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Postmodern Ruins

A pair of languishing landmarks underscores the need for continuing civic investment.

A recurrent topic of conversation during the AIA convention in May was the tragic state of a Postmodern landmark encountered by architects on their way to seminars and lectures. Charles Moore's colorful folly in the heart of New Orleans, Piazza d'Italia (1978), is in ruins. Its once bubbling fountains have been drained, its jigsaw puzzle of arches and terraces is now crumbling and haunted by the homeless.

Time has also been unkind to another Postmodern landmark 2,100 miles away. Michael Graves's garlanded Portland Building (1982) broke the Modernist mold and has literally been breaking apart ever since. The tiles of its lower facade have been repaired repeatedly, its 15th floor required shoring up, and now its entire structure is vulnerable to collapse since it doesn't meet current seismic codes.

The ruinous state of these icons elicits an I-told-you-so reaction from many architects, who view the failing structures as the logical result of Postmodernism's preoccupation with surface expression. In reality, many of the problems are the result of paltry budgets and poor maintenance.

To be sure, Graves's Portland Building was plagued from the outset by gloomy offices with small windows and a somber street presence. But those offices were the result of stringent energy conservation standards, not bad design. Graves won the competition for the Portland Building in part by submitting the only proposal that satisfied the city's meager funds, and even then, many of his details were value-engineered into mute submission. The uproar that followed the building's completion is testimony to exactly how much design Graves accomplished on a tight budget.

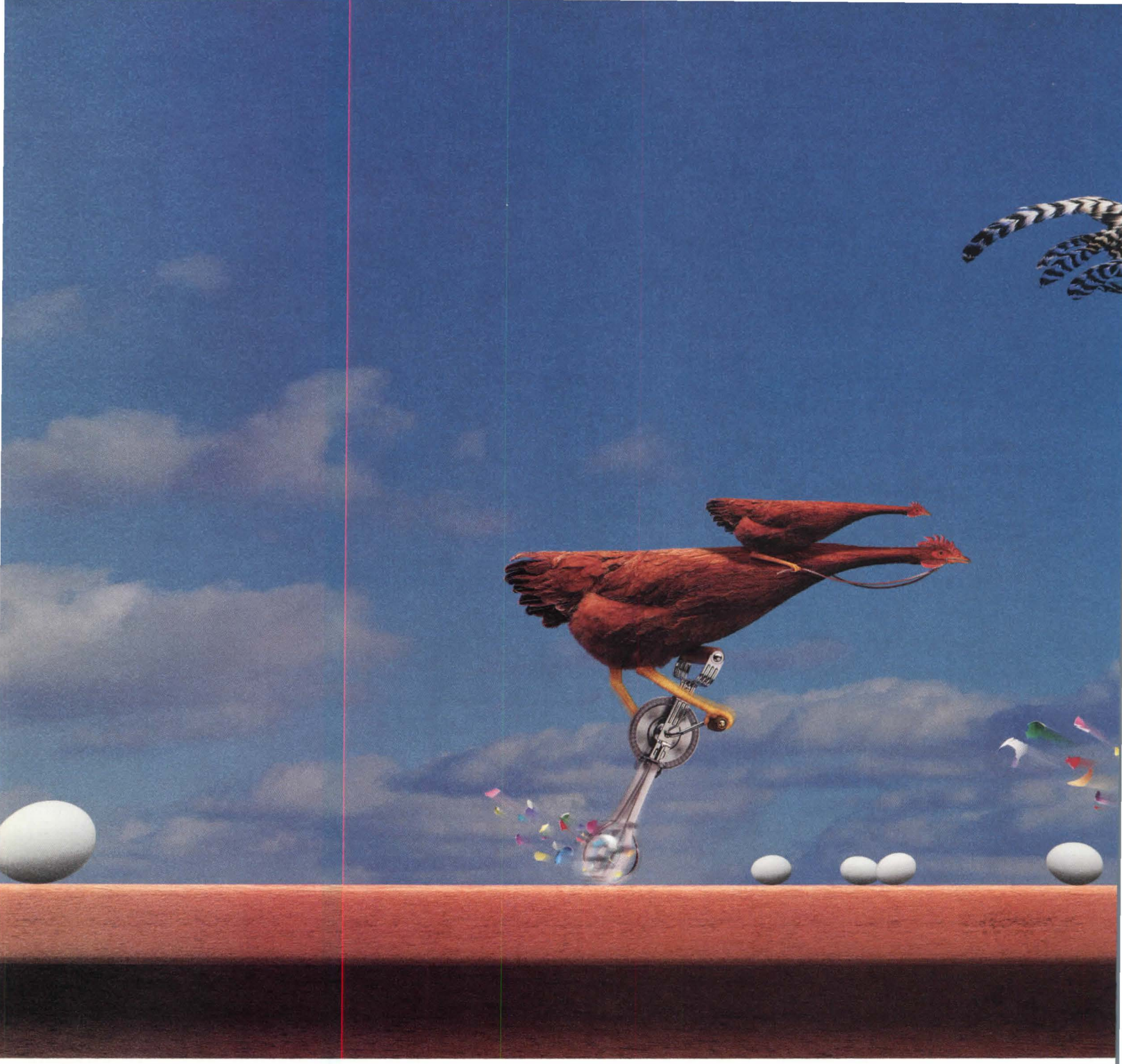
Moore's budget was also parsimonious, forcing him to work with the kind of low-end materials that require upkeep. Soon after it was completed, cash-strapped New Orleans abandoned the property and has let it deteriorate ever since. Nevertheless, Moore's fanciful riffs on history still resonate as an urban oasis.

Both the Piazza and the Portland Building should be applauded for achieving civic monumentality on shoestring budgets. The deterioration of these groundbreaking designs serves to underscore the need for greater investment in civic buildings and spaces, no matter what the style.

With Postmodernism currently dismissed as a esthetic dinosaur, and government funds for public construction drying up, demolishing Moore's and Graves's designs may seem like a logical conclusion. But just as 1950s space-age Modernism was once ridiculed and is now revered, so too, these seminal Postmodern examples should be saved and repaired. Fortunately, Portland agrees. The city has already spent $800,000 to renovate Graves's design, and may spend up to $9 million more to bring the building into compliance with seismic codes. The fate of the Piazza d'Italia is less certain. Over the years, New Orleans has repeatedly issued RFPs intended to breathe new life into Moore's urban park, but without results. The city is more hopeful that its latest effort—a hotel deal that includes renovation of the Piazza—will prove successful.

As civic icons, Piazza d'Italia and the Portland Building revived historical tradition, decoration, and whimsy at a time when government buildings were stripped of all expression beyond the abstract and the aloof. These landmarks spurred architects to reconsider attributes that humanize buildings and cities. They should be preserved—*and celebrated.*

Deborah K. Dietsch



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Car struck

I enjoyed your article about architects and cars (*Architecture*, April 1997, page 168). I am an architect who has owned a 1951 MG-TD, a 1962 Jaguar XK-120M, and a 1969 Jaguar XKE-2+2. In 1980, I designed and built a short-trip electric car (below), which I drive daily.
Albert J. Yanda
Sun City West, Arizona

Uneducated trade

It is clear that you lack any understanding of the Chicago Board of Trade facility (*Architecture*, May 1997, page 107).

Your curiosity as to why "this heavily glazed building has no actual windows" is evidence that you are uneducated about trading floors. Exterior light, noise, and radio interference are extremely disruptive to an open-outcry trading floor. Also, contrary to your observations, there are windows; they overlook the LaSalle Street park which, when completed, will have landscaping and a public fountain in addition to the "obsequious vintage lampposts" required by the city planning department.

If you wish to focus on public amenities and civically responsible architecture, protest issues where civic integrity is truly in jeopardy.
Tomoo Fujikawa
Fujikawa Johnson and Associates
Chicago, Illinois

Context booster

What palpable relief to read your interview with Rodolfo Machado and Jorge Silvetti (*Architecture*, April 1997, pages 80-83). In a time when architecture is often confused with fashion, it is refreshing to see inventive work that is part of a larger composition. If only we all believed that every piece of successful architecture is an act of intervention relating to the natural or built context, growing from a basis of precedent and invention.
Adam A. Gross
Ayers Saint Gross
Baltimore, Maryland

Heartland cheers

Cow-a-bunga! I love the cover of the May issue. Thank you for your whimsical contribution to a profession that needn't take itself so seriously. Let's continue to have fun.
Stephen Kanner
Kanner Architects
Los Angeles, California

Did I see a domesticated bovine confronting me when I picked up the latest issue? You got my attention. Bring more unexpected imagery to all the pages of your journal. Liveliness is a virtue and architects can use a lot more.
Malcolm Holzman
Hardy Holzman Pfeiffer Associates
New York City

Thank you for your May issue. Creativity is alive and well in the Midwest and we need to see more of it published. The Maxwell MacKenzie photo essay (pages 132-135) was particularly poignant. Last summer, I went home to watch the demolition of my grandparents' Gothic-style house. For me, the May issue offers just the right combination of memory and possibility.
Thomas B. Grooms
Washington, D.C.

Elitist hang-up

Ada Louise Huxtable deserves our gratitude for her impassioned efforts over the past four decades. Her new book, *Unreal America*, is a timely reminder of the essential differences between the true and the counterfeit. Diane Ghirardo has contributed a warmed-over, Marxist tract masquerading as a review (*Architecture*, May 1997, pages 71-73) that betrays its shallow academic prejudice with eight elitist jabs in as many paragraphs. Does she really believe that "quality is just class-based discrimination?"
Michael Webb
Los Angeles, California

Diane Ghirardo apparently has a hang-up about elitism: a word she uses six times in her review. She seems to feel that what people who are in the business to make money choose to build—the lowest level design quality—should be acceptable, and that to strive for anything better is elitist.

Anyone with an eye of even rudimentary discernment knows that the state of our developed environment is deplorable, and will probably overwhelm the efforts of "elitists" to stem the tide of the tawdry, tasteless ooze.
Fielding L. Bowman
New Canaan, Connecticut

Academics like Diane Ghirardo wisely hide from the icy winds of reality within the subsidized groves of the university. When they emerge to lecture us common folk, they should adopt some of the quaint customs that help us get by: courtesy, respect for others, humility, and a sense of humor. Otherwise, we who pay their bills may notice how threadbare, even lacking altogether, their intellectual garments are.
Gordon F. Tully
Norwalk, Connecticut

Island ire

I was dismayed to read your May editorial (*Architecture*, May 1997, page 15) linking Ellis Island to Governors and Davids islands as places in need of development.

It is true that the south side of Ellis Island is crumbling. The buildings have been vacant for 50 years without any funding for upkeep. But the answer is not commercial development; it is stabilization. This national park does not need another hotel or conference center.
Peg Breen
President, New York
Landmarks Conservancy
New York City

Corrections

Archeworks' new building in Chicago is designed by cofounders Stanley Tigerman and Eva Maddox (*Architecture*, May 1997, page 57).

Morphosis and Stephen Teeple Architect, Joint Venture Architects, received the commission for 450 units of graduate-student housing at the University of Toronto (*Architecture*, April 1997, page 35).

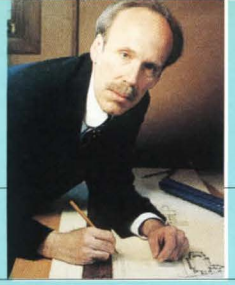
Every brilliant design deserves the right support.

exhibitions

city	dates	exhibition	contact
Chicago	through September 1	**The Grand Tour: Travel Sketches** at the Art Institute of Chicago	(312) 443-3600
New York	through August 17	**Picturing Hong Kong: Photography 1855-1910** at the Asia Society	(212) 517-6397
San Francisco	August 8-December 12	**Shiro Kuramata 1934-1991** at the San Francisco Museum of Modern Art	(415) 357-4000
Washington, D.C.	through January 4, 1998	**Main Street Five-and-Dimes** at the National Building Museum	(202) 272-2448
	through January 10, 1998	**Lying Lightly on the Land: Building America's National Park Roads and Parkways** at the National Building Museum	(202) 272-2448

Architect E.T.J. Hoffman's 1927 five-and-dime in Memphis

conferences



city	dates	conference	contact
Buffalo	September 17-21	**Frank Lloyd Wright Building Conservancy** conference	(312) 663-1786
Chicago	July 25-August 3	***Shining Brow***, Frank Lloyd Wright opera and symposium	(773) 292-7578
	October 16-18	**Restoration Chicago**	(508) 664-6455
Dallas	October 5-7	**World Workplace '97**	(713) 629-6753
San Jose	August 14-16	**alt.office Conference & Expo**	(800) 950-1314, ext. 2616
Seattle	August 8-10	**Beyond the Rainbow: Changing Views,** diversity conference sponsored by the AIA	(800) 242-3837
Washington, D.C.	September 28-October 2	**International Conference on Healthy Buildings**	(540) 231-5182

Baritone Robert Orth portrays Frank Lloyd Wright in the Chicago Opera Theater's production of *Shining Brow*.

competitions

competition	deadline	contact
Gallipoli Peninsula National Historic Park competition, sponsored by the Republic of Turkey and the International Union of Architects	August 10 (registration)	(90) (312) 210-3626
Excellence on the Waterfront Awards, sponsored by the Waterfront Center	August 15	(202) 337-0356
Investing in the Next Generation Grants, sponsored by the Boston Foundation for Architecture	August 26	(617) 951-1433, ext. 232
Membrane Design Competition, sponsored by the Taiyokogyo Corporation	September 3	(81) (6) 306-3154 fax
Great American Home Awards, sponsored by the National Trust for Historic Preservation	September 30	(202) 588-6283
Launch Your Career in Exhibit Design Competition, sponsored by Exhibitgroup/Giltspur	December 1	(212) 724-4444

Last year's Great American Home Award winner, the 1860 Kirkwood plantation in Eutaw, Alabama

Dominique Perrault

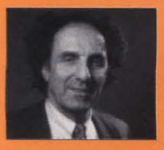
Jean Nouvel

Christian de Portzamparc

Françoise Jourda & Gilles Perraudin

Architecture Studio

Henri Gaudin



Paul Andreu

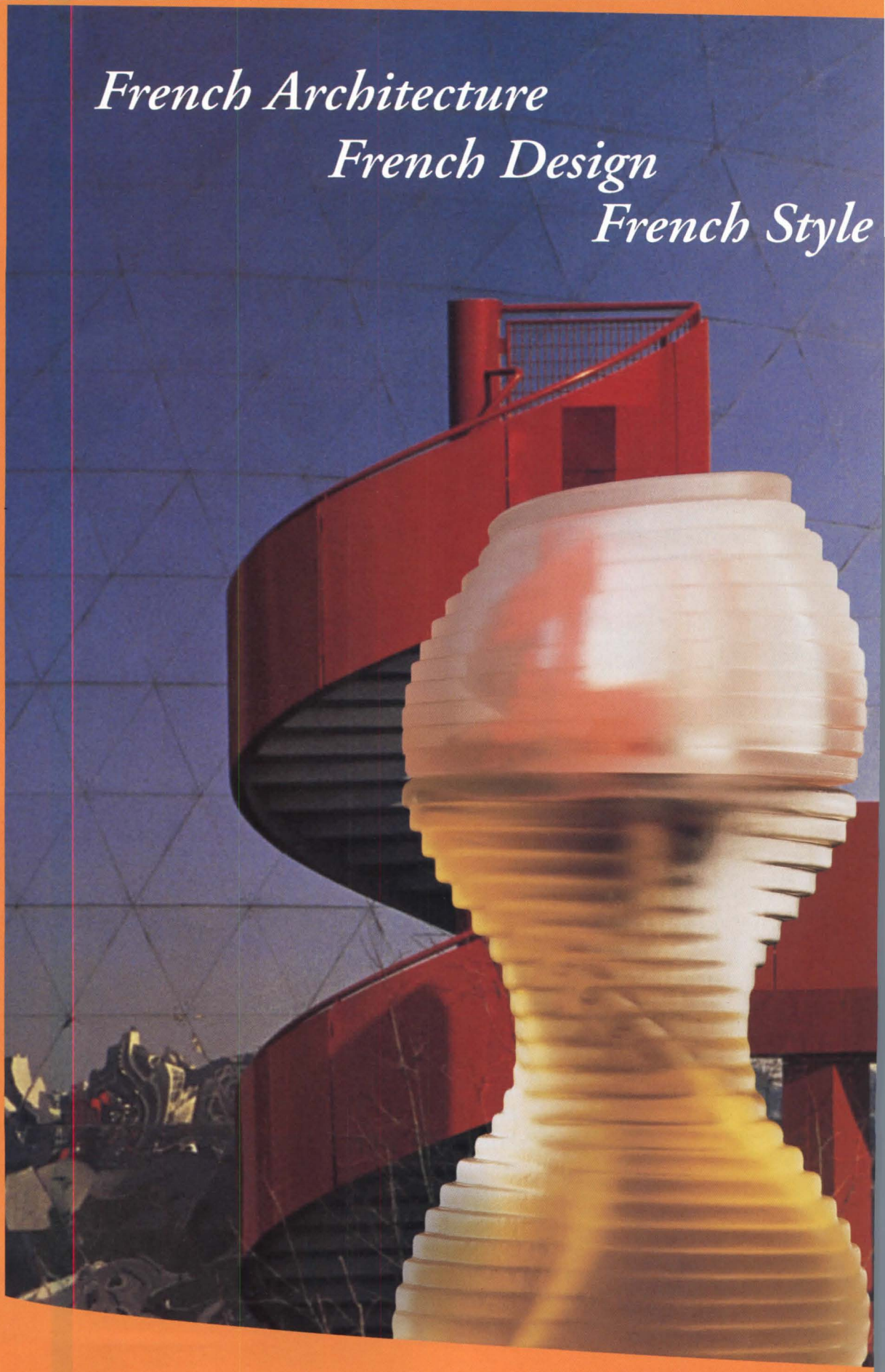
Claude Vasconi

Odile Decq & Benôit Cornette

Andrée Putman

Philippe Starck

French Architecture
French Design
French Style



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Opera House, Lyon - Jean Nouvel

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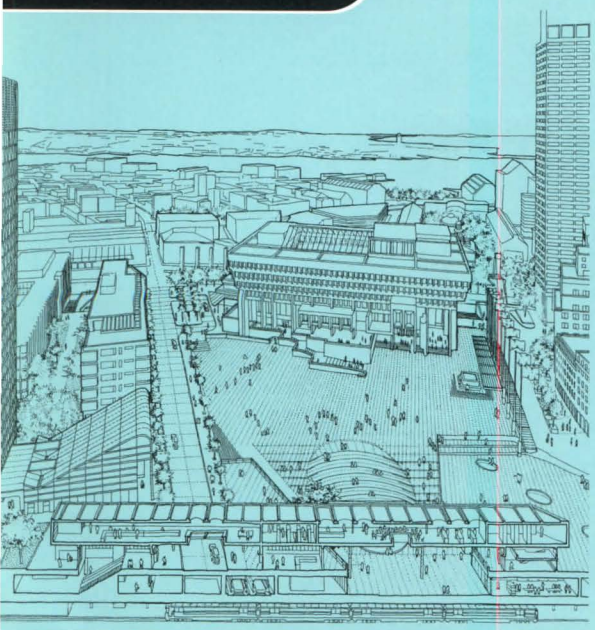


New hotel (left) for City Hall Plaza proves controversial.

Civic Disturbance IN BOSTON

Boston's City Hall Plaza has never been much of a shelter in a storm. Now a proposed redesign of the 10-acre field of brick is generating its own gales of controversy. At the core of the conflict is a new 350-room hotel which would occupy a site on the plaza between City Hall and the John F. Kennedy Federal Building. Proponents argue that it will revitalize the lifeless space and contribute much-needed funding for plaza reconstruction. Opponents protest the reduction in the plaza's size and argue that the city is ceding public land to private interests through a closed-door process.

No one disputes that the plaza is a problem—"barren" is a common description. Even so, the plaza, designed as a complement to City Hall by Kallmann, McKinnell and Knowles, has become the city's symbolic civic center and is the site of events such as political rallies, festivals, and concerts.

Two years ago, Mayor Thomas Menino sought to improve the plaza by establishing the nonprofit Trust for City Hall Plaza, led by a board of 40 businesspeople who each agreed to contribute $15,000 in funding. The Trust then selected Chan Krieger & Associates as master planners of the plaza makeover.

Principal Alex Krieger proposed several modifications: reestablishing Hanover Street at the plaza's north edge; inserting an arcade along the south edge featuring plantings, banners, and electronic media; building a visitors center along Cambridge Street; depressing the plaza to allow direct access to the subway platform; and finally, constructing a new hotel that would provide 18-hour activity, public ground-level uses, and—perhaps most important—major funding for the plaza reconstruction and maintenance endowment.

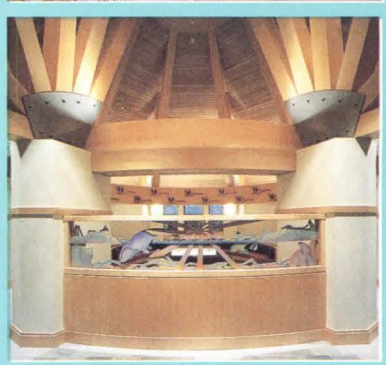
Attention quickly focused on the hotel as the largest component of the plan, despite the equally significant impact of the other recommendations. Public opposition to the perceived loss of civic space has come from Michael McKinnell, the original architect of City Hall and the plaza; Henry Cobb, who was the original master planner for the plaza and the surrounding urban renewal area; and Martha Schwartz, who was a juror for a public ideas competition for the plaza. But the most vociferous opponent is the U.S. General Services Administration (GSA), which has threatened a lawsuit. The GSA, a key player in the original plan for what is still called "Government Center" and the owner of the abutting JFK Building, cites security concerns as well as loss of sunlight, views, presence on the plaza, and building value. "Government Center represents the presence of the federal government in symbolic dialogue with city government," says GSA Chief Architect Edward Feiner. "It's like the Plaza Hotel in New York. What would you have if you put a building on the plaza in front of it?"

"'Civic' refers to the stuff we all share, the life encountered on the street," counters Alex Krieger. "It does not mean, nor has it ever meant, large enclaves of public buildings with limited hours of operation."

The dialogue between federal and city government is now anything but symbolic. *The Boston Globe* has reported that the GSA has been lobbying dissenting city councilors for support, while proponents of the plan have approached Senators John Kerry (D-MA) and Christopher Dodd (D-CT) for help.

Whatever the problems or merits of the proposal, the project has certainly been thwarted by a bad process, especially with the designation of Carpenter & Company and Interstate Hotels as the hotel developer before any significant public review of the plan. "What upsets me most is that they have not been scrupulous in their process," says architect Hubert Murray, a member of a plaza review team for the Boston Society of Architects (BSA). "People are saying, 'The fix is in.'" The participation of a recently appointed Citizens' Advisory Committee and the BSA review team may help ease tensions. Proponents insist the plan is subject to change and note that landscape architect George Hargreaves was recently hired to work with Krieger. Opponents worry that, barring legal action, the hotel is a done deal. For the Trust for City Hall Plaza, the biggest task may not be rebuilding the plaza, but rebuilding its public trust. *Elizabeth Padjen*

Native Alaskan HOSPITAL

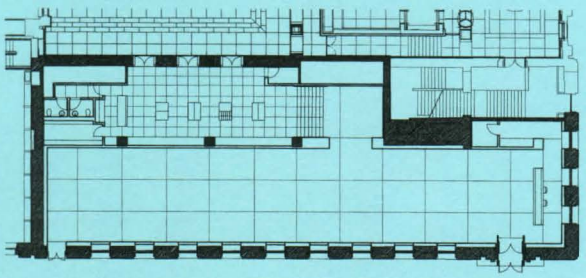


Canopy marks clinic entrance (top); fan trusses support skylit lobby ceiling (above).

In designing the new Alaska Native Medical Center in Anchorage, which opened in May, NBBJ Principal Richard Dallum spent 18 months studying the cultures of the native communities who would use the facility. "The danger was appropriating symbols, patterns, and forms without regard for their specific meanings," Dallum explains. To make the building as accessible as possible to its entirely native Alaskan clientele (the Inupiat, Yup'ik, Aleut, Alutiiq, and Athabaskan peoples), NBBJ eschewed specific references to the culture of any one group, incorporating instead the indigenous communities' shared cultural traits as design elements: Alaska natives congregate in a circle, so waiting rooms are centralized. Stepped-back massing makes the 389,000-square-foot hospital less intimidating to patients not used to urban scale. Windows at the end of every corridor recruit nature as an orienting device. *Ned Cramer*

Guggenheim IN BERLIN

Frank Gehry's highly anticipated museum in Bilbao, Spain, isn't the only branch of the Solomon R. Guggenheim Museum opening this fall. In June, the expansionist institution announced plans for a Berlin outpost, the Deutsche Guggenheim Berlin, in partnership with Germany's Deutsche Bank. Designed by Richard Gluckman Architects, the small, 3,800-square-foot gallery will be located on the ground floor of Deutsche Bank's Berlin headquarters, at the corner of Unter den Linden and Charlottenstrasse. It is scheduled to open in November. N.C.



New Guggenheim fronts German bank.

Wright Revived

Madison's new convention center is based on 1938 Wright design.

On July 18, Madison, Wisconsin, opened the Monona Terrace Community and Convention Center, more than 50 years after it was initially proposed by Frank Lloyd Wright. The architect envisioned the project in 1938 as a downtown civic center on the shore of Lake Monona. Wright's proposal generated considerable controversy for both its design and its original $17 million budget. Ultimately, the project was abandoned, revived, and redesigned several times during the intervening decades before and after Wright's death. In its final incarnation, as revised by Anthony Puttnam of Taliesin Architects and local architect Potter Lawson, the 250,000-square-foot, $67 million convention center retains its original site, but forgoes Wright's intended civic auditorium for a 14,000-square-foot meeting hall. *N.C.*

D.C. AIRPORT EXPANSION

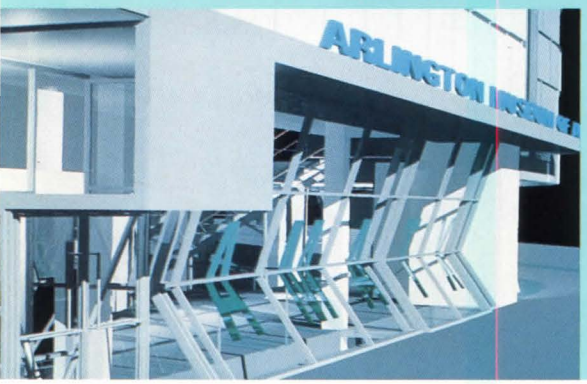
Washington, D.C.'s National Airport has long occupied a cramped, haphazardly expanded 1941 terminal. This month, the gateway to the nation's capital expands into more spacious quarters—a new, 1 million-square-foot terminal designed by Cesar Pelli & Associates with Leo A Daly. Linked to the original building by an enclosed walkway, the new 35-gate, three-floor facility extends 1,600 feet along the Potomac River and includes a control tower, which opened in April. Painted-steel domes are repeated on a 45-foot structural grid, intended to evoke the Capitol, monuments, and museums across the river. Murals, railings, floor medallions, and other pieces were created for the terminal by a group of 30 artists, including Jennifer Bartlett, Frank Stella, Sol Lewitt, and Nancy Graves. *N.C.*

Pelli's new terminal sprouts vaulted bays and control tower.

IN BRIEF

Neil Denari has been appointed the new director of the Southern California Institute of Architecture. He succeeds **Michael Rotondi**, who steps down this summer after a 10-year tenure. Denari, 40-year-old principal of Los Angeles-based Cor-Tex Architecture, is currently renovating the Arlington Museum of Art in Arlington, Texas. **Fred Koetter** is leaving the Yale University School of Architecture after four years as dean. Meanwhile, Yale has selected **Cooper, Robertson & Partners** to master plan its New Haven campus. Cooper, Robertson urban designer **Richard Schaupp** and architect **Michael Franck**, of Allan Greenberg's Washington, D.C., office, won the competition to design the Plainfield, Illinois, town center.

Cor-Tex Architecture's Arlington Museum of Art



In June, **Moshe Safdie and Associates** won the competition to expand and reorganize the Yad Vashem Holocaust Museum in Jersualem. The complex, scheduled to be completed in 2000, will include new museums of art and history, changing exhibition galleries, a visitor services building, and the Hall of Names.

June was also a good month for **Enrique Norten**, principal of **TEN Arquitectos**. Arizona State University selected Norten with the Phoenix office of **Smith Hinchman & Grylls** to design its new Liberal Arts Building, a 175,000-square-foot addition to the Tempe campus. Norten bested **Morphosis**, **Richard Meier**, **Norman Foster**, and local architect **Jones Studio** in securing the $35 million commission. The announcement of the ASU project follows on the heels of Norten's appointment to design a new 75,000-square-foot fine arts building for the University of Pennsylvania, in partnership with local

Moore Andersson's Celebration church

architects **Santos-Levy**. The Mexican architect is also designing the 7,000-square-foot Camino Real museum in Socorro, New Mexico, with **Holmes-Sabatini Architects** of Albuquerque.

New York Times Cultural Correspondent **Paul Goldberger** is heading to *The New Yorker* as its architecture critic, a position previously turned down by Goldberger's *Times* colleague **Herbert Muschamp**.

New York's Metropolitan Museum of Art, limited to a 14-acre Central Park site, is forced to find ingenious ways of expanding. To increase exhibition space for the museum's Greek and Roman antiquities, **Kevin Roche John Dinkeloo and Associates** is designing a 60,000-square-foot addition,

tucked above Richard Morris Hunt's main staircase. The **Olin Partnership** has designed a sculpture garden for Washington, D.C.'s National Gallery of Art, between the museum's West Wing and the National Museum of Natural History. San Francisco's Jewish Museum has fired **Peter Eisenman** as architect of its new Yerba Buena facility and is looking for a replacement.

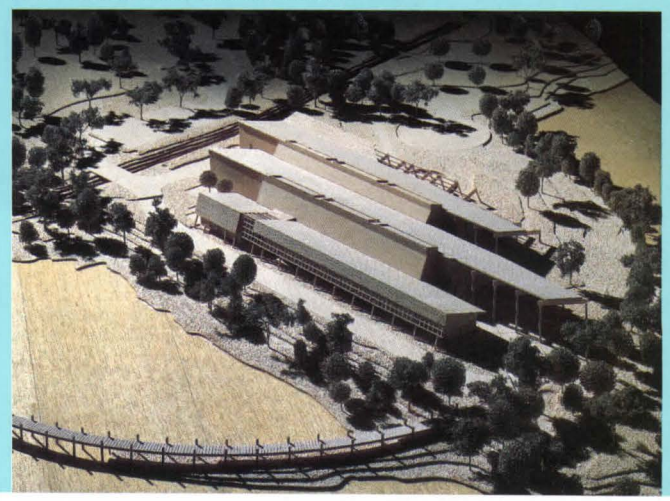
Moore Andersson Architects is designing the $7.4 million Community Presbyterian Church at Celebration, Disney's new town outside Orlando. The Austin, Texas, firm is also designing a $15 million independent-living center in Euclid, Ohio; the $2.4 million St. Paul's Episcopal Church and Whiteman Primary School in Steamboat Springs, Colorado; and a $3 million dining hall at Carleton College, in Northfield, Minnesota.

Kenyon College alum **Graham Gund** is renovating several buildings and designing a 70,000-square-foot science lab at the school's Gambier, Ohio, campus. Microsoft executives **Bill Gates** and **Steven Ballmer** are shelling out $20 million for a **Payette Associates**-designed computer science and electrical engineering lab on Harvard's Cambridge campus. Payette is also designing a 170,000-square-foot International Vaccine Institute for the United Nations in Seoul, South Korea. West of Seoul, in Inch'on, **Ellerbe Becket** is designing a 3 million-square-foot office, hotel, and retail complex.

Lisbon's new aquarium, Europe's largest at 184,000 square feet, is being designed by **Cambridge Seven Associates**. And, inspired by the long boats of the Pacific Northwest, **NBBJ** is designing a 43,900-square-foot museum for the Tulalip tribes of Snohomish County, Washington. In Seattle, French architect **Denis Laming** is adding an IMAX theater and galleries to Minoru Yamasaki's 1960 Pacific Science Center, designed for the 1962 Seattle World's Fair.

Skidmore, Owings & Merrill, **Gensler**, and **Ghafari Associates** are renovating Detroit's Renaissance Center for the General Motors Corporation. The city recently traded the building for GM's Albert Kahn-designed headquarters. And **Peter Rose and Associates** is renovating Detroit's landmark Orchestra Hall; an adjacent performing-arts high school is also in the works. In New York City, Embassy Suites Hotel has commissioned **Perkins Eastman Architects** to design a 400-room hotel and retail complex at Battery Park City.

NBBJ's Tulalip Tribes Cultural Museum



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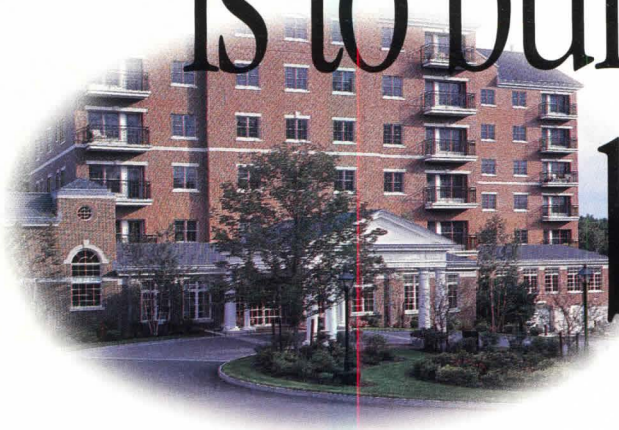

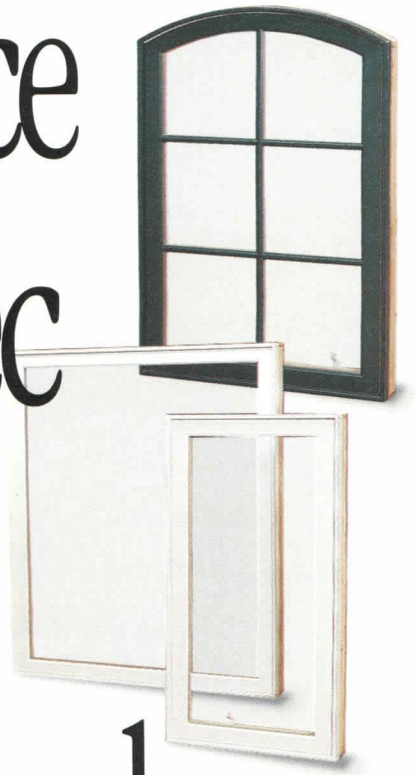

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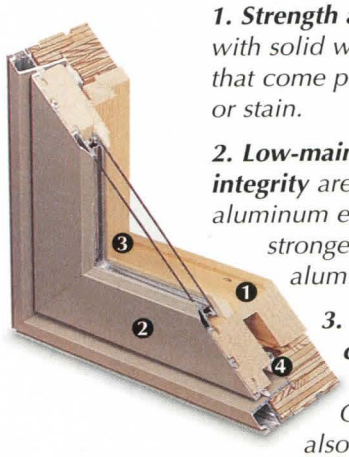

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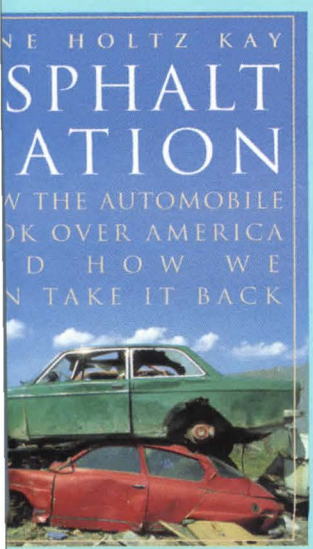
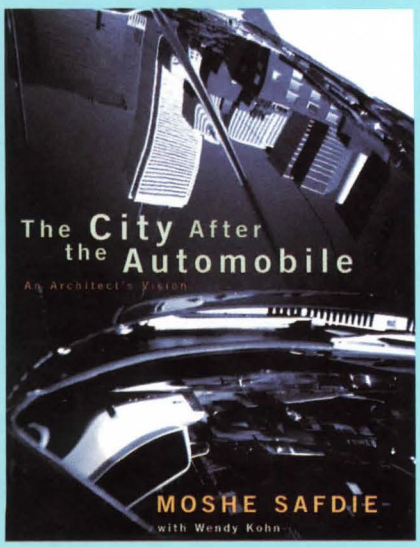
Car Culture

Two new books outline divergent solutions to America's auto-induced sprawl.





Watch out, America. Jane Holtz Kay wants to take your T-Bird away. And Moshe Safdie would like you to share it. Kay's *Asphalt Nation: How the Automobile Took Over America and How We Can Take It Back* (Crown Publishers), and Safdie's *The City After the Automobile: An Architect's Vision* (Basic Books), written with Wendy Kohn, both fault America's car culture for urban decay. But neither offers realistic guidelines for solving the problem.

According to Kay, architecture critic for *The Nation,* the automobile's destructive path leaves behind a host of social ills: The first third of her book is a depressing litany of how America's car dependency is ruining our society, environment, health, and economy. Most distressing to Kay is the desertion of the central city for the suburbs, which she traces to the rise of the automobile and decline of public transportation.

For Kay, the first two decades of this century were halcyon. The automobile was a brash newcomer and suburbia was still subservient to rail. Kay's urban-revivalist solution to car dependency harkens back to this era, despite her claim that it "is not a proposal for nostalgia." *Asphalt Nation* concludes with a fervent plea for zoning-enforced density, subsidized mass transit, a moratorium on road-building, and higher gas and other car-related taxes to restore pedestrian life to our inner cities.

The more visionary Safdie also disavows the automobile, but embraces its resulting social trends towards exurban expansion, personal mobility, and increased scale. *The City After the Automobile* proposes to channel these supposed inevitabilities into a new, healthier urban typology that Safdie calls the New Cardo. Office and residential towers would frame a pedestrian street, sheltered by a retractable roof; the street would be lined by stores and restaurants. This regional infrastructure of linear urban nodes is reminiscent of the 1960s megacities proposed by Team X and Archigram.

A complex transportation system, including light and heavy rail and technologies currently under development, would connect each New Cardo. Individually owned automobiles would be replaced by a system of shared "utility cars," that would travel on electronically-guided highways, and stack in dense "silo-like parking structures" to await the next driver. Movement within the New Cardo would be facilitated by "the conveyor," a kind of horizontal elevator.

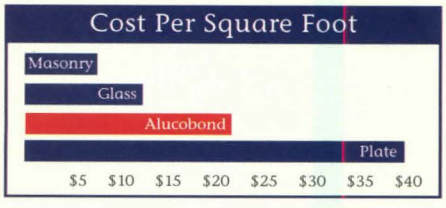
Safdie's embrace of current technological, societal, and development trends is forthright. However, his proposal is overly ambitious, bordering on the utopian. This vision of the future lacks the research necessary to raise it to the level of practicality; the graphic presentation, a handful of diagrammatic sketches, isn't sufficient to lend credibility either. Kay, on the other hand, overwhelms us with facts and figures—her research is impressive, to say the least. Kay's impassioned intentions, however, are tough to reconcile with current suburban growth. Neither book provides a plausible remedy to the problem of auto dependency. *Ned Cramer*

"You Really Can Afford To Be Versatile."

Alan Derthick, Architect

Covenant Transport, Chattanooga, TN

So says architect Alan Derthick of Derthick, Henley & Wilkerson talking about his choice of Alucobond® Material for the Covenant Transport building just outside of Chattanooga, Tennessee.



"The building really stands out. And the things we did with Alucobond Material would be extremely difficult to do with anything else. It gave us the ability to create a curving facade with lots of 3-D. It's the one material that lets you shape to fit your needs.

1951 Parliament Building

Fifty years ago next month, India gained its independence. For architecture, the unexpected windfall was Le Corbusier's masterly design of Chandigarh, the new capital of the Punjab. (The previous capital, Lahore, became part of the newly created Pakistan.) The commission for the plan and capitol buildings let Le Corbusier, at the height of his powers, implement his urban and architectural theories at a grand scale for a culturally signal project. The French architect worked on Chandigarh from 1951 until his death in 1965, serving as chief consultant for the city plan and as sole designer of the capitol complex. Images of powerful volumes sculpted in the sun—"the learned, correct, and magnificent play of forms in sunlight"—have long since imprinted the collective architectural retina. But just how have Chandigarh's complex of buildings and master plan stood up to the decades?

Chandigarh Revisited

A trip to Le Corbusier's idealized Punjabi capital reveals the French architect's cultural blindness.

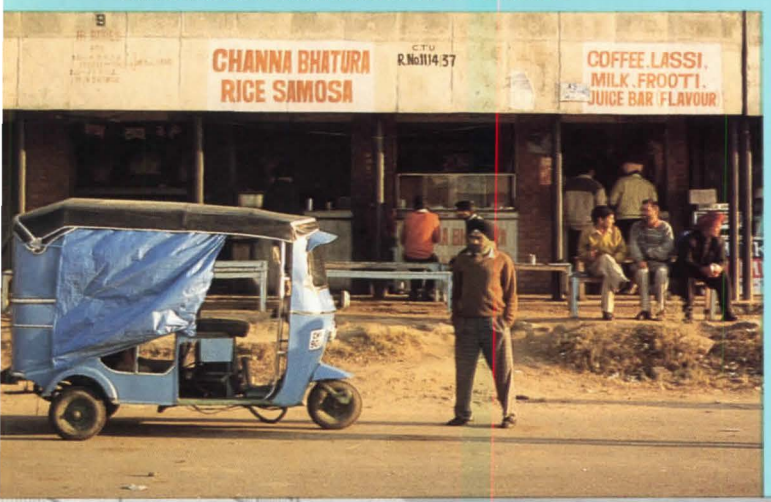
Barbed-wire fence now surrounds 1951 High Court's reflecting pool.

The period after independence, though marked by the tragedy of partition when many thousands were massacred, was a hopeful and even heady time: India was at last free to define itself in its own, non-British terms. Prime Minister Jawaharlal Nehru conceived the new capital as a showpiece of economic development and national aspiration based on his conviction that India must industrialize to survive and prosper. Nehru believed open and clean spaces would free Indians from "the tyranny of the overcrowded and filthy cities, as well as from the confines of agricultural village life," according to Le Corbusier scholar William Curtis. The leader who took over after nationalist leader Mahatma Gandhi's assassination looked beyond the village as the symbol of India's spiritual and economic bedrock to the state: Order devolved from the top. The architect, who had proposed in his shocking Plan Voisin to erase the dense, villagelike fabric of medieval Paris in favor of cruciform towers set in an open landscape, was the right man for Nehru's vision of 1950s cultural modernization. Nehru later spoke of Chandigarh as "the first large expression of our creative genius, founded on our newly earned freedom."

A few years after Le Corbusier developed the Modulor—the scale figure of the universal man that was the measure of

buildings and the basis of the architect's standardized design solutions—the Frenchman was plunging into a culture that to him was deeply foreign. Corb's predecessor on the job, Matthew Nowicki, had in fact investigated vernacular building traditions that had evolved over the centuries to handle India's heat, dust, and monsoons. But after Nowicki was killed in an airplane accident in Egypt in 1950, Corb's universalizing lens conceded little to the traditions that official India itself felt destined to escape. His Modulor,he assumed, was India's.

Food stalls are tucked into rear facade of Secretariat.



Today, broad, verdant avenues divide the town of Chandigarh into a Cartesian grid of zoned sectors, each a neighborhood measuring 2,600 by 4,000 feet. The city seems like a continuous park. Its lushly landscaped blocks, like suburban quarters set among golf links, are surprisingly relaxed and pleasant compared to the intense congestion of other Indian cities. The openness is so dilated that visitors have the strange feeling they are not actually in India: Certainly the poor drivers of pedicabs have excruciating distances to bike, often in baking heat. What is missing are the crowds, thick enough in many cities to be environments of people. Even in Chandigarh's commercial zone, avenues are so wide that the stores lining the arcades on either side hardly relate. In a country where people like to live within close physical proximity—the tight spatial structure of village India and houses for extended families seems to propel the national psyche—Chandigarh embodies an organizational tactic based on the zoned separation of functions imported from foreign garden-city principles.

Corbusier's space in Chandigarh, as in his theoretical drawings, separates people and buildings rather than gathering them into communities. Distances between buildings and sectors are great because Corb (and Nehru) predicated the town plan on the car and public transportation. Though cars are proliferating in Chandigarh, after nearly half a century, the chromed future has yet to arrive and some arteries seem like ghost avenues. The assumption of the car in Chandigarh positions India for dependency on

Concrete fountain has been turned into social space.

the petroleum India does not produce, perpetuating a colonial relationship with the world economy.

Citizens of Chandigarh are very protective of their city, vigilant about keeping out high-rises and maintaining the height limit at four stories: They appreciate the existing scale for being manageable rather than daunting. Nor do they want to subdivide parcels, increase population, and overburden the infrastructure. Still, they acknowledge the sterility designed into this overly planned, mildly soporific city and welcome the slow creep of Indian vitality that has worked its way into the streetscape, often via simple vending carts—semipermanent mobile stalls for roadside cobblers and beetlenut wallahs. In certain areas, the antiseptic streetscape is gradually ceding to the textured richness and robust sense of profusion and confusion so typical of Indian cities.

The most conspicuous contribution to Chandigarh's slow acquisition of a soul is a folk sculpture park known as the Rock Garden next to Corb's capitol buildings. One public servant, working on government time and land with found materials, sculpted a garden of figures made of ceramic shards and rocks. The rambling terrain of figures plays against the grain of the rational city, and Chandigarh residents flock to its fantasy bestiaries on outings.

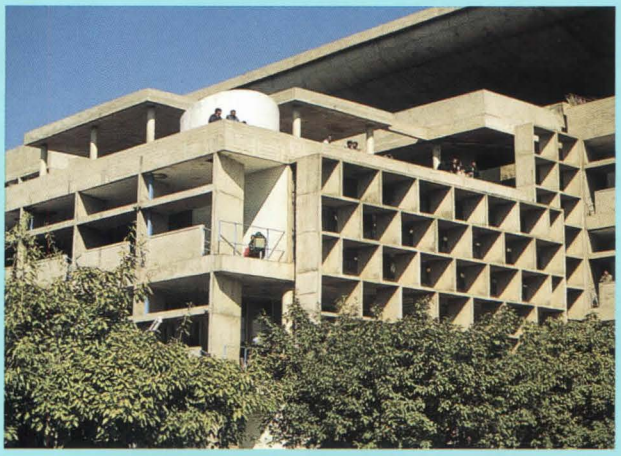
Perhaps because Chandigarh was conceived as a showpiece on the order of Sir Edwin Lutyen's New Delhi, no provision was made for the informal sector that springs to life in and around all Indian cities. Le Corbusier did not plan for migrant labor, but shanty towns have grown outside the city limits and in Chandigarh. As in Brasília's unplanned workers' quarters, this is where people see one another face to face.

We know that Corb painted in the mornings and issued manifestos his entire life, but did he ever shop or stop in a café for a drink? These simple pleasures seem underdeveloped and even overlooked not only in his garden city, but in the government complex at the head of the city, where thousands converge daily.

It is clear from the heightened architectural rhetoric of the plaza facades that the three buildings were intended to be seen primarily from the front—from the huge, stately esplanade. This plateau, though appropriate for military parades, is alien to India's teeming sense of space. Only stray architecture students wander the lifeless agora that keeps even the capitol complex from achieving a sense of community. (Granted, the keystone building, the Governor's Palace, was never built.) The esplanade is a barren no-man's-land, and there is no shelter to protect pedestrians from either sun or rain. The building may hold together compositionally and symbolically, but not by activity.

The formality of the capitol complex melts on the lee sides of both the Secretariat and the High Court, where people park or get off buses. Le Corbusier, however, made no effort to shape this influx with spaces that might pool people. The 1952 plan of the capitol shows his usual separation of roadways, with provision for drop-offs, but today there are no receptive spaces between car and office that encourage colleagues to enjoy their own community. The backyard of the High Court has become a parking lot dotted with trees, but the building itself makes no gesture to cultivate the potential community.

On the other side of the esplanade, the backyard of the Secretariat is primarily a bus depot that may have a couple of stand-up eateries for the thousands who pour through the gates, but the convenience stands are just that, conspicuously tucked behind a long, straight wall, as though commerce should not corrupt the government precint. By treating the fronts of the buildings as ceremonial facades and the backs as service entrances, Corb misses the opportunity to use the building's own population to animate the architectural civitas he created. The separation of transportation modes causes him to sanitize his own buildings. He re-creates in a Modernist idiom the standoffish urbanism of Lutyen's New Delhi, where monuments are admired at a distance.



High Court's concrete brises-soleil collect dust and absorb heat.

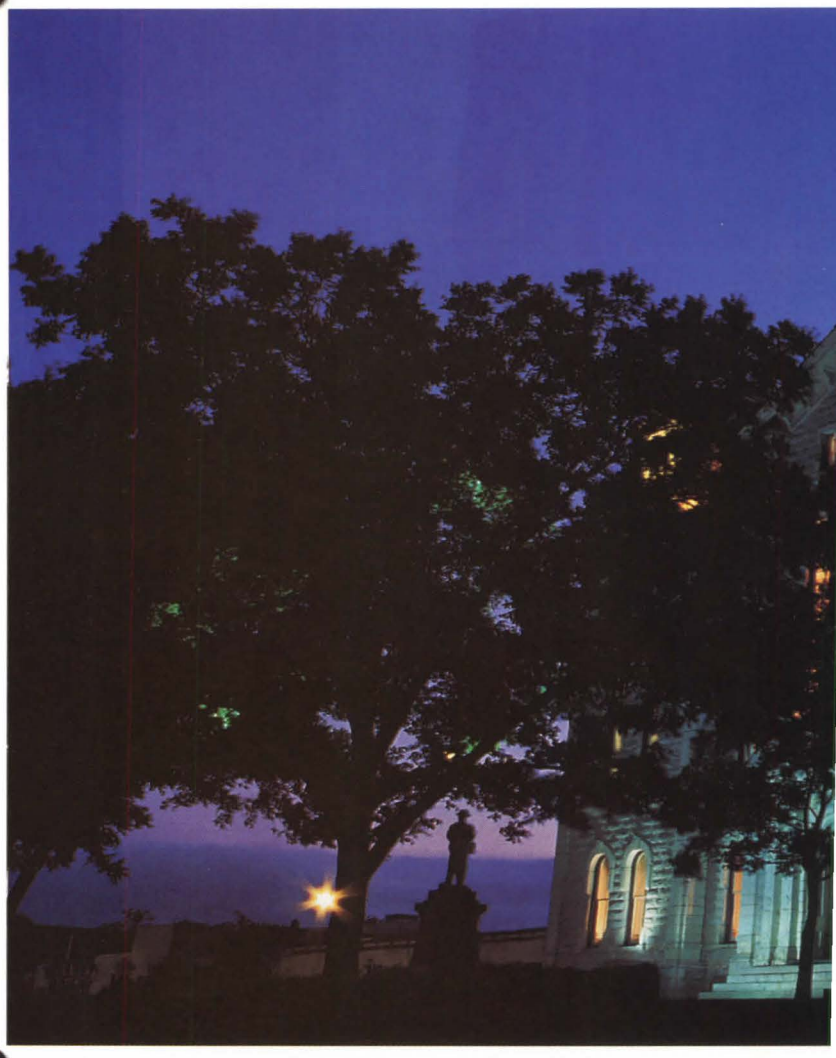
Corb would probably not be amused at the urban combustion that has spontaneously generated in the High Court. The ramps scissoring up to one of the roofs and the exterior corridors are part of the built three-dimensional landscape that fosters the entropy of village life. Though Indians object to the brises-soleil because the horizontal members collect heaps of desert dust, they improvise uses on the fins—bicycle racks, card tables, working desks, picnic benches, plant shelves, and chaises. The roof is frequented as a meeting terrace. The brises-soleil and adjacent corridors really serve as an expanded facade—a spatial accordion— populated with Indians who pour themselves into the porosities. The design unintentionally breeds the sense of community found in a bazaar. One expects to round a corner and chance on someone performing tandoori in a square of the concrete egg crate.

Public buildings in India are often poorly maintained, and Chandigarh, sadly, is no exception. The complex is all the more stressed because it now serves as two capitals. (The Punjab itself has been divided into the states of Punjab and Haryana.) The interiors of the High Court have sprouted cheap dropped ceilings, the walls are festooned with telephone wires, and windows are packed with air-conditioning units (Corb might have tried to block the sun, but he made no provision for cross-ventilation). Cells within the back facade of the Secretariat have been glazed, presumably to capture more space in the overpopulated interiors, defeating the rationale of the brise-soleil. The concrete work, never brilliant, is now visibly patched in certain areas.

The heroic structures easily sail over these lapses in care, but their monumentalism would have benefited from a more humane urbanism. Designing for history and for the universality of man, Le Corbusier overlooked the gregarious specifics of India. If the architect devised the Modular as the archetypal unit on which he built his concept of collective society, he misunderstood the Indian collective and the socializing proximities of its cities. Nothing in Corb's capitol complex or in his city is even close.

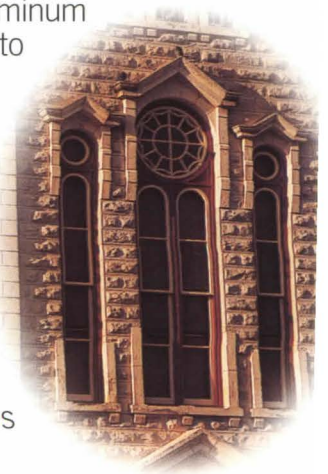
The flaw is not only a misperception of India but a blind spot in his vision that did not include textured, small-scaled urbanism within the larger gesture. What continues to be wonderful about Paris are its simultaneous, sometimes conflicting, scales: the village, the arrondissement, the city, the capital. In Chandigarh, the master plan fosters a city at the scale of the state and the speed of the car, without complementary alternatives. Corb's buildings, particularly the High Court, may inadvertently nourish a small-scaled urbanity, and vendors may be carving out niches, but the flaw in the master plan is the inflexibility of a single monolithic idea. The fluidity of space that gathers and keeps Indians in communities does not concur within his highly structured spatial concepts: Corb's sectors constitute an open, universal space that does not coincide with dense, personal, Indian-specific space. Chandigarh, the city, keeps people apart. *Joseph Giovannini*

WHEN IT CAME TO RENOVATING THIS HISTORIC COURTHOUSE, EVEN THE



In 1964, The Parker County Courthouse in Weatherford, Texas was designated a Texas Historic Landmark. And thus began the slow, methodical process of restoring it. First to receive attention was the structure's limestone stonework. Later, the roof was replaced. Then came the windows, which proved to be one of the most challenging aspects of the project.

The Historical Survey Committee mandates that if nothing remains of a historic building's original windows, the new ones must be faithful reproductions, right down to the last detail. Since the courthouse's original wood windows had been replaced by aluminum ones some years back, that meant that all 105 of the new windows had to be virtually identical to those made and installed over a century ago.

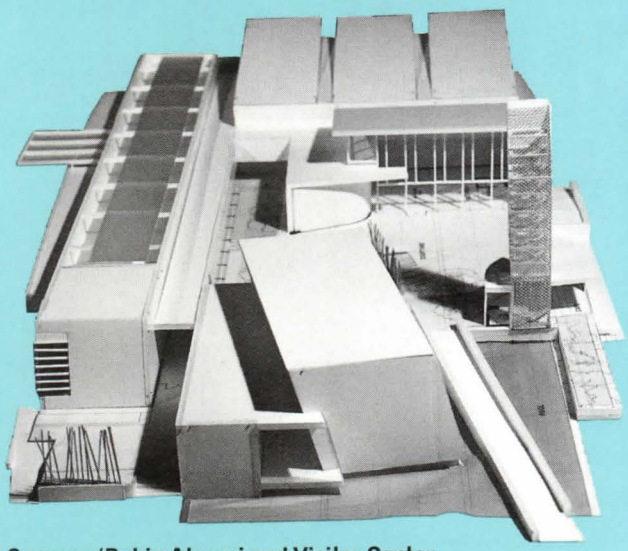


Bids were sought, but only two manufacturers felt qualified to respond. One of them, Marvin Windows & Doors, had actually been recommended by a company that was asked to bid but declined.

Though underbid by the other finalist, Marvin's figures were based on building the largest windows with structural muntin bars to withstand the winds that buffeted the building's hilltop site. Intrigued, the architect asked each company to build a sample window. One look at the prototypes and the job was immediately awarded to Marvin.

For the next several weeks, Marvin's architectural department busied itself recreating the past. Working from turn-of-the-century photographs

Project Portfolio
Dworsky Associates

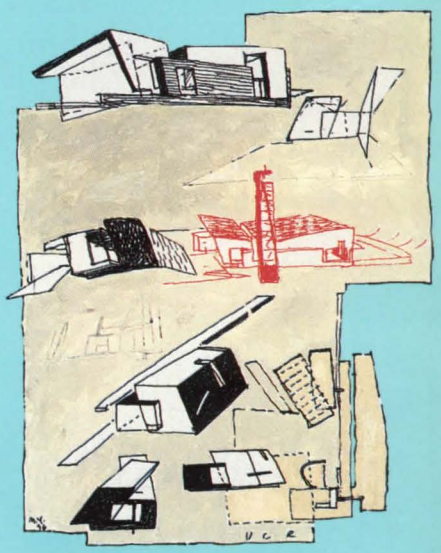


Sweeney/Rubin Alumni and Visitor Center
University of California-Riverside
Riverside, California

In 1994, Los Angeles-based Dworsky Associates placed its esthetic future in the hands of Mehrdad Yazdani by hiring the 33-year-old as its design director. Now, with the completion of his first major designs for the firm—a university alumni center, synagogue, recreation center, and federal courthouse—Yazdani is charting Dworsky's new design direction with a context-sensitive Modernism. These institutional buildings acknowledge their surroundings through careful siting, scaling, and massing, as well as generous outdoor public spaces.

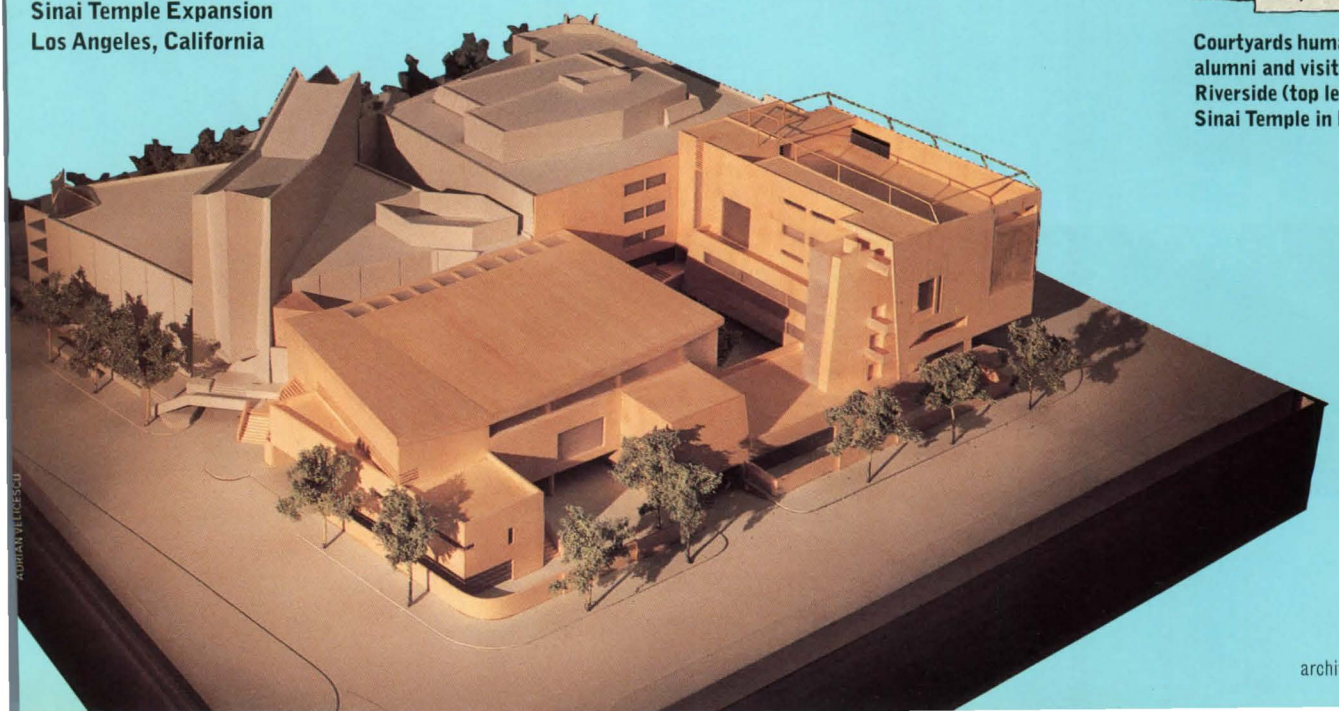
When it opens in 1999, the 25,000-square-foot Sweeney/Rubin Alumni and Visitor Center at the University of California-Riverside will form a new gateway to the campus with a 60-foot steel tower, located at the northwest corner of the building's entry court. This courtyard is framed by three wings: On the south, a sculptural block contains the lobby, library, and banquet hall. To the east, a long, low wing houses offices and meeting rooms. To the north, a reflecting pool surrounds a canted, stone-clad gallery.

At Sinai Temple in Los Angeles, Yazdani contends with an existing 1960s sanctuary, classroom, and office complex. His 60,000-square-foot addition completes the block's southern half with new classrooms,



Courtyards humanize Yazdani's alumni and visitor center at UC-Riverside (top left and above) and Sinai Temple in Los Angeles (left).

Sinai Temple Expansion
Los Angeles, California



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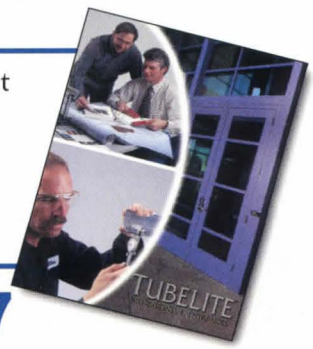

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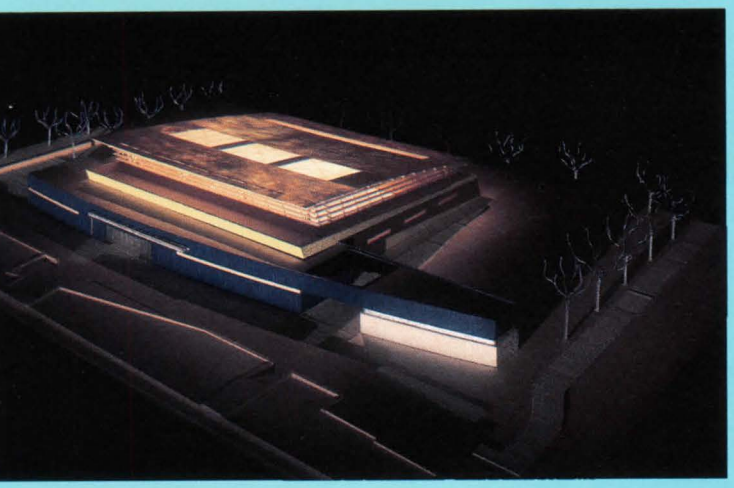


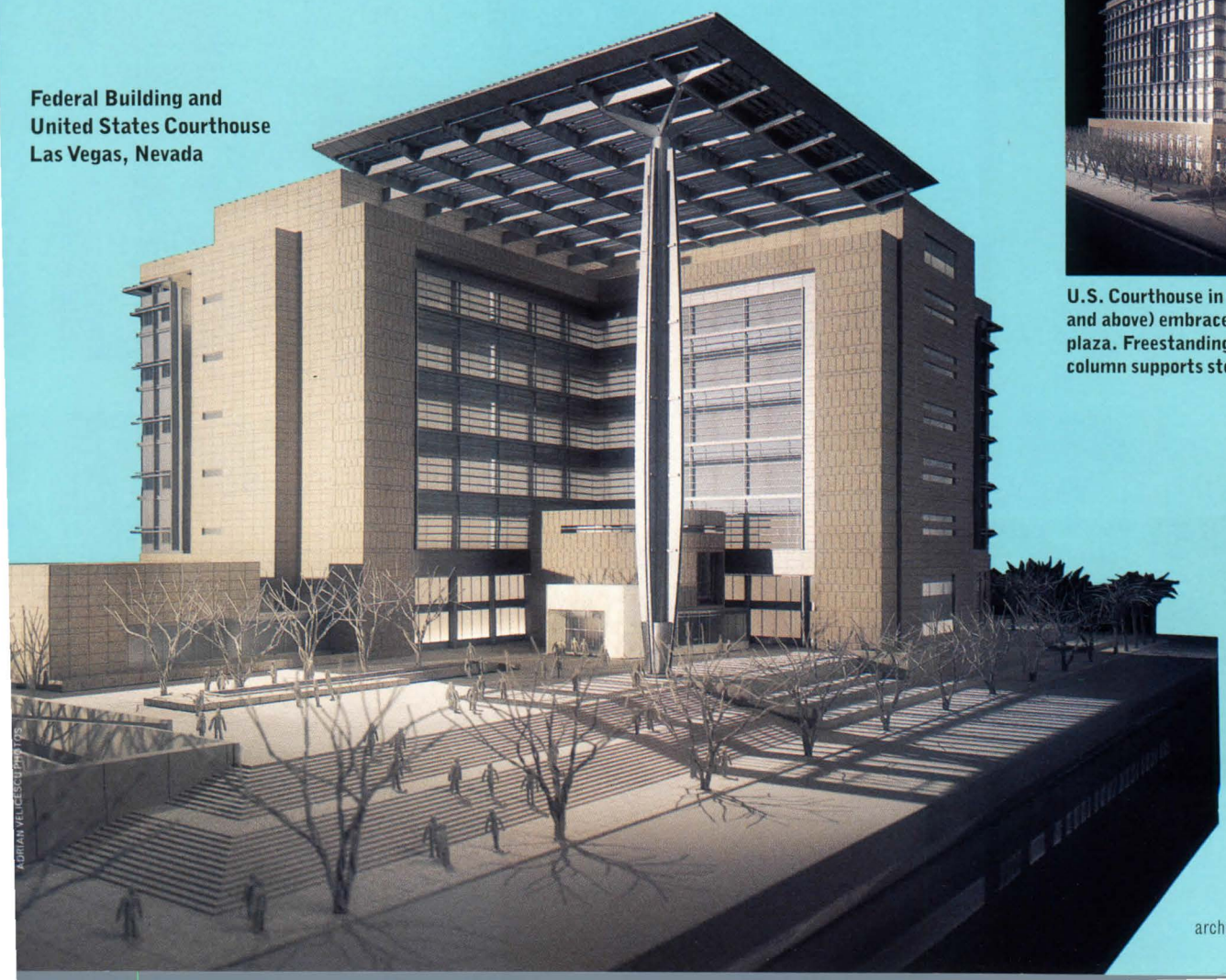
El Sereno Recreation Center
Los Angeles, California

a multipurpose room, and underground parking. Punctuated by painted aluminum panels and glass curtain walls, the two new pavilions are plaster-faced to harmonize with the original, and flank a new courtyard. The addition will be completed next year.

At the El Sereno Recreation Center, Yazdani enlivens a working-class Los Angeles neighborhood with an indoor swimming pool, scheduled for completion in 1998. Departing from his typically cool metal palette, the Iranian-born architect caps the 19,000 square-foot natatorium with an arched copper roof. A curving mass of changing rooms, constructed of blue-glazed concrete blocks, lies along the building's west face. Corrugated aluminum clads a classroom wing to the south and ocher-tinted plaster faces the building's remaining three exposures.

Yazdani's most prominent commission to date is the 437,000-square-foot Federal Building and United States Courthouse in downtown Las Vegas. This L-shaped building, housing courtrooms, judges' chambers, offices, and holding cells on eight floors, frames a monumental public plaza. A steel canopy supported by a 160-foot-tall steel column shades the plaza. Clad in limestone, concrete, and an aluminum-and-glass curtain wall, the courthouse will be completed in 1999. *Ned Cramer*

Federal Building and
United States Courthouse
Las Vegas, Nevada



U.S. Courthouse in Las Vegas (left and above) embraces monumental plaza. Freestanding, 160-foot-tall column supports steel canopy.

ADRIAN VELICESCU PHOTOS

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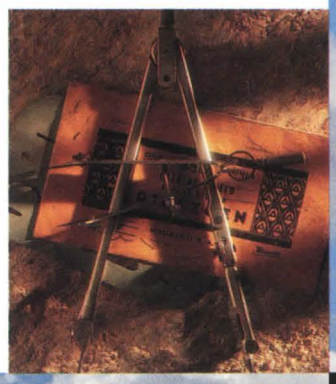

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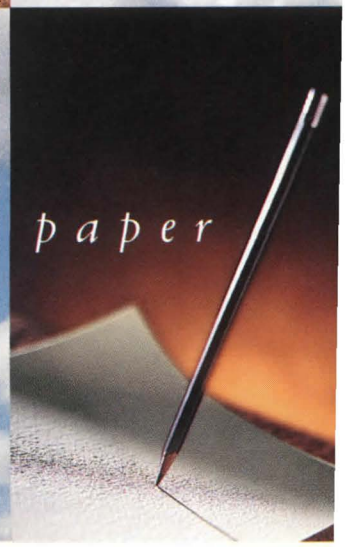

On January 30, the U.S. Senate confirmed Alan Hantman as the Architect of the Capitol, the tenth since the office was established in 1793. Prior to his appointment, Hantman worked as vice president of facilities planning and architecture for Rockefeller Center. The 54-year-old architect succeeds George White, a Nixon appointee who held the position for 24 years before resigning in 1995. As times have changed, so has the Capitol architect's role, from Benjamin Latrobe's heroic building campaign to Hantman's management of 13 million square feet of buildings and grounds.

Capitol Architect

Alan Hantman tells what it's like to supervise this country's premier public buildings.

ARCHITECTURE: What are the responsibilities of the Architect of the Capitol?

ALAN HANTMAN: The architect not only deals with the Capitol, but all the Senate and House office buildings, the Supreme Court, and the Library of Congress. Our office also oversees the Federal Judiciary Building next to Union Station, the United States Botanic Garden, the power plant, the Page School, the Capitol Police Building, the William Howard Taft Memorial Carillon, and 100 acres of storage facilities at Fort Meade in Maryland. It's significant. It's basically a little city.

You came to Capitol Hill from Rockefeller Center, another little city. How do the two differ?

Rockefeller Center totals about 15 million square feet on 16 acres. The square footage I'm dealing with now is 13 million on 273 acres. Both Rockefeller Center and the Capitol are national historic landmarks that get millions of visitors. The issues at each really dovetail: running a facility cost-effectively, dealing with visitor reception and security, maintaining a staff that enjoys coming to work in the morning. One of the first activities I had as Architect of the Capitol was going to a celebration for several 30-year employees; long-term employees are common to both places.

Why did you want the job?

I'd spent 10 years at Rockefeller Center, quite a bit of time and effort rebuilding it, and we had largely completed $300 million in renovations. Then, pending the resolution of Mitsubishi's defaulting on the property, things went into limbo for a year. It was time for me to move on, and this sounded like a wonderful position.

How many people do you oversee in this position?

Right now, we have 2,034 full-time employees. This office includes 17 architects, interior designers, preservationists, and design engineers; operating engineers; custodial staff, restaurant staff on the Senate side; all of the groundspeople; Botanic Gardens staff; power plant employees; and all the people concerned with day-to-day operations.

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What do the architects do exactly?
Their duties vary in scope and complexity. For instance, after each election, architects work with new senators and representatives to design their offices. We also have people overseeing and coordinating outside consultants. Yesterday, we began working on a new desk for the Senate where people can drop off their wallets or pocketbooks before they go into the chamber.

What are some of your upcoming major projects?
One of the projects that we hope receives funding is the renovation of the Botanic Gardens. We also have requested funds to complete a master plan for the Supreme Court, which I hope to see in our 1998 budget. The Court hasn't been upgraded since 1935.

The biggest project now being considered is a proposed visitors center for the Capitol, designed by RTKL. The Capitol has 12,000 visitors a day. Clearly, it is difficult for visitors to do a self-guided tour when there's no explanation for what they're seeing. The visitors center will orient people and give them background. Further, we must remember that in addition to serving as a museum, visitors facility, and meeting place, the Capitol is also a working office building; all those functions sometimes can conflict. During peak tourist season, for instance, it's very difficult to get from one side of the Capitol to the other.

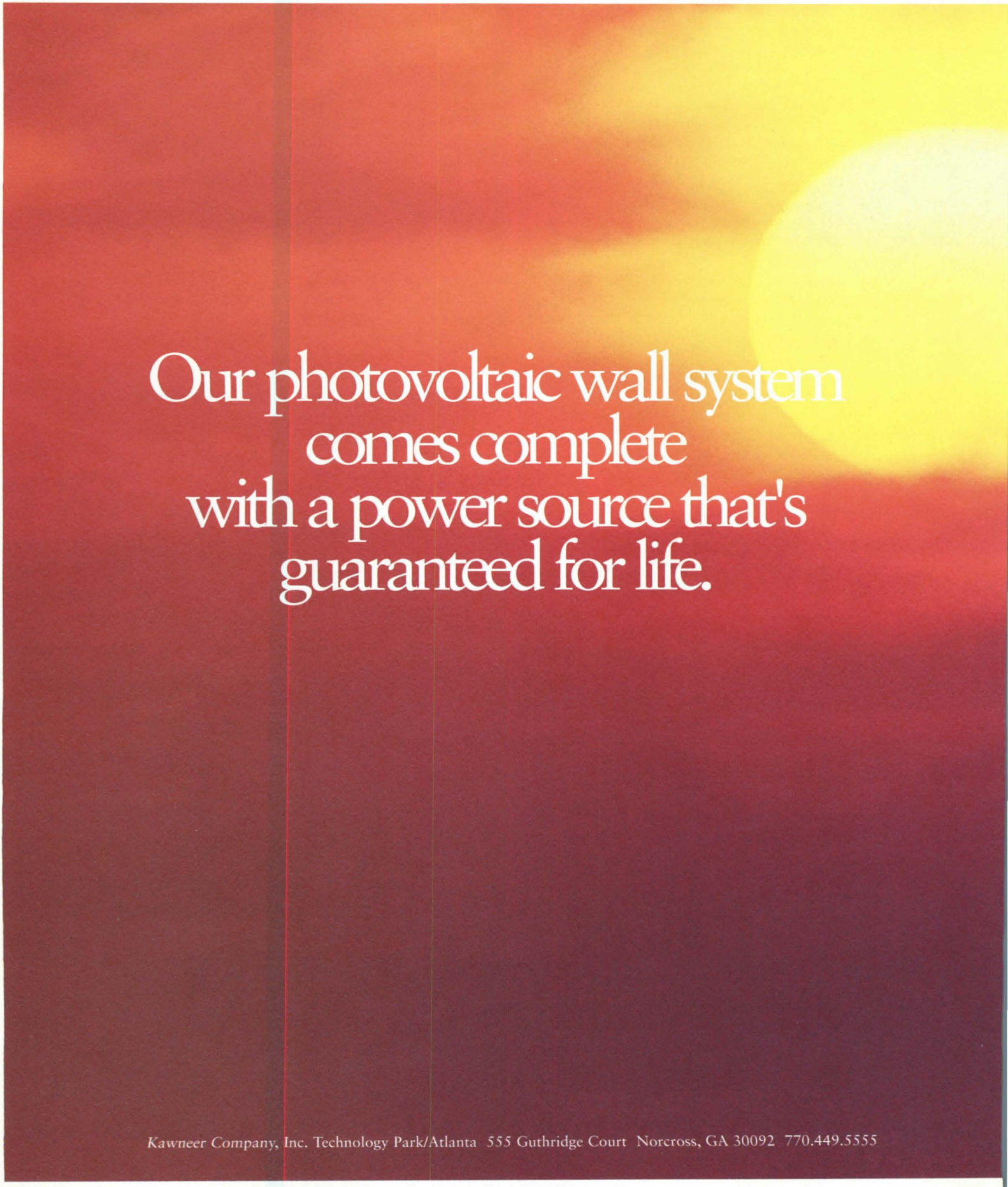
What's the most pressing issue facing the Architect of the Capitol?
Having Congress recognize that we have a major facility here that is aging and that a certain level of reinvestment is necessary to keep the Capitol up to date. One of the things that we're trying to do is to take a look at benchmarks: What does this campus really demand on an annual basis for proper maintenance? We've looked at college campuses—Stanford, Michigan, and others—and what they do, as well as other government organizations. And we've learned that in order to maintain the quality of these buildings and grounds, we are looking at anywhere from 1 1/2 to 3 percent reinvestment of the replacement value of the buildings annually.

Who on Capitol Hill is the most interested in its architecture?
Senator Daniel Patrick Moynihan (D-New York) is the dean of issues related to the Capitol and its master plan. During my confirmation hearing, Senator Kay Bailey Hutchinson (R-Texas) spoke up very clearly about trying to keep up the quality of the urban structure near the Capitol. Senator Robert Torricelli (D-New Jersey) spoke up about similar issues. On the House side, Congressman John Mica (R-Florida) has been a strong proponent of the visitors center, and in fact sponsored HR-20, the bill that calls for funding and construction of that project.

During my interview, I was asked how I would feel about having 535 bosses. I think the answer I gave was appropriate: I view it as being in a partnership with the members of Congress. If we don't work together, we're not going to get anything done.

In 1994, a highly critical report by the Government Accounting Office suggested that the Architect of the Capitol's office was discriminatory in its hiring practices: There were too many white males at the top of the ladder, and too many black females at the bottom. Has that changed?
I've tried to educate myself in the last several months by holding town meetings with virtually all the employees of the Architect of the Capitol. At the same time, we're polling members of Congress to find out how they perceive us and our services. Clearly, there's more we need to do in restructuring the organization. We must resolve these issues; the criticisms they leveled are still with us. This is a transition time. We're dealing with issues of privatization, dwindling funds for capital projects as well as operating costs. As of October 1, 1996, Capitol workers could start unionizing, and in fact the Capitol Police have had an election already. A union has petitioned to represent a portion of the staff at the AOC and that's being reviewed now.

How will your tenure be different than George White's?
In selecting a new Architect of the Capitol, the committee wanted someone with facilities management experience. I was told clearly at the interviews that they were not looking for another Benjamin Latrobe. "You are not going to be walking around here with plans tucked under your arm ready to go build," they said. I think my experience with Rockefeller Center helped. It's been a very busy few months. Our customers are the members of Congress, their staffs, and the people who come here to visit the Capitol. At the same time, our goal is to be the conservators of these wonderful works of architecture. It's a voyage of discovery.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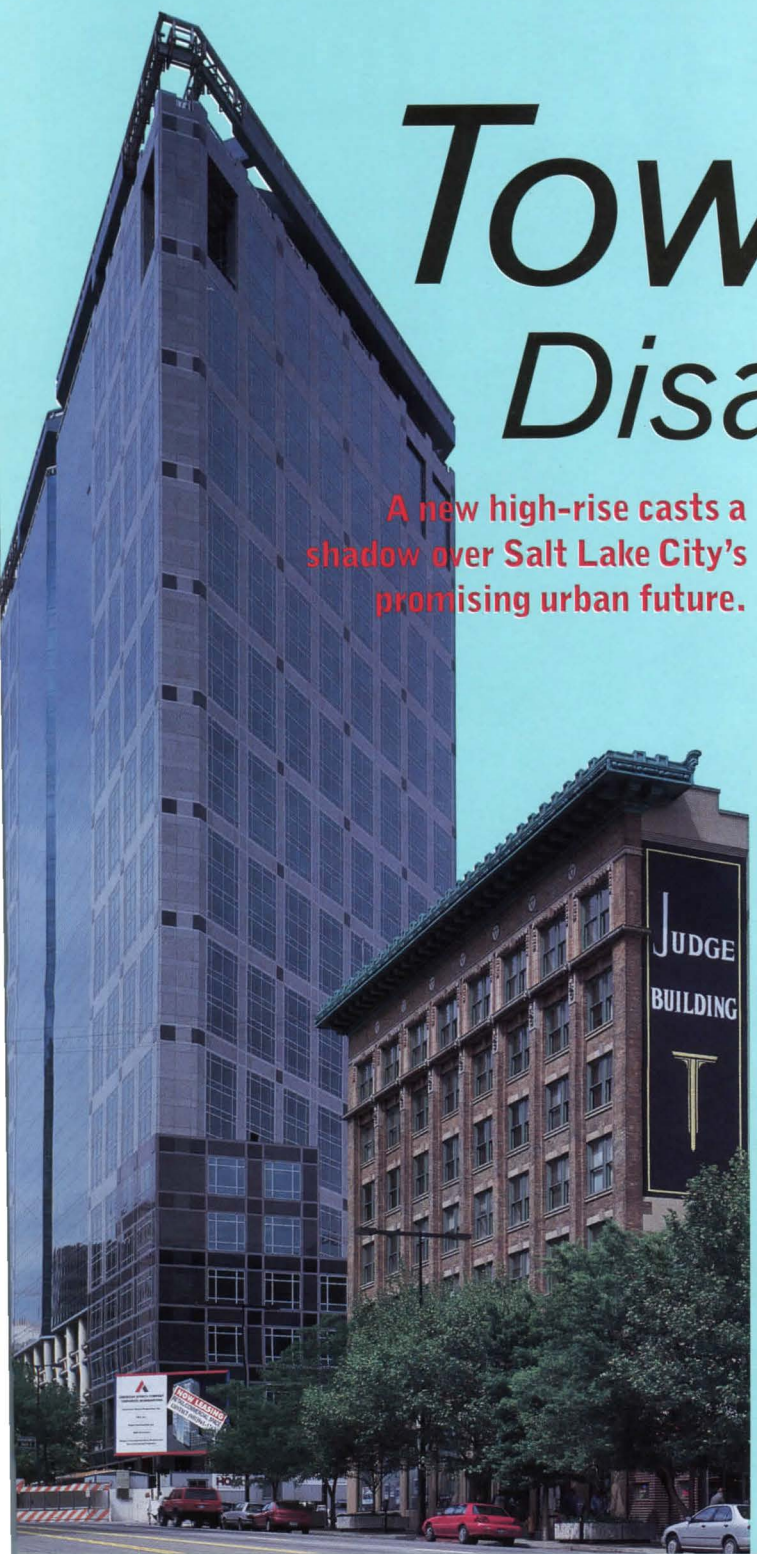
Towering Disappointment

A new high-rise casts a shadow over Salt Lake City's promising urban future.



Although it is not the worst high-rise in town—several others share that dubious distinction—Salt Lake City's new American Stores building is certainly the most prominent, and the most disappointing. At a time when downtown Salt Lake needs strong, positive architecture to signal its maturing urbanity, the glitzy American Stores tower, designed by Dallas-based HKS Architects, to house the retail grocery/pharmacy chain's headquarters, offers little more than a vapid extrapolation of standard edge-city office buildings.

Salt Lake City is on the rise. Since 1980, population in the greater metropolitan area has increased by about one-third, to more than 1.2 million, and the pace is quickening. In 2002, the city will be inundated by hundreds of thousands of visitors to the Winter Olympics, some of whom will decide to return later—permanently. Merely preparing for the Olympic Games has brought intense development to the area. Once a modest regional center, Salt Lake's core is becoming more urban at the same time as its fringes are becoming more suburban. In downtown, a new 420,000-square-foot state courts complex (by HOK with Salt Lake-based MHTN) joins a wave of residential-loft conversions. Meanwhile, the city sprawls unattractively up the mountains to its east, and west across the basin of its namesake lake.

At nearly 700,000 square feet, the American Stores building represents the largest of the new downtown projects. Roughly triangular in plan, the 25-story building is clad in the reflective glass of 1970s Modernism, accented with a 1980s appliqué of granite panels. The design knows no local history, as it relates neither to downtown's late 19th- and early 20th-century architecture, nor to the striking surrounding landscape for inspiration. Further, it breaks no new ground in design or construction.

Instead, HKS saddles Salt Lake City with a graceless wedge that couldn't possibly pique public interest in downtown. Like so many HKS-designed high-rises in other cities, the American Stores tower attempts to substitute flashy geometry for architectural substance. At least the building recognizes those already living and working in Salt Lake's urban core: It incorporates ground-level retail and a grocery store. But frankly, neither enterprise benefits from, nor requires, the bulky tower above them.

The United States has a proud history of skyscraper design, and American architects are busy creating some of the most interesting and innovative high-rises in the world. Unfortunately, most of them are in Asia. It is a rare privilege to build tall buildings in this country today, which makes this squandered opportunity in Salt Lake City an even greater shame. *Reed Kroloff*

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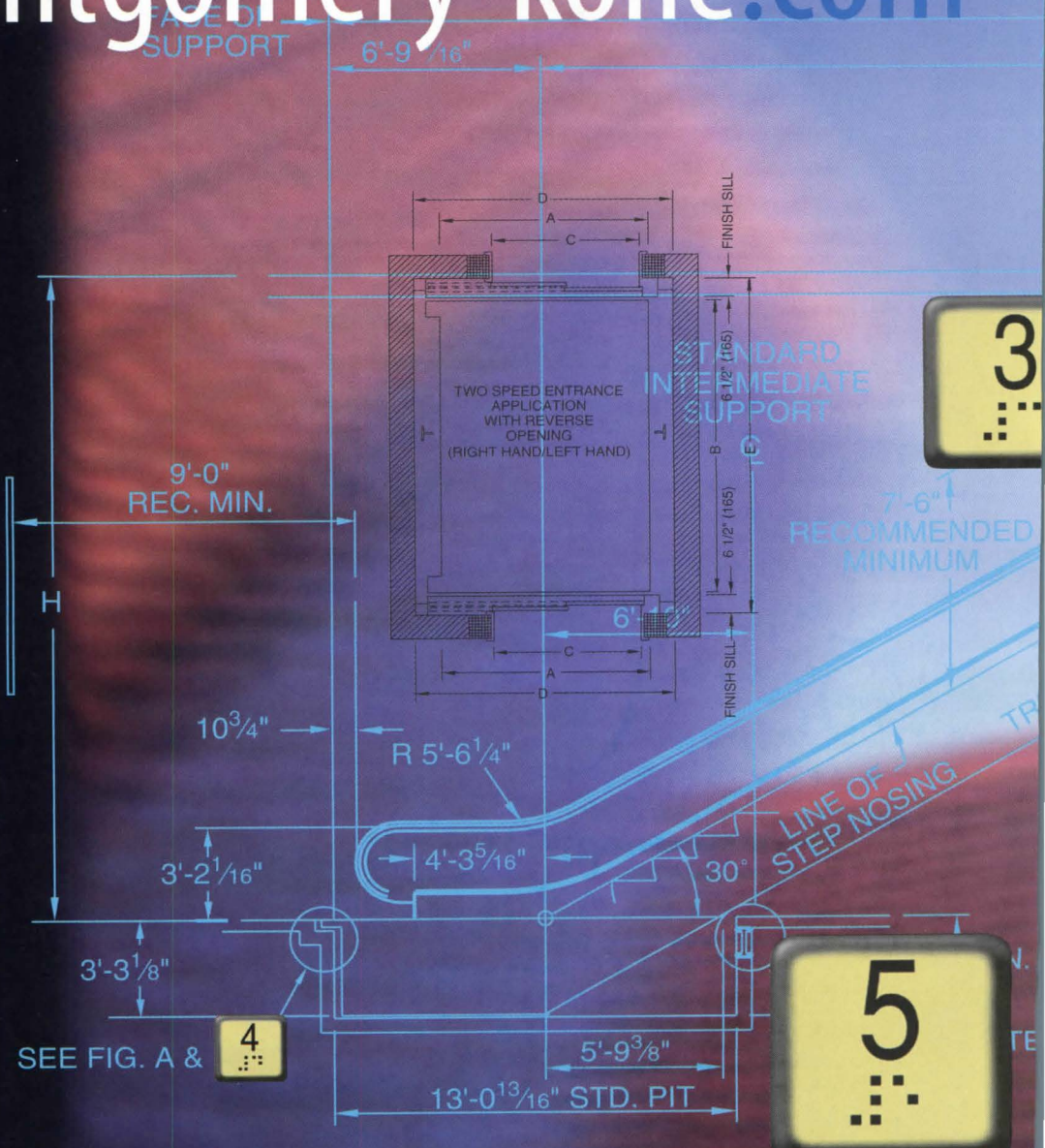

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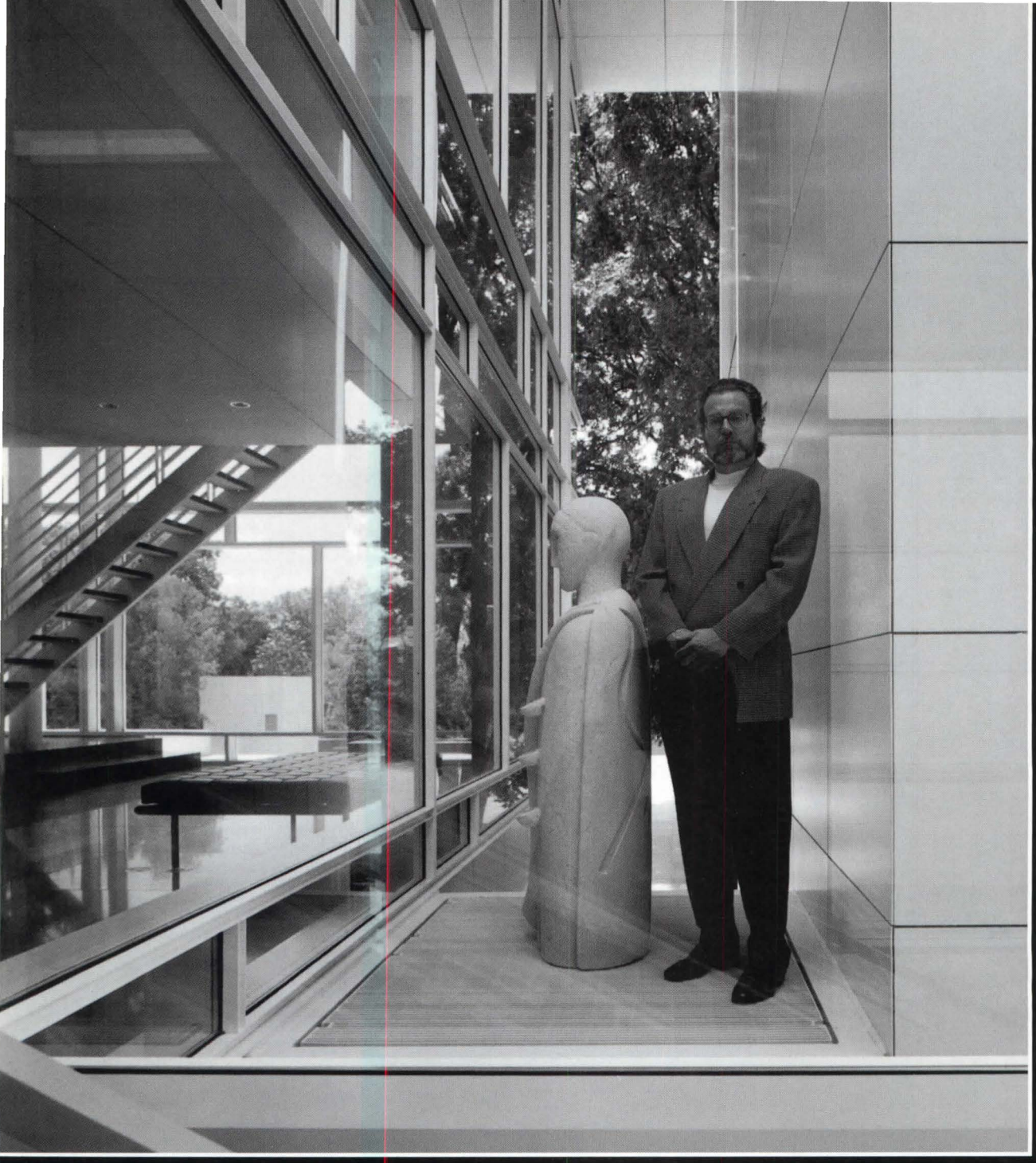
Changing Identity

Good architecture brings new character to places, people, and institutions. In Dallas, art collector Howard Rachofsky's house, designed by Richard Meier & Partners, turns a blank lot into a sublime showcase for painting and sculpture, and casts the client as a major design patron. Eric Owen Moss's quirky office building reshapes the urban face of Culver City, California, while creating a cutting-edge image for a video design firm. Likewise, Portland, Oregon's water-quality laboratory by Miller/Hull Partnership draws its esthetic from the industrial waterfront to announce its public purpose. Antoine Predock's Arizona Science Center infuses the growing cultural district of Phoenix with a large-scale personality, and links pedestrians to surrounding institutions. Even the most august institutions benefit from a change of mien. Studio Granda crafts Iceland's new Supreme Court with indigenous materials to energize an older civic complex. The American Institute of Architects continues to restructure its organization, cutting staff and polishing its image, but members still ponder whether the difference is superficial or substantial.



Howard's House

Dallas businessman Howard Rachofsky didn't build the first house Richard Meier & Partners designed for him. But Rachofsky gave Meier another try, and last fall, the 53-year-old bachelor finally installed his 150-piece contemporary art collection in an exquisite pavilion that rivals the architect's best houses—and museums.

ARCHITECTURE: Why did you commission Richard Meier to design your house?

HOWARD RACHOFSKY: My wife at the time was from Atlanta. During a trip there, we visited the High Museum, which had just opened, and I loved its sense of light and clarity. I was intrigued by the building.

Between the time that we saw the High and the time we met Richard, he had won the competition for the Getty, and I thought that he wouldn't want to tackle a residence. But he graciously said, "I've never done anything in Texas, and it might be interesting."

About six or seven months later, we started the process. We actually had another building site, and Richard designed a four- or five-bedroom house for me, my wife, her two children, and her mom. When it was first designed, the building was way too big for the other site. By the time we got through with the design and took bids, it was outrageously expensive. We tried to do value engineering and couldn't get the costs down. And it couldn't house art. It had a major circular living room that required you to insert walls to make it work. It was sort of like the Guggenheim—it just didn't work for paintings. So, to a degree, the building died of its own weight.

The project lay fallow for a couple of years, and then my wife and I got a divorce in 1989. It was two years later that I called Richard. When he showed me the first drawings of the new house, it was so perfectly reasonable that I just said yes. High ceilings, gallery spaces big enough for the collection, the light, everything flowing, it seemed like there could be no other way of doing it. His firm understood a lot about showing art, presenting it, having walls big enough to house different sizes of artwork.

[Former Meier Design Partner]Tom Phifer and I developed a great personal as well as professional relationship, and if I were going to do a building again, I don't know that I would run to Richard to do it, or run to Tom to do it, or stretch my limits and put it out to several architects.

Describe the relationship between you, the client, and Richard Meier, the architect.

We had an open dialogue. He was always responsive to concerns and questions. He was very focused. As the design process went along, there was more and more of Tom, and less and less of Richard, in terms of the details. Richard is a master of scale. I think he understands that better than anyone I have ever been around. Our dialogue was related to me trying to make the room bigger, and him trying to keep the building in scale. Richard is much more of a pragmatist than I am. I am much more of a dreamer. I was willing to push the envelope on some issues, such as the sliding wall by James Carpenter (between the gallery and dining room). Richard never really wanted to do that. That was sort of thrust upon him because I seized the idea that Tom had generated.

It was also very clear that we could save a lot of money if we did the podium in concrete, as opposed to doing it in stone, but I felt that the stone added a degree of elegance and refinement. It meant I had to sacrifice a little more elsewhere, and I did. Obviously the architects were willing to make compromises, more so than I was. But I was committed. We weren't going to compromise at the end of the project because I had seen what had happened to several other buildings that had been done.

Other Meier houses?

Yes. I went to see the houses in Westchester, New York; New Jersey; and California. The one in California, the Ackerberg House, was finished well, but the furniture was just abominable. I did like the doghouse though.

I found that if you didn't have good finishing details, the house could quickly look tacky. So we paced ourselves; I knew it was going to be a marathon. And being a perfectionist, I was not going to quit until we really got the details right. That's the one thing that I probably added to the project. And I had wonderful role models in Dallas: The Rose House by Antoine Predock is a wonderful building; the Price House by Steven Holl is a really interesting, controversial piece of architecture. I wanted to be part of that lineage and make this community a destination.

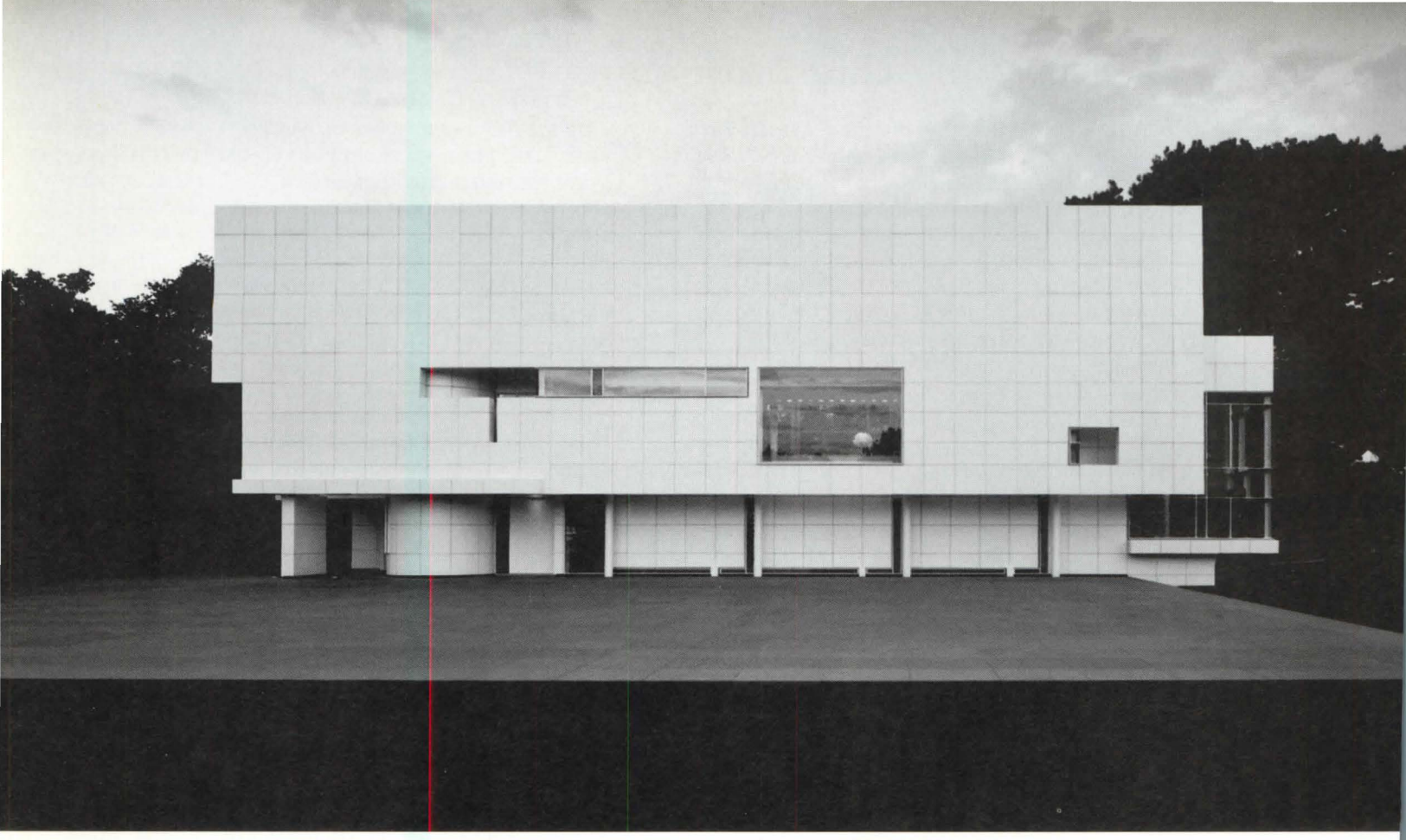
What made you start collecting art?

I went to law school at the University of Texas in Austin, but I did my undergraduate work at the University of Pennsylvania. The Philadelphia Museum of Art was there, which is a wonderful institution, and Penn had a terrific archeological antiquities collection.

Then I came back to Dallas and met an art dealer through a girl who I was going out with. She worked at the gallery. I started collecting prints and bought a few paintings. And that's really what the genesis was. I spent 1970 to probably 1980 collecting prints and works that were not particularly well-known or well-recognized. They were more decorative than fine art. But I got the bug and I got interested, and read and studied. The first major piece of art that I bought was shortly after my first divorce in 1982. It was a Frank Stella Protractor painting. Then from the mid-1980s forward, my collecting became more aggressive, more complicated, more a focus in my life. I don't play golf, and I don't have a second home. I work real hard, and art is what is important to me.

Why were you so involved in the construction?

I've had some nice relationships with my wives over the years, but I don't know that anything has been as



satisfying long-term as the developing of a building that you really didn't understand, but you knew enough that you could learn along the way. It wasn't your natural skill. It was a left-handed maneuver for a right-handed person. It forced me to change my whole way of viewing things. I became seduced by the process.

You came to the site every day?
Every day. I learned a lot about the construction process, and I really got a chance to be a part of it. I really feel like my stamp is on this building, not to the extent of Tom's of course, but I helped push this to be a better building.

Will you go on to build another project?
We still need to build the front wall, we need to ascertain whether or not we need a balance, an art storage facility at the street or whatever, to tie down this composition. We'll build the freestanding gallery [originally proposed by Meier] somewhere on the site.

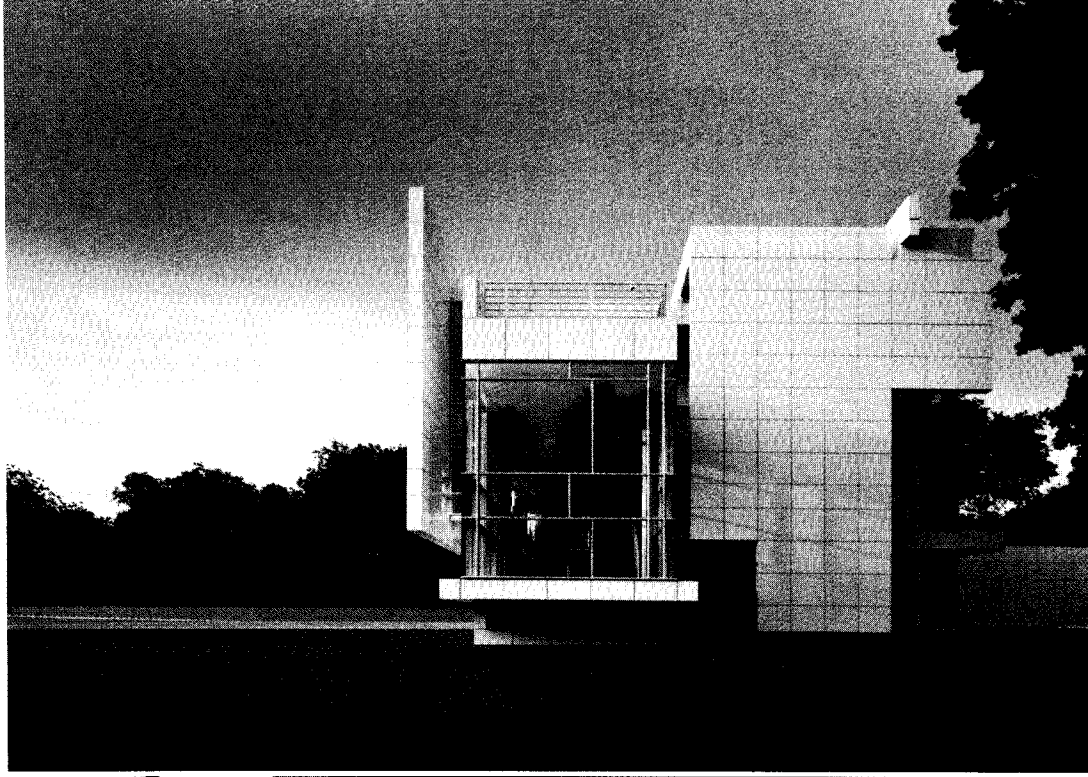
Why do you hold charitable events in the house?
I was born and raised in this community, and I think that if you're lucky enough to have a degree of success, you should help the less fortunate. So I made this commitment to share the house with various nonprofit organizations and help with their respective causes. And it began with a school on whose board I sit, a low-income school *called East Dallas Community School.* Other groups include the United Way; the Dallas Symphony and Opera; Dallas Museum of Art; Childrens' Protective Service, which deals with battered children; and the Vogel Alcove, which takes care of children of the homeless.

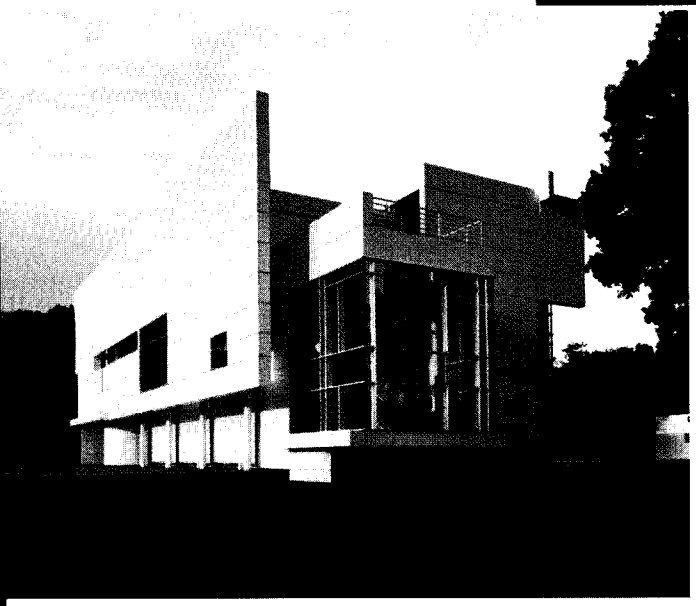
I try to be part of these events and to talk about the art and the architecture. I am proud to be part of the tradition of 20th-century architecture in my small way. My name is on the building, and I think that's pretty cool.

What advice would you give architects about a successful relationship with their clients?
Establish communication. Make sure that you understand what your client is saying. It needs to be a collaborative process, not a patient-doctor phenomenon. You don't go to the architect to get a prescription. You go to the architect to work together to develop a building that fulfills your needs and wishes. Neither the architect nor the client has all the answers, but working together, they can achieve a great project.

How do you feel being so closely identified with a Richard Meier building?
I'm glad to be a late 20th-century footnote to Richard's history. He is a visionary, and he has really helped define Modernist architecture. If I look 300 years from now at architecture in this century, I think the Modernist movement is going to be the movement that is remembered. And I am still a major Meier fan.

The Rachofsky house recalls Le Corbusier's Villa Stein as well as Meier's Barcelona Museum of Contemporary Art, which was designed at the same time as the house. Frontal and opaque, the house's eastern facade (facing page) contrasts with the glass-enclosed stair hall (right) projecting from the volumetric, De Stijl–inspired composition on the north.

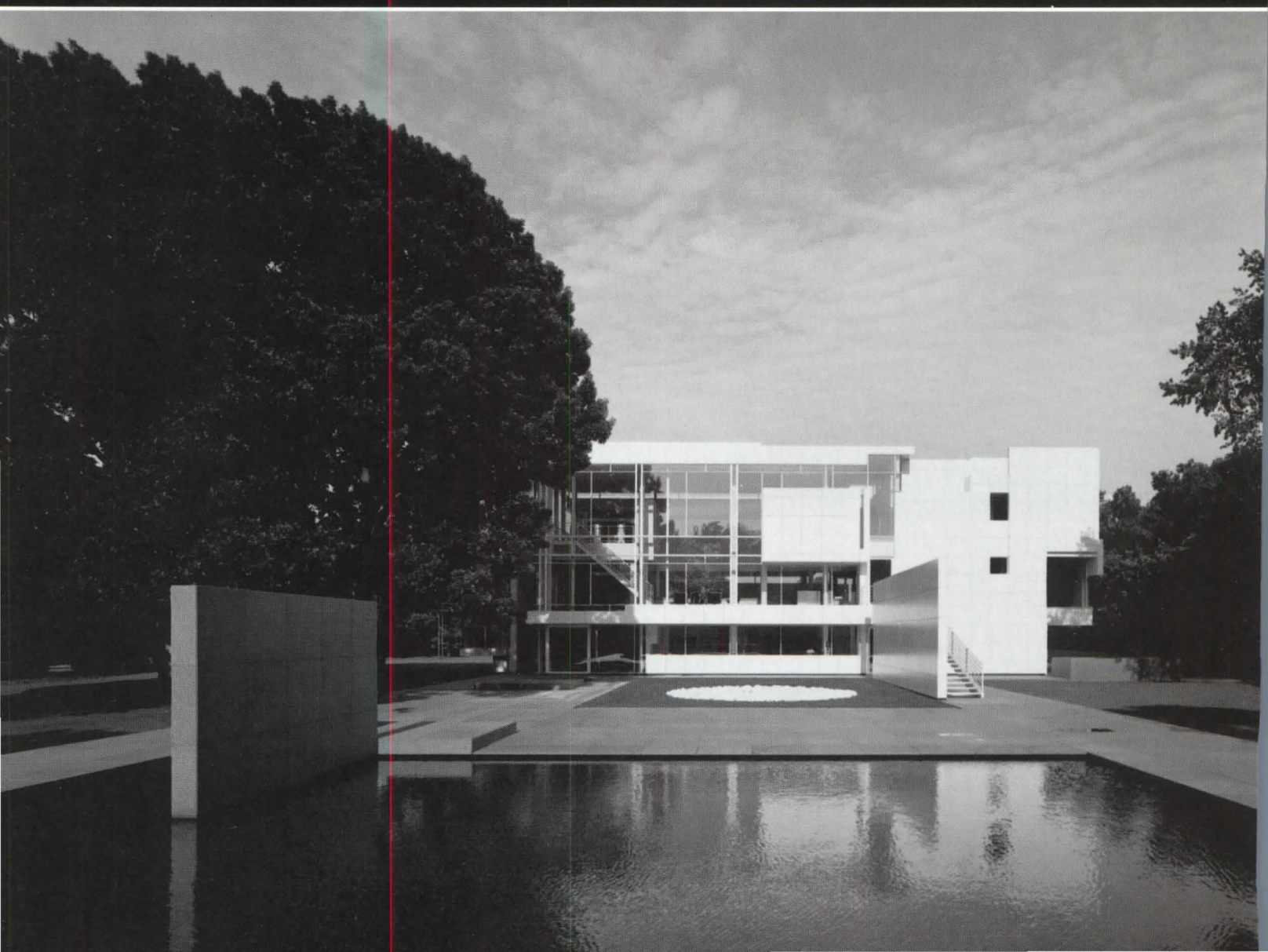


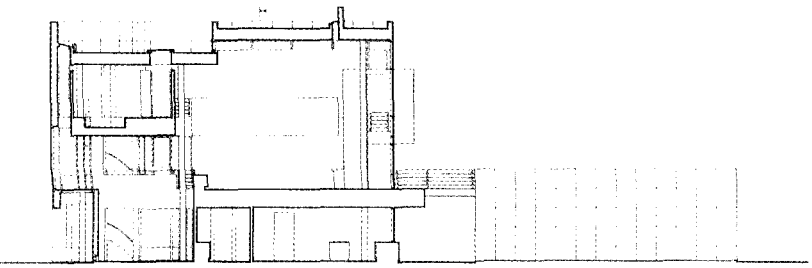


On the house's south side (right), elements are compressed behind front facade's 1-foot-thick plane, which appears to rest only on a small wing wall. Cylindrical tower contains staircase; terrace projects from second-floor library. The 3-foot-square metal panels are formed of 3/16-inch-thick aluminum plates with 1/4-inch-wide open joints between them. Neoprene gaskets set back 3/8 inch from the panel faces form an internal guttering system, preventing water runoff from streaking the facades.

SCOTT FRANCES/ESTO

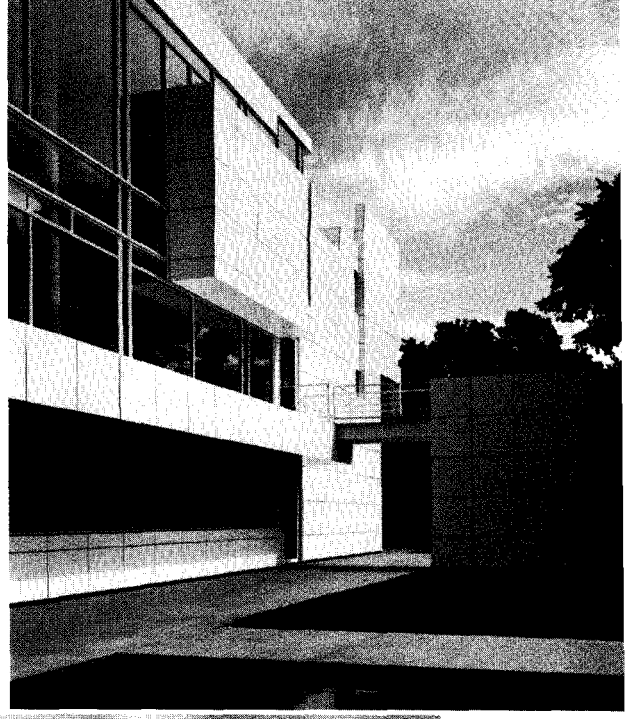
A self-admitted perfectionist, Rachofsky visited the site every day to ensure painstaking construction of Meier's design. Craft and detail are evident on every plane of steel and glass that frames the 11,000-square-foot house. The project, Rachofsky contends, "forced me to change my way of viewing things. I became seduced by the process."





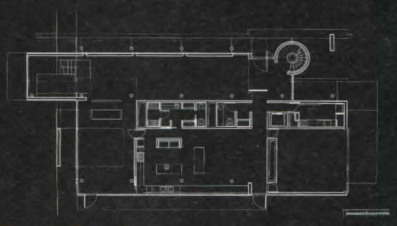
East-west section

Transparent portion of rear facade encloses double-height living room (facing page and section). Solid wing to south shelters second-floor library and third-floor bedroom. Living room, punctuated by cubic study, overlooks pool and sculpture garden, which includes Richard Long's limestone Rouchechouart Circle. House, sculpture, and pool pavilion (not shown) reside atop a Miesian black granite plinth that distinguishes Meier's architectural precinct from nature.

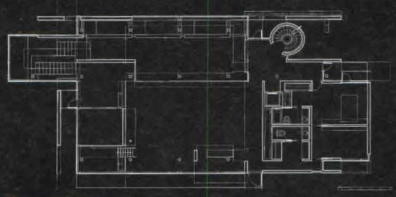


SCOTT FRANCES/ESTO

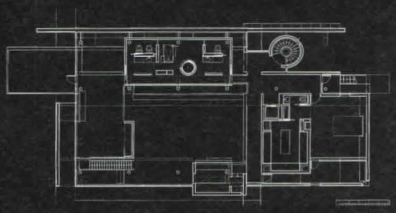
Bridge and stair, attached to a 14-foot-high wall, lead from living room to garden *below (top). At southwest corner (above),* Meier articulates his signature metal-paneled walls as floating planes that cantilever over the garage, frame the library window, and enclose the bedroom terrace.



Ground-floor plan



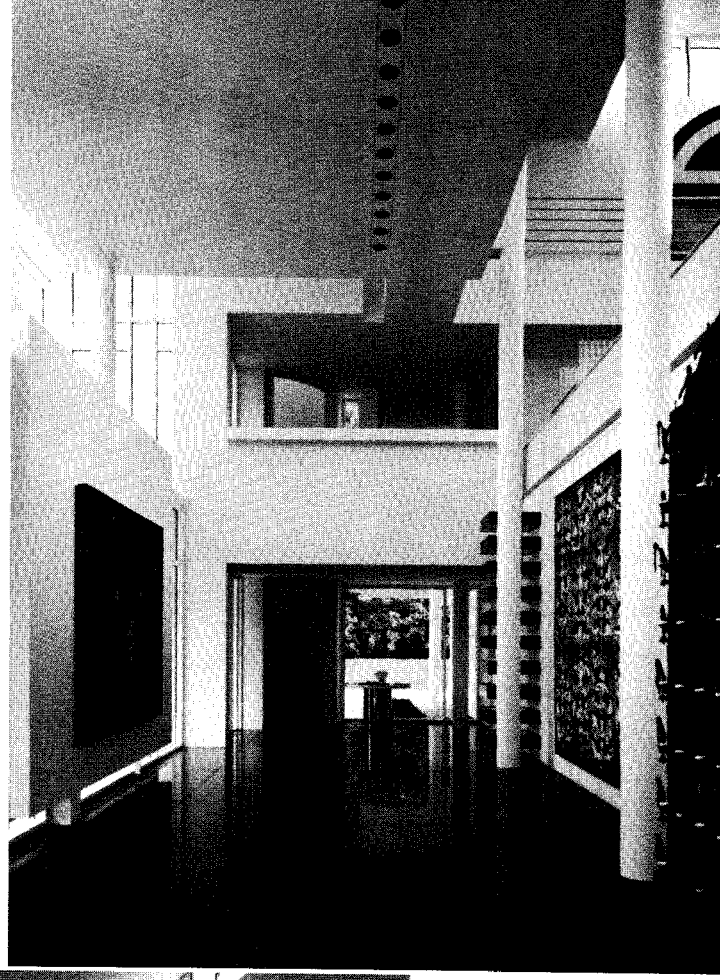
Second-floor plan



Third-floor plan

Meier designed the Rachofsky house as a progression of increasing light and transparency, drawing on Pierre Chareau's Maison de Verre for inspiration. Visitors traverse the clerestory-lit gallery at the front (top of plans) and mount the north-facing, glass-enclosed staircase to reach the sunlit living room on the second floor (bottom of plans). Inserted within the 23-foot-high living area is Rachofsky's study (top).

Gallery off entrance (right) is treated as public extension of front podium with black granite floor. Paintings are by David Salle and Philip Taaffe, stacked sculpture is by Donald Judd, and video piece is by Nam June Paik. Stair at perimeter of living area (bottom) leads to second-floor exercise area. Metal-plate cabinet flanking seating area conceals mechanical ducts and stereo speakers.



RACHOFSKY HOUSE, DALLAS, TEXAS
CLIENT: Howard E. Rachofsky **ARCHITECT**: Richard Meier & Partners, New York City—Richard Meier (principal), Thomas Phifer (design architect), Don Cox (project architect), Daniel Heuberger, Raphael Justewicz, Jeff King, Gil Rampy, Thomas Savory (project team) **ENGINEERS**: Ove Arup & Partners (structural), John Altieri Consulting Engineers (mechanical), Armstrong-Berger (landscape) **CONSULTANTS**: Fisher, Marantz, Renfro, Stone (lighting), Shen Milsom & Wilke (acoustics), Diane Weeks Interiors (interiors), Lewis Lipnick (audio) **GENERAL CONTRACTOR**: Thomas S. Byrne **COST**: Withheld at owner's request **PHOTOGRAPHER**: Timothy Hursley, except as noted

URBAN

By Aaron Betsky

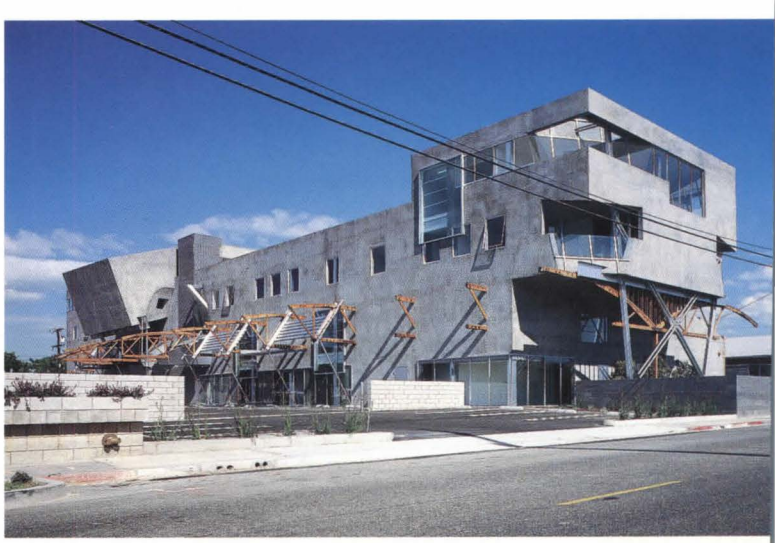
Eric Owen Moss and developers Frederick and Laurie Smith continue their piece-by-piece rebuilding of Culver City with a headquarters for an electronic graphics company.

CONSTRUCT

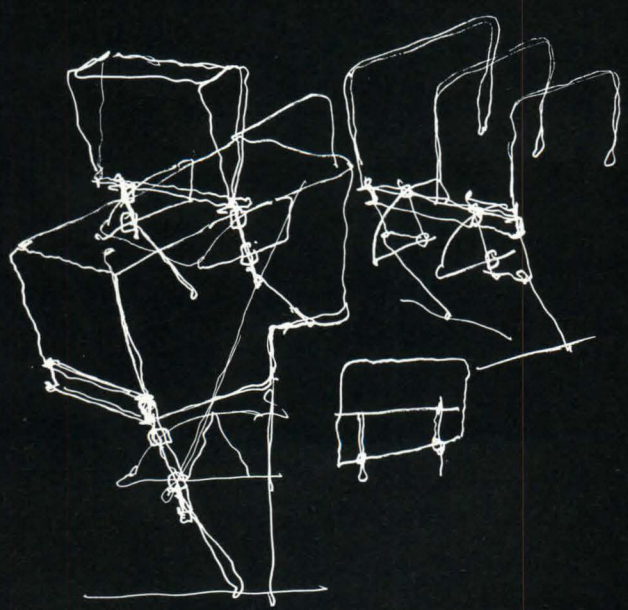
Los Angeles architect Eric Owen Moss wants to make it clear that he is not just one of the demolition experts of late Modern architecture: "I've long been interested in the idea that no matter how fragmented a building may appear, it should come together in the end," he says of his latest design, a four-story office block in Culver City, California. By revealing how buildings come together, Moss wants to teach us the meaning inherent in the process of building. Over the last 11 years, in cooperation with ambitious developers Frederick and Laurie Samitaur Smith, Moss has been building a whole curriculum of construction in Culver City.

His latest addition to this industrial district houses the headquarters of Prittard & Sullivan, masters of electronic image manipulation who have designed the animated "eye" of CBS and the titles for "ER." The PS Building, as it's called, comes together out of fragments of Moss's older constructions, a few pieces he borrowed from other designers, and a perfectly rational, new rectangular box. Then, just when things begin to make sense, Moss blows out the roof and our sense of logic with a lobby that corkscrews all the way from the entrance to the sky, bulging its curved shape into the adjacent conference rooms and the parking lot beyond. "The possibility of coherence is there; it might all work, but I don't quite get it," says Moss, adding that "if you can figure out how to photograph that lobby so somebody understands it, I've failed as an architect."

The PS Building, explains Moss, is the result of "residual memory." Its site encompasses fragments of what was once a bow-string-trussed warehouse. Moss tore down most of what he found, but left the central line of wood posts, pieces of the trusses, and one brick wall as a memory of the ordering system that once made sense of the place. To him, this approach is like "the Moors in the Hagia Sophia: Every



Culver City's Prittard & Sullivan Building is entered from the parking lot through center of stuccoed southern facade (below). Entrance is marked by tilted volume housing conference room (facing page) and concrete block-enclosed elevator shaft and lobby stair. Cross-braced east facade (right) fronts Hayden Avenue.

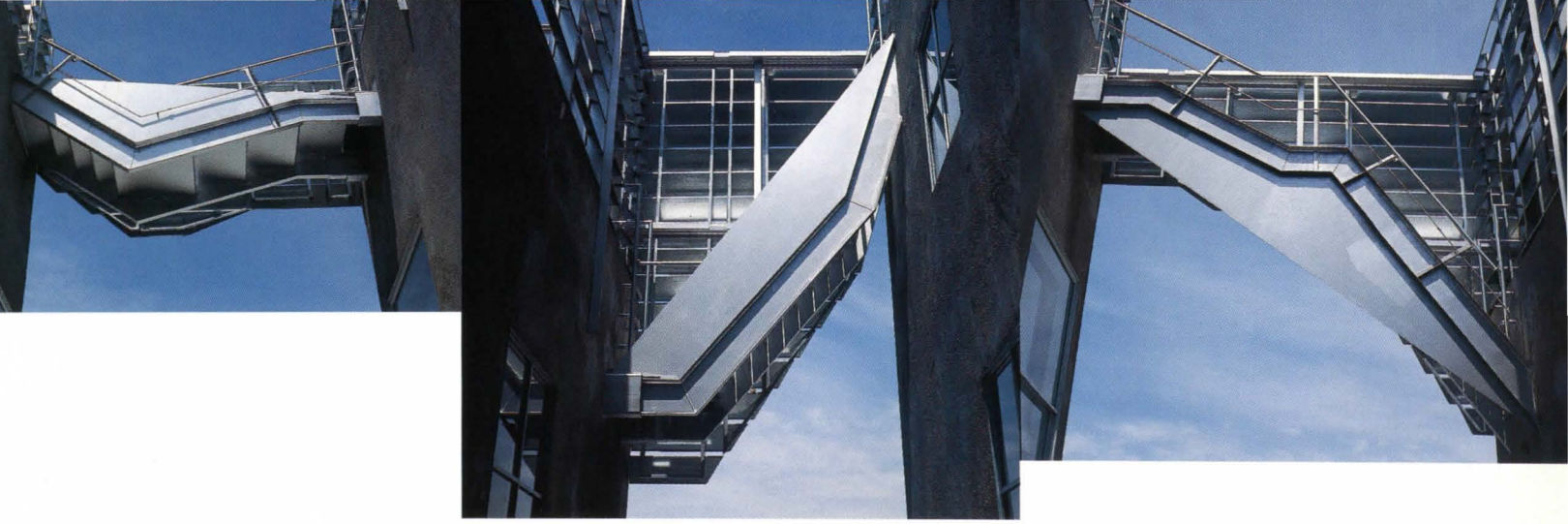


culture lays their forms on top of what's already there."

The 53-year-old architect's own contributions to the PS Building start with a structure of steel columns and wide-flange beams, then develop into a bar building whose circulation follows the line of the original wood posts. Four towers to the north of the main volume house smaller offices. Finally, a series of what Prittard & Sullivan Director of Facilities Jim Wrightsman calls "special spaces, where Moss really did his thing," rise out of the "adjustments to fit" the architect had to make. These adjustments range from small jogs in corridors around columns to the exploding lobby, and allowed Moss to accommodate the program to the existing building.

There is more history here than just that of this construction. Moss designed four buildings successively on this site for the Smiths: offices for a record company, a house that took the form and the place of the lobby, and a theater that blew that form up into a whole building. They were never constructed, but live on in part of the new design, just as the site's original warehouse does. There are also pieces of other buildings Moss added to the composition:

Steel bridges and stairs connect top level of north-facing wings, which house executive offices. Their intricacy displays skills of long-time Moss collaborator, steel fabricator Tom Farrage.



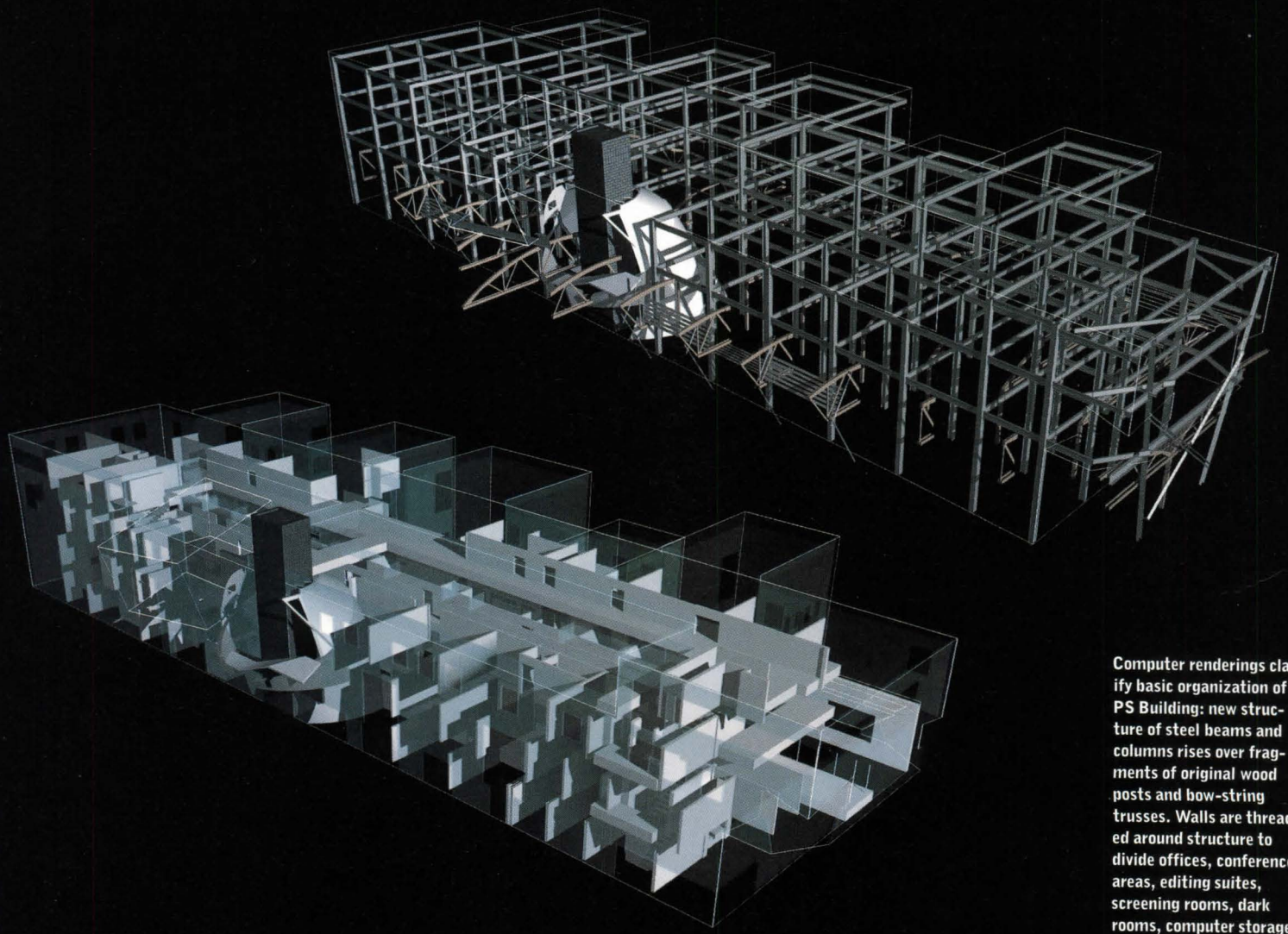
Towers rest on brick face of one-story building that previously occupied site. Metal parapets hide extensive new HVAC system required of client's computer-intensive company. Bowed-glass windows (facing page) project from east-facing offices.

bowed windows at the front recall the glazing systems of James Stirling's Leicester Laboratories, while canted steel columns at the entrance echo the work of the Austrian firm Coop Himmelblau. Even Moss's own work on other buildings is present. A block that rotates out over the entrance reworks "The Box," a conference room that crowns another Moss-designed warehouse renovation nearby.

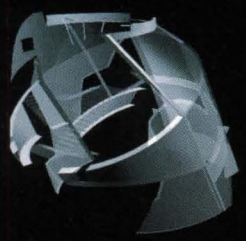
This posing of references is not just a decorative act. To the developers, it has the effect of "making the building immediately recognizable as one of ours," maintains Frederick Smith, who believes the area that he and his wife Laurie have developed is giving birth to "conjunctive points...a term from physics for the moment when particles become visible." To Smith, Moss's architecture is the visible sign of the transformation of the so-called Hayden Tract, a collection of several million square feet of former industrial buildings, into a home for new technologies, the arts, and business.

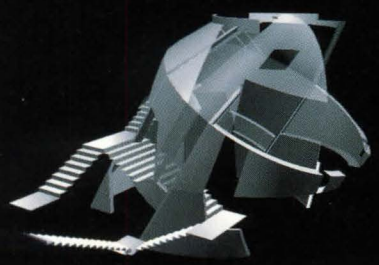
Since they started working together in 1986, Moss and the Smiths have renovated 350,000 square feet of space in this 72-acre area to house small businesses, ranging from record companies and dance schools to marketing consultancies. Their grand plan is to transform this district into its own little city, strung together in what Moss calls a "bead game," encircled by a former railroad right-of-way that would be turned into a single continuous mixed-use development. Rather than waiting for Smith to fund the 1/2-mile-long Southern Pacific Air Rights City (SPAR City), Moss is designing each new renovation as a fragment of this potential megastructure. Thus the PS Building, which sits next to the tracks, is also a "projective memory" of future construction.

Not all of the Prittard & Sullivan offices are devoted to such theoretical constructions. "The architecture draws them in, but

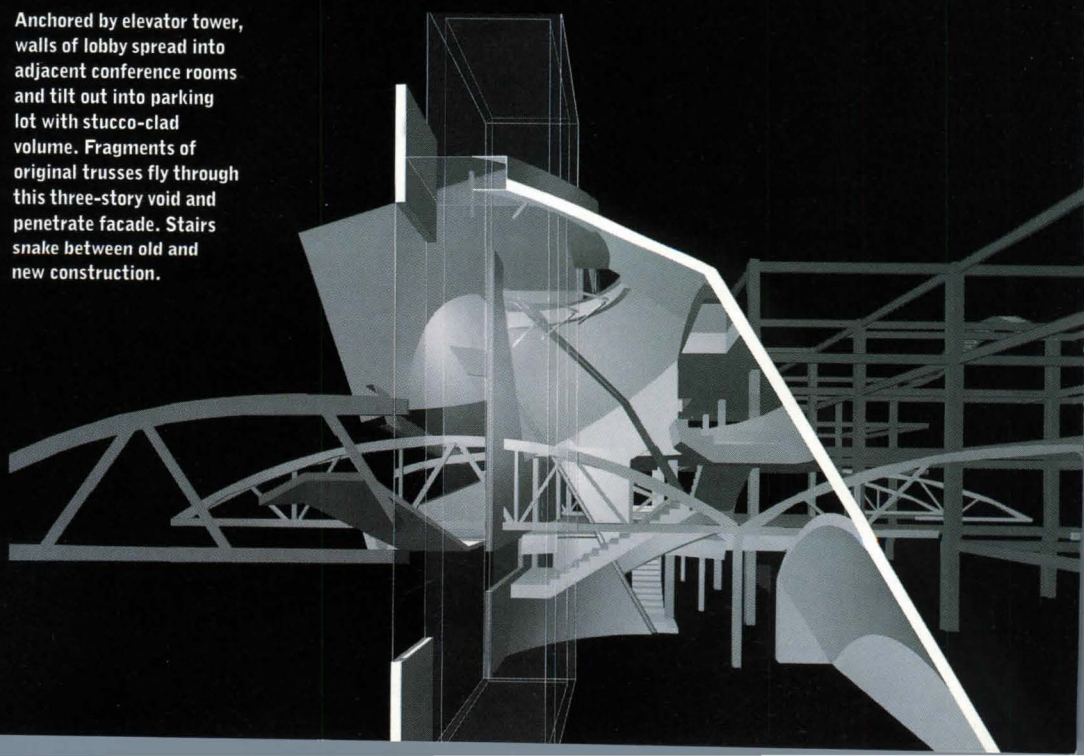


Computer renderings clarify basic organization of PS Building: new structure of steel beams and columns rises over fragments of original wood posts and bow-string trusses. Walls are threaded around structure to divide offices, conference areas, editing suites, screening rooms, dark rooms, computer storage, and dining facility. Cone-shaped lobby counters orthogonal order.





Anchored by elevator tower, walls of lobby spread into adjacent conference rooms and tilt out into parking lot with stucco-clad volume. Fragments of original trusses fly through this three-story void and penetrate facade. Stairs snake between old and new construction.



Entrance lobby shows off parts and pieces of Moss's renovation, from old wood trusses to new steel columns. Bridges from elevator tower lead to two conference rooms, one on ground floor and one on second level. Lobby enclosure expands into each meeting room (left) with a curved, plaster-clad wall.

then we hook them with the deal we make and the space we give them," boasts Laurie Smith. Prittard & Sullivan is a growing business that has very particular needs. "We all love light," explains Wrightsman, "but we need a lot of dark for our editing rooms and equipment."

Accordingly, Moss packed the center with a dense core of editing and production suites that gives way at the perimeter to more conventional offices. The strange spaces that result from the meeting between the existing building and the new structure give birth to lounges, hallways, and other leftover spaces where what Wrightsman calls "200 artists each with their own esthetic" try to come to terms with each other and the building. "People either love it or they hate it, nothing in between," shrugs Wrightsman, "but everybody adjusts, and we're all amazed at the building."

To the Smiths, such adjustments are important. "I always tell the clients that these buildings are about challenging their most creative types," says Fredrick Smith. "Usually, they encourage them by upping their pay and then just expect them to perform their work. Here, they are forced to confront creativity all around them." Smith believes that an environment where the architecture makes itself clear as art not only inserts creativity into its occupants' consciousness, but also gives architecture a "moral task...to make people aware of the human issues at the heart of all of these changes in technology."

Moss and the Smiths are already working on their next set of buildings, and Prittard & Sullivan are changing many of the ways in which they use their spaces. For those that want their building to tell them "just the facts, ma'am," the PS Building might seem a bit much. But it also reminds us that architecture can never stop posing enough questions about itself and the world to which it gives physical structure.

PRITTARD & SULLIVAN BUILDING, CULVER CITY, CALIFORNIA
ARCHITECT: Eric Owen Moss Architects, Culver City, California—Eric Owen Moss (principal), Jay Vanos (project architect), Dennis Ige (job captain), John Bencher, Todd Conversano, Scott M. Nakao (project team leaders), Thomas Ahn, Andreas Ang, Lorenza Cristolfolini, Augis Gedgaudis, Paul Groh, Mark Harris, Eric Holmquist, Mark Humphrey, Scott Hunter, Sheng-yuan Hwang, Sharon Judelman, Austin Kelly, Andreas Kirberg, Ravindran Kodalur Subramanian, Emily Kovner, Christine Lawson, Richard Lin, Anne Mooney, Mark Przekop, Sally Rigg, Elissa Scrafano, Dana Swinsky Cantelmo, Joseph Tiu, Elizebeth Torbati, David Wick (project team) **ENGINEERS:** Kurily Szymanski Tchirkow (structural), Fruchtman and Associates (mechanical), John Snyder & Associates (electrical) **CONSULTANTS:** Farrage & Company (metal and Plexiglas fabrication) **GENERAL CONTRACTOR:** Samitaur Constructs **COST:** Withheld at owners' request
PHOTOGRAPHER: Tom Bonner

Lobby's spiraling form is reminiscent of Moss's early work, and was one constant element through a five-year design process that accommodated four different uses on site. Its plaster forms reach up past cement-block elevator tower to aluminum-framed skylight.

AIA: Worth

Following a major restructuring of the institute's national headquarters, architects still debate the value of AIA membership.

By Bradford McKee

After his brief—some say bloody—tenure, American Institute of Architects CEO and Executive Vice President Terrence McDermott is packing his hatchet this month and returning to Chicago. McDermott, 54, is departing AIA to head the National Association of Realtors, leaving behind an institute vastly different from the one he joined three years ago. In February 1994, he was hired by AIA's board of directors, having been president and chief operating officer of Cahners Publishing Company, to succeed CEO James P. Cramer, who resigned two months earlier after 11 years as AIA's top executive.

The transition was timely. In the early 1990s, member unrest was rocking the AIA. Architects had been struggling through a deep depression, laying off employees by the thousands. They were beginning to wonder what they got for sending dues of up to $450 each year to AIA, whose $7 million payroll was holding steady at 220 people. In 1993, members spent a total of $11 million on AIA dues; in all, the institute raked in $36 million that year, selling books, manuals, specifications, and tickets to its convention, among other goods. But many architects didn't think AIA was making a forceful case for architects to the public at a time when the business and politics of building were moving swiftly out of the weakened profession's control. What were members getting for all their dues money?

Such doubts came to a head shortly after McDermott took office. In April 1994, *Progressive Architecture* published an article entitled "AIA: Worth the Price of Admission?" and like a lot of AIA constituents, decided that it was not. The story portrayed the national institute as an imperial palace where the executive royals ate steak while rank-and-file members starved.

Despite *P/A*'s hyperbole, the story resonated among AIA's 55,800 members, who began demanding big changes at the top of the institute. McDermott proved quite good at making those changes. His management style couldn't have been more different from Cramer's. "It was a move from touchy-feely to slash-and-

burn," recalls Richard Fitzgerald, executive director of the Boston Society of Architects.

Slicker image

"We reorganized the assets of the business so AIA has more ability to fulfill member needs," McDermott maintains. At the board's behest, McDermott shuffled internal divisions and cut one-third of the staff, which dropped from 220 to 150. According to AIA's 1995 federal income tax returns, the institute cut spending by 15 percent, to $29.6 million, which roughly matched revenue that year. (Figures for 1996 will not be available until next month.) Membership dues increased, from $11.1 million two years earlier to $11.6 million. And as he pruned the institute, McDermott's executive team pumped up AIA's image with a public relations plan costing

cisco-based Kaplan/McLaughlin/Diaz, says his firm pays the AIA $21,000 per year. "We don't get a damn thing for our dues," McLaughlin snarls. And Daniel Avchen, CEO of 250-person Hammel Green and Abrahamson (HGA) in Minneapolis, maintains that his firm's principals thought long and hard about renewing membership in January. "Our dues bill this year was $44,000," Avchen asserts. "We almost didn't pay it. We can't always see what we're getting."

Paying for access

Avchen is right, avers Peter Rand, executive vice-president of the AIA Minnesota chapter. Members can't always see the benefits. "You aren't getting $500 worth of things I can stack on your desk," Rand admits. The main thing architects get is "access," he continues: access to projects, whom we can call up and talk to and they don't feel like we're taking something from them."

By most member accounts, the institute's PIA program has been a huge success, the best way for AIA to reach out to individual members directly. But within the institute, the PIAs are one of several areas beset by administrative problems since McDermott's cutbacks, leaving some of the most engaged members unhappy. "There is a very obvious and definite lack of staff support for the PIAs," laments C. Richard Meyer, president of AIA Seattle and chairman of AIA's risk-management committee. The institute spends $2.2 million a year on its 22 PIAs, a figure that has not changed over the past four years, even as participation has increased from 7,000 PIA members the first year to 41,000 PIA members today.

the Price Yet?

$2.5 million per year—most of which pays for AIA's first-ever print-advertising campaign for architects.

As a result, many architects find that AIA's image has become slicker, but that member service is still wanting. Despite McDermott's massive changes to AIA's administration, widespread complaints persist about how the institute delivers services and makes decisions. On the eve of his departure, the CEO insists that the AIA has "built member perception of higher values across the board," and has decreased dues by 29 percent: The institute is dropping $2.4 million in "supplemental" dues (a per capita charge to member firms above the base membership rate for every architect and nonarchitect on staff). Nonetheless, McDermott claims, "our services are of better quality" than three years ago.

Not everyone agrees. Herbert McLaughlin, principal of San Fran-

yank political chains and to meet kindred colleagues—and to enter AIA design awards programs from which HGA, for one, has garnered numerous honors in years past, which are worth their weight in prestige. Besides, Rand observes, members tend to be most satisfied when they are "engaged" with AIA.

Member John Allegretti, of six-person Allegretti Architects in St. Joseph, Michigan, affirms Rand's point. Allegretti takes part in one of AIA's professional interest areas (PIAs). The PIA groups were formed in 1993 to democratize the institute's old committee structure, mobilizing members around common concerns such as design, computer-aided practice (the most popular PIA), housing, schools, and so on. "We have a feeling of belonging," Allegretti attests. "We've established networks with like-minded architects working on similar

But the AIA's strategy for these groups does change from year to year. In 1993, members were asked to pay $50 to sign up for each PIA. The next year, AIA decided PIA enrollment would be free; the year after, the first PIA was free and additional ones cost $50. A management source at AIA contends that Director Patrick N. Fox and Group Vice President Richard Hobbs, who oversee the PIAs, "are often the last to know" of management's changes in PIA policies or costs.

Fox concedes one such instance last fall, when management "unilaterally" cut the entire PIA budget by $300,000 "out of left field." The PIA council fought to restore the money, and also pushed to clarify future funding, as programs are now being planned for 1999. "Management should not be able to cut $300,000 at their own whim," Fox asserts.

Similar woes—a lack of staff

and communication, as well as distrust—embarrass the national AIA's relationships with state and local chapters. Some directors of these grassroots components regard McDermott's cost-cutting moves with suspicion because their needs aren't the priority for McDermott that they were for Cramer. Chapter executives viewed Cramer, former director of AIA Minnesota, as one of their sympathetic own, whereas McDermott is seen as an impatient outsider and cold-eyed manager who can cut their pet programs unsentimentally. "This has been a time of more strain on the [chapters]," observes AIA Minnesota's Rand.

"It's been hard at all levels, with reduced and fractured staff" in Washington, sighs Elaine Bergman, executive director of AIA Eastern Oklahoma. "We're very dependent on their government affairs people to help provide polish in our responses to local actions." But this support, Bergman adds, has declined in the past three years, as McDermott split the government affairs offices in two and twice reshuffled the Office of Component Affairs. This change shifted the burden of certain responsibilities over to chapters, some of which are small and humble, and others of which are quite large and, as McDermott observes with a laugh, "run like Tammany Hall."

The frustrations of Bergman and other chapter officials reflect the total lack of agreement within AIA about the division of duties between its national and regional offices. AIA's three-tier system of national, state, and local chapters is "outdated and unfair," remarks Robert Geddes, president of AIA New York, because it raises dues, keeping out younger architects who are the chapter's most active group. Others see the national/state/local network as unduly disjunctive. The institute needs to figure out the respective turf of the national AIA versus the chapters while still keeping them well-linked, contends Marga Rose Hancock, executive director of AIA Seattle: "We've been after this problem a long time, and we haven't gotten there yet."

McDermott admits that chapter relations were not his first worry. "My job was to run the national AIA," McDermott reminds, which "cost me some friends in the component area. ...But I was totally focused on doing what I was brought in here to do, which was make the national organization a more effective place."

Huge cuts—and additions

McDermott's success is mixed. Among his most proud accomplishments, he says, is the realignment of AIA's assets. He cut AIA's overhead by farming out management of its revenue centers, such as its Masterspec system, its printing shop, the trade show at the annual convention, and currently, the AIA bookstore, to contractors. Between the 1996 and 1997 budgets shown in AIA's 1997 annual report, AIA cut its spending on these ancillary enterprises by 5 percent. On the flip side, they are generating only 3 percent more revenue—possibly owing to one-time downsizing costs (institute officials would not comment). Total revenue is shown dropping by $1.6 million, to $31 million, in 1997—mostly owing to the supplemental dues decrease—while total expenses have climbed slightly, to $33.6 millon.

Cuts in the institute's salaries between 1993 and 1995 are curious. The $10.5 million staff payroll was slashed 24 percent, to about $8 million, with most of the difference shown in lowered employee-benefit costs. Salaries alone dropped by only 8 percent because of fewer staff. Meanwhile, AIA's tax forms for the two years show that compensation of AIA's six officers rose by 10 percent, to $547,740. McDermott's own salary this year is $265,000, plus $26,928 in deferred benefits, which ranks his pay as the 135th highest among 413 Washington trade association heads, according to the *National Journal*.

As McDermott cut lower-level staff, he broke AIA's six divisions into nine, creating three new vice-president posts. Public relations used to fall under AIA's external-affairs office, which also included AIA's federal, state and local government operations. This department was split to serve McDermott's priorities, giving AIA's PR people and federal lobbyists their own divisions. McDermott boasts that the federal division is now "more focused," able to forge stronger ties to agencies such as the General Services Administration and the Department of Housing and Urban Development, as well as to lawmakers.

Lobbying in low gear

But progress in the federal offices is questionable. Since McDermott arrived, AIA has lost several key lobbyists. As a result, AIA's record in federal government affairs is skimpier than before McDermott's restructuring. In the early '90s, AIA's federal affairs staff helped shape the basic elements of the Intermodal Surface Transportation Efficiency Act, which created billions worth of public projects for architects over six years; won crucial language in the Architectural Works Copyright Protection Act; worked with disability- and civil-rights groups to craft the Americans with Disabilities Act

Many architects find that AIA's image is slicker, but that member benefits still come up short. Even after sweeping administrative changes, complaints persist about how AIA delivers services and makes decisions.

National AIA's relations with its state and local chapters are experiencing "more strain," says one chapter head, as cost-cutting moves in Washington shift the burden of responsibility to the regional offices.

(ADA); and pushed through a variety of other federal programs, including the Historic Preservation Technology Center within the Department of Interior; and with the American Planning Association, helped steer HUD's new consolidated planning process to simplify the process for making grants to localities.

Current federal priorities are far less progressive. One of AIA's main concerns this year is trying to persuade the U.S. Department of Justice to clear architects from direct liability under the ADA. Critics find the institute backpedaling on its original commitment to the disability activists under the 1990 law, accepting architects' responsibilities for compliance. The association is now in the precarious spot of defending individual member firms against a civil-rights statute.

Meanwhile, competing proposals are swirling in Congress to reauthorize the landmark surface-transportation act. "They aren't keeping up with what we had in 1992," scoffs one chapter lobbyist, noting that AIA is not pushing hard enough to expand the next version in architects' favor. Worse, portions of preservation and construction funds may be scrapped this fall, when the law is scheduled for debate.

Half an advertising campaign

Besides federal affairs, the other major prong of McDermott's public-outreach effort is AIA's new advertising campaign, which a decade ago would have been taboo in the profession. The ads started running in 1995 with full-page, four-color spots in 17 national business and shelter magazines. As a longtime publishing executive, the ad campaign was a natural for McDermott to sell to members. While it is hard to quantify the benefits of advertising, most members report that the print ads seem successful. Yet, parts of the membership recently balked at the next phase of the ad campaign: television commercials.

The AIA projected the idea of TV ads as part of the original plan. But only in February did institute officials announce to members that a vote would be taken at the New Orleans convention in May to assess each member $50 next year to pay for the broadcast spots. Delegates from New York and California held sway and prevented the required two-thirds approval. "It was pretty poor timing, as Terry was leaving, and it wasn't very well-thought out in substance," reflects Carol Clark, executive director of AIA New York. "So we worked with the other big chapters to defeat it." Instead, delegates approved a one-time $10 fee to members to study the idea further. "Architects love process," McDermott concludes.

But members question the process by which the CEO revamped the institute. Was McDermott's downsizing done right, giving members better services and more potent ways to wield their "access"?

"It hasn't changed for the better," groans AIA member Henry Howard Smith of Atlanta. Smith has been having trouble with AIA's member services, such as getting straight

continued on page 167

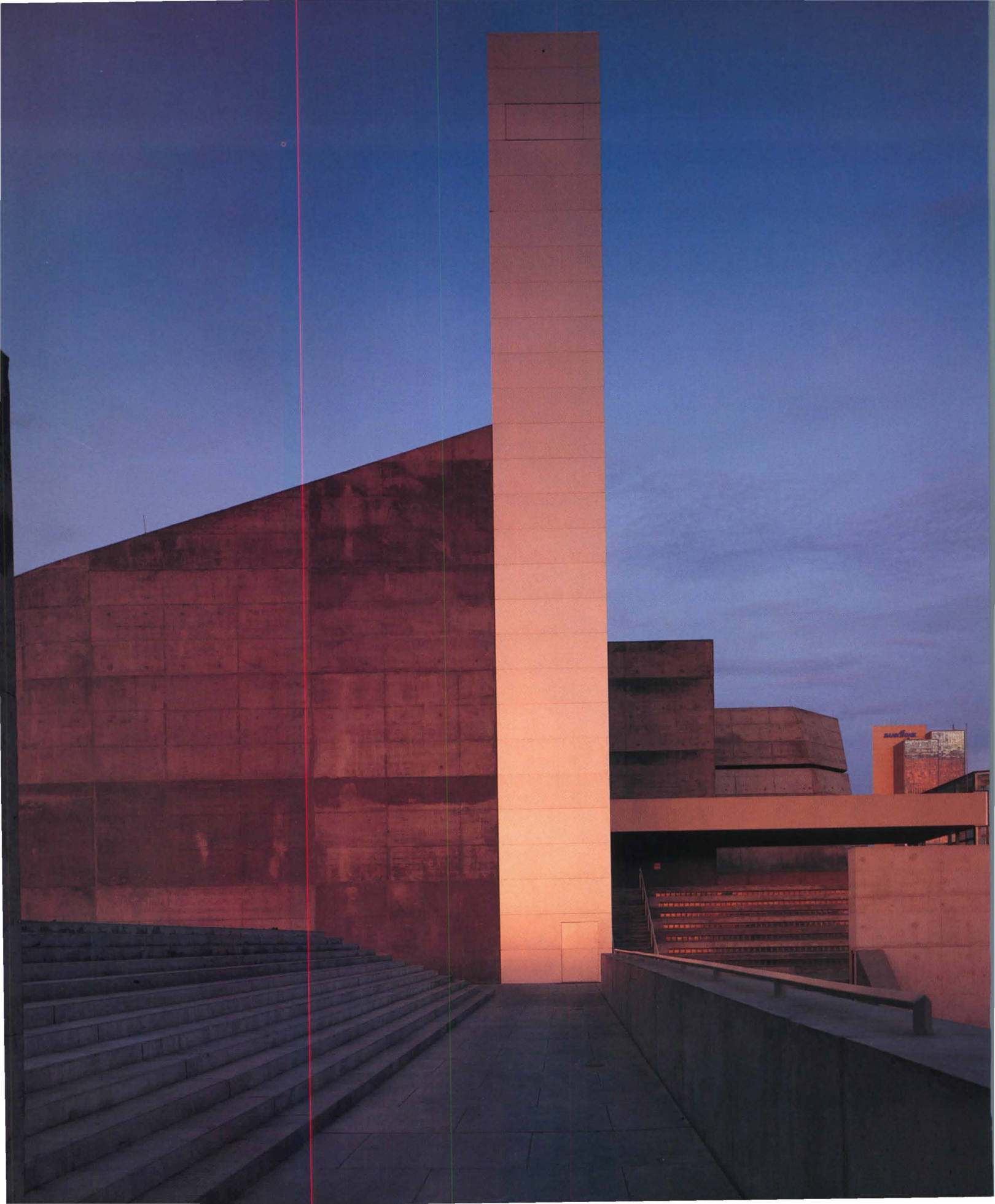
WANTED: AIA's Next CEO

This spring, weeks before Terrence McDermott stepped down as AIA's CEO, the board started looking for his replacement. The institute has hired executive search consultants Heidrick & Struggles to find candidates who can represent the institute to the public, increase public awareness, and build membership. Now the question is: Should AIA's next CEO be an architect?

The last architect who ran AIA was David Meeker, who retired in 1983. The institute could benefit by having someone "closer to the profession" than McDermott, maintains Peter Rand, director of AIA Minnesota.

Among those who want the job is Jane Maas, a former AIA public director and chairman emeritus of the advertising firm Earle Palmer Brown in New York. Also rumored as hopefuls are former Indianapolis Mayor William Hudnut, now a fellow at the Urban Land Institute in Washington; and architect and former U.S. Representative Dick Swett (D-New Hampshire).

Above all, members insist, the new CEO should have a strong business sense to manage the changes wrought under McDermott. "We need someone who can work with the mission we've already got going under Terry," suggests Director Linda Searl, who sits on the search committee, "and, I think, who can build a few bridges back to the chapters." But most members agree that the new CEO won't need to radically change the AIA again. "I would hope we won't see a dramatic left turn or right turn" in management strategy, remarks Past President Chester "Chet" Widom. "We need somebody who can continue in the same direction, but who is more of a healer."



A new science museum continues Antoine Predock's desert explorations, but at the expense of the human scale.

LAND FORMS

By Joseph Giovannini

Unlike Robert Venturi and Denise Scott Brown, who ventured to Las Vegas and read the strip for the meaning of its signs, Antoine Predock understands desert cities for their underlying geography. Some cities, victims of car-culture sprawl, make the search for nature difficult. But even in the most alien urban strips, Predock conveys a sense of wonder by rooting his designs in the land, sky, and depth of time.

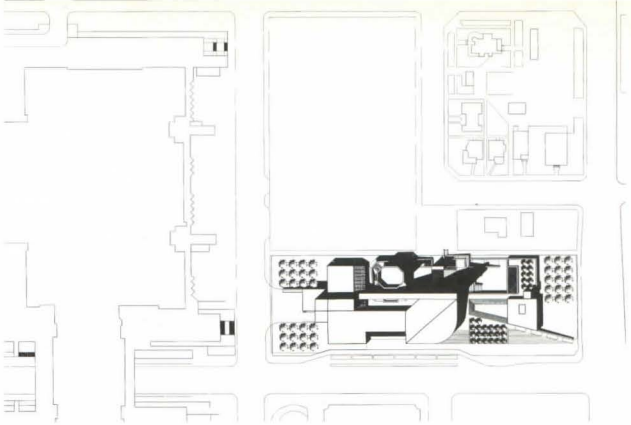
The site for the new Arizona Science Center in Phoenix confronted Predock with several contexts: the historic houses of neighboring Heritage Square and the adjacent pedestrian shopping district, the Mercado; the larger downtown area with the nearby convention center and Symphony Hall; and in the distance, the mountain ranges of the Sonoran Desert. Predock went for the big picture, shaping several black-box components of his Science Center into a man-made landscape of quasi-natural forms that echo the peaks, valleys, canyons and mesas of the Southwest. "I wanted the building to be about Arizona," Predock remarks. "I wanted to create a profile that was a horizon unto itself." Whether from the pedestrian precinct of Heritage Square or the 45-mph Washington Street corridor in front of the complex—or even from the air—the Science Center appears as a concrete aggregation of terraces, cliffs, plateaus, mounds, and peaks that abstract the fractal geometries of nature. Predock plays the Maker on the third or fourth day, planting land forms in the middle of town, positing the *building* itself as the Science Center's principal exhibit because "the evocation of the desert has didactic possibilities." He resists a techno-scientific image and instead refers to the cosmos through the land. His poetic emphasis on large-scale forms, how-ever, leads him to overlook more practical issues.

Though the program required space for more than 100 full- and part-time employees, it was, surprisingly, the theater with its five-story-tall screen, the planetarium, and the five exhibition halls (two at 12,500 square feet and three at 2,500 square feet) that played so easily into the architect's design intentions. Large, mute black boxes are usually difficult to smuggle into a composition, but the absence of windows assisted Predock in evoking natural forms. The resulting shapes are all the more powerful for their purity. A long, tall, aluminum-sheathed wedge rising dramatically to a peak forms a backdrop unifying the features of his landscape.

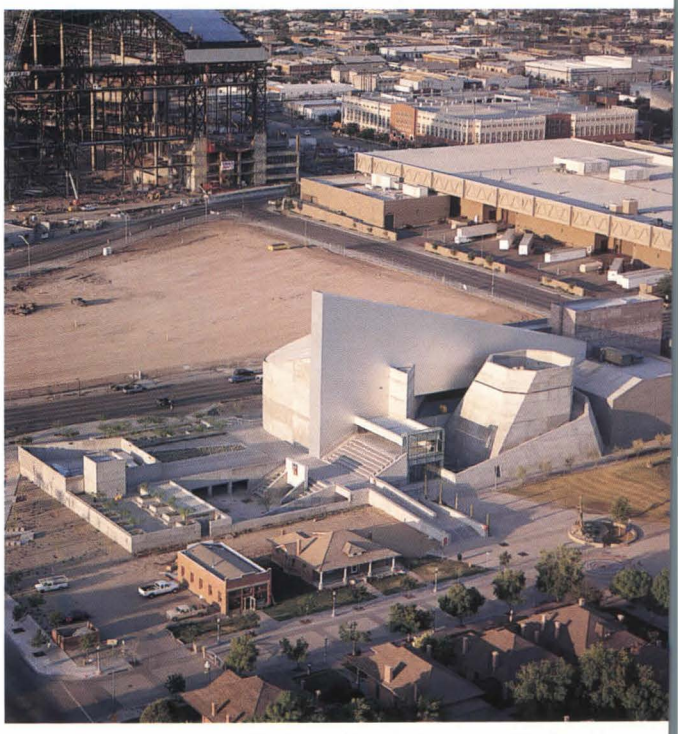
"Light in the desert creates mirages, and uncertainty about solidity," he says. "So under certain light conditions, the form dissolves. I like the destabilization one encounters in the desert—a rooted geologic power that suddenly shifts."

While building mountains, Predock also uses architecture as an excavation tool, digging so that the ground plane of the city loses its primacy as datum. One always enters the earth in his buildings, and indeed, a staircase down into a courtyard starts a promenade that Predock likens to a journey leading "into the earth and into the sky." Taking the visitor below grade, Predock redefines the context. Sunken courts edit out the city in favor of the sky above. Building down, he forces views up, and establishes the elemental terms of his architecture.

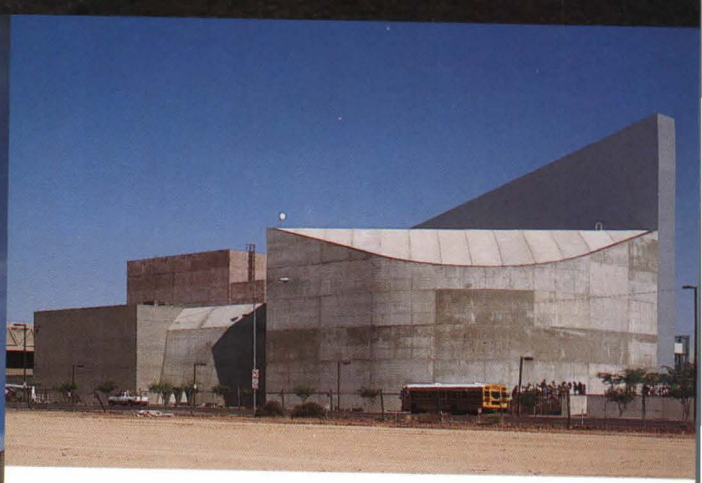
Once visitors have passed through the sunken entry court, where they can stop off at the museum store and café, they enter a plain, unpretentious, concrete orientation space facing an interior court with a water sculpture. The underground chamber gives no cues that visitors are standing below a main pedestrian artery between Washington Street and Heritage Square: The design *delivers only light, shadow,* the play of water, and the sense of



Site plan



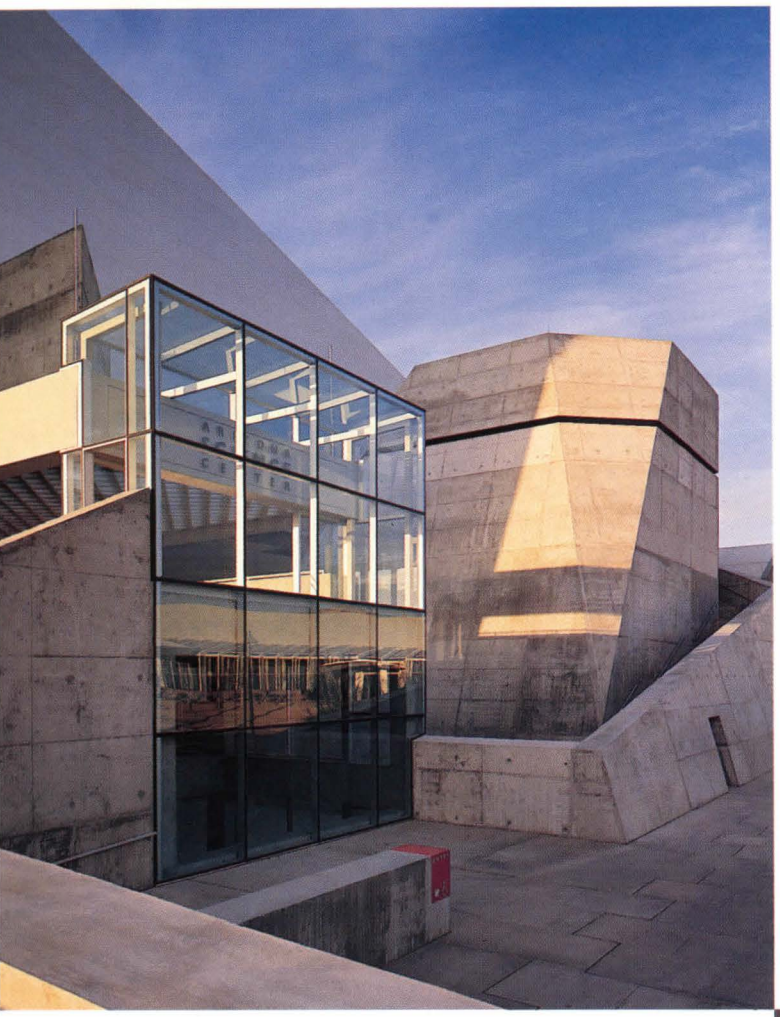
Science Center shares block (site plan) with historic houses of Heritage Square to northeast, parking garage to northwest, and Phoenix Museum of History to west. Passage through center (above) leads from Heritage Square to Washington Boulevard and future Bank One ballpark. North elevation (facing page, top) is articulated by monumental, aluminum-sheathed wedge and octagonal planetarium. Staircases (facing page, bottom left) lead from plaza to sunken courtyard and flank entrance below screen. Curved concrete volume (facing page, bottom right) contains five-story theater.



Concrete roof court (top), between octagonal planetarium and exhibition wing, will serve as a venue for future outdoor exhibits. Open to sky, star court on top of planetarium (above) offers panoramic view of Phoenix through continuous slots at children's height.

underground coolness (assisted by air conditioning). After this point, visitors continue to the exhibition spaces and theaters through a wide corridor occupying residual spaces between the large land forms. One staircase leads to exhibition halls on the second floor, and another to a narrow, very tall, peaked chamber inside the monumental aluminum wedge. Predock originally hoped this hall, a telescopically suggestive form, might be developed with apertures aligned to "moments" in the sky, but budget problems have delayed a final decision about its use. It has no substantial function, and only gives access to an octagonal rooftop "star court" with high walls isolating a section of the sky. Beyond the drama of its grand, mysterious shapes (already a site for fashion shoots), the great success of the Science Center is that visitors clamber around the building, sitting on the steps of the entry court, which double as amphitheater seating, and watching science demonstrations on the mesas. The visitor is not merely a passive user but a participant: The way the design draws in the elements heightens the physical dimension of the visit.

But Predock overlooks more obvious architectural responsibilities. The great disappointment of the building is that nearly all staff offices and workshops are consigned to the deepest subterranean spaces, where no natural light penetrates. The city objected to the scale of the two- and three-story office block Predock originally proposed, and after relocating the staff in the basement and subbasement, the director wanted the staff consolidated on a single floor: Apparently, only the subbasement accommodated the 12,000-square-foot footprint within the 127,000-square-foot building. Another scenario above grade on this large site would have *afforded daylight views and urbanized* the plaza.



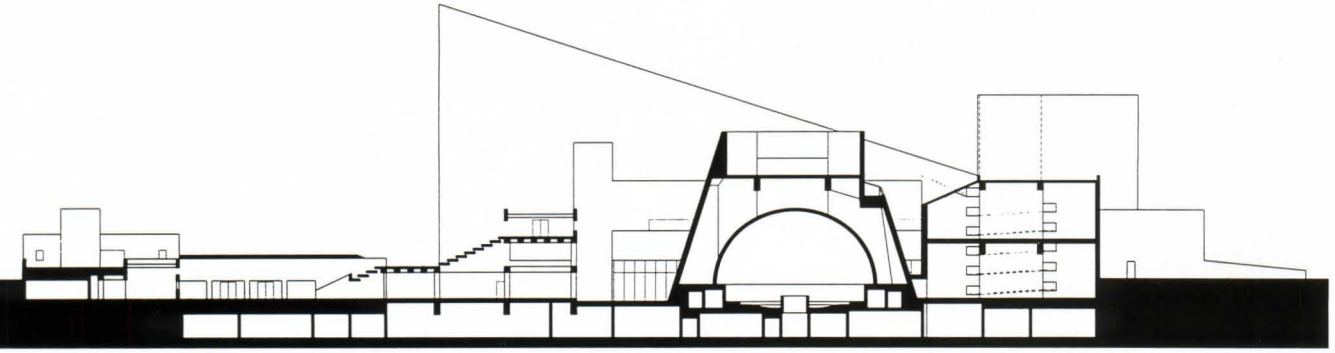
Glass-enclosed terrace (above) terminates north-south axis from plaza. Trellised structure (right) casts webbed shadows onto terrace leading to third floor.

In his desire to relate to the larger landscape, Predock neglects the small scale of Heritage Square, which could certainly benefit from the throngs drawn to the Science Center. By sinking the entrance, the front door is hard to locate, and by internalizing the café, store, and offices below grade, the Center remains removed from its context. Instead of generously playing the big church to the town square, the Center's life is siphoned to the basement. Programmatically, the black boxes that are so sculpturally evocative above grade could have been located below grade, and the grim, windowless offices could have been drawn into the light they deserve.

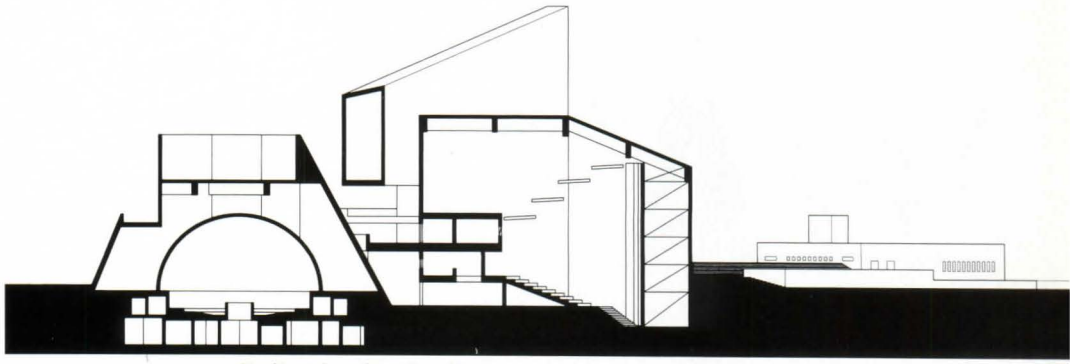
If the Center shuns the micro-urbanism of Heritage Square, it also fails on the harsher, high-speed Washington Street side to make any significant urban gesture. By developing the building's profile on the north, Predock leaves the monumental forms especially blank and ungenerous on the south, capitulating to the anomie of a strip that in fact might have some hope for animation, fueled by people from the huge parking lot planned across the street to serve a baseball stadium now being built two blocks over.

The interior exhibits other problems. In many Predock buildings, such as the American Heritage Center and Art Museum at the University of Wyoming (*Architecture*, December 1993, pages 48-61), enclosed spaces are simply the undeveloped consequence of exterior shapes. At the Science Center, Predock fails to design the corridor and circulation spaces left over from his black boxes into positive spaces: They have little of the presence of his exterior forms, and they do not gather visitors in a way that might socialize and urbanize the experience. The staircases neither conduct visitors through the building in a clear sequence nor form a path of discovery in the spirit of walks through a landscape. The staircase

Interior of aluminum-sheathed wedge (left) is temporarily programmed as science photography gallery, pending funding and final decision about its use. Corridor (top) leads from lobby to exhibition areas between leaning concrete walls of planetarium and theater. Lobby (above) faces a garden court that will house fountain; apertures in stepped roof striate interiors with light.

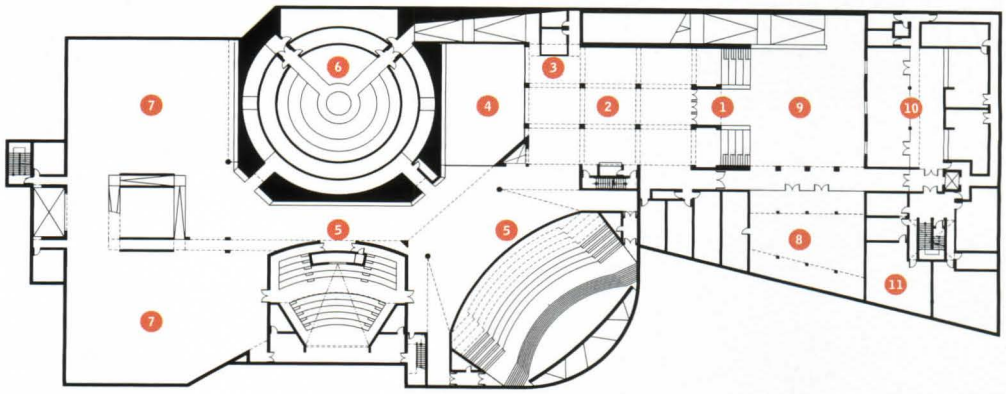


East-west section 20'/6m



Northwest-southeast section

1 entrance
2 lobby
3 security
4 reflecting pool
5 theater
6 planetarium
7 exhibit space
8 museum store
9 courtyard
10 restaurant
11 administration



Entrance-level plan 20'/6m

leading to the inside of the wedge is especially obscure and climaxes in a dud space: The interior falls far short of expectations raised outside. The exterior staircase ringing the planetarium might have been better connected to the interior so visitors could circulate in a loop that interacts with the strong architectural forms.

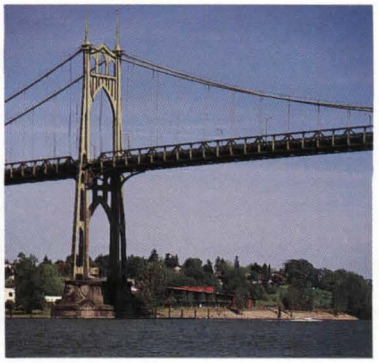
An American original, Predock is one of the few prominent architects who has cultivated "the vision thing," but at the Arizona Science Center, the vision compromises worker comfort and important urban considerations, and lapses into thematic self-absorption. By subordinating everything else to the big idea, Predock keeps his building from responding fully and generously to its context, a rare pedestrian environment in Phoenix. Despite the richness of its imagery and evocation, the building is over simplified and reductive. In his laudable search for fundamental values and epic presence, Predock overlooks smaller truths.

ARIZONA SCIENCE CENTER, PHOENIX, ARIZONA
DESIGN ARCHITECT: Antoine Predock Architect, Albuquerque—Antoine Predock (principal), Geoffrey Beebe (associate-in-charge), Karen King, Brett Oaks (project architects), Geoffrey Adams, John Brittingham, Linda Christensen, Mark Donahue, Nancy Napheys, George Newlands (project team) **EXECUTIVE ARCHITECT:** Cornoyer-Hedrick, Phoenix— R. Steven Bassett (principal-in-charge), Dave Lockrow (project director), Helen Bowling, BuckYee (project managers), Randy McManus (job captain), Kris Floor (landscape architect), Robert Morris (interior designer), Jim Bolek (graphics), Tonya Austin (project secretary) **ENGINEERS:** Robin E. Parke Associates (structural), Baltes/Valentino Associates (mechanical, electrical), Wood/Patel Associates (civil) **CONSULTANTS:** McKay Conant Brook (acoustics), Lighting Dynamics (lighting), IWERKS (theater) **GENERAL CONTRACTOR:** SundtCorp **COST:** $16 million
PHOTOGRAPHER: Timothy Hursley

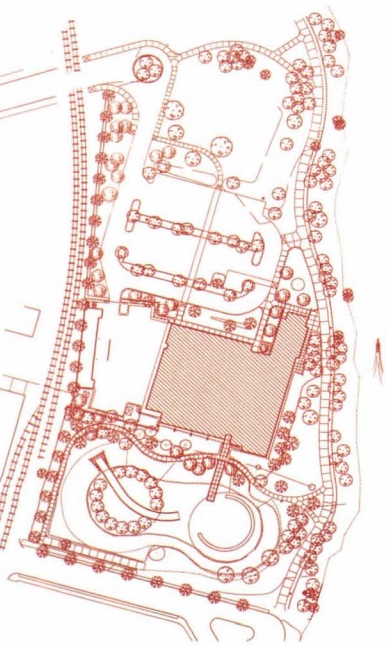
A WATER-QUALITY LABORATORY IN PORTLAND, OREGON, MEDIATES BETWEEN SECURITY AND PUBLIC ACCESS IN A METAL-CLAD DESIGN BY THE MILLER/HULL PARTNERSHIP.

By Mark Hinshaw

WATER WORKS



Portland's Water Pollution Control Laboratory hugs Willamette riverbank, below St. Johns Bridge (above). Lab's sloping office wing (facing page) incorporates operable windows (bottom left). Sculpture by local artist Don Merkt depicts water droplet and cup. Detention pond (bottom right) curves through site.



Site plan ①

In the far northern reaches of Portland, Oregon, the grandly Gothic St. Johns suspension bridge spans the Willamette River. Tucked alongside the enormous concrete arches that support the bridge's easterly approach is the quirky, but elegant Water Pollution Control Laboratory (WPCL) for the city's Bureau of Environmental Services. Designed by the Miller/Hull Partnership of Seattle with Portland-based SERA as architect of record, the 37,000-square-foot, sharply angular metal-and-glass structure occupies its 11-acre riverfront site like a glistening water bug clinging tenaciously to the shore.

The WPCL is the progeny of increasingly stringent federal and state water-quality standards, which demand a more effective and less costly means of handling storm-water runoff than conventional chemical treatment. The building replaces a facility formerly housed in a city sewage treatment plant. Portland's Bureau of Environmental Services selected its new site to demonstrate that the collection, cleaning, and discharge of storm water from the city's neighborhoods can comfortably coexist with nature.

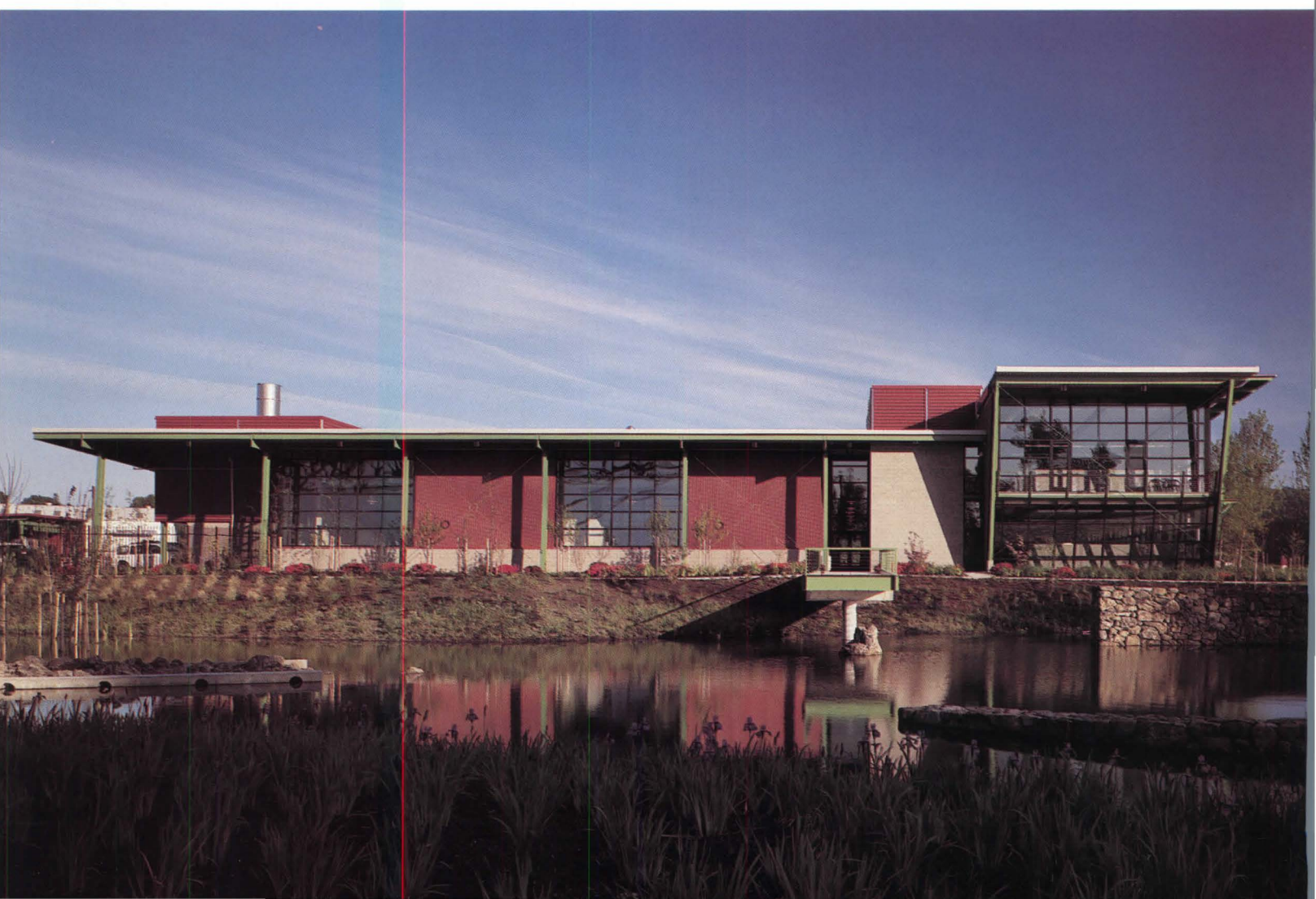
Architect Robert Hull's design captures the program's spirit in many ways, beginning with the thrusting angle of the roof, which Hull saw as a means of illustrating the building's public purpose. A considerable amount of storm-water runoff

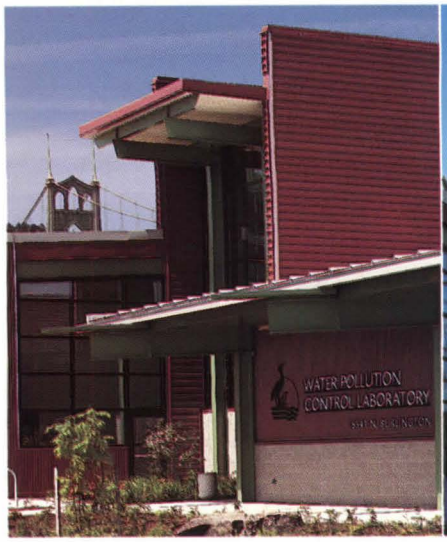
in urban areas originates from roofs. WPCL's oversized scuppers and exaggerated roof planes accentuate this process. "We knew that many people would see the building from locations up the hillside as well as from the bridge," explains Hull. "So we attempted to give the roof a scenographic quality." Hull's flying roof also reflects the cornerstone of the building's program, a loftlike space housing six testing labs on the east side of the site. Here, the roof cants up toward the bridge to accommodate mechanical ducts that hover over workstations.

A smaller linear block fronts the river. It contains offices, group work areas, conference rooms, and social spaces intended to foster interaction between scientists, technicians, and managerial staff who are normally segregated according to task. This two-level section is signature Miller/Hull, with expansive glazing and Tinkertoy tectonics. The exuberance is never gratuitous, however. The glass captures the site's most spectacular views, and the small, square windows within the larger glazing system are operable to allow for natural ventilation. Solar gain on the west-facing office block is reduced by sunscreens and deep overhangs, which enliven both the north and west facades.

Wedged between the office block and the labs is a bar of support spaces that includes a high-ceilinged lobby and a broad interior corridor, which is open to the

North facade pairs glazed laboratory wing (below left) with vaulted office block (right). Viewing platform (center) lets visitors observe water-filtration process.





Roof over entrance lifts to accommodate 27-foot-high lobby. Structure consists of corrugated steel cladding, glass, and smooth-finished concrete block.

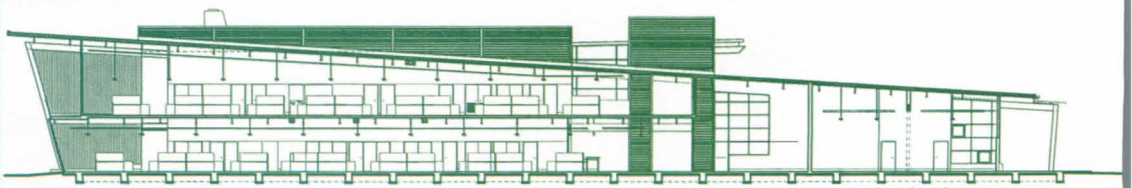
MILLER/HULL'S CORRUGATED STEEL TECTONICS FOR THE WATER POLLUTION CONTROL LABORATORY PAY HOMAGE TO THE NEARBY NEO-GOTHIC SUSPENSION BRIDGE AND FREIGHTERS ON THE WILLAMETTE RIVER.

Office block features balcony (right) to encourage impromptu meetings between technicians and scientists. Deep overhangs on north facade (right) and sunscreens on west elevation (far right) reduce solar gain from late-afternoon summer sun.

Perimeter passageways lead through open-plan offices. Glazed wall (far left) democratically distributes daylight to all. Delicately proportioned, custom-designed steel staircase (left) leads from lobby to second-floor offices.

1. lobby
2. multipurpose/conference
3. cafeteria
4. open offices
5. administrative
6. laboratory
7. field lab
8. lab support
9. sample receiving
10. loading area

Ground-floor plan



North-south section

WATER POLLUTION CONTROL LABORATORY, PORTLAND, OREGON

CLIENT: City of Portland, Bureau of Environmental Services **DESIGN ARCHITECT**: The Miller/Hull Partnership, Seattle—Robert Hull (design lead), Norman Strong (quality control), Steven Tatge, Richard Whealan (project architects) **ARCHITECT OF RECORD**: SERA Architects, Portland, Oregon—Donald Eggleston (principal-in-charge), Jane Barker, Becca Cavell (project architects), Natasha Kov (interiors), Melissia Schulz, Shaun Smith, Jeri Tess (design team) **LANDSCAPE ARCHITECT**: Murase Associates **ENGINEERS**: KPFF Structural Engineers (structural), Norm Nelson Engineered Solutions (mechanical), Cockran Broadway (electrical) Westlake Associates (civil) **CONSULTANTS**: Portland Gas & Electric Commercial Efficiency Program; Charlie Brown, University of Oregon (energy efficiency); CH2M Hill (laboratory) **GENERAL CONTRACTOR**: U.S. Pacific Builders **PHOTOGRAPHER**: Strode Eckert Photography

Extensive glazing in offices (above) allows views of river and nearby bridge. HVAC systems are exposed in laboratories, (above right), which also boast large pyramidal light monitors.

public. Lined with large windows looking into the labs, the corridor punches through the north face of the building like a nautical bridge. Visitors on the bridge find themselves standing in mid-air, directly over the filtration pond, where they get an aerial view of the reclamation process in action.

Despite its generally strong design and unquestionably good intentions, the WPCL has some shortcomings. The objective of enhancing the public's understanding of environmental protection is thwarted by the absence of interpretive displays within and around the building. The broad concrete walkway meandering along the water is austere and devoid of places to sit—hardly the inviting riverfront esplanade it might have been. And the architecture and landscape architecture seem somewhat disconnected, as if each were designed independently.

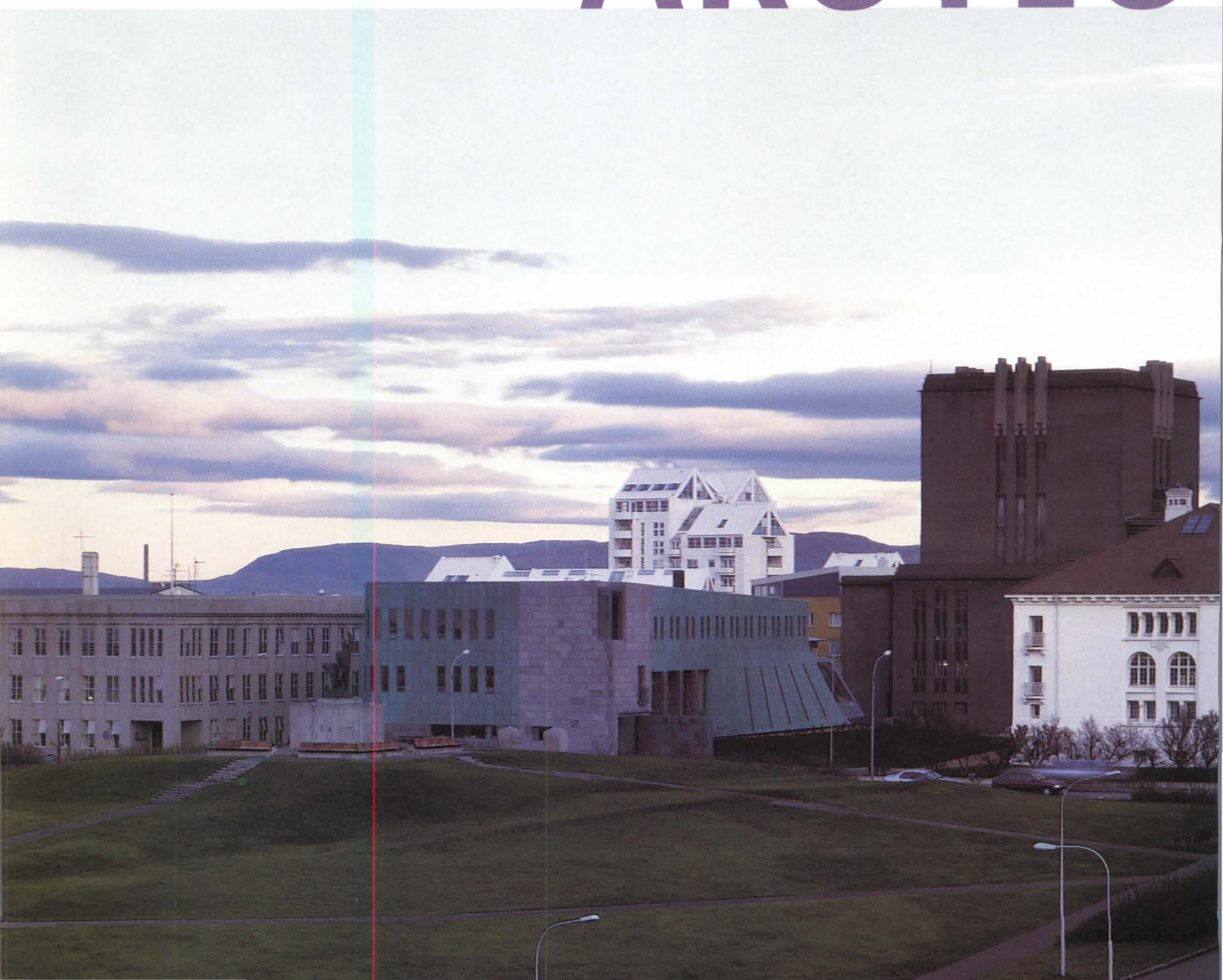
These reservations notwithstanding, Miller/Hull's building is a visually mesmerizing composition of forms and colors. Its expressive tectonics and green-painted steel nod to the enormous bridge beyond, while its red steel siding and shifting planes provide an architectural complement to the constantly moving mix of barges, tugs, and freighters on the river.

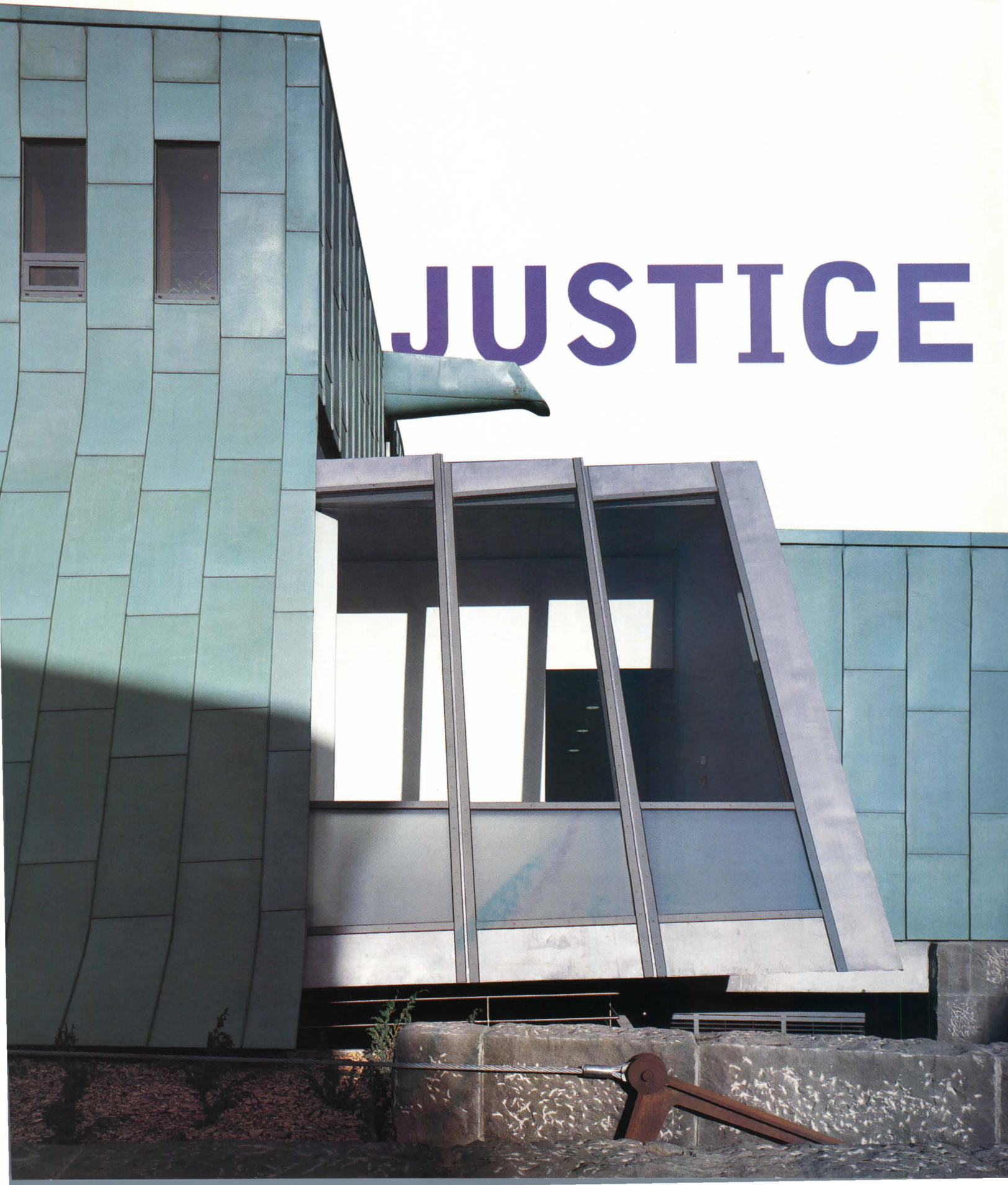
Mark Hinshaw is a columnist for the Seattle Times.

by Raul A. Barreneche

Iceland's new Supreme Court by Studio Granda reflects the country's politically open and geologically charged character.

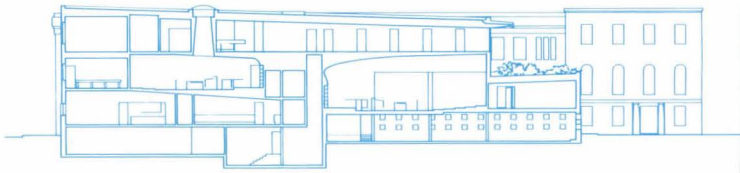
ARCTIC



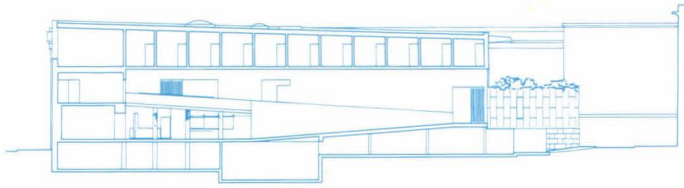

JUSTICE

Deep beneath the surface of Iceland, strong, rumbling forces still churn, push, and fold the earth's crust. Seismic shifts and volcanic eruptions created this remote North Atlantic island and imbued it with a strikingly barren, almost alien landscape of hot springs, lava fields, glaciers, and mountains. Spontaneous bursts from volcanoes and geysers are a common sight outside Reykjavík, the capital.

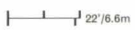
Similar undercurrents of energy invigorate the designs of Iceland's most gifted young architect, Studio Granda. Following the success of its first major design commission for Reykjavík's new city hall (*Architecture*, September 1993, pages 76-77), the husband-and-wife team of Steve Christer and Margrét Hardardóttir won the prestigious national competition for the design of the Supreme Court of Iceland in 1993. The courthouse, dedicated in September, typifies the firm's dynamic spatial and material sensibilities, and responds to the site's active geology.



East-west section through courtrooms

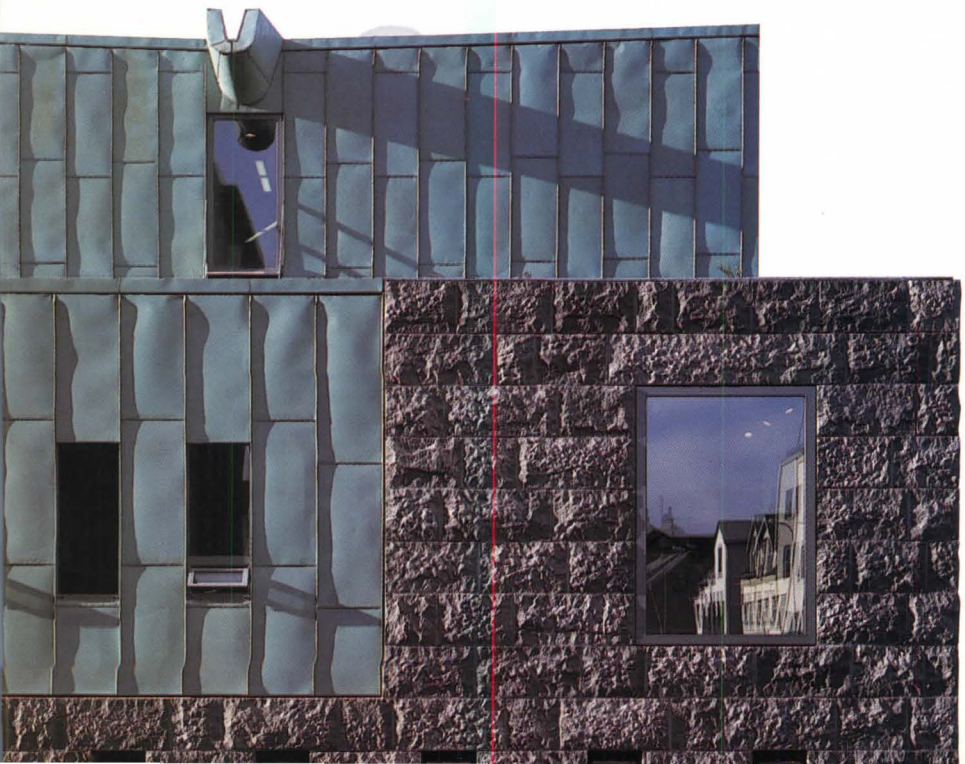


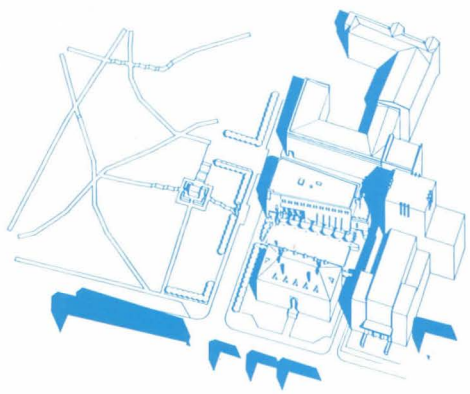
East-west section through offices



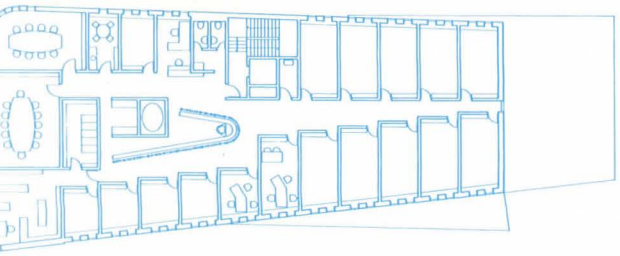
The new building flanks a pair of older government buildings on a small hilltop in central Reykjavík. Together, the ensemble frames a grassy courtyard that creates a precious green oasis in Iceland's rocky landscape. On the south side of this open space is the white-washed National Library, a staid, Nordic Classical edifice; the National Theater, a sinister Art Deco block crafted from grayish-black local basalt, defines its eastern edge. Across a narrow street to the north are government ministries and the bland 1940s office building that formerly housed the courts. The western edge of the lawn opens onto a barren, grassy square dotted with a stone statue that slopes down toward the icy Atlantic.

The court echoes the solidity of its stodgy neighbors on the miniature acropolis, but asserts its own identity through its sharp, angular volumes. Tough materials impervious to Iceland's harsh climate clad the exterior: rough-hewn basalt and rough blocks of gabbró, a dark local stone resembling granite. On the southern elevation, bands of blue-green patinated copper sliced with vertical strip windows splay outward in a quirky flourish. This cool palette doesn't take its cues from the building's monochromatic neighbors, but from the cold water of Reykjavík's harbor and the rocky, snow-capped mountains beyond.

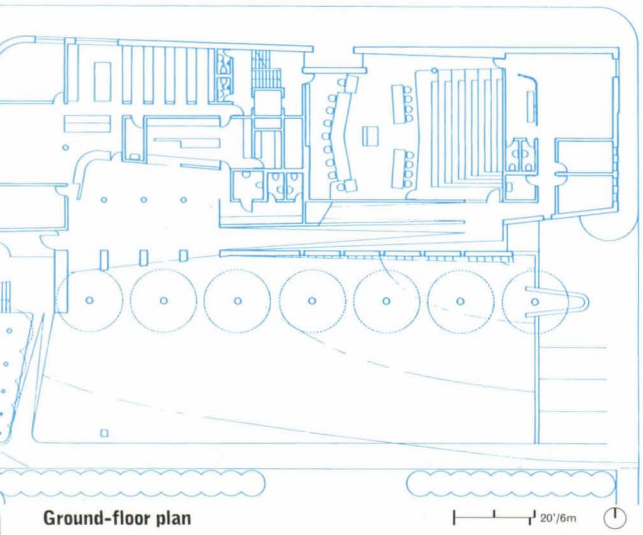




Site axonometric (above) reveals outdoor courtyard created by insertion of Supreme Court (at center) into hilltop civic complex. East elevation (left) juxtaposes vertical ribbed copper panels against horizontal bands of textured gabbró stone. Oversized copper spout drains rainwater onto roof garden topped with local lava rocks.

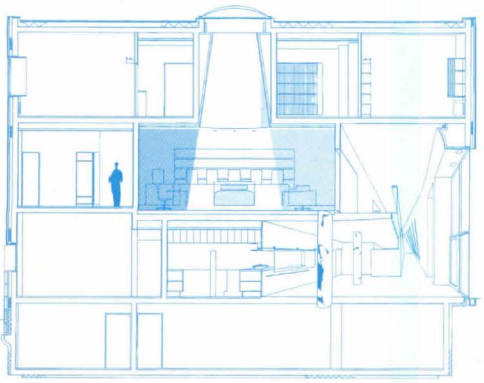


Top-floor plan



Ground-floor plan

Cladding of copper, basalt, and gabbró wraps northwest corner of building (above). Solid basalt block anchors southwest corner, marking court's public entrance (below). Balcony above entrance is used for presidential inaugural addresses. Slotted windows illuminate offices of Supreme Court justices.



North-south section

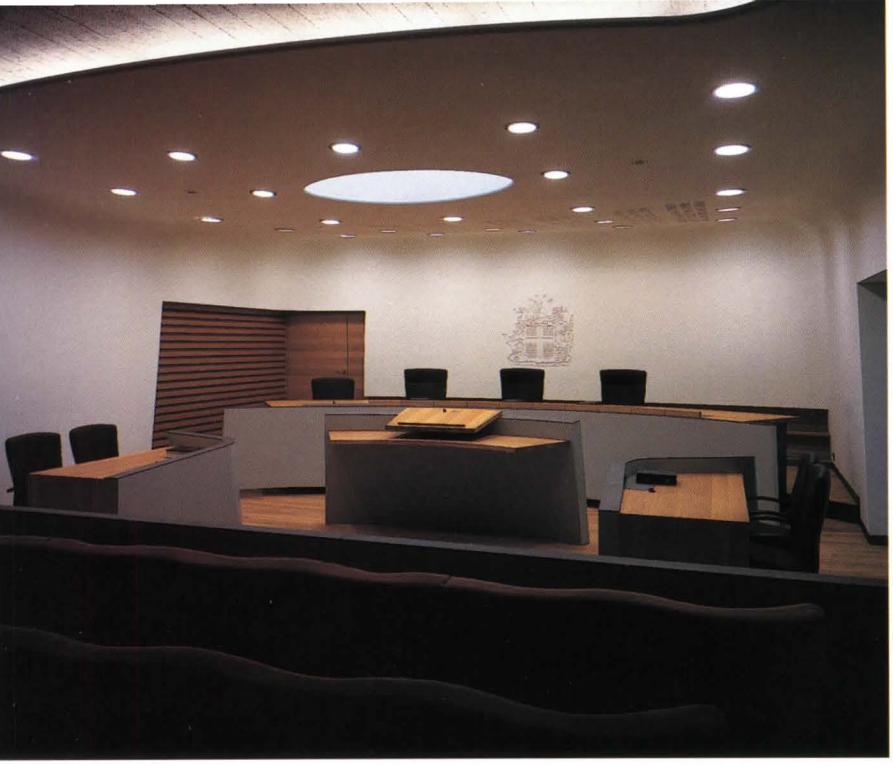
Visitors enter the courthouse through a frosted glass door at the southwest corner, which opens into a lobby filled with small leather chairs designed by the architect. The north side of the lobby incorporates a curved counter where the public can buy transcripts of court proceedings; on the east, a polished concrete ramp leads visitors up to a pair of courtrooms on the second level. As the ramp ascends, the copper-clad south wall simultaneously tilts in and out, creating a fluid folding and unfolding of space that is washed in daylight from vertical slots in the wall.

This dynamic spatial excavation recurs throughout the interior. Rough and polished materials such as stained oak, frosted glass, and brushed and oiled steel slip against each other. In several spots, smooth plaster ceiling panels are peeled back to reveal the rough texture of concrete slabs beneath, and in the third-floor office suite, a free-form concrete column filled with rough, black aggregate springs from a cutout in the pristine oil-stained oak floor. "The materials themselves are not as important as their relationships to each other," maintains Christer. Alvar Aalto's influence is whispered in these sensuous material juxtapositions, and in the wash of arctic light filtering in through circular rooftop monitors. (Aalto's Nordic House, completed in 1968, is located just a mile away.)

For Americans accustomed to metal detectors and X-ray machines as standard fixtures in public buildings, the interior of the Icelandic high court conveys a striking sense of openness, both formally and functionally. There are plenty of windows and monitors to capture the scarce Nordic daylight, but no security checkpoints anywhere. This openness reveals much about Iceland's forward-thinking society and the country's confidence in Modernism—a strong tradition honed from its Scandinavian neighbors. As Christer comments, "People in Iceland aren't afraid of modernity." The choice of such an unconventional design for the country's highest court is a tribute to this tiny nation of 250,000 people.

Studio Granda's brand of Modernism is rigorous, but not rigid. Their architecture is full of subtle volumetric shifts executed with formal finesse and exacting craft. The Supreme Court is keenly attuned to its site, shaped from materials that seem to have just been unearthed from Iceland's cold, black soil.

Ramp (right) leads past public lobby and angled south wall. Tapered concrete column, plaster ceiling panels, and sliding oak doors articulate administrative office suite (below). Circular light monitors fill corridor with cool northern light. North-south section (above) reveals skylit central court chamber and entry ramp (bottom right).



In courtroom (left), lawyers present cases to justices at central podium illuminated by circular skylight. Studio Granda designed curved benches for public seating.

THE SUPREME COURT OF ICELAND, REYKJAVÍK, ICELAND
CLIENT: The Icelandic State **ARCHITECT:** Studio Granda, Reykjavík, Iceland—Steve Christer, Margrét Hardardóttir (principals) Ásdís Ágústsdóttir, Sólveig Berg Björnsdóttir, Jóhann Einarsson, Haraldur Helgason (project team) **ENGINEERS:** Línuhönnun (structural), Almenna Verkfrædistofan (mechanical), Rafteikning (electrical) **CONSULTANTS:** Hafsteinn Haflidason (landscape), Verkfrædistofan Önn (acoustics), State Building Agency (cost control) **GENERAL CONTRACTOR:** Armannsfell **COST:** $ 5.1 million **PHOTOGRAPHER:** Dennis Gilbert/VIEW

NORDIC MODERNISTS

Principals Margrét Hardardóttir and Steve Christer pose in front of the building that made them famous, Reykjavík's new city hall.

Studio Granda is singlehandedly putting the remote country of Iceland on the architectural map. In a country with a strong Modern tradition, but few internationally known architects, this five-person firm is producing bold designs that rival the work of their better-known peers in London and Santa Monica. The husband-and-wife team of Steve Christer and Margrét Hardardóttir already have two of their country's most prestigious design commissions under their belts—the Reykjavík city hall (1992) and the Supreme Court of Iceland (1996). And in May, the duo won another major competition: the new Reykjavík Art Museum. Christer and Hardardóttir plan to transform an old concrete warehouse near the city's harbor into Iceland's leading showcase for contemporary art, inserting new galleries crafted of wood and steel with glass floors into the existing concrete shell.

Christer, 37, born and raised in Blackfyne, England, and Hardardóttir, 38, a native of Reykjavík, met while attending London's Architectural Association (AA). After graduating in 1984, the pair moved to Iceland to work on several competition entries, then returned to London to do more of the same. They moved their studio back to Iceland in 1987, after winning the commission to design the new Reykjavík city hall. Studio Granda's recent work includes a mix of houses, retail interiors, collaborative art installations, infrastructure projects such as a pedestrian and bicycle bridge and a highway interchange in Reykjavík, and even a prototype for a plastic margarine squeeze bottle.

While vastly different in scale, these projects all share the architect's signature touch: a sensuous interplay and precise detailing of materials. In addition to maintaining their practice, Christer and Hardardóttir continue to teach and lecture throughout Europe. Both taught at the AA from 1993 to 1995; Hardardóttir also recently completed a teaching stint at the Arkitekthøgskolen in Oslo, and Christer at the Berlage Institute in Amsterdam. With their latest commission in hand, the duo is looking to expand the three-person firm. Hardardóttir won't be a full-time member of the studio, however, since she is taking time off to care for the couple's newborn son.

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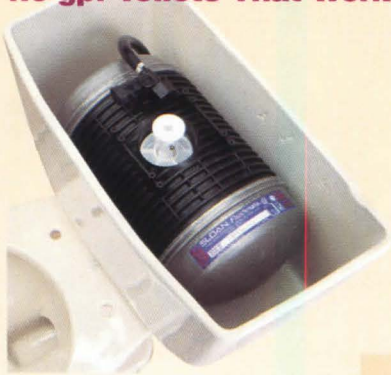

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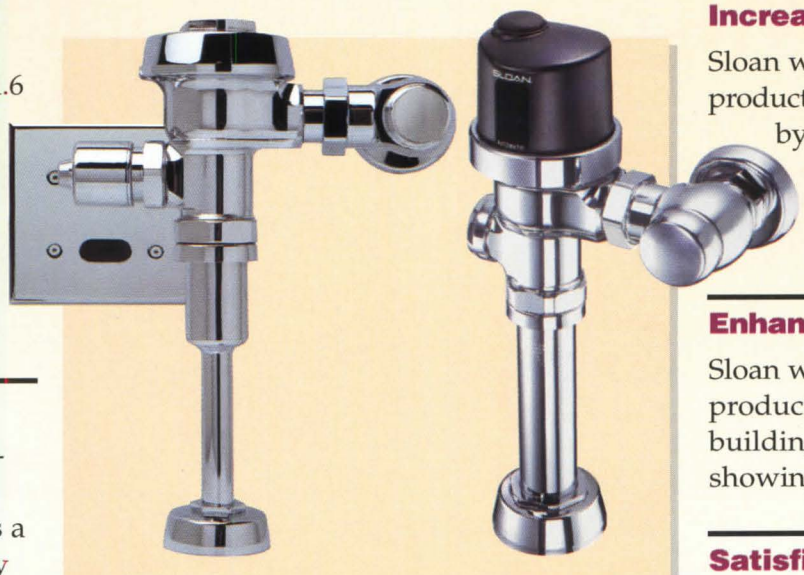

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FAX: 1-304-527-1269
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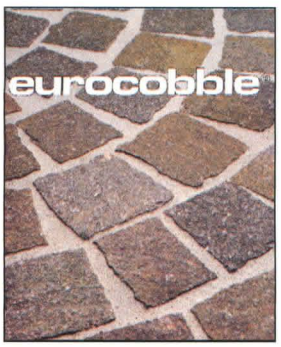
ARCHITECTURE'S LITERATURE PORTFOLIO

The Literature offered on these pages (with rare exception) are free for the asking. Simply fill out one of the postage paid reader service cards located elsewhere in this issue, circle the appropriate numbers and drop it in the mail.

Eurocobble



Granite cobblestone in modules– An updated 12-page catalog features authentic European cobblestone pre-assembled in modular form. Modules in square, fan, concentric ring, and custom formats arrive at the jobsite ready for quick and easy installation. Pedestrian or vehicular application. Eurocobble® has supplied the design community with traditional and customized paving solutions for over 15 years. NY (212) 627-5803 or CA (213) 877-5012.
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- An extensive line of light weight, all aluminum decorative lamp posts.
- Available for either anchor base or direct embedded applications.
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Architectural Woodcarvings crafted by **Raymond Enkeboll Designs.** Color catalog showcases over 500 capitals, corbels, moldings, onlays, stairparts, panels etc. Stocked in maple and Red Oak. Bound Catalog $20., Special Binder version $30. Complimentary Brochure available. Visa/MC/Amex welcome. Raymond Enkeboll Designs, 16506 Avalon Blvd. AT67, Carson, Ca. 90746. Phone: (310)532-1400 Fax (310)532-2042
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Buckingham-Virginia Slate has been sheltering America for over two centuries. As a roofing material, it is prized for its high mica content, natural cleft and texture, as well as its non-fading and distinctive handmade quality. Because of its permanence and natural beauty, Buckingham-Virginia Slate was specified by Thomas Jefferson in the 1800's and remains today the roofing choice of eminent architects. For information call 1-800-235-8921, or write Buckingham-Virginia Slate Corp., P.O. Box 8, Arvonia, VA 23004
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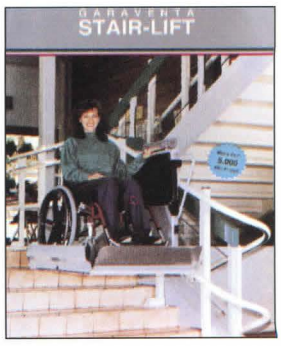
Garaventa (Canada) Ltd.



Unlimited access to innovative designs—Specifically designed to withstand the rigors of public use. Garaventa Stair-Lift is ideal for a variety of indoor and outdoor applications. With thousands of lifts installed around the world, Garaventa is the number one choice in stairway access. Call for your free information package today. **1-800-663-6556.** Garaventa—your accessibility experts.
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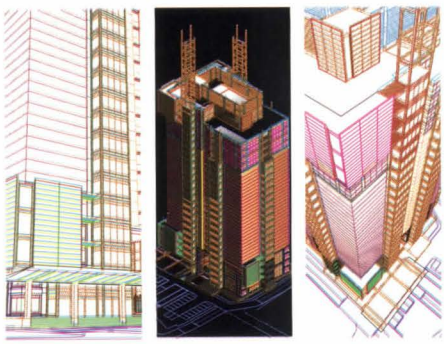

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It runs fast. Faster than Release 12 DOS. Much faster than Release 13. You save time.

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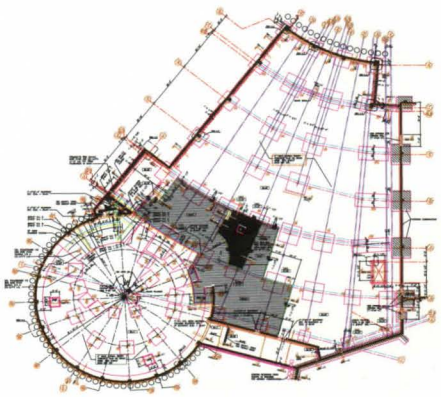

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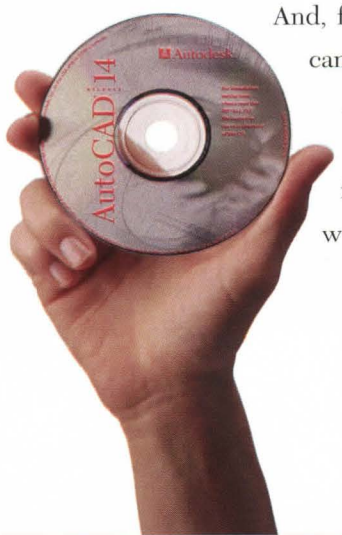

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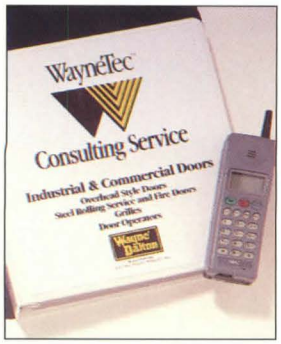
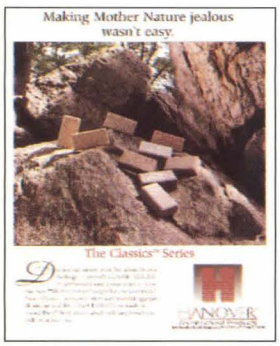


Specification made easy— WayneTec™ Consulting Service provides *free* door selection service for industrial/commercial upward-acting doors, plus AutoCad® design details and CSI-formatted specifications. Just complete simple Spec-A-Door™ forms, then fax them to our toll-free number. Results are faxed back for immediate reference, usually within 24 hours, followed by a hard copy in the mail. Call toll-free: 1-800-765-1457. Or write: Wayne Dalton Information Center, P.O. Box 3, Evansville, IN 47701
Circle 26.

Hanover® Architectural Products



Introduces the Classics Series™— Duplicating natural stone has always been a challenge. Hanover's CLASSIC SERIES™ of architectural unit pavers come so close that even "Mother Nature" might have to look twice! Nine different earthtoned colors and beautiful aggregate blends are available. The CLASSICS are made in several Prest® Brick shapes which will compliment any styles of architecture. For more information call 1-800-426-4242, or 1-717-637-0500 to talk to a Hanover® representative.
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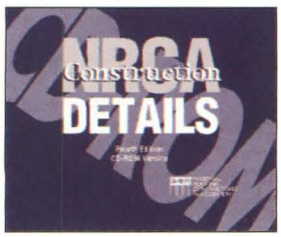
NRCA



NRCA Construction Details on CD-ROM. This disk contains more than 300 built-up roofing, modified bitumen, thermoplastic, thermoset, architectural and structural metal, sprayed polyurethane foam, and waterproofing construction details. With compatible CADD software, you can modify the details for your specific projects. The disk contains both drawing .DWG and drawing exchange .DXF files for use with AutoCad and other CADD software.
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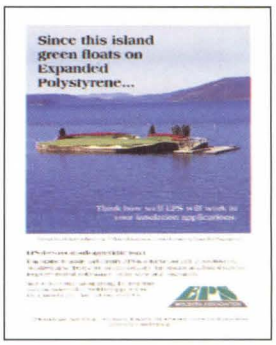
Williamette Industries, Inc.

Duraflake FR fire-rated particleboard—Duraflake FR provides Class A fire protection in wall systems, store fixtures, furniture and case goods. It has a UL flame spread rating of 20 and a smoke developed rating of 25. Its smoothness, machinability and uniformity make it an ideal substrate. It even resists warping and won't leach chemicals. Call (541) 928-3341. Sweet's Catalog 06300/WIL.
Circle 38.

EPS Molders Association



Information Resource Bulletins— EPS Molders Association serves as your source for accurate information regarding the use of Expanded Polystyrene block molded foam in all phases of residential and commercial construction. From below grade applications, to sheathing and exterior insulation finishing systems, expanded polystyrene is installed for insulation value and aesthetic appearance. New series of information now available! 800-607-EPSA.
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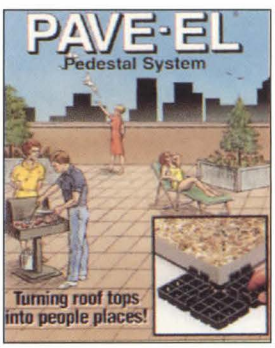
Envirospec, Inc.



Turn your roof tops into people places! New literature shows a better way to transform a roof into a patio, terrace, balcony, walk-way, plaza, podium or promenade, using the PAVE-EL Pedestal System. Designed to elevate, level and space paver stones for positive drainage in any weather. PAVE-EL reliably protects roof, paver stones, membrane and insulation. Literature available also in French or Spanish on request. ENVIROSPEC INC., Ellicott Station Box 119, Buffalo, NY 14205, Phone (716) 689-8548, Fax (716) 689-7309.
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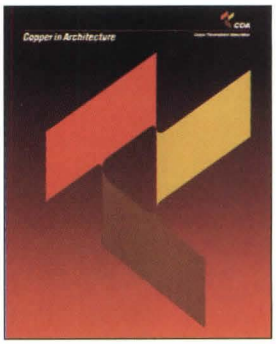
Copper Development Association



The Copper in Architecture Handbook. More information than ever assembled before on the copper metals in architecture and building construction. Contains designs, details and specifications in hard copy and on CAD diskettes. Provides abundant, practical information on physical and mechanical properties, historical applications. Copper Development Association Handbook; $85.00. Disks (4): $40.00. Copper Development Association; 260 Madison Avenue, New York, NY 10016. 800-CDA-DATA 212-251-7200
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Access Industries, Inc.

PORCH-LIFT® Vertical Platform Lifts from Access Industries, Inc. provide stairway access indoor and out for people who use wheelchairs. Lifting heights range from 1" to 144" and are available for both commercial and residential applications. Easy to install and operate, the units are space and cost efficient solutions to ADA compliance. Call 800-276-7693
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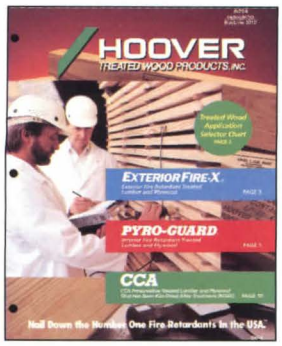
Hoover Treated Wood Products



Fire Retardants and Preservatives—New 12-page Sweet's catalog features *Pyro-Guard®* interior type fire retardant lumber and plywood for roof systems and other interior structural uses; *Exterior Fire-X®* FRT lumber and plywood for decks, balconies, siding and other exterior uses; and *CCA/KDAT* preservative treated lumber and plywood that's kiln dried after treatment, from Hoover Treated Wood Products Inc., the USA's largest producer of fire retardant treated wood.
Circle 42.

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America's Indoor-Outdoor Ceramic Tile® Metropolitan quarry is the floor covering of choice for demanding applications. Available in three sizes and a number of blendable colors, for a variety of pattern options—Metropolitan is ideal for installations where there can be no compromise of looks or durability. For our latest catalog and distributor list call 1-800-325-3945.
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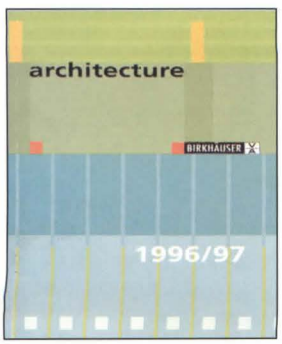
Plumberex

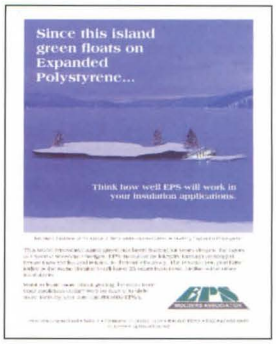
Accessible Lavatory Insulation—A full color catalog will explain the different Handy-Shield safety covers offered for the new or retrofit projects that need to comply with the American Disabilities Act. The specific use, sample specifications, drawings and color choice are all summarized in this easy to understand catalog.
Circle 50.

Birkhäuser



Birkhäuser features new beautifully illustrated and produced monographs including:
Richard Meier - Details
The Le Corbusier Guides
Josef Paul Kleihues
Building in Wood
Philip Johnson (Studio Paperback)
For our free catalog call
1-800-515-2475.
Circle 54.

EPS Molders Association



Information Resource Bulletins—EPS Molders Association serves as your source for accurate information regarding the use of Expanded Polystyrene block molded foam in all phases of residential and commercial construction. From below grade applications, to sheathing and exterior insulation finishing systems, expanded polystyrene is installed for insulation value and aesthetic appearance. New series of information now available! 800-607-EPSA.
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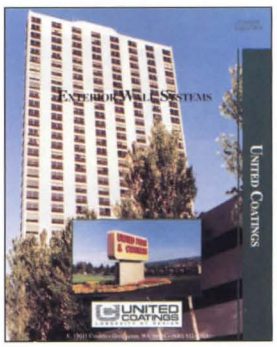
Heat-N-Glo

Three-Sided Fireplace for Unlimited Installations—Heat-N-Glo introduces model Pier TR, a three-sided direct vent fireplace that can be terminated vertically or horizontally to accommodate nearly any application. The Pier TR is perfect as a room divider, bar, end of counter or a wide variety of creative installation possibilities. As with all Heat-N-Glo fireplaces, the Pier TR can be operated by remote control for the ultimate in convenience.
Circle 48.

United Coatings



Exterior Wall Coating Systems—United Coatings, manufacturing high-quality architectural, industrial and roof coatings for over 50 years, offers three different exterior wall systems. CANYON TONE STAIN provides dampproofing and color uniformity without altering the natural surface texture, AQUATHON waterproofs with an elastomeric membrane that bridges hairline cracks, and UNI-TEX incorporates the ultimate in EIFS technology in providing a weatherproof textured finish. **United Coatings.....Longevity by Design.**
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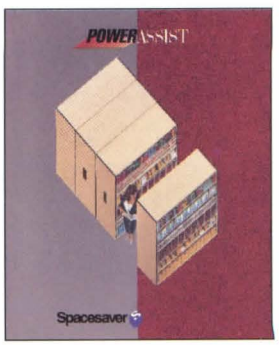
Spacesaver Corporation



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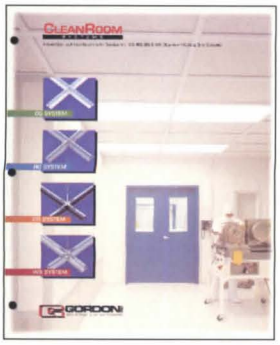
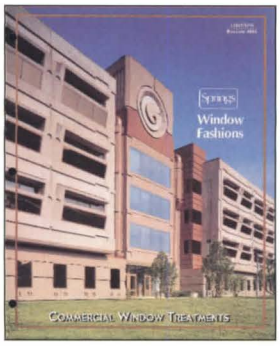
Gordon, Inc.



Extruded Aluminum Cleanroom Grid—Gordon offers a complete line of cleanroom grid systems for every application including hospitals, pharmaceutical, aerospace, food-processing and semiconductor manufacturing facilities. Call 1-800-747-8954 for more information.
Circle 58.

Springs Window Fashions



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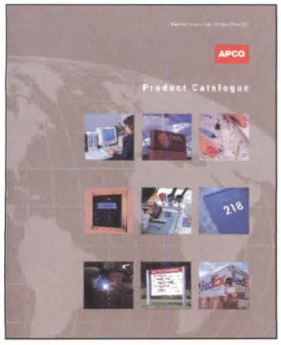

Architectural Signage—An effective sign system satisfies both aesthetic and functional needs. As a leader in the manufacture of interior and exterior sign systems, APCO offers an extensive product line designed to complement any environment. Today, as always, we strive to deliver the quality sign products and responsive customer service that have become our trademarks throughout the years. For a free color brochure, call (404)688-9000.
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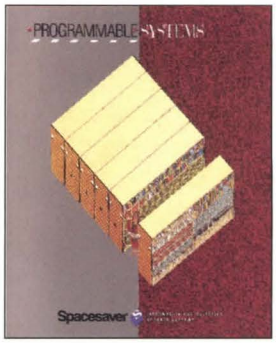

Spacesaver Mobile Filing & Storage Systems—With a Spacesaver High-Density Mobile Filing and Storage System, you can help your clients create an organized, professional image while actually being more organized as well. Face panels are available in a great variety of tasteful, coordinating colors, styles and finishes, including custom graphics. Contact a Spacesaver Area Contractor or call 800-492-3434 today!
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Elevator doors can now comply as a "tight fitting smoke and draft control assembly". The Smoke Guard System provides a virtually airtight seal without interference with the elevator hoistway door. The Smoke Guard System is ideal where space is tight and where cost, usable area, and aesthetics are important design considerations. For information and a free video call 208-383-3789.
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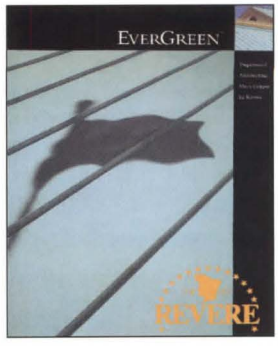
Circle 68.

Revere Copper Products



New Revere EverGreen™ pre-patinated architectural copper lets you specify the rich, warm look of patina, without waiting decades to fulfill your vision. Completely matures after four to six rainfalls. Adds striking beauty and character to any roof or accent. Call for new EverGreen brochure, Revere Copper Products, Inc., P.O. Box 300, Rome, NY 13442-0300, 800-950-1776, Fax: 315-338-2105, http://www.reverecopper.com
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INTRODUCING THE NEW STANDARD BY WHICH ALL OTHER SHINGLES WILL BE MEASURED.

Arlington *Charleston* *Cumberland* *Old Overton* *Shenandoah*

LIMITED LIFETIME WARRANTY

The ***NEW* Ambassador Shake™ FRS® Shingle** from Celotex is so revolutionary, it's a technological breakthrough. **With a patented Tri-Laminate™** construction* and the ***NEW* ColorScapes™** custom coloration technique,** Ambassador Shake is the roof you've been waiting for...that's guaranteed to last a lifetime.† *Celotex has just raised the standard. Again. Call or write for additional information: Celotex Corporation, P.O. Box 31602, Tampa, FL 33631.*

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For additional information on Ambassador Shake and other Celotex products.

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AMERICA'S SHINGLE

HOMEGUARD 10 YEAR PROTECTION

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Good Housekeeping PROMISES

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Balustrades & Columns—Melton Classics proudly introduces ***maintenance-free*** MarbleTex™ synthetic stone balustrades and ***lifetime warrantied*** columns with integral color that requires no painting. Other quality column products from Melton Classics include:

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- Hardwood Classic™ Stain Grade
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Mortar Net™

Mortar Net is placed on top of the flashing inside the cavity where it catches & permanently suspends mortar droppings above the level of the weep holes. Its patented dovetail shape & its 90 % open weave prevents mortar from forming a dam & allows water to easily move through the net & out the weeps. Available in .4"; .8"; 1" & 2" widths. It is made of non-degradable polyester or polyethylene. (800)-664-6638.
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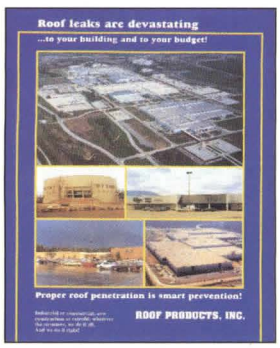
Roof Products, Inc



Roof Penetration for New & Retrofit Construction—Before you purchase or specify rooftop equipment, contact Roof Products Inc. They have the knowledge, experience and the technical staff to analyze the project and determine the best applications for a leak-free, cost-efficient job. RPI will supply the solution and the curbs, adapters, and other accessories to change equipment without disturbing the roof or substructure. 1-800-262-6669.
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Truebro

TRUEBRO manufactures a professional line of engineered under sink protection devices. The Lav Guard™, Lav Shield™ and Basin Guard™ satisfy the Americans with Disabilities Act article 4.19.4 and 4.24.6, California P.1504B, ANSI A117.1 and BOCA P-1205.4.2 code requirements. These products accommodate wheelchaired individuals access to sinks and lavatories, making those fixtures barrier-free and accessible.
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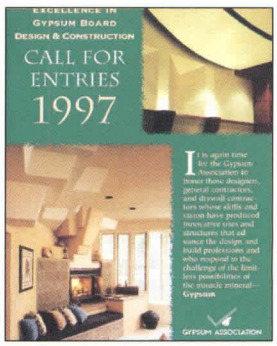
Circle 76.

Gypsum Association



Accepting entries for annual design and construction awards program, which recognizes originality, innovation and overall quality of gypsum drywall design and construction for residential and nonresidential projects. The contest is open to architects, builders and drywall contractors. Entries must be received by December 31, 1997. To obtain an entry form, contact the Gypsum Association at 810 First Street NE, #510, Washington, DC 20002. Phone: 202-289-5440. Fax: 202-289-3707.
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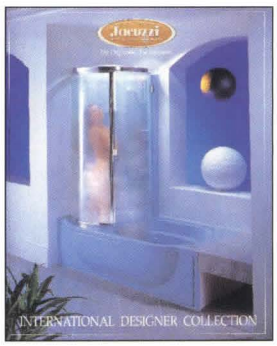

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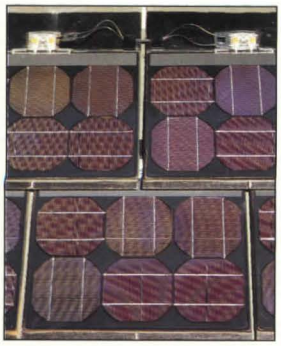

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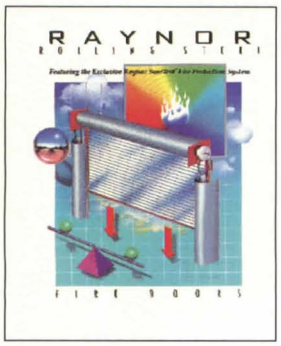

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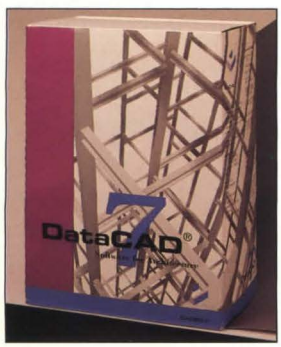

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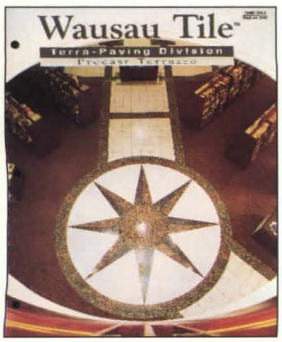

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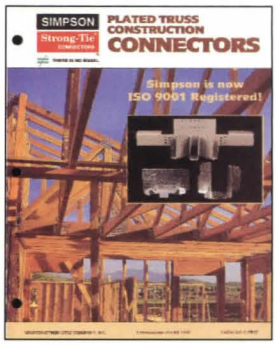

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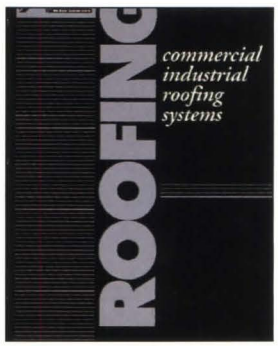

New, 1997 48-page illustrated short-form catalog features built-up roofing, modified bitumen and single ply roofing systems, insulations and accessories. Highlights materials and methods, product descriptions, technical data, specs, design and installation, with detail drawings and photos. Also includes section on reroofing. Catalog notes importance of using a single-source supplier to ensure system compatibility. Johns Manville Roofing Systems, Product Information Center, P.O. Box 5108, Denver, CO 80217, 800-654-3103, Fax: 303-978-2318
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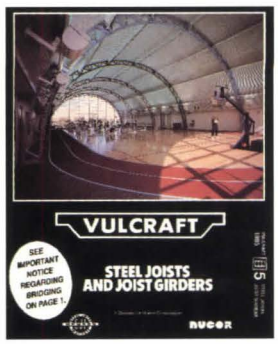

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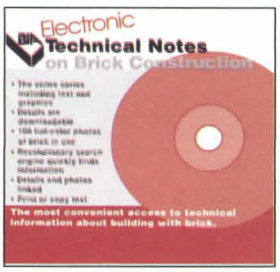

Technical Notes on Brick Construction on CD-ROM. The digitized version contains text, drawings, photographs, tables and charts on design, detailing and construction with brick. Excellent search program. Details download. 100 full color photos show brick in applications. List at $119.95; 20% professional discount. Visa/MC welcome. Brick Institute of America, 11490 Commerce Park Drive, Reston, Virginia 20191 (703) 620-0010.
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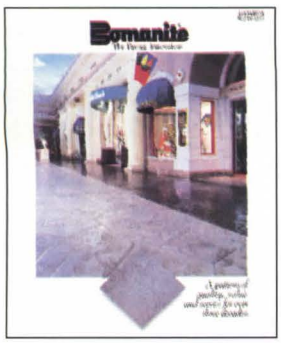

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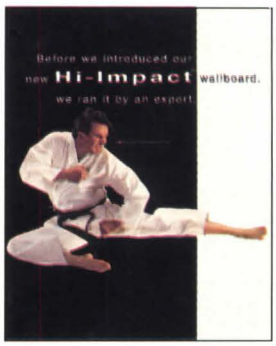

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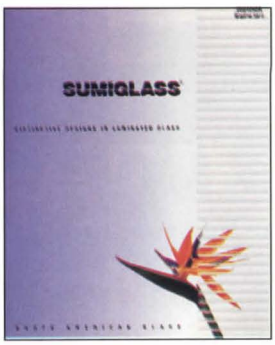

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Hurricanes and earthquakes aren't the only disasters for which architects need to prepare. Simple CAD system upgrades and contract revisions help practitioners brace themselves against the unexpected.

Technology

Hurricane-Resistant Cladding

Florida codes call for stronger windows and curtain walls to withstand wind-borne debris, but they face an uphill battle for national endorsement.

By Jack Klein

Hurricane Andrew plowed into the coast of South Florida on August 24, 1992, resulting in the worst property loss in U.S. history. Today, "the lessons of Hurricane Andrew" is a constant refrain in the building industry, underscoring the need to take preventive action before catastrophe strikes. The primary lesson to be learned and enforced through upgraded building codes is that the vast majority of hurricane damage comes not from the wind itself, but from debris driven by the wind. As a result, doors and windows are the most vulnerable components of a building envelope, and once these components fail, the entire structure *is subject to extensive damage.*

The impact of wind-borne debris on buildings has been well-documented since 1975, when a major hurricane struck Darwin, Australia. Eight years later, Hurricane Alicia caused major building damage in downtown Houston, establishing that glazing failure was not caused by the wind. Wind-borne debris—most notably gravel roof ballast from adjacent buildings—shattered the unprotected windows and curtain walls of the buildings in that city, causing the most extensive destruction.

Curtain-wall failures

"Ninety-nine percent of curtain walls utilize either tempered glass or regular window glass, materials that don't perform well in hurricanes," maintains Paul Beers, president of Glazing Consultants of Palm Beach Gardens, Florida. "The windows were always designed to withstand hurricane-force winds, but until the new codes were adopted, the flying debris which hits and breaks the glass was never taken into account."

Beers claims that most structures that experienced curtain-wall failure during Hurricane Alicia were repaired without changing materials or methods. "They used the same curtain wall as before, so when the next major hurricane hits, they'll have the same problems," he maintains. To illustrate his point, Beers shows a slide of an office building in Corpus Christi, Texas, that lost all its glass to wind-blown roof ballast from a neighboring building during a 1970 hurricane. Then, he shows a slide of the same building after another

hurricane 10 years later, again with all of its glass surfaces broken.

Hurricane Andrew was the driving force that finally jolted regulatory bodies into action to combat the destructive potential of wind-borne debris during hurricane-force winds. Leading the charge were Dade and Broward counties, areas of South Florida that suffered the most damage from Andrew.

Impact tests

In 1994, these counties modified versions of the South Florida Building Code to include protection from wind-borne debris, most specifically for curtain walls, windows, doors, shutters, and any other component that protects window and door openings. This performance standard called for all such materials and systems used within those counties to pass specific impact tests.

The two tests required by the performance standard simulate the actions of large wind-blown objects such as tree limbs and lumber from roof trusses, and the velocity of wind-borne objects such as rock roof ballast, roofing tile, and other debris. The large missile test is designed to test the durability of glazing applied to the first 30 feet of a building above the ground, while the small missile test is used for glazing installed above 30 feet.

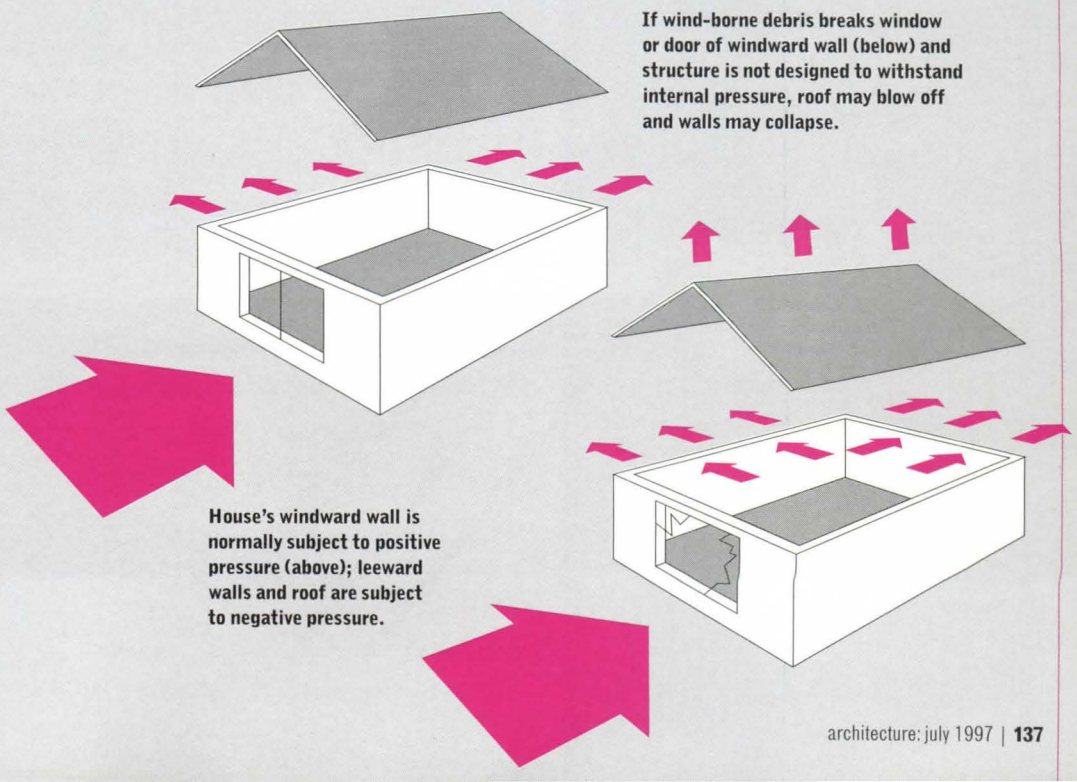
During the large missile test, a 9-pound, 2-by-4 timber is shot at a test sample from a specially designed compressed air cannon at a speed of about 34 miles per hour. If the material withstands the first test, the test is repeated. If the material holds up, it is put through a series of 9,000 inward and outward wind-pressure cycles simulating the push/pull force of the eye of a hurricane. The cycles are repeated every one to three seconds. During the small missile test, the sample is struck 30 times with roof gravel or similar material, such as ball bearings, at 55 miles per hour or higher. This sample is also put through 9,000 pressure cycles if it passes the impact test.

If the materials pass these demanding tests without breaking, they are approved for use. Any materials that fail the tests must be covered by an approved product, such as shutters or plywood, during a hurricane.

When these stringent test methods were first required by Dade and Broward counties, an outcry ensued from opponents—mostly builders and developers—who claimed the measures would add too much cost to construction, resulting in a halt to all construction. But since 1994, when the code took effect, building on Florida's Gold Coast has continued. In fact, construction is booming at almost unprecedented rates.

Defeated standard

Billy Manning served on the task force that evaluated Miami/Dade County building codes, and also helped draft the recommendation dealing with missile-impact concerns. Manning is a former director of the Southern Building Code Congress International (SBCCI) and is currently the president of National



Evaluation Services. "SBCCI was working on its standard at the same time as Miami/Dade. But Miami/Dade's government was able to mandate that code, while SBCCI, because of objections from its members, was only able to add it as an appendix," maintains Manning.

Codes and specs

SBCCI's Technical Committee recommended that the congress adopt the Dade County mandatory standard for the protection of the building envelope in high-wind zones. When the voting members of SBCCI met a month before the congress and voted unanimously to support their technical committee's recommendations, it looked as if the standard would be adopted. But protests by a powerful association lobby led the members of SBCCI to reverse their votes and defeat the measure.

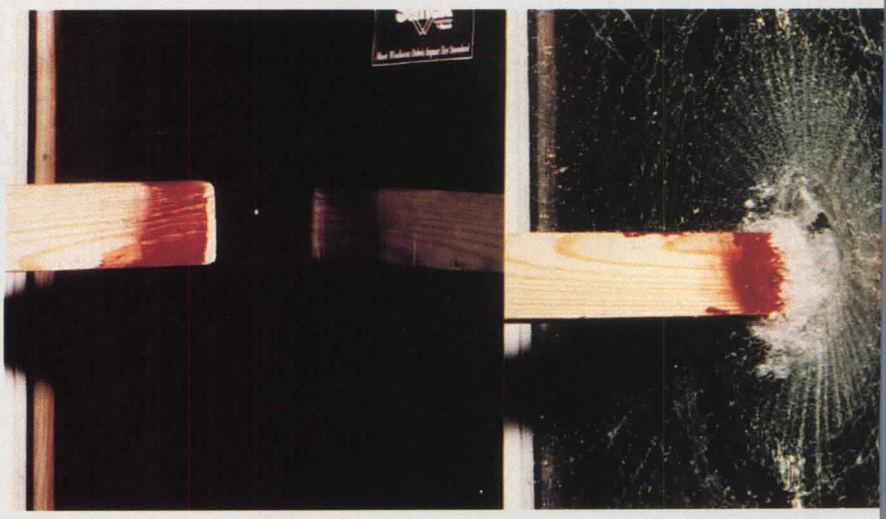
The other two code bodies, the Building Officials and Code Administrators (BOCA) and the International Conference of Building Officials (ICBO), have yet to address the issue of impact testing. BOCA, with jurisdiction in the Northeast and portions of the Midwest, does deal with it in a roundabout way. BOCA has adopted code language specifying that buildings in high-wind zones (speeds over 110 miles per hour in three-second gusts) must be designed to withstand the internal pressure when doors or windows fail during hurricane winds. Architects have the choice of protecting the envelope of the building or designing the building for higher loads on the inside of the building, assuming the doors or windows will fail.

However, BOCA and ICBO may be forced to incorporate measures to prevent damage from airborne missiles in the future with the passage of the new International Code, which will combine BOCA, ICBO, and SBCCI codes. "I think that when the wind-load issue is dealt with by the International Code, the missile issue will also be addressed," says Manning. "Whether the missile protection will be adopted as part of the wind-load provisions is hard to tell, though. We may still end up with it in the appendix and let it go at that."

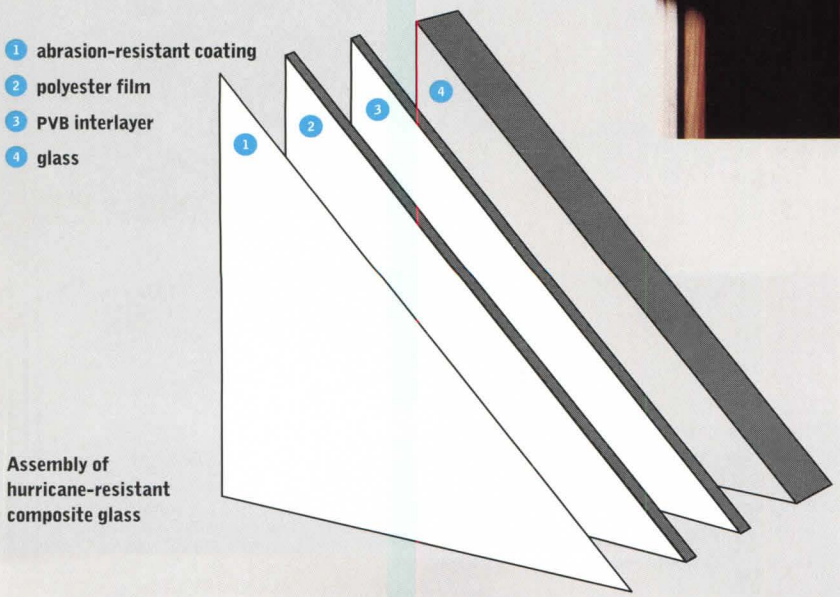
New standards

David Hattis is cochairman of the ASTM 06.51.17 Task Group, created in 1994 to develop impact standards for fenestration. Hattis basically agrees with Manning's assessment of the International Code. "Our task group has adopted a standard test method for the ability of fenestration to resist the impact of debris in windstorms. It became a standard ASTM test method in May," he relates.

A standard specification is also being developed by ASTM that will detail some of the parameters called for in the standard airborne missile test method, including wind speeds,

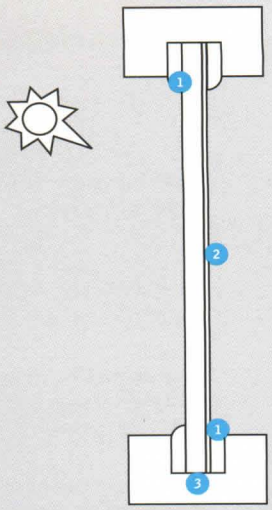


During large missile test, 9-pound 2-by-4 is shot at 34 mph by air cannon directly at laminated-glass system (above left). Missile strikes glass and shatters it (above center). PVB interlayer of laminated glass holds shattered glass together, maintaining glazing system's integrity (above right).



Assembly of hurricane-resistant composite glass

caulking
mposite, with abrasion
on exterior face
block



Section of hurricane-resistant glazing

building types, and the height of the fenestration off the ground. Hattis anticipates the specification will be completed in two years. He believes that a way to codify the ASTM missile impact test method and standard specification is to reference or partially quote it in ASCE-7—a standard outlining the minimum design loads for buildings and other structures, as established by the American Society of Civil Engineers.

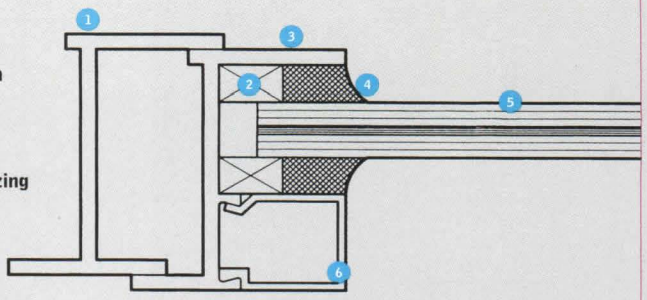
Design considerations

What do these tests and code revisions mean for architects? The code findings can be broken down into relatively simple terms. Buildings are most vulnerable at their openings: windows, doors, and curtain walls. Wind-blown debris during a hurricane is the major source of failures of these openings. Currently, the two most effective means of protecting windows and doors from wind-blown debris are by installing shutters that have passed impact tests, or by specifying windows that meet the same testing criteria. Shutters may be a practical option for small-scale residential and commercial buildings, but impractical for high-rise structures.

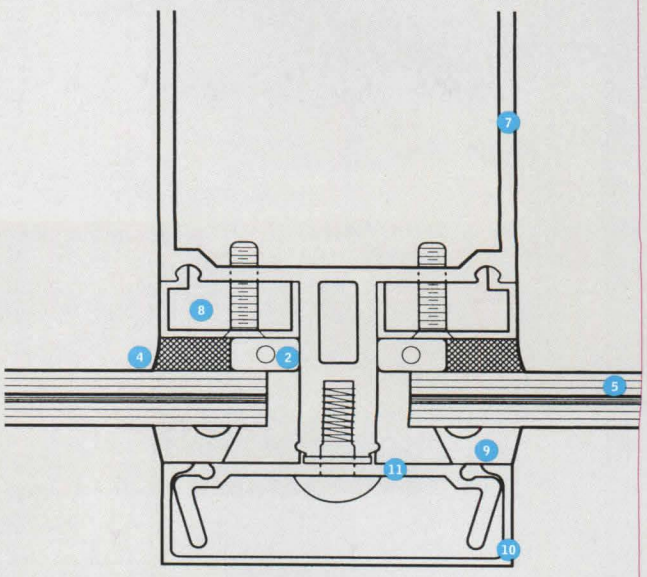
Fortunately, architects still have design flexibility in specifying laminated glass windows and curtain walls that have passed impact tests; designing hurricane-resistant structures doesn't require erecting a bunker. One example is the State of Florida Emergency Command Center in Tallahassee, which is touted as the strongest building in Florida. The single-story building, designed by Tallahassee architect Johnson/ Peterson and completed last July, is designed to withstand even the most severe hurricane, and will serve as a base of operations and communications for the governor, media, and others during a natural disaster.

Johnson/Peterson specified lami-

1. aluminum frame
2. continuous glass shim
3. ventilating sash
4. glass "anchor"
5. impact-resistant glazing
6. aluminum stop
7. aluminum mullion
8. glazing adapter
9. glazing gasket
10. snap-on cover
11. pressure bar



Window with impact-resistant glazing



Curtain wall with impact-resistant glazing

nated glass windows, along with an 18-gauge aluminum standing-seam roof, a 20-gauge structural metal deck supported on steel joists, and heavy doors with a three-part latching system to reinforce the building. During a hurricane, the laminated glass windows act like the glass in automobile windshields when struck by a wind-borne object. The glass may shatter, but the individual shards are held together by a durable PVC or poured-resin interlayer inserted between the sheets of glass or fastened to its outside surface. The interlayer allows the window to absorb the shock and flex under the impact. If the window is fastened securely by the frame, the integrity of the envelope will be maintained.

Proper framing

The strength of the window frame is as important as the glass itself; if the frame fails to hold the window in place after it has been struck by flying debris, the resulting damage to the building could be extensive. To ensure the integrity of the entire cladding system, window frames should be tested alongside the glass.

Structurally glazed systems, in which the edges of the glass are not held within a frame, have proven ineffective during the wind-cycling part of the airborne missile test, since there is little or no structure to hold shattered glass in place. Conventional, framed glazing systems have performed the best during hurricane testing, since their pressure plates and silicone seals retain the glass well. Many companies now offer window systems that have passed the airborne missile test.

Jack Klein is a Tampa, Florida-based freelance writer specializing in construction, engineering, and environmental issues.

For information on hurricane-protective products and building codes, contact:

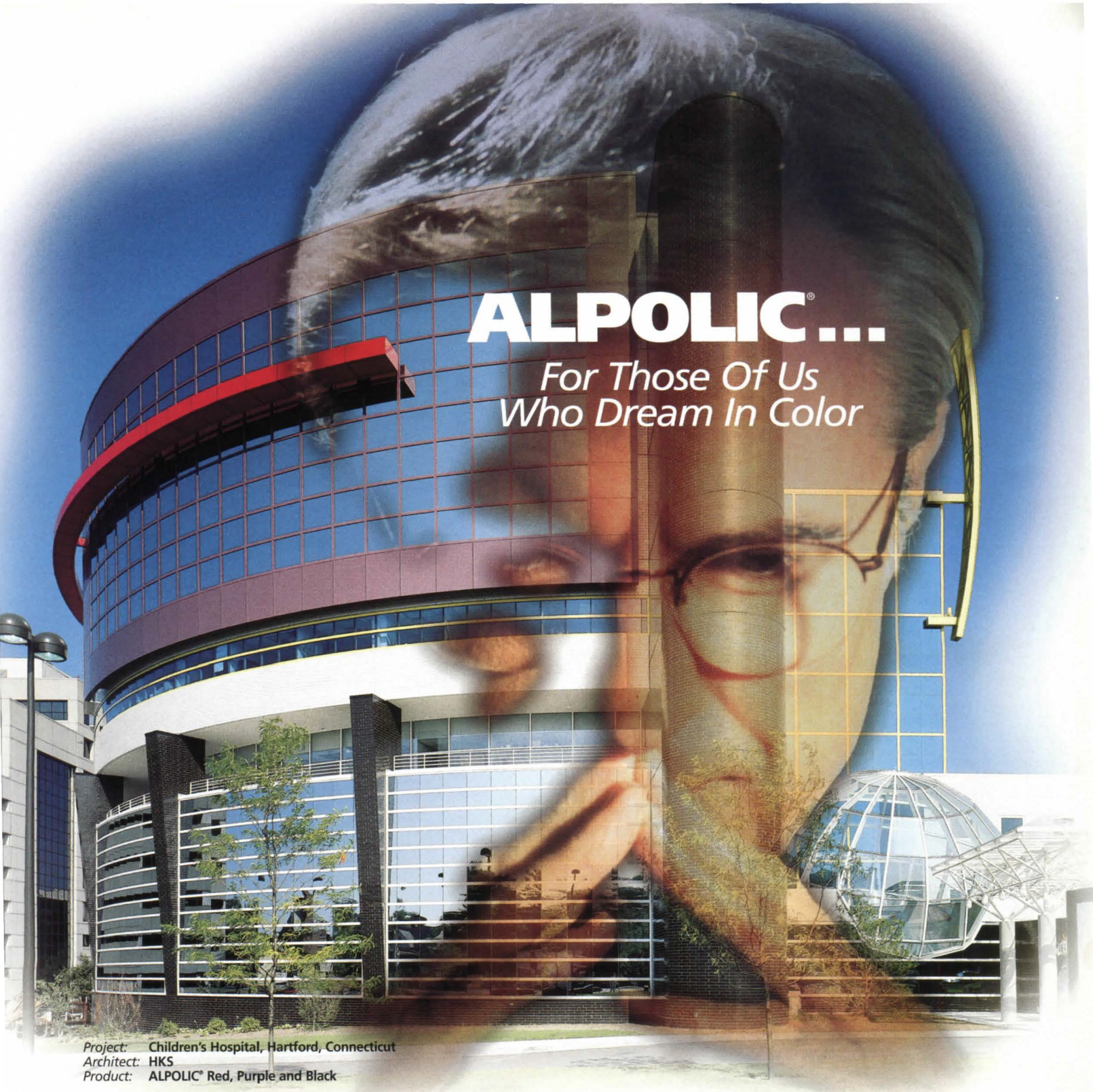
Metro-Dade County Building Code Compliance Office
(305) 375-2901

Building Officials and Code Administrators
(708) 799-2300

International Conference of Building Officials
(800) 284-4406

Southern Building Code Congress International
(205) 591-1853

New codes in Florida require architects to incorporate impact-resistant glazing on every surface more than 30 feet above grade, such as those at Brito Cohan & Associates' Oceania Condominiums in North Miami (left), and the Champlain condominium complex in Miami Beach (below), designed by William Friedman & Associates.



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The U.S. Court of Appeals in San Francisco floats on seismic isolators to ensure the future of its newly restored splendor.

By Aaron Betsky

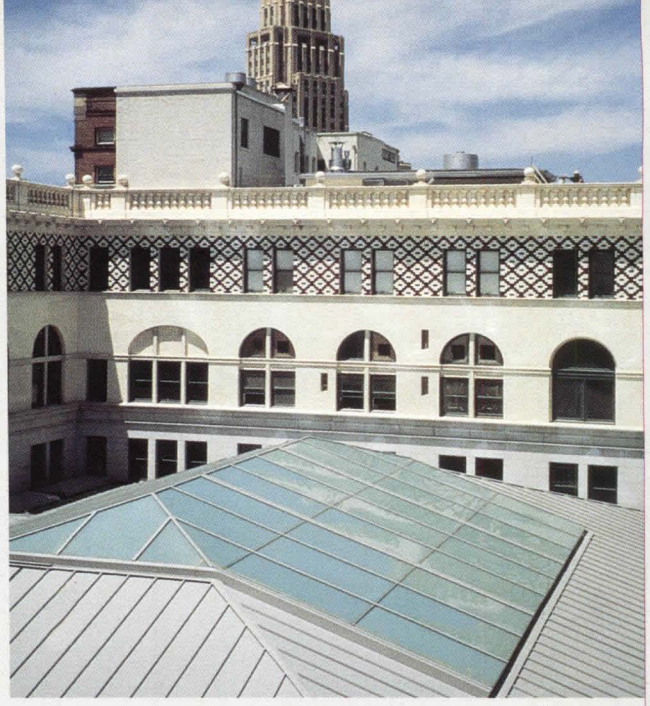
From the outside, the U.S. Court of Appeals in San Francisco looks like any other Classical palace of justice, its granite front newly resplendent and cleaned to within an inch of its 92-year life. Come the next "big one," though, you might see the whole building move as much as 24 inches over the sidewalk above a thin line that encircles the whole structure just below knee height. "As long as you stand back, you'll be fine," maintains Skidmore, Owings & Merrill (SOM) Partner Craig Hartman. The building may move, but it will still stand, he predicts. That is because hidden in its basement are 256 friction pendulum base isolators, concave stainless steel disks on top of steel constructions. Each of the building's main structural columns was cut and fitted with a flattened ball bearing at its base. They were then raised on hydraulic jacks, and the new bases were constructed underneath the columns. As a result, the whole building will move as one unit on this series of plates, should an earthquake hit. Because of the disks' concavity, the building will rise slightly, thus slipping over the "apron" around its perimeter. In laboratory tests at the University of California, Berkeley, the structure easily withstood an 8.0-magnitude earthquake.

Cause for restoration

Standing up to the traumatic geological episodes that are all too common in California generated

Designed by James Knox Taylor and built in 1905 for $2.5 million ($40 million today), the 365,000-square-foot U.S. Court of Appeals Building originally incorporated San Francisco's Main Post Office.

Granite was cleaned with mild soap-and-water solution. Bronze lanterns, replicas of designs for Palazzo Strozzi in Florence, were cleaned and outfitted with new electrical wiring.



Glazed brick and multicolored tile were resurfaced with a breathable masonry coating. New laminated and insulated-glass skylight and batten-seam aluminum roof replace roof of post office sorting room in courtyard.

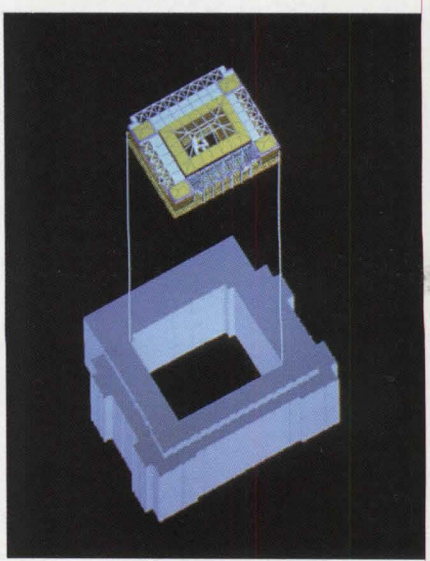
not only this innovative "base isolation" technique of seismic reinforcement, but also became the impetus for a $91 million combination of meticulous historic renovation and adaptive reuse for this 1905 structure. The Court of Appeals was "red-tagged" (declared unfit for occupation) after the 1989 Loma Prieta earthquake, and the General Services Administration (GSA), which owns the building, was faced with the task of making it habitable.

Preservation first

Because the court was listed on the National Register of Historic Buildings, it had to conform to all Secretary of the Interior regulations governing renovation. All seismic reinforcement had to be designed in keeping with the original structure, and all new elements had to be clearly identifiable as such.

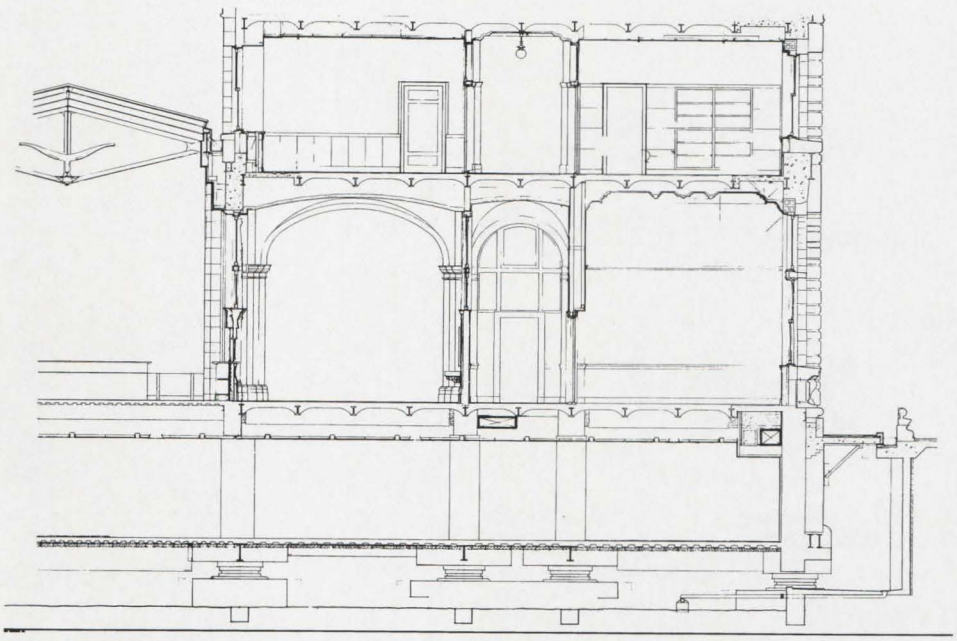
In addition, the judges of the Ninth District Court of Appeals (the nation's largest) needed more room for chambers, administrative offices, and their law library. To find additional room, the architects took over what had been the central courtyard space once occupied by the U.S. Post Office, which shared the 365,000-square-foot structure with the court when it was constructed. They turned this atrium into the library reading room, and converted the basement into stacks, offices, and secure parking for the judges. The original building, designed by James Knox Taylor for $2.5 million, as well as a 1933 addition, had to be brought up to new codes and standards for accessibility, security, and comfort without its historic character disappearing in the process.

The structural and spatial changes of this adaptive reuse were



SOM reconfigured sorting room as law library. New skylight and civic function of library echo space's original purpose.

Bronze chandeliers in main hallway (above) were created using turn-of-the-century photographs. Postal windows were glazed to separate law library beyond from main corridor. Courtroom added in 1933 (above right) is known as "fascist room" because of swastikalike motifs and gilt-plaster eagles. All wood, plaster, and stone was cleaned, and new electrical, security, and air-handling systems were added.



East-west section through library and west wing

Elaborate redwood carvings required only a light cleaning.

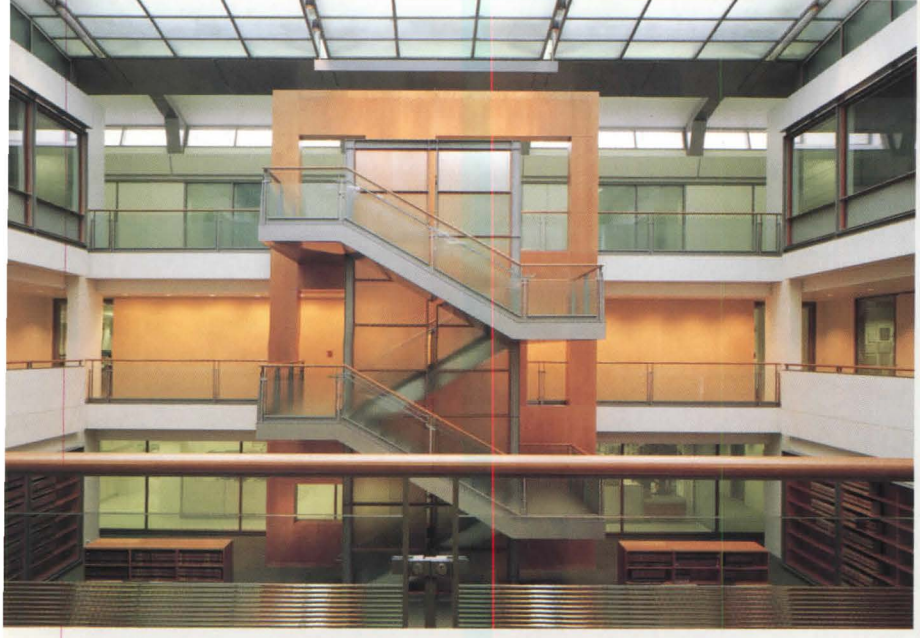
completely integrated. "We think of it as a nested box approach," explains Hartman. The library's new glass roof is a set of articulated steel members that form a web. "By separating the members in tension from the ones in compression, we could let in more light, not only into the library itself, but also into the surrounding offices. In the process, we made it clear what was new and what wasn't," says Hartman. This structure acts as a diaphragm tying together the existing walls across the 185-foot-long-by-155-foot-wide-by-43-foot-high void at the heart of the building, so that the whole court now acts as a unit floating on its base isolators. The library, which the public enters through what were once the clerks' windows in the post office, maintains a public heart to the building. Underneath fritted glass skylights, it reveals itself in a clearly new guise of cherry panels, "blades" of gray-painted steel that form window panes, and monumental set pieces such as a steel stair and two free-standing, cherry-clad bookcases that frame the main reading areas.

Though this was the main extent of the adaptive reuse program, it was not the end of SOM's structural insertions. "In using the base isolators,

we found an extra 40,000 square feet in the basement by being able to get away with a lot fewer shear walls," says GSA Project Architect Mark Tortorich, adding that friction pendulum isolators have never been previously applied to an historic building, and they cost about 10 percent more than conventional strengthening techniques. Some shear walls were still needed, and their 2-foot thickness cuts through several of the historic offices. "Where we had to insert them, we removed the original wood and marble paneling, restored it, and replaced it," Tortorich explains. Though some of the smaller offices are even smaller as a result, the architects managed to minimize the shear walls' impact. They also used existing fireplace flues for new mechanical risers and ran the "miles and miles of new conduit" Tortorich says were needed for the new data and security systems through the shear walls, up the flues, and through existing mechanical chases. The only other clearly new pieces in the building are a few carefully concealed registers, lighting sconces, and security cameras, as well as new carpets and furniture in the offices. Particularly notable are the enlarged benches in the courtrooms, because

Ornamental banding enlivens porcelain mosaic in third-floor Great Hall.

Courtroom One celebrates California agriculture in marble, plaster, and mosaic lunettes. Original skylights were uncovered and cleaned, and new bench for appellate judges was designed.



New law library with grand staircase forms building's main public space in former sorting room. Maple, glass and painted steel identify renovation's new elements.

the originals were designed for trial juries in front of a single judge, rather than appeals hearings with a full panel of judges.

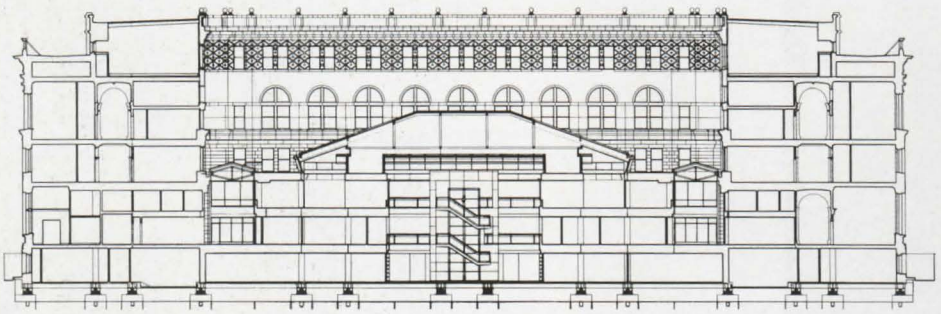
Interior refinishing

The remainder of the architect's work was a meticulous restoration of the existing splendor of the building. In some places, that meant filling wall cavities with concrete to strengthen them, uncovering the skylights that blanket the top floor, and cleaning historic finishes. For example, some plaster was recarved to match the existing depictions of artichokes, acorns, and other native fruits that adorn the tops of pilasters. Mosaic tiles were inserted where they had fallen off the many murals, and missing marble panels were matched to the originals. "A lot of it was just getting rid of avocado paint and metal skylight covers," says Tortorich. In one particularly ornate conference room, a wooden owl that had been stolen was recarved to join its fellow fowl.

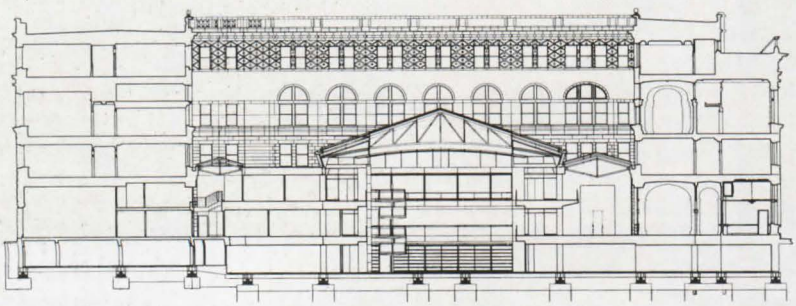
The effect is nothing short of sumptuous. "This building had a kind of San Francisco quality of being really over the top in terms of the materials that were used," says Hartman. "It was really flamboyant." Italian Carrara, Georgian, and Maine marbles; wood ranging from simple oak and redwood to rich maple, cherry, and mahogany; and polychromed tile work abound in the interiors. All of it was fully cleaned, restored, and shined to a luster it had not seen since the building's opening day. "It gleams even more because we brought in so much daylight," says Hartman. "That is really the biggest contrast between the way we found the building and what you see today—the sense of light." The daylight that enters through the courtyard, the newly uncovered and cleaned skylights, and the tall windows is supplemented with bare incandescent lightbulbs ("remember, electricity was a new, exciting thing when they built this," Hartman notes) and elaborate cast and spun bronze pendant lamps, some of which the architects had fabricated to duplicate missing fixtures depicted in historic photographs.

If this seems like a lot of work for a people's court, Tortorich sees that

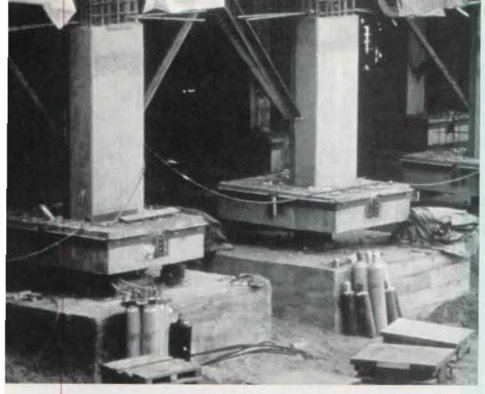
Law library's reading room stretches between monumental cherry bookcases containing seldom-used volumes. Steel web supporting skylight frames new walls and ties existing parts into single diaphragm. Extensive daylight-simulation testing determined frits of skylight glazing.



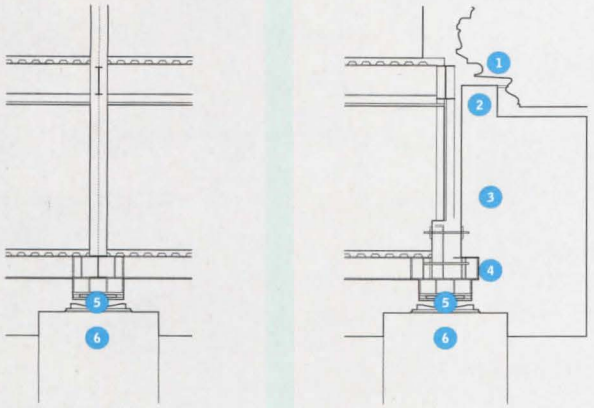
North-south section through library



East-west section through library

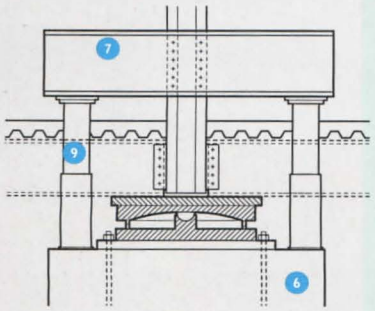


Court building floats on 256 friction pendulum bearings (above and below). Structural columns were cut at bases, lifted hydraulically, and fitted with concrete foundations. SOM studied three column-jacking options (bottom), but chose concrete for compatibility with old and new materials.

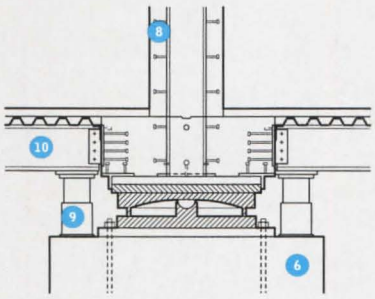


Section through bearings at center and perimeter of building

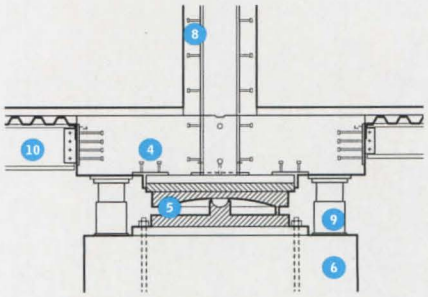
1. 3"-thick granite ledge stone moat cover
2. 14" space for lateral movement
3. moat
4. concrete jacking block
5. friction pendulum isolator bearing
6. foundation mat with cap/platform
7. steel jacking frame (temporary)
8. concrete surrounding existing steel column
9. pneumatic jack
10. steel framing for basement floor



Steel column jack



Steel-concrete column jack

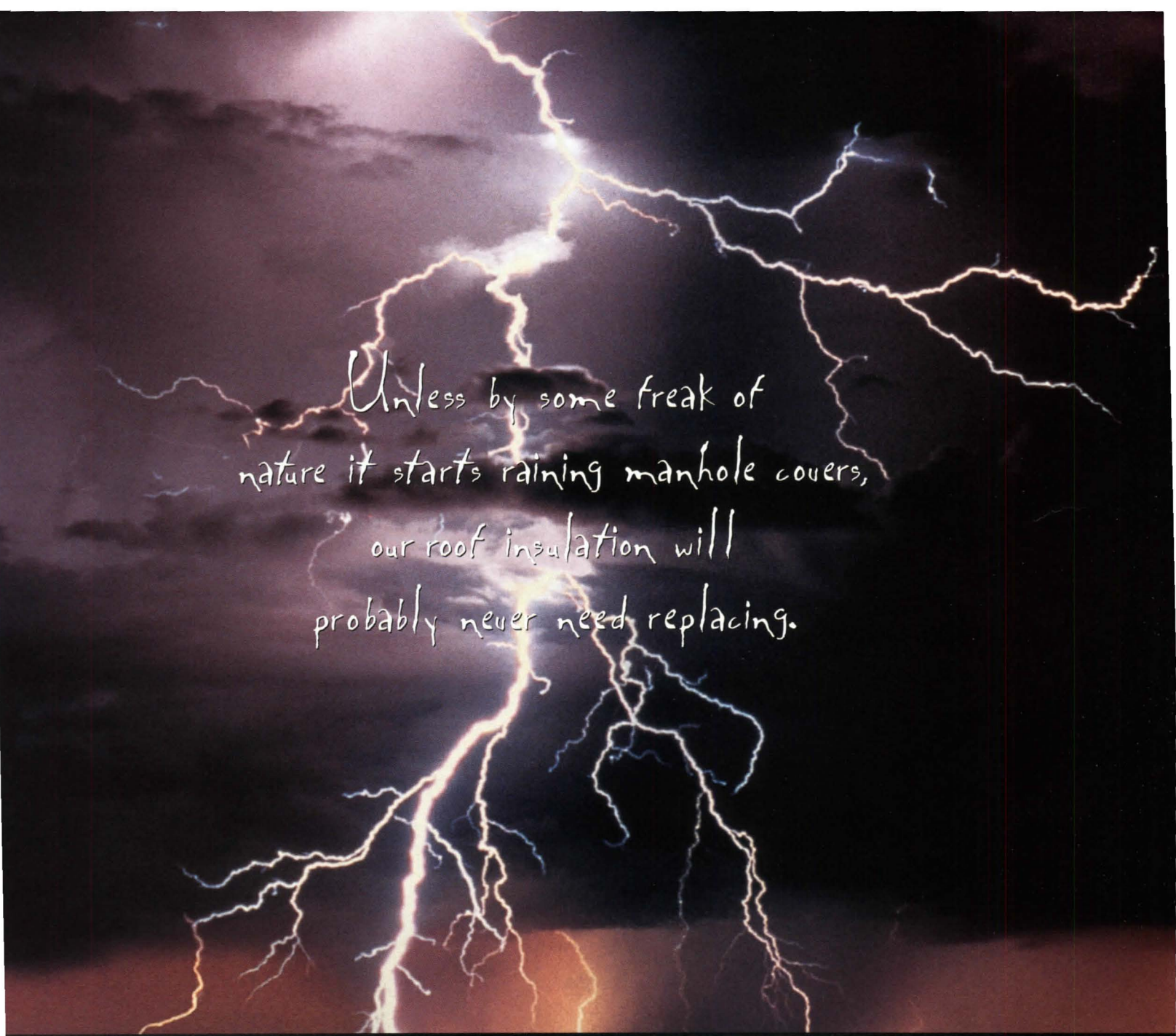


Concrete column jack

amount of attention as appropriate: "Remember, this is not just any court. It is an appeals court. It is a place where precedent is set. Substantial business takes place here, and the judges feel that the quality of the courtrooms sets a sense of decorum for the attorneys who argue here. Also, the building has been here for almost 100 years, and we expect it to be here another century. When you take that kind of long view, you begin to look harder at the architecture. You can see an architecture steeped in precedent, as the law is steeped in precedent. This *is a natural fit.*"

Hartman agrees, adding that "we designed this renovation so that history reveals itself in layers, from the old, grand outside to the light, modern interior." There, the ritual of the past gives way to the actual substance of the law, its rules, regulations, and precedents abstracted into the law books and the new library that contains them. The whole construct—from the great edifice of the past looming over the street to the ornate spaces of ritual where law is discussed—floats on its ingenious, hidden isolators, serving, protecting, and preserving the place of law in the heart of San Francisco.

U.S. COURT OF APPEALS, SAN FRANCISCO
ARCHITECT: Skidmore, Owings & Merrill, San Francisco—Craig Hartman (design partner), Carolina Woo (managing partner), Ed McCrary, Fred Powell (project managers), Sharon Cox, Steve Weindel (senior designers), Dimitri Avdienko, Chanda Capelli, Leo Chow, Wendy Chu, Amy Coburn, Jim Degener, David Diamond, Scot Dinsmore, David Horsley, Saturo Kato, Nora Klebow, Mike McCone, Tom McMillan, Jessica Rothchild, Hector Rubio, Philip Snyder, Elaine Stone, Henry Vlanin (project team), Tamara Dinsmore (interiors), Lonny Israel (graphics), Navin Amin, Hamid Fatehi, Peter Lee, Anoop Mokha, (structural engineering) ENGINEER: Flack + Kurtz Consulting Engineers (mechanical, electrical, plumbing) CONSULTANTS: Claude Engle (lighting), Page & Turnbull (historic architecture) GENERAL CONTRACTOR: Clark Construction COST: $91 million PHOTOGRAPHER: Abby Sadin



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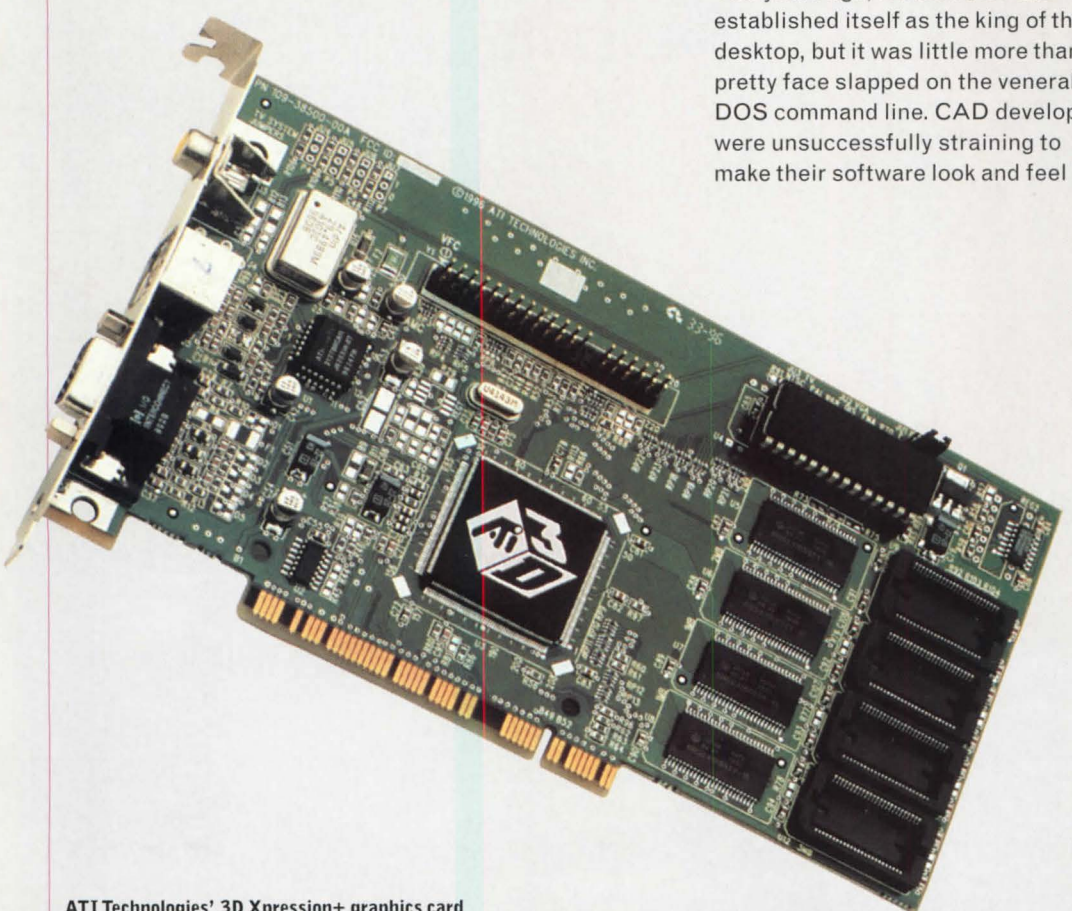
Upgrading Systems

Keeping a two- or three-year-old CAD workstation productive in the design studio requires a few simple enhancements.

By Bruce Palmer

Seems like just yesterday. It was 1995, the recession was over, and times were good. You had just purchased your first Pentium computer, and looked forward to zooming through CAD drawings and casually flipping between programs. Less than a thousand days later, that same computer is a paperweight. The once cavernous disk is full to the brim, eternity passes while the screen is repainted, and the disk-activity light shines in perpetuity.

Why is the computer that was so responsive a few years ago so slow today? Owing to advances in software development, and more than a little sloppy programming, a computer's performance actually degrades slowly over time. Understanding the source of this decline is little consolation for the owner of a PC that still seems new, yet is approaching the end of its useful life. The problem is compounded if the machine is not yet paid for. What are the options? How much money must be spent on an aging computer to keep it on the job for just a few more months?



ATI Technologies' 3D Xpression+ graphics card *enables full*-screen television display.

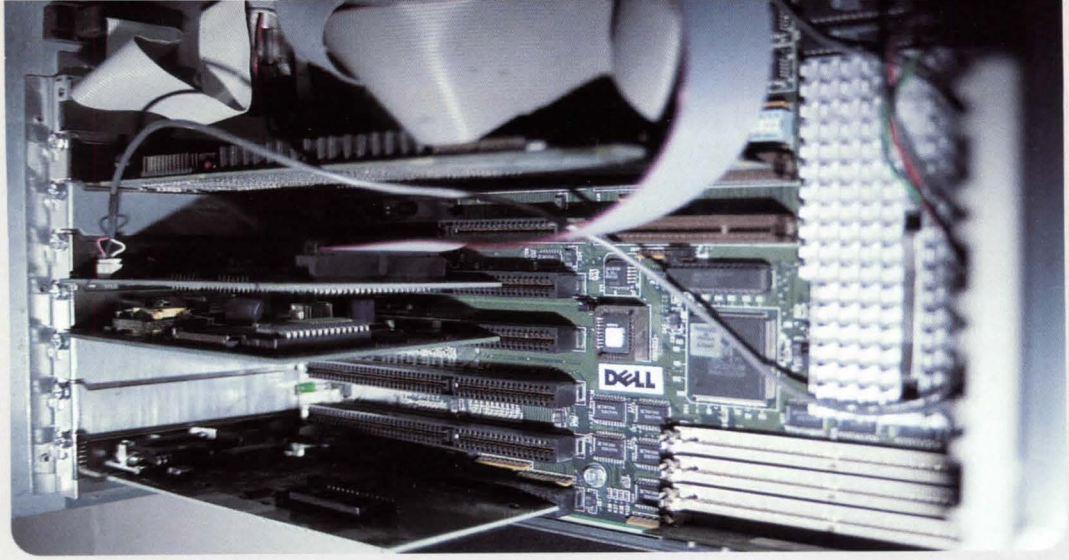
Upgrade and clean house

The first step is to upgrade to Windows 95, if you haven't already. Two years ago, Windows 3.1 had established itself as the king of the desktop, but it was little more than a pretty face slapped on the venerable DOS command line. CAD developers were unsuccessfully straining to make their software look and feel like Windows. Programs needed every byte of available memory and CAD users realized that they had none to waste to doll up the operating system. Things are different today. Windows 95 is a mature operating system, and CAD programs are optimized to exploit the advantages of the Windows environment.

The $100 investment required to upgrade to Windows 95 provides immediate payoff. Windows 95 makes any given machine faster, and this successor to Windows 3.1 eliminates most of the legendary hassles associated with earlier versions of the operating system. And forget about Windows NT for now. Windows 95's industrial-strength sibling is harder to administer and probably too much for an old computer to handle.

If you are already running Windows 95, a significant speed boost can be obtained from some simple housecleaning. A computer that's been around for a few years can accumulate an unbelievable amount of flotsam and jetsam. Artifacts are left behind each time a program is removed from the system. Over time, this accumulation takes its toll on performance. To minimize this effect, delete the superfluous data and programs and make sure that at least 10 percent of your disk drive's capacity is free. The drive should also be optimized by running the "disk defragmentation" utility included with Windows. For maximum benefit, back up the computer and reformat the system drive. Reinstalling Windows 95 and only necessary programs wipes the slate clean. The effort will take several hours, but can result in a 15 percent performance increase.

One of the less apparent benefits of upgrading to Windows 95 is the DriveSpace disk-compression



Adding memory and a graphics card gives new life to an old PC.

feature. Unlike earlier utilities of this type, DriveSpace doesn't result in a noticeable decrease in performance. Kick off the program, and two hours later your disk drive holds twice as much. "DriveSpace is essentially a free hard-drive replacement," claims Greg Shunick, principal of Manhattan Studio in New York City.

Add memory

Adding random access memory (RAM) to your system is the best strategy to beef up a computer that is starting to show its age. Like being too thin or too rich, you can't have too much RAM. Fortunately, memory prices have plummeted so it no longer requires a second mortgage to max out a system's RAM.

Software is bigger than it used to be and the data files have bloated as well. The days are gone where CAD programs run well with 16 MB of RAM. Consider 32 MB the minimum and go up from there to the limits of your system and your wallet. You won't be sorry. CAD programs thrive with increased RAM. Installing memory modules, the little boards with memory chips on them, couldn't be easier. They snap right into place and require no software configuration. The benefit will be obvious immediately. You will be able to run more programs at once, and it will be easier to work with large files. But be careful purchasing memory. Although there is little difference between products of different manufacturers, there are varying specifications. Ensure that the RAM you buy is compatible with your system.

Expand with graphics cards

Specialized graphics adapters can really pep up a computer used for intensive CAD work. Also known as graphics cards or accelerators, these expansion boards can make a big difference, especially if you like swapping between programs or zooming in and out. Although the benefits may not be as apparent while working in spreadsheets or Web surfing, you'll notice the difference the first time you update the screen in a CAD file.

"Graphics accelerators ease the processing burden of the CPU by handling display functions," notes Debbie Hynes of Matrox Graphics, makers of the popular Millennium graphics accelerator. "They also enable more colors, higher resolutions, and faster refresh rates."

The technical specifications of graphics cards can be daunting. Of most importance are the refresh rate, the resolution, and the color depth, which determines the number of colors that can be displayed. The refresh rate is the frequency with which the screen image is retransmitted to the monitor from the graphics card. A high refresh rate reduces noticeable flicker and lessens eye strain.

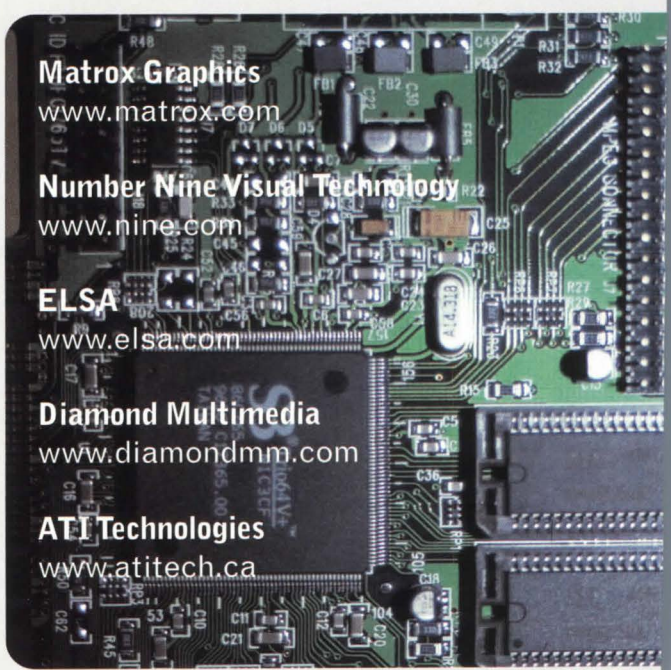
The quality of the display is dependent on the resolution and number of colors supported. The best graphics cards combine high refresh rates with millions of colors at high resolutions. The tricky part is obtaining, installing, and configuring the appropriate software driver for your CAD program.

Upgrading at a Glance

Task	Time	Cost	Benefit
Clean and and defragment hard drive	1 hour	Free	Cleaning out and defragmenting the hard drive is simple, fast, and free and results in a faster machine.
Format and reinstall software	3 hours	Free	Reinvigorating a sluggish PC takes time and moderate effort, but costs nothing.
Add memory (16/32MB)	15 minutes	$100 - $200	Adding memory is inexpensive and provides immediate results. It's the best bang for the buck.
Add graphics accelerator	2 hours	$200 - $600	A graphics accelerator is a must for modelers. Installing the card is fairly easy; installing the driver is more difficult.
All of the above	5 hours	$300 - $800	Housekeeping functions and add-ons yield as close to a new computer as you can get without buying one.

A Guide to Graphics Cards

Manufacturer Card Name	Maximum Resolution	Maximum Colors	Standard/Max. Memory	Price	
Diamond Multimedia Stealth64 Video 2001	1280x1024 w/256 colors	16.7M at 800x600 res.	1MB/2MB	$79	ENTRY LEVEL
ATI Technologies Video Xpression	1280x1024 w/16 colors	16.7M at 800x600 res.	1MB/2MB	$89	
Number Nine Visual Technology 9FX Reality 332	1024x768 w/256 colors	16.7M at 800x600 res.	2MB/2MB	$99	
Matrox Graphics Mystique	1600x1200 w/65K colors	16.7M at 800x600 res.	2MB/8MB	$129	
ATI Technologies 3D Xpression	1600x1200 w/65K colors	16.7M at 1280x1024 res.	2MB/4MB	$165	
Diamond Multimedia Stealth 3D 3000XL	1600x1200 w/65K colors	16.7M at 1280x1024 res.	2MB/4MB	$170	
Number Nine Visual Technology 9FX Reality 772	1600x1200 w/65K colors	16.7M at 800x600 res.	2MB/4MB	$199	MID-RANGE
ATI Technologies Graphics Pro Turbo	1600x1200 w/65K colors	16.7M at 1280x1024 res.	2MB/4MB	$199	
Matrox Graphics Millennium	1600x1200 w/65K colors	16.7M at 1280x1024 res.	2MB/8MB	$219	
ELSA Winner 3000	1600x1200 w/256K colors	16.7M at 800x600 res.	4MB/4MB	$349	
Number Nine Visual Technology Imagine 128	1920x1200 w/65K colors	16.7M at 1152x864 res.	4MB/4MB	$499	
ELSA GLoria-S	1280x1024 w/16.7M colors	16.7M at 1280x1024 res.	8MB/8MB	$599	
Diamond Multimedia Fire GL 3000	1600x1200 w/65K colors	16.7M at 1152x870 res.	8MB/32MB	$1,699	HIGH END
ELSA GLoria-L	1600x1200 w/16.7M colors	16.7M at 1600x1200 res.	16MB/24MB	$1,999	



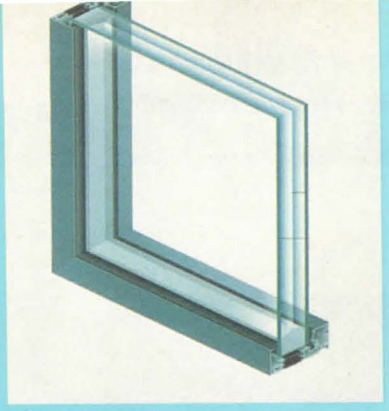
Rendering speeds are also greatly improved by dedicated graphics cards. This is where the graphics processors on these cards really pay off. If 3-D modeling and rendering are part of your repertoire, you should consider buying a powerful graphics card. Fivefold increases in rendering performance are common, but beware the offerings at both ends of the spectrum. The best cards can cost more than many computers and the bargain cards tend to be optimized for game playing and often don't affect CAD performance.

Overall, a computer can be revitalized for well under $1,000. Money invested on additional memory and a high performance graphics card is well-spent. Add a programmable mouse and an ergonomic keyboard and the PC will seem like new. It may not be the fastest computer but it *won't be gathering dust either.*

Another option is to replace the computer itself and keep all of the peripherals. The monitor, especially the large ones typically used for CAD, comprises a large portion of the price of a new system. Salvaging the network card, modem, and memory modules from the machine being retired could lower the cost of a new computer to within reason. To be back at the forefront of technology, $1,500-$2,500 may not seem like a lot to spend.

Of course, donating your old computer to a local charity and buying a completely new system is always an option. This may not be the least expensive alternative, but there are tax considerations, and you'll sleep well knowing your old computer is still being used and appreciated.

Bruce Palmer is the director of technology for Gensler's New York office.



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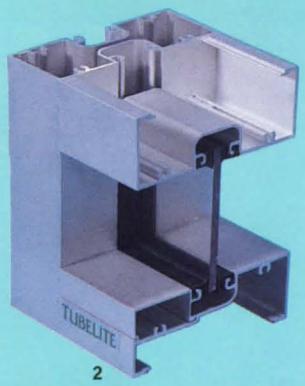
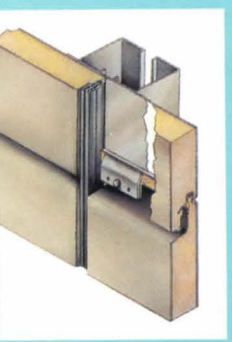


2

1 Energy-Efficient Glazing
Low shading coefficients and high visible-light transmission characterize M Series window and curtain wall systems from Canadian manufacturer Visionwall Technologies. Extruded-aluminum frames house three-layer modules with two panes of clear, tinted, or reflective glass and one suspended film; four-layer units comprise two panes of glass and two suspended films. *Circle 291 on information card.*

2 Aluminum Storefront
Tubelite manufactures extruded-aluminum storefronts and entrances. Framing members for the company's 4500 Series of flush-glazed storefronts, appropriate for first- and second-floor installations, measure 1 3/4 inches wide by 4 1/2 inches deep and accommodate 1/4-inch-thick glass. Extrusions are assembled by screw spline or clip joinery. *Circle 292 on information card.*

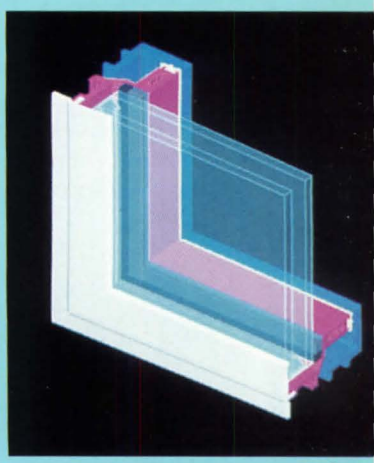
Wall Systems



3

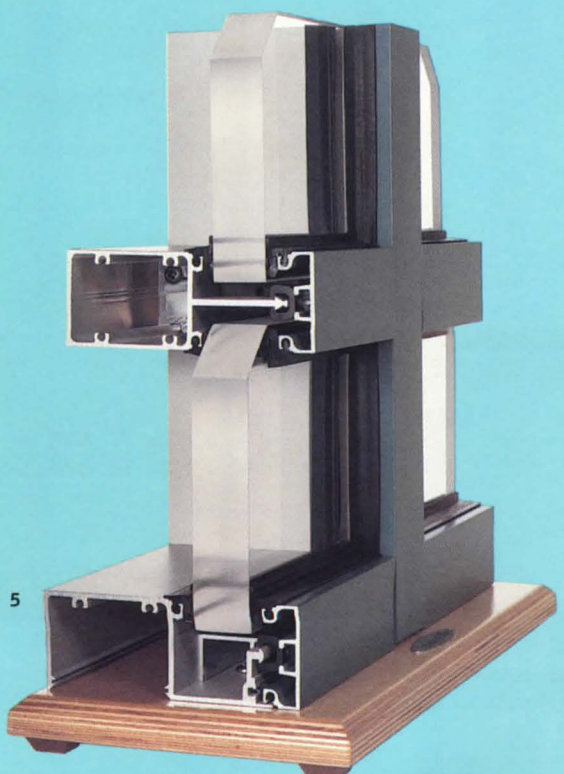
New curtain wall and storefronts achieve energy efficiency and provide weathertightness.

3 Insulated Panels
Lightweight Formawall 1000-H panels from Centria consist of a steel skin and insulating foam core. These one-piece composite panels are separated by a 1/2-inch joint and a dry-seal vertical gasket; clips and fasteners are concealed to create a clean surface. A full range of textures, colors, and finishes can be specified. *Circle 293 on information card.*



4

4 Casement Ventilator
Vistawall Architectural Products has developed a new casement ventilator that allows outside air to circulate within a storefront framing system without having to insert an operable window. The ZS-2750 Zero Sightline vent incorporates 1-inch-thick glazing. *Circle 294 on information card.*



5

5 Watertight Facade
For its EnCORE storefront line, Kawneer has devised a "self-sealing" framing system in which interior glazing gaskets run continuously through vertical members. Watertight seals are created when these gaskets intersect with horizontal framing members. This detail eliminates the need for joint sealant on horizontal members, maintains the Norcross, Georgia-based company. *Circle 295 on information card.*

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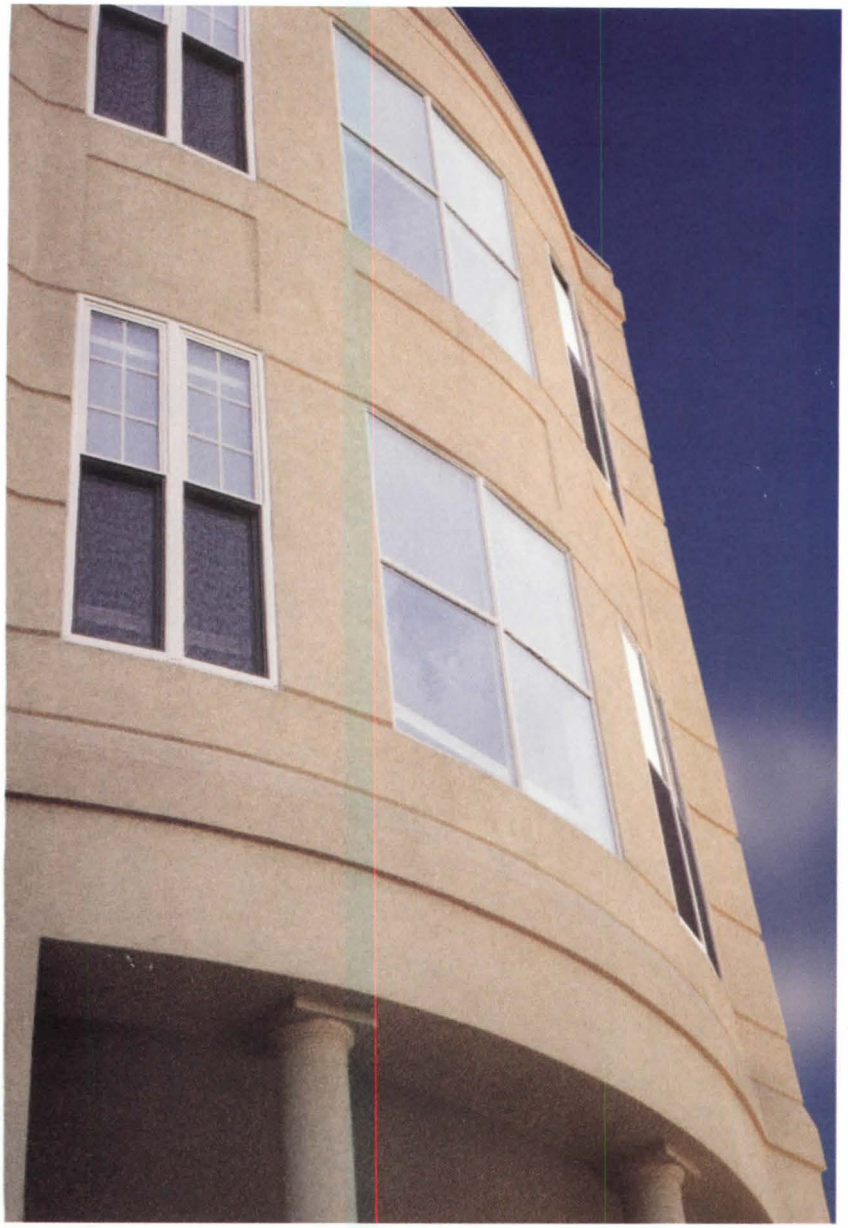

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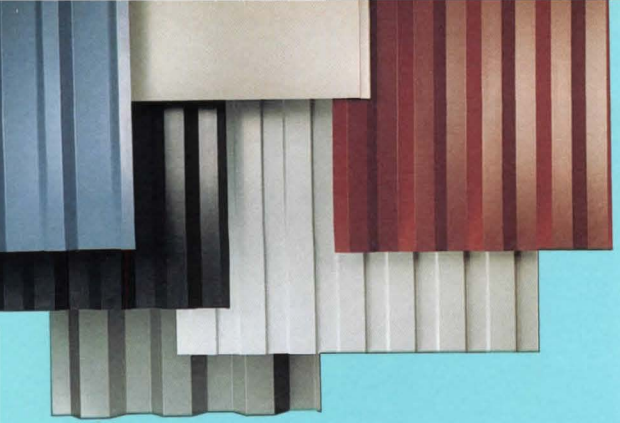


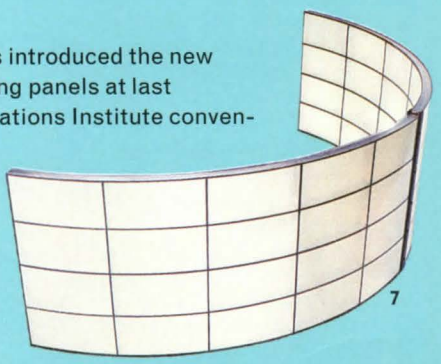
6

6 Metal Panels

Formed metal panels from Custom Panel Industries of Rancho Cucamonga, California, are available in 50 standard press- and roll-formed profiles and 10- to 29-gauge metal. Metal roofing, wall, and decking systems are available for industrial, commercial, and agricultural construction. Available finishes are aluminum, copper, and terne-coated stainless steel.
Circle 296 on information card.

7 Curved Glazing Panels

Guardian Translucent Products introduced the new Transcurve line of curved glazing panels at last month's Construction Specifications Institute convention in Orlando. Transcurve's aluminum frame can house translucent fiber-reinforced plastic panels or clear polycarbonate panels in 1 1/2- or 2 3/4-inch thicknesses.
Circle 297 on information card.



7

8

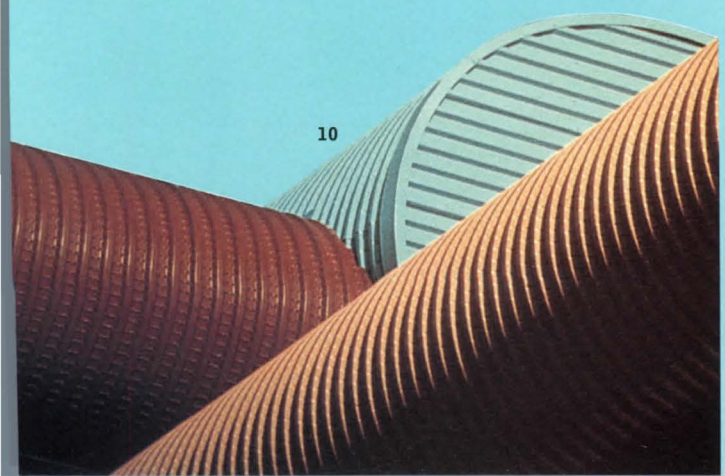
8 Curtain Wall

For the Jeppesen Sanderson building in Englewood, Colorado, Gensler specified EFCO Corporation's Series 5600 curtain wall and Series 902 Quick Set ribbon windows. EFCO's 5600 pressure-glazed curtain wall is a stick system with 2 1/4-inch-wide framing members. The system accommodates inside or outside glazing that can vary from 1/4 to 15/16 inch thick. Frame depths range between 5 and 9 inches for outside-glazed systems and 5 and 7 inches for inside-glazed installations. EFCO is based in Monett, Missouri.
Circle 298 on information card.

9

9 Privacy Glass

The new EDS Financial Trading and Technology Center at the University of Texas at Austin features Viracon Privacy Glass. With the flip of a switch, the glazing changes from frosted to clear. This metamorphosis relies on a 3M film composed of electrically sensitive liquid crystals encapsulated between two panes of glass. The molecules in the liquid crystal line up when an electric current runs through the film. This alignment allows light to pass through the glass. When the electricity is switched off, the crystals return to a random organization, diffusing light transmission. *Circle 299 on information card.*



10

10 Curved Metal

Curveline's specialty is "crimp-curving" metal panels. This spring, the Ontario, California-based company announced new options: a 10-inch-pitch profile for siding applications; a 3-inch-deep standing seam profile for roofs; and new acoustical decking panels for installation beneath domes and vaulted roofs.
Circle 300 on information card.

ad index

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continued from page 93

answers about its medical insurance plan, and also in receiving quarterly updates of specifications from Masterspec, which he says are running three months late because of address errors in the member database. To remedy such glitches, AIA is about to launch a $1.3 million, 101-site database carrying all member records. This service expands the institute's AIA Online, an Internet site that enjoys a growing audience, but has proved of less consequence so far than AIA hoped.

Yet, many architects do find value in belonging to the institute. Architects at Cornerstone Group in Austin, Texas, tell callers on hold that they are "proud members of the American Institute of Architects." George Mattson, a sole practitioner in Bozeman, Montana, says he doesn't like spending several hundred dollars each year on AIA, but considers it "paying my dues, so to speak" for the documents and other standards the AIA sets.

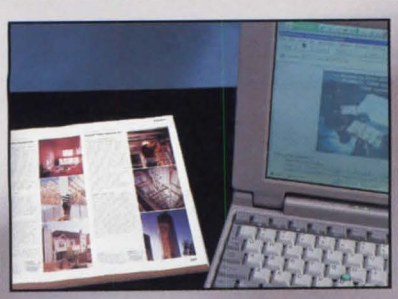
Too big a board

And the board of directors seems happy with McDermott's overhaul of the institute. "I can assure you that members have a much more attentive staff," says second-year Director G. Gray Plosser, Jr. "You don't fire half of them without the other half realizing that performance is really important." McDermott did a fine job of fulfilling the board's mandate, maintains Director Linda Searl: "We needed to do a better job of running the AIA as if it were a business."

Few businesses—or nonprofits—of AIA's size, however, have a 47-member board of directors. The average board size of nonprofits earning $10 million or more is 34 members, according to the National Center for Nonprofit Boards, and only 2 percent of all nonprofits have more than 45 directors. While the board summoned what some call the "courage" and "political will" to stop micromanaging internal affairs and let McDermott make massive cuts, AIA directors still have not mustered the will to cut the size and cost of the board itself, which is estimated to spend more than $500,000 per year on meetings and travel.

To some degree, observers report, the board has no mind of its own since McDermott arrived. The departing CEO, say insiders, has dominated the agenda and gained near-total control of AIA's restructuring. McDermott persuaded the board that AIA is successful if membership rises, which it has, slightly—from 52,000 in 1993 to 60,000 in 1997. Those numbers, however, say nothing about the members' satisfaction. "I think Terry disassembled some things that needed to be," ventures Seattle's Meyer, "but the jury's still out on the reassembly part." That huge task is left for AIA's next CEO to figure out.

photo: Jack E. Boucher/HABS



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tion, and wiring systems make occupants more productive by improving the efficiency and flexibility of utilities and services. But make no mistake—the bottom line, not worker comfort, is the driving force behind this movement. By improving building performance, companies maintain they can boost employee productivity while cutting operating costs. A 1995 report by the White House Office of Science and Technology Policy backs up these corporate claims, concluding that "well-designed" workplaces help employees crank out up to 30 percent more work than in a typical office.

Now, building performance is becoming an organized religion. Last fall, four organizations hosted the National Summit on Building Performance in Washington, D.C. The American Institute of Architects, the International Association of Corporate Real Estate Executives, the International Facility Management Association, and Johnson Controls educated corporate managers and government officials as to the potential productivity gains created by high-performance buildings.

Clients have even started tying architects' fees to performance. As a result, "performance-based compensation" is on the rise. "It's a whole different way of practicing," explains Gordon Chong, chair of the AIA's Practice and Prosperity Task Force, "where compensation is based not on construction costs, but on incentives."

Pharmaceutical giant Ciba-Geigy, for example, hired New York City-based Haines Lundberg Waehler Architects (HLW) to design a new laboratory building in Tarrytown, New York. If HLW delivered a standard-performance building, Ciba-Geigy would pay a fee that would cover costs but generate no profit for HLW.

rewards if they exceeded these predetermined levels. "It would be a threat, but a reward," contends HLW CEO Leevi Kiil.

Last October, three months after moving into the new facility, the client conducted a postoccupancy survey, which it developed with the architect and contractor to evaluate the performance of mechanical, electrical, and plumbing systems; noise abatement; and the thermal comfort of occupants. The survey also polled workers on their general impressions of their work environment, but such subjective evaluations were minimized. The building exceeded Ciba-Geigy's performance criteria, and HLW received a whopping 30 percent higher profit than it would have earned with a standard contract, according to Kiil.

HLW is currently constructing a second lab and office facility for Ciba-Geigy in Greensboro, North Carolina, following a similar performance-based schedule, betting that its project will reap even more benefits. Other firms such as HOK are also getting their feet wet with these risky but rewarding fee structures.

Such deals set a shaky precedent, one that Kiil and Chong readily admit isn't right for every project. Warns Kiil: "You need a situation where all the members of the building team are working for the same goal," such as with a design-build contract. Architects should have a hand in setting performance criteria and making the final judgments on how well a building operates, lest they sacrifice good design and reasonable fees in the process. More important, architects should be in the business of delivering top-notch buildings every day, not just when tempted by the dangling financial carrot of performance-based compensation. *Raul A. Barreneche*

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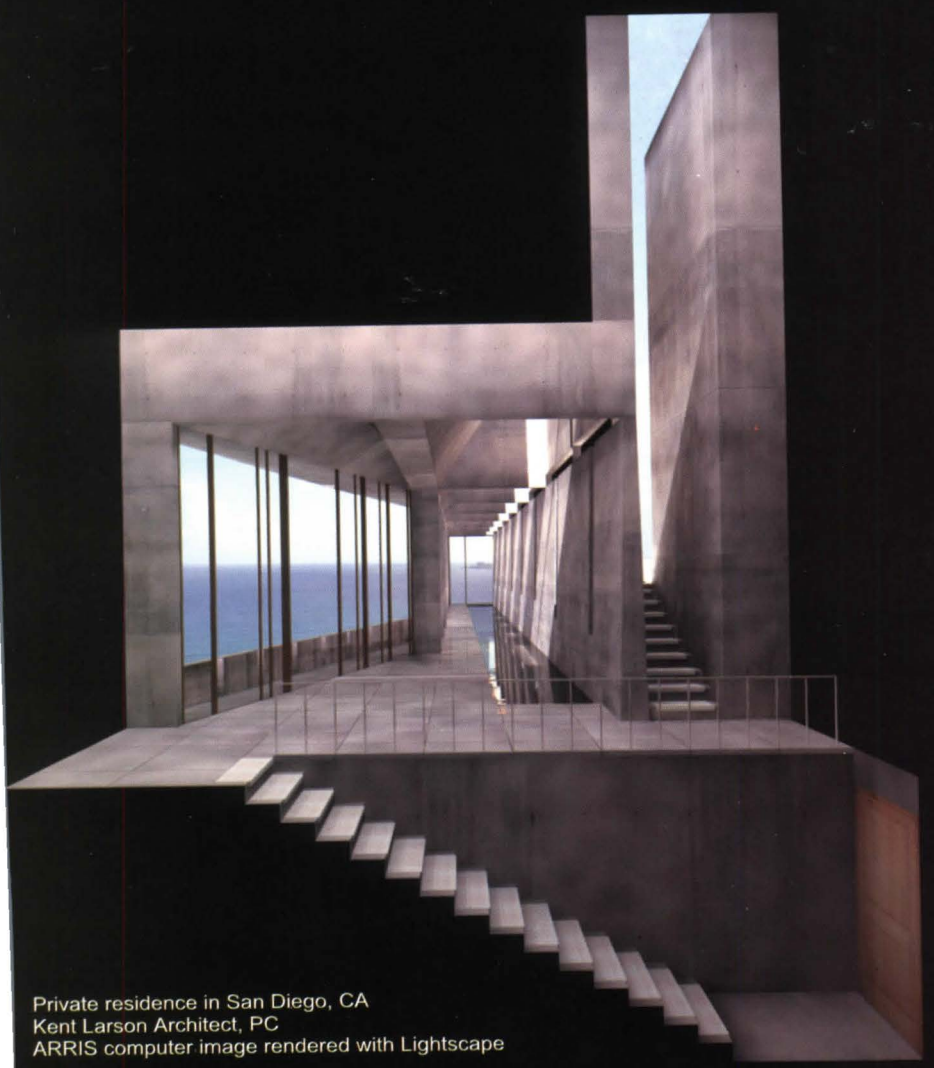

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