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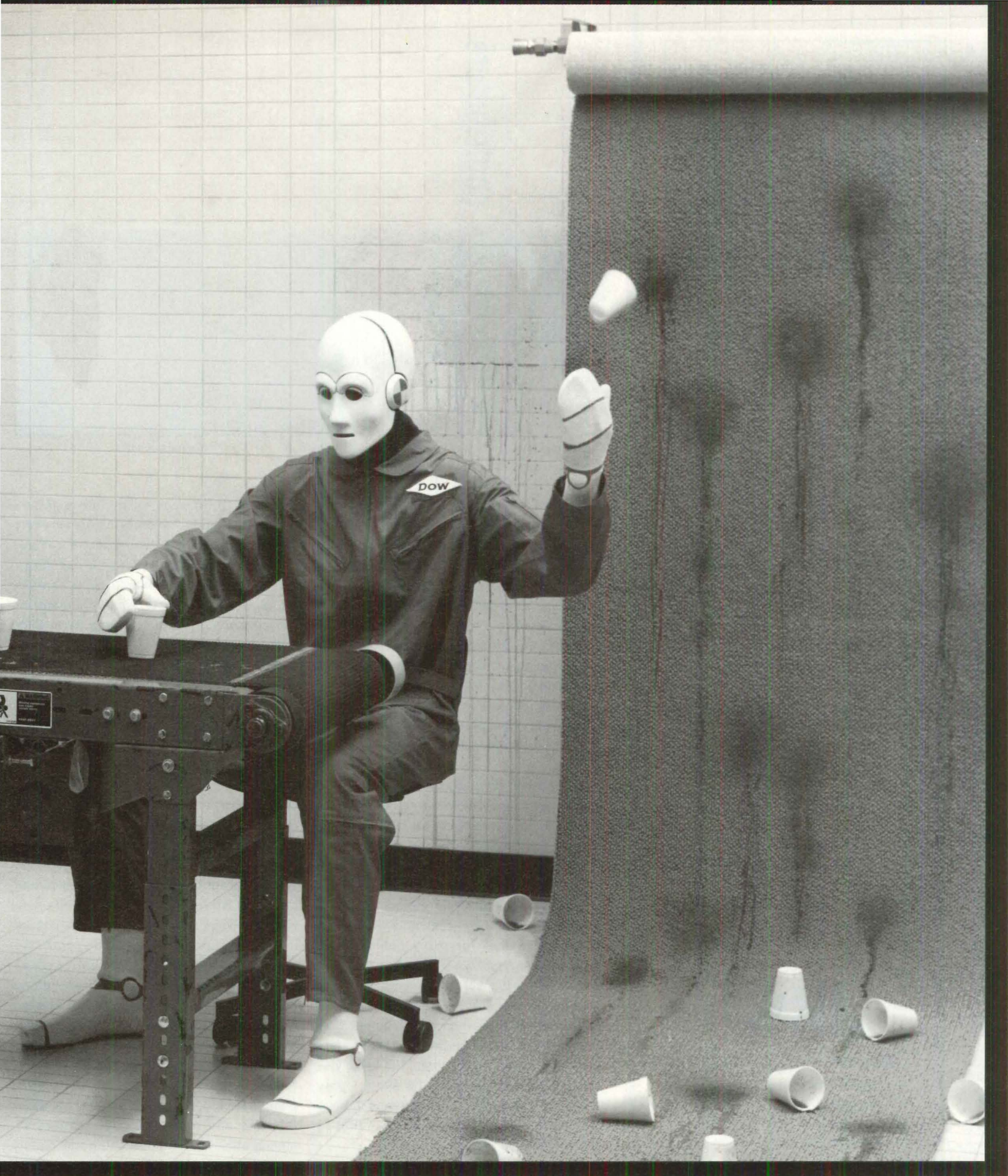
SURFACE TENSION

A modern office interior featuring a suspended ceiling with a grid-hiding visual. The room includes a desk with a computer monitor, a lounge area with two beige armchairs and a small table, and a large window. The ceiling is a key feature, showing a grid pattern that is not visible from the ground level.

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2. Grid-hiding Visual

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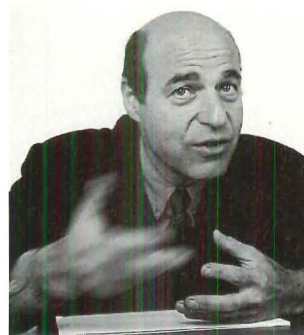
The Finest Finish

Circle 13 on information card

contributors



Raul Barreneche



Jean-Louis Cohen



Richard Johnson

New York City-based critic and writer **Raul Barreneche** worked at *Architecture* from 1993 to 2000, most recently as a senior editor. Now working as a freelance writer, Barreneche is a contributing editor to *Metropolitan Home* and *Travel & Leisure*, and writes for *The New York Times*, *I.D.*, and our sister magazine, *Interiors*, among other publications. Barreneche is currently working on a book about contemporary American houses, forthcoming from Rizzoli/Universe next fall. In this issue, he writes about Dutch designer Petra Blaisse for our Culture section (page 57).

Photographer **Nina Berman** has covered wide ground, from photojournalistic work in Bosnia and Afghanistan, to her own domestic documentary projects. Her current endeavor, recently exhibited at the Museum of the City of New York's *New York Now 2000* show, is photographing New York's refurbished Times Square. Berman has received a number of awards and shot for many publications, including *The New York Times Magazine*, *Life*, and *Fortune*. This month, Berman traveled to Loudoun County, Virginia, to shoot the mix of farmland and suburban development that Bradford McKee outlines in his Practice story (page 41). "As a city dweller, I felt like a visitor in a strange land on the shoot," says Berman. "The people there seemed to have very little understanding of what they're creating around them."

Originally trained as an architect, Paris-based **Jean-Louis Cohen** is involved in many aspects of the field. As writer, lecturer, academic, and curator, Cohen has contributed significantly to the study of architecture across the globe. In 1997, the French Minister of Culture appointed him to create Paris' Cité de l'Architecture, a museum and exhibition center, slated to open in 2003. Cohen has curated numerous exhibitions, in addition to running the Musée des Monuments Français, also in Paris. Cohen recently coauthored a book on Casablanca, forthcoming in the fall of 2001 from Monacelli Press, and has served on the editorial boards of *Architecture*, *Casabella*, and *Design Book Review*. This month, he reports on the DOCOMOMO conference in Brasília for our Culture section (page 60).

A photographer of both architecture and interiors, **Richard Johnson** worked as an interior designer for 15 years. "The life span of interior design projects is only about five years," he says, "and by documenting styles and trends photographically, I was making permanent work." In 1982, Johnson started his Toronto-based company, Interior Images. "The ambiguous name allowed me to work as both photographer and designer," he says, though he currently dedicates all his time to photography. Johnson has shot for *Canadian Interiors* and *Interior Design* magazines, among other publications, and works mainly with architects and designers. This month he shoots Kohn Shnier's new Umbra headquarters in Toronto (page 68).



The Best Gifts \$1 Million Can Buy

By Reed Kroloff

For American architects, 2000 has been the gift that keeps on giving: profits rose to their highest levels in decades, unemployment all but disappeared, and most firms enjoyed a healthy backlog of work. No wonder we got such modest responses (no jet planes, no castles in Spain) when we asked designers to name their ideal holiday gift (page 64); they were already sated.

Given the bounty, an additional wish list might seem greedy. But this profession still faces significant challenges, and some of its newfound prosperity should be directed toward resolving these persistent problems. This list is not comprehensive. However, in our strong new economy, it is surprisingly achievable. Aggregate architectural service revenues soared into the billions this year; only \$1 million dollars would fund any one of these proposals.

Architectural Research

No profession spends less on research and development than architecture, a field that prides itself—and justifies its professional licensure—on technical expertise. One million dollars should be devoted annually to research that encourages innovation in materials and methods technologies, as well as studies of the business and economics of practice. Imagine what could be done with a report that proves once and for all that architect-designed buildings generate increased bottom-line performance for their owner/developers—in other words, that good design pays.

ArchIPAC

Let's make 2001 the year architects give up their distaste for politics and address their naiveté about how it works. The art of the possible is purchased with cold, hard cash, and architects need to spend some. The American Institute of Architects (AIA) has been

trying earnestly to get its political action committee off the ground, but to little avail. An annual budget of \$1 million would make ArchiPac a player in Washington and a serious contender in the hundreds of important races and ballot initiatives that affect architects at the local level each year.

Advertising

This profession has an image problem: people don't know what architects do, or why it's important. Thus, AIA was right to push its members into an advertising campaign a few years back. But the effort was limited, and the ads have all but disappeared. In a world where saturation is the standard, it is critical to keep the drumbeat going. An annual budget of \$1 million won't buy spots during the Super Bowl, but it would be enough to support a reasonable print media campaign.

Reforming Internship

Internship is a problem that literally threatens the future of the profession: The program is a disaster area, and the number of people sitting for the licensing exam has fallen frighteningly as a result (testing has fallen by nearly 75 percent since 1997). If the trend continues, this profession could simply cease to exist. One million dollars would fund a number of pilot programs aimed at creating a viable alternative system.

How to implement these ideas? As the only truly national professional society for architects, the AIA, led by CEO Norman Koonce, is the natural choice for leadership; the Association of Collegiate Schools of Architecture could head the research agendas. And the money? Well, a million dollars is only slightly more than what the AIA spends each year on the care and feeding of its 48-member board of directors (and their spouses and hangers-on), and far less than it shells out to keep its "for-profit" Web venture afloat.

If these suggestions sound good to you—and you're an AIA member—call Santa Koonce at (202) 626-7300. Tell him you've been nice this year—nice enough to renew your membership—and that you want action. Alternatively, you might suggest that a million dollars would be buy subscriptions to *Architecture* for all members who don't currently receive it. What could be a nicer gift than that?

Seasons greetings and best wishes for a healthy, happy new year. ■



Visible Quality

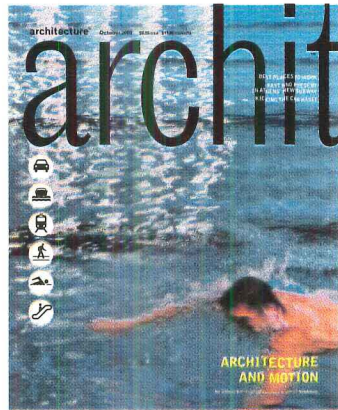
Elevator design flexible enough to harmonise with any architectural theme

Daiwa Group's brief for its European headquarters at 88 Wood Street, London, posed many difficulties for Richard Rogers Partnership*. "Daiwa wanted not only a magnificent piece of architecture, but a fully operational building suitable for a major securities house." Aside from reliability, comfort and safety, the architects chose Mitsubishi for their design flexibility. To complement the building's maximum transparency, the brief demanded "not only fully glazed elevator enclosures and staircases, but also fully glazed elevator cars... We were worried about how to maintain the appearance of lightness and transparency in the cars, so we came up with the idea of asking Mitsubishi to design a glazed floor which could be illuminated from below. Psychologically, passengers feel they are in an entirely glass container." This required a revolutionary collaborative design by architect and engineering team. "There were so many requirements which pushed the design of the elevator car itself beyond the normal constraints that Mitsubishi would have accepted."

The result is full satisfaction for client, architect and passengers. "I'm very proud we used Mitsubishi. These elevators are probably the most advanced in the UK. We believe this will be one of the most visited buildings in London for the next decade. When you come, try standing a 20 pence coin on its edge in the elevator."

*Richard Rogers Partnership, the award-winning London architect's office headed by Lord Rogers.

*Mr. George Taylor
Development Consultant
88 Wood Street*



Deflating the Blob

Ned Cramer and Anne Guiney's article "The Computer School" (September 2000, page 94) does a disservice to the school of architecture at Columbia and the entire profession by reporting on our alleged avant-garde with no more depth than would be found in *People* magazine.

The article provocatively draws a parallel between today's Columbia and Gropius' Bauhaus of the 1950s, but the assertion is not backed up. Instead the reader is left with glib group photos of faculty and buzz about the dazzling careers of Columbia graduates.

According to Cramer and Guiney, Columbia's blobs appeared suddenly in the mid-'90s because of celebrity and technology. Egregiously absent from the article is any consideration of historical precedent. Expanding on the work of Buckminster Fuller, late pop designers were designing blob shapes, some even habitable, throughout the '60s and '70s.

The characterization of developments in computer education at Columbia as a revolution, as if compass-toting Luddites were ushered into the 21st century, is an outrageous exaggeration.

The fascinating idea that the complexity of blob-forms might actually draw architects back into being intimately involved with the making of buildings is hardly touched on. Instead, contractors become the scapegoats for archi-

itects' failures to follow design through construction and, in turn, engage a broader set of problems beyond the hermetic world of pixels.

In fact, the article's belittling of the construction industry negates the basic premise of the Bauhaus, the unity of craftsman and artist. Some architects' explorations into mass customization has the potential to take the glamorous forms of the blob designers into the earned achievement of the Bauhaus designers. But until that happens, the argument put forth in this article, that blobs represent the intellectual vanguard of our profession, is maddeningly inaccurate.

Carolyn Ann Foug, New York, Yale MArch '95; Naomi Louise Neville, Los Angeles, Columbia MArch '95

Critical Education

The article by Dana Cuff on "Studio Crit" (September 2000, page 76) was a start, but got off on the wrong foot! Architecture is a complex mixture of art and technology-building technology, not CAD technology. I have found that most recent graduates of architecture programs are well versed in the latter, and utterly ignorant and downright dangerous in their understanding of the former.

Teaching students both design and building technology in five or seven years is difficult, so perhaps one cannot fault the educational programs. But the fundamental demand in the construction industry is for practitioners to learn the industry from the footing up.

Poor detailing and a lack of understanding of the materials and assemblies of construction are creating a profession whose work is riddled with errors, and that is ill serving its real clients—owners and contractors—rather than the critics and theorists who pretend to be the "clients" of art.

Cuff only asks, "What practice?" in the third to last paragraph. I suggest that the educators should look first to the functions and goals of the architect in the construction industry, and then

allow the form of education, in part, to follow those functions.

Nels Larson
Washington, D.C.

Dynamic Disorder

Tijuana is the city of the immigrant looking for passage to the land of the American dream—a city of the 20th century without grandiose gestures of urban design like those a century before, but with the complexity and dynamism of the city of the future ("Tijuana Defies its Reputation," October 2000, page 32).

For the traditional urban planner Tijuana presents itself as a nightmare, an uncontrollable and deformed city. The hierarchical solutions based on models of European and American cities of the last century have been capricious ideas without success. The city is growing like an organism directing itself any way it wants to go; urban planning as we know it is futile.

To spend time trying to salvage a few buildings for the sake of preservation is useless. Tijuana is not about melancholic ideas about the past. It will take a new generation of architects to take advantage of this dynamism in the city, and until then, Tijuana will continue to defy order.

Rene Peralta, Architect
Tijuana, Mexico

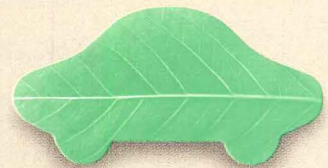
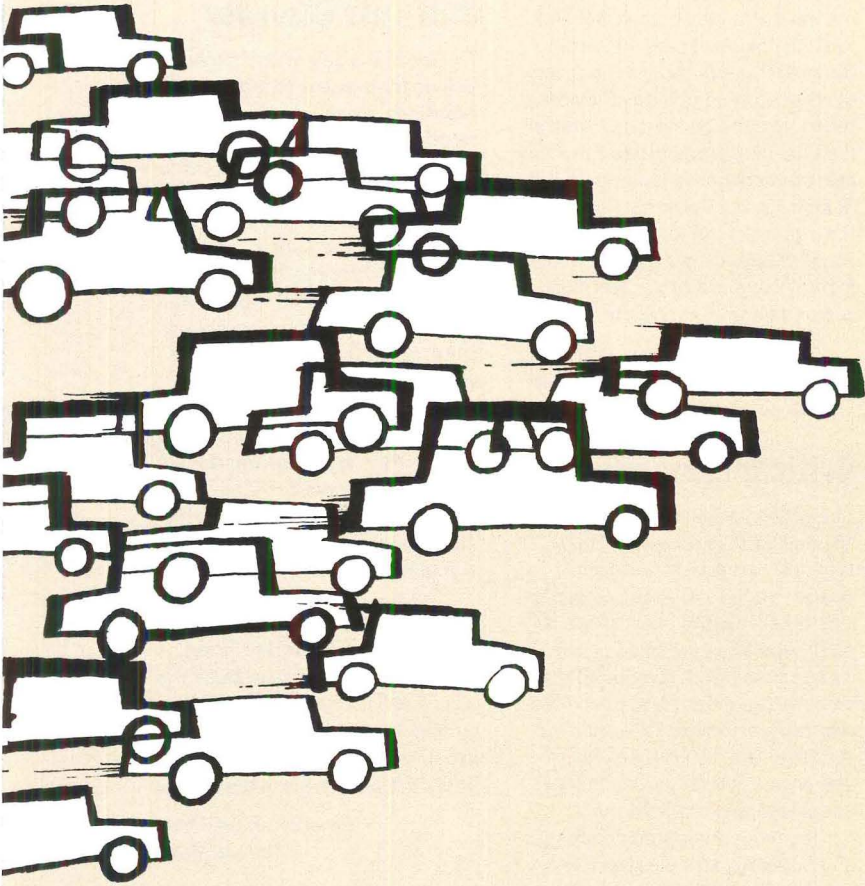
CORRECTION

The museum and theater lighting consultant for the Science City at Union Station (October 2000, page 100) was Mather Jorgensen Lighting Design.

The designer of the Minneapolis Federal Reserve Bank was HOK, not Kohn Pederson Fox Associates (October 2000, page 150).

WE WANT TO HEAR FROM YOU!

Send your letters to the editor to: Architecture, 770 Broadway, New York, NY 10003. Or fax to: 646/654-5817. Or e-mail us at: info@architecturemag.com. Include your name, address, and daytime phone number. Letters may be edited for clarity or length.



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Save For Frank Lloyd Wright
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Neoclassicists Unite!
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Great Jane

The National Building Museum honors urban activist Jane Jacobs with its second Vincent Scully Prize

Award No award is too exalted for Jane Jacobs, intellectual defender of traditional urbanism. Jacobs, who lives in Toronto, won a fabled early victory against postwar urban renewal with her 1961 book *The Death and Life of Great American Cities*; she has kept up the fight by penning a host of successive publications, including this year's *The Nature of Economies*. The battle raged on last month, perhaps incongruously, at a ceremony at the National Building Museum in Washington, D.C., where Jacobs was in attendance to accept the museum's highest honor, the second annual Vincent Scully Prize. During the event, Jacobs and New Urbanism-convert Scully (who was the first recipient of his namesake prize) went head-to-head publicly for the first time in their respectively titanic careers, on the subject of the future of American cities. In a phone interview before the event, Jacobs didn't seem too worried about the outcome, saying simply: "I think it will be fun." *Ned Cramer*

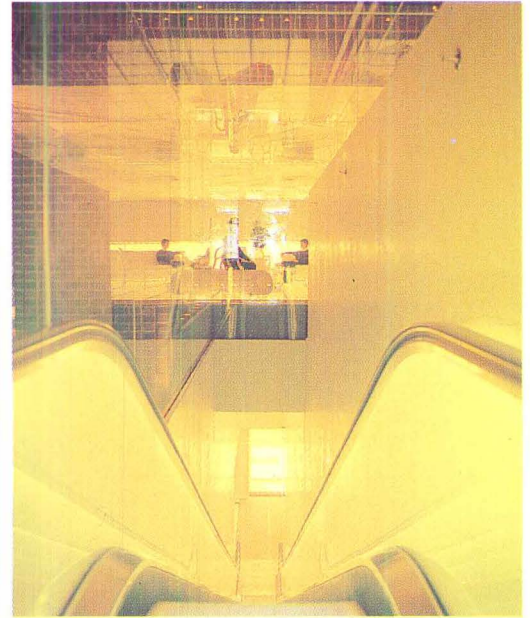
AIA's PAC Picks Winners

PACmen It only seems appropriate that in a year when a design problem nearly threw the presidential election (remember those visually confusing Florida ballots?), architects made their first serious foray into the political process. ArchiPAC, the American Institute of Architects' fledgling political action committee, distributed nearly \$150,000 to House and Senate candidates during the 1999–2000 election cycle.

Money flowed to both sides of the political aisle in anticipation of a narrowly divided congress. "We need to take a bipartisan approach to move our issues forward," explains Richard McDonnell, ArchiPAC's program manager. Most candidates received donations of \$1000–\$1500, though a few received more.

Playing it safe, ArchiPAC sided mostly with incumbents, and 80 of the 88 candidates it supported won their races. Unfortunately, Jane Frederick, the only architect running in a national election this year (October 2000, page 15), was defeated in her second attempt to unseat aging South Carolina republican Floyd Spence.

The effort depleted ArchiPAC's coffers, though AIA's McDonnell notes proudly that "money is still coming in." Member donations are voluntary, and not part of annual dues. ArchiPAC hopes to raise \$250,000 for the 2002 elections. *Reed Krolloff*



Philippe Starck Is Funkier Than Thou

Design Disco is not dead. Certainly not to Ian Schrager. In the early 1980s, the legally challenged Studio 54 kingpin said "I will survive," reimagining himself as the world's first rock-n-roll hotelier. His baroque lodging fantasies dot Manhattan's (and, now, the world's) hipscape, an area brought to you by French enigma/architect Philippe Starck. Their latest collaboration, the Hudson hotel, sits in a soon-to-be-fashionable (you heard it here first) West Side neighborhood on the northwestern fringe of Times Square's creep.

Never one for subtlety, Starck punctured the hotel's monolithic concrete entrance façade with eerie acid-yellow-green-lit cutouts. To get to the second-floor lobby and registration, visitors ascend an elevator enveloped in the same yellow fog, while patrons imbibe in the glass-walled and -floored cocktail lounge above. Surprisingly, not everything at the Hudson approaches the ersatz, including a librarylike, billiards-themed bar, a brick-walled lobby with creeping ivy, and shoebox-size rooms worthy of any train-borne Agatha Christie mystery.

But the main lounge—with its minimalist nod to the percolating illuminated floors of Saturday Night Fever—puts drinkers on display, mixing over-the-top eye candy (a confectionery ceiling mural by Francesco Clemente) with quirky modern furniture (holographic chandeliers by Ingo Mauer and several antler-enhanced pieces). Get out on the dance floor and pout! *Mickey O'Connor*

Historic Savannah Says No To Fake Bricks

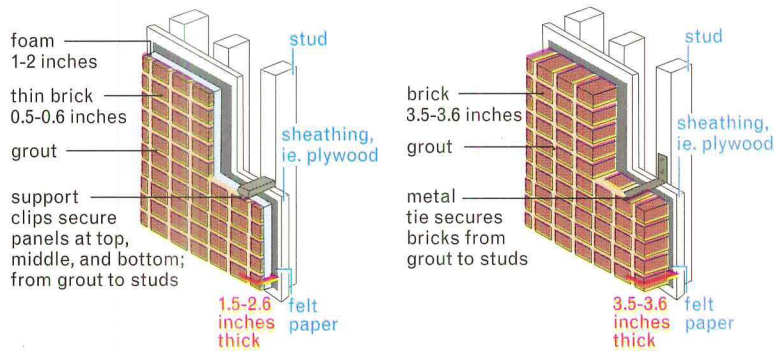
Preservation When is a brick not a brick? When the walls it creates, according to an architectural review board that oversees historic Savannah, Georgia, are made out of 20th-century materials rather than those common to the era of city founder James Oglethorpe.

What has people in Savannah thinking about bricks is a plan for an 80-room Sleep Inn and Suites Hotel on the perimeter of Savannah's historic district. In July, the city's historic review board withheld approval of a thin-brick system for the building's skin. The board said the material was visually incompatible with its surroundings and did not settle durability concerns. In response, the hotel's owners filed suit in Georgia Superior Court, charging that the review board was unable to articulate the reasons behind its objections.

The board held a second hearing on November 8 and again rejected the brick veneer. At the hearing, developers Jitendra and Jayshree Patel said they

would drop the lawsuit and build with standard bricks. The result, says Sleep Inn architect Ronald Kolman of Kolman & Smith Architects in Savannah, will be thicker, heavier walls that will make guestrooms slightly smaller than Sleep Inn standards. Structural upgrades will also cost the Patels \$300,000.

The historic review board acted partly on the recommendation of the Historic Savannah Foundation, which argued that the performance of the brick veneer was untested in the Savannah climate. City preservation office Beth Reiter said in addition that the veneer did not meet aesthetic standards. *Vernon Mays*



Economics

Alternate Careers Offer Architecture Grads More Money

After his or her final final exam, the architecture school grad can choose one of two paths: go into practice or use the degree as a point of departure to another endeavor. Kermit Baker, American Institute of Architects' chief economist, who recently completed a study of Harvard Graduate School of Design alumni, says both paths appear to lead to success—though the traditional route often returns lower (read: less lucrative) rewards. "Many alternative careers offer considerably higher compensation than is offered at architecture firms," Baker said.

Though wages are getting better for those in traditional design firms and academia, selling out still looks good. And the further an architecture graduate moves away from design-related professions, and into fields such as consulting and developing, the larger a salary he or she can expect. At the top end, corporate non-design positions offer 96 percent greater compensation than those in the traditional architecture industry.

These alternate careers attract many female workers—who still earn less on average and in all fields than their male counterparts. Women workers in "corporate non-design" and "other" fields are cheated out of only about a nickel per dollar, while in traditional architecture firms they make 30 cents to the dollar less.

Even though Baker's observations are limited only to GSD alums, they represent a broad view of the wider architecture market. *Edward Keegan*

Buzz

Going against the notion that visitors' centers should be plainly visible to visitors, the **Capitol Preservation Commission** in Washington, D.C., has finally approved plans for an underground visitors' center on the Capitol grounds. But while the 1999 federal budget included \$100 million for the \$265 million project, this year's fiscal plan has no appropriation for it.

Athens, Georgia's **Grow Green Coalition**, an organization dedicated to slowing urban growth in the area, called on Georgia's favorite sons to spread the smart growth gospel last month. Near City Hall, roots rockers **R.E.M.** performed a brief concert. Between songs, lead singer Michael Stipe railed against careless urban planning and sprawl.

Jack Dangermond, president of ESRI, was awarded the LaGasse medal by the **American Society of Landscape Architects** for his contributions to the management of natural resources, public lands, or other lands in the public interest.

Developers in San Francisco have proposed building on a replica of everybody's favorite sunken ship, the **Titanic**, to be used as an 860-foot, 568-room luxury hotel on the bay. Officials have indicated that the ship/hotel will remain docked and won't move, forward, backward, or down.

Vinyl upholstery, according to a recent study, has more bacteria-resistant benefits than fabric. Great news for the **Chemical Fabrics and Film Association, Decorative Products Division**, and grandpa and his favorite recliner.

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Whoa, Cowboy! As Las Vegas Expands, the FDIC Frets



Sprawl Watch Texas oil tycoons and Phoenix real-estate magnates were kings of braggadocio until their industries went bust in the 1980s. Now, it's developers in Las Vegas who are puffing out their chests.

Growth is rampant in and around Sin City: Suburban Henderson, Nevada, saw a 155.6 percent increase in its population to 166,399 over the last decade, according to an October Census Bureau report, making it the fastest growing city in the nation. Just behind Henderson in the standings is North Las Vegas, Nevada, and its 112.4 percent population boom. Three more cities down the list is Las Vegas, which experienced a 61.1 percent upward shift, according to Census information. Giving these new Nevadans places to live and work has become the foundation of Las Vegas' *uber*-economy.

In the middle of this prosperity a voice of dissent sounds like a devil's susurrant. Even though no one wants to hear about it, the FDIC wants construction to slow down: Just the slightest suggestion that the building bubble by the desert might burst has the federal banking agency worried. In its third-quarter report, released in October, the FDIC warned Las Vegas against commercial overbuilding. The agency based its findings on the amount of existing space under construction, and found that the areas of office, industrial, retail, and multifamily housing are in danger of being overbuilt.

"I've been here since 1976, and every year we hear this," Jim Whitworth, of GMC Real Estate, an established brokerage in booming Henderson, said. "We thought in the middle of last year around June that we were getting a little ahead of ourselves in big boxes (storage facilities). Now we have 96 percent occupancy," he said, adding, "We're not building 'em fast enough."

Some have criticized the FDIC for basing its findings only on land use—not financial—information. Local bankers say they are servicing healthy loans.

FDIC officials say they only want Las Vegas developers to proceed with caution. "We're cognizant of the fact that banking is on strong ground," Rich Brown, chief economist of FDIC market trends section, said. "We're looking at markets where growth is most rapid and are asking bankers and developers to take a hard look at the deals, that things are under less-than-ideal conditions. . . . It's the perfect time to raise this issue." *Anthony Mariani*

Peter van Dijk Pace of Van Dijk Pace Westlake Architects has received the Gold Medal Award from the Ohio Chapter of the **American Institute of Architects** for his "exemplary efforts and significant accomplishments in the architectural profession."

Chicago's housing authority has announced plans to build 25,000 public housing units in "mixed-income" neighborhoods over the next 10 years.

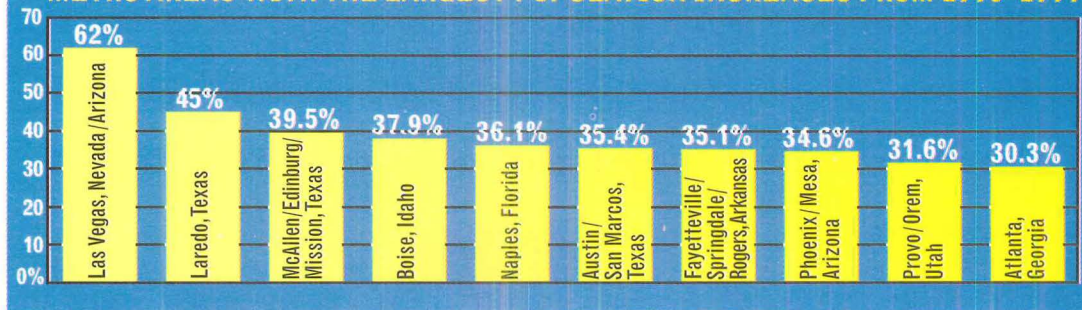
Palace Amusements in Asbury Park, New Jersey, is now officially holy land. The amusement park that we believe provided lunch-bucket rock 'n' roller **Bruce Springsteen** with years of fun and inspiration (the park is referred to in the Boss's anthem, "Born to Run") has been designated a historic site. Springsteen fans began lobbying for preserving the park in 1998 when it was closed down by the city and slated for demolition.

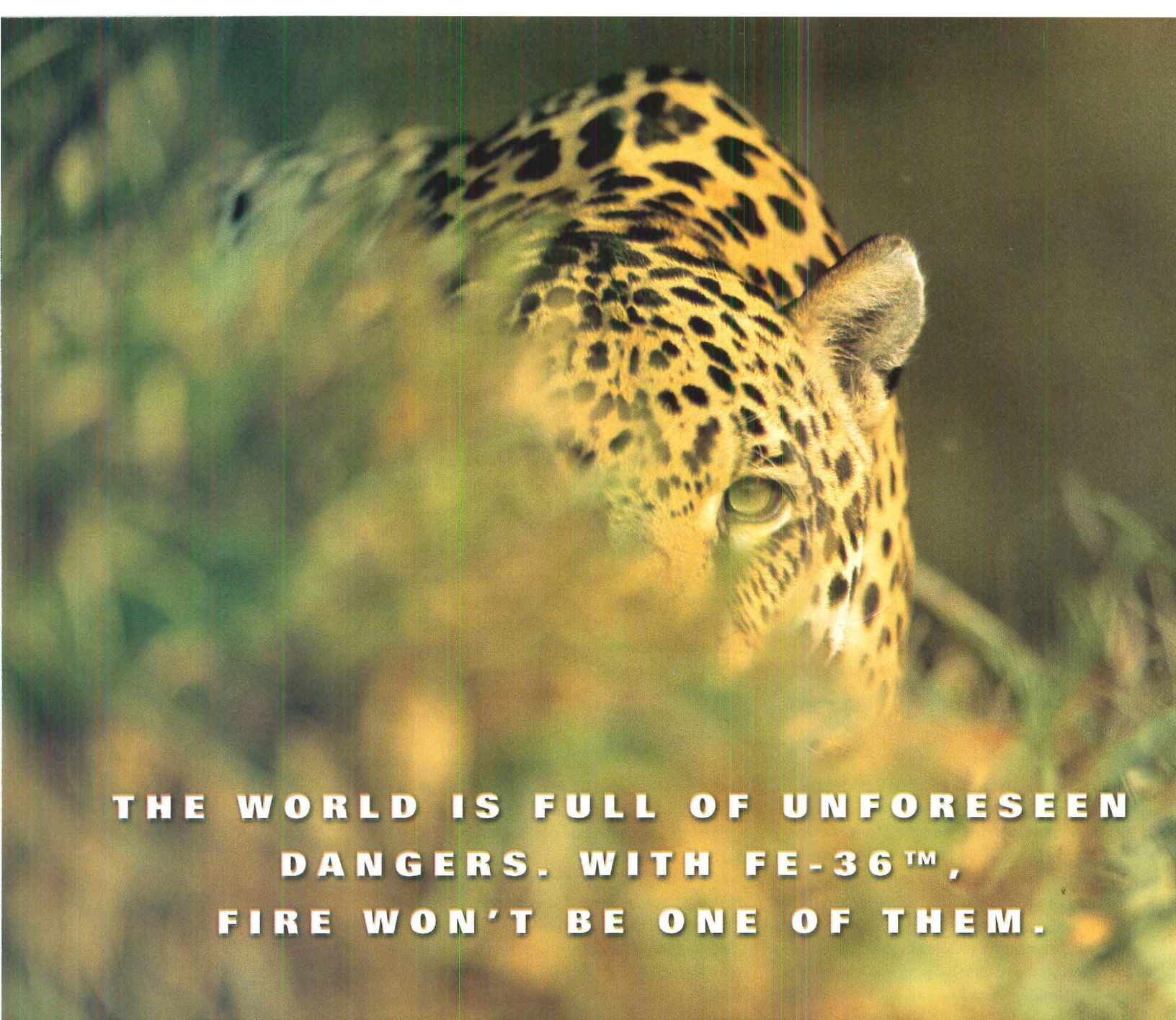
Expats in Cairo will have no problem avoiding the locals from their new perches. Plans for **New Cairo City**, a 722-acre planned community for newly relocated employees of multinational companies, are underway. Four U.S. design firms, **Sandy & Babcock**, **the Jerde Partnership**, **Overway Larsson Pedersen Architects**, and **EDAW San Francisco**, have already been tapped.

Liberace is getting another face-lift. The **Liberace Museum** in Las Vegas has chosen **Leo A. Daly** to redesign the pianistic palace.

Howard Decker has been appointed as the **National Building Museum's** chief curator.

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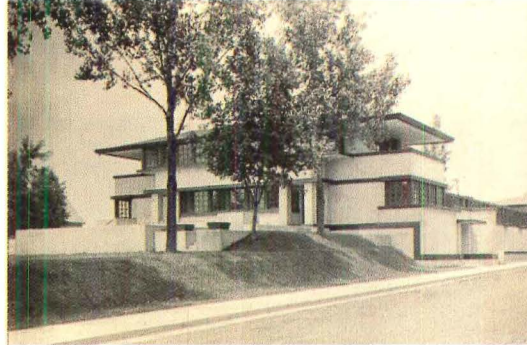
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Frank Lloyd Wright Organization Preserves House



Preservation

Achieving harmony between site and structure was Frank Lloyd Wright's aesthetic mission when he erected the Burton J. Westcott House in Springfield, Ohio, in the early 1900s. His only prairie house in that state, the Westcott house was another of Wright's works that later would be attributed with birthing modernism; the modular structure (pictured in its heyday at top) was even featured in Wright's *Wasmuth Portfolio*, the celebrated German publication of his best early works.

That was then. The house has spent the past few years in a state of disrepair. Like other Wright structures across the country, it looked as if its time had passed with the age of ragtime. The Westcott House, neglected by its owner, was in danger.

Then the Frank Lloyd Wright Building Conservancy and help arrived. Last month, the organization, backed by a recent gift to the conservancy called the Lewis-Haines Revolving Fund, purchased the house, marking the first time the conservancy has saved a Wright building by buying it. The conservancy plans to prepare a historic structure report and a preservation easement for the property and eventually sell it to the Westcott House Foundation in Springfield early next year. The foundation will be responsible for restoring and adapting the house for use as a public amenity.

The house (pictured in its current state above) was purchased for \$300,000. Kline said he expects renovations to cost between \$3.5 and \$4 million.

The Lewis-Haines fund will also help the conservancy keep careful watch over and possibly preserve some of Wright's 350 other buildings. A non-profit organization, the Chicago-based conservancy was formed in 1989 after the loss of nearly 70 Wright buildings throughout last century. *A.M.*

Economics

High Returns for High-Tech Firms

High-tech firms, according to the *American Institute of Architects Firm Survey 2000–2002*, are making mad loot. Respondents to the survey who classified themselves as "high-tech," meaning that they utilize the Internet and advanced design software regularly, not only design on average more expensive projects, they also design more projects than their non-high-tech counterparts. Tech-head firms also make more money per employee than those other firms, though they spend more on computer accoutrements than their high-technically-challenged compatriots.

The average value per contract for high-tech firms is \$884,000. For non-high-tech firms, that number is \$399,000; for all firms it is \$514,000. The average net billings per employee is \$103,000 for high-tech firms, \$91,000 for non-high-tech firms and \$99,000 industrywide. *A.M.*

Hilton Tokyo Bay has become the first hotel to achieve **ECOTEL's** five-globe status. The environmentally conscious group inspected the 743-room hotel over a three-day period.

Moshe Safdie & Associates have been chosen to design the **Bureau of Alcohol, Tobacco and Firearms'** new headquarters in Washington, DC.

Winners of **National Preservation Awards**, given out annually by the **National Trust**, include Chicago Mayor **Richard M. Daley**, the **Los Angeles Conservancy**, **Los Angeles' Egyptian Theatre**, **Stanford University**, the **USS Missouri**, and **Radio City Music Hall**.

Rem Koolhaas, **Frank Gehry** and the **Guggenheim** have formed an alliance to emphasize the significance of architecture in contemporary living; which is a fancy way of saying they're forming an ad hoc consulting company.

Thanks to **Arthur Andersen**, the world's largest accounting firm, the fourth new tower in **Times Square** can be built. The consulting operation has committed to occupying 500,000 square feet of a 47-story skyscraper, to be located between 41st and 42nd Streets in bustling Manhattan. **Boston Properties** owns the site.

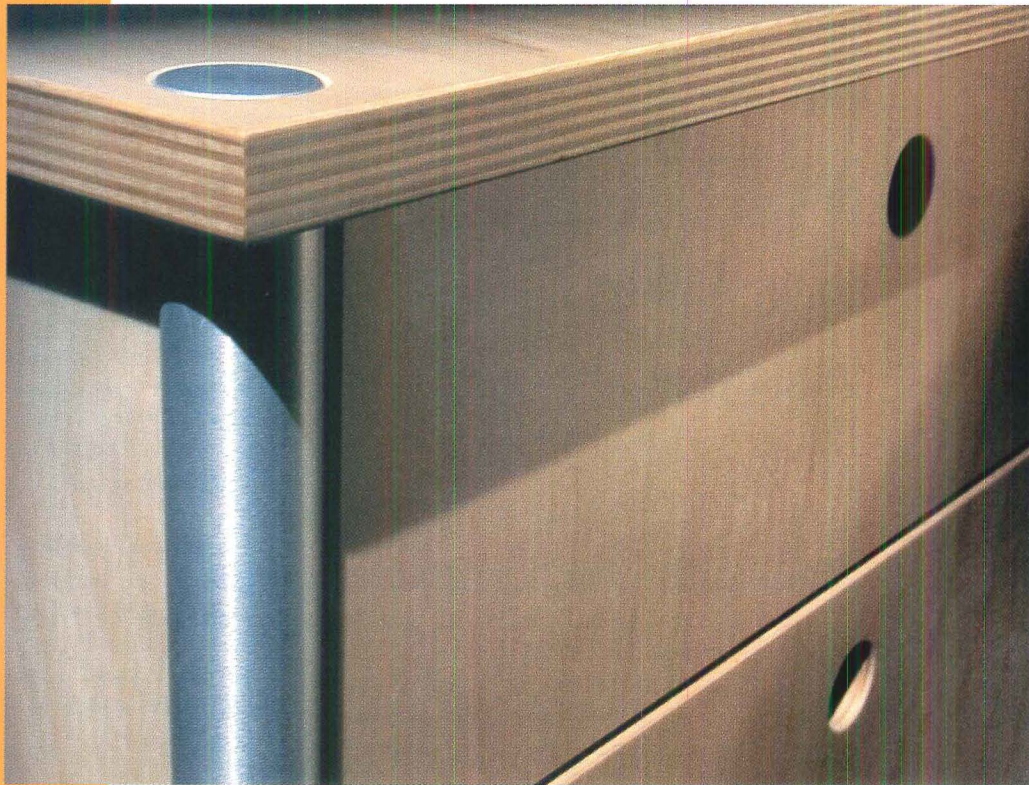
Yale's ivy towers will be renovated and expanded upon to the tune of \$250 million. Texas philanthropist **Sid R. Bass** has donated \$20 million to the project, which will affect Yale's schools of drama, art, and architecture.

Miami's **Design and Architecture Senior High**, known popularly as **DASH**, is celebrating its 10th year in operation.

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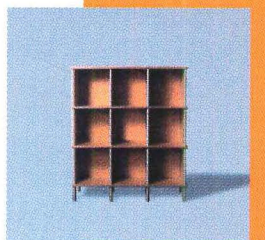


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Modern New York Performance Hall in Neoclassicists' Sites



Old School Just when the world seemed safe for modernism, along comes a group of neoclassicists intent on leveling anything with a flat roof. In a private club in midtown Manhattan last month, a small band of civic bigwigs gathered for the unveiling of a trio of neoclassical designs for a brand-new Lincoln Center, New York's major performing arts complex. While the prospect of taking a wrecking ball to the 30-year-old center had these throwbacks pumping their fists as they talked, what was really making them rowdy was the possibility at long last of modernism's end.

The three plans, by British architects Quinlan Terry and Robert Adam, and by the American firm of Franck Lohsen McCrery, were commissioned by the Manhattan Institute, a conservative civic think tank, as possible solutions to Lincoln Center's estimated \$1.5 billion renovation needs: Tear the monstrosity down, they say, and build in its place a complex that would have made Emperor Maxentius, not to mention the Prince of Wales, proud. *Andrew Blum*

Politics

Public and Private A/E's Go Head-To-Head

If anything, California's architects and engineers have stamina. Split into public- and private-sector camps, these A/E's have been waging a heated, multimillion-dollar war against each other for more than a decade. Last month, voters called a cease-fire by approving Proposition 35, which ensures that private-sector engineers and architects will not be shut out from state and locally funded projects.

Dubbed the Fair Competition and Taxpayer Savings Initiative by its backers, private engineering and architecture firms, the measure is one in a series of legal volleys between California designers over hiring private contractors for public-works projects. Lately, the forces for free enterprise seem to be winning.

Together, both sides spent \$16 million to get their messages across. Supporters argue that Proposition 35 offers the state two major benefits: the flexibility to contract out more than the specialized design work that is currently allowable by law, and relief from the engineering gridlock plaguing hundreds of projects, primarily at the California Department of Transportation. Opponents, led by the 11,000-member state engineers union, argue that the change would benefit only a narrow special interest and could lead to corruption regarding contracts.

In 1998, California voters rejected an initiative similar to Prop 35 that was also inhospitable to private firms. Backed by the state engineers union, Proposition 224 virtually would have barred private architects from designing state and local projects. The previous year, the union had won a 12-year court battle to block the state's increasing practice of hiring outside engineers.

The ballot box indicates two wins for private sector involvement, but not the end of the war. *Ann Jarmusch*

Ann Jarmusch is the San Diego Union-Tribune architecture critic.

Congress isn't up to snuff on environmental issues. That's according to the **League of Conservation Voters**, a nongovernmental, bipartisan organization. The only bright spot in the group's observations was **Senator Russ Feingold** (D-Wisconsin), who scored a 100 percent pro-environment rating—for the seventh year in a row. **Senator Mary Landrieu** (D-Louisiana) was one of many eco-slackers; her rating has dropped from 80 percent in the 105th Congress to 44 percent in the current installation.

Chicago's **Illinois Center**, the largest mixed-use development in the nation, will be getting new additions in the form of 15 new residential and commercial structures, a six-acre park, and a public elementary school. **Skidmore, Owings and Merrill** will design the project.

Los Angeles' Museum of Contemporary Art has named **Brooke Hodge**, Assistant Dean of Arts Programs at GSD, its curator of architecture and design.

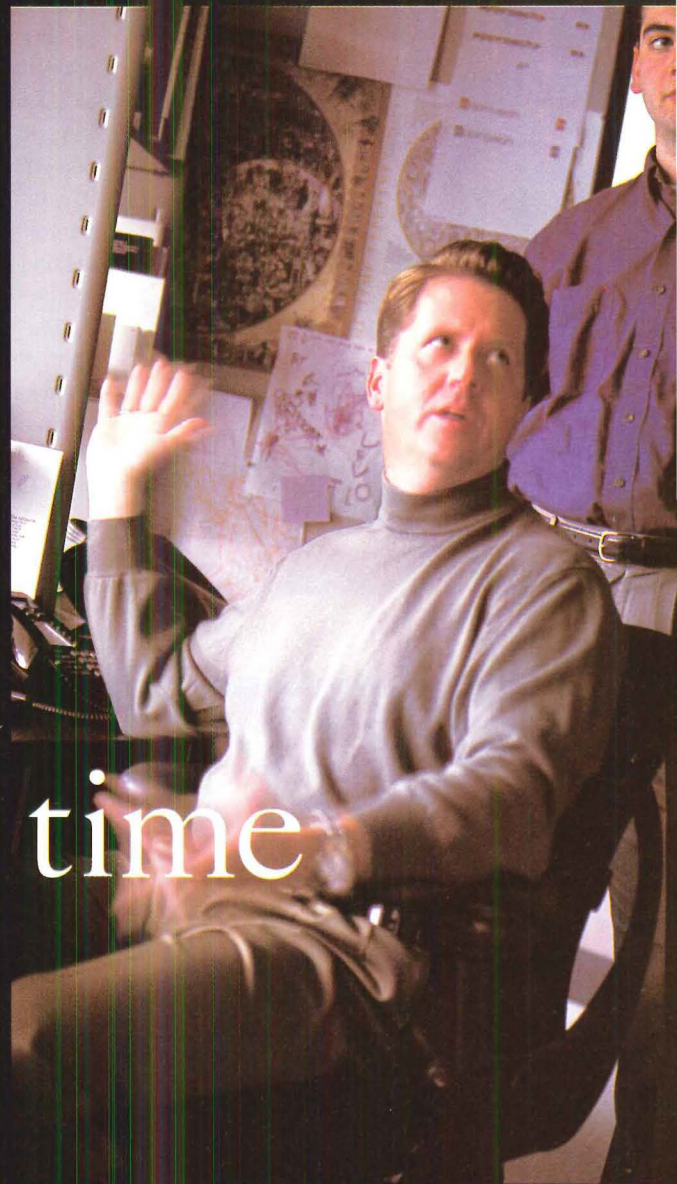
Hammel, Green & Abrahamson have been tapped to design the **Ventura County Discovery Center** in Thousand Oaks, California.

Winners of the 2000–2001 **Rome Prize**, awarded by the American Academy in Rome to various artists, were announced last month. In architecture and design, **Michael L. Goorevich** of Cleveland, Ohio, **Richard Taransky** of Haddonfield, New Jersey, **Lisa Krohn** of Los Angeles, **Michael Palladino** of Los Angeles, **Mark Klopfer** of Cambridge, Massachusetts, and **David Meyer** of Berkeley, California, have all won prizes.

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Calendar

Exhibitions

Chicago

Skyscrapers: The New Millennium at the Art Institute of Chicago through January 15, 2001 (312) 443-3600

Miami

Dreams and Disillusion: Karel Teige and the Czech Avant-Garde at the Wolfsonian through April 1, 2001 (305) 531-1001

Print, Power, and Persuasion: Graphic Design in Germany, 1890-1945 at the Wolfsonian through April 29, 2001 (305) 531-1001

New York City

Nordic Design: The Generation X is the inaugural exhibit at the new Polshek-designed Scandinavia House: The Nordic Center in America through December 30

Architecture Hot and Cold at the Museum of Modern Art through January 2, 2001 www.moma.org

Ruskin's Italy, Ruskin's England at the Morgan Library through January 7, 2001 (212) 685-0008

Utopia: The Search for the Ideal Society at the New York Public Library through January 27, 2001 www.nypl.org

Masterpieces from the Vitra Design Museum: Furnishing the Modern at the Smithsonian Cooper-Hewitt, National Design Museum through February 4, 2001 (212) 849-8400

A Portrait of Paris: Eugene Atgèt at Work at the Museum of the City of New York through February 4, 2001 www.mcny.org

Workspheres comprises six projects commissioned by MoMA to reimagine the workplace; February 8 through May 8, 2001 at the Museum of Modern Art (212) 708-9750

The Draftsman's Art: Master Drawings from the National Gallery of Scotland at the Frick Collection; December 12 through February 25, 2001 (212) 288-0700

Philadelphia

New Land-Marks: Public Art, Community, and the Meaning of Place shows 18 proposals for public art projects developed in conjunction with Philadelphia community groups; at the Pennsylvania Academy of the Fine Arts February 10 through April 14 (215) 972-7600

Pittsburgh

Inside Out: New Perspectives on the Heinz Architecture Center's Collection at the Carnegie Museum of Art through January 21, 2001 (412) 622-3118

Aluminum by Design: Jewelry to Jets at the Carnegie Museum of Art through February 11, 2001 (412) 622-3118

St. Louis, Missouri

Architect of Form and Spirit: Eric Mendelsohn in Saint Louis at the Center of Contemporary Arts through March 10, 2001 (314) 725-6555

Washington, D.C.

On the Job: Design and the American Office at the National Building Museum through June 24, 2001 (202) 272-2448

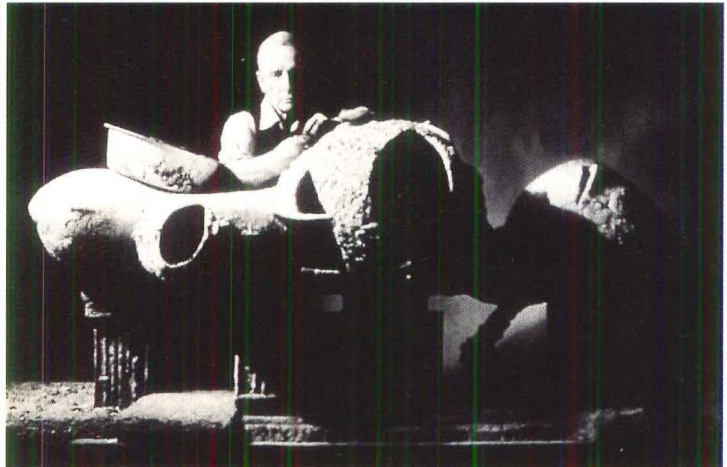
Art Nouveau, 1890-1914 at the National Gallery of Art through January 28, 2001 (202) 737-4215

Monuments, Mills, and Missile Sites: Thirty Years of the Historic American Engineering Record at the National Building Museum through April 29, 2001 (202) 272-2448

Conferences

AIAS Forum 2000 Los Angeles December 27 through January 2, 2001 www.aiasforum2000.com

NAHB's International Builder's Show Atlanta; February 9-12, 2001 (202) 822-0200



The architect and sculptor Frederick Kiesler fit into the utopian tradition, from his decades-long investigation of hypothetical futures, right down to his neat condemnations of the architecture of his time: "Functionalism is deterministic, and so stillborn... it absolves architects of all responsibility for what they design." Kiesler devoted much of his career to the exploration of the boundless nature of space. This reached its apotheosis in his *Endless House* (above), a building which would allow its inhabitants to live a life unbounded by their physical container. The MAK Center's **Frederick J. Kiesler: Endless Space** presents his work at the Schindler House in Los Angeles from December 6 to February 25; (323) 651-1510.

ICSC Centerbuild Conference, Scottsdale, Arizona December 9-12 (212) 421-8181

The American Planning Association's 92nd annual conference will be held in New Orleans from March 10-14, 2001 www.planning.org

NeoCon South Atlanta April 4-5, 2001 www.merchandisemart.com

Competitions

The Danish Foundation for Culture and Sports facilities invites entries for **Charter '99: Community Centers for the Future** due December 13 [email konkur-rer@dal-aa.dk](mailto:konkurrer@dal-aa.dk)

Congress for the New Urbanism Charter Awards submissions due December 15 (415) 495-2255

The James Beard Restaurant Design Award Applications due January 31, 2001 fax (212) 627-1064

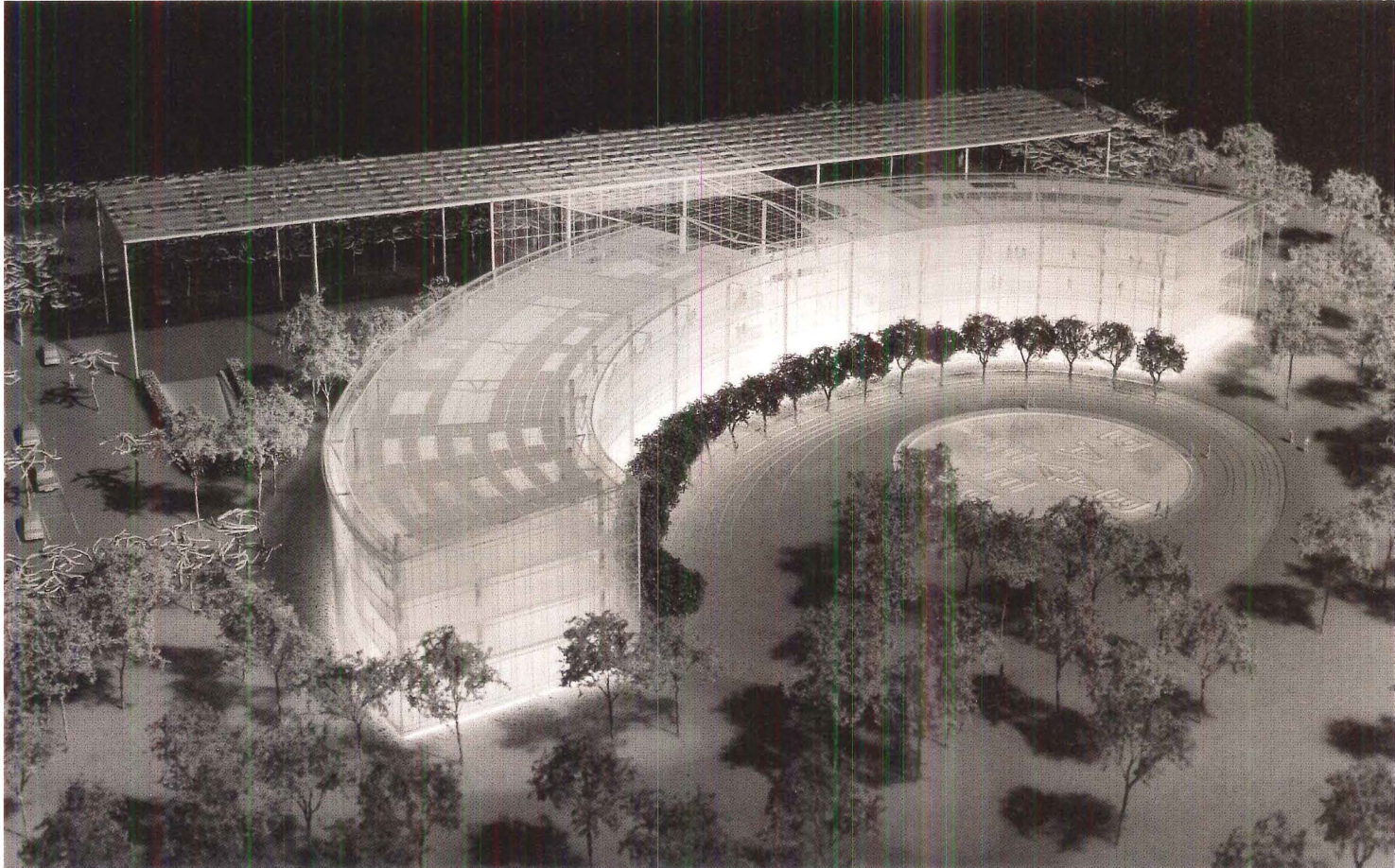
Young Massachusetts architects may compete for the \$35,000 **Rotch Travelling Scholarship**. Requests for information due January 1, 2001 www.rotchscholarship.org

New Public Works: The National Endowment for the Arts will make grants for design competitions to stimulate excellence in the design of the public realm; letter of interest due January 11, 2001 (202) 682-5452

Competition to design a gateway celebrating the town of **Seaside**, Florida's 20th anniversary is open to all; submissions due January 23, 2001 (850) 231-2226

The Architectural League of New York invites young architects and designers to submit entries to **City Limits: 2000-2001 Young Architects Forum** deadline February 12, 2001 (212) 753-1722

Spectrum and Prism Awards for creative uses of ceramic tile and stone; deadline February 15, 2001 www.coverings.com



Bayer Headquarters, Leverkusen, Germany

On the Boards

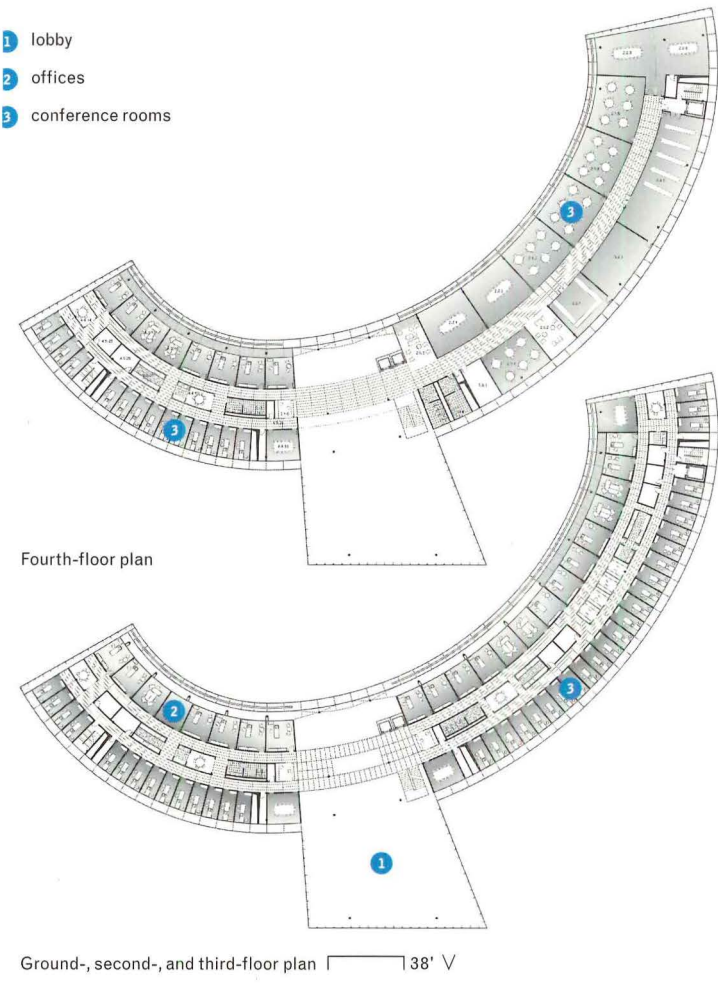
Murphy/Jahn

Bayer Headquarters, Leverkusen, Germany; Deutsche Post Headquarters, Bonn, Germany

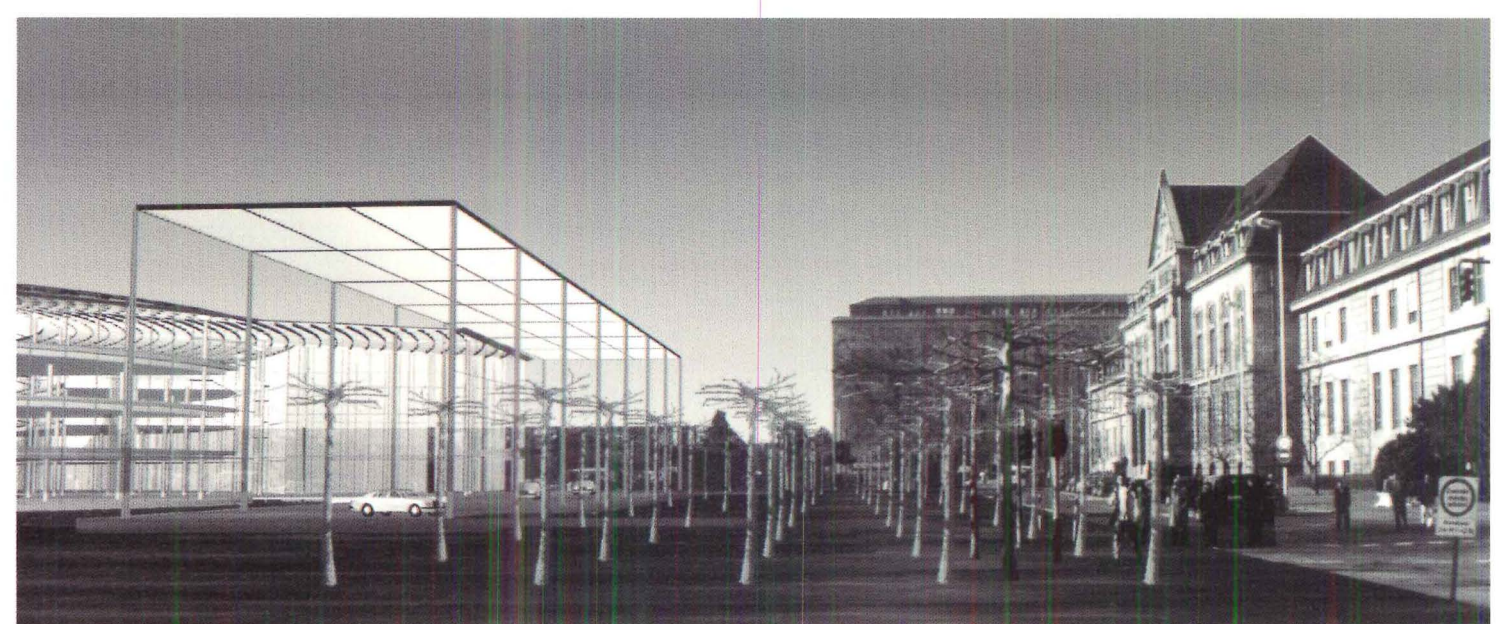
“It could only happen in Germany,” says Murphy/Jahn principal architect John Durbrow, who oversaw the design of drug-giant Bayer AG’s new Leverkusen headquarters. What he is referring to is the combination of slender floor plate and sophisticated double skin that allows the structure to be heated and cooled passively throughout the year. There are several reasons for this, Durbrow explains: German code requirements, a cultural emphasis on green building practices, and energy costs that are more than double those in the United States. Durbrow cites the Occidental Chemical Center in Niagara Falls, New York (Cannon Design Group with HOK, 1979), as an early example of a building using internal louvers and a double skin, but says that the model has rarely been followed here. Murphy/Jahn has taken this groundbreaking skin system and modified it to design two build-

ings that seem almost entirely transparent—the above-mentioned Bayer headquarters, and a new high-rise for Deutsche Post AG in Bonn.

The plan of Bayer’s headquarters is the segment of an ellipse, which, at only 64 feet wide, complies with the code requirement that workers be no farther than 12 feet from natural light and fresh air. Offices line the building’s perimeter, while services are tucked in along the central corridor. The skin system consists of a cavity bounded by an exterior glass wall and a curtain wall surrounding the office spaces, with a layer of louvers in between. This creates two channels for air—the inner for ventilation, the outer to get rid of heat gain. In section, the southern façade has a sawtooth profile, which allows space for flaps that let in air at each floor. This external layer becomes heated by the sun, and creates a convection current that draws air up through the



Skin section detail



View from northeast along Kaiser Wilhelm Allee



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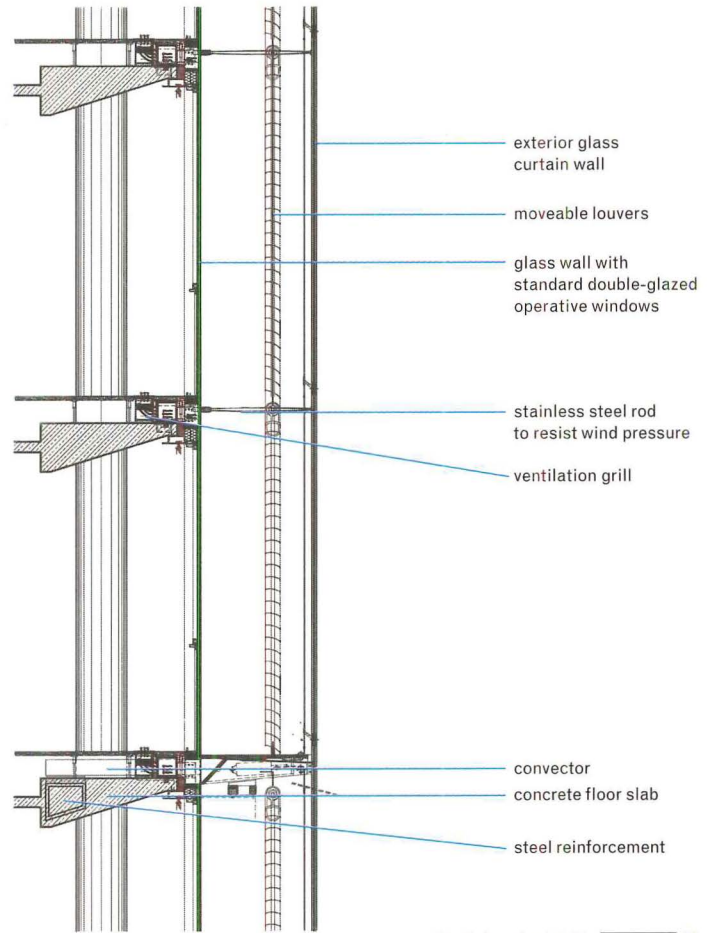


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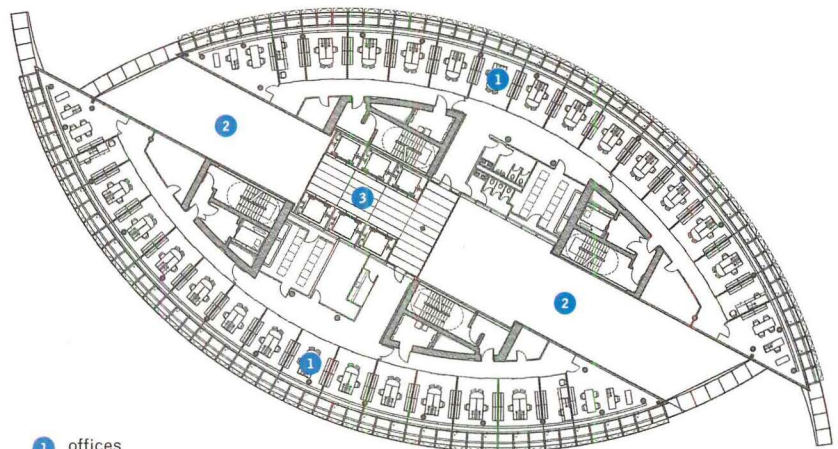


Deutche Post Headquarters, Bonn, Germany



North façade detail 2'

building. The fresh air for ventilation that travels through the inner cavity enters through a grill at the base of the building; at the edge of each floor slab, a mixing box adjusts the temperature before it moves from the cavity to the office spaces. The Deutsche Post building employs a skin system similar to the one used at Bayer: Both buildings have operable windows opening onto the cavity in the skin so that employees can have fresh air as they need it. The 41-story Deutsche Post building is oval in plan, but it is sliced into two distinct halves which are pulled apart, creating a central slot-like atrium called the Skygarden. Because there is less of the standard HVAC ductwork, the floor plates are comparatively thin, measuring only two feet thick. Construction on Bayer is scheduled to be complete in the fall of 2001, and Deutsche Post will be done in 2002. *Anne Guiney*



- 1 offices
- 2 Skygarden
- 3 elevator bank

Typical upper-level floor plan 27' ↙

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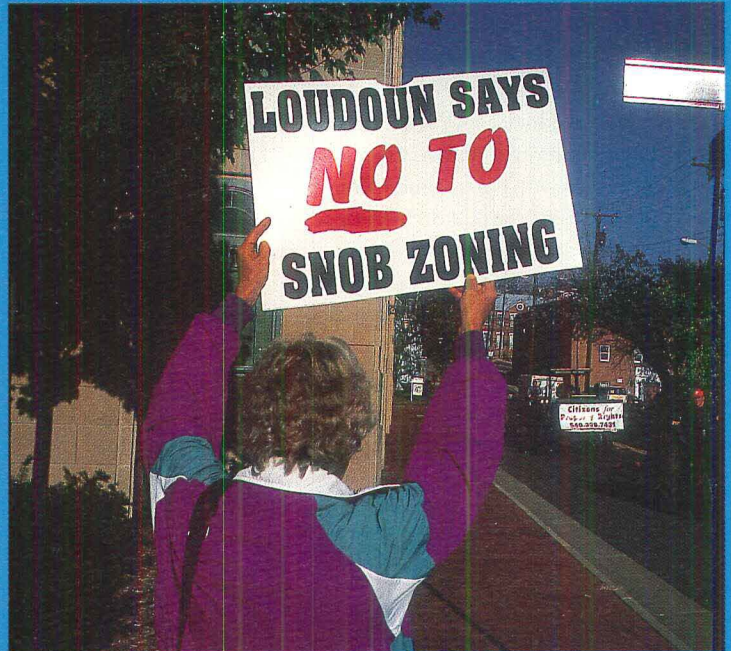
practice

"Inflation in Mexico has fallen to about 9 percent, having hit 52 percent in 1995, and that drop is pulling interest rates down with it."

Business p. 44

"The real issue is whether we are going to start training architects to be builders again: to work with materials, to understand engineering."

Computing p. 54



Land's Sakes

Sprawl-busters have taken the reins of one suburban Washington, D.C., county.

Bradford McKee wonders whether they'll trample the rights of property owners as they go.

Politics The gathering of the ad hoc group Citizens for Property Rights on a cool, sunny evening in late July had the mood of a militia-raising. Edna and Jim Cross were hosting 35 of their fellow residents of Loudoun County, Virginia, most of them farmers at or beyond retirement age, and as they settled into in the high-ceilinged living room of the large home on a 1,000-acre black Angus farm seven miles south of the county seat of Leesburg, agitation ran thick in the atmosphere. Topic A on the night's agenda, as it has been for the past year in Loudoun County, concerned recent actions by the county government to stop suburban sprawl.

The meeting began with a call to order and a prayer by Loudoun resident Joe King asking God to "help us on our righteous path" in the group's fight against the county. Then the people around the room reintroduced themselves, as many hadn't known each other until recently: Jack Shockey, a retired accountant and owner of 800 acres, who acts as one of Citizens for Property Rights' chief organizers, said he'd lived in

Loudoun for 50 years—which makes him a relative newcomer. Fran Meyer’s family had worked its farm here for 150 years. Bill Lay’s great-grandfather began farming his land in 1932.

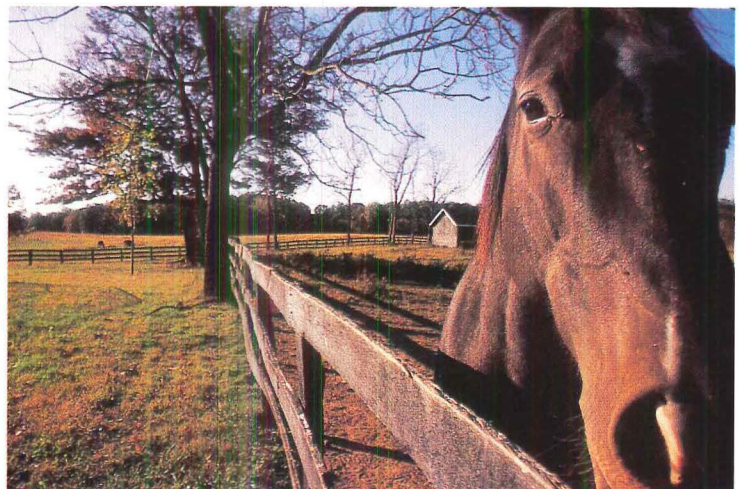
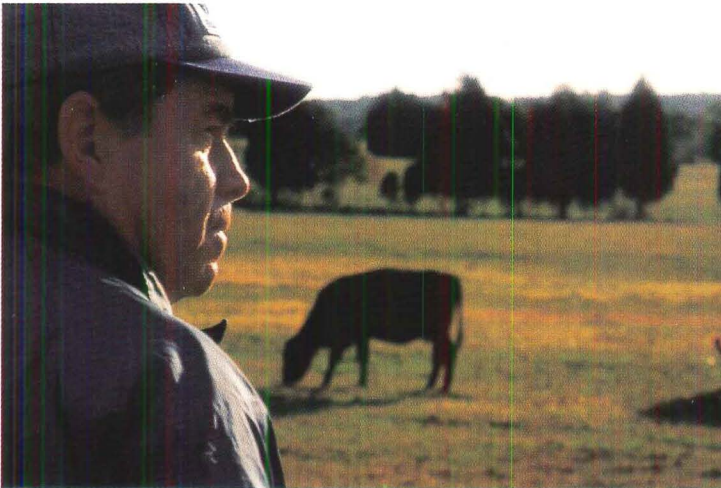
After the introductions, the group, in proper parliamentary fashion, moved unanimously to approve the minutes of its last meeting and followed the motion with the treasurer’s report: Citizens for Property Rights had \$4,350.77 in the bank. And in the seemingly endless battle ahead, their prospects for victory seemed grim, as member Jim Clarke offered: “I don’t think anything we say is going to change this stacked deck.”

Five years of drought that ended in late 1999 had nearly ruined their livelihoods. Now these mostly middle-class landowners find themselves agonizing over swiftly advancing plans by the county’s Board of Supervisors to “downzone,” or reduce the allowable building density, throughout most of Loudoun’s remaining rural tracts. The board is con-

templating the changes as part of a new comprehensive plan it has ordered the county’s Planning Commission to complete by the end of this year.

Current zoning rules mainly allow one house to be built for every three acres of land, except where they permit clusters of denser development as an offset to preserving open space. The proposed zoning rules, however, would seek to preserve the county’s remaining pastoral character by designating about half of the county, or about 165,000 acres, as a “rural economy” area where building houses would be allowed only on 10-acre parcels—except where they could only be built on 50-acre parcels, which are “too small for a farm and too big for a yard,” says one landowner.

The members of CPR, as the farmers’ group calls itself, refer to the new rules as “snob zoning,” a way to keep the increasingly suburban county countrified by preventing farmers from subdividing their lands and sell-



Rumsey Light (top left) wants to build 1,500 houses on his 750-acre farm. His representative on the Loudoun County Board of Supervisors has vowed to quash the idea. Many members attending meetings of the Citizens for Property Rights (top right) are middle-class farmers with no desire to continue farming. The property-rights phalanx (bottom left) gathers to protest zoning rules. Sprawl opponents hope to preserve Loudoun’s pastoral way of life, as on this thoroughbred farm in Hamilton (bottom right).



In Loudoun County, freshly framed houses on shadeless streets butt up against 18th-century farms, forests, and the rolling lands of the fox hunt. About 1,000 new residents are pressing into the county each month.

ing off parcels to developers. They insist that mere talk of the incipient land-use rules in Loudoun County has devalued their real estate by as much as one-half to two-thirds before they've even been enacted. The latest countrywide valuation reports from January to May over the previous year's period do not support that fear.

Edna Cross reported that Scott K. York, the new chairman of the Loudoun County Board of Supervisors, "has told me over and over that we [CPR members] are few in number and that he's working for the multitude." The "multitude" likely refers to the 18,000 voters who elected York to his at-large seat in November 1999 on a strict anti-sprawl platform. The majority rules, and, to the 300-odd members of Citizens for Property Rights, the majority seems hell-bent on stopping the breakneck suburban expansion into Loudoun County. Whereas opponents to sprawl in Loudoun County find an improbable, breathtaking sympathy in the new regime, the members of CPR see tyranny, as if "two wolves and

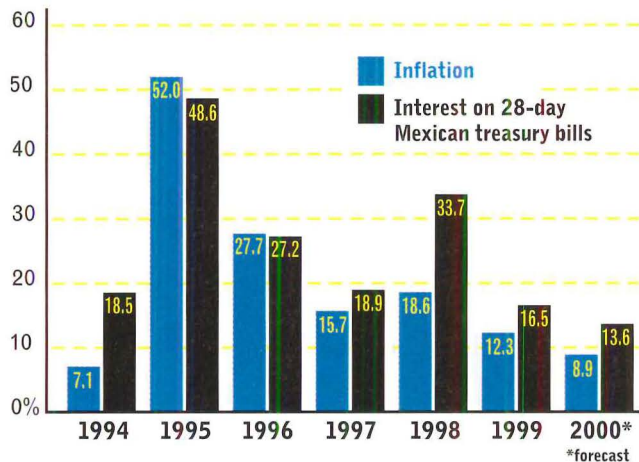
a sheep are voting on what to have for supper," as one member put it.

The group reviewed highlights of the latest Board of Supervisors' meeting, previewed the Planning Commission's hearing slated for the next week, discussed rumors of secret meetings by the county's Groundwater Advisory Committee in violation of the state's sunshine law, and proceeded to prepare for its Labor Day fundraiser: It was to feature pony rides for the kids and a raffle of, among other things, a handmade quilt and an autographed Robert J. Dole paperweight.

Good times, bad times

The anti-sprawl constituency in the U.S. has now spread far beyond its elite, liberal, or environmentalist roots to encompass a much broader swath of the general population disenchanted with the loss of open space and the attendant rise in pollution, noise, and traffic. They often find it useful to paint their adversaries—developers, bankers, politicians,

FALLING INFLATION IS PULLING INTEREST RATES DOWN



Business

Peso Yourself

If you've written off Mexico as a place to do business since the peso crisis of 1995, you might want to take another look, because the country's economy—not to mention its political scene—is beginning to rebound and is poised for a recovery. And a healthier economy bodes well for the construction industry.

The growth of Mexico's gross domestic product (GDP) perked up again this year to quarterly levels near 8 percent, which is a far cry from the negative 6 to 8 percent rate at which the Mexican economy tanked in the last three quarters of 1995, says Mario Rodarte, an economist at Mexico's Center for Economic Studies of the Private Sector. At the North American Construction Forecast conference sponsored in October by CMD Group, Rodarte projected that the country's per-capita GDP for 2000 would reach

\$5,800 in current dollars, which represents a 20 percent jump over 1994.

Inflation in Mexico has fallen to about 9 percent, having hit 52 percent in 1995, and that drop is pulling interest rates down with it, to about 13.6 percent, well below 1995's astonishing 48.6 percent interest rates. And alongside a strong labor market (unemployment has reached 1980 levels of less than 3 percent), rising private consumption, and a tripling of exports since 1994, construction-sector GDP has risen faster than total GDP, to a growth rate of 7.1 percent in the second quarter of 2000.

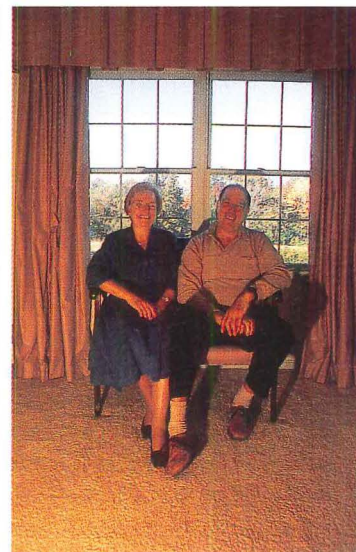
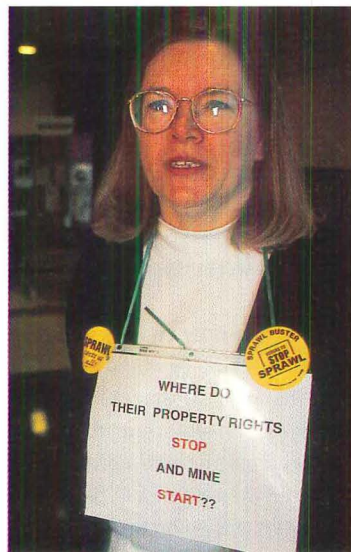
"Even without large public construction programs, the [construction] industry is recovering," Rodarte said. And for the foreseeable future, he added, "the industry can grow at a higher rate than the rest of the economy."

Bradford McKee

and so forth—as right-wing capitalist reactionaries. The Web site for Sprawl Watch (www.sprawlwatch.org), for example, summarily dismisses the trope of "property rights" on its "Myth & Fact Soundbites" page as, unsurprisingly, a myth: "Property rights advocates say that 'stopping sprawl denies their free use of property and the financial gain that comes with freedom,'" the site says. "Relatively few will profit from subsidized speculation while many others will see taxes rise and property values fall thanks to sprawl and urban disinvestment."

Across this country, the developers responsible for suburban sprawl and their powerful friends have affirmed that they can be a selfish, stupid lot. But their opponents in the anti-sprawl camp have shown, as they have so richly in Loudoun County, that their homebuilding, strip-malling counterparts have no franchise on arrogance and political dimness. The rejoicing cry of "property rights" may qualify as cynical, or as a red herring, in many land-use battles, but to many members of Loudoun's Citizens for Property Rights, their land is their living, not to mention their life.

Prosperity has brought tough times to Loudoun County. During Virginia's Republican presidential primary in March, several polling places in Loudoun ran out of ballots—the local Board of Elections had printed 20,000, but had to make 3,700 photocopies and race them to the voting stations in the afternoon. And when time came earlier this year for the 2000 census, Loudoun was the only Virginia county where the federal government couldn't find enough temporary workers to count all the new heads: Its population stood at less than 90,000 in the 1990 census, but, this year, it will likely exceed 160,000. New public schools fill up the day they open, as birth rates have risen here by 38 percent over the past five years; statewide, they have dropped by nearly 6 percent. The



At Loudoun's planning commission meetings (left), partisans wear their passions on their sleeves—and then some. Peggy and Joe Maio (right) helped launch the 1999 voter drive to elect anti-sprawl county supervisors, and succeeded.



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Technology

Stress Test

Rola L. Idriss, a professor of civil engineering at New Mexico State University in Albuquerque, recently began testing one of the first-ever built-in applications of fiber-optic sensors in a new highway bridge over the Rio Puerco about 15 miles west of the city. Idriss and her fellow researchers, who include researchers from the University of New Mexico, Albuquerque, as well as officials from the state's Highway and Transportation Department and the local office of HDR Engineering, hope to measure the strength and behavior of the bridge's high-performance concrete. To do so, they precast the sensors directly into six of the bridge's 18 girders. The project gets its funding from the state highway office as well as from the Federal Highway Administration and the National Science Foundation.

The bridge is the first in New Mexico to contain high-performance concrete, which is supposed to prove stronger, more durable, and more efficient, than conventional admixtures. Bridge girders made of ordinary concrete need to be spaced about nine

or 10 feet apart, but high-performance concrete increases that spacing to 12.63 feet. High-performance concrete, however, shrinks more than the garden variety during the curing phase, but special curing techniques make it more impermeable to water, and, thus, to ice, which can create cracks that expose the rebar to corrosion.

The fiber-optic sensors will help the research team measure stresses and strains within the structure long before signs of fatigue would become visible. "The data will be immediately useful," Idriss says, "from the time the concrete is poured for the girders, as they are transported to the site, during the construction of the bridge, and while it is in service."

The coefficients used in calculating structural stress in ordinary concrete are much different than those for high-performance concrete, says David Silva, structural engineering manager for HDR. Regular concrete's strength ranges from 3,000 pounds per square inch to 6,000 or 7,000 pounds per square inch, but this particular high-performance mixture achieves strengths of 10,000 pounds per square inch. "Fiber optics give us real-time data to see how the coefficients work using high-performance concrete," Silva says.

The team expects to collect data for the next two to three years before issuing a final report. *Bradford McKee*



Scott K. York, the controversial chairman of the Loudoun County Board of Supervisors, wants to preserve northern Virginia's old way of life, which has helped to ostracize him among his fellow local Republicans.

school district estimates that it will need to build 40 more schools over the next 10 years. In the short term, school officials recently were simply trying to hire 600 new teachers for the 2000–2001 academic year.

Loudoun, founded in 1757 on the northernmost hump of the Old Dominion, is the fastest-growing county in the commonwealth and the third-fastest-growing county in the nation. Between the spine of the Blue Ridge Mountains and the Potomac River valley, freshly framed houses on shadeless streets butt up against 18th-century farms, forests, and the

Mounting alarm over unchecked sprawl threatens to split this gorgeous, hideous county irreparably, if it hasn't done so already.

rolling lands of the fox hunt. About 1,000 new residents are pressing into the county each month, following the growing clot of high-tech companies around Dulles International Airport in the outermost suburbs of Washington, D.C. The nation's capital lies 40 miles to the east.

Many counties in Virginia and the rest of the country would die for Loudoun's kind of economic growth. But, tallying 5,300 building permits issued in 1998—47 percent more than in 1997—many people in Loudoun fear that their county has entered the golden-egg stage of wish fulfillment and will surely die for this kind of economic growth. The mounting alarm over unchecked sprawl threatens to split this gorgeous, hideous county irreparably, if it hasn't done so already.

The conflicting passions over Loudoun's growth rate have heated up steadily over the past five years. But they reached a new stage in November 1999, when election of a new county board of supervisors became a momentous referendum on *continued on page 117*

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Pier Review

One false move by SMWM, and San Francisco's Pier 1 would no longer count as "historic." **Alfredo Botello** reports on the effort to modernize and preserve the structure.

Preservation For the last 60 years San Francisco's historic waterfront has been in decline, with the possible exception of tourist trap Pier 39. Long before the new economy left the old economy reeling, the numerous waterfront buildings belonging to the Port of San Francisco had fallen into disuse, abuse, and at best, underuse. But that's all beginning to change, thanks to skyrocketing rents, the incentive of substantial tax credits for preservation projects, and the removal of an unsightly double-deck freeway damaged in the 1989 Loma Prieta earthquake.

In its first pier renovation project, the Port of San Francisco partnered with AMB Property Corporation to renovate Pier 1, built in 1932 to house the administrative offices and a warehouse for the C&H Sugar Company. C&H left decades ago, and the building had been used as a 770-foot-long parking garage ever since. Architects SMWM are now rehabilitating and preserving the historic shell of the building while transforming its interior into 140,000 square feet of premium office space for the Port and private companies, including AMB's own world headquarters. Expectations are unusually high for the project, as it will set the architectural and regulatory tone for the waterfront's revitalization.

SMWM's first task was to determine the sequence and timing of the numerous overlapping reviewing agencies, which included the National Park Service, the California State Office of Historic Preservation, the Department of Fish and Game, the Army Corps of Engineers, and the California Regional Water Quality Board, in addition to several design review agencies. Project Manager Michael Bernard compares the 18-month process to "throwing a piece of thread through the eyes of about 12 needles."

SMWM increased rentable space by inserting a second floor into the cavernous building, held back six feet from the outer walls. This strategy allowed abundant natural light to filter through clerestory windows and the roof monitor into first-floor spaces.

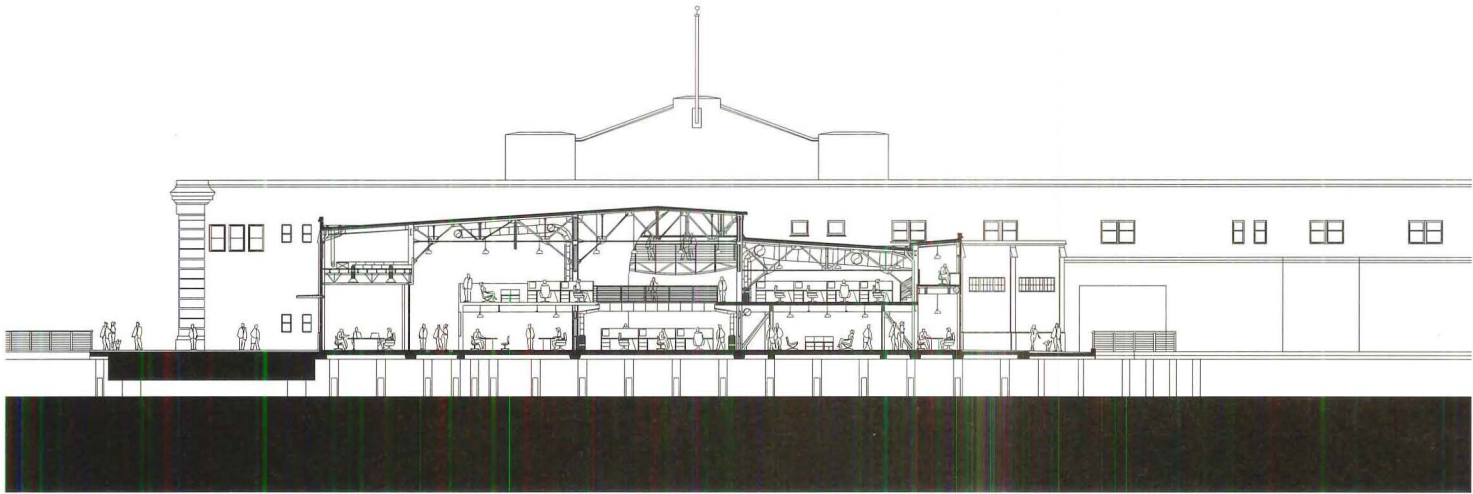
For all new work, SMWM used materials compatible with the industrial aesthetic of the building: stairs supported by gently arched steel

To make historic Pier 1 fit for commercial use, SMWM inserted a new second floor whose stained-concrete plate stops just short of outer walls to allow light to penetrate to the first floor. All new steel joints were bolted, not welded, for visual fidelity to original construction.



RICHARD BARNES





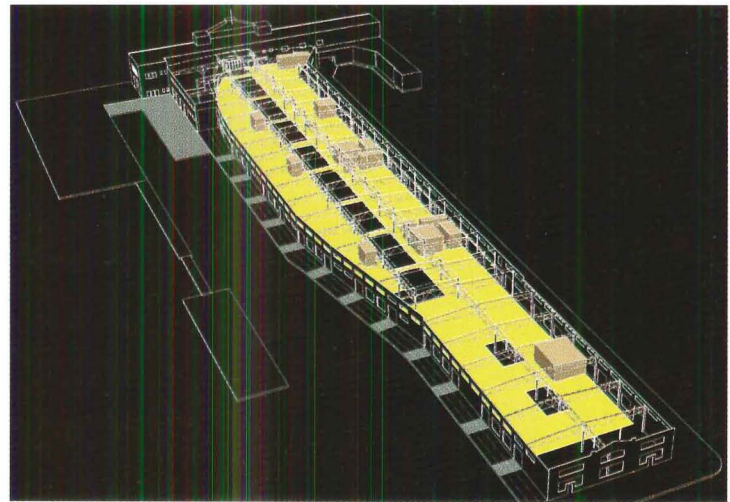
trusses, stained-concrete floors, and new steel connections that were bolted rather than welded, mimicking the original riveted structure. The firm also convinced design review agencies that the façade of the building could sport two colors without compromising its historic character. The city has since adopted the scheme as the official colors for all future pier bulkheads.

Windows posed a more delicate issue. SMWM proposed replacing some of the existing fixed windows with operable sash as part of the ventilation system, but the National Park Service and the State Office of Historic Preservation were concerned about the juxtaposition of new and old. So members of the design and construction team tracked down the original window manufacturer, still in business in Braintree, England, and were able to replicate the thin-profile steel mullions of the originals. Corrugated metal roll-up doors were left in place at cargo openings, which have been retrofitted with painted steel storefronts. The operable windows work in conjunction with an innovative bay-water heat exchange system, comprising a closed-loop system of polyethylene tubing submerged in the bay to dissipate heat and help cool the building.

Fifteen percent of the \$40 million construction budget went into seismic improvements. While the existing wood piles under the building were in good condition, they were not braced laterally. New piles could not be driven through the interior as they would have significantly damaged the building's historic fabric, thereby jeopardizing the Pier's eligibility for \$8 million in preservation tax credits. So Rutherford and Chekene, the project's consulting structural engineers, developed a system of pile clusters tied to and flanking the historic deck structure to strengthen the building while leaving it essentially untouched.

Set to open this month, Pier 1 will be a key element of the City's ambitious Bayside History Walk, intended to attract tourists as well as locals, and to rekindle interest in the waterfront's past. ■

Alfredo Botello is a Berkeley, California-based freelance writer whose work has appeared in Metropolis, Interiors, and the San Francisco Chronicle.



The north-south section through Pier 1 (top) shows the placement of new second-floor plates and catwalks, as well as pile clusters supporting the pier. New second-floor slabs allow light to penetrate the first floor (axonometric, center). A model (bottom) demonstrates that Pier 1 will retain its historic neoclassical façade.

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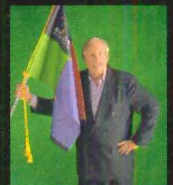
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The Business of Complex Curves

Jim Glymph introduced Frank Gehry to CATIA, the aircraft software that made his radical visions possible. But as Glymph tells **Andrew Cocke**, the CATIA revolution goes well beyond design—it's about the battle to save the profession.

Computing When Jim Glymph arrived in Frank Gehry's office in 1989, there were two computers in the office—in accounting. Gehry's increasingly fluid work had already pushed manual drafting to its limit when Glymph brought Dessault's CATIA program to the table. Over the next decade, the French aerospace software revolutionized the way Gehry detailed and built his buildings. Now, Glymph has been out telling the rest of the profession about his leap to the newer technology. Architecture's Andrew Cocke caught up with Glymph recently in Boston, where Gehry's firm is working on the Ray and Maria Stata Center for Computer, Information, and Intelligence Sciences at the Massachusetts Institute of Technology.

Andrew Cocke: CATIA has obviously had an enormous impact on Gehry's work. It seems as though there's no limit to the formal complexity with a program like CATIA. But why would architects designing more traditional buildings ever use it?

Jim Glymph: Initially, software that did this kind of thing was very specialized, very expensive, and very difficult to learn. It took a great deal of time to do these kinds of pieces. So if you weren't attempting a Frank Gehry design, it would be very difficult to justify the cost. But the same thing happens with this software that happens with all software, it becomes more powerful and cheaper every 18 months.

If you look at the automotive or aerospace industry, they work with many, many subcontractors. They bring a lot of components together with extremely high precision. That has a parallel in the building industry. So if you forget the curves, and simply think about a centralized database for coordination, there are obvious advantages regardless of the nature of the architecture.

Frank Gehry's name has become synonymous with titanium, but, in fact, your office has been innovating in a number of different materials. How does the office work with fabricators to get such unusual results?

The notion of working with materials and fabricators in a collaborative way is something that Frank has probably been engaging in his whole career.

If you look at the stone industry, when we started the Disney Concert

Hall, there were three companies who could handle CAD/CAM comfortably. Within a year there were 13. The harder sell is the general contracting community, because this kind of exchange between the architect and the subcontractor more or less violates the basic ground rules for how construction projects are managed. At the same time, the general contractor is not very anxious to be the middleman in a process that he normally hasn't been responsible for.

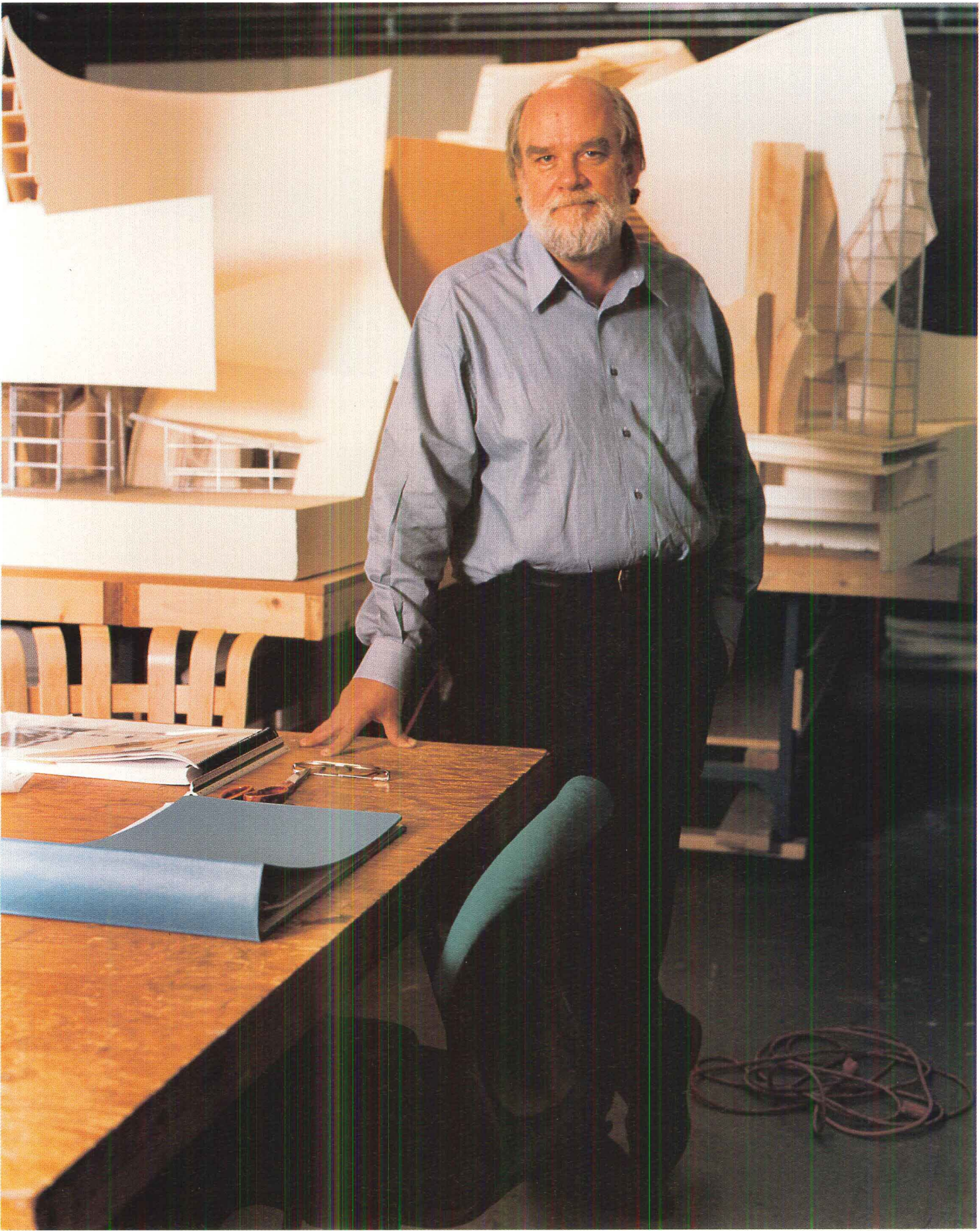
Has it been difficult to get Dessault (CATIA's maker) to respond to your specific needs as an architect?

It's a lot easier for a salesman to sell a thousand machines to one client than to go to a thousand architects' offices to sell a thousand machines. The interesting thing here is that the building industry—architects, engineers, contractors, and fabricators—is far larger than aerospace and automotive combined. But those industries operate on long-term contracts where they can demand that each of their subcontractors get on a common platform. Every subcontractor, no matter how small, is looking at 20 years' worth of contracts, so the investment in technology makes perfect sense. In the building industry, the investment in technology doesn't make sense to a dry-wall contractor working on our project at Case Western Reserve University, because he assumes he will never see the need for this again, and the job's not big enough to capitalize the education and the basic infrastructure costs. In those cases we usually end up providing them a consulting service either through other people or ourselves to close the gap.

Why wouldn't the small, independent firms simply be able to adapt the tools developed by the large industries to their own needs?

If we do that now, while these softwares are in their infancy, then we'll wind up with a more diverse, more democratic industry. If we don't do it as this software develops—I'm absolutely certain that it will make conventional buildings even more efficient—there will be no market incentive for [the software companies] to deal with the traditional architectural profession.

continued on page 124



Photograph: Gail Albert Halaban

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Jean-Louis Cohen
on Preserving Modernism
p. 60

Susanna Sirefman
on Holiday Wish Lists
p. 64



Curtain Call

Versatile Dutch designer Petra Blaisse changes how we look at curtains, walls, indoors, outdoors, and the spaces in between. **Raul A. Barreneche** rifles through the layers.

Profile Petra Blaisse's unconventional design approach is part dressmaker, part scavenger, part engineer, part choreographer. As the name of her practice—*Inside Outside*—suggests, the Dutch designer of textiles, interiors, and landscapes sees the realms of indoor and outdoor as completely fluid and interchangeable: “There are common threads of scale, movement, light, and structure,” she says. “The big point is the connection between inside and out.”

Blaisse's multidisciplinary studio found a perfect venue, New York City's Storefront for Art and Architecture, for its first solo retrospective, which took place this fall. Storefront's façade of pivoting panels (a classic by Steven Holl and Vito Acconci, from 1982) allows the gallery's interior space to spill out to the sidewalk—a feature Blaisse fully exploited to show her work, which takes place both inside (textile and interior designs) and outside (landscapes). “The mission behind my work is to always shift,” explains the designer, who founded her prac-



Blaisse saw the façade of New York City's Storefront for Art and Architecture as a fitting billboard for her work. At one end, she hung a three-story-tall curtain of layered, perforated plastic (typically used to keep weeds out of strawberry patches).

tice in Amsterdam nine years ago. "My work is not fixed at all; it flows, either with fashion or my interests at the moment."

Blaisse got her start at Amsterdam's venerable Stedelijk Museum, where she curated and designed an exhibition of the young Rem Koolhaas's firm, OMA, in 1980. Koolhaas was taken with Blaisse's treatment of his architectural models as part of provocative interiors of her own design, many of which employed textiles to great dramatic effect. "I always did these shows about other people's work, but I never had time to do my own work," recalls Blaisse. "I was just too busy."

Impressed, Koolhaas asked her to design the interiors of his 1984 Netherlands Dance Theater in The Hague—and Blaisse's own career took a liberating turn. (She went on to design all of OMA's international exhibitions between 1987 and 1991.) The highlight of the dance theater's interior was a velvet stage curtain dotted with gold foil circles that

became a metonymic icon, known simply as "the golden curtain," for the entire theater. Excitedly, Blaisse recalls the glow and subtle changes of light on that curtain, revealing her belief that a curtain is much more than a simple piece of fabric. "A curtain is a barrier to another space, just like a garden is the interface between a house and the outside world," she professes. "Curtains can make space, too."

She illustrated this idea again more recently in the Second Stage Theater in Manhattan, another collaboration with Koolhaas, along with New York's Gluckman Mayner Architects. In this installation, curtains perforated with grommets, hung along one of the auditorium's walls (punctured with tall windows), created an unexpected dialogue between two entirely separate realms, the theater interior and the chaotic street life outside.

Blaisse regards her textiles as not just dividers with spatial repercussions, but also structural elements that move. Her designs anticipate how fabrics will rustle in the wind or ripple as they're dragged across a stage. On view at the Storefront exhibition were samples of

Blaisse's works in progress, among them textiles for two OMA designs due for completion next year: the Dutch Embassy in Berlin and the Casa da Musica in Porto, Portugal. The full-scale fabric mock-ups include unorthodox curtains made from bubble-wrap, sheets of copper greenhouse insulation, mosquito netting silk-screened with nearly invisible patterns, and hand-knit fabrics that impart an almost structural heaviness. Her pleated theater curtains at the Grand Palais at Euralille, another Koolhaas creation, display the same rhythm and depth as the corrugations in the building's cheap-chic plastic walls.

As a billboard for the Storefront show, Blaisse hung a huge three-story curtain from the gallery's exterior made of perforated plastic sheets that keep weeds out of strawberry patches. "I treated it as a chic thing, layering it like a ballerina's dress," explains Blaisse. "I'm now studying the plastic to use in a beach house in the Bahamas, figuring out how it will withstand salt air and wind. It's tough but elegant." Like an architect, Blaisse has to deal with the workaday issues of climate, light, and acoustics.

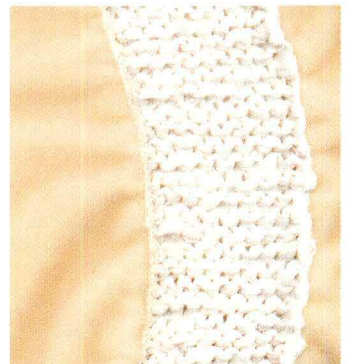
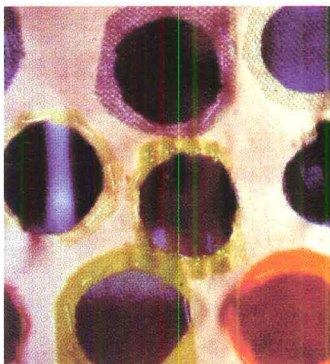
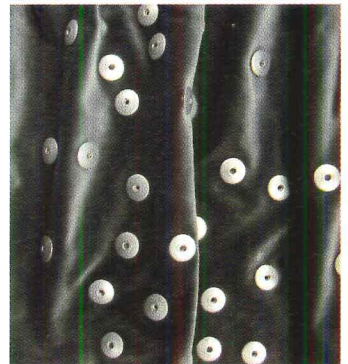
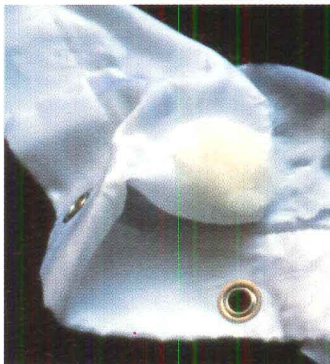
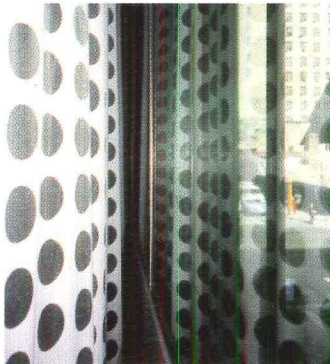
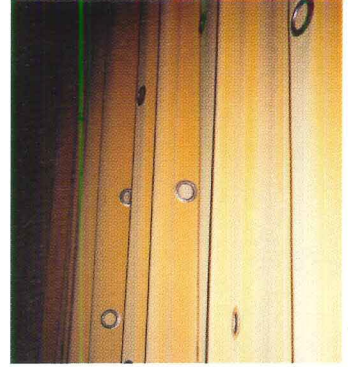
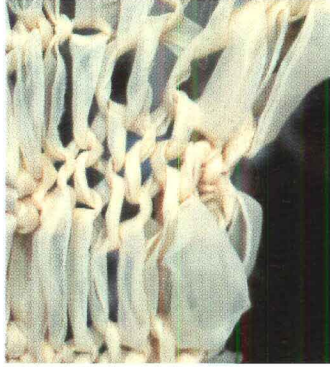
Textiles constitute most of Blaisse's "inside" work, a large amount of which has been on OMA projects. Her "outside" work, her landscape designs—the fastest growing area of her practice—are another equally important arena in which Blaisse explores links between inside and

Blaisse regards her textiles as not just dividers with spatial repercussions, but also as structural elements that move.

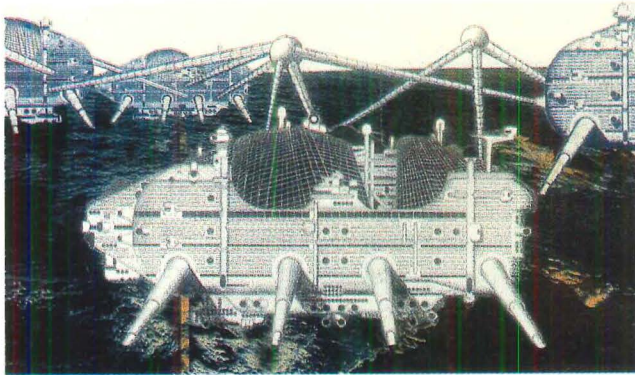
out. Her gardens thrive on the bold and the unexpected: brightly colored patches of flora, mounds of shells and broken glass, mirrored walls and—bringing Blaisse's oeuvre full-circle—large-scale exterior curtains.

Blaisse has completed two big landscape projects: Museum Park in Rotterdam (1994), which includes a roof garden atop the OMA-designed Kunsthal, and gardens at a prison in Utrecht by the Dutch firm Archivolt, completed last year. Museum Park boasts an apple orchard reflected in a large mirrored wall, and a tilted asphalt plane marked with lines of white paint, bands of blue-green shrubs, and a "stream" of white stones and colored glass. The more expansive prison gardens, which fill in voids between the jail's U-shaped wings, feature landscape vignettes of meandering paths inscribed into fields of seashells, sand, gravel, and glass. Some of the swirling, concentric walks resemble land art of the 1970s, most obviously Robert Smithson's *Spiral Jetty*.

Blaisse's newest project, now being built in the Dutch city of Almere, is what she calls a "parking palace on the waterfront, with the roof cut off." While the designer's earlier landscape projects seemed fluid and somewhat lyrical, the parking garden promises to be harsher: Blaisse violently cracks apart concrete paths between two parking structures and inserts marsh trees between the jagged, upended planes; 120 tons of crushed glass pour from the fissures in the *continued on page 125*



Blaisse's "curtain walls" can be anything—hard or soft, smooth or textured, opaque or punctured. Her approach blends architecture with theater, interior, and landscape design.



Review

Open Ends Museum of Modern Art, New York, through January 2, 2001.

Open Ends, the final cycle of the Museum of Modern Art's ambitious *MoMA 2000* series, is the first time that the museum has devoted nearly all its space to post-1960s work. Like the first two installments (*Modern Starts*, which focused on the period from 1880 to 1920, and *Making Choices*, devoted to 1920 to 1960), *Open Ends* employs novel juxtapositions to create critical resonances among a wide range of works. Selections from the museum's holdings are divided into 11 exhibitions. The groupings are only as successful as the juxtapositions they produce are compelling.

"Architecture Hot and Cold," for instance, presents drawings and models by architects alongside works by artists, mostly photographers, who have made buildings their subject. While this includes an admirable range—from architects and firms Archigram (above), Superstudio, Hans Hollein, and Rem Koolhaas to artists Andreas Gursky, Gordon Matta-Clarke, and

Thomas Struth—the result is a balkanization between the two disciplines. The artists are almost uniformly critical of the built environment, portraying the banality of sprawl, the normative regularity of functionalist modernism, and the depredation of pastoral landscapes. Meanwhile, the architects fantasize about built and unbuilt projects and their liberating or progressive power. So striking is the difference of perspective that any other similarities and dissimilarities (aesthetic, ideological, or methodological) are lost.

This loss of ideas is even more evident in the section called "Matter," focused on the exploration of materials in design and art. Placing Joseph Beuys' *Felt Suit* (1970) next to an untitled work by Robert Morris (1969) and Gaetano Pesce's *Feltri Chair* (1989), for example, simply because they are all made out of felt, obscures the radical conceptual differences each represents.

The catalogue best encapsulates the exhibition—it's an uncritical image bank of MoMA's greatest hits from the last two decades. *Branden Hookway*

The Future of the Modern

At DOCOMOMO's conference in Brasília, debates swirl about the preservation of Brasília, modernism, and modernism's preservationists. **Jean-Louis Cohen** reports.

Essay

The coincidence of Brasília's 40th and DOCOMOMO's 10th anniversaries prompted the latter's convening of an international conference in the Brazilian capital last September, titled "The Modern City Facing the Future." Beyond the synchronization of celebrations, the event was also motivated by the congruence of dilemmas now confronting both Brasília and DOCOMOMO (Documentation and Conservation of the Modern Movement), an international organization that champions and safeguards important modernist relics. Brasília's coming of age has put the integrity of its original Lúcio Costa plan at risk, while DOCOMOMO finds itself reexamining its original purpose, and perhaps revising its goals according to the changing shades of meaning of the term "modern."

Present-day Brasília is a huge departure from Costa's initial vision of the city as a contained urban organism (his Plano Piloto, or master plan, resembles a bird with extended wings). The creation of a new Brazilian capital was the idea of then-President Juscelino Kubitschek, who saw Brasília as a means to consolidate geopolitical power, to eschew the inefficient bureaucracies of the old capital in Rio, and to



build a new national identity, starting with this symbol of modernization. The new capital was meant to grow to a population of only 500,000. But after the expected civil servants settled in, no one anticipated that the workers, who had been lured to the city's construction sites from the nearby depressed city of Nordeste, would remain. City officials were quick to move migrants and their self-built shacks to "satellite cities," outside the city's core, a safe distance from where Oscar Niemeyer's monumental institutional buildings stand. Still, this hierarchical arrangement—of the elite at the city's center and poor on the periphery—flew in the face of Brasília's modernist utopia rhetoric. This fueled critics' conclusions of the city's, and hence, modernism's, failure.

But 40 years later, Brasília has evolved into a planning success story of sorts. The capital has grown in complexity, intensity, and diversity—contrary to its popular image, as a dull, formalistic, modernist desert. (It's not irrelevant that historical critiques of Brasília have relied on a handful of stark period black-and-white photographs.) The hastily built satellite settlements, such as Taguatinga, Sobradinho, and Planaltina, are now established cities in themselves. A grid of public services effectively attends to Brasília's expanded metropolis. A new network of schools, designed by architect João "Lelé" Filgueiras Lima whose work appeared at the 2000 Venice Biennale, bears witness to the region's widespread improvements. With a current population of two million, Brasília has exceeded São Paulo as the city with the highest per capita income in the country.

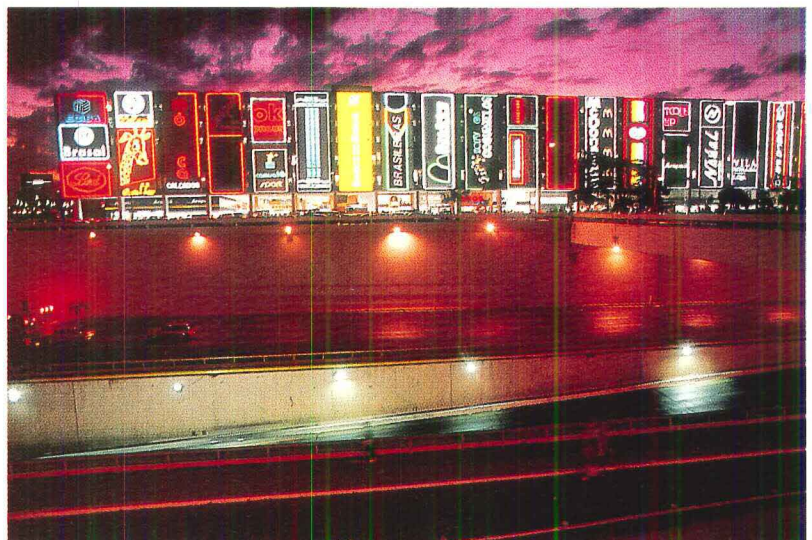
As the ideal society imagined by Costa and inscribed in his Plano Piloto has become more complex, so naturally have class contrasts and social polarities become more visible throughout the urban area. On the shores of Lake Paranoá (a man-made lake, part of the Plano Piloto), diplomats and political brokers have established their mansions, while clerks, servants, and janitors endure gridlock in their bus commutes from the residential quadrants and satellite towns that radi-

ate from the city's core. A subway scheme, in discussion for years, has yet to be implemented. Meanwhile, in Brasília's central government and business "sectors"—the city's terms for zones or districts, each devoted to specific, segregated functions—once-deserted open spaces are now filled with open markets and ground-level stores, bringing some traditional Brazilian urban color to the young capital. These changes are greatly welcomed by residents and white-collar workers. By the same token, social diversity is becoming more visible in the satellite cities, with middle-class houses springing out from the initial gridded plan. In other words, the crystalline class structure imbedded in Costa's master plan has become doubly blurred, with the presence of the working poor in the monumental center on the one hand, and the emergence of an affluent class in the remote suburbs, on the other.

A ripe subject for DOCOMOMO, Brasília occupied a significant part of the conference's program (which also covered a wide range of topics, from urban conservation to housing, in various places in the world). Papers addressed the many ambiguous readings of Costa's and Niemeyer's concepts, the misunderstanding of Brasília as expressed in architectural history's master narratives, and prevailing perceptions of it as reflected in iconic films and photography (one paper was devoted to the townscape's role as a backdrop in fashion spreads). Regrettably, however, few at the conference addressed the urban and architectural conditions of the present-day city.

Given the nature of this dynamic, evolving city, a discussion about preservation could seem a patronizing gesture by European and North American fetishists of modernism. But the city is presently facing very real pressures that require very real plans of action. As early as 1987, I

Present-day Brasília is no longer limited to Lúcio Costa's harmonious design. With a population of two million (more than quadruple what had been originally planned), the young capital has become complex, intense, diverse—contrary to its popular image as a dull, formalistic, modernist desert.





Tribute

Rosie the Riveter Memorial

As the drama over the World War II memorial in Washington, D.C., continues to be played out on the national stage, another WWII memorial has been quietly realized in two short years, built by the small industrial city of Richmond, California, facing San Francisco Bay: It honors Rosie the Riveter, the nickname given to the women who worked in wartime production factories, winning the war from home. Richmond's waterfront might not be the Washington Mall, but this site is loaded with meaning. The landscape monument, designed by local artists Cheryl Barton and Susan Schwartzberg, has reclaimed a part of the old Kaiser shipyard where thousands of women toiled as welders, machinists, draftswomen, pipefitters, electricians, and more. Over 200 "Rosies" who had worked at the shipyard, along with 2,000 fam-

ily members and friends, attended the memorial's dedication in October. Conceived as a stern-to-stem axis touching the water and pointing toward the Golden Gate Bridge, the monument suggests a partially framed ship poised to slip into the waves.

Two weeks after the memorial's dedication, President Clinton signed a bill approving the designation of Richmond's industrial shores, home to over 56 wartime industries, as a national park. With the Rosie the Riveter Memorial as its centerpiece, the new Home Front National Historical Park will restore and maintain key WWII structures and sites, and also rejuvenate the Richmond's economy, which has suffered severe post-industrial decline. Ironically, the war wrought Richmond's first transformation—from a sleepy rural community of 26,000 to an industry town of over 100,000—and now, memorializing it will breathe new life into the city. *Jay Powell*

remember Costa expressing concern about the stability of the city's central areas. As real-estate pressure builds up in the business and hotel sectors, the possibility of new buildings poses a threat to the major spaces of the Plano Piloto—most notably the Planalto area where Niemeyer's ministries, parliament buildings, and monumental palaces are located. Recent government buildings, including some by Niemeyer, already weaken, to some extent, the clarity and power of the original ensemble of the Plano Piloto. While Brasília battles pressures to capitalize upon and densify its grand core, historians and preservationists can unfortunately do little more than worry about losing a beautiful, laconic urban landscape to the clutter of incongruous high-rises.

This neglect of the incremental transformation of urban spaces exemplifies the problem with DOCOMOMO and its activities. In order to understand what kind of future the "modern city" faces, a basic agreement on the definition of the term must be reached. Is the "modern city" identified strictly with the productions of the Modern Movement, or is it identified with the *modern condition* of cities (leaving radical or visionary planning schemes, such as Brasília, Chandigarh, or other totally

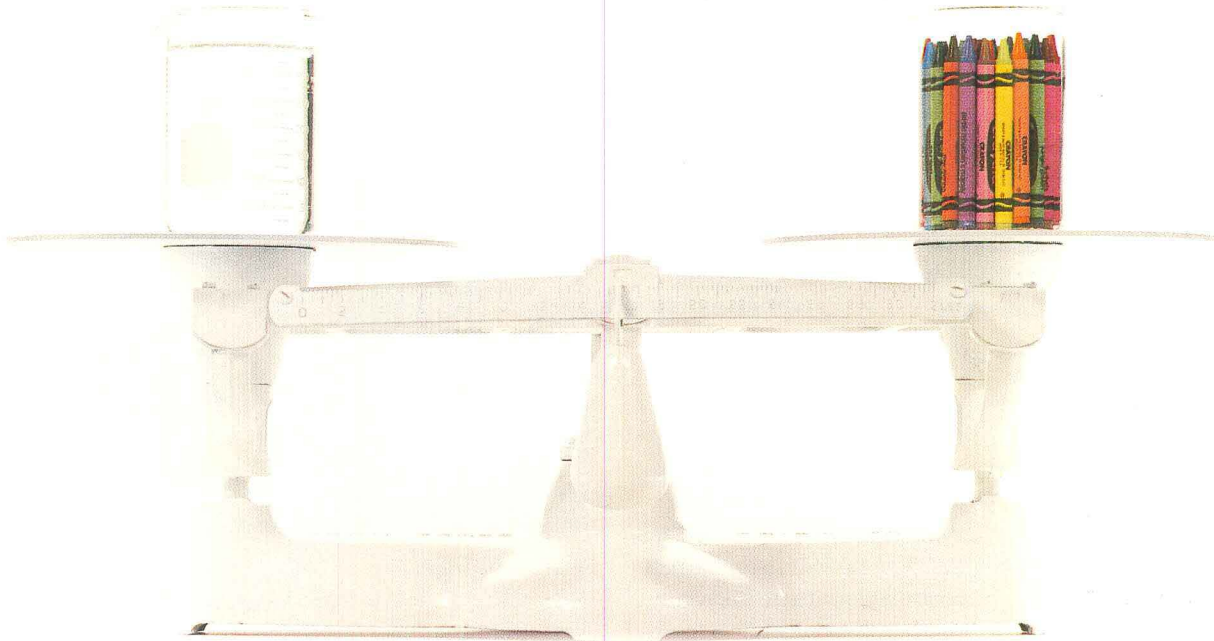
Given the dynamic, evolving nature of Brasília, a discussion about preservation could seem a patronizing gesture by fetishists of modernism.

planned modernist compositions, exceptions to the rule)? Depending on one's answer, strategies of how to approach Brasília will diverge widely, from focusing on a limited range of specific artifacts, to understanding the complexity of the city's numerous and constantly changing fabrics.

By now, the restoration of specific modernist works—one of DOCOMOMO's original aims—has become established public policy in many European cities (though it remains a contentious issue elsewhere). Preserving entire urban areas raises economic and real-estate issues of greater complexity. The fact that urban-scale preservation is being discussed at DOCOMOMO's conference at all, however, indicates the astonishing extension of the group's purview at the end of its first decade. With its headquarters in Delft, Holland, where it was founded, DOCOMOMO has evolved into a loose but effective network of groups in 42 countries, with members representing a range of disciplines, including history, preservation, and architecture. It has staged a series of international scholarly conferences (in Dessau, Barcelona, Bratislava, and Stockholm), in addition to fostering investigations on building technologies and acting as a watchdog for important modernist sites. This latter effort has led to the publication of a comprehensive international register that identifies preservation-worthy works in 32 countries.

During the conference, under the 700-meter-long brise-soleil of Brasília University (a Niemeyer classic), these modernist activists debated the future of their organization and *continued on page 127*

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Holiday Wish List

Wondering what to get your favorite designer for the holidays? To help with gift ideas, **Susanna Sirefman** polls prominent design figures to see what *they* want.

Odds and Ends What do those who collect—and those who are collected—admire, crave, and dream of for themselves? In the spirit of the holiday gift-giving (and getting) season, we asked a group of design mavens what's on their wish lists. The following is not intended to be *Architecture's* New Best Bets Shopping Guide—many of the items below are unavailable—but rather a celebration of great design and great designers. Wish-list items range from books to objects to buildings, both real and imagined, and reveal quite a lot about the person doing the wishing. No one questioned was allowed to choose something of his or her own design. Interestingly, of all the disciplines included, only the architects showed marked reluctance to name someone else's work. Of course, it was inevitable that, while conducting our poll, we'd encounter a Scrooge or two. One individual withdrew her response—which was a shame because it was wonderfully telling. After berating us for the frivolity of our endeavor, this nameless architect wished for “world peace and an end to world hunger.” But, barring the possibility of getting those, she ceded, “Or, the perfect bowl.” Designers *are* practical, after all.

Joe Rosa is in the midst of planning his first exhibition as curator of the Heinz Architectural Center in Pittsburgh. *Folds, Blobs and Boxes: Architecture in the Digital Era* is due to open in February 2002. Rosa, though, has his heart set on the work of a pre-digital blobber, the architect Jean Maneval (1923–1986). His perfect gift would be Maneval's polyester/polyurethane kit-of-parts vacation house **Six Shell Bubble** of which 30 were produced between 1968 and 1970.

An assistant professor of architecture at the California College of Arts & Crafts since 1998, **Mabel Wilson** still feels like a transplanted New Yorker. Wilson, whose work with partner Paul Kariouk was the subject of an exhibition at Yale University this fall, would really like “property in San Francisco and an IPO” but will settle for the **LC5 daybed** designed by Charlotte Perriand and Le Corbusier in 1934 and reissued by Cassina this year.

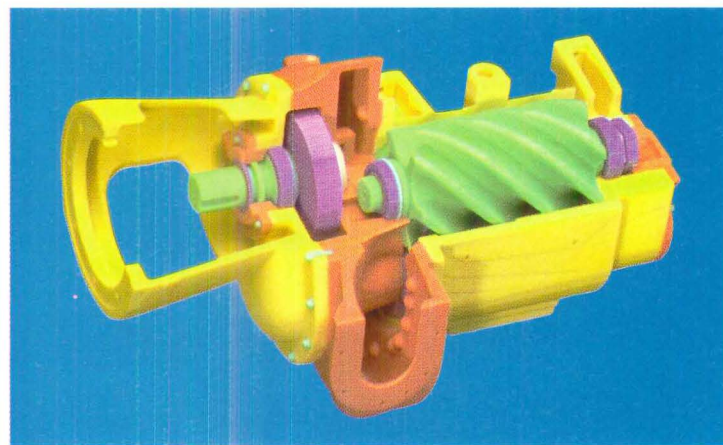
Architect **Morris Lapidus** was creating sensuous curvy architecture well before the digital age. His renowned Miami Beach hotel designs, including the Fontainebleau (1954) and Eden Roc (1955), are ripe with free-form concrete shapes and circular cutouts known as “cheese holes.” Lapidus, 98, honored as an “American Original” in the Cooper-Hewitt's inaugural National Design Awards this fall, says he has been lucky enough to have had everything material he ever wanted, and now only wishes for **good health**.

It has been a hectic season for graphic designers **Massimo and Lella Vignelli**. Due to skyrocketing rents in Manhattan, they recently relocated their firm from their longtime downtown loft to a home office in Long

Island—an experience Massimo likens to “changing from an evening gown into a miniskirt.” In their quest for tranquility, they would love to have the minimalist **SkyWood House** in Middlesex, England, designed by architect Graham Phillips in 1998. Says Massimo, “This house is like a young tree with deep roots.”

Architect **Richard Meier** just wrapped up two Federal Courthouses this fall, one in Phoenix and another on Long Island. With past projects as spread out as Rome, Italy to California, Meier's holiday wish is for “**more time**, and I would like to know where to get it.”

German photographer **Katharina Bosse** takes color images that transform one's



The Garbo trash bin and plastic Oh chair have made designer **Karim Rashid** a household name. Current project highlights: two restaurants for Iron Chef Mori Moto; hotels in Miami, Athens, and Los Angeles; watches for Yahoo!; and a jacket powered by solar panel fabric you can plug your tech right into. Rashid believes “the future is desktop manufacturing,” and would like the **Rapid Prototyping Machine Z Corp Z 402 Solid Object Printer** which squirts out bits of colored plastic in forms dictated by a computer drawing (an example, above). This would allow him more time for even more projects.



As executive VP of Research and Development at Razorfish, **Tucker Viemeister**, who has designed everything from kitchen tools to wacky Joe Boxer watches, creates not only appliances and information platforms but virtual products as well. Choosing the very snazzy **ZEUS: Zero Emission Scooter** designed by Springtime for Urban Solutions, Viemeister muses, "My first thought for a gift was something like John and Yoko's 'end of war,' but I think as a designer I have an obligation to 'stuff'."

notion of space. Particularly disconcerting is *Ten Rooms for Sex*, her series of empty fetish interiors. Bosse has exhibited in Germany, France, and the United States, and her first monograph, *Surface Tension*, will be published early next year. Having recently attended the Hannover Expo 2000, Bosse would very much like to have the **Icelandic Pavilion**, which she describes as "really beautiful but somehow oppressive, clear yet mysterious." One might describe her photographs the same way.

Upon packing-in the critical journal *Assemblage* (with the final issue, #41, appearing this month), founding editor and Harvard professor of architectural theory **K. Michael Hays** plans to focus on his new position as adjunct curator of architecture at the Whitney Museum of

American Art. In light of his frequent Cambridge/Manhattan commute, Hays, who has proposed a retrospective on John Hejduk for his first exhibition (2003), wishes for **a high-speed train between Boston and New York**.

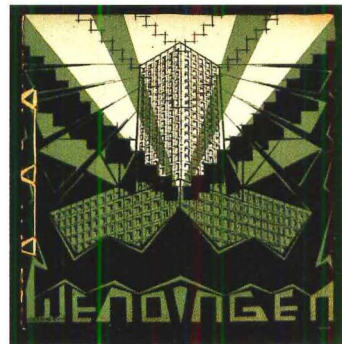
Canadian graphic designer **Bruce Mau** is well known as the coauthor with Rem Koolhaas of *S, M, L, XL* (Monacelli, 1998). If that book didn't give you carpal tunnel syndrome just from holding it, Mau has just released a spectacular 627-page monograph of his own work, entitled *Life Style* (Phaidon, 2000). Obsessed with completeness (and timeliness) Mau would like **the complete works of author George Orwell** (14 volumes, reissued by Secker Martin Warburg Ltd.), whom, he marvels, "invented the concept of Big Brother."

Mr. Target himself, architect **Michael Graves** has raised the bar for design across the United States, adding glamour to inexpensive picture frames, bathroom brushes, and measuring spoons. Besides designing his 40-odd product line for Target, Graves is currently working on five luxury hotels in Egypt, the Houston headquarters for the Federal Reserve Bank, and a U.S. embassy with a secret location. No wonder Graves says he has "never worked as hard as this year." He would like to spend the holidays **golfing at either Pebble Beach or St. Andrews** in Scotland. It was not clear whether he intends to design his own clubs.

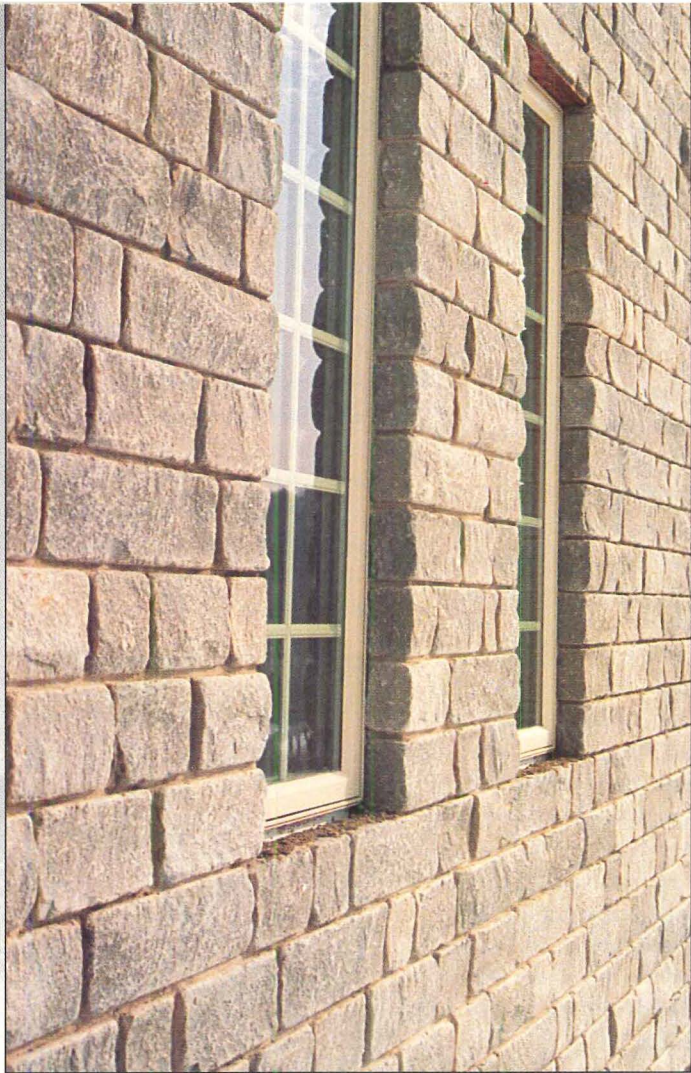
The latest works of architect-artist **Gaetano Pesce**, 40 poured-resin portraits that double as wall hangings and lamps, are currently on display at SoHo design retail mecca Moss. Pesce believes consumerism is a big value in our society. "The culture of our time goes through shopping," he says. "We buy for pleasure, as a way to become part of what we admire." Pesce himself is apparently such an impulsive shopper that he has everything he wants, explaining, "Each time I see something I want as a gift, I buy it for myself."

David Shearer, founder and president of Totem Design Group, named his empire after design greats Charles and Ray Eames. Says Shearer, "The Eameses traveled the world collecting objects they described as symbols of particular meaning or place, in essence, totems."

Continuing this tradition, Shearer adores road trips. To help him travel in style his ideal present would be **Ford's 021C car designed by Marc Newson**, complete with Prada luggage filled with personal products designed by Karim Rashid.



William K. Stout Architectural Books in San Francisco is one of the best architectural (and gift) sources in the country. The proprietor **Bill Stout** also publishes very cool books. Look out for his latest: *Wrapper: 40 Possible Surfaces for the Museum of Jurassic Technology* by California architects Robert Mangurian and Mary Ann Ray, and his own *William Turnbull: Buildings in the Landscape*. One of the few who would know where to locate his wish gift—Stout covets a complete set (all 200 issues) of **Wendingen**, the great 1920s Dutch magazine. ■



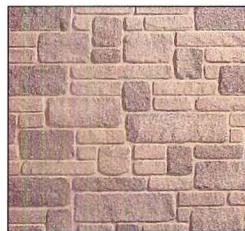
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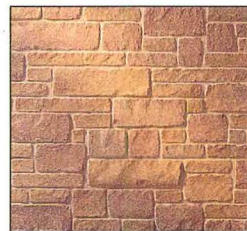
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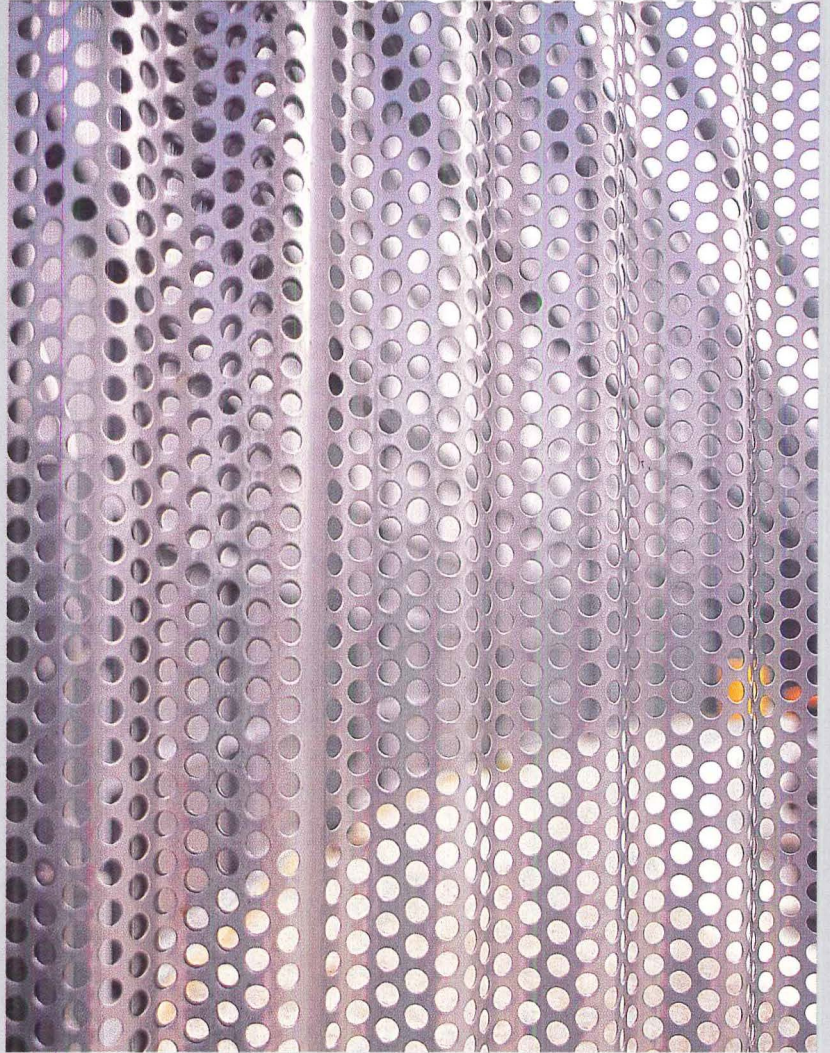
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SURFACE TENSION

Architectural transparency is an outdated concept, irreconcilable with the perceived complexity of contemporary economics, social relations, science, and politics. Architects, eager to dress up the nude simplicity of the traditional modern façade, have begun to veil their buildings in woven, perforated, and translucent layers of glass, metal, and plastic. The seductive promise of such surface treatments can transform the most mundane building into a Salome, the most indifferent passerby into a Herod. Meaning and content are secondary to allusion and suggestion. Yet, as Aaron Betsky points out in his essay on page 92, such tactics of obfuscation and titillation are not necessarily empty promises, but hint at the beginnings of a whole new approach to architecture's societal role.

From concept to reality: The pattern on the cover of this issue derives from the perforations in the corrugated-metal façade of Leers Weinzapfel Associates' University of Pennsylvania Chiller Plant (above).



KOHN SHNIER

**UMBRA WORLD HEADQUARTERS
TORONTO**

BY ADELE FREEDMAN

Debut

Kohn Shnier Architects

Toronto



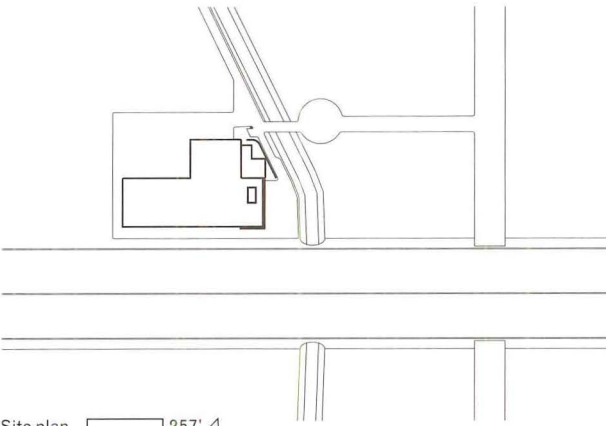
Principals: Martin Kohn, John Shnier

Toronto architects Martin Kohn and John Shnier met in the late 1970s while students at the University of Waterloo in London, Ontario. But the two didn't start practicing architecture together for another decade, when they were finalists in the highly publicized competition for Kitchener City Hall in Ontario. Kohn and Shnier officially became partners in 1990, and are currently working on a number of projects, including a 50,000-square-foot interior renovation of Victoria University at the University of Toronto's E.J. Pratt Library (with Shore Tilbe Irwin and Partners).

With one million sold, the shapely plastic container known as Garbo is the most celebrated trash receptacle of our time. Proclaiming through its name alone that garbage can be glamorous, this ubiquitous object is the creation of industrial designer Karim Rashid, a Toronto boy who has erupted into the international limelight. It happens that Garbo is manufactured by Umbra, a Toronto-based company reputed for hiring Canadian talents to feed a youthful public's appetite for stylish but affordable home accessories, from desk chairs to dish racks. When it came to its headquarters in suburban Scarborough, east of Toronto, Umbra founder and president Les Mandelbaum stuck with the principles that built his firm: modern design and materials, old-fashioned economy. The commission for the building went to Kohn Shnier Architects, Toronto-based connoisseurs of the spare and soigné, who sought inspiration from the material of which Umbra's greatest hits are made: plastic.

As world headquarters go, Umbra's had humble beginnings. After nearly 20 years in business, Mandelbaum decided to relocate from one concrete warehouse to another that is twice the size (115,000 square feet) and situated near a major highway. Architect John Shnier was to endow this "totally banal and ugly" structure, as he describes it, with an image that reflected Umbra's thinking about things, while playing up its headquarters' newfound visibility from eight lanes of traffic. Renovations to the interior—containing offices, showrooms, and a design studio, with modest warehousing and manufacturing facilities around the back—were assigned to Figure 3, a local interior design outfit. "Architects tend to take over," is how Mandelbaum justifies his team approach. Besides, his first priority was a pleasant work environment, not an architectural masterpiece: "I thought of dressing up the exterior, nothing major."

Shnier took the notion of dressing up seriously. In his words, he fitted the warehouse with "sunglasses,"



Site plan 1/257' ↙

connoting both fashion statement and self-concealment. By way of a pun, a pair of snazzy new shades was just the thing for Umbra—the company is named after one of its early products, a window shade. Shnier wrapped the warehouse in multiples of a single translucent green plastic module, perforated to exploit the potential of light and shadow, as well as to transform views of a bleak industrial landscape into a cinematic experience for office workers. In other words, he did take over.

Mounted in rows on a structural frame, the 30-inch-square convex panels coalesce into banks of television screens broadcasting the weather. There are three different versions of wrapper, all seductive: a front-lit screen cantilevered from the second-floor office area; a sinuous, back-lit, freestanding screen parted curtainlike to reveal the entrances and which forms the perimeter of a small courtyard; and a slim, three-sided column spelling out Umbra in attached metal letters that stands as a glowing sentinel at the end of the driveway. The veiled theatricality of it all builds to a striptease—a 16-foot-high glass lantern crowning an upturned parapet above the office block. Besides admitting indirect light into the design studio below, the boxy skylight is both landmark and sign: It advertises the Umbra name on a polyvinyl chloride scrim suspended from a track. Industrial production in the service of architecture, the generic in the cause of the particular, simplicity yielding experiential richness, Umbra World Headquarters amounts to a corporate identity program that exceeds the sum of its plastic modules by an enchanting mile. ■

Adele Freedman is a Seattle-based freelance writer.

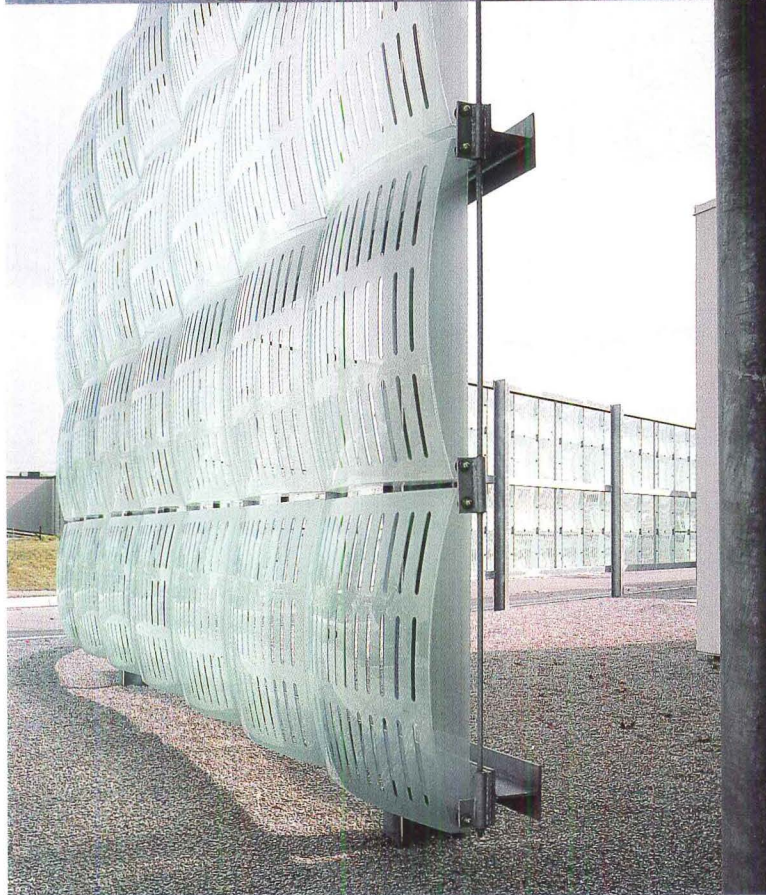
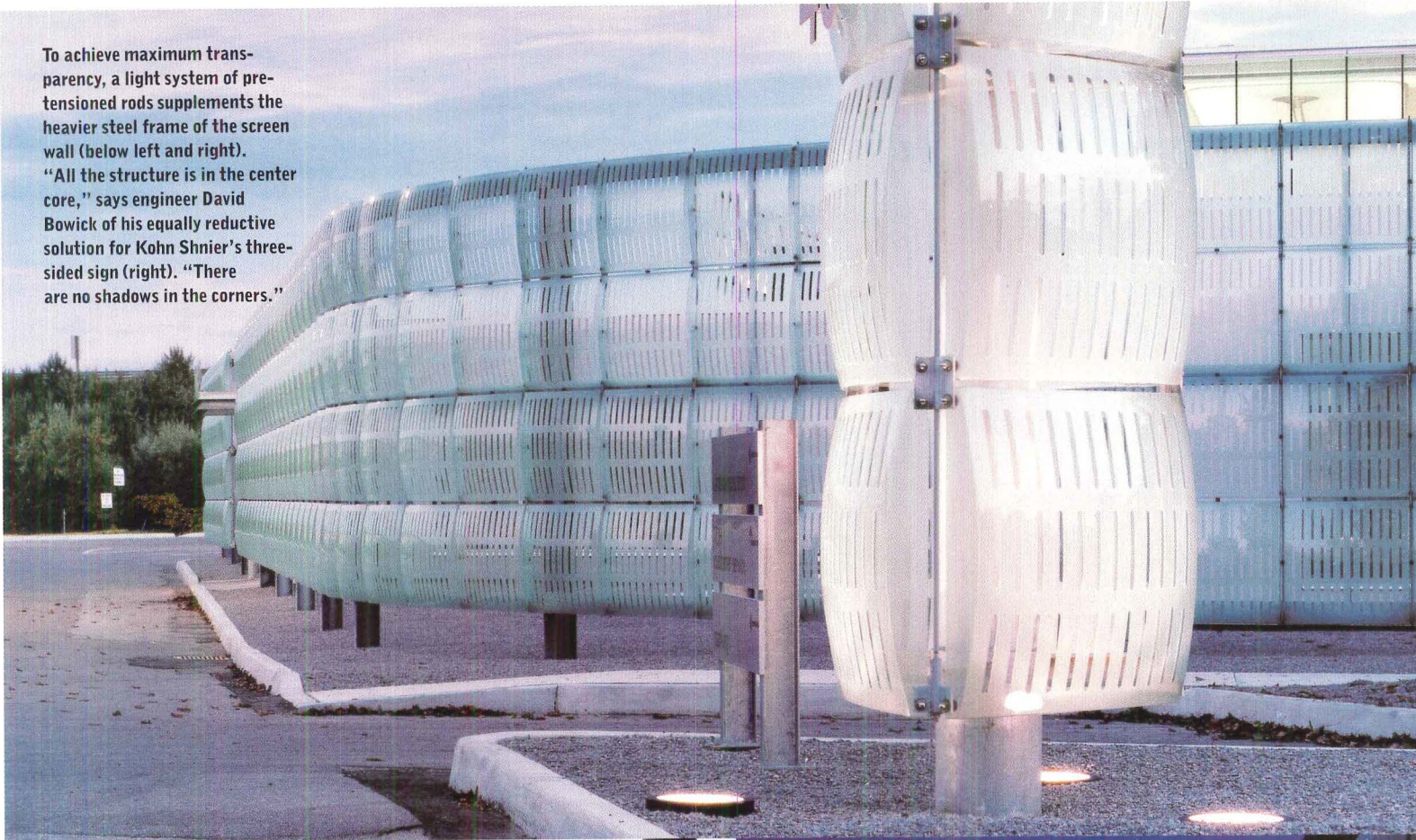
For Umbra's new suburban Toronto headquarters, Kohn Shnier Architects remade a nondescript concrete warehouse; a screen wall of translucent plastic panels (left) cantilevers off the existing, but newly stuccoed, south façade.

Another local firm, Figure 3, was responsible for the interiors, but Kohn Shnier designed a rooftop clerestory (right, at center) that illuminates a design studio within the building.



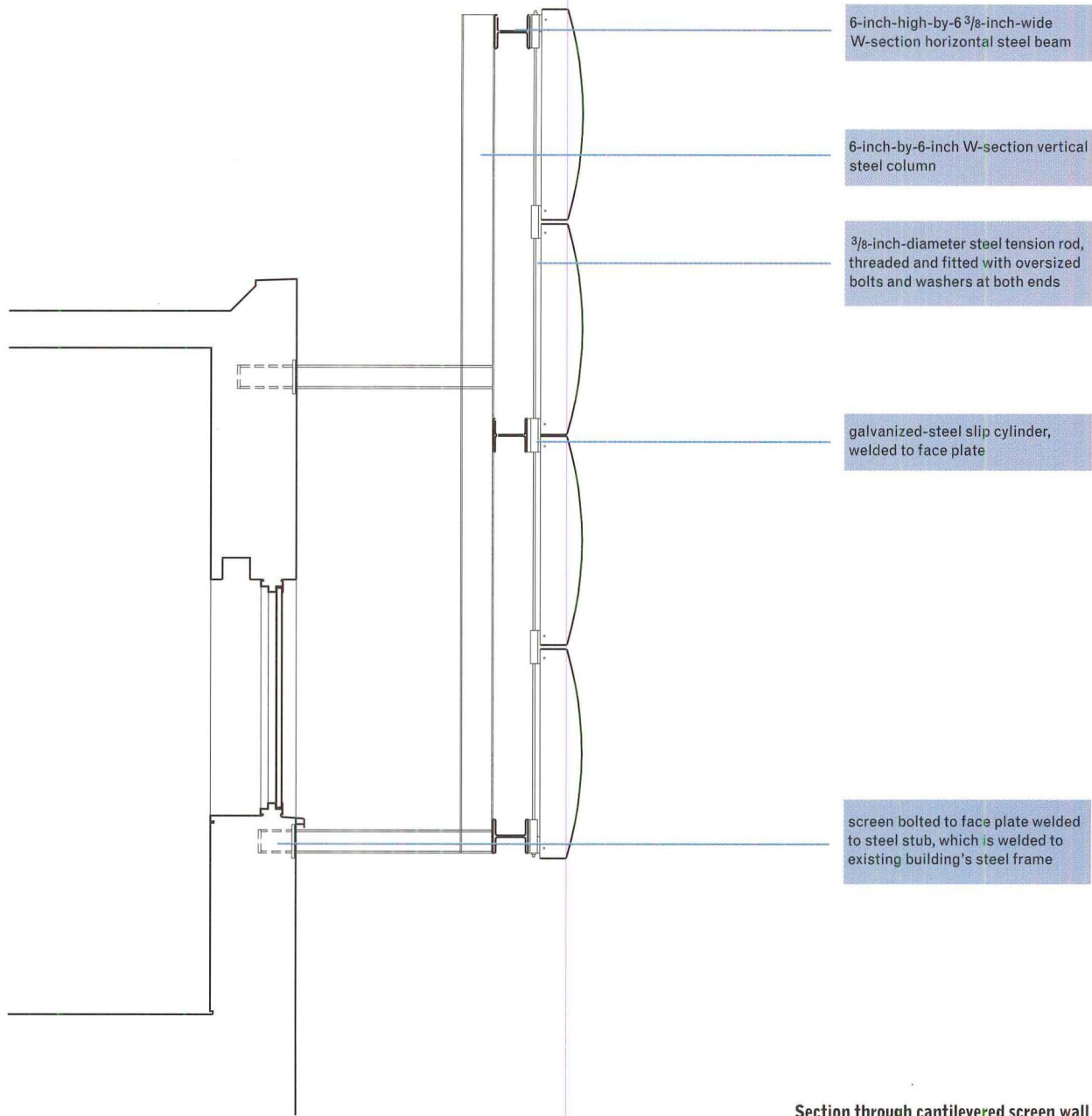


To achieve maximum transparency, a light system of pre-tensioned rods supplements the heavier steel frame of the screen wall (below left and right). "All the structure is in the center core," says engineer David Bowick of his equally reductive solution for Kohn Shnier's three-sided sign (right). "There are no shadows in the corners."



UMBRA WORLD HEADQUARTERS, TORONTO

CLIENT: Les Mandelbaum, Paul Rowan, David Quan; Toronto **ARCHITECT:** Kohn Shnier Architects, Toronto—John Shnier, Martin Kohn (partners); Richard Galezowski, John Potter (project architects) **ENGINEERS:** Blackwell Engineering (structural); Enso Systems (mechanical, electrical, HVAC) **CONSULTANT:** Figure 3 (interior design) **GENERAL CONTRACTOR:** Urbacon Construction Mgt. **COST:** Withheld at client's request **PHOTOGRAPHER:** Richard Johnson



Section through cantilevered screen wall

SKIN ANALYSIS: VACUUM-FORMED PLASTIC

John Shnier allows that his largely freestanding warehouse wrapping acts as a skin only in the sense that it creates continuity of appearance and, in the manner of human skin, "isn't fussy." Fundamentally, the wrapping is decorative. It comprises identical vacuum-formed modules of copolyester plastic shaped by a resin mold. The modules are convex, perforated by three rows of vertical slots, and sit within a stainless steel frame with a W-beam section. The frames attached to the wall are cantilevered from the structural frame of the building; those on the ground are attached by localized sonotube footings and reinforced concrete. A succession of vertical pretensioned rods,

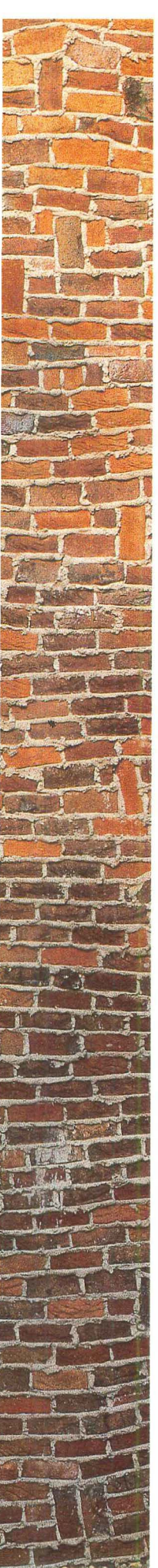
joined to the panels at each corner, help the screens achieve wind resistance. Before the panels were installed, the threaded ends of the rods were fitted with stainless steel nuts, which were then tightened, putting the rods in a critical stage of tension before any external loads were applied. Structural engineer David Bowick, who devised the framework, which, to his knowledge, is unprecedented, uses the analogy of stringing a tennis racquet: "By tightening the strings, you get a rigid racquet." He continues: "The object was to have a structure that was very minimal. The rods are not visually obvious, and they were needed frequently because the panels are small." *A.F.*



MECAN00

**NATIONAL HERITAGE MUSEUM
ARNHEM, THE NETHERLANDS**

BY LIANE LEFAIVRE



It is hard to imagine a museum collection more stolidly traditional than that of the National Heritage Museum. Set in an idyllic hilly park in southern Holland's Arnhem Forest, it houses a large collection of traditional Dutch costumes gathered by Wilhelmina, the beloved queen of the Netherlands whose reign lasted from 1890 to 1948. But because dresses alone cannot evoke the texture of everyday life, architect Francine Houben of Mecanoo has split the museum in two: Along with a straightforward brick and glass box, she designed an incongruous and playful blimp-shaped sensorium called the HollandRama. It is far more suggestive of some 1960s issue of *Popular Science* devoted to flying saucer design than of Dutch peasant life, and invokes not local history, but local sensibilities.

On arrival, visitors walk by a mysterious copper-clad egg-shaped building to which there seems to be no entry. Just beyond, there is an opening in the 470-foot-long brick wall which forms one edge of the museum building. Houben sets great store by this wall, and with it, she celebrates the material that more than any other symbolizes—and makes up—the Dutch built environment. It is a mosaic of over 40 brick types, from hand-made to glazed, from random to geometric, from old edge-joint to modern glue techniques. The ground floor of the attached building serves as a roofed-over reception area, restaurant, and exhibition hall. On the lower level is a space for current exhibitions and for the permanent collection of costumes and jewelry.

Among the memorabilia and traditional dresses on the lower level, one may enter the HollandRama, the bubble Houben refers to as a "time capsule." Once



Site plan 49' <

- 1 HollandRama
- 2 main entrance
- 3 education center
- 4 information
- 5 auditorium
- 6 support spaces

A collage of 40 different types of brick clads the 470-foot wall announcing the National Heritage Museum's historical agenda to arriving visitors.

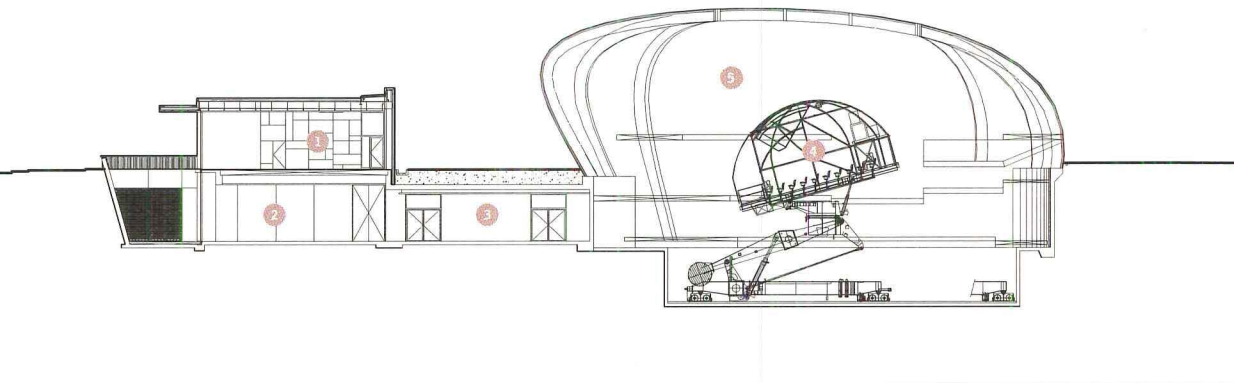
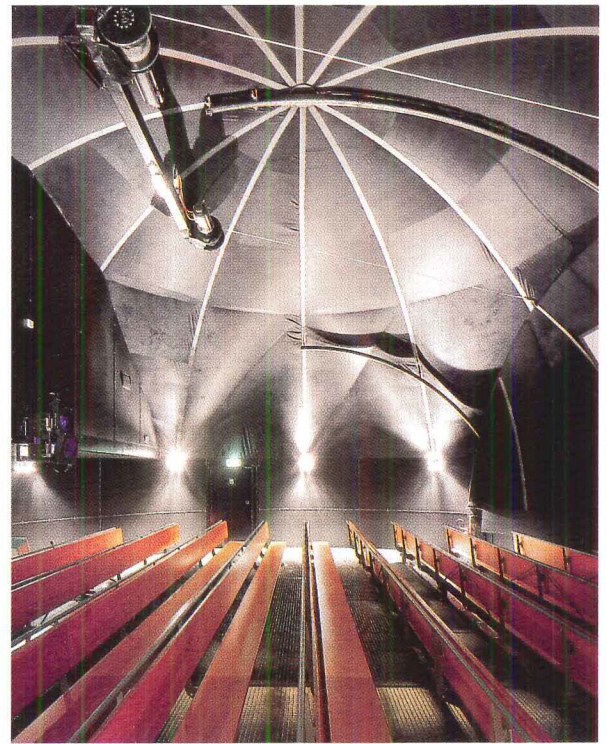
The mysterious copper-clad bubble sitting just in front of the museum's brick wall holds the HollandRama, a sight, sound, and smell show designed to add an experiential layer to the museum's exhibits.







Vistors enter the HollandRama from the lower level of the museum, passing through the copper skin onto a viewing platform.



inside, visitors (or rather passengers) are seated on a mechanized mobile platform accommodating 170 people. It twists and winds its way upward along the inside of the shell that serves as a screen. Scenes of Dutch history and life are beamed up on the shell: cows munching on flat green fields, skaters frolicking on frozen canals, a celebration of Queen Wilhelmina's birthday as a little girl. The space module physically pulls visitors back into a Holland long gone.

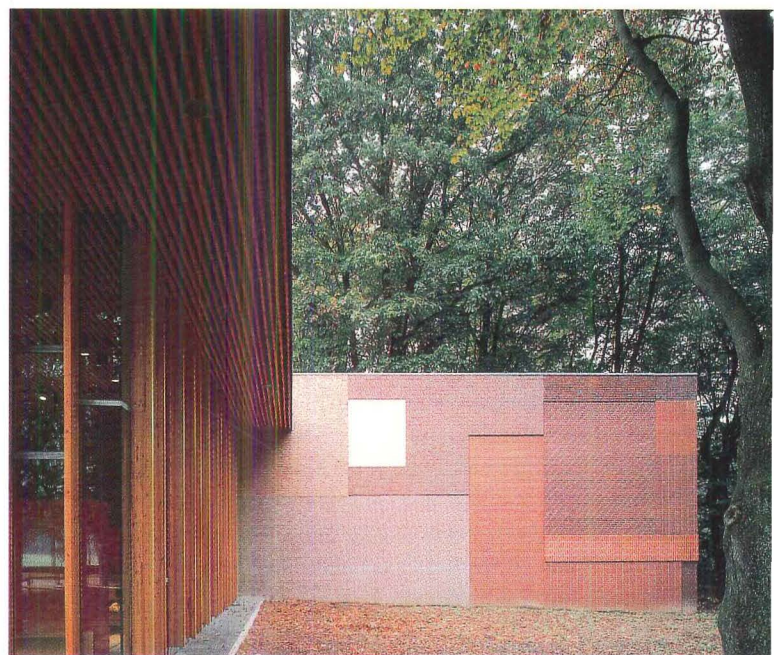
This is the kind of celebration of patriotic sentiment that one would have expected to find inside a sugary piece of architectural gingerbread. Not in Holland. There is little appetite for the "ye olde" recreations of Colonial Williamsburg. Here, there is not only a coexistence but a perceived complement of the traditional and the modern, that elsewhere tend to be taken as mutually exclusive. The museum manages to get at something more deeply Dutch than windmills or canals: It is a country where futuristic symbolism naturally supports history. ■

East-west section 20'

- 1 auditorium
- 2 temporary exhibitions
- 3 permanent collections
- 4 hydraulic stage platform
- 5 HollandRama

Mecanoo hints at the whimsical approach to Dutch history offered up in the HollandRama by making the blimp-like form look as if it might break free from the ground at any moment.

Once inside, visitors sit on a hydraulic platform that tilts and rotates, and watch images projected on the interior surface of the bubble.

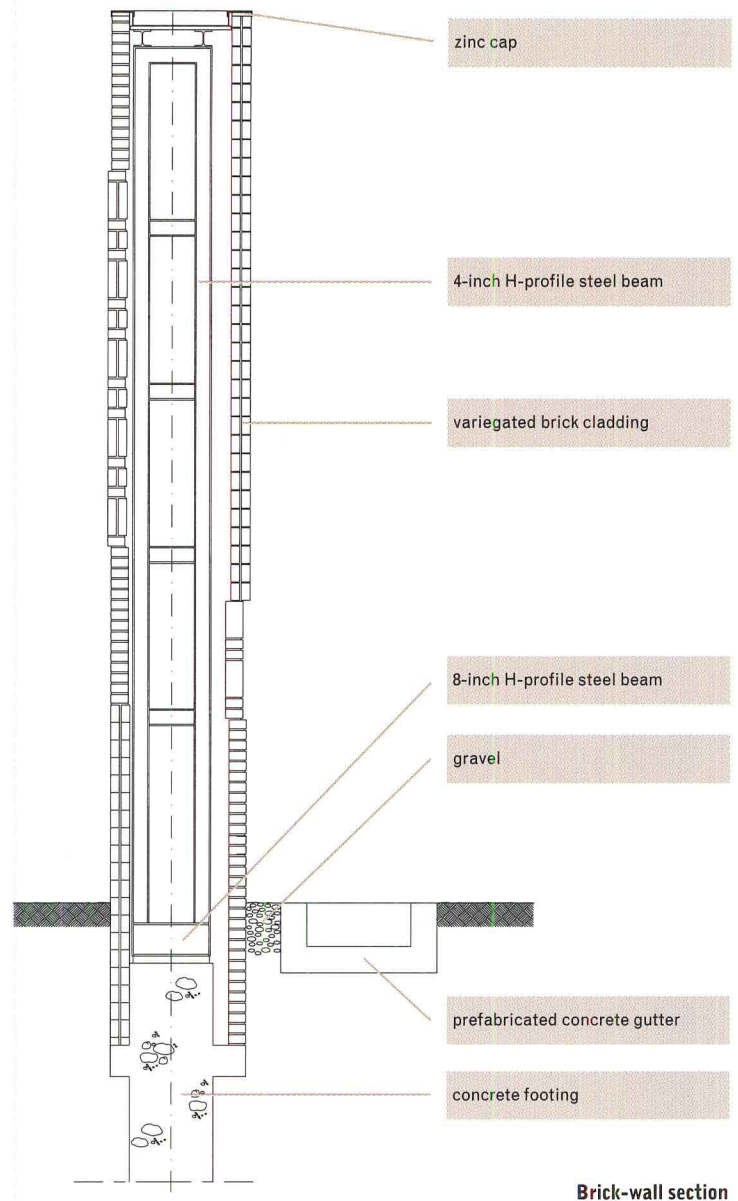




The irregular Aalto-inspired glass curtain wall on the eastern side of the museum looks out onto a park that has some 40 examples of traditional of 17th- and 18th-century Dutch architecture.

The small farmhouse near the museum pavilion is a typical example of the type that were built in the Gelderland region of Holland; this one dates from 1771.

The brick veneer on the museum's long wall is intended to evoke both the craft so inextricably linked with Dutch culture, and the watery, clay-rich landscape from which the bricks arose.



Brick-wall section

SKIN ANALYSIS: BRICK PATTERNING

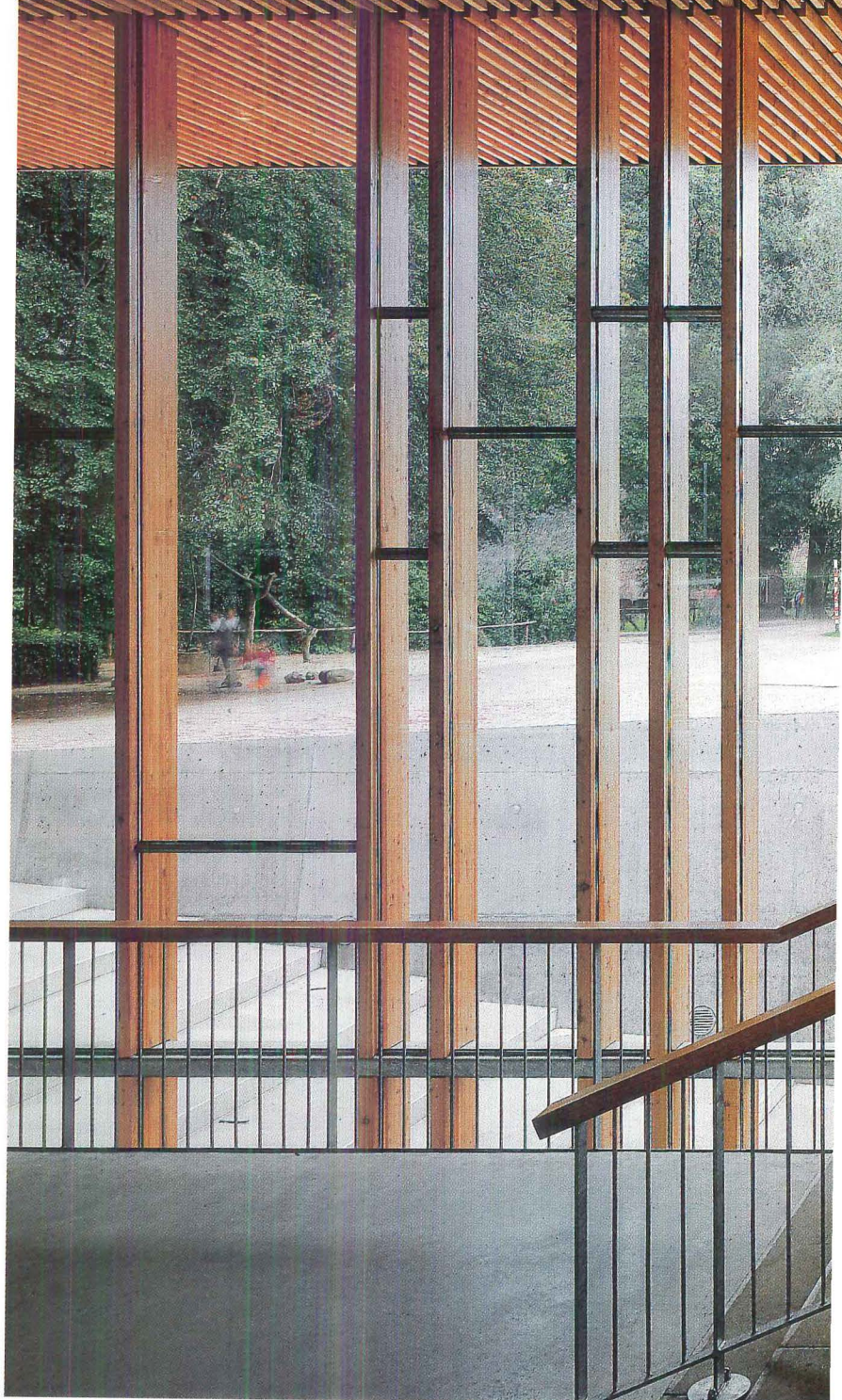
The 470-foot long wall that forms the National Heritage Museum's western façade is not a brick wall in the strict, load-bearing sense of the term. A simple frame—4-inch H-profile steel beams in concrete footings—forms the scaffolding for Mecanoo's exhaustive historical encyclopedia of Dutch bricks and bricklaying techniques. The museum supplies a brochure of the 40 kinds of bricks and 47 different kinds of bricklaying patterns assembled on the wall, and visitors are invited to use it the way one would flip through a book, in a tactile, hands-on way. In the manner of a playful, punky, clunky, pop collage of fragments of found objects, the wall is dominated by the principle of contrast rather than harmonious whole. It brings together bricks ranging in color from black to dark blue to bordeaux to terra-cotta to yellow to white, in texture from rough to glazed, into a disjointed whole. Some hues are solid, and others variegated, and the plethora of joinery techniques juxtaposes neat rows of bricks with curving waves; flat, flush surfaces with mottled ones, and seamless surfaces with discontinuous ones. *L.L.*



Mecanoo left the ground level of the museum pavilion so that it could be reconfigured for events.

Wooden slats that line the ceiling on the interior of the building continue outside along the roof's deep overhang.

Visitors get to the open-air museum of traditional Dutch buildings through an entrance on the building's ground floor outside.



NATIONAL HERITAGE MUSEUM, ARNHEM, THE NETHERLANDS

CLIENT: National Heritage Museum, Arnhem, The Netherlands

ARCHITECT: Mecanoo, Delft, The Netherlands—Francine Houben, Aart Fransen, Michel Tombal, Alfa Hügelmann, Joke Klumper, Pascal Tetteroo, Patrick Eichhorn, Rick Splinter, Michael Dax, Saskia Hebert, Theo Kupers (project team)

ENGINEERS: Technical Management (mechanical, electrical)

CONSULTANT: Goudstikker-De Vries (construction); Imtech

Projekts (contractor/mechanical installations); Ergon

(contractor/electrotechnical installations); ARBA MINÇH (project

management) **GENERAL CONTRACTOR:** Strukton Bouwprojecten

COST: \$6.6 million **PHOTOGRAPHER:** Christian Richters





LEERS WEINZAPFEL ASSOCIATES

**MODULAR VII CHILLER PLANT
PHILADELPHIA**

BY VERNON MAYS



P
1999 AWARD
A

As grand entrances go, the southern threshold of the University of Pennsylvania campus is an undeniably gritty one. Smokestacks, fuel storage tanks, and a power plant dominate the landscape, which is criss-crossed by highway ramps, bridges, and railroad tracks. To the casual observer, the setting offers few cues that one is about to cross an important boundary where the rough-and-tumble city ends and the hallowed ground of an Ivy League college begins.

Until now, that is, with the completion of an unlikely gateway building known simply as Chilled Water Module VII, a massive water chiller plant built to air-condition Penn's newest academic facilities. Designed by Leers Weinzapfel Associates of Boston, the \$18.9 million, P/A Award-winning building, sheathed in an oblong veil of perforated steel, is an unapologetic marker of the campus edge. "We were interested in frankly displaying the industrial quality of this piece of infrastructure—not trying to render it as something that could be mistaken for a research building," says Jane Weinzapfel, principal-in-charge of the project.

The site's high profile prompted the university to stage an invited competition in early 1998 for a building type often treated as an afterthought. Leers Weinzapfel's reading of the site was strongly influenced by curved off-ramps leading from an adjacent expressway and the sinuous banks of the Schuylkill River, both of which suggested a building more fluid in form, less enslaved by the city grid.

The silvery orb is a bold stroke, at once sidestepping the awkwardness that a flat-sided building would have



The railroad bridge, curving overpasses, and industrial buildings along the edge of Philadelphia's Schuylkill River informed Leers Weizapfel's decision to design a sheath for the Chiller Plant that would not disguise its function.

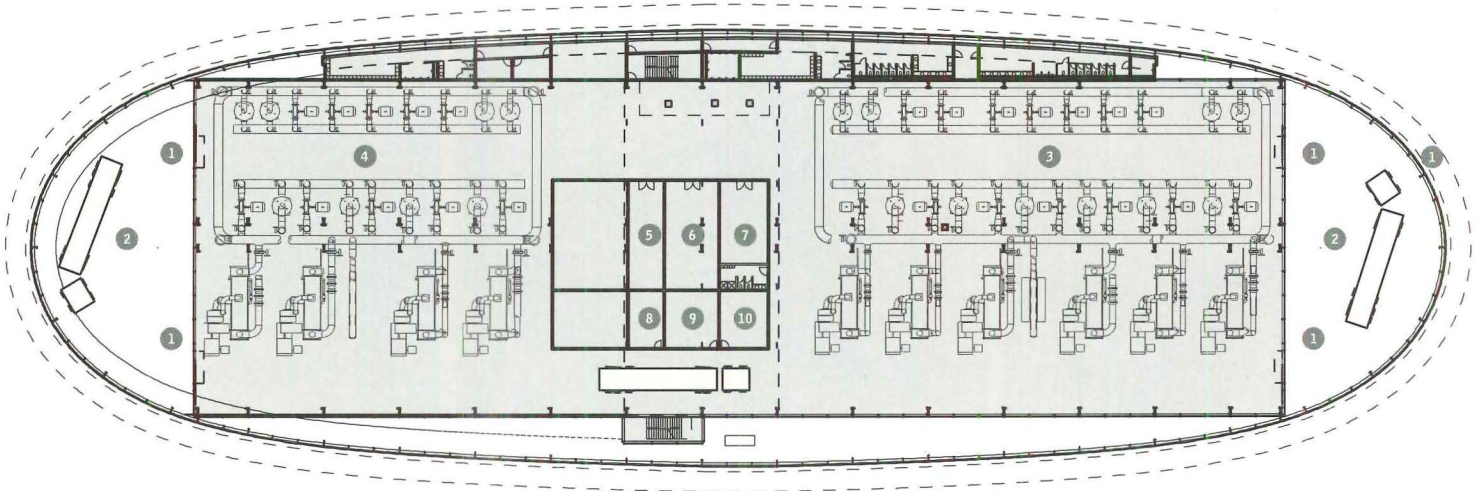
The plant abuts one of the University's baseball fields, but does not overpower it: The perforated metal screen surrounding the glass curtain wall is translucent enough to allow the building to sit lightly at the edge of the field.

had on the curvilinear site, while addressing a number of practical issues inherent in a 20,000-ton chiller operation. The 80,000-square-foot central container—a muscular frame wrapped in insulated steel panels on the north and west sides and a crisply detailed glass curtain wall on the east and south façades—contains some \$30 million in equipment and gargantuan pipes, many of which are brightly color-coded to denote their function. Because the chiller plant was built to accommodate the university's future needs, only half of the planned facility has been constructed thus far, so one forward-thinking aspect of the design was to create a façade that would remain constant even when later phases of construction take place behind it. In addition, the elliptical screen wall encloses a service yard at each end of the building just large enough so that trucking rigs can drop their load inside, make a U-turn in the easternmost yard, and exit by passing back through the building.



Ground-floor plan 30'

- | | |
|---------------------------------|-----------------------|
| 1 pedestrian/vehicular entrance | 6 pump room |
| 2 service yard | 7 storage room |
| 3 plant (phase 1—completed) | 8 communications room |
| 4 plant (phase 2—future) | 9 plan room |
| 5 filter room | 10 control room |

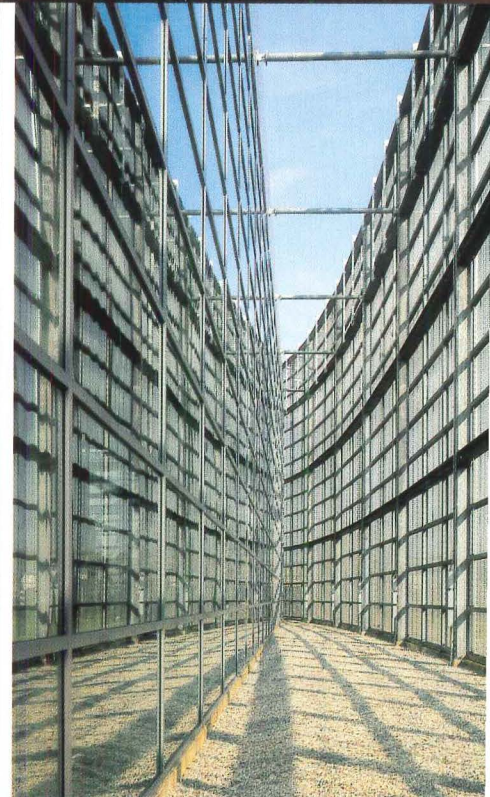


Leers Weinzapfel tested lighting options both through computer models and mock-ups using actual materials. Their decision to illuminate the wall from the top down produces a pleasing uniformity to the curved surface, an effect complemented by the colors inside the chiller building as seen through it at night.

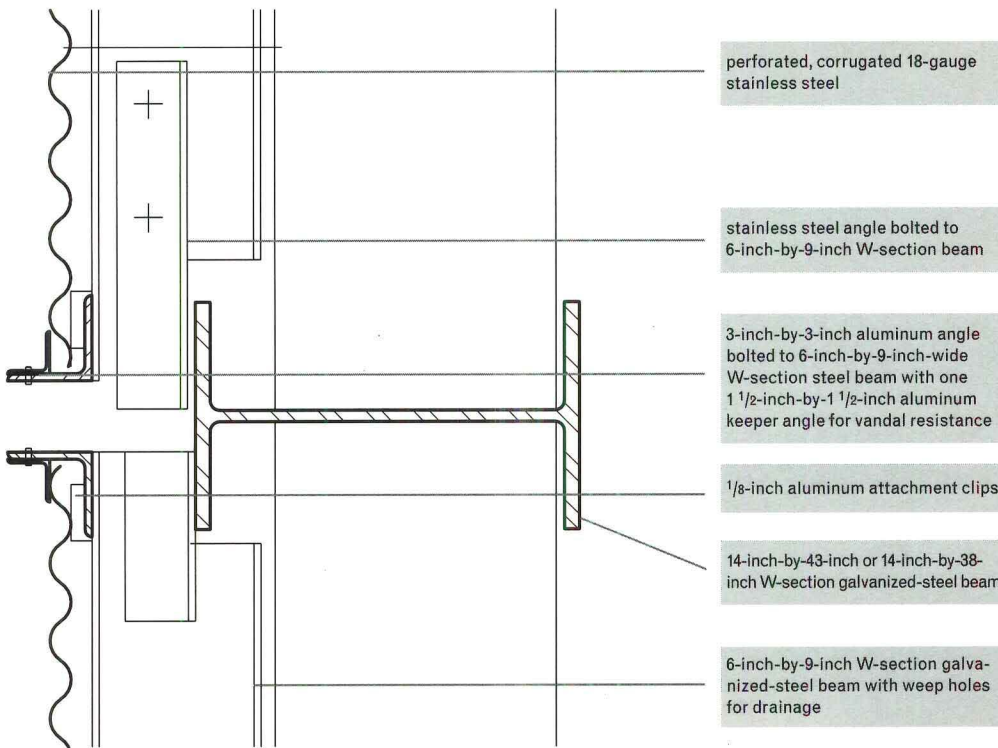
To get a cost-effective material for the screen, the architects asked the manufacturer to make a slight modification to a standard product: Before the sheet metal was corrugated at the factory, thousands of holes were punched out of it.

Openings at the ends of the lozenge-shaped screen are large enough for trucks to pass through. Within the enclosure, the architects left enough room between the screen and the plant proper for trucks to turn around in.

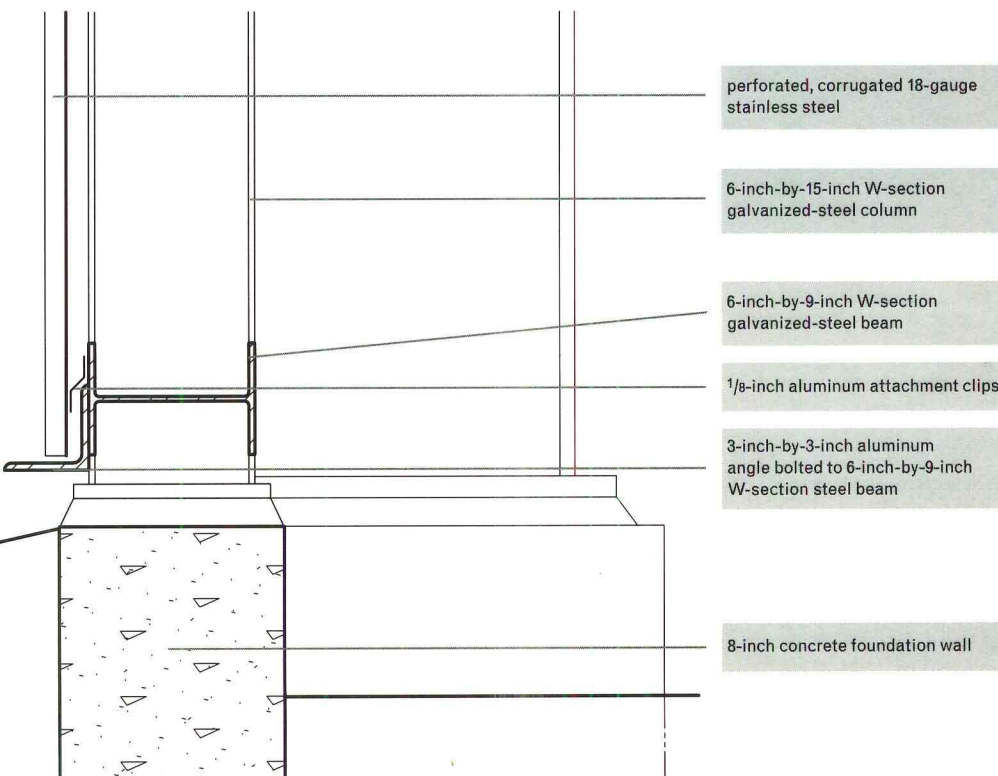
The rectangular glass structure that houses the machinery sits within the rounded shell of the metal screen, leaving a pathway all around.



SKIN ANALYSIS: PERFORATED METAL



Expansion joint at screen wall



Base of screen wall

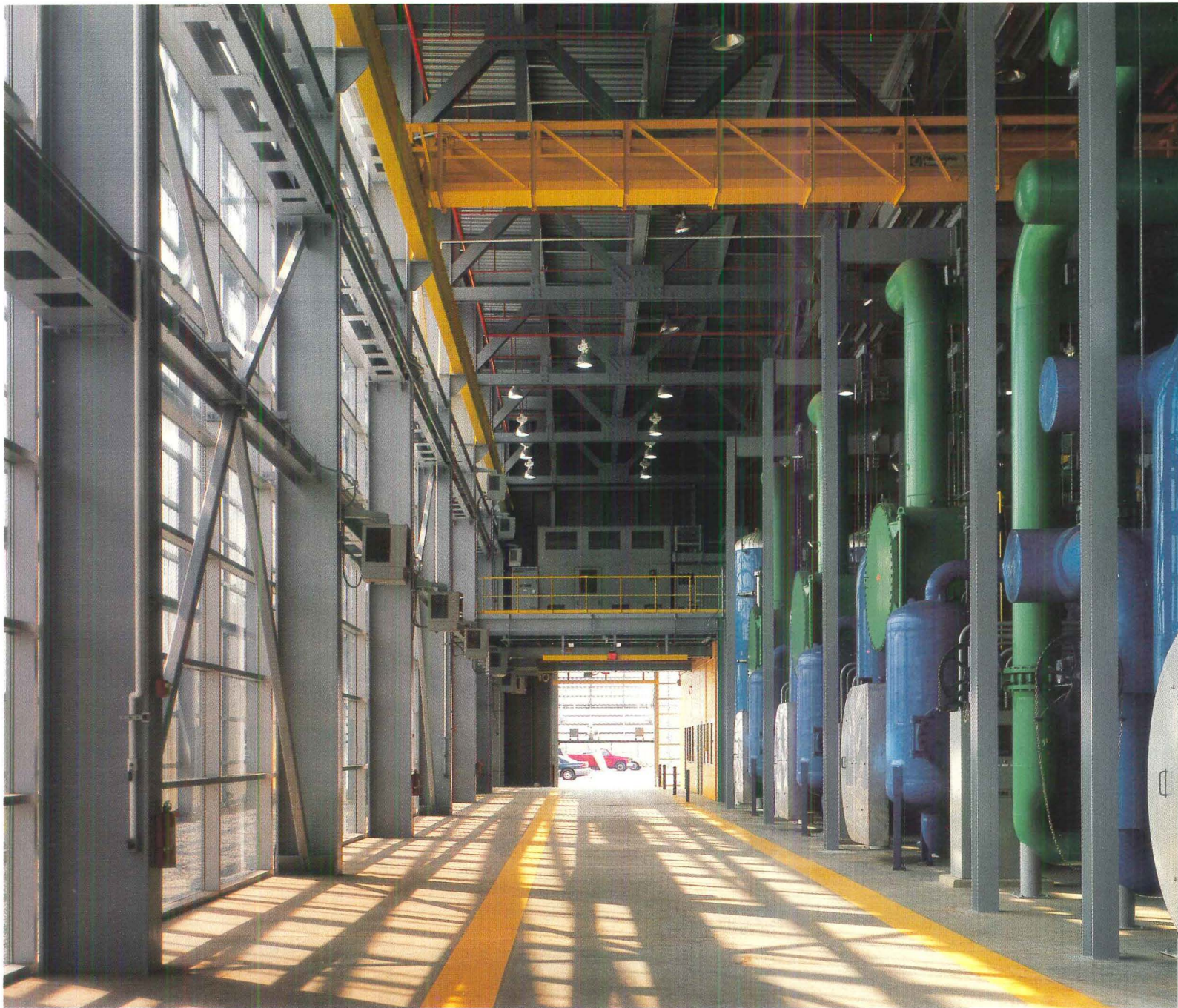
Creating a skin that glistens by day but turns transparent at night was a key goal of Leers Weinzapfel. After false starts with a system of flat panels that proved too detail-intensive and a stainless steel mesh that was ruled out due to high cost, they turned to a conventional corrugated metal system. “What was custom about it was the perforation,” says project manager Joe Raia. “But installation was easy for the subcontractors.”

A simple frame of galvanized-steel members with bolted connections supports the screen wall. The main structural grid consists of large W14 columns placed at 30-foot intervals and connected by W10 beams. The secondary structure is a grid of W6 steel members that provides direct support for the screen panels, which are screwed into aluminum strips attached to the W6 frame. To simplify assembly, two of every three bays were constructed on the ground and raised into position; the third bay, located between them, was then built in place to accommodate minor variations in dimension.

Meetings with the structural engineer and fabricator focused on analyzing the geometry of the ellipse to limit the required number of custom-curved members and rely, where possible, on less costly standard beams. The sheer size of the wall also demanded expansion joints, creating a need for slip joints at four strategic points.

Additional bracing to resist wind loads is provided along the top of the screen wall with members that attach to the chiller building. In the main service yard, large V-braces steady the screen wall in the interim until the second phase of the plant is built. To keep the service yards free of obstacles, horizontal trusses were designed for the extreme ends of the ellipse and placed far overhead.

Concerns about vandalism prompted the design of a continuous foundation (rather than having pads at the columns) to keep trouble-makers from crawling beneath the screen or digging under it. Likewise, exposed edges of the perforated panels are secured with keeper angles at the expansion joints to deter scavengers from prying the steel away. *V.M.*



The desire to conceal the activity behind the screen wall grew from the second major component of the project—a varsity baseball field. The architects studied a variety of relationships between building and ball field, and in the end decided to anchor the grandstand in a grassy berm that creates an effective buffer between the two. It's a testament to the designers' skill that the chiller monolith does not overpower the baseball diamond. In fact, as the day goes by, the screen wall is at times reflective, at times transparent, at times ephemeral—each change in character is brought about by new positions of the sun or the viewer's perspective. And, because its visibility as a landmark was important both day and night, the lighting of the screen wall was a critical component.

This blue-collar corner of campus is now transformed into an asset for the university, which ultimately made a responsible urban design gesture that not only polished its public image, but also made a meaningful contribution to the city at large. ■



Leers Weinzapfel considered the chiller plant's machinery as integral to its design, and color-coded the tanks to denote their functions—the green tanks are for condensed water, and the blue for chilled water.

At nighttime, the plant reveals its many layers all at once: The colored tanks show through the glass curtain wall, which in turn acts as a surface that reflects the perforated metal screen.

MODULAR VII CHILLER PLANT, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA

CLIENT: University of Pennsylvania, Philadelphia—Omar Blaik (vice president of facility management); Titus Hewryk (university architect); Juan Suarez (university engineer); Dave Bryan (director/athletic facilities/operations); Bob Seddon (head baseball coach) **ARCHITECT:** Leers Weinzapfel Associates, Boston—Jane Weinzapfel (principal-in-charge); Andrea P. Leers (consulting principal); Joe Raia (project manager); Cathy Lassen (project architect); Ellen Altman, Tom Chang, Anne Snelling Lee, Jim Vogel, John Kim, Mee Lee (project team) **LANDSCAPE ARCHITECT:** Michael Van Valkenburgh Associates, Cambridge, Massachusetts **ENGINEERS:** Keast and Hood Co. (structural); William J. Trefz Consulting Engineers (mechanical, electrical, HVAC); Boles, Smyth Associates (civil & site) **CONSULTANTS:** LAM Partners (lighting design); Richard Mabry (geotechnical engineering) **GENERAL CONTRACTOR:** Sordoni Skanska **COST:** \$18.9 million **PHOTOGRAPHER:** Peter Aaron/ESTO

ESSAY

THE DISAPPEARING FAÇADE, AND OTHER ARCHITECTURAL SLEIGHTS-OF-HAND

BY AARON BETSKY

It used to be simple. Draw a plan. Extrude that organization into three dimensions. Derive a pretty face—a façade—from the logical extension of that structure. Everything related to everything else. It all followed. Merchants in the past did much the same thing: Invent a product. Come up with a plan to manufacture the product. Design packaging and devise a marketing strategy. Enjoy the profits.

None of this applies any more. Value no longer follows simple logic; it resides in speculation about dots and dashes that course through the electrosphere. We change who we are and what we do at a moment's notice. Reality transforms continually. A building's plan is just what gets financing; its façade is what gets approvals. Don't like either? No problem. We'll deliver up new ones tomorrow. Like so many aspects of contemporary life, architecture is simply a vehicle.

This is not a sudden occurrence. After long ages characterized by the clarity of the classical front, came the 19th-century surfeit of historical façades. Then came the puritanical modernist reaction, with buildings that refused to say anything at all, content to be either transparent planes of glass or mute masses of concrete—though, as Mark Wigley showed in his 1995 book *White Walls, Designer Dresses: The Fashioning of Modern Architecture*, this change in attitude was just another play on the kind of clothes construction wore. Postmodernists recaptured the past in the form of thin façades that could say almost anything, while interiors—which in the days of eclecticism still had to reflect a chosen style—could be completely neutral. Unsatisfied with lies only 1/4-inch deep, architects next broke their façades into deconstructivist fragments. Now we are picking up the pieces, and it turns out that

we don't have a simple plan—or façade—for the reconstruction of architecture.

Not that this appears to be much of a problem. We are actually able to produce some great buildings now that we have thrown off our couture concern for beautiful plans and faces. Look at the Bilbao Guggenheim (again—it is the touchstone these days): What is its façade, and what is its plan? All we see is a sculptural mass that curves in on itself and wraps us into its innermost spaces. Like the medieval wood carvings on which Gehry based his design, the building is a fluid form turned into a three-dimensional and inhabitable mass. The dress has become flesh.

Others would go even further. With computer-aided design, we can now make almost any form, and disregard the polite finality of the façade (September 2000, page 126). The forms are generally blobs, which is to say that they are accumulations of data in three-dimensional form. Where they begin and end is the result of an architect's decision about what data to use, rather than concerns generated from conventions such as proportion. The blob is its own organic thing; it has no definable façade or plan. Similarly, what is the façade of any Rem Koolhaas building? It is a collection of layers—images—that fold up one over the other. A floor becomes a wall, a wide ramp becomes an auditorium, a glass wall interrupts the ramp to announce that the program has run out.

The reality of building is becoming not just more plastic, but, like Apple's Cube, more translucent. In instances where progressive architects are still designing façades, as often as not they consist of scrims and screens, seducing us with hints of what may lie inside. Terence Riley collected a host of such buildings in his 1996 exhibition at New York City's Museum of Modern Art, *Light Construction*. More recently, architects have begun to play with advanced materials, such as the lenticular plastic film applied as an adhesive to the windows of architect Toshiko Mori's Issey Miyake boutique in New York (September 1998, page 124), which only from oblique angles allows a clear view of the store's interior. Herbert Muschamp sang the praises of such veiling in a recent essay in the *New York Times*, pointing out that the allure of what we can almost see, but can't quite touch, is much greater than that which is presented to us with

immediacy. We love the artfulness of such slight obfuscations more than the banal availability of the everyday.

The endpoint of the building as object may be in its site. A whole group of architects are interested in “topological” buildings. These are structures that come out of an interpretation of the ground and barely, if at all, rise above that plane. When façades appear in structures such as the Diamond Ranch High School by Morphosis (November 2000, page 132), or in the Delft Technical University Library by Mecanoo (October 1998, page 124), they are incidental. What matters is a kind of horizontal façade of folded planes and plateaus. Here architecture is a disturbance in the field, not a confident statement. Peter Eisenman, the Svengali of modern architecture, predicted much of the movement and is now trying to build his own rather geometrized version, in the guise of such projects as a cultural center in Santiago de Compostela, Spain (December 1999, page 42).

Indeed, architecture might disappear into more than almost nothing. Diller + Scofidio’s Cloud Building (April 2000, page 90), which will be constructed on a lake in Switzerland next summer, is no more and no less than a mist produced by thousands of computer-controlled jets. Herzog & de Meuron have become interested in hiding their façades behind mold they encourage to grow on specially treated concrete, or behind photographs they etch onto glass in order to turn whole buildings into billboards. Like the experiments of SITE in the 1960s, they propose structures that dissolve into the landscape—a landscape these days consisting of billboards and video monitors as often as of trees and grass.

There is even a technical reason for the façade’s disappearance. In Europe, more and more architects are using double skins for ventilation purposes. They have found that they can use convection to pull warm air out of buildings and fresh air in by doubling skins. The result, whether in Norman Foster’s Commerzbank Headquarters in Frankfurt or Sauerbruch & Hutton’s GSW Headquarters tower in Berlin, are buildings that never quite reveal their interiors; both make a mystery of what is a fairly standard collection of offices.

Are we then to be left with shimmering disappearance, mute form, and convoluted folds? What will remain, if we are

forced to drop our masks? Are we finally facing a period of great honesty and purity, in which the making of a building will be an organic and wholesome activity that will either reveal itself as a complex whole or disappear, humbly and honestly, into the fabric of everyday life?

Perhaps. Yet we should not forget that all these tactics of disappearance, dissolution, occlusion, and elision are just that—more tricks the architect uses to justify her or his activities. Few contemporary buildings are simple statements of fact. They are carefully contrived and constructed artifacts.

This might not be altogether such a bad thing. The English economist and sociologist Anthony Giddens has pointed out that our essential life work is the construction of scenarios that allow us to play out the roles we assign to ourselves. From the first moments of our lives, we engage in role-playing—acting out our sense of ourselves through our relations with others and the real world. We create not so much an identity, as a scenario in which we know what to do. We plan our lives—or try to—so that we will find ourselves in desirable scenes, and adjust our behavior according to the roles we play. Collectively, we negotiate such scenes and call them communities.

I once asked Giddens what role he thought architecture could play in such acts. “None,” was his terse answer. Perhaps he was still thinking of architecture as the profession that tried to regulate life with plans and represent it with façades. He was thinking of a discipline of immutable walls and alien visages that narrowed the possibilities of life.

Now things are different. We can make an architecture that is as malleable as our lives, but that also doubles as a prop to remind us of our lines, gives a sense of order to our scenes, and clothes our reality with the rich ideality to which we aspire. If we were to see the making of architecture as the designing of stage sets—erected so that we might play out our chosen roles—there might be some future for this old profession. Architecture can provide the clues, the framework, the setting. As such, it can build in a sense of memory, a sense of place, and a sense of proportion.

It could also be flexible enough to allow us to invent new scenarios. That might be a great role for architecture to play. ■



ENRIQUE CARBONELL with ADHOC MSL and SALVADOR MORENO

FACULTY OF ECONOMICS AND BUSINESS,
UNIVERSITY OF MURCIA
MURCIA, SPAIN

BY CATHERINE SLESSOR

Debut

Carbonell, Adhoc Msl, and Moreno

Murcia, Spain

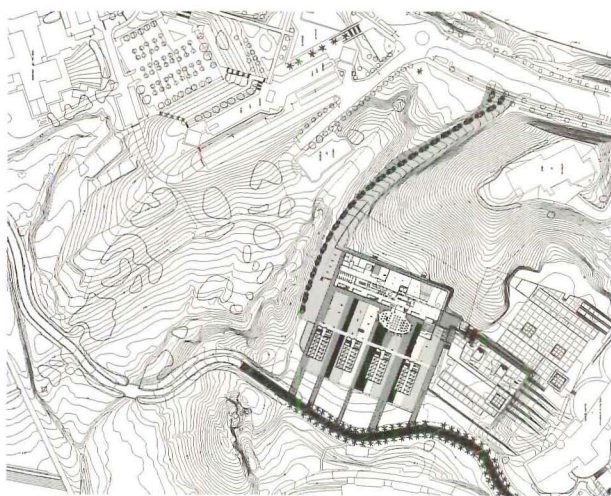


The Faculty of Economics and Business at the University of Murcia is the first joint project (and largest completed building) for Murcia-based architects Enrique Carbonell, Adhoc Msl (Carlos Jurado and Juan Antonio Sánchez) and Salvador Moreno. Carbonell worked with Rafael Moneo on the town hall for his home city (October 1999, page 110), and is currently designing offices for a spice company in Murcia, and a printing office for the local government. Adhoc Msl will soon complete the offices of the Cervantes Institute in New York, an organization founded by the Spanish government to promote its country's language and culture.

Principals: Clockwise from top left, Enrique Carbonell, Juan Antonio Sánchez, and Carlos Jurado (Salvador Moreno not shown)

Murcia, according to the 19th-century writer Augustus Hare, would, "from the stagnation of its long existence, be the only place Adam would recognize if he returned to earth". Founded by the Moors in the ninth century, Murcia originally evolved as an important trading center on the southeast corner of the Iberian peninsula. It is now a thriving regional capital, yet the city maintains an air of languid tranquility, blessedly removed from the sprawling tourist resorts of the Costa Blanca. Murcia's university dates from 1915 and originally occupied sites in the city center, but the need to expand and provide modern, purpose-built facilities led to the establishment of a new campus on the northwest edge of town. Set on a ridge with views back down to town, the new site has a distinct work-in-progress feel as buildings are added and landscaping slowly takes root. The university has pursued an enlightened policy of putting the various teaching and residential facilities out to competition, and the fruits of this are evident in the generally lively and inventive campus architecture.

The latest and most striking addition is a new building for the Faculty of Economics and Business by Murcia-based architect Enrique Carbonell working with other local architects Adhoc Msl and Salvador Moreno, whose proposal won a 1996 competition. Underpinning the brief was the need to make a large building on a small budget; Carbonell and his collaborators responded by bringing it in at an extremely economical \$30 per square foot. (One of the team, Carlos Jurado, is currently designing a project for the Cervantes Institute in New York for a budget of \$300 per square foot.) Yet this parsimony has acted as a stimulus rather than a constraint, generating a taut synthesis of modular planning and resourcefully applied materials.



Site plan | 180' >

Nestling into rising ground on the southern perimeter of the campus, the new faculty building is a crisply articulated orthogonal mass. Four parallel linear blocks containing classrooms, lecture halls, and offices are attached at right angles to a spinal street housing the faculty's library and a 750 seat auditorium. The street is oriented to connect with adjoining buildings and future additions, thereby creating routes and promenades through the campus.

Transparency and permeability are the building's key themes, explored internally through spatial interpenetration and externally through its skin. The long flanks of the four classroom blocks are clad in a simple clear glass curtain wall custom-designed by the architects. Like huge fish tanks, the glazed blocks have a transparent, diffuse quality that reveals the building's life, especially at night when they randomly pulsate with light. Thin brise-soleils made of perforated metal are fixed to



sun-vulnerable façades, providing protection against glare and emphasizing the sleek horizontality of the blocks. Sheathed in lustrously smooth aluminium panels, the ends of each slab form a gleaming coda to the faculty complex.

A more intriguing variation on the metal cladding theme occurs on the long north elevation enclosing the library and large auditorium. Here, broad strips of galvanized steel appear to be woven together, transforming the wall into a metallic basket. The effect is undeniably eye-catching and enlivens what would otherwise have been a largely blind façade. Inside the library, light dapples and filters through the woven metal skin in the manner of a *mashrabiya*, or traditional Moorish latticework screen. Carbonell and Adhoc Msl's modern version may be less ornate, but it is just as visually compelling and also acts as a permeable, breathing skin, allowing air to circulate through the gaps in the steel cladding and inner wall to naturally ventilate the interior.



The western façade of the University of Murcia's Faculty of Economics and Business building (top) is clad in a distinctive steel basket-weave skin which helps to modulate the sun's heat: A 14-inch cavity separates the metallic skin from the concrete wall behind it.

The steel basket-weave skin wraps around the western façade to cover a small portion of the southern side of the building.

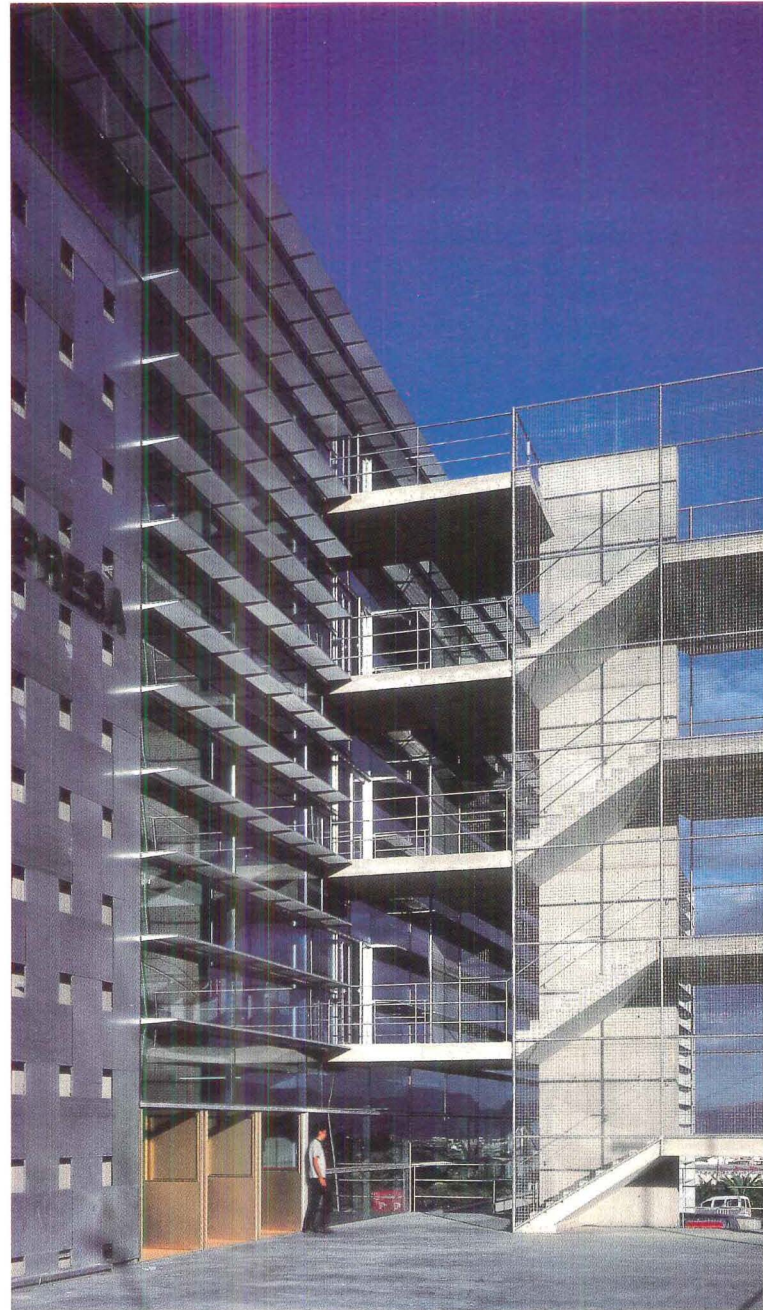
Open stairways on the exterior provide alternative access to the auditorium, the library, and the classroom wings.

The building's plan is arranged so that the two largest spaces, the library and auditorium, form a linear spine along the western steel-covered façade (top). Four bars holding smaller classrooms and offices are set perpendicular to this spine (center left).

The farther one moves away from the spine into the bars, the smaller the individual spaces get: Rooms closest to the spine are medium-sized lecture halls, and the farthest are small offices.



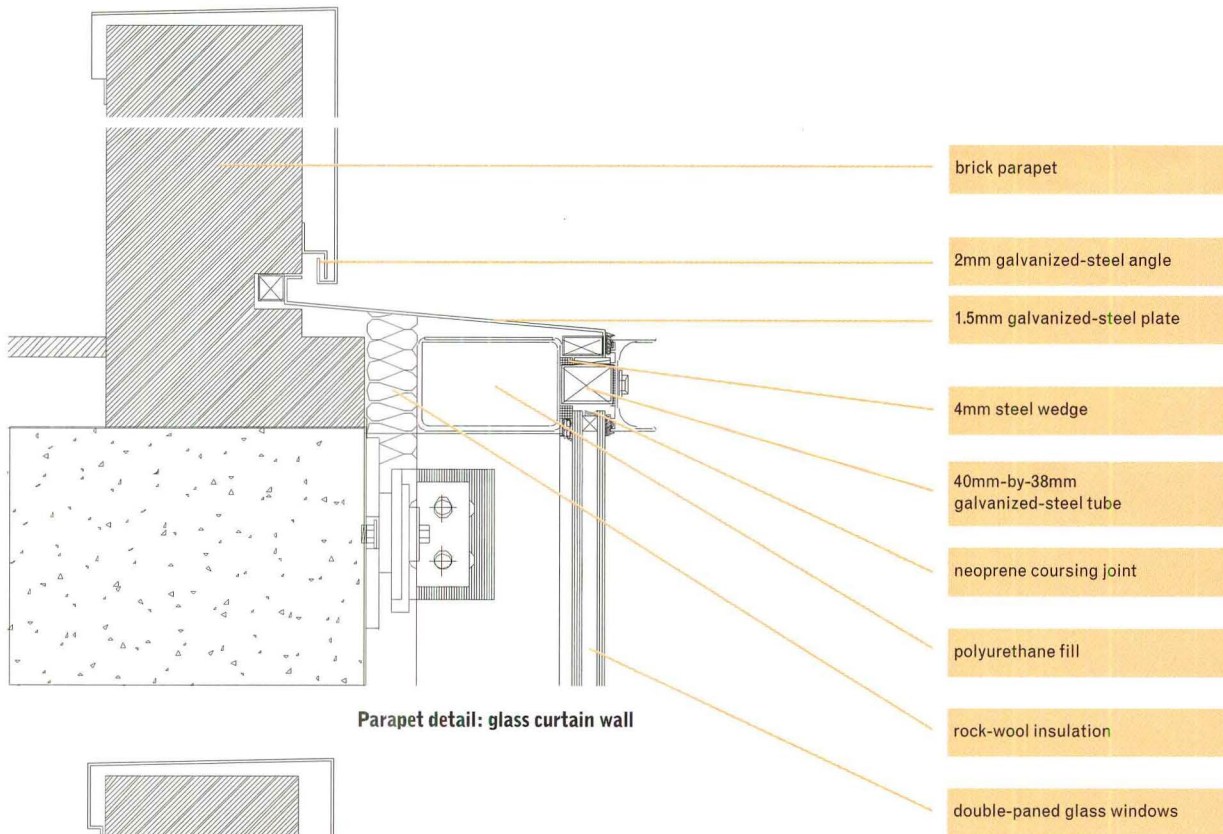
On the south-facing façades of the four classroom wings the glass curtain wall is sheltered with perforated-metal brise-soleils to reduce glare and heat gain.



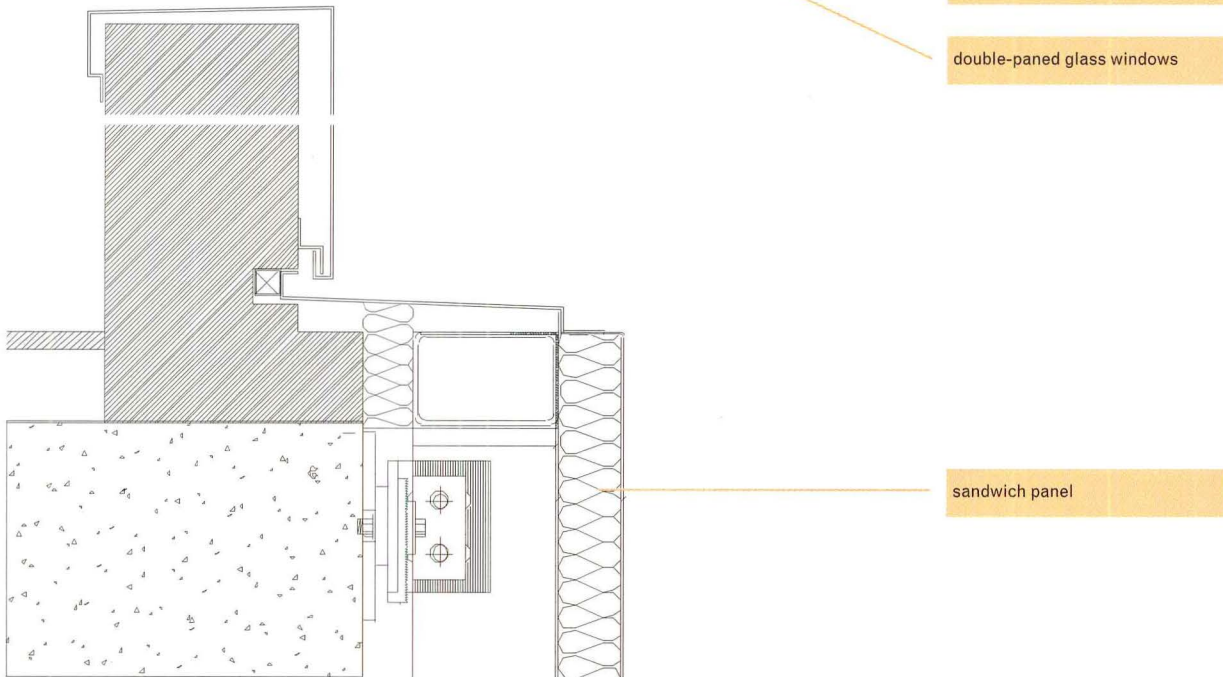
Along the building's northern and southern façades, external staircases connect to an internal street that runs parallel to the library and auditorium.

FACULTY OF ECONOMICS AND BUSINESS, UNIVERSITY OF MURCIA, MURCIA, SPAIN

CLIENT: University of Murcia, Murcia, Spain **ARCHITECT:** Enrique Carbonell, Adhoc Msl (Juan A. Sánchez, Carlos Jurado), Salvador Moreno; Murcia, Spain
ASSOCIATE ARCHITECT: Juan Luis Ballesteros **ENGINEER:** Salvador Moreno **CONSULTANT:** A.C.E. Edificación (quality control) **GENERAL CONTRACTOR:** A.C.S. Proyectos, Obras y Construcciones **COST:** \$7.2 million **PHOTOGRAPHER:** Duccio Malagamba



Parapet detail: glass curtain wall



Parapet detail: aluminum sandwich-panel curtain wall

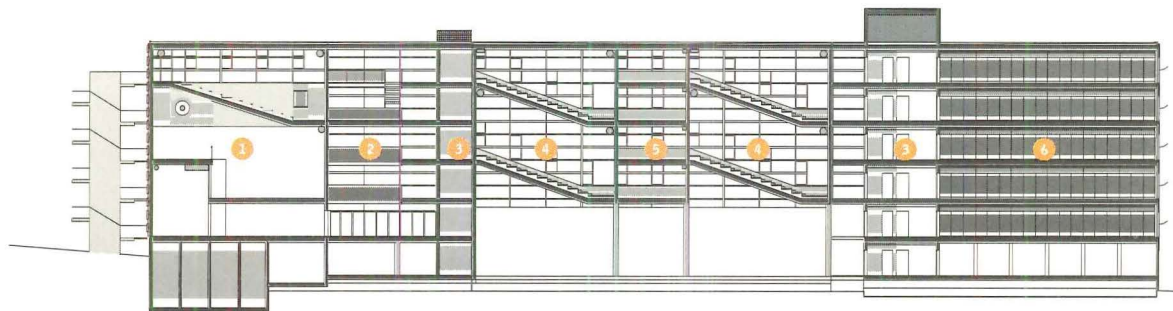
SKIN ANALYSIS: WOVEN STEEL

Enveloping the University of Murcia's Economics and Business building's north façade is an extraordinary wall that looks as though it is woven from strips of metal. The cladding was devised especially for the project. The architects originally wanted to use long, continuous sheets of metal for the metal basket wall, which would literally be "woven" together, but this proved impractical. The as-built solution uses

thin (2mm) sheets of galvanized steel measuring 50-by-28 inches which are lapped to create the impression of a woven surface. The sheets are riveted to a series of horizontal and vertical galvanized-steel tubes, separated from the inner wall by anchors. They are spaced to leave regular gaps of 10¹/₂-by-13¹/₄ inches between the strips, enhancing the woven effect and letting air circulate around the cavity. The gaps also allow light to filter through the wall, transforming it into a kind of brise-soleil or modern version of a *mashrabiya*, a traditional Moorish latticework screen. The inner wall is made of two layers of reinforced concrete which sandwich a layer of rock-wool insulation. This heavy inner masonry wall is separated from the outer skin by a 14-inch air cavity. C.S.



- 1 auditorium
- 2 footbridge
- 3 stairwell and elevator
- 4 lecture room
- 5 class/seminar room
- 6 faculty offices

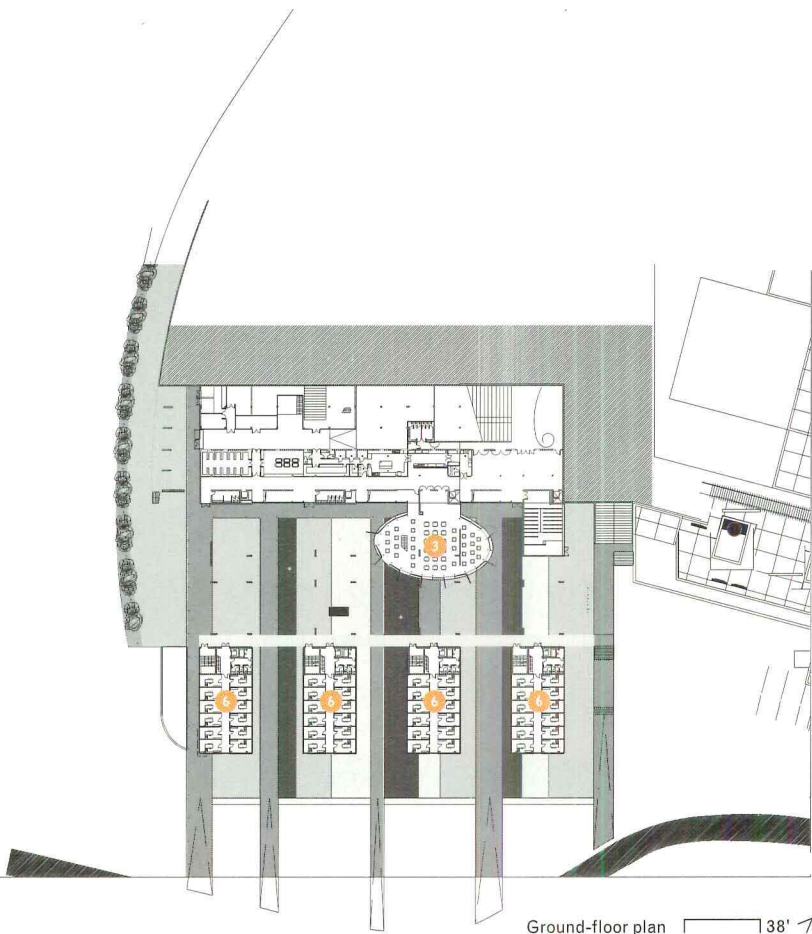


Section through classroom wing | 14'

Based on a modular hierarchy of spaces that decrease in size across the building, the plan has a rigorous spatial and structural economy. An internal street acts as a spine for the structure, and is flanked on one side by the two largest volumes, the library and auditorium. Perpendicular to the street are four distinct blocks which hold classroom and office spaces. Within the blocks, medium-sized class and seminar rooms occupy the end closest to the street, and smaller cellular offices for staff sit at the other. The combination of floor-slab forms—sloping for the amphitheater-shaped lecture halls and horizontal for the regular classrooms and staff offices—gives the section a spatial complexity that can be clearly read through the transparent glass skin. Volumes slot in and around each other with the calculated precision of a Chinese puzzle. At ground level, the long classroom blocks enclose a series of patios or shaded external courtyards, another variation on a traditional Mediterranean building form. The regimented orthogo-

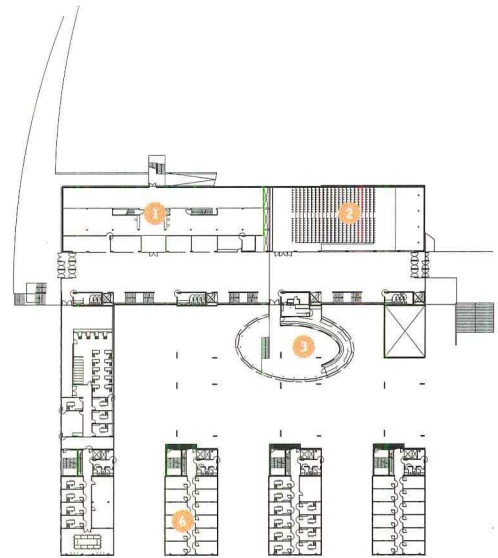
Smaller lecture halls (above left) are stacked in the center of each classroom wing (plan). Operable windows set into the curtain wall provide fresh air.

Interior stairways within each classroom wing (right, and plan) separate classrooms from faculty offices.

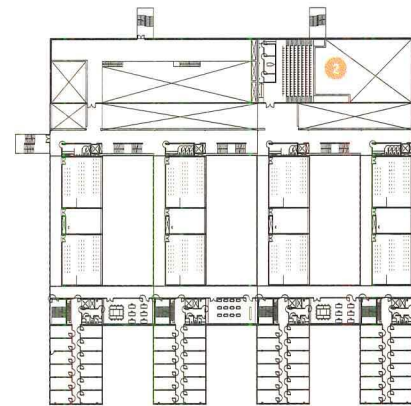


Ground-floor plan 138'

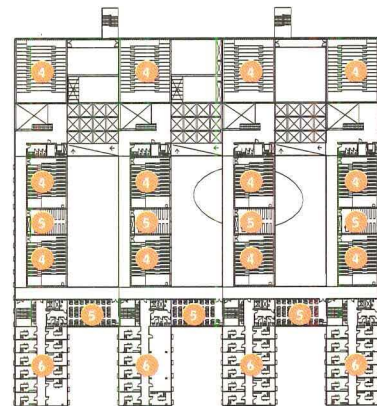
- 1 library
- 2 auditorium
- 3 cafeteria
- 4 seminar rooms
- 5 classrooms
- 6 offices



Second-floor plan



Fourth-floor plan



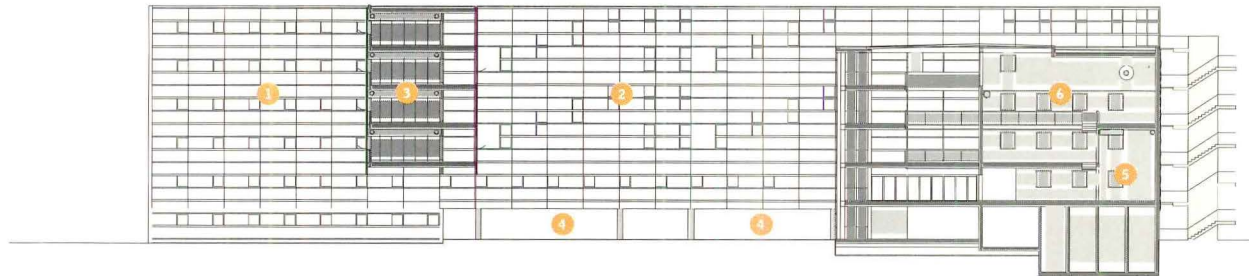
Sixth-floor plan

nality of the slabs is punctuated by an elliptical volume housing the student canteen that bulges out from one of the classroom blocks.

As with most university facilities, this complex needed to be able to withstand the rigors of concentrated daily use, and its robustly functional internal finishes—concrete, galvanized steel, and tough linoleum floors—seem designed and detailed to last. In surroundings dominated by raw concrete walls, color is used as both an orienting device (each of the four classroom blocks is color-coded) and for visual stimulation (the vividly colored seats in the main auditorium are a kaleidoscopic delight). With a minimum of resources Carbonell and his collaborators have fashioned a decent, dignified building characterized by organizational clarity, an inventive approach to materials, and generally doing more with less. For the faculty's fledgling accountants and businesspeople, what could be more appropriate than a lesson in the joys of economy? ■



- ① offices
- ② class/seminar rooms
- ③ footbridges
- ④ open
- ⑤ library
- ⑥ auditorium



Section through patio 14'

The two interior classroom wings sit on pilotis, allowing the ground floor to become a large atrium (above). Also opening onto the atrium are the cafeteria and periodicals reading room.

Footbridges spanning the ground-floor atrium (facing page) connect the interior street to the seminar rooms and offices on the upper levels.

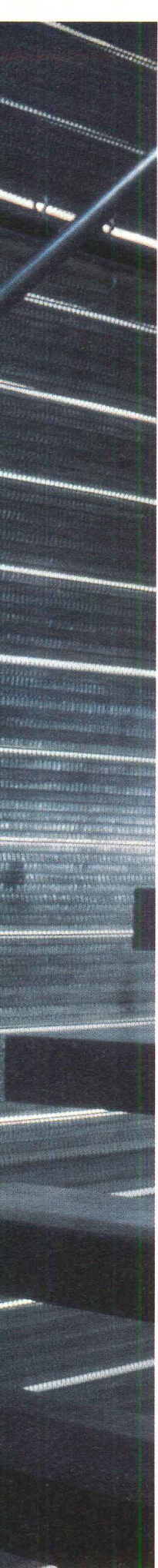




HEIKKINEN- KOMONEN ARCHITECTS

LUME, MEDIA CENTER
HELSINKI, FINLAND

BY CATHY LANG HO



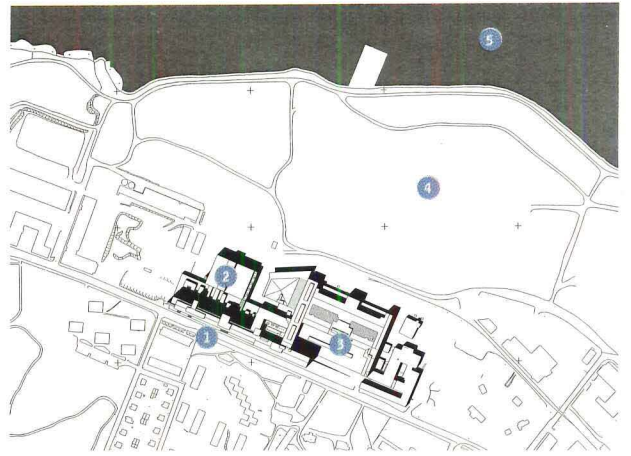
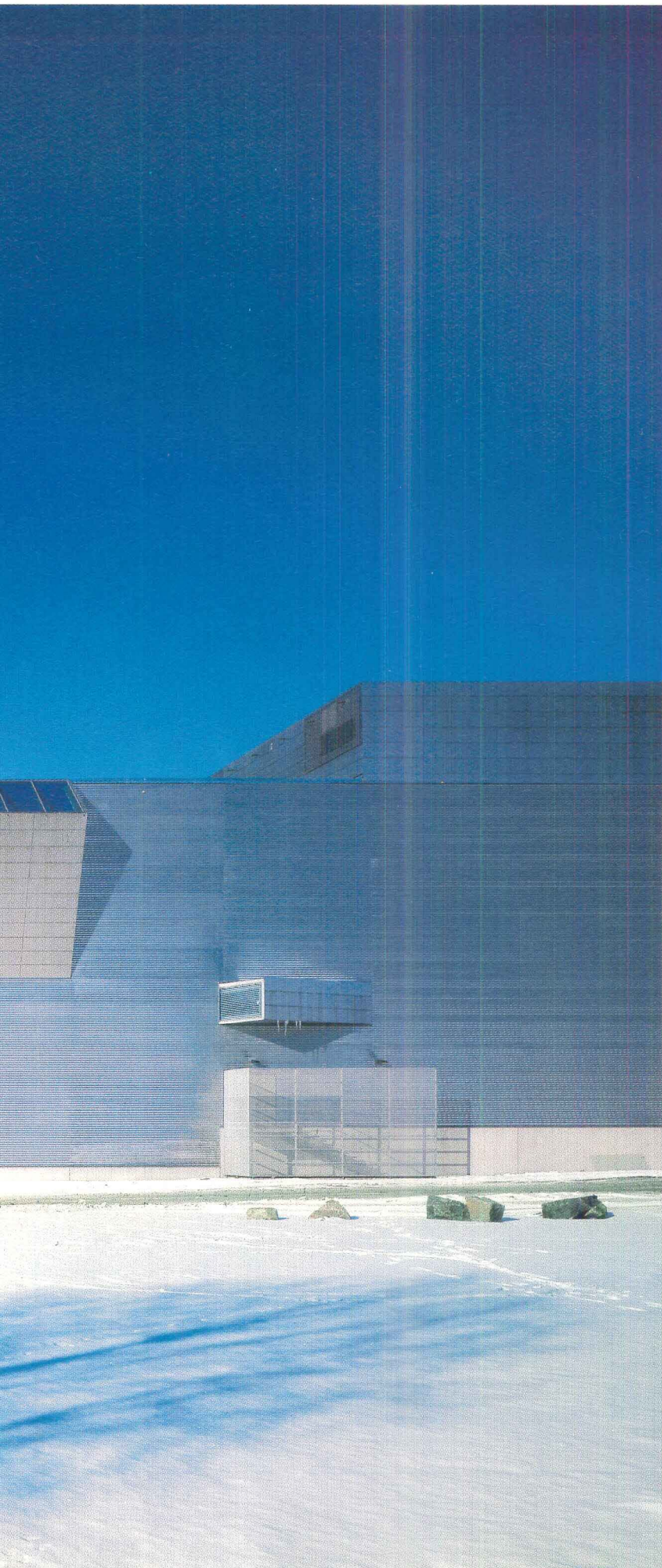
The Finns are famously sensitive to light—due, no doubt, to the circadian extremes that Nordic countries experience. Finns even have a unique vocabulary to describe the minute variations of light they witness within the course of days, seasons, years. Only a Finn could understand the different colors of darkness during the *kaamos* (a winter period of total darkness in Northern Finland that lasts over a hundred days), or the distinct shades of light that turn the clock for weeks during the summer. Heikkinen-Komonen's Lume, Media Center in Helsinki—a massive box clad entirely in corrugated steel—almost seems designed to capture light. The flatness and expansiveness of its metallic skin puts every speck of light on the rebound. The glistening winter snow, the shimmering surface of the adjoining Bay of the Old City, and the sky's kaleidoscope of tints all find their reflection on this monolithic, glinty box.

The program of this building addition, ironically, involves shutting out light: It's an audiovisual center for the University of Art and Design, which occupies a converted section of the Arabia Ceramic Factory complex (still on site, still functioning). The addition's dumb-box form and straightforward interior composition—quartered into four cavernous, dark volumes—derive from its basic requirement, to provide a sound stage, two studios, and an auditorium. The skin is the divider of extremes—inside and out, dark and light, old and new.

Lume has been grafted to the existing masonry building with surgical care. But like a bionic prosthetic, this state-of-the-art media center could never be mistaken as a part of the old body. The Arabia factory dates to the turn of the century, when it began producing some of Finland's finest earthenware. It started downsizing its operations in the 1970s, with the onset of mechanization. The whole area, in fact—a factory district—experienced postindustrial vacancies, which inspired city officials to designate it a prime locale for "Design City Helsinki," a new community centered on art, design, and industry. The University of Art and Design overtook its part of the Arabia factory in the late 1980s. Other sections are currently undergoing



Heikkinen-Komonen's corrugated-steel Lume, Media Center is an addition to the Arabia Ceramics Factory in Helsinki's industrial district. The Media Center is part of the University of Art and Design, which shares the factory complex with the still-active ceramics manufacturer. The university and its media center are part of a larger master plan to transform this mostly industrial district into a "design city."



Site plan | 306' <

- ① University of Art and Design
(formerly part of the Arabia Ceramic Factory)
- ② Lume Media Center
- ③ Arabia Ceramic Factory complex
- ④ Nature Preserve (future part of Design City Helsinki)
- ⑤ Bay of the Old City

renovation to accommodate design shops, restaurants, and an annex gallery of Helsinki's Museum of Art and Design.

Lume is one of the cornerstones of the new Design City. Its warehouse profile and steel cladding are certainly at home with the district's industrial vernacular. But the choice of materials is strategic in many other respects as well. Says Mikko Heikkinen, "We introduced materials, such as steel and glass, that would have the starkest possible contrast with the existing building, so as not to compete with the old concrete and brickwork." The designers were also drawn to these materials for their neutrality; the result is a sort of "undesigned" look, akin to that of anonymous industrial structures. In material, plan, and form, Lume is a decidedly casual architecture.

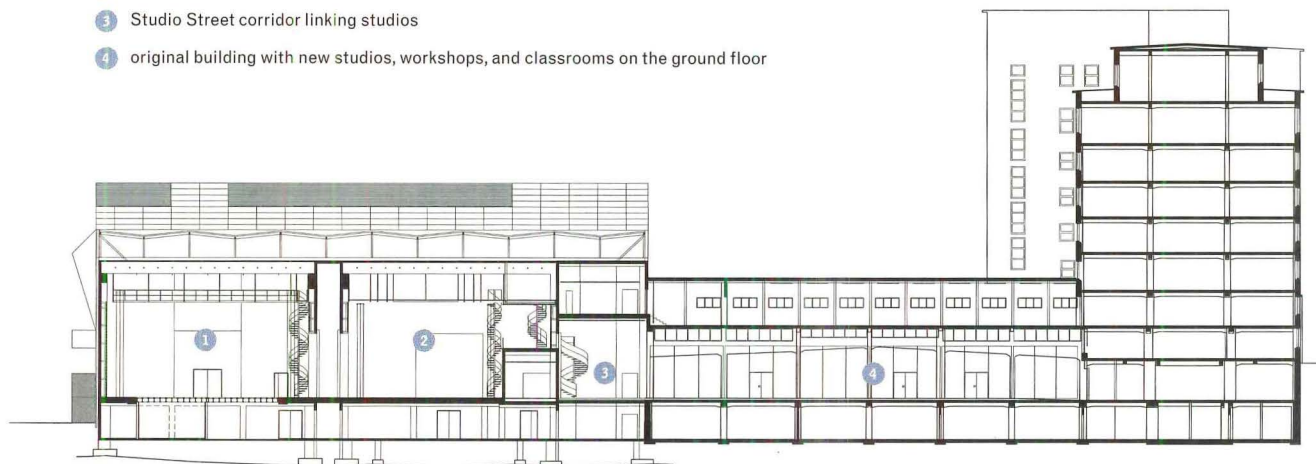
It's in the details, however, where the rigorous craft tradition to which these two Finnish architects are heirs reinvents itself. Minimal but sharp, the detailing is the territory of Heikkinen-Komonen's innovation. The addition—the metal box, neatly attached to the building's rear—actually begins at the original building's façade. It is linked to the front by a glazed walkway, cut clean through the old building, creating a new entrance foyer for both the old and new sections. The original façade gives only subtle indication that an addition has been made. A dark steel panel flanking nondescript glass double doors offers the most understated of greetings. In the new foyer, the architects sand-blasted existing walls to reveal layers of stucco and paint ("the essence of the old building," as they put it)—and set them in high relief with new walls paneled with raw, dark-brown steel plates. On other walls, where cuts to create this new passageway have been made, the architects have hung curtains of woven metal mesh, typically used on conveyor belts. Heavy and industrial, the mesh is also fluid and semitransparent, allowing lateral views into parts of the old building.

The entrance leads to a glazed corridor that projects along the length of the addition. Because the site slopes in the rear, the walkway becomes more of a bridge, suspended above the Lume

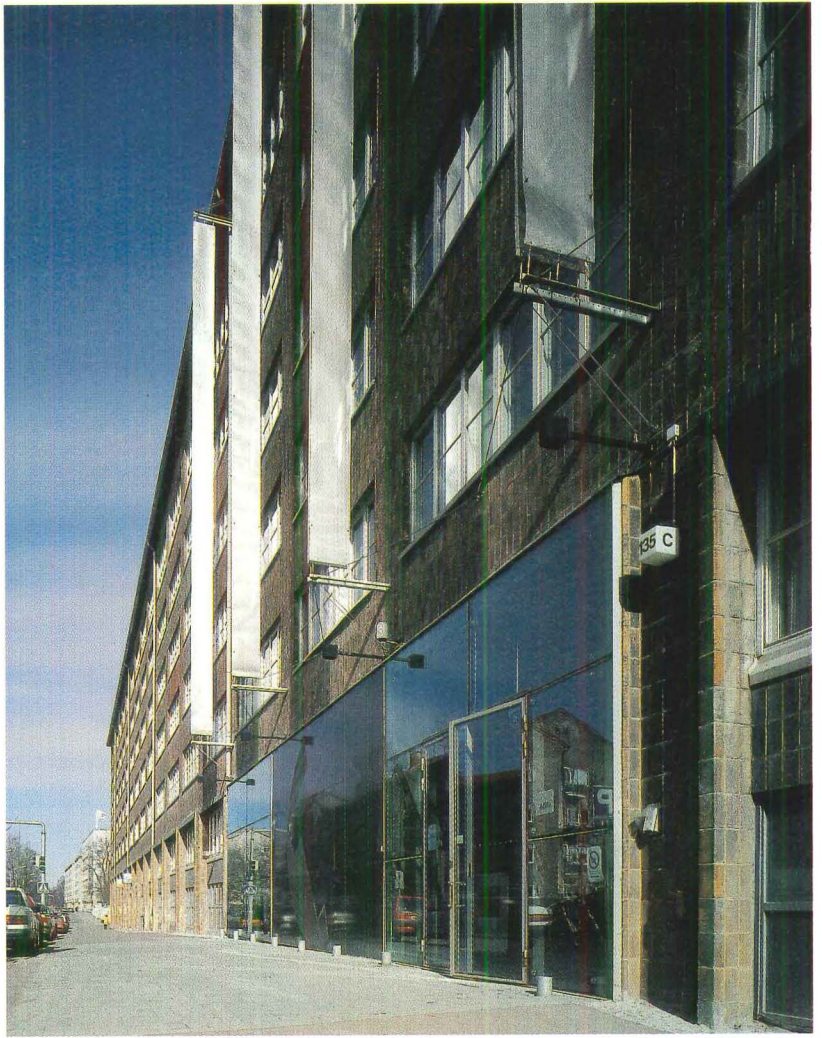


A glazed "bridge," fronted by a metal mesh-clad stair tower, runs the length of the media center's south face. The bridge is supported by I-beams cantilevered from the main addition as well as from a subsidiary system of cables.

- ① film studio
- ② video studio
- ③ Studio Street corridor linking studios
- ④ original building with new studios, workshops, and classrooms on the ground floor



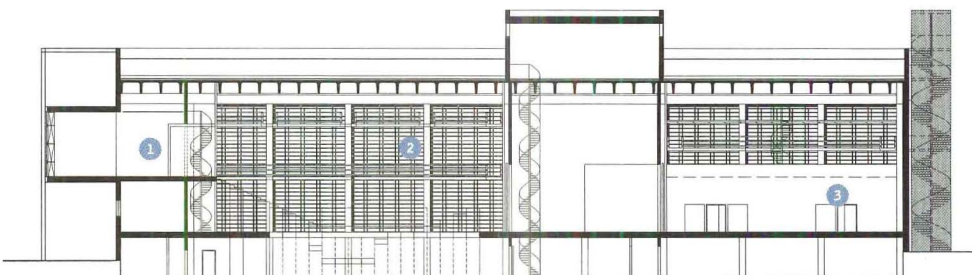
East-west section | 19'



A nature preserve is visible in the distance, beyond the addition. As a portion of the preserve is slated for development (including housing) of the Design City, the media center's southern, back face may end up as a principal façade.

The bridge extends as a corridor into the former factory (now partly occupied by the University of Art and Design), terminating in a minimal "storefront" entrance of sheer glass. Judging an awning out of character with the industrial neighborhood, the architects offered instead four bandarolls—narrow banners of metal mesh hung vertically above the entrance.

- ① glazed bridge
- ② auditorium
- ③ film studio



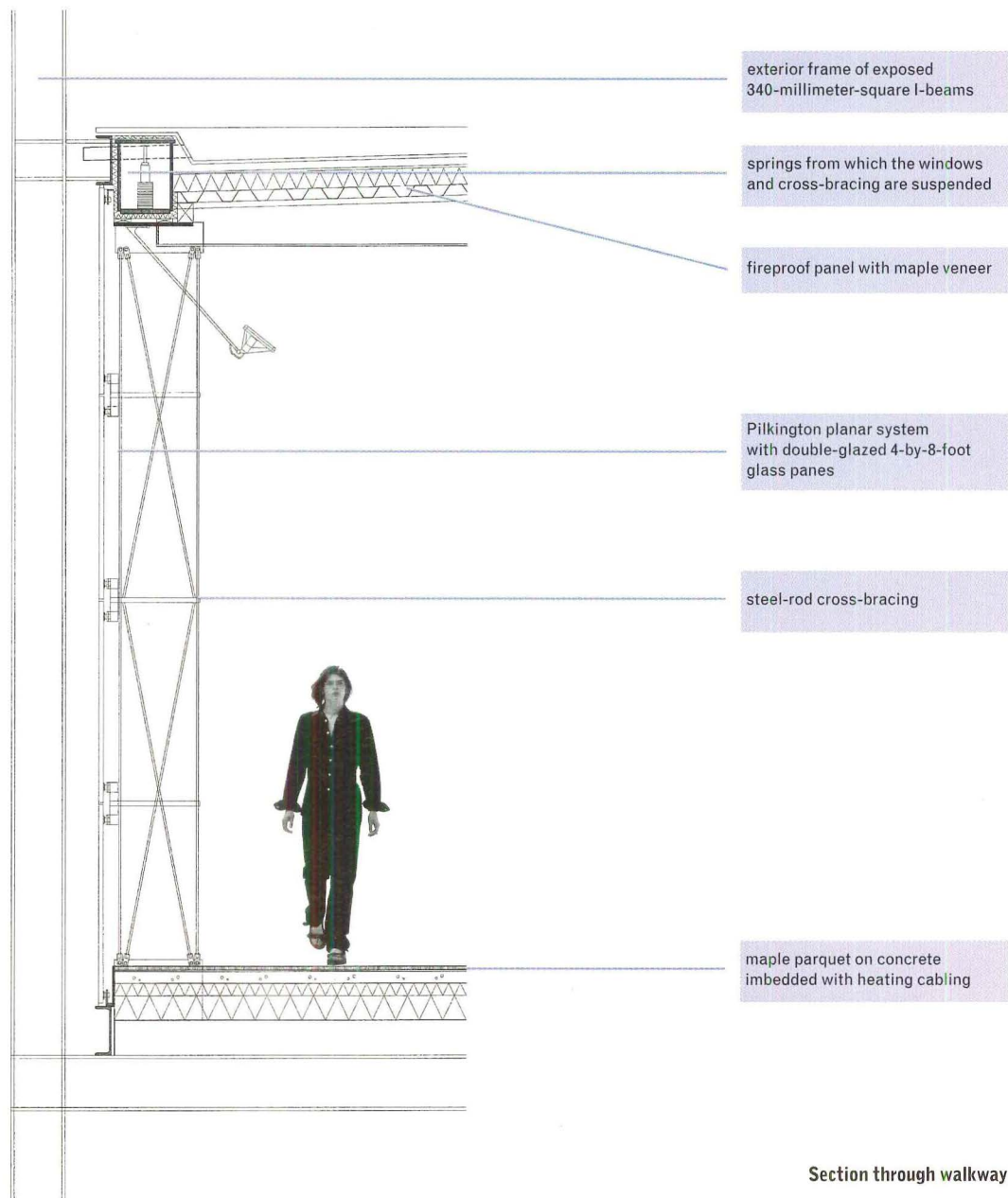
North-south section



View from the end of the glazed bridge, looking toward the university's main entrance; the still-functioning Arabia Ceramic Factory is opposite.

View toward the end of the glazed bridge, toward the Bay of the Old City. The flooring is a matte dark-maple parquet, and the auditorium wall is painted with raw pigment for greater intensity. Says Heikkinen, "There is hardly any color in this building, so the places where we used it, we used it strikingly."





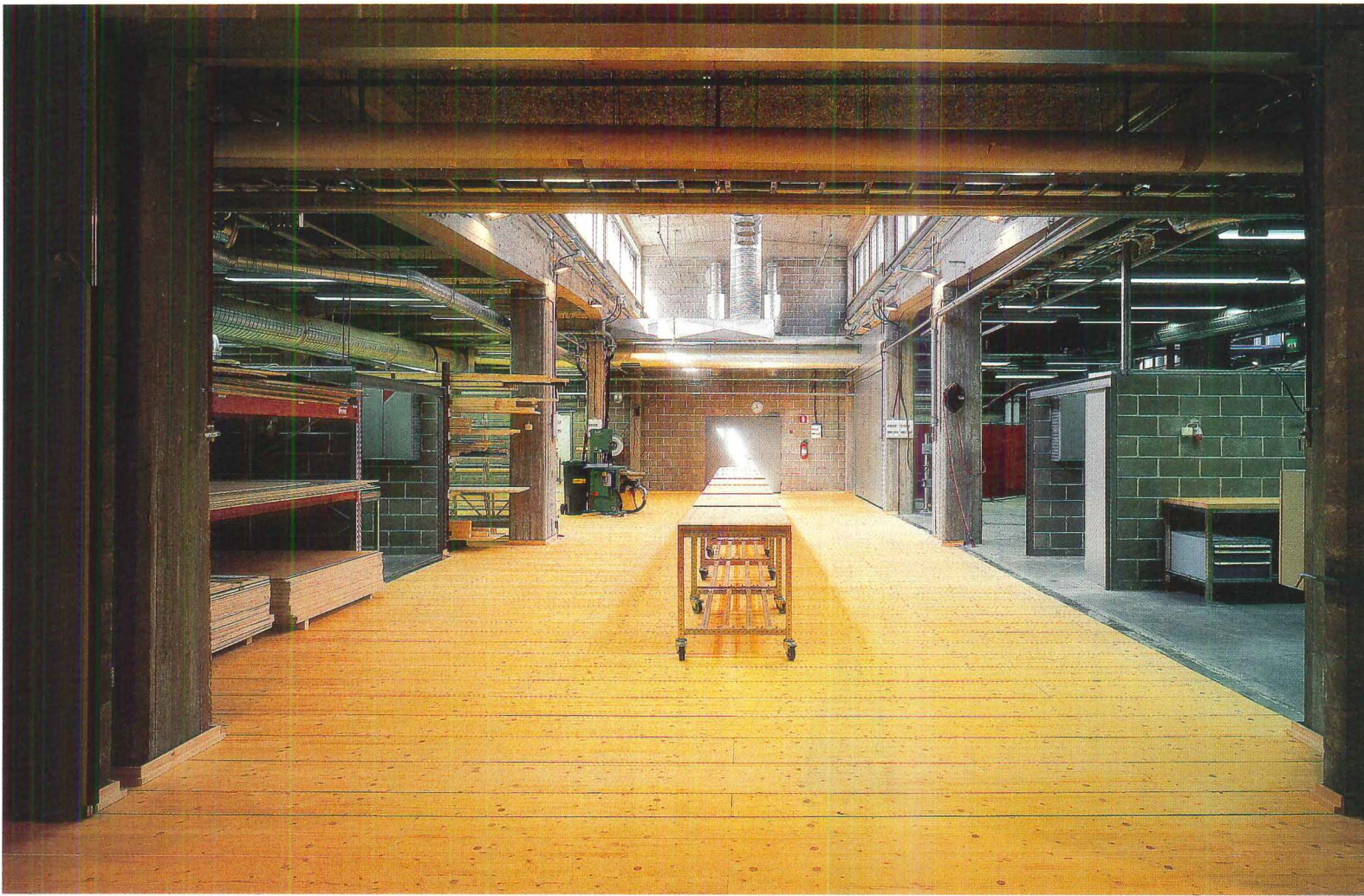
SKIN ANALYSIS: MULLIONLESS GLAZING

Serving the University of Art and Design's departments of audiovisual arts, media, film, theater, and television, the Lume, Media Center claims many sources as its namesake: the Lumière brothers, inventors of the first cinematograph; *lumens*, the measure of light; and *lume*, a Finnish word that translates richly to "illusion," "vision," "mirage," "fantasy," "hallucination." The word is also very close to *lumi*, the Finnish word for snow.

Light relates strongly to all these notions. Because the bulk of the building is given over to sealed, controllable (often dark) environments, it was natural for the architects to want its primary circulation—a bridge that connects the addition to the existing university facilities in a former factory—to be an entirely light, luminous object. The glazed bridge, which also functions as an art gallery, is a box frame that

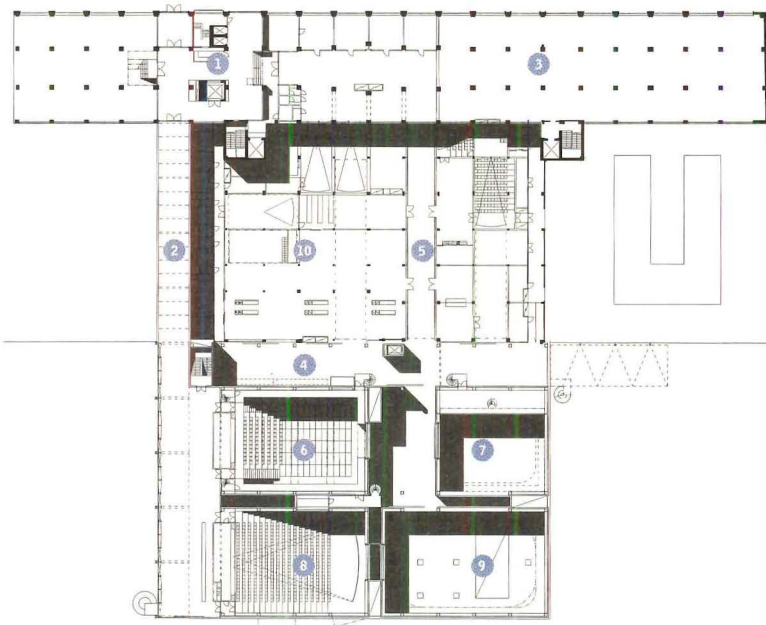
projects from the side of the corrugated-steel-wrapped addition. It is braced with a series of rods and cables that tie into the addition's exposed external frame of 340-millimeter-square steel sections.

To create the 152-foot-long windowed wall, the architects used Pilkington brackets to attach 4-by-8-foot double-glazed panes of clear glass to the structure. The wall is reinforced with vertical steel-rod cross-bracing for stability. This technique has become increasingly common—architects have found it the ideal solution in instances when they want to achieve a great amount of transparency. "The more material you have on a structure, the less invisible and luminous it is," says Heikkinen. "With Pilkington joints, you have a minimum of elements." The architects wanted to preserve views of the old factory and the bay beyond. *C.L.H.*



View into one of the new workshops carved out from the ground-floor space of the original building (the University of Art and Design's classrooms and offices occupy upper floors). There are rooms devoted to set production, sound and film editing, and computers.

The designers call the two main corridors "streets" to emphasize the urbanistic grid plan of the workshops and studio spaces. Studio Street occupies the line between the original and the new building; Workshop Street cuts perpendicularly across the ground floor of the original building.



- 1 entrance foyer
- 2 glazed bridge
- 3 University of Art and Design classrooms and offices
- 4 Studio Street
- 5 Workshop Street
- 6 sound stage
- 7 video studio
- 8 auditorium
- 9 film studio
- 10 workshops

Composite first- and second-floor plan 38' 8"



In the auditorium, the architects draped metal mesh nets (typically used for conveyor belts) from the ceiling to partly conceal the clutter of technical equipment. The mesh also hangs along the walls, allowing light to pass through from light scoops and reflect off of painted green and blue surfaces to create glowing patterns.

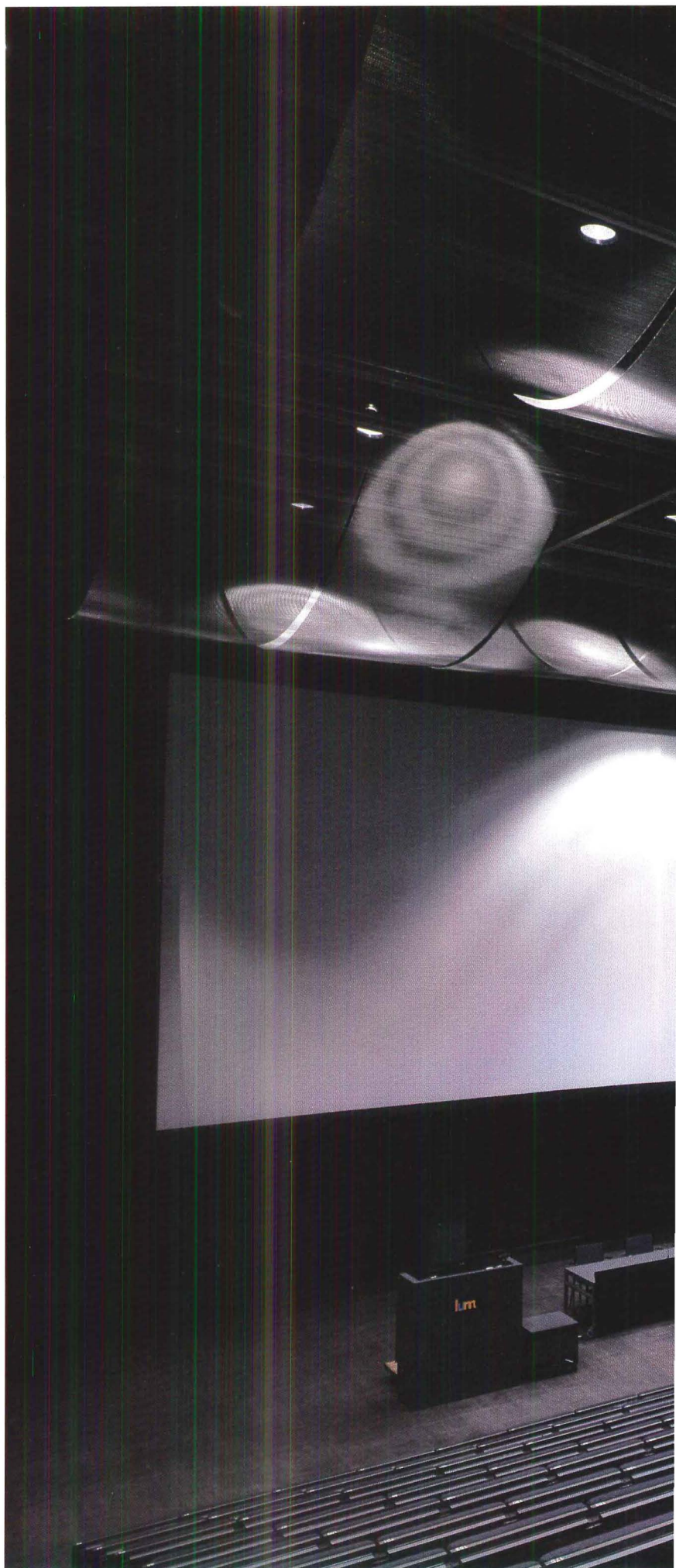
Center's ground level. The architects played up the independence of this element, cantilevering the bridge from the new building as opposed to making it a part of the box, and giving the bridge its own material treatment—all glass—in contrast to the opacity of the corrugated metal. The bridge (which doubles as an exhibition gallery) terminates with a view of a nature preserve and the Bay of the Old City in the distance. In creating this promenade as an autonomous, scenographic adventure, the architects were also able to preserve the integrity of their big box.

The studios contained within the box are straightforward, tech-heavy workrooms—necessarily standard, flexible, and clean. Serving as a theater and lecture hall, the auditorium is the most public of the four spaces. It is also laden with technical equipment, including acoustic insulation, lighting, and sound systems, mostly hung from the ceiling. The designers draped more of the conveyor-belt mesh banner-like from the ceiling, hiding the unsightly equipment while bringing some definition to an otherwise characterless room. The mesh is acoustically transparent—sound waves can go through it, as can light. Two additional subtle details provide some added color, literally: Two popped-out volumes—the only interruptions on the rear elevation—bring in indirect light. (“You can’t have direct light, but people like to know whether it’s night or day outside,” says Heikkinen.) The walls of these light scoops are painted intense pigments of blue and green; tinted light washes along the interior’s wall. The gesture could be seen as a low-tech cousin of a James Turrell sculpture.

With the simplest of materials—including light—and a minimum of gestures, the architects accomplished a great deal. Heikkinen found a quote from Alfred Hitchcock that struck him as relevant to certain types of architectural projects, such as museums or art schools, which are meant to frame, without overwhelming, creative environments: “In my opinion the chief requisite for an actor is to do nothing well, which is by no means as easy as it sounds.” It might not be noticeable, but Heikkinen-Komonen worked hard to make a lot look like a little. ■

LUME, MEDIA CENTER; HELSINKI, FINLAND

CLIENT: Varma-Sampo, University of Art and Design, Helsinki, Finland
ARCHITECT: Heikkinen-Komonen Architects, Helsinki, Finland—Mikko Heikkinen ja, Markku Komonen, Sarlotta Narjus, Markku Puumala (project architects) **ENGINEERS:** Finnmap Consulting (structural); Insinööri Asplan Oy (HVAC); Akukon Oy (acoustical); Kupari Engineering (electrical), Geomap Oy (geotechnical); J.W. Majurinen (a/v electrical); Teakon Oy (theater technical) **CONSULTANTS:** Heikkinen-Komonen Architects, K&Y Wiherheimo (interior design)
GENERAL CONTRACTOR: Skanska E-S Oy **COST:** Withheld at client's request **PHOTOGRAPHER:** Jussi Tiainen, except as noted





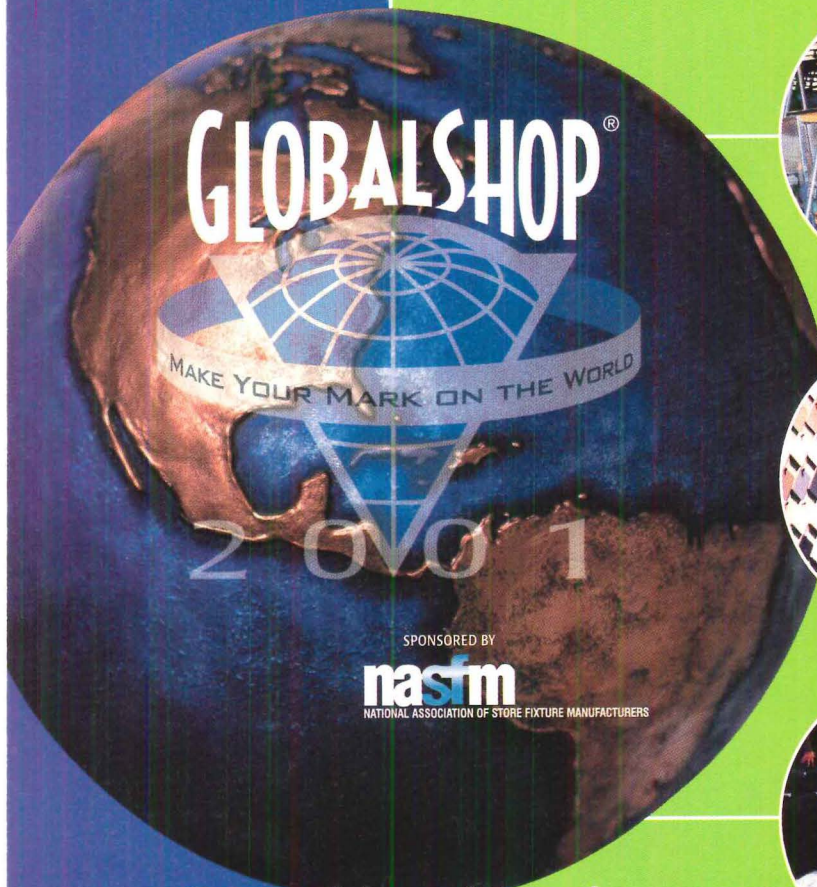
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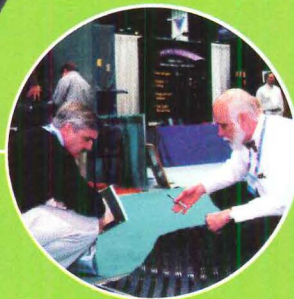
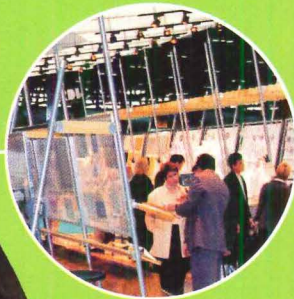


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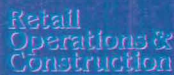
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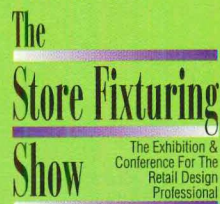
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Land's Sakes

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sprawl—at least, to hear the victors' version, it did. An activist band of residents had lost patience with the old board, whose members, they believed, had become handmaidens of the homebuilders' lobby and abetted the scourge of suburbia upon their paradise.

Joe Maio, a former Internal Revenue Service analyst who has lived in Loudoun for 22 years, grew so disgusted with the pace of development that he formed a political action committee called Voters to Stop Sprawl. After a storm of phone calls and leaflets, Voters to Stop Sprawl achieved

better election results than its leaders had ever dared to hope: a slow-growth landslide. Eight of nine elected supervisors had run on a platform to stop sprawl—four Democrats, two Republicans, and two independents.

"Our role now," says Maio of his committee, "is primarily as keeper of the mandate and spreader of the mandate."

There is, however, plenty of argument as to whether the election constituted a "mandate" or not. Some members of the Citizens for Property Rights claim that the election was "bought" by the horse-country aristocracy by shoveling unprecedented donations of \$10,000 into slow-growth candidates' coffers. And, besides, "While it is so that the majority of

the voters elected 'smart growth' candidates," says Jeff Scouten, president of the Loudoun chapter of the Northern Virginia Building Industries Association, "the truth of the matter is that only a very small percentage—a minority—of the registered voters actually bothered to vote." Turnout figures from the Loudoun County electoral board favor Scouten's argument: Only 34 percent of registered voters in the county made their way to the polls for the supervisors' race.

To slow-growth types, however, their profound anger had found its valve, and the days leading up to the swearings-in last January made them giddy. The new board, with "smart-growth" Republican York as its chairman, issued a transition

report promising quick action to stop the march of new townhouses and minimansions across Loudoun's fields. And, indeed, when it came time to get down to board business, the new team began to make good on its promises: In one of its first official overtures, the incoming board set aside \$1 million in public funds to beat back inevitable legal challenges to its slow-growth measures.

Two starkly divided constituencies have begun weighing in on the county board's new land-use edicts. Aligned with the Citizens for Property Rights stand the region's homebuilders, who have far more money to protect their retail way of life. The supervisors' *continued on page 118*

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Land's Sakes

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downzoning proposal is "going to destroy the economy of the county," contends Grayson Haynes, a crabby attorney who represents the local homebuilders' lobby. And, as if to sharpen the fears of the farmers, he adds, "You'd be an idiot to buy property in Loudoun County."

County officials insist that, in fact, they are trying to sustain, not destroy, Loudoun's economy. About 8,800 new houses were built in Loudoun in 1998 and 1999, and another 40,000 have been approved but haven't been built, mainly because of a labor short-

age. "We have zoned 20 Tysons Corners in eastern Loudoun," sighs Democratic Supervisor Charles A. "Chuck" Harris, referring to the commercial exurb 30 miles east in Fairfax County.

Harris, who represents Loudoun's most populous district, Broad Run, frets over the cost of each new house to the county, which comes to about \$20,000 for schools (schools now account for 70 percent of the county's budget), infrastructure, and other services. He projects that in the next six years, the county's population will increase by another third and that its debt, currently about \$200 million, will triple.

Not surprisingly, most northern Virginia developers don't buy Harris' reasoning. Several formed

a group called the Coalition for Prosperity, and hired Stephen Fuller, an economist at nearby George Mason University, to conduct a study whose results suggest that the county, rather than cut the

"You'd be an idiot to buy property in Loudoun County" says a homebuilder's attorney.

number of housing starts, should promote the construction of as many homes as possible that sell for more than \$305,000. "That's the break-even point," says Fuller. "That covers the cost of schools and anything else the county would fund. One could make the case that new housing in Loudoun County is subsidizing the older housing, gen-

erating higher tax revenues as the population has grown."

Indeed, population growth lies at the center of the war over Loudoun. In March, the Piedmont Environmental Council (PEC),

perhaps the most vocal anti-sprawl group working in northern Virginia, issued its own study urging the county to cut back its current population growth rate of 7.8 percent per year to a more modest 3.5 percent, toward a target of 300,000 people by 2025, rather than half a million.

The salvos over Loudoun are

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firing in the wake of a national brawl over local versus state versus federal prerogatives in law enforcement, and, surely, as most soldiers in this fight know, the future of Loudoun County will wind up in the courts. Virginia's constitution states that the General Assembly "shall not pass any law...whereby private property shall be taken or damaged for public uses, without just compensation," and may here view the county's growth initiative as a "taking" wrapped in righteous anti-sprawl language.

The county has so far suggested no form of compensation to property owners nervous about land values; it hasn't even moved to study the economic impact of downzoning on land prices. And

given the county's liberal zeal, there are reasons to presume that Virginia's conservative legislature will look closely at limiting the powers of the local government, especially in the northern counties, which the rest of the commonwealth has traditionally viewed as redoubts of uppity progressives. Virginia is far from alone in struggling with these issues: Voters are facing dozens of growth-control ballot initiatives across the country this fall. If Loudoun county is any guide, the process is not going to be brief—or pretty.

Enemy lines

Suzanne Walker Wright, a co-founder of Citizens for Property Rights, sat on a bench in the lobby of the Loudoun County Govern-

ment Center one evening in early August. Inside the board of supervisors' chambers, the Planning Commission was holding the final public-comment session before releasing its draft comprehensive plan in September. The meeting was jam-packed with people wearing yellow "Sprawl Buster" buttons and property-rights partisans, wearing red bandanas around their necks, as if trying to present themselves as outlaw cowpokes. Several yards away, a few folks whispered around a table of literature set up by the Sustainable Loudoun Network, an affiliate of the Piedmont Environmental Council.

Wright, a CPR founder, owns a 600-acre farm near Purcellville in western Loudoun. She stayed

to the lobby's perimeter, glowering in the direction of the PEC people, calling them "Privileged Equestrian Caucasians," a reference to the group's base of supporters in the old-money districts around the town of Middleburg. Wright, it happens, served on the PEC's board for a year in the '80s and maintained long friendships with many of its members—until recently, when it became clear to her that the organization's wish list could affect the value of her farm.

"We've struck horror in the heart of the hunt," Wright says of the horse-country crowd. "A lot of these [anti-sprawl champions] hunted on our land, but this past year, I just had to say, 'No,' because these people had become my enemy." ■

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The Business of Complex Curves

continued from page 54

Look, these tools are being developed in very much the same way in which they are for automotive and aerospace: I can develop a single tool, apply it uniformly across my subcontract group, which, say, is going to be doing the next 20 models of the Corvette. It becomes a fixed system, a doctrinal approach that says: "Thou shalt work this way."

Under that system, designers have a very different role; they are stylists. If that's the future we want for architecture, then there's absolutely no problem—if we want to handpick teams appropriate to

the task rather than adapting the task to the team.

Where does a profession where profit margins are already so low get the money and time to develop these new tools?

Both money and time can be eliminated from the construction process by shifting the design responsibility forward. If you look at the amount of money invested in shop drawings for a large-scale project, it far exceeds the architectural and engineering fees.

Most recently we have been working with Capco, a steel fabricator in Rhode Island in a software called SDS [from Design Data]. As recently as April we asked them to price some components on the building, giving them a

three-dimensional model of the steel structure. Instead of doing estimates from that, they completed the shop drawings in about three hours and were able to price the thing incredibly precisely, right down to the length of weld. A similar component done in X-Steel—

materials, to understand engineering. And whether we are going to be able to deal with the legal profession in terms of the appearance of risk; whether we are going to be able to deal with the standard practices that have developed over the last 40 or 50 years and be able

"The building industry," Glymph points out, "is far larger than aerospace and automotive combined."

which we used on the Concert Hall—would take a couple of weeks. That same component done in two-dimensional AutoCAD would take a couple of months.

The real issue is whether we are going to start training architects to be builders again: to work with

to reverse them. If we don't, then I believe that the profession as we know it will cease to exist. ■

Andrew Cocke has written for Architecture and Metropolis. He lives and practices architecture in Charlottesville, Virginia.

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Curtain Call

continued from page 59

concrete. "I pretended the floor was cracking because of water pressure," suggests Blaisse, acknowledging Almere's provinance as a polder.

Her biggest landscape commission yet is still on the boards: the gardens at the new Universal headquarters in Los Angeles, another OMA design that's currently on hold. Blaisse's drawings—rendered in her signature style of colorful, paint-by-number patterns—show her plans to landscape "a position in an earthquake zone prone to landslides, hot winds, and water shortages."

She proposes covering the hillside site with "grass carpets," folded terraces, and gardens of large white boulders. She's also planning five interior gardens throughout OMA's building. These smaller installations include a terrace filled with Drago trees; an aluminum-floored bamboo garden with a large exterior curtain; a garden filled with mossy mounds of earth, dotted with Plexiglas tubes; a potted shrub garden populated with butterflies; and a roof terrace patterned with gravel and black Mexican pebbles. With so many colors, textures, and materials surrounding Koolhaas's unbuilt building, the landscape seems poised to overshadow the master's architecture.

For better or for worse, the bulk

of Blaisse's oeuvre has involved Koolhaas's projects. For those apprised of Blaisse and Koolhaas's personal relationship in a July cover story in the *New York Times Magazine*, her collaboration on so many OMA projects sounds like nothing more than an opportunistic byproduct of their "domestic equipoise," as the *Times* writer described one aspect of their partnership. Though the article's Hester Prynne portrayal of Blaisse indirectly cast a shadow of cynicism over her work with Koolhaas, their collaborations have influenced both partners. From Koolhaas, Blaisse acknowledges she's learned "to dare throw away good ideas that seem irreplaceable, and not to underestimate the quality of ugliness,

contradiction, and illogical decision." She's also influenced Koolhaas' extra-large philosophy, helping him "develop ideas about movement, transparency, instability, and metamorphosis. And also, maybe, by introducing 'bourgeois values' as an artistic confrontation with intellectualism and architectural space."

Blaisse's vision of what constitutes architecture is inspired and wholly original. For her, architecture can be soft—a curtain billowing in the breeze, a bushy plant—or hard, like a mirrored wall or a pile of crushed glass. She loves challenging conventional definitions of space and exploring the fluid line between—as her firm's name wisely pronounces—inside and outside. ■

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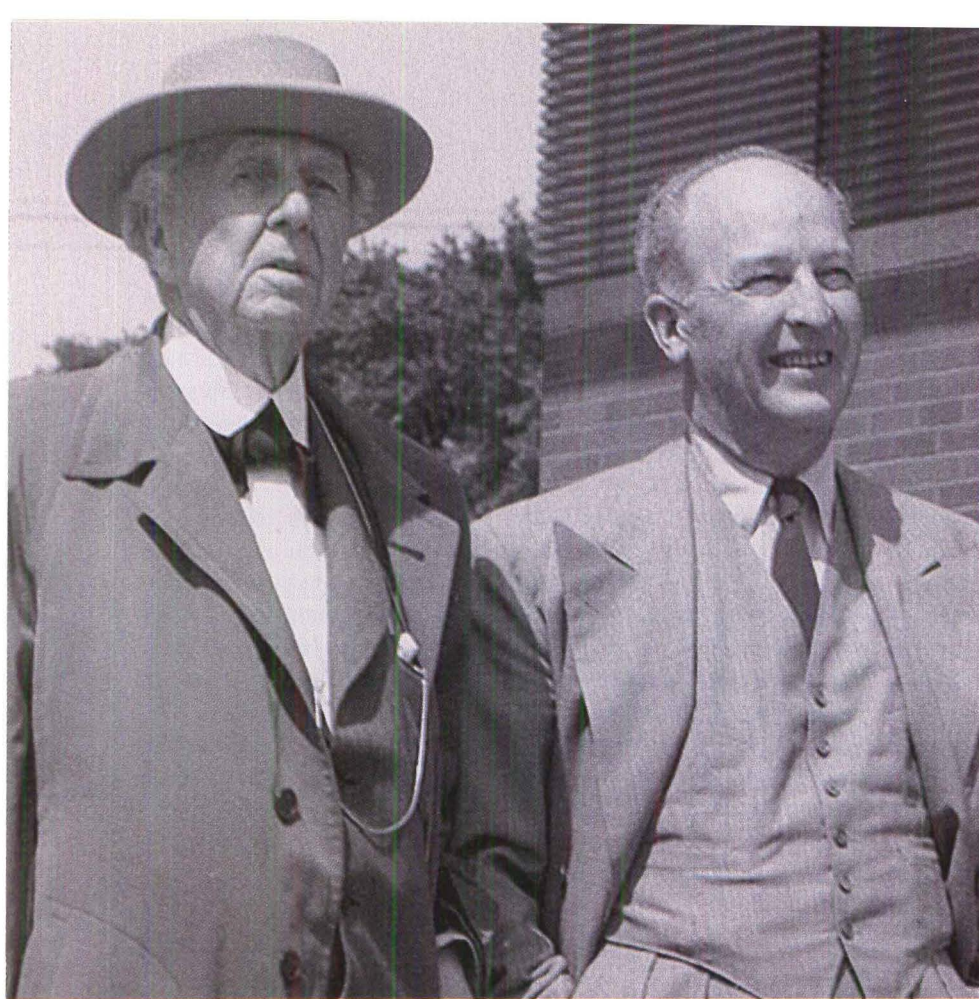
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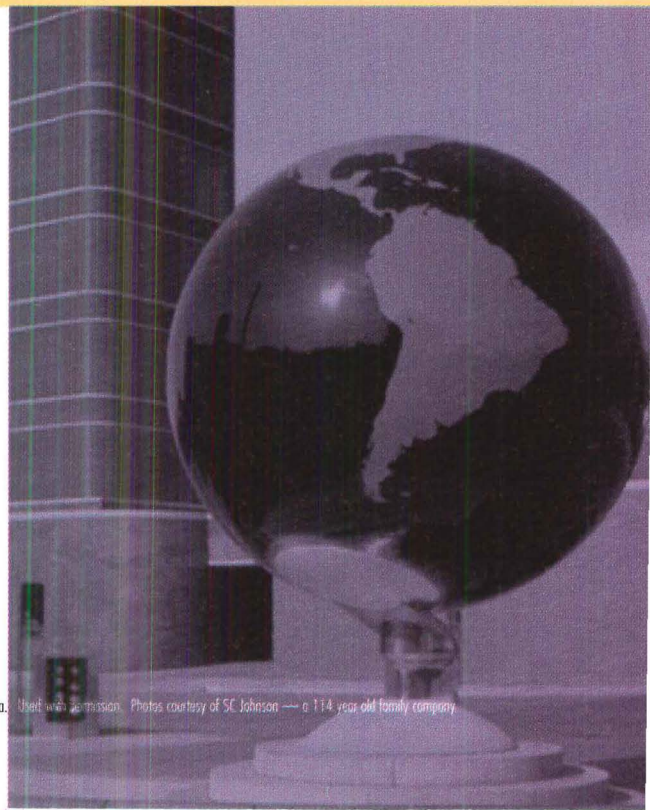


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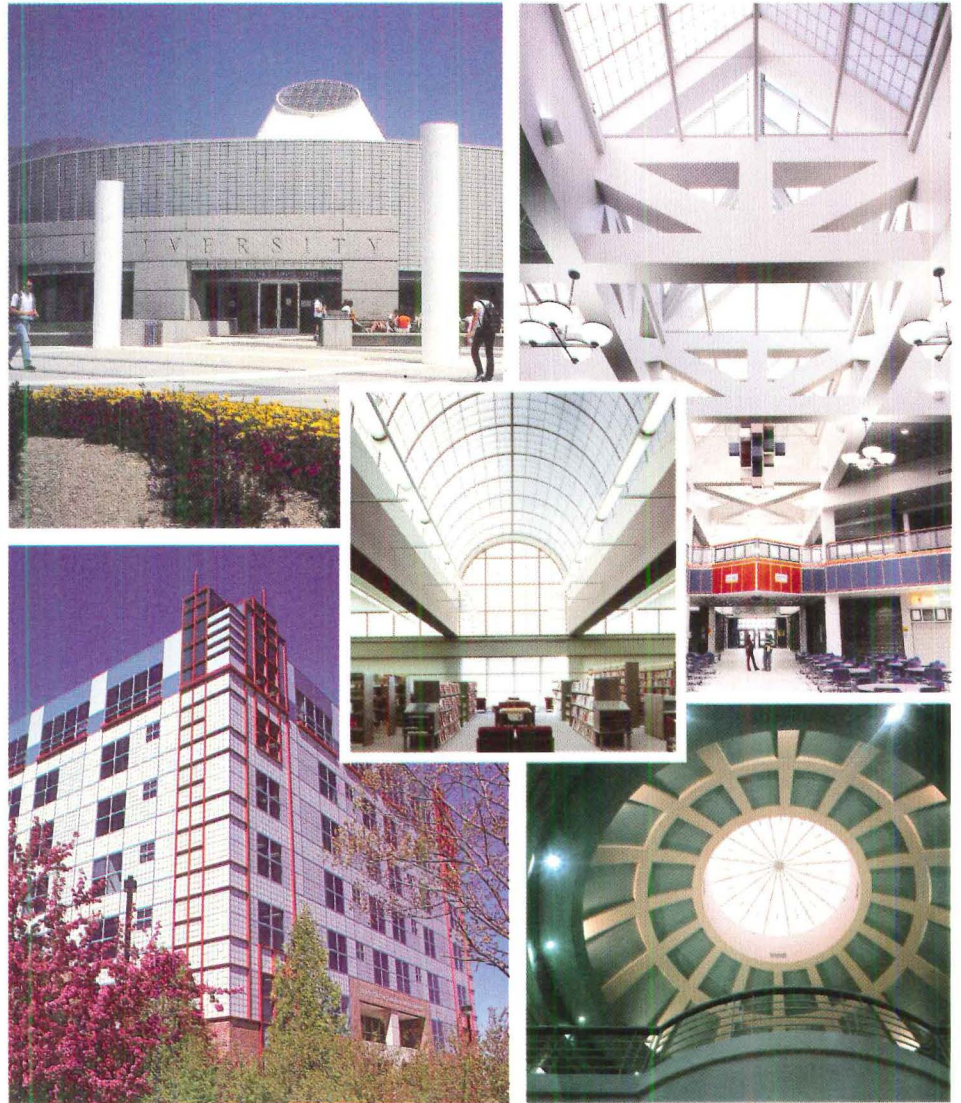
The Future of the Modern

continued from page 62

its purpose. With the publication of the register completed, many agreed that education is the next frontier, as well as geographic expansion. But this raises another question, concerning architectural ideology. Is DOCOMOMO inherently centered on "modern movements"? (I use the lowercase and plural form to stress how much the "MOMO" to which the organization refers is a construction shaped by critics, and not an indisputable, objective movement.) Might it stretch its field of action to 20th-century architecture at large, abandoning its parochial interpretation of "modern" and accepting the conflicting design strategies born since the dawn of the modern age?

These issues provided the background for heated debate on the future leadership of the organization's council. After founding and running DOCOMOMO's operation for 10 years (on a voluntary base, with some backing from Delft's Technical University), President Hubert-Jan Henket and Secretary General Wessel de Jonge have decided to step down to devote more time to their respective design practices. Art historian Gérard Monnier and DOCOMOMO's French branch proposed to move the organization's secretariat from Delft to Paris, but their proposal met firm resistance. Part of the dilemma about its move is funding-related. The cultural institutions in the Netherlands have been supportive of architectural projects. It's unclear, however, how much support, or control, will come with a move to France. The council will meet again in early 2001 to discuss alternatives.

As with the Brasilia's Plano Piloto, DOCOMOMO, rather than being frozen in its original self-contained design, needs to find a pattern of action that preserves the energy of its founding episode, while accommodating its inevitable expansion. ■



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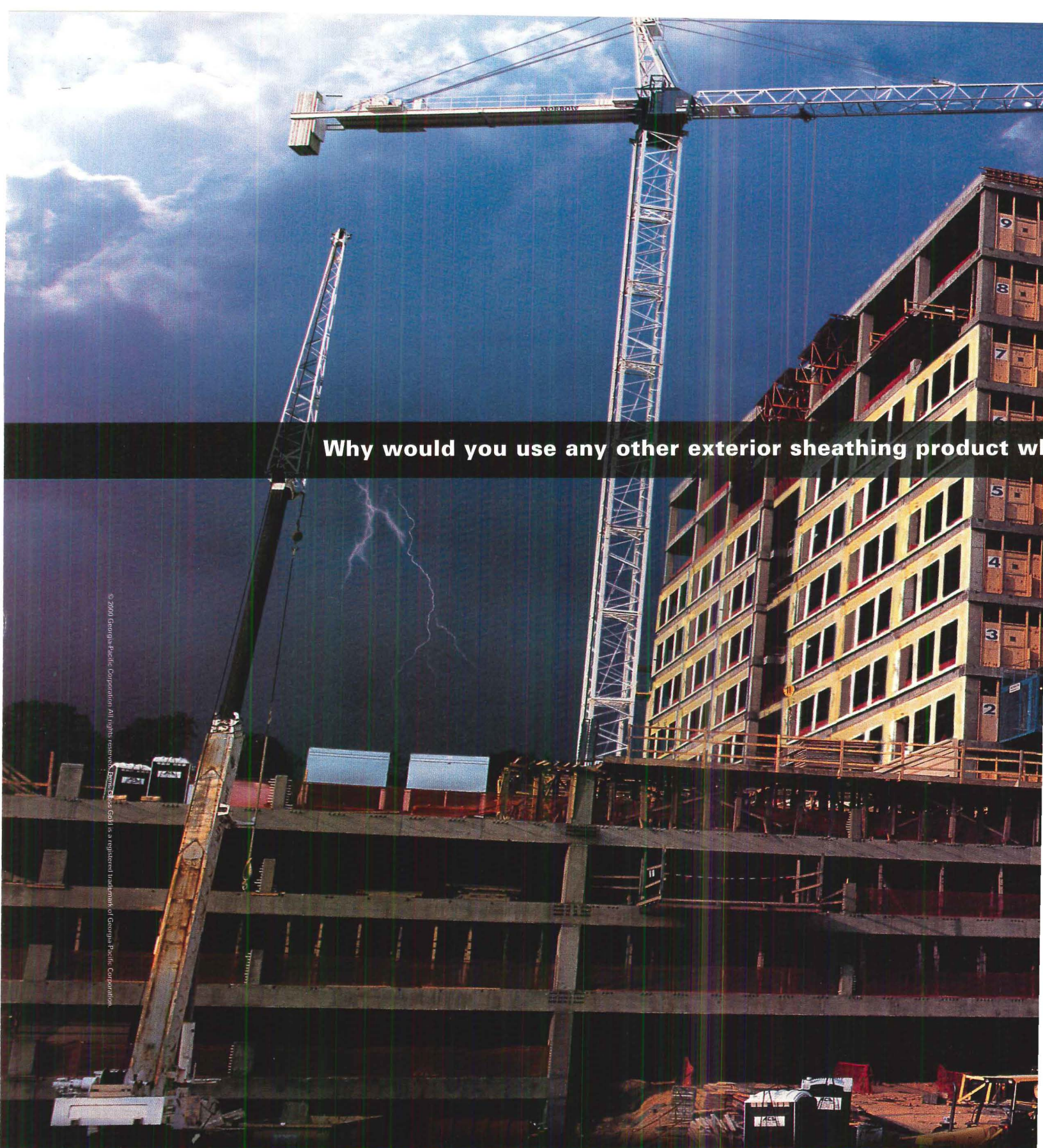
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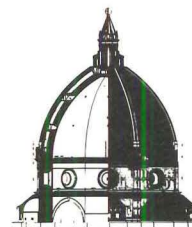
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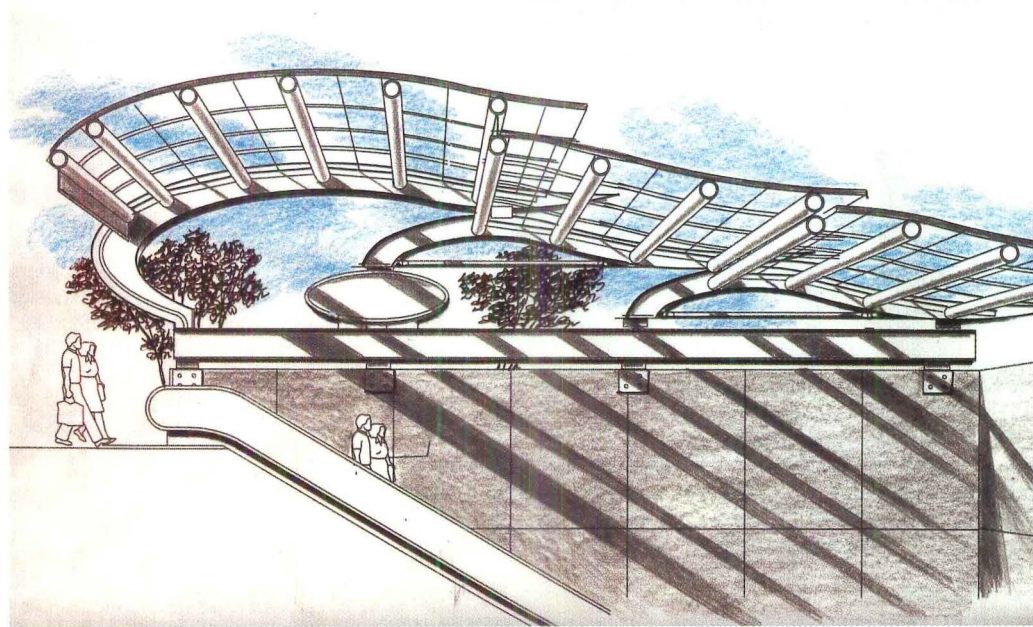
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Design By Default



The entrances to Washington, D.C.'s monumentally modern subway stations are at risk of being tarted up with florid canopies. **Bradford McKee** thinks the design selection process needs cultivating.

As if Washington, D.C., needs to see any more of Arthur Cotton Moore's wavy "Dionysian" designs, as he fatuously calls them, on its streets, the city may be about to get 53 of them. Yes, 53: That's the number of Metrorail subway stations in danger of being stapled with silly new escalator canopies designed by Moore (whom one angry local architect, Julian Bond, aptly calls the "Liberace" of architecture).

Metrorail, better known as Metro, has experienced a lot of escalator breakdowns lately at its stations throughout the capital and its suburbs. One big problem is their exposure—many of the moving staircases are out in the open, and suffer through rain and snow. And anybody who's ever had to trudge up the equivalent of 10 flights of stairs at the end of the day will tell you that Metro's escalator malfunctions are not acceptable. But neither is the process engaged by Metro's manager, the Washington Metropolitan Area Transit Authority (WMATA), to correct the problem.

WMATA decided to cover the open escalators with canopies, which would also help the transit system meet new code requirements in the jurisdictions it serves. It already had a prototype—a horsey, faceted-glass and steel deal it had erected at the Court House station in Arlington, Virginia, and at the Columbia Heights Station in D.C. In July, WMATA officials approached the city's Commission of Fine Arts (CFA) for design approval, as the commission holds veto power over designs at the 21 of the 53 Metro stations that lie on or adjacent to federal

property. The members of the commission rejected the design outright.

That's when things got a bit thick. Shortly after the commission threw out the original canopies, the *Washington Post's* architecture critic Benjamin Forgey wrote an article suggesting that WMATA show a little inspiration in adding to Metro's marvelous, classically modern design, conceived by the late Chicago architect Harry Weese in the 1960s. Why not, Forgey asked, take a cue from Paris's Metro entrances, designed by Hector Guimard in the 1890s, or from the Bilbao subway's new glass-shell entrance capsules wrought by Norman Foster?

And that's when Moore moved into the picture, according to WMATA spokesman Ray Feldmann. The architect offered the transit authority help in developing a design that would pass muster with the Fine Arts Commission. WMATA referred him to its prime project consultants, who signed up Moore as a subcontractor, Feldmann says. And out came the odious proposal you see above.

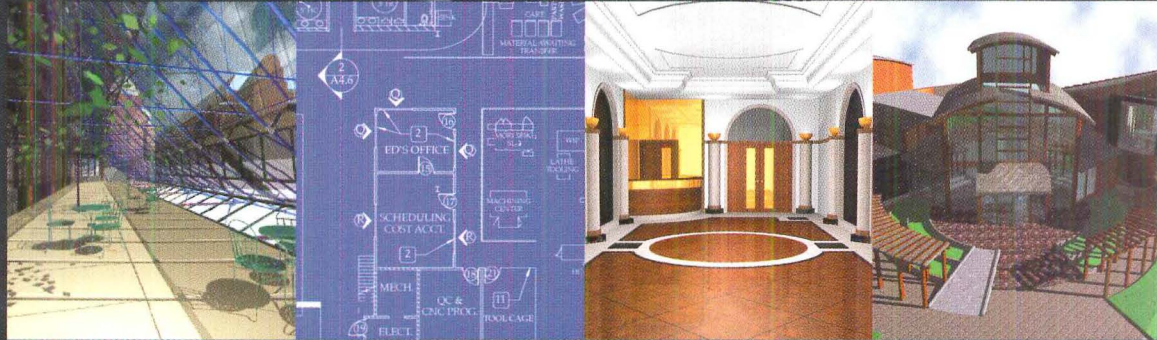
Weese's design for Metro's stations remains notable for its sobriety, which is the exact opposite of Moore's signature affectations. Moore is forever reviving the swooping lines and cursive script of the Baroque—so overrich it can instantly turn you into a diabetic. WMATA's board, after a public outcry, has now acceded to calls for a competition. But Moore's shameless shoo-in is still in the running, and with prior CFA and WMATA approval, clearly the one to beat. Soon the World War II memorial may not be the worst architectural proposal in the city. ■

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