steel superstructure: Rowecord Engineering

Swansea’s Port Tawe industrial waterfront district is not unlike those in countless port cities throughout the world. Over the past century its shipping and heavy industries became redundant and fell into obsolescence. But this city on the Bristol Channel in southwest Wales is in some ways more fortunate than many others. The British government’s Welsh Development Agency (WDA) master planned the area and invested millions of pounds in its redevelopment. It commissioned the Sail Bridge, a pedestrian link spanning the Tawe River and connecting the new Port Tawe Innovation Village with Swansea’s business district, as a symbol of the area’s revival.

Program
The purpose of the WDA’s redevelopment project at Swansea was to attract businesses at a reasonable price. Yet considering that the area was in need of costly improvements to its infrastructure, one might think the $5 million spent on the bridge would have been better put into sewers and power lines. But those work pretty much the same way everywhere—they don’t give one city a substantial advantage over the next. That demands marketing.

A marketing plan intended to show off a redevelopment should include a grand gesture, something to turn the heads of prospective tenants and investors and distinguish a particular plan from all others. For a city like Swansea, which has a notable such a focal point might display some element of that tradition still showing that progress is the
to tell the entire world your city is having a comeback? Build yourself an iconic bridge in a key location, and the public will flock to your shores.
Appearing to levitate, the curved bridge deck never touches the coastal mast. Tuned mass dampers prevent it from vibrating.

of the day, and the future is bright.

Now, what if that symbol could be a crucial piece of infrastructure.

Solution

In Swansea, the grand gesture is the Sail Bridge. Wilkinson Eyre, a London-based architecture firm, was selected for the project based on the strength of its preliminary design, a cable-stayed bridge that departs from conventional designs in several ways. Instead of creating a straight point-to-point span across the river, the deck curves gently around the mast (see plan, page 264). The 125-foot-tall tower leans toward the wind at a significant angle, counterbalancing the deck in much the same way that a sailboat in the wind is kept from overturning by the weight of its keel. The bridge's sculptural shape along with its semiradi ally fanned stay cables, gives it its distinctive maritime character.

The aluminum-topped deck sections are slender steel box girders designed to resist the torsional forces that develop as a result of the placement of the cables on one side of the deck. Tuned mass dampers keep the deck from vibrating under repetitive impact loads such as those that might occur when joggers cross the bridge.

Commentary

Architects often wish for an algorithm that can show clients that return on investment for an exceptional, but perhaps costly, structure will be much greater than some thing plain that can perform the equally well. Unfortunately, though the power of certain objects to attract people is very real, at the moment their return on investment can't be quantified. Clients and public are extremely lucky when exceptional architects can persuade them that even if a job is only a footbridge, it will be there a long time—and that the grand gesture is worth the money.
Houghton Park Pedestrian Skyway
Corning, New York

HASCUP/LORENZINI REVIVES THE SPIRIT OF THE BAUHAUS WITH AN ENCLOSED GLASS BRIDGE AND VISITORS’ PAVILION FOR THE CORNING COMPANY.
By Suzanne Stephens

Architect: Hascup/Lorenzini Associates—George Hascup, principal in charge of design; David Lorenzini, principal and project architect; Robert Manchester, Edsel Ramirez, designers; Jeremiah Fairbank, CADD designer
Client: Corning Incorporated
Consultants: Delta Engineers (m/e/p for skyway); Thomas Associates (m/e/p for visitor’s pavilion); SureSpan Group (structural for bridge truss); Greg Dende (structural for visitors’ pavilion); Amy Netleton (landscape design for skyway); Trowbridge & Wolf (landscape architects for parking pavilion)

Span: 200 feet
Cost: $3.5 million (skyway); $2.2 million (visitor’s pavilion)
Completion date: May 2003

Sources
Steel bridge truss: SureSpan Group
Glass and metal curtain wall: Clayton B. Obersheimer
Metal roofing and stainless-steel perforated ceiling panels: AccuFab

One doesn’t usually expect a covered bridge to be made of glass. Unless it belongs to Corning Incorporated: Glass has been integral to the architectural identity of this company, located in upstate New York, since Harrison & Abramovitz designed the Corning Glass Center and Administrative Building in 1950–53. Then Corning bolstered the image with a glass museum by Gunnar Birkerts (1976), plus additional expansions by Smith-Miller Hawkins (1992–2001), and even a headquarters complex across the Chemung River by Kevin Roche John Dinkeloo and Associates (1993 and 1999). As the latest installment, Hascup/Lorenzini Associates (now George Hascup Associates and David Lorenzini Associates) designed a pedestrian bridge and a visitors’ pavilion as part of the 5-acre Houghton Park, adjacent to the original complex.

Ironically, however, the glass used in the bridge is not made by Corning. The company once known as Corning Glass Works no longer produces architectural glass, having directed its interests to high-tech areas such as telecommunications components, ophthalmic products, and high-performance glass for tele-vision and information display. Curtis Steuben, renowned for his hand-blown-glass luxury objects, still runs a factory at this location.

Program
Because of the influx of museum visitors in addition to Corning personnel, the company needed a 200-foot-long bridge to take pedestrians from a 700-car garage and a parking lot for 1,000 cars across the main boulevard, Poultney Street, into the Corning campus. Cold, icy weather half the year called for an enclosed bridge. In addition, the company wanted...
The glass canopy of the visitors' pavilion (above) shelters a triangular glass structure attached to a round concrete bathroom core. The skyway bridge (opposite) cantilevers at the north end (below), next to the parking garage.
have a 4,500-square-foot visitor pavilion to provide orientation, service facilities, and a shuttle stop for the Roche Dinkeloo–designed headquarters. It turned to Georg Hascup, a professor of architecture at Cornell University, to provide a clean, modern lines displayed in the firm's Lake Source Cooling Pump Facility for the university (2002).

**Solution**

The 3,600-square-foot elongate structure is composed of an 11-foot-square Vierendeel truss, the largest size that could accommodate pedestrians yet still be trucked from the factory in West Vancouver, Canada. Horizontal mullions of the curtain wall further reinforce the long linear thrust of the bridge, which is cantilevered in true Bauhaus fashion at one end.

The interior of the 200-foot walkway is made more dramatic through the installation of shimmering perforated-steel screens on the ceiling. A spine of crystal louvers runs down the middle, refracting the light and emphasizing the sense of movement.

"When I apprenticed with Roche and John Dinkeloo," he says, "I worked on the TWA Terminal renovations at Kennedy Airport. Saarinen's beautifully curved steel tubular link at TWA fostered a sense of dynamism that I hope to recreate here."

Even though the bridge is cooled and heated, the ceiling screens reduce heat gain, as do side panels of pale green glass with a low-e coefficient. "The light relates the bridge to other Corning buildings," Hascup says.

**Commentary**

While this bridge is not the awe-inspiring engineering feat of its long-span bridges held together with threads of steel, the pristinely elegant manipulation of geometry concealing the Vierendeel truss for the bridge is impressive. The architectural contribution is particularly notable for its balance of proportions in such elements as truss chords, gusset plates, and mullions.
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What happens when architects and engineers team up on a design? In the stereotypical scenario, tensions run high in opposing camps. Architects decry how engineers whittle away at design intent and aesthetic quality for the sake of efficiency and budget; engineers, largely trained to analyze the efficacy of a given structure with little regard for its program or overall composition, agitate impatiently as architects ponder options for siting, form, material. Fortunately, this shopworn script has undergone a rewrite by today's best practitioners, who have jettisoned finger-pointing and assumptions about the role of each profession in favor of setting common goals from the outset of a project and staying true to them throughout its execution. Often, technology serves as the starting ground, becoming the basis for experimentation and execution.

This month we highlight the fruits of this collaboration. Bridge design, for instance, has evolved enormously with 3D CAD and advanced structural analysis for nonorthogonal forms. The pedestrian bridges shown in the Building Science feature demonstrate that, far from being simple pathways connecting disparate points, bridges can now define the void space between destinations in unique, even exuberant, ways. The feature on mass transit catalogs options for travel by means other than the beloved-yet-beleaguered passenger vehicle, and showcases transit shelters and stations whose bold forms could be emblems of an emerging trend, one that could be termed "transit density" (even freeway-centric Houston recently opened a light-rail surface transit system). Finally, in Zoom In, we examine a temple whose organic design (an exotic mushroom? a graceful sea creature?) evolved from rigorous computer modeling and analysis by an architect-engineer team in Toronto, with guidance from some technophiles in Los Angeles (we'll let you read who they are).

With projects that imply movement and motion, these designers are shaking up the status quo. Deborah Snoonian, P.E.
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Most bridges are seen as utilitarian instruments built to traverse an irregular terrain in a regular way. So logical is this process that most bridges can be diagrammed as a straight line announcing the shortest distance between two points. Bridges are all structure—form following function in the most literal way. Yet, despite the obvious connections to engineering, there are numerous examples that suggest bridge design is a subset within architectural building types, as well. When an architect and engineer enter into a true collaboration, there is design parity; the results are often stunning, as evidenced by this issue’s collection of outstanding pedestrian bridges (page 247). Two of them are examined more closely here in order to demonstrate the connection between art and science.

Twisted movement

Enduring quality of many bridges is their sense of twisted movement,” writes Jim Eyre, partner at London-based Wilkinson Eyre Architects, a firm renowned for its bridges. “What can imply more movement than the curved curves of an arch or a suspension catenary? The balance of the structure is obviously important in this regard, the sense that all of the various elements are juxtaposed in an organic manner—where balance is only just maintained, sometimes close to the limits—is crucial, too.”

Wilkinson Eyre arrested movement artfully with its Floral Street Bridge in London’s Covent Garden district (page 260). The bridge connects the Royal Ballet School with the Royal Opera House. Ballet students training to attain a certain dynamic counterpoise of their own will use this walkway four floors above the street to get from the practice studio in the school to center stage at the opera house.

The bridge spans 31 feet, which is not particularly formidable as spans go. However, engineering gets more complicated when the architecture deviates from the orthogonal, as it does dramatically in this case, prompting the figurative description of the structure as a “twisted concertina.”

The single structural component that governs all other elements in its construction is the box beam, also called the spine, which runs the distance between the two buildings and supports the deck surface, the secondary structure, and all other loads. Generally referred to as a “simple” beam, the eccentricities of the bridge enclosure required complex 3D modeling to solve the issue of both the slope (about 2 feet) and the rotation of the frames (about 13 feet over the span). In the final solution, the engineers ended up with a beam that is anything but simple. It is defined by thin rectangles at each end, which morph into an equilateral triangle at the center (see section, page 280).

The beam is an aluminum box made up of flat plates welded

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month’s ARCHITECTURAL RECORD/AIA Continuing Education article. To receive credit, turn to page 286 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue include the following sponsored sections: “Window Installation,” sponsored by JELD-WEN, page 311; “Italian Tile,” sponsored by the Italian Trade Commission, page 317; and “New Tools for Specifying Architecturally Exposed Structural Steel,” sponsored by the American Institute of Steel Construction (AISC), page 323.

LEARNING OBJECTIVES

After reading this article, you should be able to:
Discuss unusual artistic design of recent bridge projects.
Explain the concept of arrested movement.
Describe the construction of the box beam used in these bridges.

For more continuing education, as well as links to sources, white papers, and products, go to www.architecturalrecord.com.
The bridge is lit from within (far right) by LEDs mounted on brackets in the upper corners of the portals.

onto extruded sections of varying geometry, which are bolted together to form the complete beam. Before settling on aluminum, which is lightweight and durable, the design team considered other materials. Ian Firth, partner at the London-based Flint & Neill Partnership, the engineers for the project, explains, "The materials had to be lightweight, because there was a limit to the loads that could bear on either building. We considered stainless steel, which could have been thinner, because of its higher strength and stiffness, and, therefore, as light as aluminum." In the end, they rejected stainless steel along with glass-fiber-reinforced polymer, because the cost of both was considerably more than the cost of aluminum.

The beam, fabricated in Austria, was shipped to a factory in West London, where it was clad with powder-coated aluminum and timber frames, also called portals or fins, and then glazed with either opaque float glass or low-iron clear glass. The square frames are attached to the aluminum beam by pairs of simple brackets on each side of the beam. These brackets secure the bottom corners of the frame and have slots to allow thermal expansion and contraction, as well as ventilation. The panels are fixed between the frames using structural silicone.

Maintenance issues were a large concern, especially considering how integrated all the components are. Because the spine supports elements, none of the frames is dependent on the one adjacent for support or stiffness. This means that individual frames or their glass se can be replaced if necessary without compromising the overall structure. Early on in the design process, the team realized that achieving this rational objective, as well as ensuring stability within the frames, required that the beam be engineered to absorb live-load deflections in order to minimize movement in the frames.

Factory prefabrication had two advantages. First of all,
The box beam was fabricated in Austria, then shipped to a factory in West London, where the aluminum and wood fins, or portals, were attached (left and below), then glazed.
A STRUCTURE HAS TENSEGRITY IF ITS ELEMENTS ARE BALANCED IN TENSION AND COMPRESSION AND RESISTANT TO TORQUE.

Details and the connections have the craftsmanship of fine cabinetry. Secondly, the assembled bridge could be delivered to the site in one piece and installed in 2 hours, limiting disruption of a busy site in central London.

Arrested movement continues to be a theme for Wilkinson Eyre. In a project currently in development, the architects are designing a bridge to span 116 feet across the giant hall of the National Building Museum in Washington, D.C. The Advanced Geometry unit at Arup’s London office is engineering the bridge as a “tensegrity” structure. Buckminster Fuller invented the term tensegrity to describe the structural principle behind his geodesic domes; it’s the contraction of tensional integrity. A structure has tensegrity if its elements are balanced in tension and compression and resistant to torque. Tensegrity structures reappear from time to time, either in commercial applications [RECORD, May 2002, page 267] or in experimental ones, such as the project at a museum. At this stage, the idea is emerging as a matrix of cable struts equipped with stress gauges, which will record live loads and the signals to a computer, which will turn them into a pedestrian-generated light show.

Bridge over neglected waters

The Webb Bridge in the Melbourne Docklands (page 248) has a common with the Floral Street Bridge a half a world away—one of geometry, off-site fabrication, the same Austrian bridge subcontr and a continuous box-beam structural system. It also required a collaboration between the architect, Denton Corker Marshall (DCM) and the engineer, Arup. Furthermore, the bridge was to incorporate elements of an old railway bridge, abandoned in the River Yarra at longer attached to the shore.

The Melbourne team also included artist Robert Owen, the idea for the bridge was inspired by an eel-fishing trap, a reference type used by Aboriginal people who lived at the site 200 years ago. A Floral Street, the design process began with 3D computer modeling
concept—in this case, the artist’s sketch.

The new bridge is constructed of a concrete ramp sitting atop a box beam, which, in turn, rests over the existing railway bridge piers. This main structure is then enclosed by an elaborate latticework of curved, flat, laser-cut strips of steel. DCM developed the geometry through parametric modeling to determine the size and spacing of the straps that make up the open-weave design. Parametric base models were defined by simple physical parameters; the designer can change the meters and the model updates itself automatically. This allowed the architect to explore multiple iterations rapidly until the desired effect was achieved. The data was simultaneously entered into a CAD model, which was used to locate the hoops along the ramp’s path. This tool immediately enabled clearance both internally over the ramp and externally over tidal water levels.

The geometry of the bridge, a hairpin ramp of varying widths and turning in three-dimensions, enclosed with steel hoops and cladding of varying radii and spacings, meant that almost every component was unique. The collaboration soon expanded to include a drawing specialist and a fabricator, as it became obvious that their
The Webb Bridge is constructed of a concrete ramp in an open-weave form of steel hoops connected by flat steel straps.

expertise would be needed from the beginning.

All team members reviewed and developed the documents through each stage, to ensure the scheme stayed within budget without diluting the design objectives. In this way, the cost of what Australians call “design-development risk” was eliminated from the process. At the same time, the team made sure the steel supplier understood the design’s complexity well enough to keep prices within an acceptable range.

The 3D CAD design model was developed by DCM and passed to the fabricator and his shop-drawing specialist, Precision Design. With the close involvement of Peter Bowtell, principal in Arup’s Melbourne office, the structural components were developed in three dimensions. These consisted of the large steel box girders and primary substructure, and later the hoops, straps, and cladding supports. At all times, the components were reviewed against the architect’s CAD model to ensure the design envelope was not compromised and the design integrity was maintained. Individual shop drawings were created in 3D CAD and used to drive CAD-based plasma cutters.

As with Floral Street, prefabrication was appealing. The steel
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The Webb Bridge was towed on a barge to the site on the River Yarra.

The fabricator suggested towing the completely assembled bridge into position over water. This saved significant money on the anticipated floating-crane costs and site-assembly time. As the project architect recalls, “It was this joint sharing of ideas and approaches that meant that everyone ‘won’ in the process.”

Rather than ship the assembled bridge across Port Philip Bay from Geelong to Melbourne (47 miles), the design team, at the suggestion of the fabricator, decided to assemble the components at an empty quay within the Melbourne Docklands. The box girders, outrigger substructure, ramp deck, hoops, and cladding supports were assembled as a giant three-dimensional jigsaw puzzle on three connected barges. Much of the straps and all of the cladding sheets were left off at this stage.

Very early one morning during high spring tide, the barges were slowly towed to the site by tugboats. Because the bridge weighed hundreds of tons, coordination and precision became imperative. The barges were maneuvered into place, and when the tide dropped, the bridge lowered into position and rested on the end of the existing bridge, pier, and quayside. The window of opportunity was very small, with only a few hours to complete the process. If they had waited even a few hours, the tides might have been too high to get below for the next several weeks. The extensive lighting facilities, cladding panels, handrails, concrete deck, and the remainder of the straps were subsequently installed in a few days.

Bridge design offers the architect a course in craftsmanship shown here, detailing bridges involves risk. Expectations of accuracy higher than in many building types, and as a result, commonly acceptable tolerances shrink out of view. Technological and computational advances notwithstanding, bridges offer architects the experience of raw discipline.

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### AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

**INSTRUCTIONS**
- Read the article "Architects Discover Bridge Design Can Be the Perfect Union of Art and Science" using the learning objectives provided.
- Complete the questions below, then fill in your answers (page 384).
- Fill out and submit the AIA/CES education reporting form (page 384) or download the form at www.architecturalrecord.com to receive one AIA learning unit.

#### QUESTIONS

1. Bridges are usually described in all of the following ways except which?
   - a. function following form
   - b. a straight line between two points
   - c. a way to traverse an irregular terrain
   - d. form following function

2. Which is the best description of Wilkinson Eyre’s arrested movement?
   - a. the graduated curves of an arch
   - b. balance that is only just maintained
   - c. ballet students training to attain counterpoise
   - d. a twisted concertina

3. The deciding factor in selecting aluminum over stainless steel and glass-fiber-reinforced polymer for the Floral Street Bridge box beam was which?
   - a. light weight
   - b. high strength
   - c. thinness
   - d. low cost

4. The aluminum beam was designed to absorb live-load deflections for which reasons?
   - a. for easy replacement of the glass sections
   - b. to minimize movements in the frames
   - c. to keep adjacent frames stiff
   - d. to keep the glass sections from breaking

5. The advantages of prefabrication of the Floral Street Bridge are all of the following except which?
   - a. high craftsmanship of the connections and details
   - b. delivery to the site in one piece
   - c. less disruption if a busy site
   - d. avoid taxation by shipping from another country

6. Buckminster Fuller’s term "tensegrity" is described as which?
   - a. a combination of tension and integrity
   - b. elements balanced in tension and compression
   - c. resistance to torque and compression
   - d. elements balanced in tension and compression and resistant to torque

7. Which of these elements is true for the Webb Bridge, but not for the Floral Street Bridge?
   - a. it began with 3D computer modeling
   - b. it was prefabricated in Austria
   - c. it incorporates fragments of an old abandoned bridge
   - d. they had to wait several weeks to secure the bridge into place

8. What tool allowed the architect of the Webb Bridge to explore multiple iterations rapidly?
   - a. 3D CAD modeling
   - b. parametric modeling
   - c. laser cutting
   - d. CAD-based plasma cutters

9. The "design-development risk" factor was eliminated from the Webb Bridge by what means?
   - a. a shop drawing specialist and a fabricator were added to the design team
   - b. the team made sure the steel supplier understood the design's complexity
   - c. all the team members reviewed and developed the documents through each stage
   - d. shop drawings were created in 3D CAD

10. After the Webb Bridge was towed to the site, which of the following happened?
    - a. it was raised into place as the tide came in
    - b. it was lowered into place as the tide went out
    - c. the bridge was positioned onto a new bridge pier
    - d. they had to wait several weeks to secure the bridge into place
Mass Transportation to Get Sleek and Daring

ARCHITECTS ARE BEING CHALLENGED TO PRODUCE TRANSIT SHELTERS AND STATIONS THAT ARE AS NOVATIVE AS THE NEW AND IMPROVED SYSTEMS OF MOVING PEOPLE AROUND THE COUNTRY.

Barbara Knecht

Strangling traffic notwithstanding, cars are still the preferred mode of transportation, especially in the U.S. And why not? Roadways are, for the most part, smooth and ubiquitous. Internet, telephone, and movies are available at the touch of a button from the comfort of your zone-climate-controlled seat. Even for commuters who take public transit from the suburbs into the city, automobile is required to deliver them to the bus or rail station. Europeans, among citizens of the car-dependent nations, are particularly wedded to the convenience of driving, as evidenced by U.S. Department of Transportation statistics, which state that 89 percent of commuters drive to work alone.

Everyone is aware of the downside to this convenience. Besides the rising cost of gasoline, traffic congestion is a huge drain on both productivity and energy conservation. The average urban rush-hour driver spends about 62 hours a year stuck in traffic, which translates to 5.7 billion gallons of wasted fuel and a cost to the economy of $70 billion dollars annually.

And yet, innovative technology is emerging that promises to make surface transport on roadways and railways more energy-efficient, reliable, and comfortable—from smoother rides on faster trains to sleeker buses with smart systems to keep them running on time, attractive alternatives to automotive transportation. The architecture of shelters and stations, which supports rail and road transit, is just starting to feed off

In architects Samyn and Partners used a combination of fiberglass and steel fabrics to create canopies for the elevated Erasme Metro station in Brussels, which opened in September 2003.
The Calgary-based CPV Group designed a bold station for an expanded light-rail system in the Shawnessy suburb of Calgary. A series of concrete-shell canopies provide platform coverage. Each canopy section is naturally lit through the louvered clerestories and enhanced with indirect lighting. The modular forms respond to the modest scale and rhythm of the nearby residential neighborhoods.
the high-tech momentum that seems to be driving the current surge in advanced applications.

**Riding (above) the rails**

Light- and heavy-rail transit remains tremendously effective for frequent service in heavily traveled corridors. Intercity high-speed links have been contemplated in states as far-flung as California, Nevada, Florida, Ohio, and are heavily used in Europe, China, and Japan. Denver and Los Angeles, Sacramento and St. Louis, among others, have opened successful rail surface systems within the past 10 years. Houston opened one at the beginning of this year. San Juan, Puerto Rico, will open a heavy-rail system this year, and upgrading and expansion plans for existing systems in New York, Chicago, and Boston.

However, current innovations in rail technology are focused on new materials, including magnetic levitation, or Maglev, which is a system in which the train moves without touching the ground, using magnetic levitation and propulsion. The frequency, intensity, and direction of the electric current controls the train's motion. One type of Maglev system, developed in Germany, is already in service in Shanghai, China, and another version is in development in the United States. These trains are designed to operate in cities with a high density of rail service, such as New York, Chicago, and Boston.

The three components of the system include magnetic coils, a guideway (comparable to a traditional track); guiding magnets, and the undercarriage of the train; and an electric power source. The magnetic coils along the guideway repel the train magnets and levitate the train. The guideway is made of highly durable, maintenance-free materials, including stainless steel and other specialized metals.

The route between Pudong Airport and Shanghai opened for commercial service in December 2003 and is the fastest railway system in commercial operation in the world. Designed by Berlin-based Transrapid International (www.transrapid.de), the train levitates ⅛ inch above its guideway, and at speeds typically reaching 267 mph, it makes the 19-mile trip in 8 minutes. Unlike a conventional steel-wheeled train, a Maglev train doesn’t use fossil fuels. A Japanese system in development is designed to use super-cooled, super-conducting electromagnets, which will save more energy than even the German system.

New and expanding rail systems are offering architects an opportunity to experiment with new materials in the design of stations and shelters. In Calgary, Canada, CPV Group architects designed a station with thin-shell concrete canopies. Enzo Vicenzino, CPV principal, notes, "The community wanted a design that would announce the entrance to its neighborhood and be distinguishable from the more traditional LRT stations. I was certain that the canopies needed to be a thin-shell concrete, and the local supplier recommended a newly developed abrasion-resistant, high-performance concrete material called Ductal (www.ductal.com), which has tensile as well as compressive strength.”

In Brussels, Samyn and Partners used a combination of fiber-glass and steel fabrics for the equally dramatic elevated Erasme Metro station that opened in September 2003. “This is the new terminus station of a major light-rail system,” explained design partner Philippe Samyn. “The client was eager to see this station serve as a city gate as well as..."
The Erasme Metro station in Brussels, by Samyn and Partners, is a combination of fiberglass and steel fabrics. The fiberglass fabric is formed into posttensioned “saddles” attached to arched steel frames. The architects chose a stainless-steel mesh, heretofore used only for sand separation in quarries. It is durable and provides natural ventilation.

linking a major hospital to the city center. It also says, ‘Look at us! Use public transport!’”

The pedestrian approach, entrance hall, and the central platform are covered by a series of posttensioned fabric “saddles” attached to arched steel frames. The fabric was required to resist wind loads and shield passengers from the rain. The fiberglass fabric, with a life expectancy of 30 to 40 years, provides a temperate light during the day and glows at night. The stainless-steel mesh of the side walls is a product employed for sand separation in quarries. Used for the first time in an architectural application, it is extremely durable, breaks the wind, sheds rain, and provides natural ventilation. According to Samyn, the Ministry of the Brussels Capital Region, Administration of Equipment and Transport, while understandably conservative, was very supportive of the use of fabric.

Where the rubber hits the road

Roads, too, are a fixed system that can carry individuals virtually anywhere. Believing we can pave our way out of the congestion and gridlock we have developed a high tolerance for road expansion, one that is higher than our tolerance for rail expansion.

Bus Rapid Transit (BRT), sometimes called a surface subway, is not new. From Curitiba, Brazil, to Ottawa, Canada, communities have invested in highly successful roadway transit systems that use buses separated in dedicated lanes, which have limited stops at identifiable stations where fare is collected prior to boarding and service is frequent. Cast as a substitute for light rail, it has characteristics of both bus and rail. Although it has dedicated lanes, they may either be physically separate or instead may include right-turning or emergency or other buses for sections of the route. When the BRT bus shares the public road, it communicates directly with the traffic signal system to get priority at intersections. Deviations from the route or changes are easier to implement with BRT than with fixed rails. New technology will further distinguish it from its conventional rail and bus siblings.

This summer, Las Vegas will be the inaugural U.S. site for CIVIS, the bus rapid-transit vehicle manufactured by Irisbus of France. CIVIS MAX by its owner and operator, the Regional Transportation Commission of Southern Nevada, it will all have the features of BRT systems except the driver is aided by an optical guidance system which uses cameras to follow painted lines in the road. For a vehicle on a dedicated lane, the guidance system keeps the bus on its course. The driver, who can take over controls with the touch of the hand. BRT MAX will share the road with other vehicles, the optical guidance system will be used for precise docking at each station. MAX will stop each at the same place in front of the whimsical new shelters design Assemblage Studio Architects of Las Vegas.

Assemblage Studio Architects of Las Vegas designed a whimsical shelter for a state-of-the-art bus system to be introduced this summer.

Looking more like a monorail or a bullet train than a workhorse bus, the CIVIS bus is typical of new-style buses that aim for sleeker, high-speed passenger transport.
Have all you need to stay in constant contact with your business with a BlackBerry 7510™ from Nextel. Phone with speakerphone, walkie-talkie, email and PDA all in one conveniently sized device. Just another professional power tool that helps you get things done. To speak with a Nextel Representative, call 888-798-1005 or visit nextel.com/blackberry.
and improved accessibility. Aerodynamic design, hybrid diesel-electric propulsion for fuel economy, and four doors and a low floor for easier loading are typical of advances in bus design. Low-floor buses appeared in Europe at least 10 years ago and came to this country about five years ago when rental car companies began experimenting with them for transporting customers from the terminal to their lots. Dropping the floor of the bus lower to the ground makes it much easier for most people to board, with or without suitcases and packages. On long buses, there is a high central section to clear the axle, which reduces the overall advantages. The Civis bus improves this by removing the central axle and powering each wheel with its own motor, making the entire bus universally accessible.

MAX will have the added advantage of integration with the local bus system. Passengers pay one fare once to ride on any part of the system. If the first transportation choice is always one ride door-to-door, then every time a person changes seats, it must be seamless. Local fare integration and single payment isn’t common yet; regional and larger-area integrated fare systems are indeed a rarity. Within 10 years, the experts say, one will be able to change from the Maglev train to the BRT to the local system with a regional-transit-fare card, leaving cash and fumbling at machines or fare kiosks behind. Toll-road technology is at hand for the transit system. A prepaid device (presumably some kind of card) will automatically calculate and deduct the cost of trip segments. It will be automatically replenished and a record of all transactions will be available on demand.

Seamless transfers mean never having to stop to pay a new fare, and having the bus turn up within minutes of your arrival. If we can’t make the trains run on time, how will we ever be able to make the buses run on time and in the places where they are needed? Answers to that question may come, in part, from the research of Professor Nigel Wilson, of Massachusetts Institute of Technology’s Center for Transportation and Logistics, and his students. Wilson observes, “Dimensions to improve ‘connectivity’ include facility design, service planning, and service control.” Transit operators are already collecting vast amounts of information about their riders from fare-card readers and automatic passenger counting. Buses are being outfitted with satellite Global Positioning Systems (GPS) that will help control centers track bus locations.

Knowing where the vehicles are at any moment means being able to inform passengers of when to expect the next bus, just as systems commonly do already. It also means that adjustments can be made quickly to respond to emergencies or other short-term events. Collecting information on who goes where and when will improve route and capacity planning for better service design on average. Small buses can run on low-volume routes during the rush hour and higher-volume routes to increase frequency in the nonrush period. Schedules between bus feeders and rail transit can be coordinated for expected connections.

Way down the road

There is, of course, also a system to appeal to those who want their vehicle to go where they want, when they want. Skyweb Express (www.skywebexpress.com), SkyTran (www.skytran.net), and Cybertran (www.cybertran.com) are just three variations on Personal Rapid Transit (PRT) that comes on demand and takes you to your specific destination—just as it is on the guideway system. In its most common form, small cars that may hold from two to 20 people run on lightweight elevated tracks or guideways. Stations, which can be located within buildings, are off the guideway, so traffic moves freely past loading and unloading vehicles. Rather than traveling on fixed routes, passengers program their vehicle, just like an elevator, for pick up and drop off where along the network. Proponents cite convenience, safety, energy-efficiency, and low capital costs as advantages. They are still the domain of The Jetsons, but someday, in a connected transportation network, they may become reality, too.

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Zoom In

Bahá’í Mother Temple, Santiago, Chile

By Deborah Snoonian, P.E.

When Toronto firm Hariri Pontarini Architects won a competition for a 21,000-square-foot place of worship in South America, it turned to Gehry Technologies to help it achieve a form that was both highly organic and buildable.

Leaders of the Bahá’í Faith, which has five million members worldwide, wanted a nine-sided dome structure with nine entrances to signify openness to all peoples, says principal Siamak Hariri, himself a member of the faith. Hariri and his team developed what he calls “a glowing temple of light” clad with nine graceful, draped “leaves” of translucent alabaster. “We sought symmetry in the form,” notes Hariri, not only to signify the faith’s ideals of equality and harmony, but also for pragmatic reasons: Symmetrical structures are generally cheaper to build and easier to reinforce structurally (the temple is located in a seismic zone).

Achieving symmetry meant manipulating numerous physical and digital models. With engineers Carruthers and Wallace, the designers used Maya software to model the “leaves,” then spent a week with Gehry Technologies in California refining them and analyzing the structure in CATIA. “It was exciting. We came away with a richer understanding of using technology to achieve design goals,” says Hariri of working with the Gehry team. The temple will open in 2007.

A structural system that mimics Mother Nature

Nine identical curved panels, each anchor a reinforced-concrete base, enclose the Bahá’í Temple. Structurally, are supported by central vertical spines—like leaves—from which branch the secondary steel supports that bear the load of the stone exterior and wood interior rings at the roof, mezzanine, and foundation provide lateral stabili...
Only nonorthogonal building calls for complex structural analyses made possible by serious number-crunching software. Using CATIA, the design team analyzed the temple's form and loads to determine where to add reinforcements and stiffening members for the steel endoskeleton.
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California tests conventional and "green" products for emissions

By measuring emissions of paint, furniture, and finishes, California officials aim to develop a list of acceptable products for use in public buildings, such as libraries.

Weighing the health and environmental effects of building products typically means sifting through incomplete, mismatched, or out-of-date manufacturers' literature, government documents, and lab data. Officials in California, perennially the green-building trendsetter among states, recently stepped into the breach by publishing the results of emissions tests on paint, ceiling panels, carpeting, wall components, flooring, and other indoor products that are manufactured both conventionally and with recycled content. Their work will make it easier for designers to compare available products and anticipate their impact on indoor air quality (IAQ).

The tests were coordinated by two different groups—a state agency, the California Integrated Waste Management Board (CIWMB), and the nonprofit Collaborative for High Performance Schools (CHPS). They were based on the state's special environmental requirements specifications (Section 01350) for sustainable building projects. The tests screened for more than 70 substances, including ammonia, benzene, chlorine, and toluene. To establish the limits in the specifications, researchers drew up a list of chemical compounds typically found in indoor air, calculated safe exposure levels for a 20-year period, and halved those figures to establish maximum allowable emissions.

So far, the data suggest that conventionally manufactured products and those that contain recycled content have roughly similar emissions profiles. Many of the products failed to meet the state's public health emissions standards for this criterion, most on the basis of a single chemical, according to officials. Big chemical offenders included naphthalene, formaldehyde, and acetaldehyde, which are tied to respiratory and eye problems. The 01350 tests helped counter the perception that products containing significant recycled content are worse for IAQ than standard products, according to Tom Estes, manager of the waste management board's sustainable building program. "Emissions are really dependent on what you put into the material, regardless of whether it's virgin or recycled," says Anthony Bernheim, FAIA, managing principal and head of green design at SMWM in San Francisco and an adviser for the state's research efforts.

The tests funded by the waste management board were conducted by the California Department of Health Services (DHS), which evaluated 77 samples of interior building products. After a 10-day airing-out period, products were prepared as they would be for assembly or installation (e.g., adhesives applied to carpets) and tested for 96 hours in a sealed chamber. The measured concentrations are used to model estimated concentrations in typical classrooms or offices, based on assumed spatial dimensions and ventilation rates.

In a concession to manufacturers, vendor and product names have been omitted from the most detailed results, but the testing is
Tech Briefs

California's push to improve indoor air quality has strong support by the school districts.

yielding useful data. “It’s the first time as architect that I have a tool I can take to the manufacturer and say, ‘if you don’t exceed this level, you’re okay,’ where the level is based on health,” says Bernheim. ASTM officials are considering adopting the test protocols as standards.

In some cases, the California studies have led manufacturers to reformulate their products or pay closer attention to contributions from raw-material providers and supply-chain partners, something that the green-building community has encouraged for many years.

The waste management board report is available at www.ciwm.org/greenbuilding/specs/section/metstudies.htm, and a list of products that passed the tests for the state’s Capital Area East End Complex office project is available at www.ciwm.org/greenbuilding/specs/eastend/. The DHS is now monitoring the long-term emissions of materials in the East End facility, according to officials.

The Collaborative for High Performance Schools (CHPS) initiative, which is ongoing, relies on independent lab tests arranged by manufacturers. IAQ is an optional but commonly addressed category of CHPS’s green school guidelines. The testing program stems from efforts by the Los Angeles Unified School District to list products that meet Section 01350 standards. Qualifying products are added to a Web site, www.chps.net/manual/ind01350.htm, as manufacturers submit test results.

Officials stressed that the specifications note only emission levels for products, not other environmental measures, such as embodied energy and pollution generated during manufacturing and distribution.

Ted Smalley Bowen

Building industry professionals gather to pledge commitment to interoperability

In late April, more than 30 industry associations, professional organizations, government agencies, and software companies assembled at the AIA’s headquarters in Washington, D.C., to explore opportunities to promote the adoption of open standards for digital data exchange in the design and construction community. By the end of the meeting, each attendee had signed a pledge to work across organizational boundaries toward the so-far-elusive goal of interoperability—in which hardware and software made by different vendors work together seamlessly, so that users in disparate groups can exchange digital design information effortlessly throughout the life of a building and design projects.

Achieving this goal, industry leaders say, will allow buildings to be erected faster and cheaper, as well as operated more effectively and efficiently. (continued on page 148 of this issue.)
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Tech Briefs

The gathering differed from past efforts in that organizers emphasized what the participating groups could do as a whole to promote open standards and interoperability, instead of focusing on individual efforts by a single group or company in particular. "These groups are competing within a small community: No one gets sufficient funding or attention to be effective. And up to now, efforts to develop standards have been fragmented and uncoordinated, and the value of interoperability has not been effectively 'sold' to the professional user community," says one of the conference's organizers, Jonathan Cohen, FAIA, the former head of the AIA's Technology in Architectural Practice Committee (TAP).

Perhaps the most significant outcome of the meeting was an agreement to establish a Web site, www.building-connections.org, to serve as a "one-stop" information source about interoperability for building professionals, including case studies and progress updates on achieving open standards. The site's content will be provided voluntarily by the organizations that attended the congress; it will be launched later this year.

To avoid duplication of effort, two disparate groups that have been working to develop open standards agreed to coordinate their efforts—the National Institute of Building Science (NIBS) and the Open Standards Consortium for Real Estate (OSCRE), a group begun in 2000 by private-sector managers for Cisco, Intel, and other technology companies.

The group will meet again in early June to set forth a more detailed agenda for collaboration. Deborah Snoonian, P.E.

What the Numbers Say

What does your firm spend on IT? Not surprisingly, the 2003 AIA Firm Survey revealed that the costliest IT items are hardware and personnel (top) and that single practitioners and large firms spend more per employee on technology than mid-size firms (bottom).

**IT-RELATED EXPENDITURES IN 2002, AVERAGES ACROSS ALL FIRMS**

<table>
<thead>
<tr>
<th>Category</th>
<th>2002 Averages</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARDWARE</td>
<td>16%</td>
</tr>
<tr>
<td>SOFTWARE</td>
<td>7%</td>
</tr>
<tr>
<td>TELECOMMUNICATIONS/</td>
<td>24%</td>
</tr>
<tr>
<td>INTERNET</td>
<td>24%</td>
</tr>
<tr>
<td>CONSULTING/SUPPORT</td>
<td>3%</td>
</tr>
<tr>
<td>IT STAFF</td>
<td>24%</td>
</tr>
<tr>
<td>TRAINING</td>
<td>3%</td>
</tr>
<tr>
<td>OTHER</td>
<td>6%</td>
</tr>
</tbody>
</table>

**SOURCE:** 2003 AIA FIRM SURVEY

**SPENDING PER EMPLOYEE, AVERAGE ACROSS ALL ITEMS**

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>ALL FIRMS</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>$4,500</td>
</tr>
<tr>
<td>2-4</td>
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<td>5-9</td>
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<td>$4,600</td>
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<tr>
<td>100+</td>
<td>$9,200</td>
</tr>
</tbody>
</table>

**SOURCE:** 2003 AIA FIRM SURVEY

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  - **Qoo**
  - **www.oqo.com**
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  - This Windows XP-compatible computer boasts the number-crunching power of a conventional laptop at a fraction of the size and weight (4.9 inches by 3.5 inches by 0.9 inch, weighing 14 ounces). The ultra Personal Computer (uPC) comes equipped with a 1-gigahertz processor, a 20-gigabyte hard drive, a color display screen, and Firewire and Bluetooth wireless capabilities. A USB port lets you add a mouse or another peripheral device; a miniature keyboard, mouse buttons, and thumbwheel allow data input and navigation. When connected to its docking cable, the uPC can be enhanced with audio and Ethernet functions or a second USB or FireWire port. Though it's not souped-up enough to manipulate CAD files, the uPC represents a viable option for those who want to toto more power than a handheld organizer offers, but with a lot less bulk than a laptop. The company says the uPC will be widely available by summer 2004.

- **Architectural Desktop 2005**
  - **AutoCAD**
  - **www.autodesk.com**
  - **Windows only**
  - AutoCAD's latest version of ADT, its 3D CAD program, has a new "details" feature and a library of built-in, editable components, as well as automated tools that help users draw more quickly. Objects can include information on technology metrics, including reviews, lists, and links, go to architect at Architecturalrecord.com.
Tech Products

Project 4D and ConstructSim
Common Point
www.commonpointinc.com
Windows only

Common Point's founders first began working with simulation construction sites at Stanford's Center for Integrated Facility Engineering (CFIE). Project 4D, its flagship program, adds a fourth dimension—time—to a typical 3D building model so that users can visualize construction activity for a building or group of buildings and manage the schedule accordingly, to ensure that conflicts and delays are minimized. The software uses information imported from a variety of existing CAD and scheduling programs. ConstructSim is a "visual collaborative environment" for a project team, integrating data from Project 4D as well as engineering, procurement, and materials-management software for a more comprehensive management effort.

Speech Privacy Predictor
Armstrong World Industries
www.armstrong.com/speechprivacy
Windows or Mac

A company known more for ceiling panels than software, Armstrong has created a design aide for predicting the acoustic performance of spaces like offices and healthcare facilities where speech privacy is a high priority for occupants. Users enter the dimensions and materials of a space as well as the distance between talkers and listeners. The software returns a Privacy Index (based on an ASTM standard) that tells the user whether a design is achieving the project's speech-privacy goals, as well as options for improving performance.

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Improvements in drawing efficiency are the hallmark of Nemetschek's update of its CAD package for architects. A database for notes lets multiple designers share a common set of annotations and text for drawings that are used repeatedly, and new page-layout features let designers compose drawing sheets that combine multiple views of the same design at different scales and sizes, including text and annotations. New building objects, such as a ceiling-grid tool and a stair tool, make enhancements to building details easier to draw and manage. Built-in rendering modes now include options for softening hard-edged drawings so they appear hand-sketched.

VIZ 2005
Autodesk
www.autodesk.com
Windows only

Autodesk says that VIZ is to digital 3D modeling what clay is to physical modeling—a medium for highly mutable, early-stage exploration of design options. One major new feature of the latest VIZ release, the incorporation of mental ray's rendering technology for global illumination, lets ambitious designers create ultra-high-quality photorealistic renderings by capturing subtle lighting effects and shadows within a space. Other new features include an architectural materials library; better editing features for splines, polygons, and patch objects; and improved cross-platform compatibility with other Autodesk products.
"Secretarial corridors" may have gone the way of the typewriter, but some offices look back to move forward

**BRIEFS**

French designer Charlotte Perriand is frequently mentioned as one of the most overlooked Modernist design talents of the 20th century. A longtime collaborator with Le Corbusier, Pierre Jeanneret, and Jean Prouvé, she worked for more than six decades perfecting tubular-style furniture that came to be known as "equipment for living." (She died in 1999 at age 96.) The Princeton University Art Museum spotlights her best work in a major exhibition, *Useful Forms: Furniture by Charlotte Perriand*, on view through July 11. Works in the show include a rare library table designed for the Maison de l'Étudiant in Paris and a free-form desk from 1960. Go to www.princetonartmuseum.org. W.W.

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A sign of the times, circa 1968: "Although the secretarial pools and the open work areas are both accepted principles in office planning," wrote author Michael Saphier, "on occasion it is necessary to provide partial privacy for some secretaries." This text, from a McGraw-Hill book published that year, *Office Planning and Design* (below), accompanied a photo in which secretaries and their blond desks were placed in a corridor and shielded behind 3-foot-wide, floor-to-ceiling sections of drywall, an arrangement that likely would not be considered congenial or productive today. (And don't support-staff personnel prefer the title of executive assistant these days?)

On the plus side, some of the book's tenets regarding office organization seem to hold up even 36 years later. And among the featured projects that were more progressive than the "secretarial corridor" was a private office's "roll-top room" that employed hinged doors powered by a garage-door mechanism to hide a research area. The automation was primitive, but the solution foretold today's continuing search for flexibility of form and a balance of private and public zones.

Among the offices we present this month, most look back to earlier times for inspiration. San Francisco-based Huntsman Architectural Group settled on Arne Jacobsen's Egg chair as an iconic touchstone for reinterpreting elements of midcentury Modernism for its own offices. Its colorful (dare we say, almost mod?) materials library, with Verner Panton chairs (above), doubles as a space available to community charities. Johnson Chou's conference room at Grip in Toronto is an illuminated "bubble" that evokes the sci-fi optimism of '60s space travel. Guillermo M. Gomez adopts a Mondrian-like palette for the office of a Broadway ad agency. Looking farther into the past, Traboscia Roiatti mediated on a vintage Veue Clicquot champagne bottle, its shapely curves and orange label cuing abstract forms for a modern loft office. Times have changed, but the search for connections to shared history has not. William Weathersby, Jr.
Broadway advertising campaigns are projected on one wall of the EMG reception area as a focal point. Downlights create a play of color along the luminescent flooring, while red chairs rest against a glass wall.
Guillermo M. Gomez orchestrates color and flexibility for the Broadway advertising agency Eliran Murphy Group

William Weathersby, Jr.

"They say the neon lights are bright on Broadway," so the popular song goes. For the New York City–based media firm Eliran Murphy Group (EMG), whose business is designing advertisements and branding campaigns that help to make hits of Broadway shows like Nine and Cabaret, bright lights, bold colors, and grand flashes of creativity are its stock-in-trade. To present the agency’s strong suit of design talent and marketing finesse within a new, near the theater crossroads of Times Square, Guillermo M. Gomez, architecture (GGA) orchestrated a modern, energetic office that trumpets a new corporate identity.

"From the start, it was very clear what our business was and our goals for the new office were," says EMG president/creative or Ann Murphy. "We wanted our architect to become involved from the beginning, to bring in his ideas and listen to ours so we could together make the relocation project a success."

To foster a collaborative working relationship, Murphy and C.E.O. Barbara Eliran enlisted GGA principal architect Guillermo Gomez to assist in scouting potential offices for the relocation from overtaxed floors in midtown. Together they discovered a 10,000-square-foot, fifth-floor space in a prewar building just south of the theater district that offered the most potential for programming and design within a modest budget of $59 per square foot. "The clients sought a design that would spark day-to-day operations by emphasizing light, height, and quality of space, kept within affordable relocation and construction costs," Gomez says.

Besides its Broadway mainstays, EMG also designs media campaigns and materials for New York arts institutions such as City Opera and the American Museum of Natural History, as well as television industry players like PBS/Channel 13. Rather than go over the top with theatrical razzle-dazzle for the office, Gomez delivered the desired high-end visual appeal via inventive, cost-effective design solutions.

At the entry, the architect expanded the elevator lobby and created a view into the reception area with a frameless, acid-etched glass wall sandblasted with the company’s logo. Beyond the glass wall, a com-

| Project: Eliran Murphy Group, New York City |
| Architect: Guillermo M. Gomez |
| Architect—Guillermo M. Gomez, principal architect; Luciano Rennis, project designer |
| Contractor: Certified of New York |
| Audiovisual consultant: Ruppert Bohle |
position of intersecting. Minimalist planes enclosing various zones creates a strong first impression. The same acid-etched glass tops a 6.5-foot-long reception desk set on the diagonal. Luminescent flooring with a pattern of repeating circles shifts from gray to green, silver, and gold, depending on the angle of light cast by ceiling-recessed light fixtures and the position of pedestrians. The agency’s work, including television commercials for Tony-winning musicals, is projected against a side wall within view of reception seating, a cluster of Ron Arad’s red Tom Vac chairs. “The clients originally planned to show their work on a flat-screen monitor, but we proposed a projector to make the images larger and more theatrical as a focal point for their clients and guests,” Gomez explains.

In the main open-office area for creative teams, Gomez simplified the plan by demolishing an existing maze of enclosed offices, raising the ceiling, and opening the central core to accommodate 10 custom workstations. The partial enclosures are constructed of drywall painted in a Mondrian-inspired palette of red, yellow, and orange. Constructing desks, rather than purchasing a modular furniture system, allowed EMG to reuse undercounter filing cabinets and other support units, now painted black to recede from view. Partitions of translucent acrylic are mounted directly onto the drywall in random configurations so no two
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workstations are the same. Linear fluorescents inset atop some of the partitions enhance ambient uplighting. White laminate desktops and laminated plywood shelving are affordable, attractive contrasts to the color-splashed walls. Galvanized-steel pipes, which run power cables along the ceiling and walls to each desk, were left exposed to enhance the interoperable parts look. The network of perpendicular colored walls also doubles as a gallery showcase for EMG’s colorful posters and advertising artwork.

Private offices for art directors, account managers, and executives rim the perimeter, enclosed by acid-etched glass walls that allow daylight into the open-office core. A clear horizontal band runs through the translucent panels at the eye level of employees seated at their desks.

One client, the musical *The Thing About Men*, incorporated the EMG office into its production. “They wanted a look that reflected a cutting-edge ad agency,” Gomez says, “and said this was their lowest Irish bid.” It’s a favorable review for GGA’s design, an office for creative concern that improves the bottom line of show business.

**Sources**

Workstation laminates: Formica Corporation  
Luminous panels: Lumicore Acrylics  
Flooring: Chilewich, through Architectural Flooring Research  
Ceilings: U.S. Gypsum  
Door hardware: Blumcraft  
Glazing: Zeca Mirror & Glass

**Signage:** Certified Graphics  
**Lighting:** Lightolier  
**Reception chairs:** Vitra  
**Cabinetry:** Certified of New York  
**Paint:** Benjamin Moore

For more information on this project, go to Projects at www.architecturalrecord.com.
A custom-designed screen separates a breakout room and informal meeting area from the main corridor (above). The screen, which rotates and snaps into place with a gentle push, is of unstained domino walnut that frames woven paper rushes.
The walnut reception desk is topped by plywood turned on end and laminated. The charcoal mosaic is part of the graphic identity.

Andrew Blum

The Barcelona chair designed by Mies van der Rohe is the mezzuzah of American architecture firms, installed by the front door as a symbol of devotion to the tribe of Modernism. As a result, it has become a design-office cliché, a placeholder, a piece that is no choice at all. It is a pleasant surprise, then, to find it miss-somewhere in the lobby of the new San Francisco flagship of Huntsman Architectural Group, replaced by a trio of Egg chairs, a lesser-known but classic icon by midcentury Danish designer Arne Jacobsen. It is nice, too, because the robin's-egg-blue chairs also signal a devotion to design, yet they convey warmth, comfort, and the atmosphere of family that envelopes each area of this clean-lined office.

"Clients will come in for a meeting, and they are often very portable just sitting in one of the reception-area Jacobsen chairs," Mark Harwick, AIA, Huntsman principal and lead designer for the project. Clients may stretch out in public areas here, but not for of other space. The 20,000-square-foot office on the seventh floor of a mid-1960s-era downtown building is designed to be accommodating only to Huntsman's practice but to the local community. The firm hosts large holiday parties and other social functions, frequently in its office to nonprofit organizations for benefits, and encourages the community (particularly those from out of town) to stop by, plug in a laptop, and help themselves to coffee in the kitchen. And nearly one third of the staff are dedicated to "public" rooms that notes of openness and crisp informality.

The Huntsman practice moved to this location from offices in a nearby historic building designed by architect Julia Morgan. Founded in 1981, when Daniel Huntsman left San Francisco Bay area. After years of ad hoc growth, Huntsman saw move as a chance to clean its own slate and start afresh. "It was time for an office that better reflected our personality and expressed the cultural elements that make us different," Harwick says, sitting on the living-roomlike lounge off the boardroom. Other projects were an inexpensive construction budget, experimentation with modern forms, and the use of sustainable materials.

While the partners signed off on most decisions, key philo-
The long credenza in the conference room doubles as a buffet and extra seating (above). Jacobsen's Egg chairs impart a Modern yet casual feeling in the reception area (below).

Sophical ideas were put to the firm as a whole in an attempt to comparatively capture its corporate personality.

For example, the library in the old offices was believed invariably a mess. "We got so busy and crowded," Harbick says, "when you ran out of conference rooms we would schlep our clients back in the library, and as soon as they got there their eyes got big—they just loved to see where it all happens." But would a library area work as the focal point of the new space? The issue was resolved at an "all-hands" meeting when information from the library now links the public rooms along the main circulation core with a single large studio in the back. Raising the 8-foot ceilings to 12 feet balanced the size of the room and illustrated for clients Huntsman's philosophy of using its office as a combination lab and workroom. (Similarly, the dropped ceiling in the studio has a 6-inch depth to demonstrate the "inner workings" of the infrastructure above.) The clarity of the library to the boardroom means clients can sometimes be found riffling through sample catalogs on their own. The room's furniture also make it the area most frequently used by outside guests.

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charity that helps people with HIV/AIDS care for their pets.

Huntsman has engaged its office as a “beta testing” site for mock-ups of new furniture and interior products manufactured by companies that include Herman Miller and Peerless Lighting. (The mesh backs of Eames swivel chairs were “road tested” in the conference room.) Serving as a marketing tool and calling card, the office has aided the firm in acquiring new clients, some of whom first became aware of Huntsman while touring the office to see its on-site installations at the invitation of manufacturer representatives, Harbick reports.

One room that captures the form-and-function spirit of the office is the open kitchen, where clients help themselves to coffee, and snacks and wine are served on Friday afternoons. An island is topped by plywood turned on its side and laminated, while the counter is covered in linoleum—inexpensive, strong, and sustainable. When the manufacturer of the latter material refused to warrant it for use on any surface but the floor, Harbick decided to experiment with it anyway. Becoming your own client, he notes, can lead to a windfall of new design solutions.

Sources
Wood flooring: Junkers
Carpeting: Prince Street; Interface
Mosaic wall tile: Bisazza
Ceilings: Armstrong
Wall panel system: Fabrictrak
Lighting: Peerless Lighting; ERCO; RSA; Bella Shades; Selux; Artemide
Furniture: Knoll; Herman Miller; Sloan Miyasato; Veca; Steelcase; Cassina; Nienkamper; Mayline; Design Within Reach
Fabrics: Carnegie; DesignTex; Maharam; Jack Lenor Larsen; Pollack

For more information on this project, go to Projects at www.architecturalrecord.com.
Traboscia Roiatti introduces a modern point of view to the offices of French vintner Clicquot in New York City

William Weathersby, Jr.

...
Though their colleagues in France typically work in pastoralaux or city town houses lined with rich wood paneling and antique furnishings, Clicquot's New York executives envisioned an office that contemporary, open, and light,” says principal architect Robert Sciacca. The 15th-floor facility was graced with broad expanses of land,

dfactory-style windows, but presented challenges in terms of

and programming, he notes. To reach Clicquot’s corner area

d other tenant locations, for example, a new public corridor was

ed to connect to one corner of the company’s rectangular space.

enclosed executive offices would adjoin the terrace at the end of

ice opposite the entrance, circulation between public and private

DITIONAL INTERIORS WERE REPLACED

A LOFT WITH OPEN SIGHT LINES AND

ORAMIC VIEWS OF MANHATTAN.

was a grappling point for the design team.

A kitchen, bar, café, and wine-storage area were set require-

Flexible, accessible facilities to accommodate special events such

tastings were a key part of the program,” adds project partner

a Roiatti, AIA. In terms of circulation, “no one wanted guests to

rough open office areas to reach the terraces during a party. The

an had to balance the demands of entertainment areas on one

private office, support staff, and production areas on the other.”

The conference room (opposite, bottom left and top) juts into the

bar and café area. The C.E.O.’s private office (above) and another

ecutive’s office (opposite, bottom right) are faced with glass

alls and doors treated with translucent film.

To maintain internal sight lines while

maximizing daylight and framing the panoramic

the boxy building envelope. The archi-
tects say they were inspired by the classic Veue

Clicquot champagne bottle itself. The shapely

ncontainer influenced curving glass walls “with a liquid, transparent feeling, which transmit day-

light to the core while encouraging a flow of

ovement,” Roiatti says. Meanwhile, the bottle’s

distinctive orange label (called “Clicquot yellow” by employees) was adapted as an accent color.

The office design capitalizes on volume and light to trump the

pace’s vast horizontality. Visitors are greeted at the Clicquot reception

rea by long views looking diagonally through the glass-enclosed confer-

room and work spaces beyond; one can see skyscrapers from the

outset. Set between the concave front edge of the reception desk and the

eter of glass doors and windows facing the terrace, the private meet-

room becomes a central focal point, with the “fork in the road” it

creates in plan presenting two main circulation choices. The floor-to-ceil-

glazing of the conference room enclosure is faceted to echo the lines of

the Starrett Lehigh Building’s perimeter wall. Though its meeting-in-a-

fishbowl configuration puts participants on view at center stage, the room

is fitted with blackout draperies that can be deployed for privacy.
The beveled line of the building's glazing is reiterated by the outline of the nearby bar (below). The existing concrete floors were stained in a sepia-like shade that approximates the color of vintage Veuve Clicquot wine labels and bottle glass. A café area beyond the conference room is set near windows overlooking the 4,000-square-foot terrace, newly outfitted with pavers (right).

Enclosing executive and management offices, floor-to-ceiling glass walls configured without visible framing seem to dissolve the edges of interior spaces. Treated with bands of translucent film, the enclosures afford a degree of privacy while conveying openness. Ceiling tile panels and walls manufactured from recycled materials also contribute to a progressive culture. To also meet the mandate of low-cost, durable materials, an orange laminate bar and tabletops, in addition to orange accents, approximate the signature Clicquot hue without requiring color-matching. Bright, lightweight chairs and bar stools are a perfect spot for guests to perch while toasting the sunset over the skyline.

**Project:** Clicquot, Inc., New York City  
**Architect:** Trabosca Roiatti—Robert Trabosca, Caterina Roiatti, AIA, partners in charge; Diego Otero, Michael Silverman, Andres Tenorio, project team  
**Consultants:** Liker Associates (engineer); Jim Willey/International Lights (lighting)  
**General contractor:** Celtic General Contractors

**Sources**  
Furniture panels: Trespa USA  
Acoustical panels: Tectum; P. Acoustic  
Chairs: Heller; Vitra  
Shelving: Rakks  
Lighting: Atlite; Lucifer Lighting  
Selux; Hess America

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).
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Transparency, lightness, and a sense of play enliven two Toronto offices designed by architect Johnson Chou

By John E. Czarnecki, Assoc. AIA

Toronto is home to a number of young multimedia design firms whose offices near downtown are often nondescript, with exposed brick walls in renovated warehouse buildings. While the firms may be creative, they can become bland landscapes of standard, open-plan workstations. Taking a different tack, two firms, Grip Limited and Medium One Productions, turned to Toronto architect Johnson Chou to design spaces that better reflect their companies' distinctive, sophisticated styles. Chou, who says he was inspired by the notion that a workplace can help engage both a firm and its client to achieve a creative vision, developed two offices that enhance the industriousness of each company without overemphasizing the industrial nature of the core facilities it occupies.

Since 1999, Chou has built his practice with projects mostly in Toronto that encompass the design of offices, restaurants, and furniture. Like many of his commissions, Grip and Medium One display his inventive use of materials and exploration of transparency and illumination.

Grip, a creative agency focusing on multimedia print and design, granted Chou broad design freedom, he says. Perhaps best known in Canada for its irreverent TV ads for Labatt Breweries geared to young men, Grip wanted an office that was neither corporate nor overly sleek, but that reflected a sophisticated rather than sophisticated wit. To fit in, the middle ground, the architect was inspired by Grip's trademark adve
tableaux, in which a spare number of actors and objects are arranged in unexpected ways; he kept that idea in mind as he designed the space.

Located on the third floor of a new mixed-use building in Toronto's youth-oriented Queen Street West, Grip's office employs a minimal palette of materials, textures, and a single color—orange.
Aside from the orange carpet in the lounge (above), floors are a gypsum-based commercial underlay, while ceilings expose the building's concrete structure (below left). A circular conference room is enclosed by nylon stretched across a steel frame (below).
Exploring the power of materiality and translucency at Medium One, Chou designed a long steel reception desk fronting a glass ramp (below) and steel workstations topped by illuminated acrylic panels (right).

great effect. From the elevator, the sweeping curve of an acrylic wall, which encloses a conference room, leads past the orange Grip logo to the main entrance. A wall, covered in gray felt to dampen sound and add texture, defines the path to workspaces while separating public and private realms.

Programmatically, Chou layered sequences of forms and enclosures within the 6,700-square-foot envelope. The tableaux include a suspended, spherical meeting pod enveloped in nylon fabric stretched on a steel frame. A glass-enclosed lounge features orange carpet (besides the signage, the only bright color present) and sofas Chou designed that attract employees taking breaks during and after late-night work sessions. The lounge is also soundproofed for blaring stereos and televisions.

Private offices for Grip managers hug the south wall, with cubicles reserved for account managers. In creative team areas, workstations can be divided for privacy via sliding, galvanized-steel doors. Clear and translucent glass panels throughout convey openness and informality.

A few blocks west of Grip, Medium One is set within a former munitions factory with original wood and rough concrete floors, heavy timber framing, and remarkably beautiful brick walls. Chou's simple Modern office installation contrasts with the sublime yet aging environment. At the entrance, a stainless-steel reception desk spans the length of a frosted-glass ramp that leads to the creative staff wing. Curved workstations feature steel bases and acrylic enclosures that pivot to and close. When lit, the workstations appear more like an art installation than standard desks; Chou confirms that he was inspired by the illuminated artworks of James Turrell when tackling this office configuration.

At Grip and Medium One, Chou explores translucency, mutability, and complexity of form. Though each is distinctive, both express the playful yet professional nature of the creative work at hand.

**AT TWO TORONTO MEDIA FIRMS, GRIP AND MEDIUM ONE, GLASS PANELS AND LUMINOUS SURFACES CONVEY OPENNESS.**

**Project:** Grip Limited, Toronto
**Architect:** Johnson Chou—Johnson Chou, Anne-Rachel Schiffman, Steffanie Adams, David Annand Peterson, Seth Matson, Stacie Amo, Parisa Manoucheri, project team
**Engineer:** Nunn Warden Design
**General contractor:** MCM 2001

**Sources**
**Glazing:** CLO Glass; CYRO
**Furniture:** Keilhauer; Nienkamper

**Project:** Medium One, Toronto
**Architect:** Johnson Chou—Johnson Chou, Michael Lam, Steve Cho, project team
**General contractor:** Pre-Co

**Sources**
**Glazing:** CLO Glass
**Lighting:** Eurolight

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com)
At the Milan Furniture Fair, Frank Gehry translates his signature shapes into chairs and door hardware.

With major new works such as the Stata Center at MIT, a civic pavilion and bridge at Millennium Park in Chicago, two recent civic building commissions in Brooklyn, Gehry remains dead on the radar of architects working at full-tilt. (His new line for the Polish vodka Wyborowa won over another strain of aficionados in May.) At the Furniture Fair in April, Gehry switched gears to blaze a trail within the field of interior furnishings and fixtures. His furniture designs for American manufacturers Emeco and Heller joined shapely hardware for the Italian company Fusital/Valli&Valli to blanket the show’s Pavilion 20 in FOG. Though shown as prototypes with some tweaking to come, the chairs, tables, door handles captured the architect’s signature melding of industrial sensibilities (gray or natural finishes), materials (aluminum, resin, stainless steel), playful shapes (door handles evoked fish and arrowheads), while Heller’s seemed like abstractions of his building models. Among the highlights:

The stacking Superlight chair has an optional felt pad supported aluminum base. Emeco, Hanover, Penn. www.emeco.net CIRCLE 251

For use indoors or out, a series of cubes, tables, and a sofa come in resin. Heller, New York City. www.helleronline.com CIRCLE 252

The FOG Duemilaquattro (abstract fish shapes) and Arrowhead include door and window handles, knobs, and coat hooks in finishes such as polished brass and satin stainless steel. Fusital/Valli&Valli, Cremona, Italy. www.vallievalli.com CIRCLE 253 William Weathersby, Jr.

For more on these designs, plus Gehry discussing his work with Emeco, go to architecturalrecord.com.

Clockwise, from top left: Gehry perched on his cube for Heller; his sketch for the Superlight folding chair by Emeco; two views of the Superlight chair in brushed/anodized aluminum; the Frank Gehry Furniture Collection by Heller; maquettes of the Heller line; and Fusital/Valli&Valli’s door handles in stainless steel (top) and polished brass (bottom).
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Natural-Look Spanish Tile a Hit at Cevisima

A look of natural stone, weathered oxidized steel, and even simulated wood grain were big trends among the Spanish ceramic tile showcased at the annual Cevisima trade forum in Valencia, Spain, last March. More than 100 exhibitors attracted over 86,000 visitors from 140 countries to view the array of tile for commercial and residential use. Another highlight was a broader range of tile dimensions, with many companies offering six or more sizes in square or rectangular formats with additional coordinating, mesh-mounted mosaics and bar- or rod-shaped accent pieces. Bright colors, including red, inspired by Pop Art and Art Deco, made a strong return to the market. For more information on these products, Spain's tile industry, or individual manufacturers, visit the Miami-based Tile of Spain Center at www.spaintiles.info. William Weathersby, Jr.

1. Inalco's Structures, a series of 8" x 8" wall tiles, is produced in 12 colors, including white, gray, and various shades of green, lilac, and blue. This series features 10 design reliefs that can be mixed for added visual impact or used individually for a more subtle installation. Inalco, Alcora. www.inalco.es CIRCLE 209

2. Altamira is part of Porcelanosa's Ston-Ker collection of all-through body porcelain tile. Ston-Ker is an extensive program of stonelike tiles with a high slip-resistant surface featuring a smooth, nongritty texture. This feature improves safety with the added value of easy cleaning. Altamira is produced in 17" x 17\%\(\text{sq'}\), 17" x 26", and 6" x 26" formats, and comes in gray, beige, and brown. Porcelanosa, Villarreal. www.porcelanosa.com CIRCLE 210

3. Keraben's Futura is a commercially rated, all-through body porcelain tile series, engineered for floors and available in a polished, high-gloss finish, a semipolished satin texture, or with a natural matte surface. The tiles are offered in black, white, cream, gray, and mocha. Futura is produced in 16" x 16" and 12" x 24" formats. Keraben, Nules. www.keraben.com CIRCLE 211

4. Inalco's Structures, a series of 8" x 8" wall tiles, is produced in 12 colors, including white, gray, and various shades of green, lilac, and blue. This series features 10 design reliefs that can be mixed for added visual impact or used individually for a more subtle installation. Inalco, Alcora. www.inalco.es CIRCLE 209

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6. Keraben's Futura is a commercially rated, all-through body porcelain tile series, engineered for floors and available in a polished, high-gloss finish, a semipolished satin texture, or with a natural matte surface. The tiles are offered in black, white, cream, gray, and mocha. Futura is produced in 16" x 16" and 12" x 24" formats. Keraben, Nules. www.keraben.com CIRCLE 211
**Interiors Products** Contract Fabrics

- **Cushionlike back fabric**

Herman Miller now offers an upholstered-back option to its Mirra office chair. Mirra’s new upholstery fabric, Latitude, is placed on the front of the backrest with a trim piece around the periphery. Latitude’s spacer-knit technology provides a cushionlike material for the user to sink into without the use of foam. The fabric comes in 17 colors and is made from polyester that is 100 percent recyclable at the end of its useful life. Herman Miller, Zeeland, Mich. www.hermanmiller.com [CIRCLE 200]

- **Crafty collaboration**

Winkraft is a new brand of contemporary textiles, furniture, and accessories launched by the Winkreative design agency and Bernhardt Design. The first offering from Winkraft is the Alp Maritim collection of upholstery fabrics. Created in collaboration with Swiss textile designer Caroline Frueler, the six designs feature colorways that blend a selection of neutrals with splashes of bright oranges, greens, and blues. Bernhardt Design, Lenoir, N.C. www.bernhardtdesign.com [CIRCLE 201]

- **Ancient look for modern fabrics**

The Ceramica collection of Crypton jacquard upholstery textiles was inspired by age-old craft techniques, including raku, terrazzo, and fresco. Crypton, the patented textile-treatment process, is engineered to provide extreme stain, moisture, and microbial resistance. The fabrics are intended for projects including health-care, corporate, and hospitality facilities, as well as the residential market. Pallas Textiles, Green Bay, Wis. www.pallas textiles.com [CIRCLE 202]

- **Fabrics from the brink**

The Brinkman Fabric Collection is not available in the U.S. solely through Roger Arlington’s national showroom. Previously, these fabrics were only available to an exclusive group of Anne Brinkman’s own clients. Brinkman, a Dutch designer/artist/architect/antique dealer, created a collection of jacquard woven fabrics in silk, linen, cotton, and mohair, in response to a need for adequate fabrics for his interior projects. Shown here is Allover, a cotton/linen blend. Roger Arlington, New York City. www.apbrinkman.nl [CIRCLE 203]

- **Working out a better fabric**

Burlington Contract Fabrics’ (BCF) new Environ fabric (right) is engineered from postindustrial textile chip and is suited for applications where polyester products are currently used for panel and upholstery. One of the newest products from BCF featuring Environ technology is ProKnit (left), a knitted, layered panel fabric and upholstery based on a technology once confined to the performance apparel industry. Burlington Contract Fabrics, Greensboro, N.C. www.burlingtoncontractfabrics.com [CIRCLE 204]

- **Vintage textiles**

The name for Keilhauer’s new Recho Collection of five textiles came from the desire to address different segments of the market—residential, contract, and hospitality—with a collection of sophisticated fabrics inspired by the couture fashions of the 1950s. The collection includes Divine, a wool blend that features a refined faille weave inspired by elegant French coating fabrics; Coco, an embodiment of the texture found in suits from the house of Coco Chanel; Faux, a faux suede that is durable enough for contract settings; and Aria semianiline-dyed cowhide. Keilhauer, Toronto, Canada. www.keilhauer.com [CIRCLE]
Products

Commercial Carpet & Furnishings

The following carpet & furnishings are appropriate for an array of commercial interiors, particularly the office setting. It is now standard for furnishings such as chairs to have an ergonomic “brain,” and carpets to have an environmental “consciousness,” reflecting a trend toward a healthier work environment. Rita F. Catirella

Practical solutions for when meetings and furniture intersect

According to Herman Miller, while a larger proportion of workplace square footage is being allocated to multipurpose group spaces, collaborative areas can be impeded by work tools and environments designed mainly to support individual work. Herman Miller has responded to this issue with the Intersect portfolio, an offering of movable, freestanding products that can be used in open areas, and primarily intended for settings that support up to six people. Each element is scalable to accommodate groups of any size. Intersect is divided into four categories: display products that allow for taking as well as the display of ideas and information; tables in different sizes and shapes; stacking lounge seating; and boundary products, including four- to six-panel coping screens to divide space, create standing privacy, and add vertical work space.

Rather than focus on a single design vision, Herman Miller chose to work with an array of designers. Mark Goetz’s idea Exchange Center is a large marker board/display surface that also delineates group space. Jeff Weber contributed the Foldaway mobile table, the Caper chair (an existing product), and the Mobile Easel. Kyle Swen and Danny Peter’s Work Island serves as a mobile café or a standing meeting space for two to six people. Ayako Takase and Cutter Hurt’s Kotatsu worktable features a functional understructure and a clever center-cutout tray, and when workers need to take a load off, David Pesso’s Celeste Lounge Seating offers a soft seating solution. Herman Miller, Zeeland, Mich. www.hermannmiller.com CIRCLE 212

Durable lacquered executive furnishings

Suit of one of the Fantoni North America’s experimental chairs, the Stripes collection of office furniture was recognized with an award at this year’s Salone del Mobile’s office exhibition, 2004. Developed in cooperation with Marco Viozzi, Stripes uses a 32" stripe of colored bands in three color schemes, including shades of green (left), multicolored (right), and shades of gray. The system is composed of a bookcase, a desk, and a bench in two width/height combinations. Each element is manually lacquered with high-resistant paint on MDF panels. Luminaire, Miami, Fla. www.fantoni.it CIRCLE 213

New standard for sustainable carpet tile

C&A Floorcoverings has introduced the Cycle Collection, a non-directional design of different scales intended for corporate and government settings. Sequence is the first of the two designs to be released, followed by the blocks-on-blocks design of Cadence. The environmentally friendly carpet tile will utilize Honeywell’s (formerly BASF) Savant HRC (High Recycled Content) nylon with a minimum of 50 percent recycled content (25 percent post-consumer and 25 percent post-industrial). In addition, a built-in RS tackifier eliminates the use of wet adhesives, which can contribute to poor indoor air quality. Independent, third-party certification through Scientific Certification Systems has verified the total recycled content of the product as well as its 100 percent recyclability. C&A Floorcoverings, Dalton, Ga. www.tandus.com CIRCLE 214

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Sit and think
Steelcase's new mid-priced office chair, Think, is designed with a three-part "brain": Forsor that adapt to the user's movements; a reclining mechanism that creates resistance proportional to the user's individual weight and an adjustable back selector. The company worked with McDonough布拉格Art Design Chemistry to give the chair a "conscience," as well. Comprised of 98 percent recyclable content and up to 50 percent recycled material, Think is the greenest office chair on the market to date. Steelcase, Grand Rapids, Mich.

Smarter table shape
The e-table 2 trapezoid is Vecta's newest wire-ready meeting, presentation, and teleconferencing table. The trapezoid shape of the table gives everyone a better view of the camera and video display during presentations. The table also offers instant tabletop access to extra multifunctional utility bays open to reveal four electrical outlets, 12 voice/data outlets, or a variety of multimedia connectors. Vecta, Grand Prairie, Texas. www.vecta.com CIRCLE 218

Ergonomics for the masses
Alsteele's new mid-priced Sum chair features a gas-filled bladder—made of a puncture-proof material borrowed from the biomedical field—to provide automatic, self-adjusting lumbar support. Designed by Marcus Koepke of Alsteele's #39 chair, Sum offers automatic weight-activated control and provides a universal fit for more than 90 percent of the population. Alsteele, Muscatine, Iowa. www.alsteeleoffice.com CIRCLE 222

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**Certifying the Certifiers**

Haworth is helping the U.S. Green Building Council (USGBC) in Washington, D.C., meet its own stringent guidelines for LEED CI (commercial interiors) certification with furniture and movable walls from both Haworth and its subsidiary, SMED. Some of the furniture choices meant using wheatboard instead of the industry standard MDF or particleboard. USGBC also chose FSC-certified cherry veneer for SMED’s wood casegoods (Masters Series shown below). Haworth, Holland, Mich. www.haworth.com

**Look good on paper**

The Paper Collection is one of the newest designs resulting from the collaboration between the family-owned Northern Italian manufacturer Plank and designers Raul Barbieri and Anna Giuffrida. The Paper Collection is available in side, arm, and swivel options and at bar and kitchen heights. Featuring a tubular, steel-polished chrome frame, the molded seat and back are available in colored laminate, aluminum laminate, and veneer. ICF Group, Taftville, Conn. www.icfsource.com

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Product of the Month  
Ductal Components

The first light-rail transit station constructed with Lafarge North America's Ductal high-performance composite material is expected to open for commuters at Shawnessy Station in Calgary, Canada, at the end of the month. The Ductal components, manufactured for Calgary architect Enzo Vicenzino of CPV Group Architects & Engineers for the City of Calgary, include 24" thick precast curved canopies (measuring approximately 18' x 20'), as well as struts, columns, beams, and rain gutters. The composite is significantly stronger than normal concrete: It has a compressive strength of 20,000 psi (six to seven times stronger) and a flexural strength of 4,000 psi (three times stronger).

To validate the performance of the structural system and material, a full-size canopy prototype was sent to the University of Calgary for intensive, full-scale load tests. The results confirmed the Ductal canopy not only surpassed the test criteria, it easily carried full-factored live and dead loads without cracking. Lafarge N.A., Calgary, Canada. www.imagineductal.com CIRCLE 227

Customize your concept

The Concept Series is a new collection of concealed-fastener exterior metal wall panel profiles. Available in 12" and 16" widths, the panels are available in G-90 galvanized steel, aluminum, stainless steel, and Centria's Durallure finish system. Profile options consist of narrow ribs, medium-width ribs, and wide flat surfaces that can be used to create a single repetitive appearance or to generate a pattern or feature on a wall elevation. Centria, Moon Township, Pa. www.centria.com CIRCLE 228

A dynamic exhibition of fabric

Transformit, a tension-fabric-structure design, manufacturing, and rental company, has unveiled its new collection of tension fabric structures for exhibition, event, interior, and retail applications. The Dynamics collection, composed of six interchangeable components, features an aluminum extrusion frame that can hold up to three layers of fabric. Different lighting effects can be used between the layers to achieve visual motion. Transformit, Gorham, Maine, www.transformitdesign.com CIRCLE 229

American debut

designer

Norguet makes American debut with lounging chair

Norguet, who has been in the fields of fashion, furniture, and product design, generated a plan four years ago with his "Rainbow" chair of colored Plexiglas layers for hi. Only comes in its own bright palette of colors in fabric and leather, and brushed nickel legs and a back cushion that appears to plug into the back of the chair. Bernhardt Design, Lenoir, N.C. www.bernhardtdeisgn.com CIRCLE 230

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Product Briefs

Exhibitions honoring textile artists
In the past few months, two different New York galleries featured the work of textile artists. The design gallery/store Moss introduced "fossilized textiles" (below right) created by artist/designer Luisa Cevese with light layers of polyurethane and precious fabrics, while Gallery Gen presented the work of master Japanese textile artist, Jun-ichi Arai. Over 30 of Arai's works, including cloths made of a flame-retardant fiber he has been secretly formulating for theater drapery, were on display (left). Gallery Gen, New York City. www.gallerygen.com CIRCLE 231 Moss, New York City. www.mossonline.com CIRCLE 232

Real ivory? Don't be nutty
Providence Artworks new Ivory of Tagua Collection features an ivory look-alike vested from the Tagua Palm Nut. The cabinet knobs—hand-carved by Ecuador artisans—look, feel, age, and have the strength of elephant ivory. Used as an substitute since the Victorian era (mostly buttons), the demand for the Tagua nut declined after the discovery of less expensive synthetics. Providence Artw Venice, Calif. www. providenceartworks.com CIRCLE 233

Concrete masonry units
Made of 10 percent recycled thermoset high-strength plastic powder, Sealtex concrete masonry blocks are 10 percent lighter than (and have a 2-hour fire rating, R value, and U value comparable to) standard concrete block. The water-resistant blocks come in 16 colors, with a split-face or smooth finish, in a standard 4", 8", and 12" size. US Technology, Canton, Ohio. www.sealtexblock.com CIRCLE 234

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A rug by any other name

Architect Michael Graves, FAIA, has designed a new collection of Wools of New Zealand Brand rugs from Glen Eden. The collection includes 18 patterns (Rose, below), each embracing Graves's experiences as an architect. All patterns are offered in custom shapes and sizes, and custom colors can be matched from a sample or selected from a palette of 42 standard shades. Wools of New Zealand, Calhoun, Ga. www.glen-eden.com CIRCLE 236

A New Shade of Mold-Control

Temple-Inland has introduced Silent Guard TS, a mold-resistant version of its existing Silent Guard shaftliner panels. Designed for elevator shafts, stairwells, and area separation walls, Silent Guard maintains the same sound-control and fire-resistance of the traditional product. The TemShield protection system is manufactured in both the core and the surface of the panel and is recognized on the job by a new magenta face paper. Temple-Inland Forest Products, Diboll, Texas. www.templeinland.com CIRCLE 237

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Fabric duct filter system
DuctSox’s Final Filter is the HVAC industry’s first replaceable in-duct air filter for fabric duct that increases IAQ and energy savings while reducing outdoor air requirements and building maintenance. The cone-shaped Final Filter is designed for supplementing primary filter systems in new or retrofit buildings with DuctSox air dispersion.
DuctSox, Dubuque, Iowa.
www.ductsox.com CIRCLE 238

Cladding alternative
The Fasec facade system combines wood composite sheathing, a base coat reinforced with glass fiber mesh, and a finish coat available in a range of colors. The system incorporates a lightweight foam resin binder and can be used with either steel or wood frames. Fasec is constructed with a ventilation gap and can be used for residential and commercial buildings. Facades, Springfield, Mo. www.facadesinc.com CIRCLE 239

Coastal-approved roofing
The Met-Tile roofing system is now available in an aluminum substrate with a Meadow Green finish. Though it looks like tile, the roofing consists of the same profile as the standard Met-Tile system: 3′ wide panels that are securely applied for wind- and weather-tight performance. Aluminum’s superior resistance to corrosion and water makes the product ideal for coastal environments. Met-Tile, Ontario, Calif. www.met-tile.com CIRCLE 240

Exterior-grade laminate
Used in Europe for more than 20 y, MEG (Material Exterior Grade) from Abet is an exterior high-pressure laminate consisting of layers of kraft paper impregnated with thermosetting phenolic resins. Bonded by heat and high pressure, the core and exterior color are one piece. MEG is graffiti-proof, and custom patterns can be created digitally for building exteriors. Abet, Englewood, NJ. www.abetlaminati.com CIRCLE 241

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Product Literature

Tile competition winners
Ceramic Tiles of Italy has released a new book titled Ten Years of Design Excellence: Ceramic Tiles of Italy Across America. Award-winning tile applications, culled from the Ceramic Tiles of Italy Design Competition, are the focus of the 114-page book, which features more than 25 projects. Italian Trade Commission, New York City. www.italiatile.com CIRCLE 242

Faucet brochure
The 2003 Price Pfister faucet collections are featured in a new 60-page color brochure, which details 48 new faucets in a range of finish options and available configurations. Price Pfister Faucets, Lake Forest, Ill. www.pricepfister.com CIRCLE 243

Indoor/outdoor door catalog
Stilewood’s 32-page architectural catalog features more than 65 of the company’s standard interior, exterior, and custom door designs shown with glass and transom choices and various prehanging options. The catalog illustrates Stilewood’s cross-machining capabilities and the many species options available. Stilewood, Port Coquitlam, British Columbia, Canada. www.stilewood.com CIRCLE 244

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Online reference for the basic stock metal products regularly produced in the U.S. www.metalreference.com

New site for contemporary kitchen range hoods www.siriushoods.com

Site that promotes the sustainability of Italian tiles www.s-tiles.it

Guide to greener specs
PPG Industries has outlined its new Ecological Building Solutions collection of glass, coatings, and paint for sustainable design in a new 12-page booklet called It’s Just Our Nature which provides specific guidance on how PPG products can help architects earn LEED credits for their projects or meet ASTM E 2129 standards for sustainable building. PPG Industries, Pittsburgh. www.ppg.com CIRCLE 245

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Product Literature

Countertop Installation CD
The Marble Institute of America (MIA) has released a new training CD-ROM for the natural stone industry. Natural Stone Countertop Installation Overview is the first in a series of instructional tools the association is developing for members and others within the stone industry. Marble Institute of America, Cleveland. www.marble-institute.com CIRCLE 248

Signage system guide
Vista System's new MCFT Guidebook 2: Signs includes more than 500 examples of sign types professionals can design with Vista's new Modular Curved Frame Technology (MCFT) system. The 82-page guidebook came as a result of the market's demand for a modular system with custom-fabricated appearance and capabilities. Vista System, Sarasota, Fla. www.vistasystem.us CIRCLE 247

Residential recreations

Porcelain tile brochures
Ilva S.A. offers two new brochures that highlight the firm's San Ignacio and Nevada series of porcelain tiles, inset and listellos through detailed photographs and technical product information. 305/667-7090. Ceramic Consulting Corporation, Coconut Grove, Fla. CIRCLE 249

Customizable workstation
Allsteel has introduced several publications to support its new Landscape Surfaces program in partnership with Pentone that allows any color in the system to be applied to Terrace tiles. In addition to a Design Guide that provides designers, specifiers, and end users with a comprehensive offering of workstations using the Terrace workstation, Allsteel offers a Surfaces and Materials brochure that features the newest colors for Terrace tiles. Allsteel, Muscatine, Iowa. www.allsteeloffice.com CIRCLE 250

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Sound and space interface in Christopher Janney's unique world

Interviewed by Jane F. Kolleeny

Christopher Janney's work represents a fusion of his two passions—music and architecture. Three years after graduating in 1973 from Princeton University, where he majored in architecture and sculpture, he entered a master's program for artists at MIT, providing him free reign to experiment with technology. Janney developed a unique form of environmental and participatory architecture, an immersive art form that relies on sound to transform space. When the New Sound, New York program of performance, dialogue, and sound installations was launched in New York City this spring, Janney, curator and a visiting professor at Cooper Union, spoke to RECORD.

Q: What inspired you to think that music and architecture could be partners in art? All my works are fundamentally made of rhythm, harmony, and motion. With many of my installations, such as Harmonic Run, an interactive environment of light, sound, and color at the Miami International Airport, I control the harmonic and melodic aspects, but the rhythm is given over to movement through the particular architectural space. People move through the 180-foot-long concourse, trigger photo sensors stationed every 10 feet, which send information to computers that shape the rhythm of the music piped into the space. I want people to experience my pieces, not just see them.

Much of your work exists in urban areas. Why? I feel cities need humanizing. For example, large urban plazas are often designed to respond to adjacent buildings, but rarely consider the pedestrian. In an effort to bring human scale back to the plaza, I designed something called Sonic Forest, part of a series of musical instruments, a theme that characterizes many of my pieces. It is a series of columns placed on a plaza to create scale. Sensors, lights, and speakers in each column respond to the passersby.

Has the architecture profession embraced your work? I think architecture embraces my work, but not necessarily the profession; painting the space with sound, something that falls under the normal purview of architecture. A number of factors in the past 10 years helped to change that, such as the One Percent Program, where public construction budgets dedicate one percent to art. In private development, however, usually the first thing to go. In the end, it comes down to relationships; you resonate with those that understand and appreciate what you do, and they hire you.

Do you find that you use your architectural training in creating art? I am so happy to be trained as an architect. In architecture school, I learned how to convey abstract concepts to a variety of audiences, an invaluable skill. Also, sketching and learning CAD have been extremely useful tools. Since my interest is in making music out of information from the concrete world that helps me create; to me, that is music in large part results from being an architect. Someone asked Gehry what he believed an architecture student needed to do to go into architecture, and he said, "read novels," and I totally agree with him. Architecture is a frame of mind; it's about ideas; the profession is about translating those ideas into the real world. Recognizing these two aspects and finding how to bring them together is what it's all about.

Photography by Andrew French
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