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Letters

Jeffersonian lament

I am disappointed and surprised that you have given nearly a quarter of the July feature section [ARCHITECTURAL RECORD, pages 72-79] to the Graduate School of Business at the University of Virginia.

I have been a regular reader of RECORD for over 35 years; throughout that time I have known your magazine to be the voice of intelligent conservatism in architecture, slow to see emerging trends, to criticize the prevailing establishments, or to take stands, perhaps, but nonetheless a thoughtful defender of the status quo and a voice for quality.

I find it incredible that you can state that, "Robert A. M. Stern Architects brings Thomas Jefferson's ideals to the University of Virginia's North Grounds." One of the main reasons that we admire Jefferson is that in most of his diverse endeavors—including architecture—he was unusually far-sighted and ahead of his time. Just as he accepted slavery, he designed in the eclectic vocabulary of his time and place, jumping from Georgian-Colonial to Palladian and early Roman. Yet throughout the design of the University of Virginia, and even more so Monticello, his real passion was finding new and better ways of doing things: creative innovations such as single wythe serpentine brick walls, advanced plumbing and ventilation, experimental horticulture. His excursions into the past were, for his time, almost avant garde.

Stern's design for the new Business School is more of a slap in the face to Jefferson than a statement of his ideals, a cynical parody of the mannerisms of the

University of Virginia. In the hands of RECORD's erstwhile cartoonist, Alan Dunn, such mischief would have been humorous; here, it's a bad joke and then some.

Are the University's Board of Visitors and other lay powers behind the commissioning of this project too culturally backward to differentiate between good architecture and kitsch or, as your article points out, were they seduced by the idea of good "donor opportunities" by playing to the notion of lowest common denominator design? They may not have known any better, but Robert Stern certainly should have.

And so should RECORD. By publishing this work in a non-critical fashion, you are in effect glorifying it and saying to today's architects that neo-Classical reproductions are fine, authenticity be damned, and that architecture is no more than fatuous decorations.

Walter Wagner [RECORD's editor-in-chief for many years] must be turning over in his grave.

G. MacKenzie Gordon
Gordon & Gordon
Lakeville, Connecticut

Continuing education

It's rare that anyone throws in an "extra" as valuable as your AIA/CES Continuing Education service. Reading the articles is enjoyable because you've set a learning challenge and offered a reward. Even if my professional focus is not on the subject matter, the insights and information they present can often be transposed into my own specialty. Kenneth N. Dickerman
Healthcare Facility Consultants
Jacksonville, Florida

Calendar

September 25-29

"Frank Lloyd Wright's Influence on Architecture in the Northwest," to be held in Seattle, will feature authorities on FLW; comments from architects such as Frank Gehry; and tours of houses not usually open to the public. Sponsored by the FLW Building Conservancy. Call 312/663-1786, fax 312/663-1683 for details.

September 28-30

The Door and Hardware Institute's convention and exposition. Cincinnati. Call 703/222-2010 or fax 703/222-2410 for details.

October 16-20

Three exhibits and conferences, "Restoration/Chicago," the National Trust for Historic Preservation, and the Fall Antiques Show will run in conjunction at two Chicago locations: the Navy Pier and an adjacent exhibit hall for the Restoration and Antiques events, the Palmer House Hotel for the National Trust Conference. Call 508/664-8066, fax 508/664-5822 for further information.

October 26

ARCHITECTURAL RECORD and the Cooper-Hewitt National Design Museum will hold a symposium on "Creating the Modern House: Forty Years of RECORD HOUSES" in the auditorium of the McGraw-Hill Building, 1221 Avenue of the Americas, New York, N.Y. Four panel discussions will be featured: 1. lifestyles and residential design; 2. design ideas that started with RECORD HOUSES; 3. client-architect relations, and; 4. houses of the future. Participants will include Charles Gwathmey, Will Bruder, Ulrich Franzen, Jack Travis, Gisue Hariri, Leslie Gill, John Johansen, Robert Campbell, Suzanne Stephens, Thomas Hine, and Charles Gandee.

Continued on page 120

Dallas

Philip Johnson Unveils Design for Gay and Lesbian Church



© Michael Rogol

After much ado about Philip Johnson's 90th birthday this summer, the nonagenarian's firm, Johnson, Ritchie & Fiore of New York City, unveiled its design for the Cathedral of Hope in Dallas. The \$20-million project for what is said to be the world's largest church

servicing the gay and lesbian community is a concrete structure, following in the Zaha Hadid vein of the recent visitors' center on Johnson's Connecticut estate. The 30,250-sq-ft project includes a new 2,500-seat sanctuary, the renovation of an existing building,

and a new cloister connecting the two structures. Johnson, who is also the architect of the Crystal Cathedral in California, has described the project as "the crowning jewel in my lifetime of work." A fund-raising campaign is underway. *Abby Bussel*

Washington, D.C.

National Council Repeals "Experienced Architect" Status

In a move that has stirred much debate, the National Council of Architectural Registration Boards (NCARB) repealed its "broadly experienced architect" provision that exempted practitioners from the U.S. or Canada who could demonstrate satisfaction of the NCARB's education standard through extended professional practice. Approved by delegates to the organization's 77th annual conference this summer, the measure was developed to "strengthen" NCARB's two-year-old education requirement, which states that all U.S. applicants must have a degree in

architecture from a program accredited by the National Architectural Accrediting Board beginning July 1, 2000. Delegates, however, did not adopt the measure for architects with a professional degree acquired from an institution outside the U.S. and Canada; these architects can request an independent evaluation of their educational qualifications to determine satisfaction of NCARB's standards. Several other changes were passed at the conference, including the elimination of architect references from the evaluation process for everyone but sole proprietors. ■

New York

Staff Satisfaction Will Determine Fee

HLW International of New York City has agreed to an unusual fee structure for their recently completed Ciba-Geigy Additives Laboratory Facility, a design-build project in Tarrytown: the architect's contract stipulates that their profits be based on user satisfaction and completion of the project on time and on budget. HLW beat the clock by five months, completing the project \$3.3-million under budget. This fall, Ciba employees will fill out a questionnaire evaluating soundproofing, lighting, design, spatial organization, construction quality, and odor control. ■

News Continues

Briefs

San Diego library goes to Rob Quigley

The San Diego City Council has approved selection of hometown architect Rob Wellington Quigley with Simon Martin-Vegue Winkelstein Moris and Tucker, Sadler & Associates as designer of the city's new main library, following the recommendation of a citizens' advisory committee. Runners-up were: William P. Bruder Architect; Cesar Pelli & Associates; and Moshe Safdie Associates.

Pratt news

Architect Thomas Hanrahan has been appointed dean of the school of architecture at Pratt Institute. The school's Higgins Hall sustained \$10-million in damage in a fire of unknown origin on July 21. The 1868 Brooklyn landmark was being renovated and restored at the time of the fire.

Gaudi's Casa Mila restored

Ten years after the project began, Antoni Gaudi's Casa Mila in Barcelona has been restored. Popularly known as La Pedrera, the building is now a cultural center called the Caixa de Catalunya.

I.D. Design Review winners

Hodgetts + Fung Design Associates, Santa Monica, has won Best of Category for Environments in *I.D.*'s 42nd annual Design Review (July/August 1996) for "Sun Power: No More Daisy" exhibition in Germany. Other winners include Paola Antonelli, curator of "Mutant Materials" at the Museum of Modern Art in New York; and CORE of Washington, D.C., for the National Minority AIDS Council in Washington, D.C.

Obituaries

- ◆ Myron Goldsmith, architect and engineer, died July 15 at 77. Known for his McMath-Pierce Solar Telescope Facility at Kitt Peak in Arizona, Goldsmith studied under Mies van der Rohe and Pier Luigi Nervi and worked for SOM from 1955 to 1983.
- ◆ British landscape architect Sir Geoffrey Jellicoe died July 17 at 95. Trained as an architect, Jellicoe designed public and private gardens and landscapes, including the John F. Kennedy Memorial in England.
- ◆ Jed Johnson, a self-taught interior designer based in New York, was killed in the explosion of TWA Flight 800 on July 17. He was 47. Johnson, whose first project was Andy Warhol's residence, established Johnson Wanzenberg with architect Alan Wanzenberg in the early 1980s. ■

Huge Size of UIA Congress Causes Capacity Problems

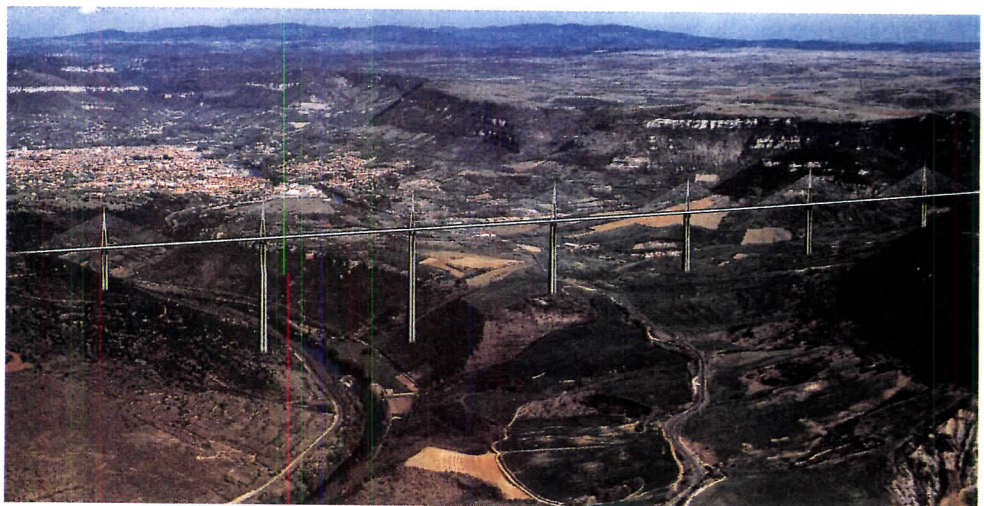
With an attendance of 9,790 architects from 97 countries, including 4,043 students, the 19th Union of International Architects Congress held in Barcelona, Spain, this summer became the largest recorded gathering of architects in history. Addressing the theme "Present and Futures: Architecture in Cities," participants set out to debate the metropolitan condition at the threshold of the 21st century. The proceedings, however, mirrored the pending crisis in the profession: incongruencies between intentions and reality were evident not only in the architects' philosophizing, but in the logistics of the conference itself. Faced with capacity problems, organizers moved the first day's debates from three small theaters to an Olympic stadium, where the main debates became quick, MTV-like spots. Fortunately, some of the workshops were more substan-



© B.K. Boley

tive. Awards included the UIA Gold Medal to Rafael Moneo of Spain; the Auguste Perret Award for applied technology to Thomas Herzog of Germany; and the Benedictus Award to William P. Bruder Architect for the Phoenix Central Library. *Kelly Shannon*

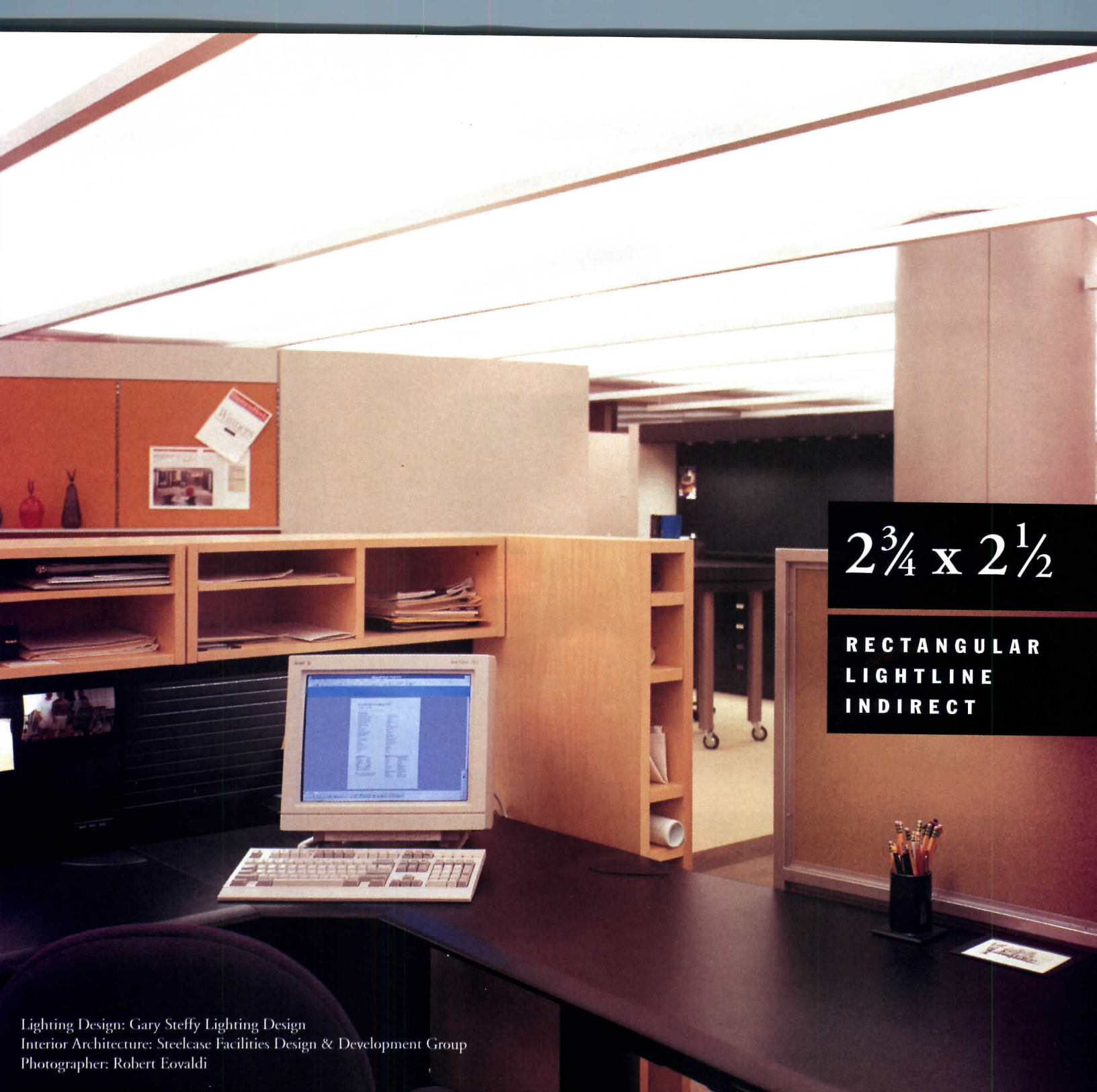
Foster to Plan Bridge Over Tarn



Foster & Partners of London have won a limited competition to design a 2.5-kilometer-long road bridge over the Tarn River in the South of France. The \$280-million bridge will cross the Tarn Valley west of Millau in the Aveyron. At 1,060 ft, its largest column will be 99 feet taller than the Eiffel Tower, according to a Reuters report. The cable-stay structure will be divided into seven sections,

each spanning 350 meters. To accommodate the concrete deck's expansion and contraction, each column splits in two below the road deck to become more flexible. The cables are connected to A-frame masts and organized in a fan configuration. The project, funded by the French Roads Department, is to be completed in 2001. Foster's team includes French engineers Sogelerg, EEG, and SERF. ■

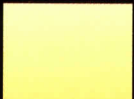
News Continues



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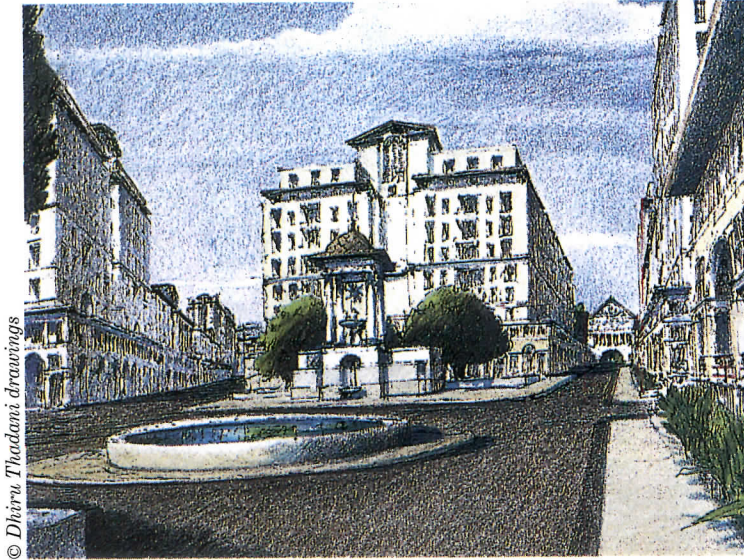
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Interior Architecture: Steelcase Facilities Design & Development Group
Photographer: Robert Eovaldi

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Thadani Hetzel to Design New Town for 25,000 People



© Dhru Thadani drawings



To house India's growing middle class of computer-industry employees, developers India Builders Corp., ETA, and Dynamix Group have commissioned Thadani Hetzel Partnership of Washington, D.C., and Bombay to design the master plan for a \$250-million new town on the edge of Bangalore, a center of

India's computer boom. Called Platinum City, the 90-acre site will house 25,000 people and include 4,500 residences, 500,000 sq ft of offices, 175,000 sq ft of retail, plus schools, and community centers. With Andres Duany and Elizabeth Plater-Zyberk Architects & Town Planners as consultants, the architects

designed a master plan focused on making streets and public spaces. Completion is a decade away. High-tech computer development is a fast-growing industry in India, as American computer giants take advantage of local engineering expertise and relatively inexpensive living costs. ■

Technology

Curtain Wall As Power Plant

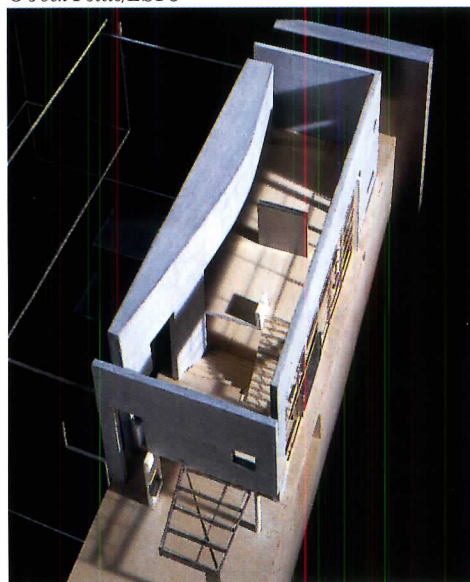
Kawneer Co., Inc., of Norcross, Ga., announced that it will be offering as a standardized assembly the 1600 PowerWall, which places solar-electric modules (PV cells) into several styles of the company's widely used aluminum curtain-wall framing systems. The polycrystalline cells convert sunlight energy directly into electricity without using fuel, and were designed specifically for wall and sloped-glazing installations by Solarex, a joint venture of Amoco and Enron Corp. (both also in the oil business).

Kawneer anticipates that replacing opaque infill with PV panels in a facade will lower the net energy consumption of a building, as well as cut utility bills by reducing power use during premium-cost, peak-demand hours. Curtain-wall panels come in both AC and DC versions. *Joan Blatterman*

New York

A Small Project With Major Impact

© Jock Pottle/ESTO



With their 3,000-sq-ft entrance addition to the Red Hook Community Center, Thomas Hanrahan & Victoria Meyers Architects of New York have parlayed a small project into a significant urban improvement for the residents of the Red Hook section of Brooklyn, a working class neighborhood. A newly landscaped area will mark the entrance to the community center and an adjacent daycare facility and act as a gateway to the Red Hook Houses, a 1939 WPA housing complex currently accessed by a dark and unsafe route. The architects, who are working in conjunction with Castro-Blanco Piscioneri & Associates, will remove and replace the community center's north facade with operable panels to open the existing auditorium to a planned outdoor theater. The project, commissioned by the New York City Housing Authority, is to be completed by September 1997. ■

How Money and Codes Shape Skyscrapers

Form Follows Finance: Skyscrapers and Skylines in New York and Chicago, by Carol Willis. New York: Princeton Architectural Press, 1995, 224 pages, \$35 (cloth), \$23 (paper).

Reviewed by Laurie Beckelman

Lewis Mumford wrote that cities were created as “a means of bringing heaven down on earth.” They are a “symbol of the possible.” In *Form Follows Finance*, architectural historian Carol Willis shows how skyscraper developers in two metropolises have combined optimism with realism, a faith in finding form for heaven on earth with a capitalist’s devotion to the bottom line.

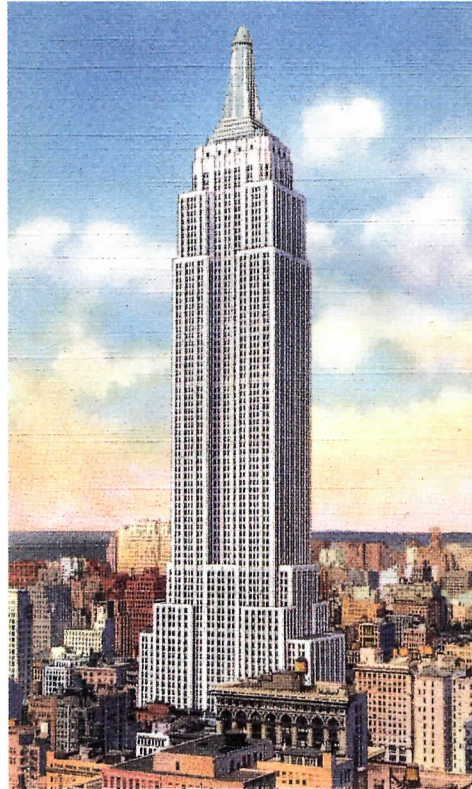
Rather than tracing the evolution of styles in the history of the skyscraper, as too many other books on the subject already have done, this readable work focuses on economics and municipal codes as the main determinants of form. Willis, who is an adjunct professor of urban studies at Columbia College and the driving force behind the Skyscraper Museum in Manhattan, which she hopes to kick off this fall, departs from what one would consider a more holistic approach to skyscraper history.

She states at the beginning of her book that it is not a traditional architectural history and doesn’t dwell on “schools,” style, or structure. According to Willis, the most important determinants of skyscraper form are the real-estate formulas and the modifications developers have adopted to respond to local conditions, municipal regulations, zoning, and each city’s street grid. She argues that profit and program are critical factors in a building type dedicated to generating rents and that economic considerations govern design decisions.

The first half of the book focuses on what Willis calls “vernaculars of capitalism,” while the second homes in on the economics of the real-estate speculation that shaped the skylines of New York and Chicago. She notes the different nature of real-estate development in

Laurie Beckelman is vice president of the World Monuments Fund and a former chair of the N.Y. Landmarks Preservation Commission.

© Courtesy of the Skyscraper Museum



Postcard view of the Empire State Building.

the two cities—New York’s being aggressive and speculative, while Chicago’s being more conservative and measured.

Willis gives detailed examples of these differences—showing how New York’s free-wheeling approach and Chicago’s more regulated system influenced skyscraper design. She devotes many pages to the Empire State Building and shows how it is truly the best example of form following finance. Willis’s common-sense approach to the creation of these commercial buildings is persuasive. Yet I yearned to read more about the esthetic, historical, and social factors so inseparable from the process of building.

Form Follows Finance includes a wealth of old photographs, postcards, floor plans, and historic maps that provide the opportunity to understand the physical and historic contexts in which these buildings were placed. And by explaining the economic forces that help shape skyscrapers, Willis shows us the capitalist context in which they grew. ■

Reconstructing Architecture for the 21st Century: An Inquiry into the Architect’s World, by Anthony Jackson. Toronto: University of Toronto Press, 1995, 224 pages, \$50 (cloth), \$18 (paper).

Reviewed by M. Gordon Brown

The first sentence of this readable, polemical, and ultimately persuasive book expresses a conviction that many in the architectural profession hold: “There is something very wrong with architecture as it is practiced today.”

The “something very wrong” that Anthony Jackson, a professor of architecture at the Technical University of Nova Scotia, writes about is that architecture has created a public largely indifferent to what architects produce. He points out that even the word “architecture” has become part of the problem: it conveys images of an elite group of artists no longer suited to play a major role in a democratic market society.

Jackson frames his critique of architectural practice by examining the culture of architects, showing how the myths of architecture have pulled the profession away from the culture of society at large. “It is reasonable that buildings should reflect the values of at least the majority of the people who inhabit them,” states Jackson. “If they do not, there is a conflict between the public outlook and its constructed environment.”

The problem, according to Jackson, started not with Deconstructivism, nor Postmodernism, nor Modernism. The author traces the roots of the current dilemma back to antiquity when myths of the architect’s role as symbol- and form-maker began. It was with these myths that “Vitruvius succeeded in divorcing building from the ordinary world and elevating it to the metaphysical realm.” Jackson shows that what is increasingly missing in what architects design is an *affective* connection with the everyday interests and values of the people and communities their buildings are supposed to serve. ■

M. Gordon Brown writes about architecture for the Denver Business Journal and is a principal of Space Analytics in Denver.
Books continues

Briefly Noted

Aalto's Villa Mairea (below) in Noormarkku, Finland, dates from 1931-1941.



Alvar Aalto, by Richard Weston. London: Phaidon (distributed in U.S. by Chronicle), 1995, 240 pages, \$75.

This large-format book offers an excellent overview of the great Finnish architect's work. Although Weston doesn't get into the kind of detail that Göran Schildt did in his three-volume biography of Aalto (published by Rizzoli from the late 1970s to 1991), he sets the context—both cultural and historical—in which his subject worked. Chapters are organized thematically covering such topics as the architect's "classical foundations," his town halls and campus projects, and his places of worship. New color photos, lots of drawings, and heavy-stock paper help convey the richness of Aalto's architecture.

Achtung Architektur! Image and Phantasm in Contemporary Austrian Architecture, by Eeva-Liisa Pelkonen. Cambridge: MIT, 1996, 195 pages, \$40.

An enthusiastic cheerleader of the avant-garde, Eeva-Liisa Pelkonen discusses the ideas and practices behind the work of Austria's radical architects. Pelkonen, who teaches architectural design and theory at Yale and who immersed herself in the Marxist-Freudian art scene by collaborating with architect Volker Giencke in Graz, Austria, for four years, examines the work of Giencke, COOP Himmelblau, Günther Domenig, Klaus Kada, Helmut Richter, and others. Her approach sacrifices critical distance for immediacy.

The Lewis Mumford Reader, edited by Donald L. Miller. Athens, GA: University of Georgia, 1995, 392 pages, \$20 (paper). Twenty-eight essays by the great urban critic are neatly packed in this single volume. ■

Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture, by Kenneth Frampton. Cambridge: MIT Press, 1995, 421 pages, \$50.

Reviewed by Lester Paul Korzilius

Since the late 19th century, the manipulation of space has become an increasingly dominant issue in architectural thought. In his latest book, Kenneth Frampton seeks to redress this imbalance by focusing on the art of construction—or the "tectonic."

Frampton, a professor of architecture at Columbia University, earned his high reputation with books such as *Modern Architecture: A Critical History* (1980), *Modern Architecture: 1851-1919* (1981), and *Modern Architecture: 1920-1945* (1983), the latter two produced with Yukio Futagawa. In *Studies in Tectonic Culture*, Frampton elaborates on ideas first presented in these books.

The book begins with background on the evolution of tectonic form and examines the work of Schinkel, Labrouste, Pugin, and others. Throughout the book, Frampton refers to the theories of Viollet-le-Duc and Gottfried Semper. In his discussion of Viollet-le-Duc, Frampton shows how the 19th-century Frenchman sought to establish architecture as an art of construction based on logic, economy, and craft production.

The heart of the book devotes one chapter each to the work of six architects: Frank Lloyd Wright, Auguste Perret, Ludwig Mies van der Rohe, Louis Kahn, Jørn Utzon, and Carlo Scarpa. As he did in *Modern Architecture: A Critical History*, Frampton uses the work of each architect as the basis for a themed discussion. The inclusion of Utzon and Scarpa in this book gives added breadth since neither was mentioned in the 1980 book. Indeed, the chapters on Utzon, Scarpa, and Perret are particularly strong.

The new book is most persuasive when it combines an analysis of a work's underlying principles with its tectonic manifestation. ■

Lester Paul Korzilius is a principal of Lester Paul Korzilius Architects in New York City.

Intelligent Glass Facades: Material, Practice, Design, by Andrea Compagno. Basel: Birkhäuser, 1995, 128 pages, \$58.

Anyone seeking the latest methods for designing glazing systems that take maximum advantage of daylight and natural ventilation, while saving energy, would be wise to pick up this up-to-date primer. It ranges from the constituents of recently developed glass products and selectively reflecting glazings and coatings, to laminated glass, integral photovoltaics, external and internal shading devices, and multiple-skin facades. While much of the information and many of the book's innovative examples have been published in journals (many were in "The Intelligent Exterior," *RECORD*, October, 1995, pages 70-85, for example), the book usefully places all the innovative facade criteria together in one readily navigated volume. *James S. Russell*

Twentieth-Century Building Materials: History and Conservation, edited by Thomas C. Jester. New York: McGraw-Hill, 1995, 352 pages, \$50.

A comprehensive reference, this book includes information on the history, manufacturing process, uses, and conservation of dozens of modern building materials.

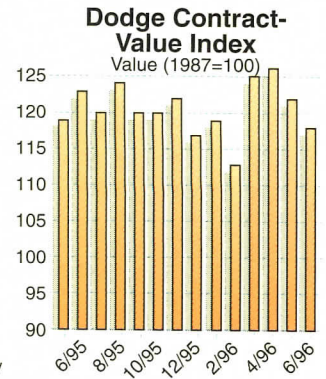
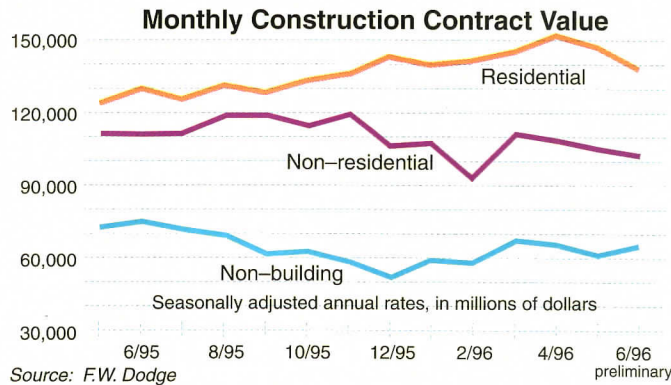
Nightlands: Nordic Building, by Christian Norberg-Schulz, translated by Thomas McQuillan. Cambridge: MIT, 1996, 230 pages, \$40.

Neither a history of Scandinavian architecture nor a catalog of landmark structures, this book tries to answer the question: What is Nordic building? By examining the architecture of four countries—Denmark, Sweden, Norway, and Finland—and then comparing it with the architecture of the Mediterranean (the "South"), Norberg-Schulz paints a fascinating picture in which climate, geography, culture, and the angle of the sun are some of the factors separating and linking these countries to each other. A professor at the Oslo School of Architecture who has lived in Rome, Norberg-Schulz uses themes such as "the natural," "the domestic," "the universal," and "the regional" to discuss the similarities and differences within Nordic building and between the architecture of the North and that of the South. *Clifford A. Pearson*

Indicators

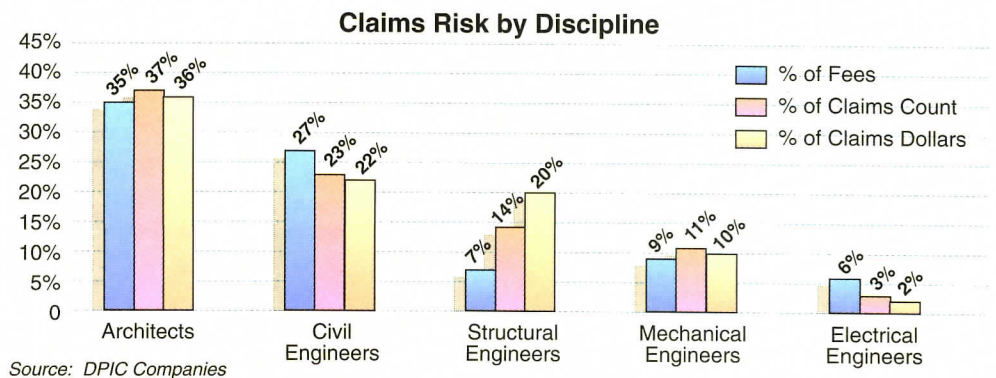
Higher interest rates take their toll

The torrid residential market finally reacted to higher interest rates as June volume declined 7 percent. Non-residential construction also slipped 3 percent; store construction retreated from near-record levels, and public building volume also dipped. Hotels have been a bright spot in 1996, however. In the January-to-June period, reports Dodge, unadjusted total construction rose 4 percent over the same period last year, driven mostly by residential building. Non-residential construction was down 6 percent. ■



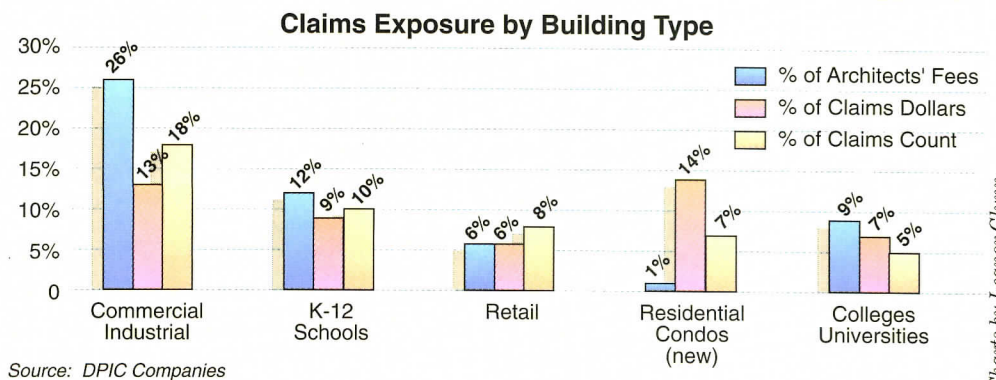
Architecture not a liability-claim magnet

Comparing claims to fees, structural engineers are at highest liability risk among construction professionals. Architects' and mechanical engineers' risk is "above average," according to a DPIC Companies study of 8,600 closed-claim files dating from 1989 to 1995. Electrical and civil engineers defended fewer claims than average, and the cost of each claim was lower. Architects had by far the highest claim count and the highest claim cost, but this reflects the far-higher percentage of total fees architects collect. ■



Condos riskiest building type

The same DPIC study compared liability claims made by building type and found that residential condominium projects, while only generating 1 percent of all architect fees accounted for a much larger percentage of claims and claim-dollars paid. By contrast, commercial, industrial, and university projects were relatively low risk. Roof and wall problems were the most common source of complaints, followed by hvac and floors. Most claims are filed by owners; economic loss is the primary damage claimed. ■



Short Takes

◆ Performance specs for design/build:

The Construction Specifications Institute and the Design-Build Institute announced they will develop a master guide for writing performance specifications. Design/build firms often prefer specifications that define performance and product qualities rather than name a specific product (800/689-2900).

◆ Commercial vacancy rates fall

Though current commercial construction is flat or lower, future signals are positive. Real-

estate services firm Cushman & Wakefield reports higher space absorption and continued declining vacancy rates in many markets. Of 41 suburban markets recently studied, vacancy declined from 15.1 percent to 14.2. Of 32 downtowns analyzed, the rate slipped to 15.9 from 16.2. Nationally, vacancies dropped to 21.8 percent from 23 percent.

◆ **New salary survey:** There is widespread consensus that the job market for experienced staff is tightening up. The "PSMJ Executive Management Salary Survey" focuses on compensation and related issues

for 18 high-level positions, from junior project manager to CEO. PSMJ Resources, Newton, Mass. (800/537-7765).

◆ **Windows to new prospects:** There is now a Windows 95 version of Dodge DataLine, which helps firms identify newly announced projects (212/512-4324). ■

Charts by Leannor Glynn

No Paths to Competitive Success

This month we profile firms that have followed two different paths in their quest not only to secure more work, but to obtain clients that offer more rewarding projects. Chicago-based McClier is a fast-growing example of the strategically focused firm that tailors the services it offers to client needs. Large, multi-discipline firms can make a plausible argument that they have been successfully serving clients' needs for a long time through the more focused services they offer. But a number of such firms have sought increased success by raising their design profile. Ellerbe Becket added signature design talent 10 years ago, but has recently retreated to its traditional strengths. NBBJ has embarked on an aggressive expansion strategy that not only depends on new "name" designers, but on many of those who departed Ellerbe Becket. How and whether such firms succeed over the long term will say a great deal about the profession's future.

Michael J. Crosbie is an architect with Steven Winter Associates, Inc., a building-systems research and consulting firm in Norwalk, Connecticut.

**"We've developed a way of aligning the business goals of the client with the architecture and design."
—Tom Rossiter, McClier**

**"Bringing Peter [Pran] in was a recognition of the realities of business and competition—the need to create as strong a design profile as we could."
—John Gaunt, former CEO, Ellerbe Becket**

**"You've got to recognize the business climate and what clients want, but that doesn't mean you don't want to deliver the best-designed product. Our view is 'best in product, best in service.'
—James Jonassen, NBBJ**

Tailoring Services to Client Desires



Grant McCullagh (left) and Frank Cavalier co-founded McClier, a firm that has grown rapidly by offering a very broad range of design/build services.

By Michael J. Crosbie
When people talk about reinventing the architecture firm, Chicago-based McClier is the kind of firm they are probably talking about. Architect Grant McCullagh, CEO, founded one of the largest and fastest-growing firms in the country. Started eight years ago with partner Frank Cavalier, a civil and structural engineer (the firm name is a hybrid of theirs), McClier has grown from four people in 1988 to 425 today. Their project base is design/build in primarily industrial and commercial sectors—newspapers, factories, airports, laboratories, food processing, as well as office buildings. But it's misleading to think of McClier only in terms of projects, because that's only part of what they do.

In fact, the partners think of what they do much more broadly. The building may be only one part of a larger continuum that begins with helping the client to think strategically about achieving long-range business goals. McClier offers pre-design services that range from strategic business planning, manufacturing and industrial engineering to distribution planning. The firm's architecture

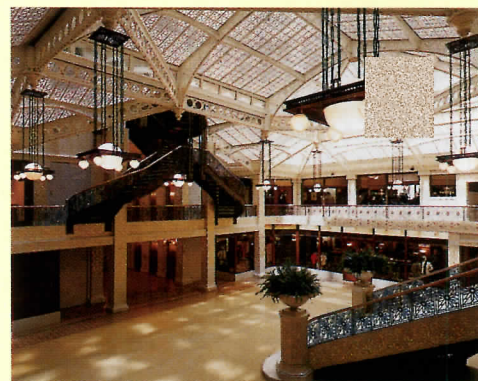
and engineering services feed into construction-management services. And now McClier is moving into such post-construction services as facilities management.

It can offer this range of services as a "turnkey" package, or separately (although it does not build projects it did not design). "It's literally one-stop shopping for the client," notes McCullagh. And there's no reason why architects can't be involved with a much wider range of services, he says, drawing an analogy to advertising firms. "The client shares their strategic business objectives with the ad firm," he explains. "The ad firm comes up with a strategy to achieve those objectives, and implements it all the way through the process."

Design the software, design the building

Such a broad conception of what a "design" firm does has as its vanguard corporate-interiors practices that find themselves competing with real-estate consultants or management consultants, and those at AIA promoting its "Practice and Prosperity" initiative.

To McClier, it comes naturally out of the design/build culture that prevails among its competitors in the industrial field. Such an



1

Three firms—all with strong client-service orientations—have each tried their own method of accommodating diverse client needs. Their experience offers lessons to those facing changing markets.

approach means that McClier finds itself fulfilling some rather novel roles. “Ninety percent of the factories we do start with designing the computer architecture that connects the manufacturing processes,” explains McCullagh. And there are other services, such as assessing a building’s physical condition, which can turn into a renovation.

McClier’s brochure lists a dizzying array of services, but many are not provided in-house. Of the firm’s personnel, 35 are devoted to strategic consulting, 275 work in A/E services, and 100 are in construction. For more specialized tasks, McClier turns to an array of consultants across the country, assembling partnerships tailor-made to client demands.

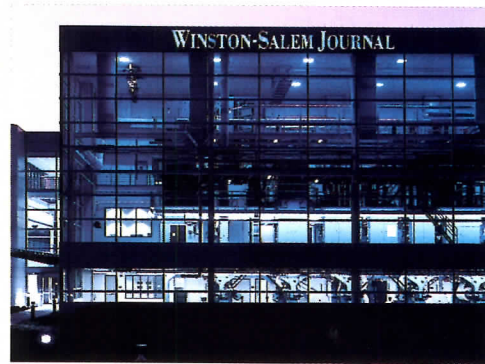
Indeed, clients laud McClier’s approach. “They’re a very talented group,” explains James Clegg, president and chief operating officer of Sunbeam-Oster North America, for which McClier designed and built a new 750,000-sq-ft plant in Mississippi (photo 5). Not only did the firm deliver this complicated project “on time, and within budget,” Clegg says that he was particularly impressed with

McClier’s involvement in conceptualizing the plant and its operation, and its understanding of manufacturing and distribution.

A higher profile proves “strategic”
McClier’s emphasis on process means that it doesn’t distinguish itself by an exploratory design approach or an attention-getting esthetic (photos 3, 4, 5). But four years ago, McClier captured the attention of the design world when it won a number of awards for the restoration of Burnham & Root’s famous 1888 Rookery in Chicago, carefully preserving Frank Lloyd Wright’s 1905 lobby remodeling. The success of that project helped the firm win the commission to restore the famous 1895 Reliance building (Burnham & Root, and D.H. Burnham & Co.), the exterior of which is now complete.

According to Tom Rossiter, president of the firm’s commercial group, the Reliance’s success shows how the design/build process can deliver award-winning design. Indeed, the firm won both jobs over more-established historic-preservation firms. “It shows how a non-traditional way of doing preservation

work can give the client more in terms of services.” In terms of profits, Rossiter calls such projects “a labor of love,” but Gunny Harboe, director of the firm’s preservation group, says the firm sees the work as “strategically very worthwhile,” because it positions the firm to try for a new range of projects. “It shows that we can do high-profile work of a quality beyond simple industrial buildings,” he explains. The firm does not now compete with firms known better for design, but such a step would test whether a firm with such a broad range of services could succeed against the specialists.



3



2



4

© Hedrich-Blessing photos this page and opposite.

*A McClier portfolio:
1, 2. The Rookery
3, 4. The Winston-Salem, (N.C.)
Journal
5. Sunbeam-Oster consolidated manufacturing and distribution, Hattiesburg, Miss.*



5

Merging High-Service and High-Design Cultures

McCluer defines itself as different from more traditional service-oriented firms, because, notes Rossiter, "We've developed a way of aligning the business goals of the client with the architecture and design." The latter "are important ingredients," but they are not seen as ends in themselves. Is that approach, however, really different from that of more traditional A/E's like Ellerbe Becket, which has not only done jobs for such clients as Notre Dame University and State Farm insurance, but has been chief architect for both for decades? Or NBBJ, a dominant firm in Seattle, that sees no divide between high service and high design? Neither firm has gone for the broad range of expanded services embraced by McCluer; instead each has tried to meld a service culture with a high-design identity.

Minneapolis-based Ellerbe Becket maintained the classic profile of the profitable, service-oriented, large firm. They did not usually compete for high-profile commissions like those won by Pei Cobb Freed or Frank O. Gehry. That all changed in 1986 when the firm brought in Peter Pran, Carlos Zapata, and Mehrdad Yazdani, all of whom added a dramatic, highly expressive, individualistic design sensibility.

It was a jolt for a firm that wasn't used to asking its clients to step onto the esthetic cutting edge. A decade later, Pran and the others have moved on. Ellerbe Becket



Peter Pran, who brought a signature style to Ellerbe Becket, has moved to NBBJ.

learned that accommodating individualistic design approaches within a culture oriented to serving diverse client interests isn't easy. That it struggled so long to do so, and that other firms—from Hillier in Philadelphia to Cannon in St. Louis—are trying similar strategies, suggests that at some point "good

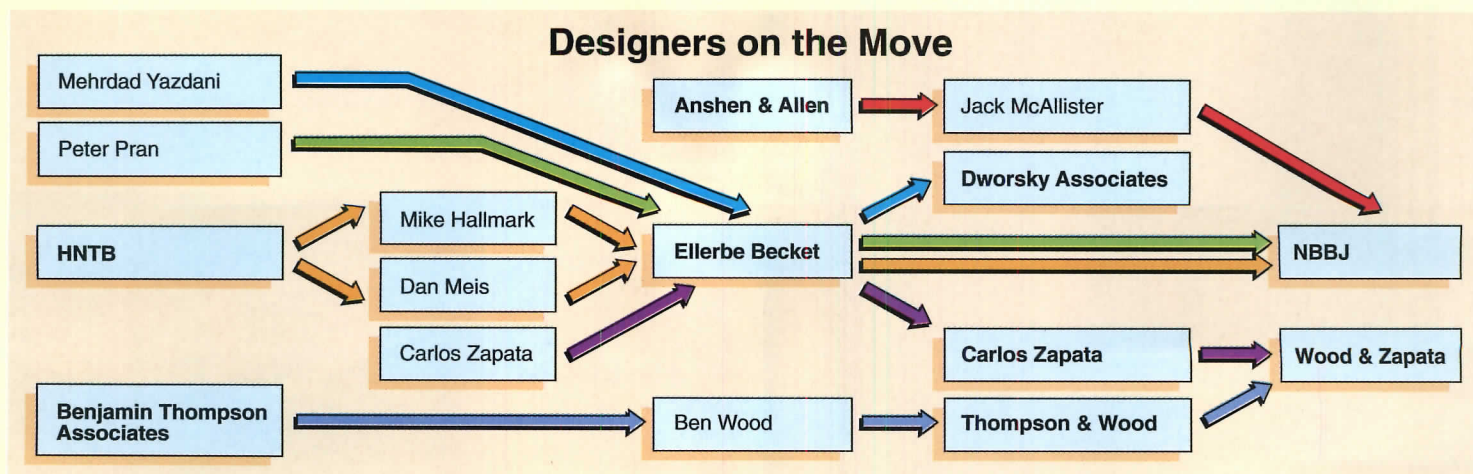
service," at least in the traditional big-firm mode, isn't enough.

Pran joined the firm's New York City office after practicing in his native Norway and working in Chicago with Mies van der Rohe and Skidmore, Owings & Merrill. Pran came aboard Ellerbe Becket at the invitation of Wayne Fishback, who headed the New York City office, and who knew Pran from his Chicago days. "Bringing Peter in was a recognition of the realities of business and competition," says John Gaunt, who was CEO at the time, including "the need to create as strong a design profile as we could reasonably create."

Singular designer meets team culture

Observes Rick Lincicome, current president of Ellerbe Becket's architecture division, "We benefited from Peter's credibility and visibility in the architectural world, and in recruiting young talent," such as Zapata, Yazdani, and others. "Peter had a profound effect on the firm from the start, with his focus on cutting-edge design," says another young architect and Pran fan, Richard Varda, of Ellerbe Becket's Minneapolis office.

Pran was involved in, or gave critiques on, projects throughout Ellerbe Becket's five offices. He raised the firm's profile by winning a number of design competitions, such as the New York City police academy (with Michael Fieldman, a project that has not gone forward due to a change in the city's political climate) and the New York State Psychiatric Institute (overlooking the



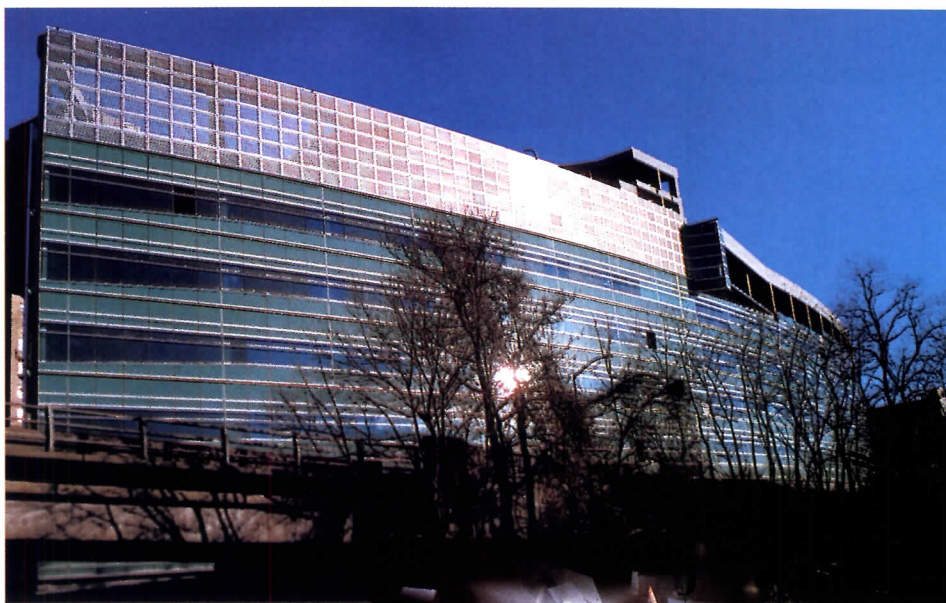
Hudson River on Manhattan's Upper West Side—top—and now nearly complete). Pran also provided an entree for Ellerbe Becket into international work, garnering commissions in such thriving markets as Indonesia.

When markets contract

Pran's role at Ellerbe Becket wasn't easy to accommodate. "We're a team-based organization," explains Lincicome. Pran challenged the firm, "because Ellerbe Becket was not comfortable with designers of such individuality." Lincicome says Pran's celebrated work "created barriers with other folks who were doing design in the firm." Adds Varda, "Peter has a unique personality, and sometimes it is hard to integrate him into a team environment." But Lincicome explains that these tensions were not fatal, that the firm has a good cross-section of talent, and that a single design vision was not what Ellerbe Becket was after. But it's clear Pran's sensibility affected some of Ellerbe Becket's most appreciated recent work, such as the Varda-designed Leamington Municipal Transit Hub [RECORD, June 1993, pages 126-129].

Still, Gaunt's and Fishback's vision foundered on a harsh reality. A number of important markets for the firm contracted in the early 1990s. Typical was health care—a large and profitable area for the firm—which had tightened up as uncertainty rose over the fate of the nation's health-care system. This focused management on cost-cutting, observes Yazdani, "and, as is usual with large organizations, design is the first thing that suffers." He and other senior designers feel that their concerns were not forcefully represented in management, where engineers more than architects held sway, and management did not see a bottom-line value for design.

In a 1994 shakeup, Gaunt departed, and the firm's commitment to exploratory design collapsed, according to Pran and other young designers who had been attracted during his tenure. "We had hoped to take a few jobs and make them exceptional," recalls Zapata. "I believe in big firms," he says, but was frustrated that Ellerbe Becket seemed unable to get its most cutting-edge projects built. He left to start his own Miami firm in 1991, and has recently merged with Ben Wood, a
Continued on page 127



8
A Peter Pran portfolio, all with Ellerbe Becket, except as noted.

7. *New York State Psychiatric Institute, New York City*

8. *Academic complex for the State University of New York, Binghamton.*

9. *Karet office tower, Jakarta, Indonesia*

10. *Graha Kuningan, Jakarta, Indonesia. (Pran will complete this project with NBBJ.)*

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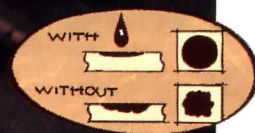
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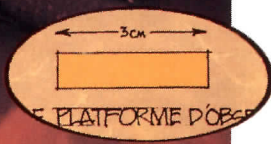
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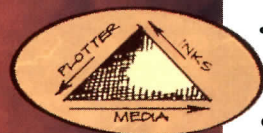
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Quiet Progress in Managing Environmental Toxins

By Nadav Malin

Just because environmental hazards in buildings aren't often in the headlines these days doesn't mean that architects and building owners can ignore the difficult cost and public-safety issues presented by such substances as asbestos, radon, lead in paint, and electromagnetic-field radiation. There is quiet progress on a number of fronts, however, that can make management and abatement less costly and less burdensome.

Although the architect must rely on specialists like industrial hygienists and specialty contractors for management and abatement

The architect has a prominent role in helping the owner identify hazards, navigate the regulatory morass, and decide among remedial strategies.

specifics, the architect has a prominent role in helping the owner identify hazards, navigate the regulatory morass, and decide among remedial strategies. Clients may be genuinely unaware of the dangers or they may play dumb, hoping to avoid expense and inconvenience. Either way, they are subjecting workers and occupants to real hazards. Lead and asbestos, in particular, are more dangerous when disturbed; incompetent removal can offer the greatest health risk.

Biggest lead-paint risk: children

Federal and many state regulations distinguish between the presence of lead paint and the existence of a lead hazard. If the paint is in good condition, not subject to abrasion or

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Continuing Education

AIA members can earn two AIA/ARCHITECTURAL RECORD continuing-education learning units by examining the learning objectives (page 133), reading the story on these pages, completing the questions, and filling out and returning the self-report form, page 134.

impacts, and not on a surface that a child might chew (such as a windowsill), it may pose little hazard. Unfortunately, lead-based paint tends to become brittle over time, so it often flakes off walls and sloughs off surfaces that are subject to wear.

Cases of childhood lead poisoning occur most frequently in residential rental units that have not been well-maintained, and in homes where renovation or remodeling is undertaken by uninformed contractors or occupants. Ironically, many cases of lead poisoning occur during well-intentioned efforts to remove lead paint from walls, when appropriate mea-

sures to prevent exposure to the leaded dust are lacking. Only vacuums that use high-efficiency particulate-air (HEPA) filters will reliably trap lead dust, for example, according to abatement experts.

States or localities may have certification or training requirements for lead-abatement contractors. OSHA and EPA are working on applicable nationwide requirements. Federal regulations apply to any federally assisted housing. Each funding program has had its own rules, which, until recently, have been scattered throughout the thousands of pages of regulation at the Department of Housing and Urban Development (HUD). Such rules will soon be consolidated in one place, according to Ronald Morony, deputy director of the HUD Lead Office.

Another new federal regulation will soon require that anyone selling or leasing a residential property built before 1978 disclose the presence of any known lead-based paint, and provide to purchasers or renters any available records on lead paint and lead-paint hazards. Promulgation of this rule was "a real breakthrough," according to Marianne Lavelle, staff writer at the *National Law Journal*, because the rule had long been

stalled. The law further requires the sellers and lessors to provide purchasers with an approved lead-hazard information pamphlet and a 10-day opportunity to conduct a risk assessment or inspection for lead paint.

An unfortunate effect of this regulation is that owners may not test for lead in order to avoid disclosing its presence upon sale. "You are not required to reveal information you don't have," points out lead-abatement trainer James Keck of Leadtec Services, Inc. in Baltimore. Keck feels the disclosure requirement is important since it increases public awareness. Unknown as of yet is whether disclosure makes a residence unsellable, just as the presence of asbestos has made millions of square feet of office space all but unrentable.

Lead-abatement options

The handling of lead-based paint falls into two categories: managing the lead in place, or removing it. If the surface is not accessible to children and not likely to release paint flakes or dust, simply monitoring the surface, by visual inspection or by periodic testing of collected dust, may be adequate, though many people would seek the added protection of a coat of new paint.

Encapsulation with an approved barrier coating is another option for managing lead paint in place. A just-approved standard, ASTM E-1796, covers liquid-coating encapsulants. Most government regulations accept encapsulation that meets this standard as a "permanent" abatement strategy if the coating can be expected to last at least 20 years. Although high-quality encapsulants are quite expensive, overall costs are usually much lower than the cost of removing and replacing paint. The main drawback of encapsulation is that the lead paint remains in place, where it could become a hazard or liability during future alterations to the building, even if the encapsulant itself performs perfectly.

Lead-based paint may also be encased by installing a new wall surface, such as drywall. Encasement behind a solid material is usually considered more secure than encapsulation, but architectural details in rooms are usually lost behind the new surface.

Toxic substances like asbestos, lead in paint, radon, and electromagnetic field radiation haven't made the headlines recently, but there is increasing consensus on management and abatement.

Removal of lead-based paint is difficult and expensive, partly due to the need to protect workers and others in the vicinity from exposure to lead residues. In residences, sandblasting is rarely feasible due to the dust generated. Chemical strippers may be effective on metal surfaces, but on wood they tend to leave a residue of lead, according to Keck.

Mechanical strippers, which knock paint loose within a vacuum head, are very dependent on operator skill and care. The heads are unwieldy, and must be held tightly against the surface to prevent lead dust from escaping. Also, "We try to discourage paint removal on porous surfaces unless it's absolutely necessary," Keck says. "If it is necessary, we prefer heat as a method of removal." He cautions, however, that heat cannot be used in an occupied building because of the fumes generated. The only truly effective way to remove lead on woodwork is to replace it, Keck advises.

Lead-abatement costs coming down

On the outside of buildings, and on commercial and industrial sites, blasting can be used. Equipment operators must wear protective clothing, and a special enclosure is used to contain the operation. All paint removed, along with the contaminated blasting medium, must be collected and disposed of in an approved hazardous-waste landfill. The cost of this disposal has led to the development of equipment that uses Dry Ice (solid carbon dioxide—CO₂) as the blasting medium. John Feller, a project manager with Boelter Environmental Consultants, of Park Ridge, Ill., calls CO₂ blasting "the biggest new development I've seen" for lead-paint removal. After striking the painted surface, the Dry-Ice pellets evaporate, leaving only the paint particles, which minimizes disposal.

Cumbersome and expensive as it is, the cost of lead abatement in most situations is actually coming down. New technologies are making it easier for contractors to work effectively while complying with safety laws. With experience, contractors' comfort level with the work is improving, giving them the confidence to bid more competitively on jobs. Finally, many safety precautions used initially on lead-abatement sites were borrowed directly from the asbestos-abatement indus-

Risks and Regulations Affecting Toxics in Buildings

Lead paint

Hazard: At low levels, the neurotoxic effects of lead affect primarily children's developing brains and nervous systems, causing reductions in IQ and attention span, reading and learning disabilities, hyperactivity, and behavioral problems. National average lead levels in blood have come down significantly since lead was banned in gasoline and other products. However, lead poisoning, primarily from ingestion from dust or paint in buildings, remains "the most common environmental disease of young children," according to the CDC.

Regulatory history: Containing as much as 50 percent lead, lead-based paint was commonly used well into the 1960s. Beginning as early as 1940, however, the amount of lead in paint and the frequency of its use declined, until it was banned for use in buildings in 1978.

Asbestos

Hazard: Prolonged exposure can cause lung and other cancers, and scarring of the lung (Asbestosis). Smoking has a synergistic effect with asbestos exposure, more than doubling the likelihood of developing asbestos-related cancers, according to the CDC.

Regulatory history: Asbestos is not legally banned. Lawsuits, however, have effectively prevented companies from continuing to manufacture asbestos-containing building materials.

Occupational Health and Safety Administration (OSHA) regulations distinguish between friable

and non-friable asbestos-containing materials. Products used for thermal insulation and surfacing applications are categorized as friable, and require a more complex abatement process, while those incorporated in other products—wallboard, floor tile, roofing, siding, and construction mastics—are considered non-friable, and can be removed or managed under a less-strict regime.

Radon

Hazard: Radon gas and its decay products can release cancer-causing radiation in lungs. Only long-term exposure is known to affect health. Radon occurs naturally in certain soils and rocks, and typically gets into buildings through cracks or gaps in the foundation or floor slab, or via water from underground sources.

Regulatory history: The EPA has weathered a great deal of criticism for its 4 pCi/l action level, yet remains wedded to it. The Agency estimates that one out of every 15 homes exceeds that action level on a regular basis. The Canadian government, in contrast, has set a much higher level of 20 pCi/l, which many argue is too high.

EMF radiation

Hazard: Electromagnetic radiation is alleged to cause cancer, and may adversely affect development of fetuses.

Regulatory history: Efforts have been voluntary, including improved computer-monitor shielding. ■

Fundamentals

Lead poisoning, primarily from ingestion from dust or paint in buildings, remains "the most common environmental disease of young children," according to the U.S. Centers for Disease Control.

try, but lead abatement does not require such strict procedures.

Asbestos: new management alternatives

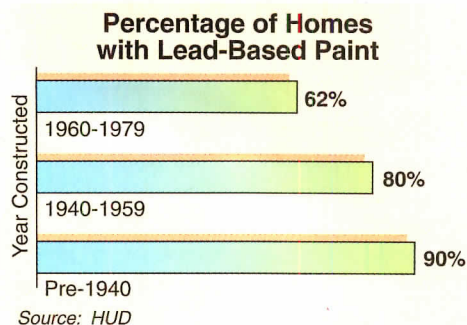
The perception is widespread that there is only one thing to be done with asbestos. "Usually people think in terms of removal," says Gerald Karches, CEO of Southwest Hazard Control, Inc., of Tucson, Ariz. Because of the cost and risk in removing asbestos, however, procedures to manage the material in place have become increasingly accepted [RECORD, October 1990, pages 110-111]. Asbestos-containing materials that are in good condition—not flaking, crumbling, or otherwise releasing fibers—may require only monitoring to ensure that they are not disturbed in an unsafe manner. If the asbestos-containing material is likely to release fibers, some action is required. For readily accessible material, removal is still the most prudent approach.

Where removal is less feasible, specialists are increasingly recommending encasement as a viable alternative. "About five to ten percent of our work is an encasement process of some kind," explains Karches, who thinks it would be used more if clients realized "that encapsulating-in-place is an option."

Safely encasing a low-density, fibrous material such as asbestos fireproofing is no simple matter, but new products are available that do the job well, according to Karches and other who have used them. The encapsulant must be tested on each job to ensure that the additional weight won't pull the material loose, and it must not reduce the installation's fire-retardant properties.

Controversial threshold of radon risk

In the 1980's and early 1990's the EPA's Radon Division actively spread the word about the dangers of radon, and encouraged homeowners to use test kits to evaluate indoor air. Extrapolating from studies of cancer among uranium miners, the EPA determined that a lifetime of exposure to radon at a level of 4 picocuries per liter (pCi/l) constitutes an unacceptable risk, and set that level as its recommended action threshold. While the fact that radon causes cancer is well-accepted (indoor health consultant Terry Brennan calls radon "the best



Beginning as early as 1940, the amount of lead in paint and the frequency of its use declined, until it was banned for use in buildings in 1978. Actual lead poisoning most often occurs in poorly maintained dwellings or during improper removal.

documented human carcinogen"), some recent epidemiological studies have failed to link radon with cancer at such low levels.

The test kits that are widely available to consumers consist of activated-charcoal filters that must be exposed to the indoor air for a given length of time, and then sent to a laboratory for analysis. Radon levels in a given space can vary widely by time of day, season, weather, and occupant behavior, so test kits with longer exposure times are considered more reliable. "If there's no pressure in terms of time, we always recommend that people take a longer-term measurement," says Phil Jalbert of the EPA's Indoor Environments Division (formed last year from the merger of the Radon and Indoor Air Divisions). Quality of the laboratory analysis on the exposed charcoal can also vary, so the EPA recommends that users seek out kits from companies that participate in the Agency's voluntary certification program.

When short-term testing finds elevated radon levels, EPA recommends verifying the problem with more comprehensive (and expensive) long-term testing. Mitigation strategies include sealing gaps and cracks in foundations, floor slabs, and other areas of ground contact, and increasing ventilation in habitable areas with earth contact. While radon is primarily a hazard in homes, the site of structures that may expose occupants over extended periods, such as schools and nursing homes, should also be analyzed.

Electromagnetic fields: risks overstated?

Electromagnetic fields (EMFs) received a great deal of notice several years ago when a number of studies were published suggesting a link between low-level EMFs and cancer. The risks were viewed with skepticism by many scientists because the fields in question are far too weak to affect chemical bonds—the mechanism by which such fields generally interact with matter. Some subsequent studies contradicted the findings in the earlier reports, supporting the skeptics' position. But other possible biological effects have been proposed, which could explain a connection between EMFs and health risks. These include an effect on the communication across cell membranes, an impact on the production of melatonin, and an interaction with ions in the body that can affect chemical bonds.

Most electric power systems carry alternating current, which produces oscillating electric and magnetic fields. Electric fields are relatively easy to shield, but magnetic fields are not. Magnetic fields, the source of most of the concern with EMFs, do drop off rapidly with distance from the source, however.

Is the threat posed by EMFs real? "It all depends upon your interpretation of the studies that have been published, and it depends upon your values," says Dr. Michael Greenberg of the Department of Urban Studies and Community Health at Rutgers University. Greenberg goes on to say that as an advocate for public health, he feels that there is enough evidence to suggest that the risk from sources such as high-voltage power lines should be taken seriously. In practical terms, Greenberg points out that market economics are already discouraging construction near transmission lines, because builders know that such sites will be less desirable.

Greenberg is less concerned about EMFs from sources inside buildings: "There's a lot less evidence to suggest that the indoor sources would cause things like cancer or low-birthweight babies." EMFs in buildings can cause problems for sensitive computer systems, however, including flutter on computer screens. For this reason alone, it is wise to locate computer users at some distance

from main power supply lines in a building. Fields generated by computer monitors were once suspect, but newer monitors have been redesigned to reduce emissions.

Because sources of EMFs, like transformers or main service lines, may be hidden from view, some consultants recommend checking a space with a gaussmeter before designing the layout of systems and personnel. In new construction or renovation projects, relatively minor alterations to the electric wiring may help to reduce the current loops that generate EMFs.

Further information

- ◆ "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing" is offered by the federal government for a small handling fee: 800/245-2691 (phone); huduser@aspensys.com (e-mail).
- ◆ National Center for Lead-Safe Housing, 505 American City Building, Columbia, MD 21044; 410/992-0712.
- ◆ The Environmental Information Association (4915 Auburn Ave., Suite 301, Bethesda, MD 20814; 301/961-4999) is a good source on health hazards and abatement strategies for both lead and asbestos, with a training center in Atlanta, and field instructors throughout the country.
- ◆ Industrial hygienists are certified to do consulting on lead and asbestos by: American Board of Industrial Hygiene, 6015 W. St. Joseph, Suite 102, Lansing, MI 48917-3980; 517/321-2638 (phone); 517/321-4624 (fax).
- ◆ Radon mitigation efforts at the federal level are the purview of EPA: 800/557-2366 (radon hotline); Dave Price, Indoor Environments Division, 401 M St. S.W., 6604J, Washington, DC 20460; 202/233-9447.
- ◆ States have mapped likely radon sites. Usually a radon office within the department of public health is responsible. The Web site www.epa.gov/radonpro/contacts.html lists state radon offices as do local American Lung Association offices (800/LUNG USA).
- ◆ The best technical resource on EMFs is *Microwave News* (P.O. Box 1799, Grand Central Station, New York, NY 10163 (212/517-2800)). Most local utilities also offer guidance. An EMF interest group is: EMR Alliance, 410 W. 53 St., Suite 402, New York, NY 10019; 212/554-4073 (phone); 212/977-5541 (fax); emrall@aol.com (e-mail). ■

Health Hazards in Buildings				
Hazard	Occurrence	Potential Health Effects	Recommended Strategies	Principal Regulations
Lead Paint	Very common in pre-1960 buildings	At high levels: coma, convulsions, death. At low levels: reduced IQ and attention span; reading and learning disabilities; hyperactivity; behavioral problems	Control of dust (HEPA vacuum), encapsulation, removal	Vary by state and locality; disclosure required upon sale or lease; many rules affect federally funded properties; OSHA reg's govern worker safety
Asbestos	Very common in pre-1980 buildings	Lung cancer, asbestosis, other cancers	Control of fibers (HEPA vacuum), management-in-place (monitoring and/or encapsulation), removal	EPA reg's cover repair, removal, demolition, and disposal; alteration or removal must be done by certified contractor; OSHA reg's govern worker safety
Radon	Varies by local geology; 1 in 15 homes exceed EPA action level	Lung cancer	Sealing off possible gas entry routes, increased ventilation, depressurization of sub-slab or crawl space	No national regulations; some states have disclosure requirements upon real-estate transactions
Low-level EMF	Ubiquitous in developed areas, modern buildings	Nature and degree of risk is very controversial. Ascribed risks include leukemia, other cancers, birth abnormalities	Maintain distance from sources, avoid wiring designs with current loops that generate larger fields	No regulations affecting low-level EMF

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Circle 23 on inquiry card

A Data Gateway For AutoCAD

By Steven S. Ross

It's been in the works for more than two years, but AutoCAD Data Extension has finally been upgraded. It's not a moment too soon for Autodesk, because many other vendors have been developing ways to link large data sets to drawings—especially for geographical information systems (GIS) and facilities management.

What's more, drawings will soon be containing extra information to turn collections of lines into "objects" that in some ways mimic real doors, windows, and so forth.

Thus, in the next few months we'll be taking closer looks at MicroStation GeoGraphics and other data utilities, and at new CAD releases with lots of data hooks built in—among them ArchiCAD, Architrion, and AllPlan.

AutoCAD Data Extension Release 2

Vendor: Autodesk, 111 McInnis Parkway, San Rafael, CA 94903. 800/964-6432.

Equipment required: Computer-capable of running Windows; Windows 95 or NT and at least 32MB of physical RAM and 500MB of disk space for virtual memory strongly recommended. You'll need AutoCAD Release 13 c4a or newer to run it.

This long-awaited update of ADE vastly expands upon the ability of the original—and AutoCAD itself—to link AutoCAD drawings to external data. The data can be graphic or part of an external database. The biggest change in functionality is in ADE's ability to open more than one data type at a time.

Not so obviously, ADE allows you to update graphic and non-graphic objects from almost any number of AutoCAD drawings while in a single AutoCAD session. That is, you can edit or manipulate the objects and send them back to the drawings they came from.

That's a big deal, because AutoCAD itself can only open one drawing at a time for editing or cut-and-paste operations. And, unless you have Windows NT, you can't open more than one copy of Release 13 at a time, so you're

limited to one drawing, period, unless you have something like ADE.

One of the original key functions for ADE was its ability to select only a subset of the data in another source for attaching to a drawing. This function was especially useful for geographical information systems and facilities management, which produce staggering amounts of data. But as computers have gotten bigger and more and more data have been added to drawings themselves, ADE's uses have expanded. As object-oriented drawing methods come into play over the next few years, drawings will continue to grow.

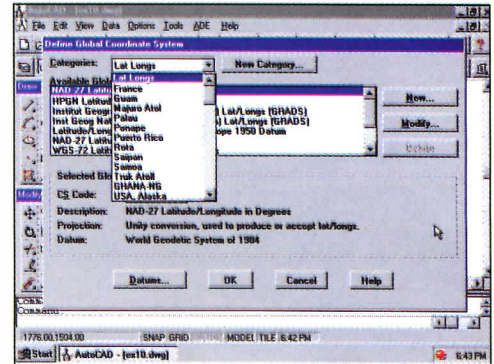
You can select by layer, object type, color, and so forth. It helps if all the drawings with which you are working are done the same way—have the same layer definitions and symbols. But even that's not absolutely necessary if you are clever in the construction of "queries" that snatch your needles of data out of haystacks of available information.

This selection feature allows more than one person to work on a drawing at the same time, too. You can carve the drawing up by layer, building subsystem, or even by room or building wing.

The carving can be made somewhat easier by saving queries for reuse. The queries are done in SQL (structured query language). SQL is a bit wordy, but it is standard across a wide range of database programs. An ADE dialog box writes much of the query automatically as you choose various options for selecting the data or section of drawing you need.

The big drawbacks: You have to use ADE with AutoCAD Release 13, and with drawings in the Release 13 format. The program, in common with most database software, requires enormous amounts of memory. Autodesk recommends that you keep drawing sets (groups of drawings that contain data you want to manipulate or attach to the drawing you have opened in AutoCAD) you work with under ADE to 20MB, and that you select no more than 25 percent of that at a time in queries.

A long-awaited update of AutoCAD Data Extension expands on the software's ability to link AutoCAD drawings to external data. But it must be used with AutoCAD13, with drawings in the Release 13 mode.



ADE is not specifically for GIS data, but it comes with a coordinate definition utility that is aimed specifically at this market.

Autodesk recommends that you add 8MB of virtual memory for every megabyte above that 20MB. We found we could "cheat" on that quite a bit, especially with database tables instead of drawing files. Virtual memory is cheap, however, because it simply takes up disk space. The 500MB or so that Autodesk recommends for a 50 or 60MB set of drawing files will cost you only a hundred dollars.

Manuals: One small, quick-start installation guide, one 234-page paperback with good tutorials.

Ease-of-use: Good once everything is set up. But installation is tricky, and so are queries for data from different sources. You'll need some systems help for all but the simplest installations. You need AutoCAD Release 13 c4a or better. The CD-ROM version of ADE comes with a complete copy. The floppy-disk version only has the changes to upgrade from c4.

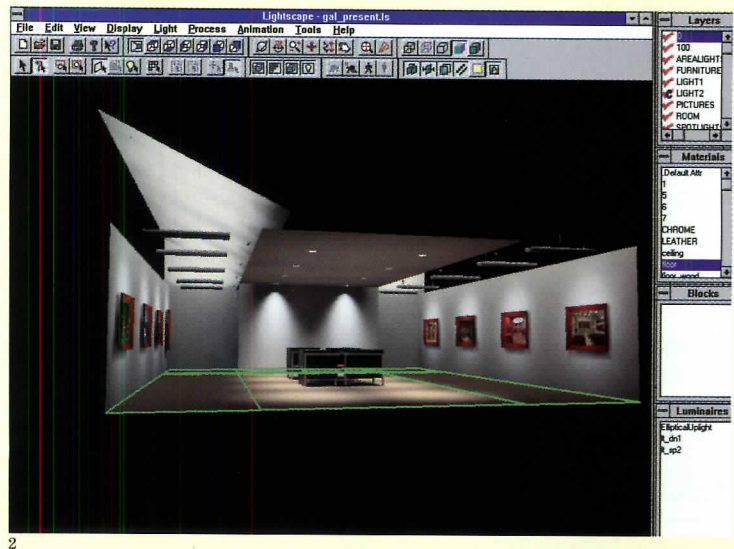
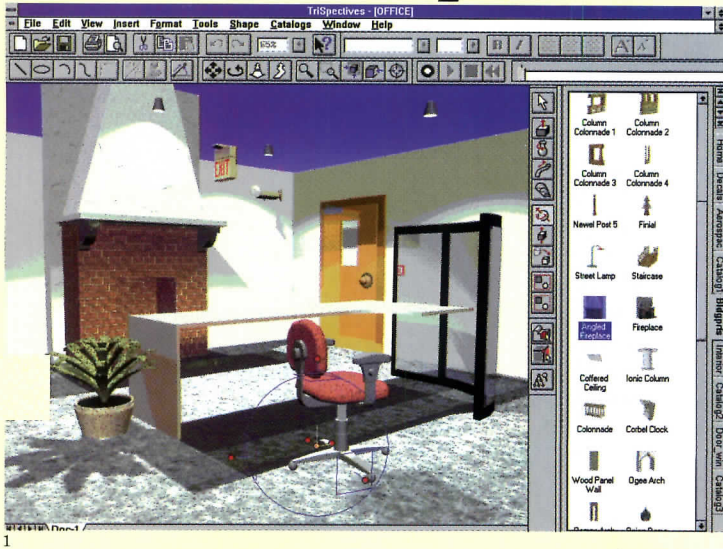
Error-trapping: The sheer versatility and reach of the package can get you into trouble. A query may not return all the data you want because some of the data may have been mis-coded. Thus, it is wise to test queries on each drawing or database source one at a time, before pulling everything together. ■

150 on Reader Service Card

CORRECTION

Last month we misidentified Bentley Systems' TriForma software. We regret the error.

CAD and Visualization Tools At A/E/C Systems Show



By Steven S. Ross

CAD and rendering software

In a year when neither of the "big two" American CAD vendors, Autodesk and Bentley Systems, made major changes to their offerings, the focus at the annual A/E/C Systems Show in Anaheim shifted to upstarts with good ideas. Clear trends: easier-to-use, stable rendering and visualization products, and software requiring Windows NT or Windows 95, or Macintosh System 7.5 (and lots of memory for any of them; 16MB minimum, 32MB or more recommended) to operate.

Bentley even released a version of MicroStation for IBM OS/2 Warp, with the OS/2 interface. Phone: 800/236-8539.

The big news was in the spread of visualization tools (rendering software, for instance) on top of CAD. IBM showed its 3D Interaction Accelerator visualization software for placing TV cameras at the Olympics and for security and ticketing. IBM used AutoCAD and Autodesk's Kinetix animation software (Autodesk spun off its 3D Studio and other animation products to a new company, Kinetix) on IBM RS/6000 workstations. Phone: 800/879-4233.

Graphisoft's ArchiCAD 5.0 was demonstrated (the final versions shipped in July). The

underlying 3D database is more tightly integrated with drawings, there are more drawing tools, and better control of multiple symbol libraries. The Mac version, as with earlier releases above 4.2, can create Quick-Time VR animations. The Windows 95/NT version can be integrated with LightScape's flexible photorealistic rendering engine, which includes a terrific radiosity control for representing indirect lighting. Phone: 415/703-9777 for Graphisoft, 800/343-0073 for LightScape Technologies.

GDS Corp. announced it has acquired rights to Piranesi, an "interactive" rendering package; you can manually "edit" the rendered image more or less as you would in a paint program, except that it works in three dimensions. The prototype runs on SGI hardware. A Windows NT version is due at the end of the year. Phone: 303/741-8587.

Bentley Systems showed a number of packages for improved visualization. The new release of MicroStation MasterPiece (pictured in last month's issue) now includes radiosity, photomatching to superimpose a rendered image on a photo (even synchronizing orientation and perspective on the model to fit the picture), and solid texturing. Its TriForma add-on sits on top of MicroStation to allow conceptual 3D modeling. You sculpt 3D surface models, not solids, but the models usually behave like solids. Phone: 800/236-8539.

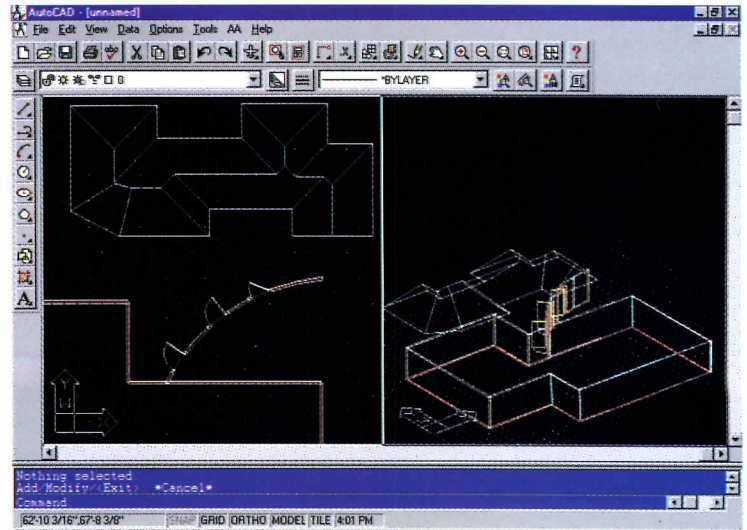
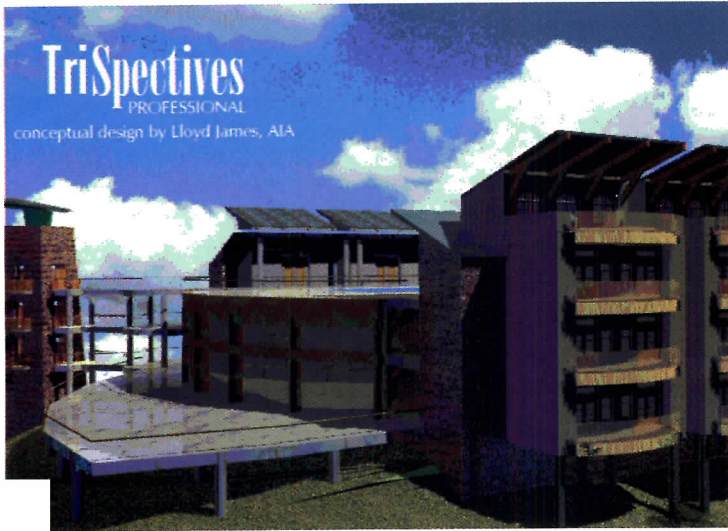
Speedikon from AEC Solutions is also an add-on (for MicroStation and AutoCAD) that helps build 3D models from 2D plan views. The resulting files can be moved from one CAD program to the other. Phone: 800/298-2327.

TriSpectives and TriSpectives Professional from 3D/Eye combine illustration, animation, and 3D solid modeling. TriSpectives requires Windows 95 or NT. The 3D modeler is based on ACIS (the standard solids-modeling software engine). The package comes with prefabricated shapes and standard objects (such as desks and chairs) that can be combined to handle many modeling tasks almost without drawing. Architects should like it; facilities managers should love it because standard shapes can be inserted on drawings (and FM personnel don't always know how to draw). Phone: 770/937-9000.

Visio, which started the "draw with prefab shapes" movement, showed its new Visio Technical 4.1 with better database connectivity (the shapes are governed by underlying data on size and orientation). It becomes easier to use shapes from a manufacturer's catalog and bring them into a Visio drawing through the database. It runs in Windows 3.1 but really shines in Windows 95. Phone: 206/521-4500.

Hitachi Software has a Visio add-on called SmartView for integrating raster data with

Vendors at A/E/C Systems concentrated on adding CAD visualization and modeling tools, and on faster graphics-display monitors and photorealistic printers.



the vector format of Visio drawings; you can scan an image into the drawing, or "coat" a shape with it. Visio is still a 2D program, however, not 3D.
Phone: 303/449-3200.

Vendors of third-party add-ons to AutoCAD also showed new visualization tools. Softdesk announced an AutoCAD ARX application, GTX 7.5 CAD Overlay for converting raster images to vector formats. Promised for release this fall, it includes readily manipulated raster data before vectorization.
Phone: 603/428-5033.

Ketiv showed ArchT 13.5 for AutoCAD 13. This is one of the first shipping applications using the ARX, an object-oriented gateway into AutoCAD. ArchT is pushed as a drafting productivity tool but it includes Autodesk AutoVision for fast rendering. There are strong links to Wiley's *Architectural Graphic Standard* CD and Timberline Precision Estimating.
Phone: 800/458-0690.

Eagle Point pushed its new Virtual Image fast, photorealistic rendering software, and its Virtual Simulator real-time animation package for walkthroughs.
Phone: 800/678-6565.

Corel, well-known for its drawing and paint programs, fulfilled its promise to enter the CAD market with a suite of animation and rendering tools released just before A/E/C

began. CorelCAD, for Windows 95/NT, includes ACIS boolean modeling, good drawing tools, auto dimensioning and so forth. In the same box, you get Dream 3D, Multimedia Manager, a scripting language and other tools for clever presentation work. Corel is also selling Numera's Visual CADD, the successor to Generic CADD.
Phone: 613/728-8200.

The big news at BAGH was the top-to-bottom rewrite of Archtrion. When this package first appeared in the mid-1980s, it was the most advanced—and most usable—2D/3D CAD software for the Macintosh. But the underlying file structure used integer math and cube-like entities for speed. As the Mac got faster, the severe limitations of this approach became more apparent; other Mac packages passed Archtrion in ability to draw complex shapes in 3D. Version VI, the first version with revised, modern file structure, was shown to architects for the first time at A/E/C Systems. It's available for Windows 95/NT, SGI Unix, and Macintosh Systems 7.5.
Phone: 800/561-0522.

MacDraft, another echo of Macintosh history, returned as a product of Microspot MacDraft. Originally developed by IDD, it was the first successful 2D drafting program for the Mac; the new version, 4.2, has been recoded for better running with the Power Mac CPU. It remains fast and easy to use. The underlying database can be replicated as an Excel spreadsheet. Microspot has also

1. *TriSpectives*, from 3D Eye, combines 3D modeling illustrations and animations features. Predrawn objects such as chairs and desks can be popped into place.

2. *Lightscape Technologies' Lightscape* provides 3D simulations which users can interactively walk through and explore.

3. The professional version of 3D Eye's *TriSpectives*.

4. *Softdesk Inc.'s Auto Architect 8.0*, an add-on drafting aid for AutoCAD' 13, was previewed by *RECORD* at the show. Its release will be late 1996 or early 1997. Phone: 800/763-8377.

been selling 3D World, a 3D design and rendering program for the Mac, since early this year. Phone: 408/253-2000.

FIT was showing Cadvance, one of the first full-featured Windows CAD programs; after several years of stagnation and corporate ownership changes, Version 7 was due for release as we went to press in mid-August. Despite its robust feature set, it remains happy in Windows 3.1 or 3.11—it will work with Windows 95 but doesn't require it. Cadvance LiTe 6.3, a 2D version aimed at the AutoCAD LT market, was released at the show.
Phone: 714/956-3171.

Would you rather freehand sketch than draft? Two vendors unveiled software that allows you to rough out shapes. The software

then cleans up the drawing automatically. Intergraph began distribution of its Imagi-ner 2D drawing package for Windows 95 and NT; it can save files in AutoCAD or MicroStation format.
Phone: 800/692-8069.

Nemetschek Systems showed a beta copy of an AllPlan upgrade due this month that brings a "sketch" interface to this high-end Windows 95/NT 3D package. The firm's AllPlan FT also now permits users to make bubble diagrams and a Windows-like interface instead of the European-style original menus.
Phone: 415/289-3752.

Vdraft from SoftSource will be a big help for AutoCAD users who want to edit more than one drawing at once and cut-and-paste among them. Vdraft uses the SoftSource programming tools for DWG compatibility, reads and writes DWG and DXF files through Release 12, and runs under Windows 95/NT. It integrates with SoftSource Web publishing tools as well. The program was unveiled at A/E/C but probably won't be available until the fall.
Phone: 800/877-1875.

FelixCAD from FCAD is a 3D drafting program that's AutoCAD-compatible. But it can also be a Windows 95/NT developer's kit for those who have vertical-market solutions such as plant layout or kitchen design for AutoCAD, MicroStation and similar high-powered CAD engines, and want to create stand-alone applications instead of add-ons. This saves customers the cost of expensive extra AutoCAD seats.
Phone: 415/893-1240.

Display hardware

Lower prices and higher versatility were the watchwords this year. The pricing was expected but the functionality advance was not. Much of the advance comes from the 32-bit Windows NT/95 environment, which offers several standard graphics acceleration methods (such as OpenGL).

Appian Graphics, for instance, showed its new Jeronimo J2 PCI-bus video card, capable of 3200 by 1200 resolution across two moni-

tors and up to three video windows at 30 frames per second—all in one card. You can have a second J2 in the system, for spreading images across four monitors. It comes with Windows NT and 95 drivers, and separate drivers for DOS AutoCAD and MicroStation. The cost? Under \$600 for the 4MB version thanks to new Cirrus Logic graphics chips and cheaper-than-VRAM memory.
Phone: 800/727-7426.

Diamond MultiMedia announced a 1-slot, 2-monitor card, the Diamond Fire GL 2000, with more raw-image-processing power than Appian; delivery was due last month. It uses the 3Dlabs GLINT Delta accelerator; the 4MB VRAM/8MB DRAM configuration (1600 by 1200 per monitor) goes for \$1,995. You get Windows NT/95 support, OpenGL, and Heidi (for 3D Studio).
Phone: 800/468-5846.

ELSA Data Communications showed its new GLINT-based GLoria PCI 2D/3D graphics accelerator board for Windows 95 and NT, too. The on-board accelerator can handle OpenGL, Direct 3D, ELSA POWERlib, and Heidi. It includes display list drivers for AutoCAD and MicroStation DOS as well as Windows versions. You can use two cards for dual monitor setups—but the solution is pricey at \$1,999 per card with 4MB of 3D DRAM and 4MB of VRAM.
Phone: 408/935-0350.

Of course, for real action, nothing beats a Silicon Graphics Onyx—apparently the most powerful computer ever shown at A/E/C Systems. For complex visualization tasks such as ray-traced photorealistic animations, the new InfiniteReality Onyx line is up to 100 times faster than the previous record holder, the Onyx RealityEngine. It can handle 200MB a second of incoming image data, and output full-motion video.

The tab starts at more than \$200,000 (single-processor i-Stations start at \$125,000 and the Indigo IMPACT series at under \$30,000). But conferees were marveling at the machines -- and planning to buy an Onyx-class model once the price comes down to \$10,000 in five years or so. Expect some service bureaus to consider such high-end marvels soon.
Phone: 415/960-1980.

Printers and graphics adapters kept pace. Intergraph booth-minders were excited about the firm's Intense 3D line of graphics accelerator cards. This is the first time Intergraph has offered the cards for sale separately, apart from its TDZ line of 3D graphics workstations. The cards come with OpenGL and Heidi drivers, hardware and software for texture-mapping, and processing options. Intergraph claims higher processing speed than GLint-based cards. The price starts at \$2,499 with 16MB of SDRAM; Intergraph expects to be selling them directly and through OEMs.
Phone: 800-763-0242.

Inkjet plotters

Encad showed its CADJET 2 E-size color inkjet plotter at A/E/C, with new low \$2,995 price (including roll feed and automatic cutter). But the crowd-pleaser was the firm's NovaJet series with huge 500 ml ink reservoirs capable of reproducing photorealistic art with full ink coverage, rather than typical "line art" CAD drawings. The largest in the line is the new NovaJet Pro 50, which uses 50-in.-wide paper.
Phone: 800/453-6223.

CalComp set up its new TechJET 720c plotter in a suite for private showings. The D- and E-size TechJET series can plot at 720 dpi in monochrome and 360 dpi in color—the highest resolution of any wide-format inkjet plotter. The plotters, meant for CAD drawings that use some color, use either a high-capacity (44 ml) black inkjet head, or a four-color head with 5 ml each of cyan, magenta and yellow, and 9 ml of black. Prices weren't final at press time, but CalComp has been pricing aggressively
Phone: 800/932-1212.

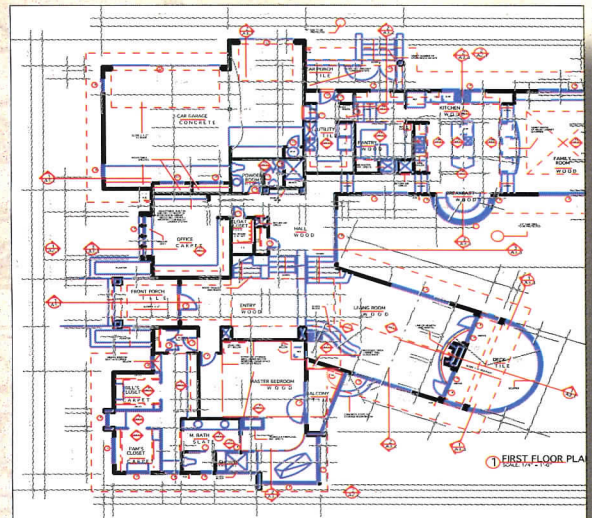
Hewlett Packard showed its new large format DesignJet 350C and 330 inkjet plotters.
Phone: 800/851-1170.



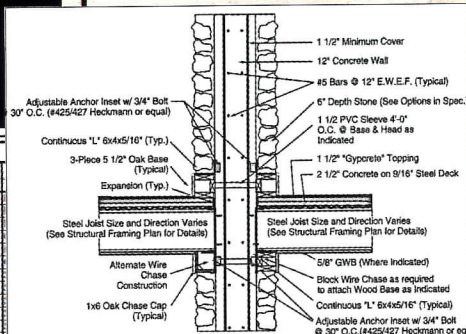
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*Image 1



*Images 2

#	Room	Finish	Material	Notes
101	101	1x4 wd	1x4 wd	
102	102	1x6 wd	1x4 wd	
103	103	1x6 wd	1x4 wd	
104	104	1x6 wd	1x4 wd	
105	105	1x6 wd	1x4 wd	
106	106	1x6 wd	1x4 wd	
107	107	1x6 wd	1x4 wd	
108	108	1x6 wd	1x4 wd	
109	109	1x6 wd	1x4 wd	
110	110	1x6 wd	1x4 wd	
111	111	1x6 wd	1x4 wd	
112	112	1x6 wd	1x4 wd	
113	113	1x6 wd	1x4 wd	
114	Kitchen	X	12x12 Ceramic	Gwb Gwb Gwb Gwb Gwb
115	Breakfast Nook	X	12x12 Ceramic	Gwb Gwb Gwb Gwb Gwb
116	Rear Vestibule	X	12x12 Ceramic	Gwb Gwb Gwb Gwb Gwb
117	Spa Room	X	12x12 Ceramic	Gwb Var. Gwb Gwb T&G Wd & Gwb
118	Bath w/Shower	X	12x12 Ceramic	Gwb Gwb Gwb Gwb Gwb/ Sloped
119	Side Foyer	X	12x12 Ceramic	Gwb Gwb Var. Gwb Gwb/ Sloped
120	Laundry	X	Sheet Vinyl	Gwb Gwb Gwb Gwb Gwb/ Sloped
121	Bed Room	X	Part'l Concrete	Gwb Gwb Gwb Gwb Gwb
122	Tool Room	X	Part'l Concrete	Gwb Gwb Gwb Gwb Gwb
123	Garage	X	Part'l Concrete	Gwb Gwb Gwb Gwb Gwb

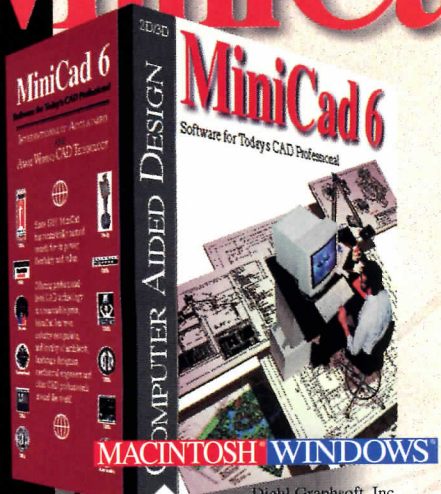
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Charles Perrygo
Senior Systems Engineer
Swales and Associates, Inc.



*Image 3

MiniCad 6



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*Image 1 - Courtesy of Francois Levy, Dick Clark Architects, Austin, TX
*Image 2 - Courtesy of Cameron Lacy, DCL Architects, Wayne, PA
*Image 3 - Courtesy of David Brunke, Herring & Trowbridge Architects, Herndon, VA

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NEW PRODUCTS

Interior Options

152. Heavy-traffic wood floor

Timeless Series II is an acrylic-impregnated hardwood floor furnished as tongue-and-groove, three-ply planks. Intended for commercial and institutional use, the floor is UL listed for slip resistance, and has a Class B flame spread (ASTM E-84). Color and finish are uniform throughout the top veneer layer, preventing visible marring from foot traffic. Available in five wood species (red oak, clear maple, tupelo, linden, and cherry) and any of 25 stain colors: architect Daniel L. Pacek selected linden wood in blue and accents in natural-finish maple for a Boston optical store (right). 610/353-8801; www.permagrain.com/home (Web site). PermaGrain Products, Inc., Media, Pa.

153. Custom-look wall treatment

Marlite's new Modules interior system uses three modestly priced substrates—medium-density fiberboard (MDF), birch plywood, and particleboard—to capture the appearance of custom woodwork. For direct-glue installation, the 2-ft-sq panels have tongue-and-groove edges that interlock to form their own "recessed" surround. Appearance options include a printed overlay on MDF, such as faux Brown Sugar Birdseye or Tahoe Aingre, with a catalyzed melamine topcoat. Want a funkier choice? Try tinted plywood or particleboard. Pictured: an orange tint on particleboard; fasteners are decorative only. May be ordered as a solid face, or with pre-machined slots that hold display shelving. 330/343-6621. Marlite, Dover, Ohio.

154. Feathery broadloom pattern

Maestro departs from the traditional cabbage-rose hospitality carpet with a non-directional, random-color overprinted pattern "suggestive of plumage." Made with Ultron 6,6 nylon, the broadloom comes in eight colorways, each balanced between warm and cool tones. 709/517-0075. Patcraft Division, Queen Carpet, Dalton, Ga.

155. Commercial laminate flooring

A new line for Bruce, Traffic Zone Elite commercial flooring incorporates a photographically produced woodgrain, marble, or stone pattern laminated under an aluminum-oxide wear layer. Specifically for heavy-traffic spaces, the laminate floor is said to have better stain- and indentation-resistance than

vinyl sheet. Traffic Zone comes in 7 5/8-in.-wide, 50-in.-long planks for "floating" installation. 800/841-4630. Bruce Floors, Dallas.

156. Multidirectional modular

A patterned-loop carpet tile in Antron nylon, Tree Bark has a sinuous, full-repeat-scroll pattern that will "seam up like broadloom" to conceal joints between the 18-in. squares. Thermobond construction is said to prevent delamination in even the heaviest-traffic hallways. An updated sampling program for architects and designers covers all Lees commercial modular and broadloom carpet. 800/523-5647. Lees, Greensboro, N.C.

157. Metallic/wood look/vinyl floor

A new Amtico pattern, Dazzlewood is described as a "visual illusion" that combines a naturalistic wood grain with a metallic luster. One of over 170 standard colors now available in this high-design resilient flooring, Dazzlewood comes in four strip widths. An unusual CAD-controlled cutting technology allows the producer to combine any colors into a custom-design format suitable for the most severe wear areas. Complete commercial catalog. 800/268-4260. Amtico, Atlanta.

158. Special-effect concrete

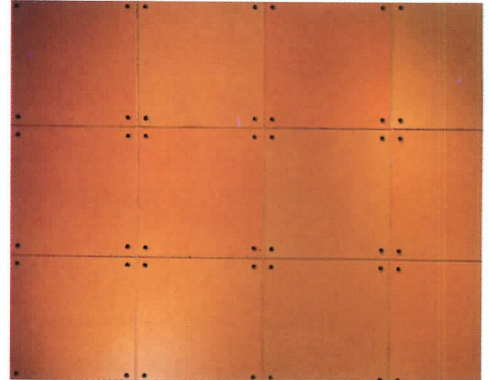
A system of coloring, patterning, and finishing techniques for cementitious flooring, Patène Artectura lets the architect turn plain gray concrete into a dramatic interior or exterior element. For existing and new slabs as well as thinset toppings, the product line includes integral colors, color hardeners, chemical stains, and tinted sealers, imprinted in Bomanite patterns or finished with standard broom, steel trowel, or other methods. 209/673-2411. Bomanite Corp., Madera, Calif.

159. Hardwood floor from bamboo

Made of strips cut from the stem, Plyboo flooring displays the node pattern characteristic of fast-growing bamboo. Botanically a grass, bamboo is nevertheless very hard, and will not shrink or swell. Developed by Dutch, German, and Chinese forestry scientists, Plyboo consists of three veneer layers laminated into 3 1/2-in.-wide, random-length boards. While a nail-down installation is permitted, floating-floor techniques are preferred. 315/687-7088. Plyboo America, Inc., Kirkville, N.Y. ■



152



153



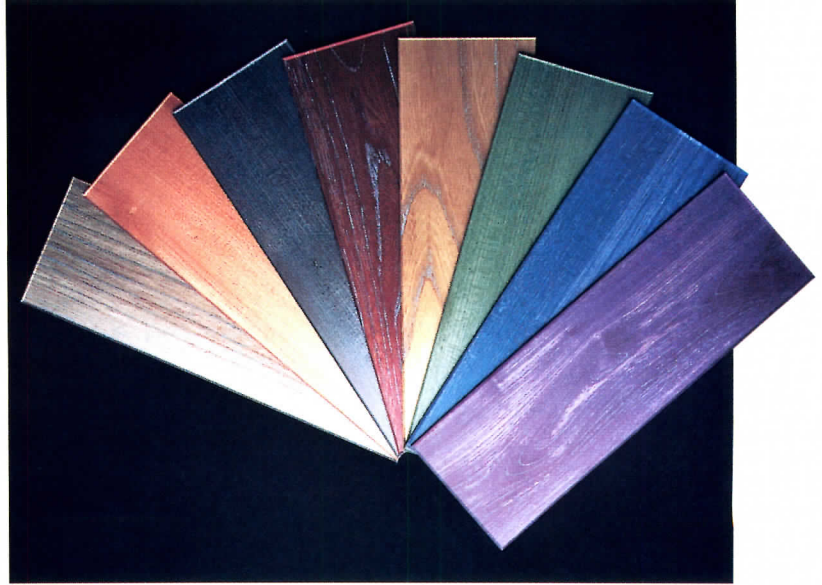
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For more information, circle item numbers on Reader Service Card.

New color, material, and texture choices expand the interior-design palette for commercial, hospitality, and retail environments.



155



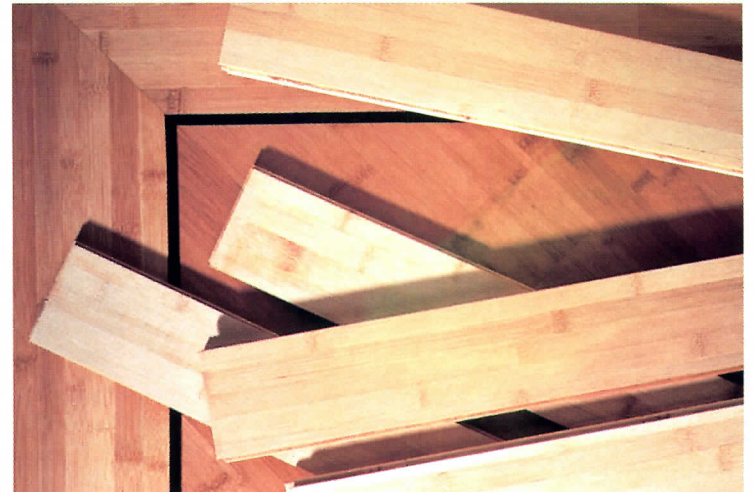
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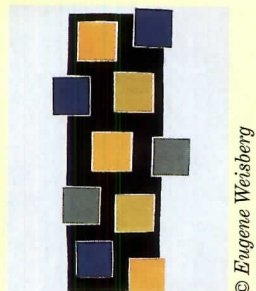


159



160. Restaurant-style hood

A new kitchen ventilation hood is deeper—27 in.—to extend effectively over larger, commercial-style stoves. Widths range from 30 to 66 in., with custom sizes and mounting configurations available. Centrifugal blower units are said to operate quietly and reduce the chance of duct fires; hoods come in stainless steel, brass, copper, and enamel colors. 214/235-5201. Vent-A-Hood, Richardson, Tex.



© Eugene Weisberg

164. Area rugs

Christine VanDerHurd sculpts her cut-and-loop wool-pile rugs in some unusual shapes, grouped under a common design theme—this year, it is The Dance. Shown: Square Dance, with pre-cut sections that can be lifted to show the floor underneath. All carpets and rugs are made in custom colors, sizes, and shapes for retail, residential, and corporate settings. VanDerHurd, New York City.



161. Porcelain-slab cladding

Fade-proof Top porcelain tiles in sizes as large as 3 by 3 ft can be used on facades at a substantial weight savings over the same dimension in natural stone. A system of clip fasteners and brackets—either fully concealed or partially exposed—fit into grooves in the back for hanging the panels; tiles can also be glazed into a curtain-wall assembly. 305/445-6433. Imola, Coral Gables, Fla.



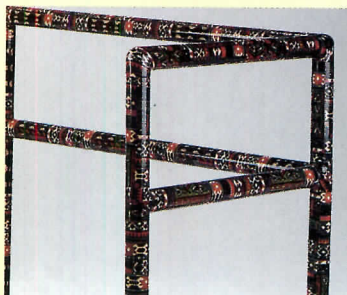
165. Studded sheet vinyl

A heavy-duty flooring made in rolls 6-ft wide by 60-ft long, Moonwalk comes in bright primary colors and metallics and an embossed pattern of smallish disks. Installation pictured has accent circles of black and yellow set into a vibrant red field; custom colors and patterns are said to be cost effective for orders of 800 yards or more. 800/832-7111. Lonseal, Inc., Carson, Calif.



162. Seersucker shading

Vignette Roman-shade-style window treatments, for both residential and commercial use, are available in less formal weaves such as an all-polyester seersucker with alternating flat and puckered texture. Panels can be specified in widths up to 72 in. Motorized operation, a new option, can be controlled by switch or hand-held remote. 800/937-7895. Hunter Douglas, Inc., Upper Saddle River, N.J.



166. A rail of a different color

Tattoo is a vivid multicolor finish option now offered on all Brass Smith metal products, including railings, pedestrian-control standards, and partition posts. Created by a unique process that prints directly onto three-dimensional objects, patterns include leopard skin and tapestry—a choice of 12 designs—with a baked-on clear top coat. 800/662-9595, x244. Brass Smith, Inc., Denver.



163. Decorative-shape windows

Kolbe wood windows can be ordered in some new shapes: circles, round tops, octagons, gothic arches, ovals, and squares, fixed or venting. Insulating glass is standard; decorative grilles and glazing are options. Exteriors can be specified in K-Kron, a baked-on coating that does not obscure architectural details of the window frame. 800/955-8177. Kolbe & Kolbe Millwork, Wausau, Wis.



167. Sign rock

Made using urethanes and artificial-rock replication technology developed by Futura Coatings, the Ident-Rock is a realistic, fully weatherproof "boulder" that carries an aluminum address plate. "Rock" can be ordered in three sizes, up to 30 by 25 by 19 in.; signage can be black, red, or green, with gold letters. Priced under \$200. 419/626-2002. Ultimate Industries, Inc., Sandusky, Ohio. ■

Short Takes

Fibreboard expands

A source of building products such as Pabco structural fireproofing, Fibreboard Corporation has bought Stone Products, also a California firm, for about \$52 million. Napa-based Stone Products makes simulated stone under the name Cultured Stone.

Also in an acquisitive mode, Triangle Pacific of Dallas, owner of four flooring-product lines including Bruce

Hardwood Floors, completed the purchase of Hartco Flooring Co., Knoxville, Tenn.

Energy-efficient home sites

An interactive guide to the Earth Smart home, already built in Oregon, is offered on Portland General Electric's new Web site. The innovative building design incorporates energy-efficient, environmentally benign structural materials, finishes, hvac

equipment, and naturoscaping concepts. The visitor can walk through the home, clicking for details on each component. The utility also offers an excellent Residential Resource Guide (print) to "Earth Smart" building components. At: www.pge.online.com (Web page); 800/722-9287 (phone).

Another great eco-source: Environmental Building News, with a new site: www.ebuild.com (Web page). ■

Building Types Study 741/Interiors

We could all learn a lesson from Morris Lapidus, who this fall turns 94 and also celebrates the publication of his *second* autobiography, aptly named *Too Much Is Never Enough*. Lapidus teaches us not only about survival, but also about conviction. With the 1996 presidential race currently in full swing, it's become conventional wisdom that candidates for public office change their views to meet the latest public-opinion polls—"waffle" is now firmly ensconced in our vocabulary as a verb. Not for Lapidus.

Beginning his career as a draftsman during the Depression, he formed his own firm in 1943, commuting between New York City and Miami Beach. From then on, Lapidus carved out his own niche primarily as a designer of shops and hotels. As correspondent Beth Dunlop writes in the introduction to the portfolio of his decades of interiors work (pages 92-97), from the early years of his practice he spurned the popularized teachings and esthetic of Mies van der Rohe and Walter Gropius, whose designs he termed "cold and clinical." Architecture, Lapidus maintains, should have popular appeal. "My basic theory," Lapidus wrote in 1987 of his life-long pursuit, "is based on the fact that in earliest prehistoric time, primitive man sought to adorn his cave with phenomenally beautiful wall paintings and to adorn himself with shells, feathers, and flowers. The basic human instinct (the love of adornment) is a part of our genes."

Accused of going too far into architectural showmanship by other architects, critics, and, at times, clients, Lapidus kept going even further, and going and going and going. History will be the ultimate judge of his work—some buildings, like the Fontainebleau Hotel in Miami Beach of 1954 are now acknowledged as breakthroughs. Today, however, we can certainly evaluate the man as true to himself—an accomplishment above all others. *Karen D. Stein*

*Manufacturers' Sources
listed on page 116*

Baywatch or Workplace?

f/X Networks Corporate Headquarters
Los Angeles, California
Fernau & Hartman Architects

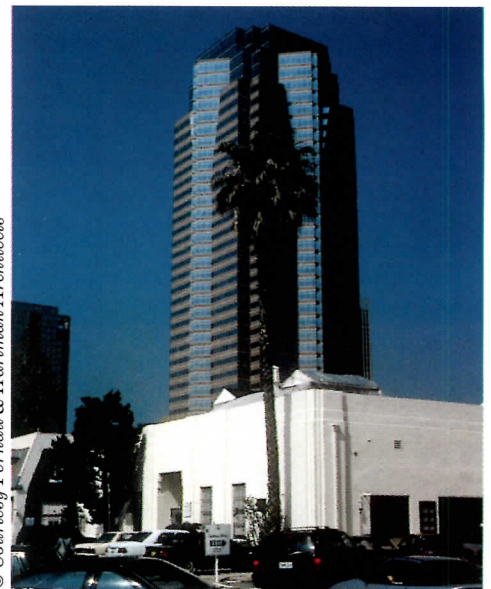
© Richard Barnes photos, except as noted

The wide-open space is the thing that surprises one most when entering the floor of the Los Angeles office of the cable network f/X—it is deliberately spacious. Out of the latest thinking about how companies work comes the idea that they need this empty space. “It’s about communication, not cubicles,” says Richard Ross, f/X’s senior vice president for production and development. “We are designing wasteful space now, because that’s where people talk to each other,” says principal Richard Fernau, of the Berkeley-based firm of Fernau & Hartman. In an era of lean management, flexible work teams, intensive use of communication technology, and the realization that an office is as much a place for communal, “real-time” strategizing as it is for individual performance, companies such as f/X are actually asking designers to break open the box, and leave it open. It is to Fernau & Hartman’s credit that they have grounded what could have been too playful a place with real materials and real objects.

To deploy such expressive emptiness, however, they needed to find the room: “You have to pay for public space, especially if it’s not just going to be an icon at the end of a path,” says Fernau. Luckily, f/X, a client for whom they had already designed two previous offices, had a reasonably radical notion of how their offices could be organized: all the managers sit in minimal cubicles that crowd around the core, while the support staff occupies a world of light-colored plywood stretching all the way to the windows. “It’s a great equalizer,” says Ross. The real work of the company takes place in seven eccentric objects that serve as conference rooms, or in the chairs, picnic tables, and rolling blackboards that occupy the left-over spaces between the grid of desks and the conference rooms.

Using the landscape as a cue, Fernau & Hartman divided the floor into three areas: beach, hills, and lot. “I wanted the users to be able to register where they were by the outside,” says Fernau. The west side faces the Pacific Ocean a few miles away. Here temporary workers or visitors from the New York City office sit at fold-out “Murphy desks” that Fernau likens to “sleeping on the beach.” On the opposite side of the floor, a concrete ramp leads up to a small conference room, creating a sense of tectonic uplift that recalls the nearby hills. On the south side, a metal shack seems to make the Twentieth Century Fox movie lot next door, which is continually under construction, into an extension of the daily programming of the cable shows. A fourth metaphor seems to be a reference to the executive niceties of the surrounding office complex, reconstituted in the grand, north-side executive conference room.

“We like to think of this place as very L.A.,” says Fernau, and sometimes the place looks more like Baywatch than like a workplace. Everyone’s day starts at the “lifeguard station,” a conference room, mailroom, and lunchroom that faces Ross’s office. For Fernau, this is a place “where you check the conditions with the lifeguard before you hit the beach.” For Ross, it’s a control post: “I watch my assistant go through her day, I know how often everyone gets coffee, and everyone knows what I am doing.” Here, Big Brother meets the boardwalk and perhaps makes things just a little less than mellow than a day at the beach. *Aaron Betsky*



© Courtesy Fernau & Hartman Architects

Tilted planes angle up and out from the confines of offices (top) to bring in light, views, and memories of places of informal conversation such as cafes, diners, or the beach. Colors and contours serve to soften both institutional and structural edges, while serving as “wayfinders” in the expanse of offices.



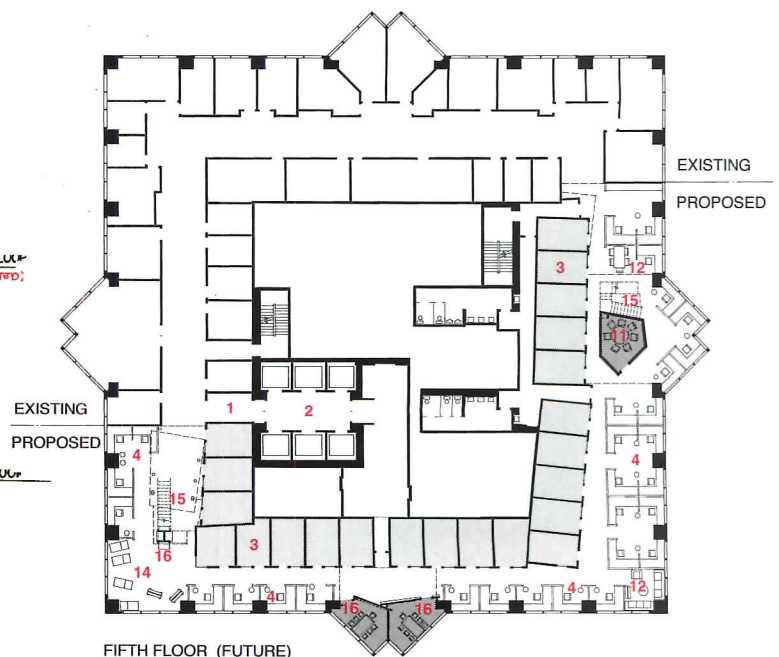
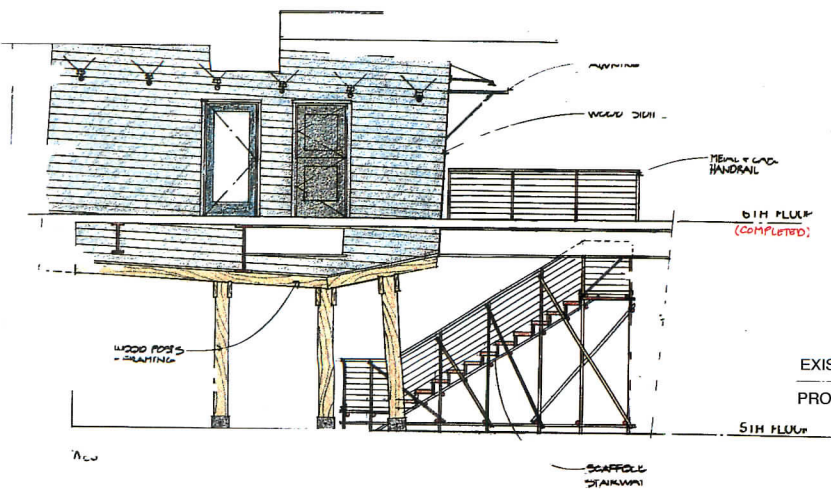
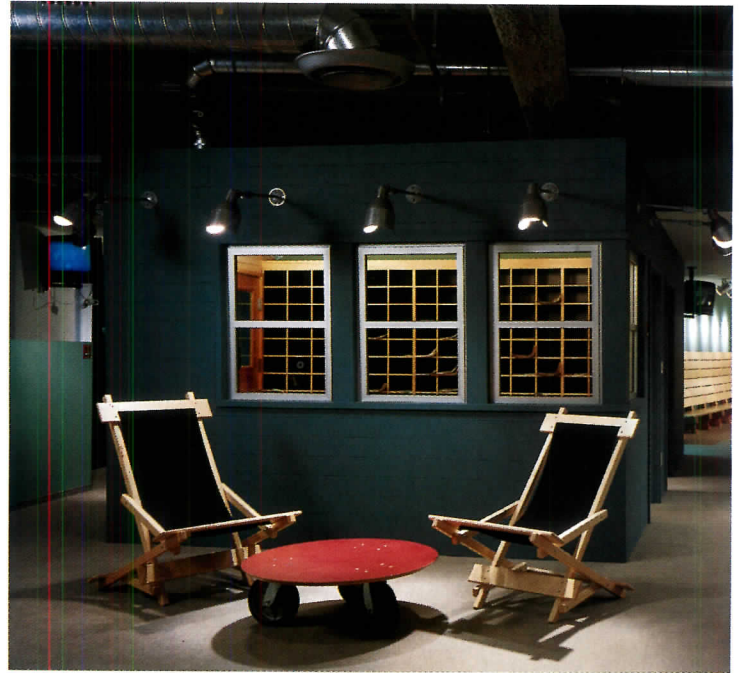




By "peeling the core," Fernau & Hartman found open space to play out their special effects. The offices of f/X currently take up one floor of the "Die Hard" building (the Fox Tower), and they may expand to half of a floor below in the future.

Between the dense core and the parameters of the building, references turn into real materials when they solidify into the conference rooms: on the north,

corporate power asserts itself in poured-in-place table legs and the flying wing of a hung indirect lighting fixture (previous page). The "hill" (this page, left) provides handicap access to a room whose skeleton refers to Rudolf Schindler's hillside houses; the lifeguard station (this page, right) looks like a beach shack. The "sweat hut" (opposite left) evokes a sauna; the minimal storefront assembly



facing the neighboring movie lot (this page, right) is like the scaffolding for a corporate enclosure that never arrives.

Credits

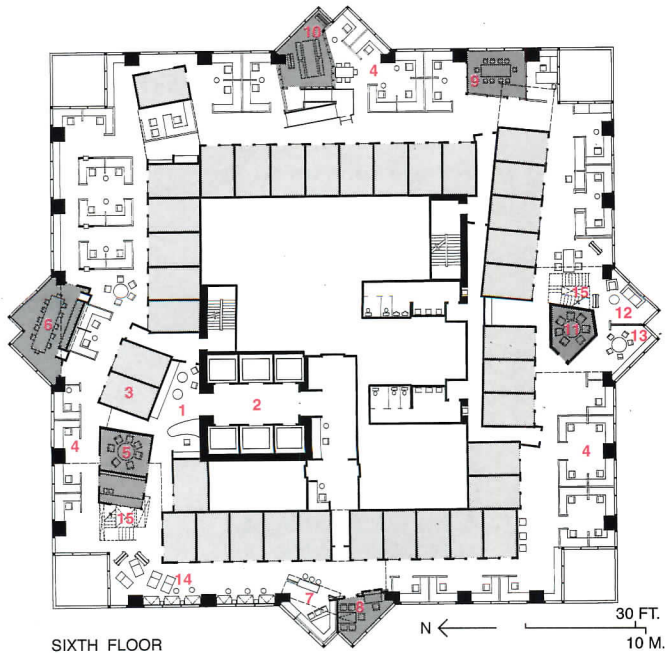
*f*X Networks Corporate Headquarters
Los Angeles, California

Architect: Fernau & Hartman Architects—Mark Macy, project architect; Richard Fernau, Laura Hartman, Turk

Kauffman, Mark Macy, David Kau, Susan Stoltz, design team; Tom Powers, Scott Donahue, Sunshine Chen, Geoff Holton, Alice Lin, Jane Lee, Tanya Davidge, project team

Consultants: John A. Martin & Associates (structural); Peters & Myer Illumination Design Collaborative (lighting)

Contractor: Gordon & Williams



1. Reception area
2. Lobby
3. Typical closed office
4. "Murphy" workstations
5. "Lifeguard" conference room
6. Executive conference room
7. "Diner" conference room
8. "Murphy" conference area
9. "Storefront" conference area
10. "The hill" conference area
11. "Sweat hut" conference area
12. Conference area
13. Research areas
14. "Beach" conference areas
15. Future stairway to fifth floor
16. "Rocks" conference room

A Firm of Many Visions

Divergent projects can come from the same architectural office. Scogin Elam and Bray have designed two in Atlanta, a spa and an art gallery, with dramatically different results.

The architectural projects of Scogin Elam and Bray capture Atlanta's spirited duality: like the city, they are serious and at the same time exuberant; their buildings and interiors mark the landscape in a signatory way.

Mack Scogin, Merrill Elam, and Lloyd Bray, who founded a joint practice in 1984, seek additional meaning in each project by thoughtfully setting buildings in tune with place, client, and use. A freedom of invention and joy in exploration often marks their work, a kind of playfulness in the highest sense. "We are always looking for cues that set a project apart," says Elam. "We think that it is very difficult, that there are no formulas, that every place in every sense is unique."

Ordinary objects, reconsidered and redeployed, linger in the imagination from earlier projects—a satellite dish converted into a symbolic chandelier or full-height telephone poles used as sculptural anchors for a residential deck. Some gestures (mottled metal walls, curvilinear canopies) can seem zany at first blush; others, such as the High Museum at Georgia Pacific Center, eminently restrained. All explore the genius of materials—texture, heft, or shine.

While whole architectural projects dominate the firm's roster of works-in-progress, two recent interiors in Atlanta illustrate directions in their contemporary work. One, a commercial day spa, creates the illusion of amplitude in a confined place, enriching an otherwise banal space with an ambiguous quality. The second, a museum gallery, perches lightly within a Beaux-Arts Neoclassical hall, deferring to the existing architecture and a collection of African-American art. Both projects had extremely limited space and budgets.

The following renovations, while small-scale and divergent, demonstrate the transformative power of a second, hard look at interior space. *Robert Ivy*

An Architectural Plan That "Uplifts" the Art

A treasury of African-American art fills the gallery at Clark Atlanta University with color and life. The single, expansive space, originally designed by New York architect James Gamble Rogers in 1931 as a library reading room, has been pared down and spruced up. The architects' respect for the original space shows in the details: new double-glazed windows by a local craftsman replicate the originals; new hardwood floors shine underfoot. Large murals in an adjoining vestibule by artist Hale Woodruff have been restored.

Director Tina Dunkley worked for a decade in the hope of seeing a new gallery. She says the architectural work "uplifts the art we possess." A single intervention, an overscaled steel trellis, provides a framework for the collection. Walls and lighting tracks are flexible, able to shift for subsequent shows. The whole trellis, while grand as the space, steps off the walls, creating expansive vistas from one end of the space to the other. A gift shop inserted into the larger space intrudes only slightly and will be replaced in a subsequent phase.

Credits

*Clark Atlanta University Art Gallery
Atlanta, Georgia*

Architect: *Scogin Elam and Bray Architects, Inc.—Mack Scogin, Merrill Elam and Lloyd Bray with Martha Henderson Bennett, Carlos Tardio, Elizabeth Morris, Denise Dumais, Jeff Atwood, and Kathy Wright*

Engineers: *Uzun & Case (structural); Newcomb and Boyd (mechanical/electrical); Ramon Luminance Design (lighting)*

General Contractor: *The Flagler Company*



© Tim Hursley photos



A Place to Scrub, Rub, Oil, Wax, Massage, Trim, Cleanse, Pamper



A hidden oasis always surprises, and there is nothing on the outside of the generic 1970s-era pitched-roof mall to prepare a visitor for the Don and Sylvia Shaw Salon and Spa located inside. It is serene, meditative, and douses the visitor with space and light.

Owner Shaw and his wife know their customers' needs. "We've been in the salon business for 35 years," he says. "People are trying to take control of their lives. We give them a day of pampering." The actual spa footprint is tiny, only 2,050 sq ft on two floors. "We had to squeeze a large program into a tiny space," says Elam. The spa, located adjacent to the Shaws' popular salon, has dual offerings: watery ablutions, including steam baths and full body massage on the first level; a "Spa Express" on the second for quick trips, facials, and manicures.

The doors inside the spa are sealed and the mood is meditative and solitary. Elam cites the customer's perceived vulnerability during the spa experience. Don Shaw is more direct. He expected private spaces that would insulate noise from the massage and active bathrooms. "I didn't want any gyp board walls there."

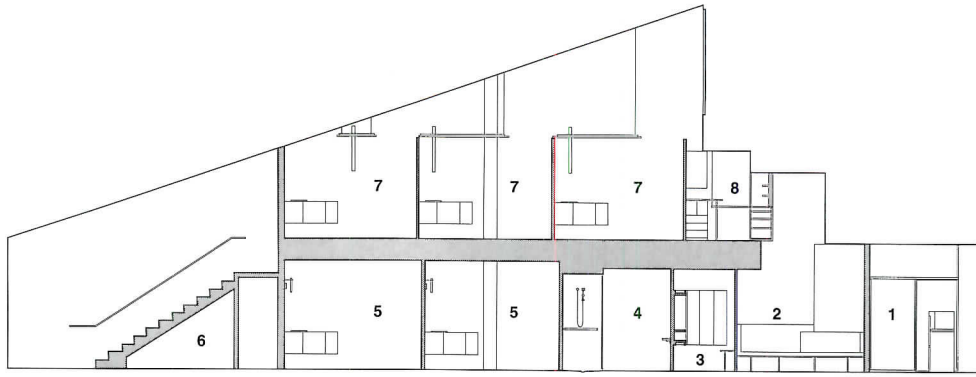
Stepped glazing, the interlocking geometry of floors, and walls, and ceiling, glazing and lighting effects combine in a spatial tour-de-force, an essay in which technique conquers limitations by raising questions. What lies behind a translucent wall? What lies upstairs? Textures and materials carry the formal interplay further. Materials like concrete are rough; ceramic tile, smooth; multiple-layered plywood doors, warm; steel rails and struc-



A skeletal metal system outlines the stair rail with raw structure, and etched acrylic and plywood panels line opposing walls (right). The entrance to the spa through the salon (top) leads to the translucent reception area (above).



1. Reception
2. Parlor
3. Lockers
4. Steam/shower
5. Spa room
6. Laundry/exit stair
7. Facial
8. Make-up/manicure



Continued on page 82

Continued from page 80

tural accents, cool. In a small space, the small details count. Continuous piano hinges on open doors offer structural stability and a ribbon of texture to open doors. Exposed plywood layers of walls and doors can be counted like rings on a felled tree. Capped bolts add rhythmic bumps to interior walls. Joints between interior panels are exposed; joinery shows.

Some effects were experimental. Frosty walls resulted when the architects sanded acrylic panels into a blurred opalescence. Achieved on a tight budget, the spa strains in certain spots. Despite admitted shortcomings such as concrete finishes, the spa seems expansive beyond its true size, augmented by light and space. Owner Shaw is pleased. "You'd think it was 3,000 or 4,000 square feet," he exults.

Credits

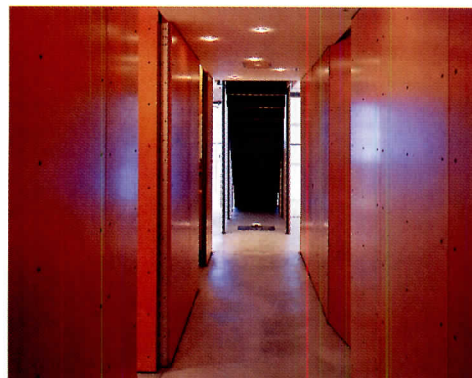
*Don and Sylvia Shaw Salon & Spa
Dunwoody, Georgia*

Architect: *Scogin Elam and Bray Architects, Inc.—Mack Scogin, Merrill Elam, and Lloyd Bray with Martha Henderson Bennett, Kathy Wright, Elizabeth Morris, and Dustin Lindblad*

Engineers: *Palmer Engineering Company (structural); Ramon Luminance Design (lighting)*

General Contractor: *Farrar and Associates; Dowlen Lloyd (Cabinetwork)*

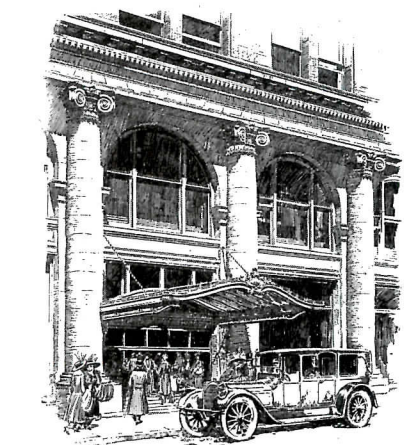
Plywood doors and walls in the ceramic-tiled-spa area are protected by phenolic resin-impregnated film (above and right). Stairs are sealed, pigmented concrete, exposed to the first-floor corridor (opposite).





*The Science, Industry and Business Library
The New York Public Library
New York City
Gwathmey Siegel & Associates Architects*

© Peter Aaron/ESTO photos



Drawings from a 1914 B. Altman catalog depict the original character of the Madison Avenue building, designed by Trowbridge & Livingston in 1906 and expanded in 1914. Save for a cleaning and new double-glazed windows, the exterior was largely untouched by Gwathmey Siegel & Associates (photo top left).

Next Century's Library—Today

A prototype of the 21st century library," is how Paul LeClerc, president of The New York Public Library (NYPL), describes the new Science, Industry and Business Library (SIBL), located in the former B. Altman department store in midtown Manhattan. Chairman emeritus of the Library's board of trustees, Marshall Rose, considers it "a total package" of research facility and circulating library, and "the vision of the next century." Charles Gwathmey of Gwathmey Siegel & Associates, the architectural firm responsible for the transformation of the former retail space, calls it "revolutionary—in preconception and perception."

That's heady stuff considering the future is largely unknown. But in creating this new, \$100-million facility, both client and architect sought the impossible—a look into the future. Their prediction, after years of research, world-wide library visits, and facility programming: books are here to stay and so is technology as a research tool. As a result, SIBL amply provides for both: a collection of 1.2-million volumes (an additional 50,000 books circulate) and, among other computer-based resources, an electronic information center of some 100 workstations that allows library patrons to access internal and external information networks. (Patrons inexperienced in computers can take free classes at the library's training center.) Says LeClerc of the dual approach: "The library of the next century depends on overlapping [resource] pools. Print and technology are compatible." His assertion is, at least, true in the present. Since opening its doors to the public on May 2, 90 percent of the library's users have employed some type of technology in their research, while two-thirds have requested hard-copy material.

Creating an image for this new hybrid was the challenge faced by Gwathmey and partner Robert Siegel. The architects were awarded the commission following an interview process and design-ideas competition that included, in the last round, two other New York City-based finalists, James Stewart Polshek and Partners, and Beyer Blinder Belle, equally adept at working with historic structures. Says Gwathmey of his firm's design approach: "The program required 50,000 sq ft of public space. To put it on a single level is more manageable [for staff to supervise]." While the other teams distributed the public space among several floors, Gwathmey Siegel made the basement level—the single largest floor plate—not as stack space, but entirely public, a winning characteristic according to William Walker, director of The Research Libraries of NYPL.

While any new facility for The New York Public Library is overshadowed by the Fifth Avenue "headquarters," a 1911 white marble temple by Carrère & Hastings, the architects were unwilling to replicate what Gwathmey calls its "library-as-edifice" approach. However, occupying another historic, if less venerable, structure that was designed in 1906 by Trowbridge & Livingston and expanded in 1914, did provide SIBL the added "dynamic of history," says Gwathmey. The contrast of 8-ft-thick exterior stone walls with the slick planarity of more modern materials like stainless steel on the inside energized the mix of old and new. Another dynamic is also clearly at work: the remaking of a retail space for scholarly use. In fact, the selection of the space has as much to do with SIBL's current success as does the realization of its unique program.

(Continued on page 90)

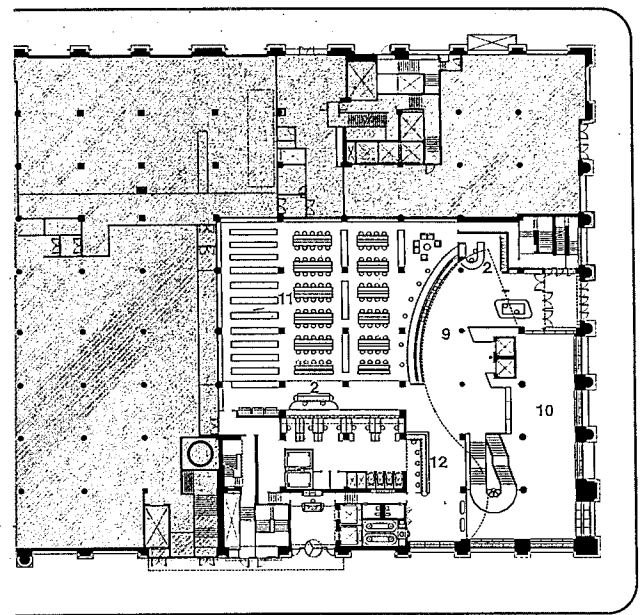
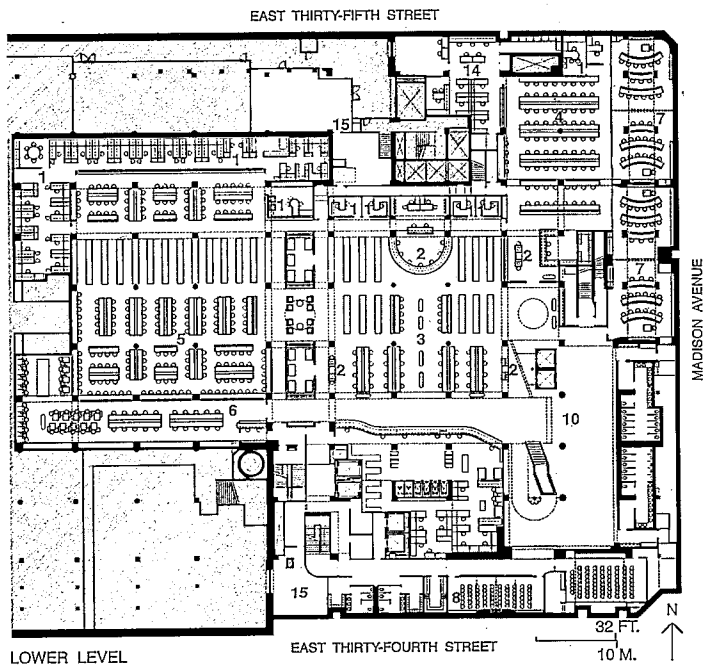
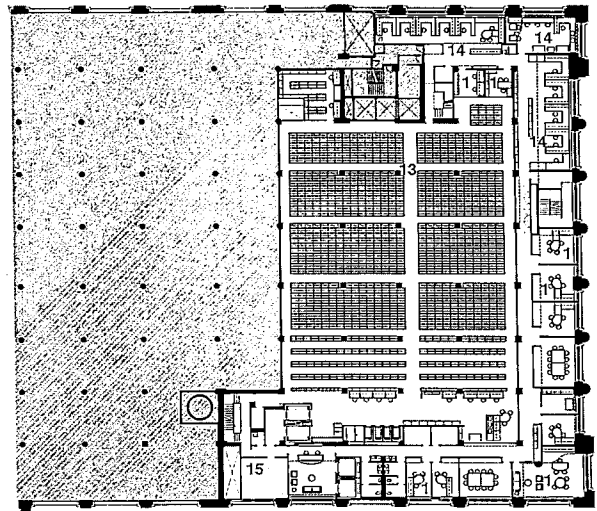
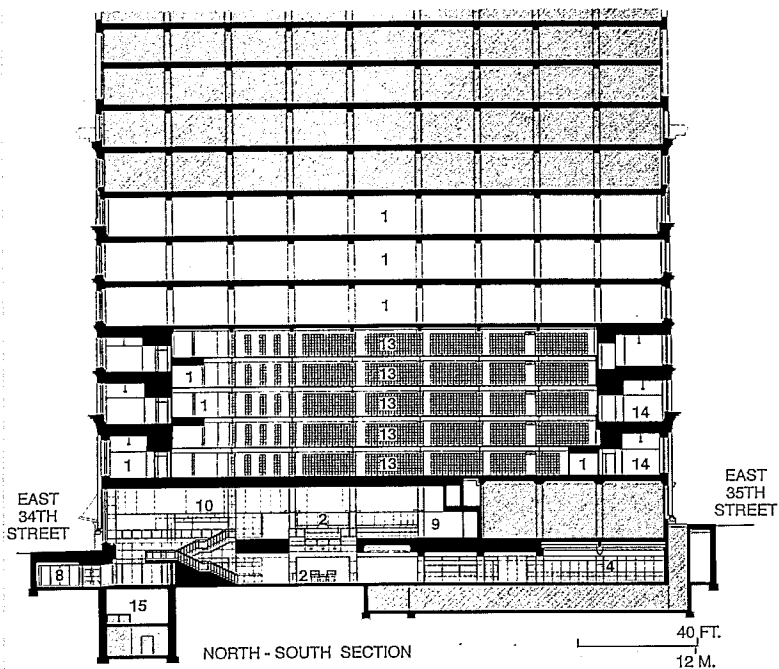






The double-height entry space, named Healy Hall, includes exhibition space, information desks, and access to the circulating library (previous pages and below right). On the basement level, the McGraw Information Services Center (top right) provides "brilliant sight lines" across the catalog center and reading room for library staff supervision, according to William Walker, director of The Research Libraries. Major materials are stainless steel, oak, and terrazzo.





- | | | |
|----------------------------------|-----------------------------|-------------------------|
| 1. Office | 7. Electronic training room | 11. Circulating library |
| 2. Information | 8. Conference center | 12. Circulating desk |
| 3. Online catalog | 9. Lobby/display | 13. Stacks |
| 4. Electronic Information Center | 10. Healy Hall | 14. Work room |
| 5. Reading room | | 15. Mechanical |
| 6. Microform | | |

(Continued from page 84)

Thanks to a slump in the local real-estate market, The New York Public Library was able to convince the owners of the massive B. Altman Building to go co-op in 1993, allowing the library to purchase a portion of the space, some 217,000 sq ft spread over seven above-ground floors and two basement levels. By redistributing the floor levels, the architects produced 235,000 sq ft of useable space: 160,000 sq ft for SIBL, with the remainder slated for future expansion. Funding for the project came through a public-private partnership. The New York Public Library received \$25.5 million in financing, and private gifts totaling \$50 million supplemented \$24.5 million in government funds from a variety of sources: \$13 million from the city, \$7.5 million from the state through the Port Authority of New York and New Jersey, and \$4 million in federal support from the Small Business Administration and the Economic Development Administration.

New York City landmark regulations required that the B. Altman's exterior facades be retained, so shop windows have been reconceived as windows on a learning center. SIBL is an open book to the pedestrian traffic along Madison Avenue, a deliberate acknowledgement that, today, libraries must compete for their patrons with other hybrids like super-size bookstores that permit endless browsing in modified living-room niches.

The architects capitalized on views to the street by creating a grand interior public space, intended for exhibition use, that connects the two main public levels. Gwathmey calls this two-story atrium (preceding pages), named Healy Hall in memory of former library president Timothy Healy, a "public square." This internal courtyard with its glass and steel elevator cab and staircase of cascading planes of stainless steel, benefited from a quirk in the largely flat Manhattan street grid. Between the south corner and the entry of the building, Madison Avenue slopes up four feet, establishing a sense of vertical motion on entry that the architects have carried through in their design.

"There was a lot riding on this project," says LeClerc of the balancing act between past library precedents and anticipation of future needs. While client and architect of SIBL have focused on the need for invention in the library building type, the site itself offered the lessons of precedent: Benjamin Altman, patron of the original structure, was also considered a maverick for moving his department store from Sixth Avenue and 19th Street to what at the time was a residential neighborhood uptown. Eventually, other merchants followed.
Karen D. Stein

In the basement level (top left), the architects exposed original terra-cotta arches, raising the ceiling heights to 14 ft. A plaster finish and reflective ambient lighting were added. Computer access is provided throughout (top right, middle left), as are accommodations for book users (middle right). Staff offices face south, overlooking 34th Street, and have a separate entrance (bottom).

Credits

The Science, Industry and Business Library

*The New York Public Library
New York City*

Architect: *Gwathmey Siegel & Associates Architects—Charles Gwathmey, Robert Siegel, principals-in-charge; Jacob Alspector, associate-in-charge; Earl Swisher, project architect; Sean Flynn, job captain; Karen Brenner, Oana Bretcanu, Wendy Burger, Federico Del Priore, Steven Forman, Mike Harshman, Philip Henshaw, Mark Hill, Rebecca Iovino, John Johnston, James Leet, Martin Marciano, David Mateer, Cheryl McQueen, Mark Montalbano, Jeffrey Poorten, Joseph Rivera, Elizabeth Skowronek, Tom Levering, Joseph Ruocco, project team*

Engineers: *Severud Associates (structural); Jaros Baum & Bolles (electrical/mechanical/hvac)*

Consultants: *Shen Milsom & Wilke (A/V); Cole Gillman Associates and Jam Consultants (code); Spagnola & Associates (graphics); Edwin Schlossberg, Inc. (electronic display); Logistics, Inc. (furniture); Hillman DiBernardo & Associates (lighting); Glezen Associates (hardware); Chapman Ducibella Associates (security); Sunrise Systems (LED displays)*

Construction Manager: *A.J. Contracting Company, Inc.*



Lapidus Laughs ast

Scorned by many through much of his life, Morris Lapidus, who turns 94 in November, knows how to get the last laugh: simply outlive your critics. Indeed, Lapidus—whose prolific career began in the 1920s and never truly drew to a close—spent many years dodging verbal bullets and professional denigration over the excesses and flourishes that marked his work. He was the Miami Beach architect who dared to do too much in an era of minimalism and restraint.

In the late 1970s and early 1980s, however, Lapidus began to enjoy a new popularity. One day, while leafing through Charles Jenck's 1977 book *The Language of Postmodern*, he saw his name mentioned as the pioneer of "Ersatz Style." It was the kind of affirmation he'd been yearning for over several decades—a legitimizing moment. It galvanized him. Lapidus stepped out of obscurity and called me to suggest an interview since I was then the *Miami Herald's* architecture critic. It was the first of many conversations.

Now Lapidus is about to come out with a new autobiography, *Too Much Is Never Enough*, to be published by Rizzoli next month. A first autobiography, entitled *An Architecture of Joy*, was released when Lapidus was in his 70s. But he's not resting on past laurels. He has been consulting on the renovation (by a team including architects Ben Wood and Carlos Zapata, and landscape architect Martha Schwartz) of Miami Beach's Lincoln Road Mall, a pedestrian promenade Lapidus designed in 1961, among the first auto-free open malls in America. He also recently participated with his architect son Alan in a proposal for Miami Beach's planned convention hotel, although they didn't get the commission, and worked on a design for a restaurant in Lincoln Road's Sony Building (the restaurant plan was abandoned).

In the course of the last two decades, he's written prolifically, including a 1989 study of the human race entitled "Man's Three-Million Year Odyssey." A Dutch publisher produced a monograph on his work, and an exhibition toured Europe; he's given his archives to Miami Beach's Bass Museum, which mounted an exhibition of its holdings in 1993. He's lectured abroad and at home, including the 1992 keynote talk to the American Institute of Architects' (AIA) Young Architects Forum, his first AIA appearance since the one he made in 1961 at his own Americana Hotel in Miami, where he was roundly ridiculed and left embittered.

It's easy to see why Lapidus is such a controversial figure. During the busy years of his practice, he bucked trends [see portfolio of his work on the following pages]. Back when most other architects were clinging to Classicism and designing only the loftiest of structures, he turned to Modernism and began doing commercial architecture. At a time when most architects embraced the Modern movement, Lapidus moved away—more or less. He spurned Mies van der Rohe (of whom he says, "I call him the black plague of architecture") in favor of the Brazilian Modernists, especially Oscar Niemeyer. And though his work took Modernist shape—the original Fontainebleau Hotel building is a fine example—he let the interiors get, well, carried away. He was a crowd-pleaser, a showman, a circus performer in an era of architect-as-god. Ayn Rand, author of *The Fountainhead*, could never have created Morris Lapidus. *Beth Dunlop*

On the eve of the publication of his second autobiography, RECORD correspondent Beth Dunlop talks to Morris Lapidus, nearly 94, about his staying power.

RECORD: Why is it that your designs seem so fresh today, six and seven decades later?

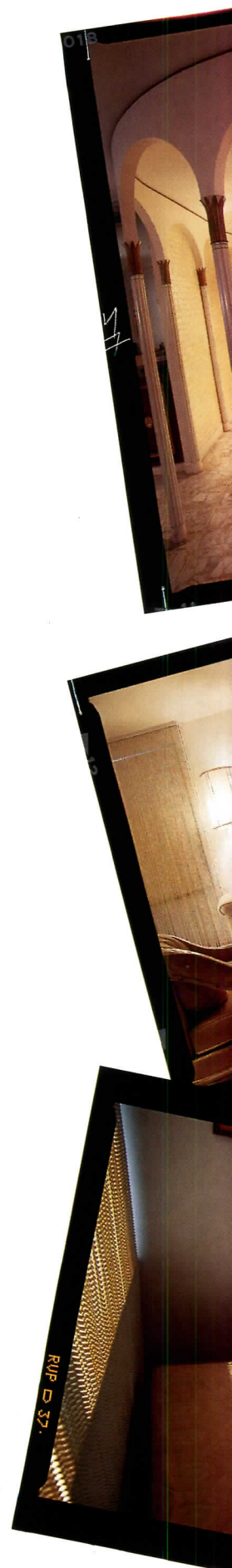
Lapidus: My first real store was the Theresa Pharmacy [in 1927]. The store caused a furor at the time, at least in the pharmacy business. There was a pharmacy in Harlem in the Theresa Hotel and Harlem began to change, so the Theresa Pharmacy came down to Broadway. I decided I was going to do a Modern pharmacy. But what was Modern? Only a few years before was the Paris exposition of Art Deco. I decided to do all the counters and cases in black with moldings in silver. So I did black and silver. I designed a light fixture in a skyscraper style in a smoky glass held together with leaded glass, which was actually a disaster later because the lead melted. I also did a verde antique marble soda fountain and installed a red linoleum floor. Armstrong was coming out strong right at that time. I had the plasterers make a white sunburst in the center of the ceiling, but the rest of the ceiling I painted red.

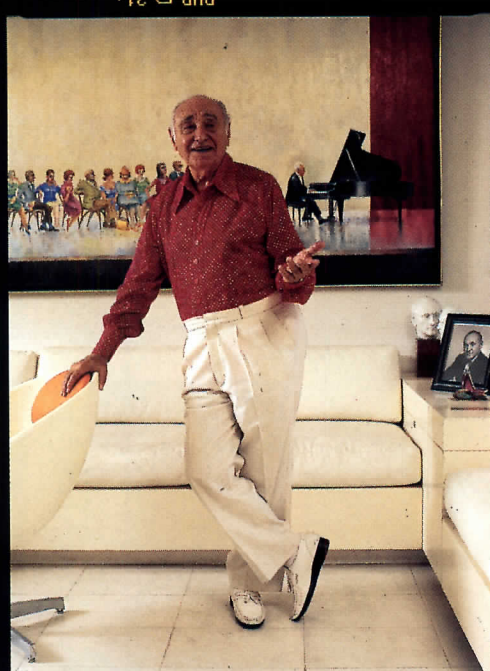
RECORD: You obviously had a flair for the dramatic from the very start.

Lapidus: Well, they hired me and they paid me \$3 an hour, or whatever it was.

RECORD: How did you get into store design so early in your architectural career?

Lapidus: Starting out, I studied drama at NYU (New York University). In fact, last year I won the achievement award for the class of 1925 even though I never graduated. I really wanted to be an actor. I got a chance to understudy a part on Broadway in a wonderful play, "He Who Gets Slapped," but I discovered I hated an actor's life. You're backstage, just sitting there, sitting, sitting. I decided to become a scenic designer. That's when I went to Columbia University. My earliest stores I never even photographed. They were just after I graduated from Columbia. I was working for one architect, then another. I was moonlighting by designing stores for [New York City architect] Ross Frankel. I couldn't make much money as an architect. Ross Frankel kept offering me more money, more money, and finally he offered me





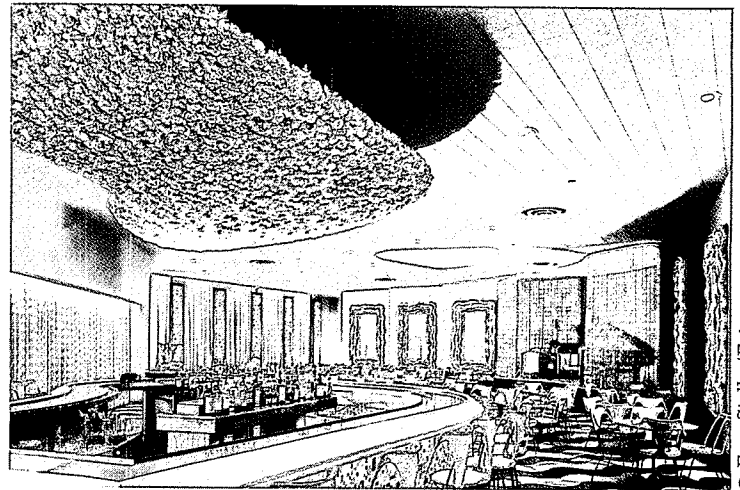
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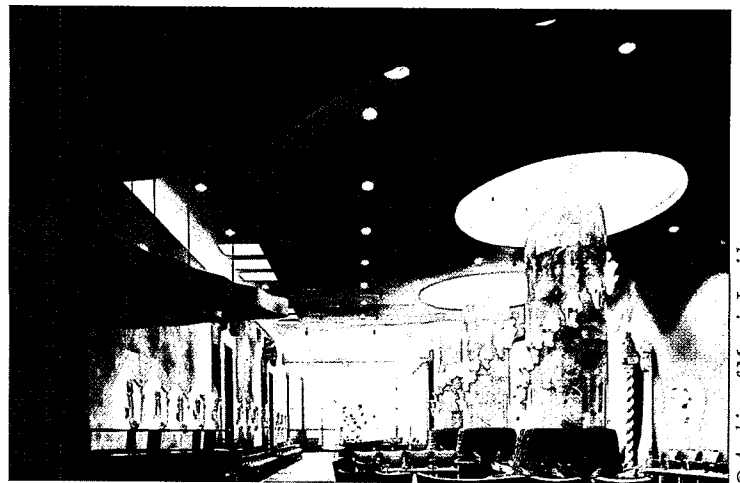
a sum so high that it was inconceivable for me not to take it: \$10,000 a year. Imagine, \$10,000 a year in 1925. So I left architecture, or so I thought, to be a store designer. Remember, I was trained in a Classical tradition at Columbia. Of course, now I'm in store design. Now what in the hell am I going to do? My challenge was what am I doing and why am I doing it? So I began developing my own theories. First, I thought of identification of the store, of graphics, so I used these great big signs. Neon had just come out, so I used neon. On my storefronts, I was strongly influenced by Art Deco, so instead of using stock storefronts I did my own with wrought iron mullions and Art Deco floral forms in the ceilings, supporting milky glass. I was really doing what I considered to be Modern stores. If it was new, I used it: fluorescent lighting, for example. I was there at the birth of the fluorescent light. So then I said, what am I going to do inside? For one store I carved women's figures into the pilasters. Most designs were semi-Classic then with imitation columns and imitation capitals and imitation cornices and imitation pilasters. I also thought a store should have color; bold color. There was a women's store, Mangel's Ready-to-Wear. I told them I'd like to use colors. I said, "Let me try it, and if you don't like it, at no cost to you we'll repaint it." That was in Florida, in Jacksonville. I used wallpaper with nice big cabbage roses. I painted some walls the nice pink of the roses, some yellow and some blue. Well, Mr. Mangel had a fit, but it was too late to repaint before the store opened. At the opening, he and I stood outside listening, and the customers all came out saying, "What color!" So Mr. Mangel said, "From now on, use color."

RECORD: The vocabulary you started using in your stores stuck with you as you designed the hotels that you became famous for; did it not?

Lapidus: I began using unusual forms, first circles. I used them in the ceilings and then on walls. I loved curves, circles. I thought why must a store be a rectangle? So I began to use curving forms. By the time I was through, there were no straight lines left. There were no beginnings and no endings in my stores. Then the editor of an interior design magazine said "What are you using? Woggles?" That was Olga Gueft, who was editor of *Interiors* then. Then they started calling some of my circles "cheese holes." Then Olga started calling my columns "bean poles." So I had my alphabet. ■



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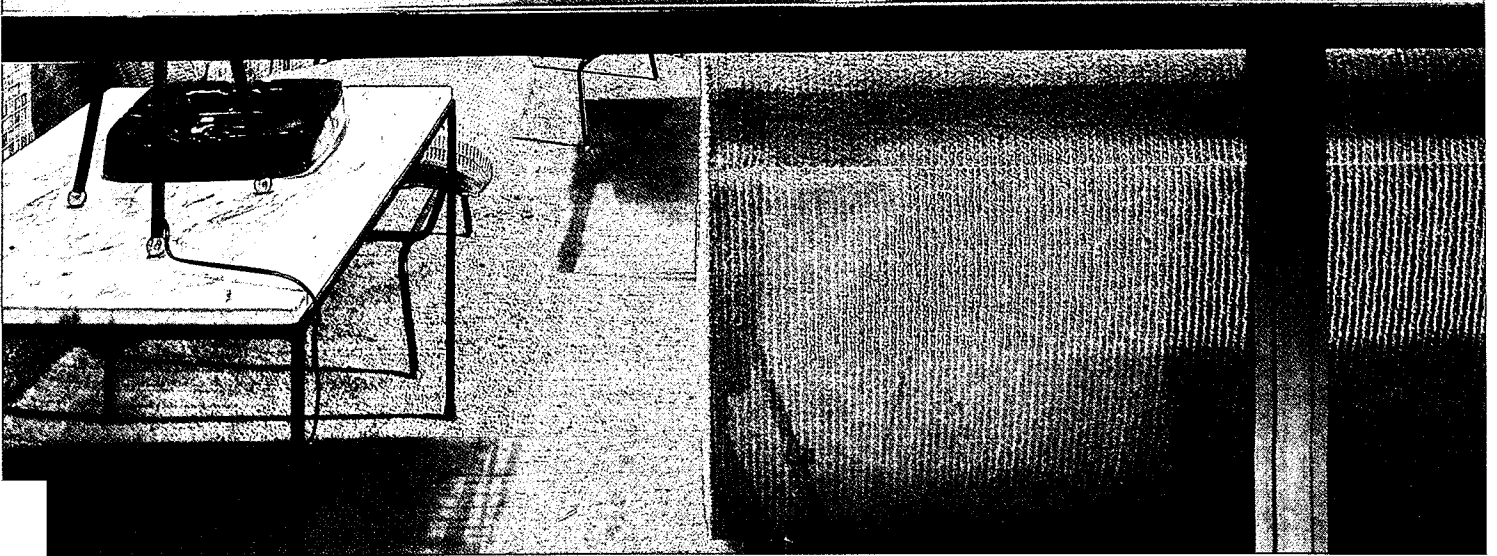
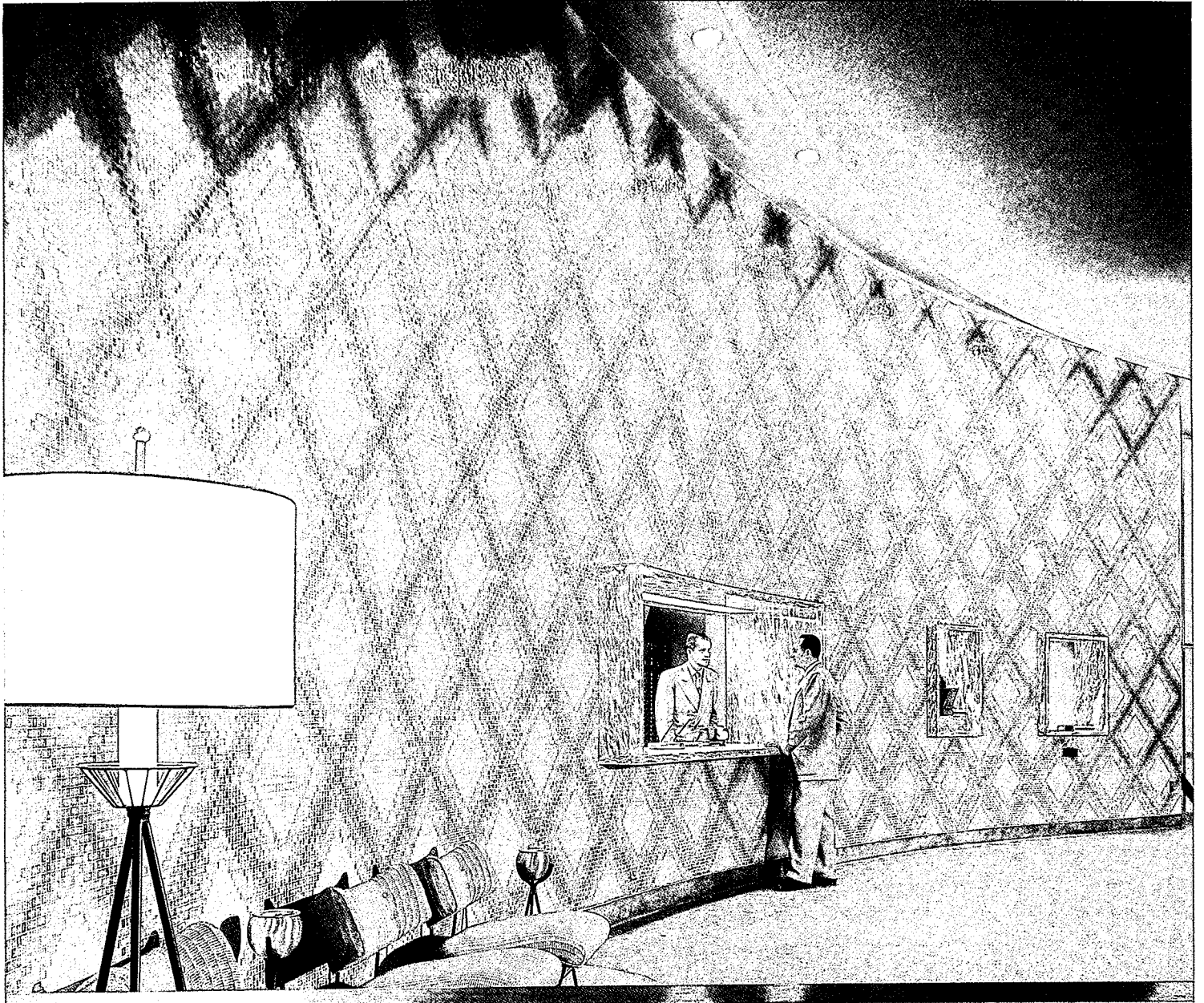


2

1. *Americana Hotel, Bar Harbour, Florida, 1956*
2. *The Ansonia Shoe Store, New York City, 1940*
3. *Algiers Hotel, Miami Beach, Florida, 1951*

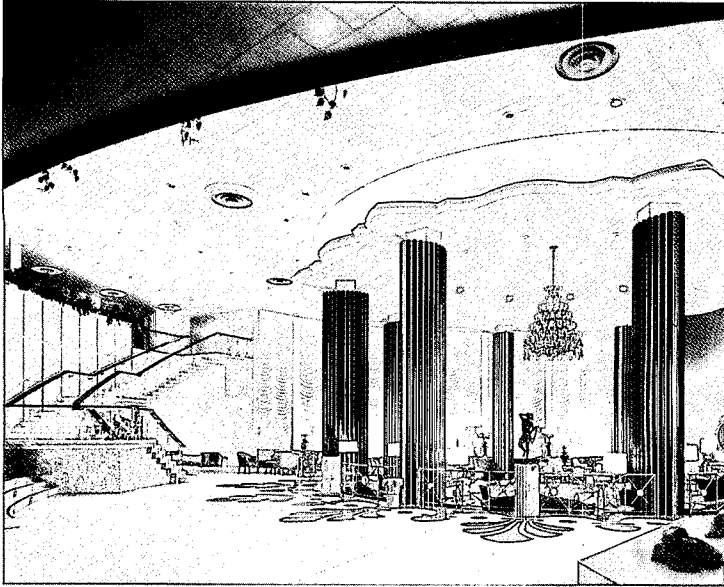
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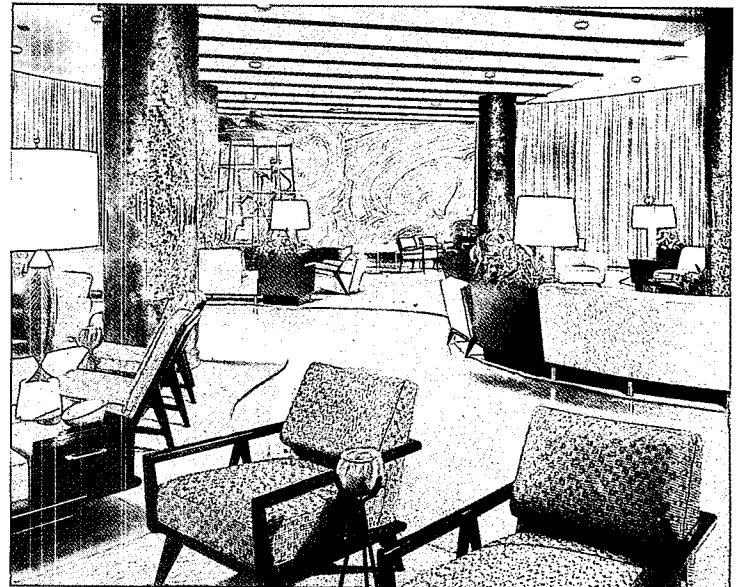


4. Eden Roc Hotel, Miami Beach, Florida, 1955
5. Algiers Hotel, Miami Beach, Florida, 1951
6. Fontainebleau Hotel, Miami Beach, Florida, 1954
7. Americana Hotel, Bal Harbour, Florida, 1956
8. Biltmore Terrace Hotel, Miami Beach, Florida, 1951

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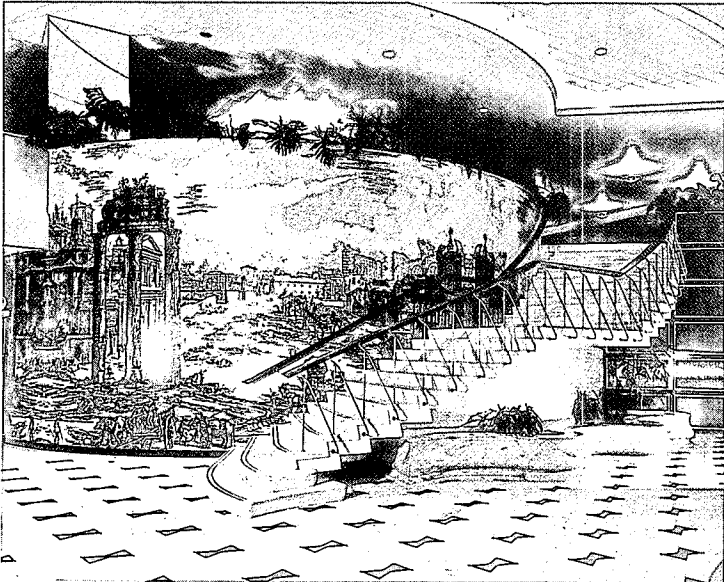
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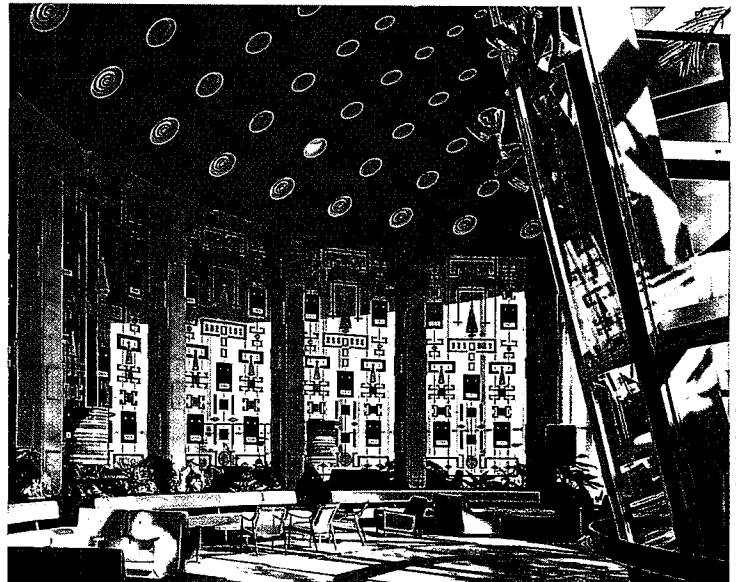
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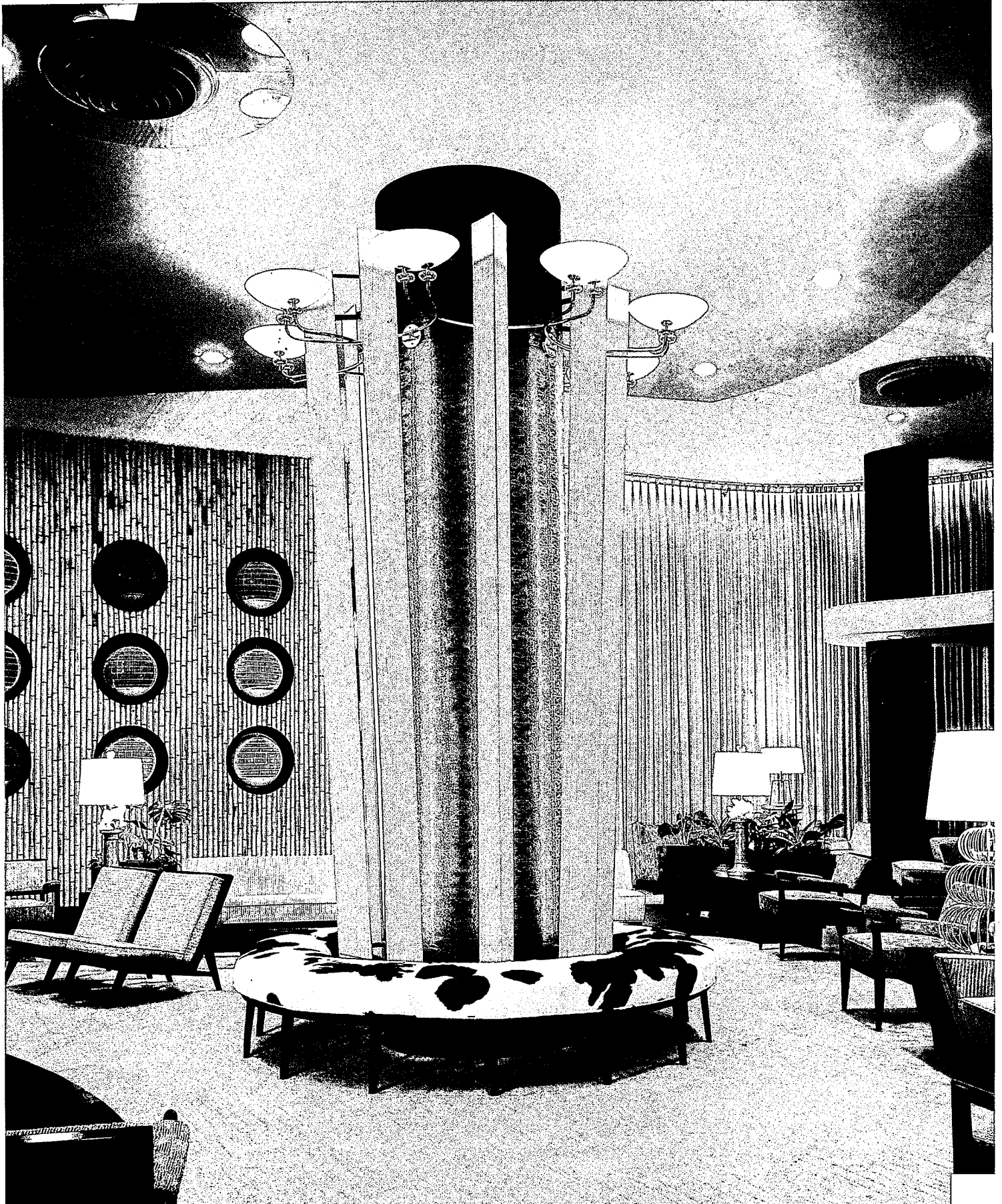


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7

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Modulating in Industrial Space

These days almost everybody has a modulator-demodulator, or modem, linked to their computer. The architects took derelict industrial space and, using new finishes and a layout, modulated them into modem-maker U.S. Robotics' new plant.

UWest was "the worst building U.S. Robotics had decided to rehabilitate yet," says architect Joe Valerio, referring to his on-going relationship with the manufacturer. The 300,000 sq-ft manufacturing building "was a wreck." Much of the work in a modulation/demodulation style here could be defined in the structural measures that were taken to enable good communication. These were accomplished by the architects simply laying out offices for the manufacturing engineers perpendicular to the axis of the production floor, along a hallway of metal-mesh curtainwall they adoringly call "the chunnel of industry" (see partial floor plan below). Featured in the chunnel of industry are a pair of wooden cylindrical drums (following two pages) affectionately known as "the reactors," a well-chosen name, considering that they are coffee bars, an all-important source of energy for U.S. Robotics' engineers.

Elsewhere at UWest (photos right and opposite), finishes modulate the hard industrial origins of the building, softening them somewhat, but not enough to make them mimic the seamless surface of a modem case. If these wood and metal-mesh panels were popped off, one would expect a nest of wires and printed-circuit boards not to come tumbling out. *Charles Linn*

Credits

UWest

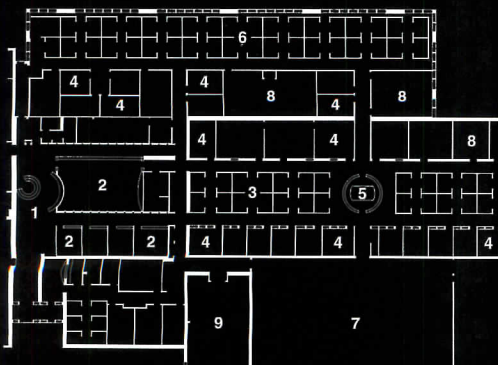
Morton Grove, Illinois

Owner: *U.S. Robotics*

Architect: *Valerio Dewalt Train Associates—Joseph M. Valerio, partner-in-charge; David Jennerjahn, project manager; Jeff Berta, project architect; Daniel Harmon, Sarah Morie, Neil Sheehan, project team*

Engineers: *WMA Consulting Engineers (m/e/p); SDI Consultants, Ltd. (civil); Don Belford Associates (structural)*

Consultants: *Nancy Willert (interior design); Peter Lindsay Schaudt (landscape)*



1. Reception
2. Conference
3. The "chunnel of industry"
4. Enclosed offices
5. The "reactor" (coffee/fax station)
6. Open offices
7. Production area
8. Laboratories
9. Break room

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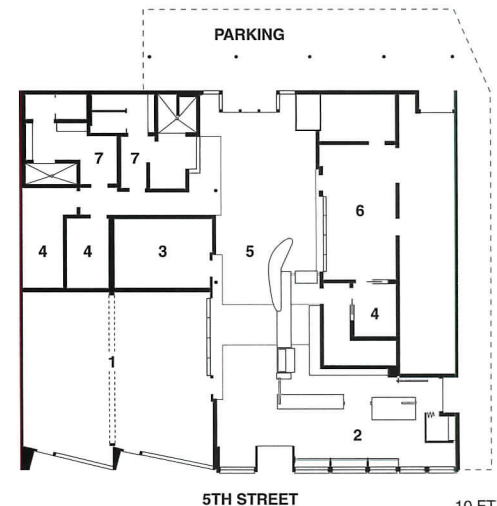
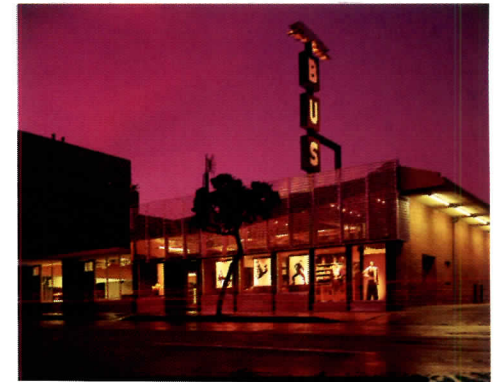
From Bus Station To Fitness Center

*Bus Wellness Center
Santa Monica, California
Steven Ehrlich Architects*

Architecture can be a performing art," says Steven Ehrlich. In this case, the youthful California practitioner had to work hard at projecting enthusiasm to his dubious developer clients to convince them that a dark and dank, deserted bus station could be converted into a bright and airy physical-fitness center. He had toured many available spaces with the three exercise enthusiasts, but his choice was the bus station. Ehrlich saw past latter-day remudblings such as maze-like partitions and blocked-in street windows. Steel mesh sun screens (top right) above blank walls were the only clues to the windows' existence. Here was potential: a structure full of hidden 1950s character in a prominent Santa Monica location built with reinforced-masonry bearing walls strong enough to meet new stringent seismic codes.

Ehrlich and his design team's first task was to examine the existing layout and develop a plan that accommodated the required spaces (right) with a minimum of demolition and new construction. The objective: keep the 5,000 sq-ft project within a Spartan budget of \$175,000. Ehrlich likens excavations into decaying finishes to an "archeological dig." Above the sagging hung ceiling, the architects found timber and tapered steel-beam roof supports, which they promptly exposed. Under debris, they found the waiting room's original terrazzo floor. To keep the floor, they filled it with contrasting grey cement where new work, such as utility trenches and ramps, required disturbing the surface. (One ramp leads up to the maple dance floor on rubber sleepers.) The old bus-station sign, taller than new codes would allow, stayed put to become the gym's namesake.

To bring in light and air, the architects reproduced the original street windows and added skylights that rise to capture the nearby ocean's breezes. By removing only three partitions, they created an inviting central sweep through the building from street door to rear parking-lot entry, used as a juice and coffee cafe (opposite, top). This space attracts constant activity and creates a clear route to the various exercise spaces, visible through large openings sealed for excessive noise with glazed overhead garage doors. Custom touches within the tight budget include a sculpted-glass juice-bar counter, free-form cafe tables, and specially altered gym equipment painted with bright blue automobile paint (lower right). As testament to Ehrlich's successful client relationship, he recently celebrated his birthday with a party at Bus, where guests tried out the equipment as part of the celebrations.
Charles K. Hoyt



- PLAN
1. Dance/aerobics
 2. Retail
 3. Plate room
 4. Office
 5. Cafe
 6. Gymnasium
 7. Lockers

Credits

*Bus Wellness Center
Santa Monica, California*

Owner: Richard and Agnes Thayer, Brian Cinadr

Architect: Steven Ehrlich Architects—Steven Ehrlich, Nick Seierup, principals; James Schmidt, project architect; Iris Anna Regn, Supachai Kiatkwankul, Gary Alzona, Markus Hintzen, Sookja Lee, Mei-Ting Lin, project team

Engineer: Gordon L. Polon (structural)

Consultant: Edward Effron, *Designing in Light*

Glass Artist: Philip Vourvoulis

General Contractor: Ben Levine & Son—Michael Levine, project manager



A House That Remains a Work in Progress

A pair of young Canadian architects continues the three-decades-long process of adding new layers of building and meaning onto a house in suburban Toronto. The project shows their interest in weaving together landscape and architecture, using light to animate space, and creating Zen-like places. Their latest work at the house is a bathroom addition that shines like "a clearing in the forest."

Piece by piece, Brigitte Shim and Howard Sutcliffe are transforming a quiet Modern house from the 1960s into a quiet Modern house of the '90s. The changes are incremental, respectful of the past, evolutionary. The radical shifts of scale or style found in some renovation projects are missing in this one. Rather than engineering a grand metamorphosis of one architectural species into another, the husband-and-wife team of Toronto-based architects has nurtured a set of design ideas, letting them take root and blossom. The result is akin to a garden that has matured and grown more complex with age.

The garden analogy seems particularly appropriate since Shim and Sutcliffe started their work on this suburban brick-and-cedar ranch house about a decade ago by designing a wooden screen in a brick garden wall (below right). This small insertion in the landscape led to a larger one: creating a terraced garden with reflecting pool, foot bridge, and Cor-Ten-steel pavilion (below left).

The original house, designed for a developer and his family, was an introspective courtyard structure. In the 1970s and '80s, Canadian architect Ronald Thom brought a West-coast sensibility to a series of renovations that connected the house more to its landscape. Sutcliffe, who had worked for Thom, carried on the work after the older architect died, and brought in Shim. (Shim and Sutcliffe both graduated from the University of Waterloo, then went separate ways for awhile, she working for Arthur Erickson and he for Barton Meyers and Kuwabara Payne McKenna Blumberg, as well as for Thom.)

Continuity and change are twinned themes in this house. The owner has remained the same the entire time, though his circumstances have evolved. The children are adults now and grandchildren have

arrived. His wife died. He remarried. A collection of African and contemporary Canadian art has also grown, becoming an important and ever-changing aspect of the house. "We see the house as a series of layers built up over time," says Shim. "We don't try to rework the design each time. It's not about contrasts, but about adding on." When asked about future projects, the client says, "I think I'm going to be doing this 'til they put me away." In fact, he will remain an active patron of architecture even after his death, having commissioned Shim-Sutcliffe to design his cemetery plot.

The most recent work is a new bathroom for the master bedroom suite. Compared with some of the bathrooms found in shelter magazines and suburban subdivisions, it is modest in size: about 140 sq ft of floor space. While the bathroom is an extension to the original house, the project also included turning the old master bath into the sleeping area for the bedroom and the old sleeping area into a sitting area. With no partitions in the new master suite, one space flows into the next so that light and views can be borrowed. Tall, slender pieces of African art serve as another link between old and new spaces.

The new bathroom, however, has an identity that is all its own. While the older parts of the house are made of ironspot brick and dark woods and feel "earthbound," the new bathroom "is all about light," Shim notes. Since the addition faces a neighboring house, maintaining privacy while bringing in light was a key concern. The solution was to use skylights, sandblasted glass, and only narrow strips of clear glass. "The room is filled with light that comes in in mysterious ways," says Shim. "It has the feeling of a clearing in the forest."

The materials used in the bathroom contribute to the sense of lightness. Polished limestone floors contrast with ebonized wood floors in the bedroom, while four layers of Venetian plaster add "depth and warmth" to walls. Faucet fixtures and drawer pulls were designed by the architects (see drawings, following pages). At night, halogen flood lights shine inside and let snow and rain cast shadows on interior surfaces. The effect is to remind people inside of what's going on outside. "Our work is about reconnecting people to more primeval conditions" such as the weather, says Shim. "We accept that the world is hectic. But we understand there's a need to create places where people don't have to look at a computer screen." *Clifford A. Pearson*



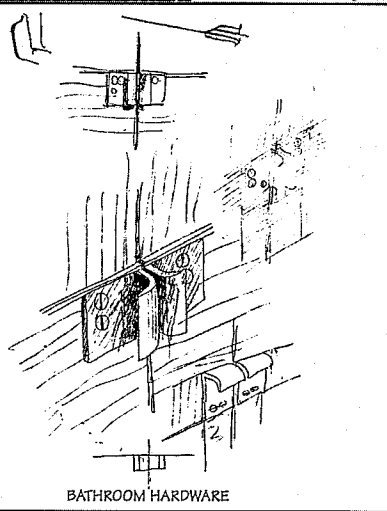
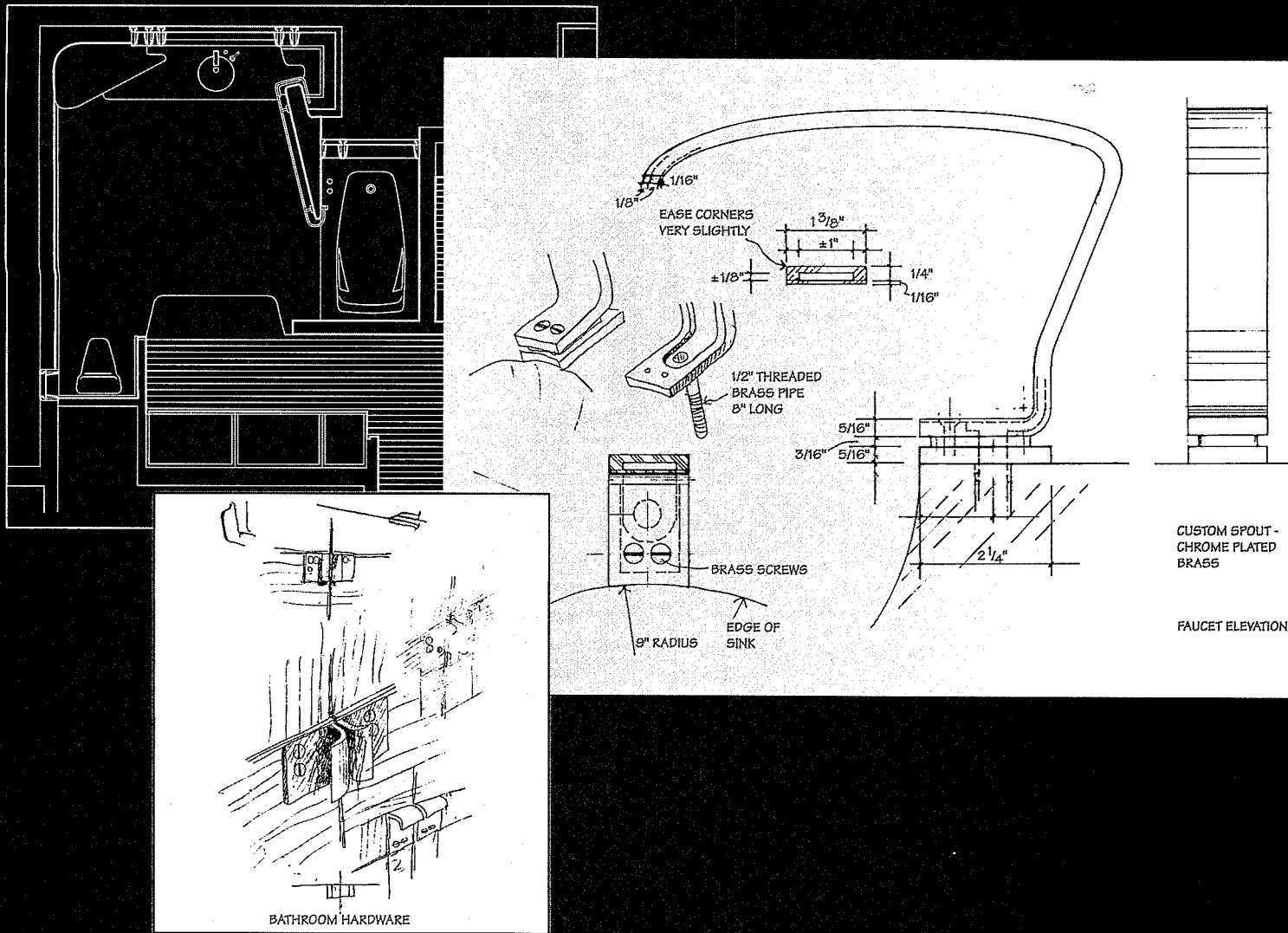
Previous work on the house includes a screen made of resawn cedar planks set in a garden wall (left) and a Japanese-inspired garden (far left) that cascades toward a wooded ravine. Shim-Sutcliffe's involvement in landscape design has made their interiors more sensitive to the outdoors.

*Bathroom Addition, House in Toronto
Toronto, Ontario
Shim-Sutcliffe, Architect*

© Michael Awad photos



Light comes into the new bathroom from custom-made frameless skylights, narrow windows, and sandblasted glass (above). Rounded corners and gently curving lines contrast with the rectilinear quality of the existing house. Materials used in the bathroom include French limestone floors, anigre and burl-maple cabinets, and Venetian plaster on the walls.



One of the pleasures of this project, notes Shim, was having “the opportunity to explore several different scales”—from shaping the surrounding landscape to designing drawer pulls and faucet fixtures (drawings above). “We’ve always been interested in craft and we’re lucky enough to be in a city like Toronto, which has a great stock of skilled craftspeople.” The graceful curve of the faucet spout

is reinforced by the sheet of water it releases. While the curves and light colors of the bathroom help give the room its own identity, the architects borrowed a few elements from the old parts of the house in the entry to the bathroom—including ebonized wood floors and amigre-wood cabinets (opposite right). The presence of African art also connects the bath to the rest of the house (opposite left).



Credits

Bathroom Addition, House in Toronto

Architect: Shim-Sutcliffe—*Brigitte Shim, Howard Sutcliffe, partners-in-charge; Donald Chong, presentation drawings*

Engineer: Frank Toews
(mechanical)

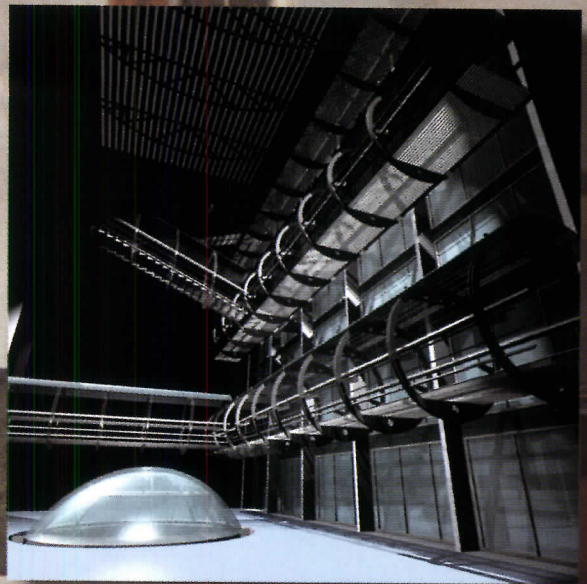
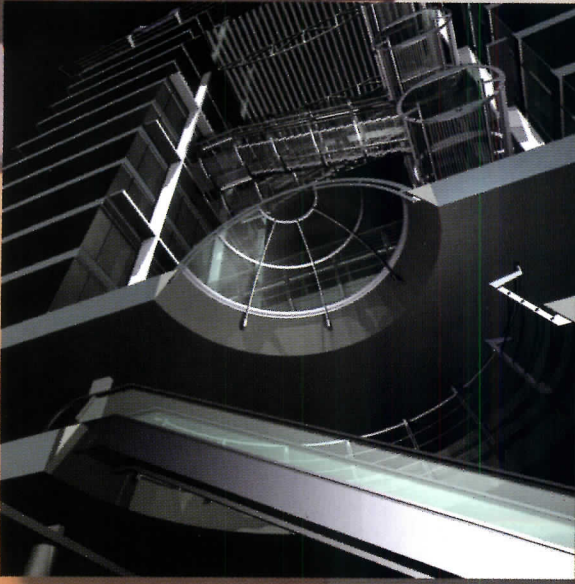
Consultants: *Suzanne Powadluk Design (lighting); Nelson Garrett Lighting (custom lighting); Takashi Sakamoto*

(hardware and faucet fabrication); Edile (custom plaster); Steve Bugler; Radiant City Millwork (millwork)

Builder: *Tony Azevedo*

FOR ARCHITECTS IN THE INFORMATION AGE

Architects: Csaba Virág and Judit Halmágyi, 3D Design and Visualization: Dune Studio. Rendered with Artlantis Render. Artwork: "Architectural Illusion Series" by Gimry Herzog © 1994. ArchiCAD and Graphisoft are registered trademarks of Graphisoft R&D Software Development Kt.



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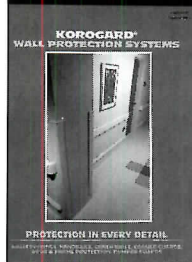
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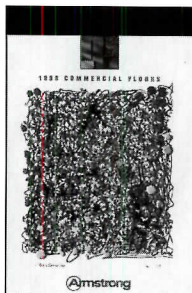
190. Coordinated crash rails

A brochure illustrates the Korogard wall-protection railing, and explains how solid-foam end caps provide a more impact-resistant construction with much less chance of in-use damage to rail or users. Available in 16 standard colors that coordinate with corner guards and wallcoverings. 800/628-0449. Koroseal, Div. RJF International, Fairlawn, Ohio.



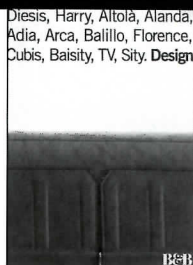
191. Custom tile mosaics

Working with artist David Wright, a Custom Fabrication Program uses CAD and water jet tile-cutting equipment to translate an architect's sketch into full-scale tile walls and floors. Patterns can be created in both ceramic and porcelain tile, supplied pre-mounted and numbered for easy installation. 615/484-2110. Crossville Ceramics, Crossville, Tenn.



192. Commercial resilient floors

A 60-page catalog describes the features and benefits of all Armstrong commercial floor products, and illustrates each pattern in retail, health-care, and similar settings. A selection chart matches the requirements of a particular space with the most appropriate flooring options. Technical data included. 800/292-6308. Armstrong World Industries, Lancaster, Pa.



193. Furniture with Italian flair

B&B's newest catalog collects new and classic designs under a *Comfort Zone* heading. All seating is intended for relaxed in-home settings—lounging, reading, watching TV—including an armchair with a pull-out footrest and a sofa with adjustable back and arms. All dimensions and upholstery options given. 800/872-1697. B&B Italia, USA, Inc., New York City.



194. Rietveld furniture

From a collection of estate-authorized reproductions of furniture by modern masters such as Walter Gropius, Marcel Breuer, and Charles Mackintosh, Cassina offers Gerrit Rietveld's Red & Blue chair (1918) and his Schroeder table (1922). Each piece carries a trademark vouching for its authenticity. 516/423-4560. Cassina USA, Huntington Station, N.Y.

* Product Data on CAD disk

For more information, circle item numbers on Reader Service Card.



195. Italian tile database

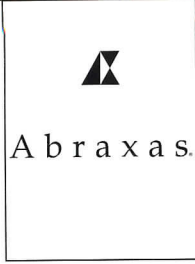
A PC-format database for specifiers, importers, and distributors of Italian ceramic tile lets users search and identify product by tile type and size, production method, manufacturer's location, and other attributes. It is said to be easy to install; price is \$49.50. 212/661-0435. D. Grosser and Associates, New York City.

Continued on page 115

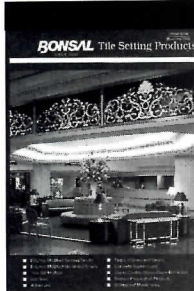
Product Literature



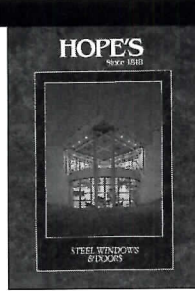
196. Greek marble Web site
A new promotional effort for architects and other stone specifiers, a Web site supplies photos of all Greek marbles, with their mechanical and physical properties. Distributors of each stone are listed state-by-state; marble producers will have a page detailing specific products: www.hep-ogreektrade.com/marble (Web page) Greek Trade Commission, Chicago.



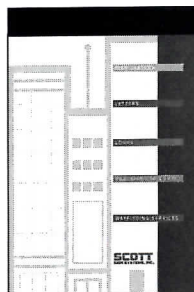
197. Hand-crafted furniture
A 20-page catalog illustrates current productions of Californian Glendon Good, who designs "useful forms": screens, seating, tables, and shelving in aluminum, glass, and leather. Detail drawings give dimensions and sectional views; all furnishings are shown in color. Fax requests to 510/841-4032. Abraxas, Berkeley, Calif.



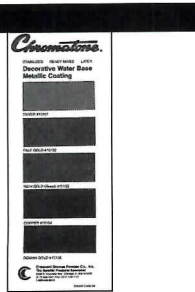
198. Tile-setting materials
Thin-set mortars, adhesives, additives, tile cleaners and sealers, and grouts are described in a 12-page architectural catalog. Products are grouped by service requirements, ANSI specification, and the type of tile installation (vitreous, semi-vitreous, impervious, or marble). Grouts shown in all colors. 800/334-0784. W.R. Bonsal Co., Charlotte, N.C.



199. Steel windows and doors
A new, 20-page portfolio explains the esthetic and functional advantages of steel window and door systems. Discusses fire ratings and landmark considerations, and compares profiles and sight lines. Photos illustrate how steel units contributed to the appearance of offices, homes, schools, and stores. 716/665-5124. Hope's Architectural Products, Inc., Jamestown, N.Y.



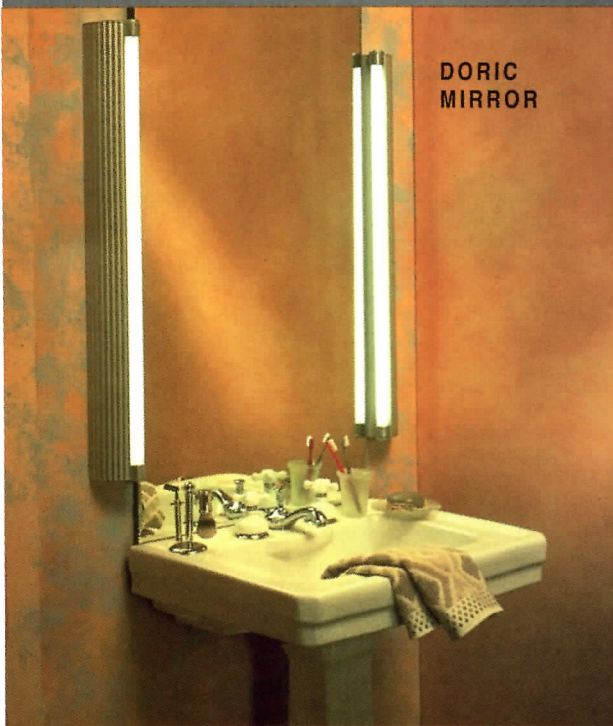
200. Signage systems
An architectural signage catalog has 28 pages on "effective signing," suggesting identification devices and graphics that reinforce a design image throughout a facility. Signs and directories can be ordered in several materials and almost any finish; ADA and other requirements are explained. 941/355-5171. Scott Sign Systems, Inc., Tallavast, Fla.



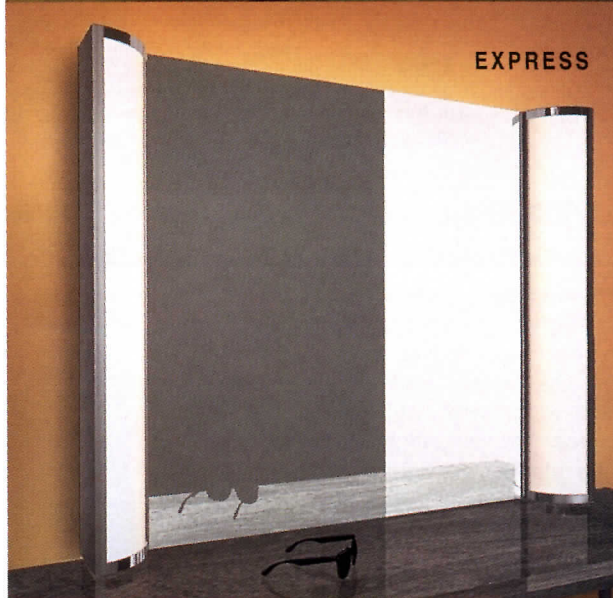
201. Latex metallic paint
A new low-VOC, water-based decorative coating for use on primed or previously painted interior surfaces, Chromatone Stabilized ready-mixed metallics come in silver, pale gold, rich gold, copper, and Roman gold. Color chart and packaging specs: 800/445-6810. Crescent Bronze Powder Co., Inc., Chicago.
Continued on page 118

For more information, circle item numbers on Reader Service Card.

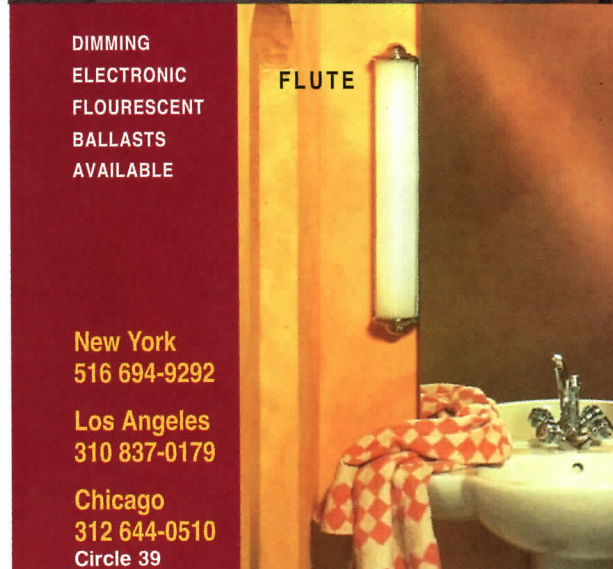
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Manufacturers' Sources

For your convenience in locating building materials and other products shown in this month's feature articles, *RECORD* has asked the architects to identify the products specified.

Pages 72-77

f/X Networks Corporate Headquarters
Fernau & Hartman Architects
Labeled doors: Republic. Conference doors: U.S. Aluminum. Locksets: Sargent. Acoustic ceilings: Armstrong World Industries; Illbruck. Cabinetry: Fred K. Anderson & Sons, Inc.; Jeffrey Trott Industries. Cabinet hardware: Forms+Surfaces; Grant; Doug Mockett & Co. Cork flooring: Dodge Regupol, Inc. Stools: ICF. Chairs: Emeco. Banquette: West Coast. Carpeting: Design Weave. Sling chairs, table: custom by architects. Conference-room seating: Via. Fluorescent troffers: Columbia. Downlights: Edison Price. Fluorescent fixtures (exposed ceiling): Zumtobel. Office ambient fixtures: Neo-Ray; task lighting: Luxo; Adjustable Fixture Co.

Pages 78-80

Art Gallery, Clark Atlanta University
Scogin Elam & Bray, Architects, Inc.
Triple-hung wood windows: Simpson Millwork.
Flooring: Rift-cut red oak, tung-oil finish. Custom color paint: Duron. Barn-door fixtures: Halo.

Pages 81-83

Don and Sylvia Shaw Salon & Spa
Downlights with decorative disks: Diskus. Phenolic-finished birch plywood paneling and interior doors: Finland Color Plywood Corp., fabricated by

Dowlen Lloyd Custom Woodwork. Lever locksets: Schlage Lock Co. Full-length hinges: Select Products Limited. Laminated glass: ASG Industries. Storefronts and entrances: Amarlite. Closers: LCN. In-floor uplight: Hydrel (9000 Series).

Pages 84-91

The Science, Industry, and Business Library
Gwathmey Siegel & Associates, Architects
Wood windows and rift-cut white oak paneling: Rimi Woodcraft. Aluminum storefronts, entrances, and ornamental metalwork: Allied Bronze. Locksets: Yale. Butt hinges: McKinney. Overhead closers: Rixson. Exits: Von Duprin. Pulls: Quality. Fire doors: Atlas. Acoustic finish: Pyrok. Ceiling tile and resilient flooring: Armstrong World Industries. Paints: Benjamin Moore & Co. Laminate surfaces: Nevamar. Epoxy-terrazzo floors, walls, and column treatments: Port Morris. Stainless-steel paneling: Allied Armstrong. Broadloom and carpet tile: Collins & Aikman. Access floor: C-Tec. Reading tables: Textus Group, Inc. Library shelving: Montel. Downlighting: Edison Price. Dimming controls: Lightolier, Inc. High-density shelving system: Spacesaver, Inc. LED signage: Sunrise Systems. Elevators: Otis.

Pages 98-101

U West, U.S. Robotics
Valerio Train Dewalt Associates, Inc.
Entrances: Kawneer Co., Inc. (TriFab). Locksets and exits: Yale. Pulls: Rockwood. Paints: Benjamin Moore & Co.; Sherwin Williams. Acoustic ceilings: USG Interiors, Inc. Birch-veneer paneling and granite-topped reception desk: Wm. Huber

Cabinet Works, Inc. Sandblasted glass partitions: Christopher Glass. Ceiling fixture (conference): Artemide, Inc. (Mikado). Office furniture system: Kimball. Lobby flooring: Forbo. Carpeting: Lees Commercial. Linear fluorescents: Zumtobel. Cylindrical fixtures: I.C.E. Custom metal-mesh ceiling: fabricated by P.I.W. Corp. Downlighting: Halo.

Pages 102-103

Bus Wellness Center
Steven Ehrlich Architects
Laminate on custom cafe tables and espresso bar: Formica Corp. Cafe chairs: West Coast Industries. Tables: custom by architect. Signlight fixtures (lobby): USI Columbia. Track lighting: Lightolier, Inc. Green stain over OSB: Frazee. Cast-glass counter: designed and fabricated by Philip Vourvoulis, Glass Tech. Sectional interior doors: Finishline. Lever-handle locksets, closers: Cal-Royal. Hinges: Hager. Acrylic-glazed skylights: Bristolite. Colored concrete: L.M. Scofield. Northern hard maple gym floor: Horner Flooring Co.

Pages 104-107

Bathroom Addition, House in Toronto
Shim-Sutcliffe, Architect
Wood windows and skylights, Anigre and burl maple cabinetry and paneling: custom, fabricated by Steve Bugler; Radiant City Millwork. Sandblasted mirror: Clo Glass. Pulls and faucets: fabricated by Takashi Sakamoto. Shower fittings: Speakman. Stucco Veneziana (plaster): Edile. Cabinet hinges: Blum. Slides: Accuride. French Limestone floor: Enmar Natural Stone. Mirror light: Eurolite. ■

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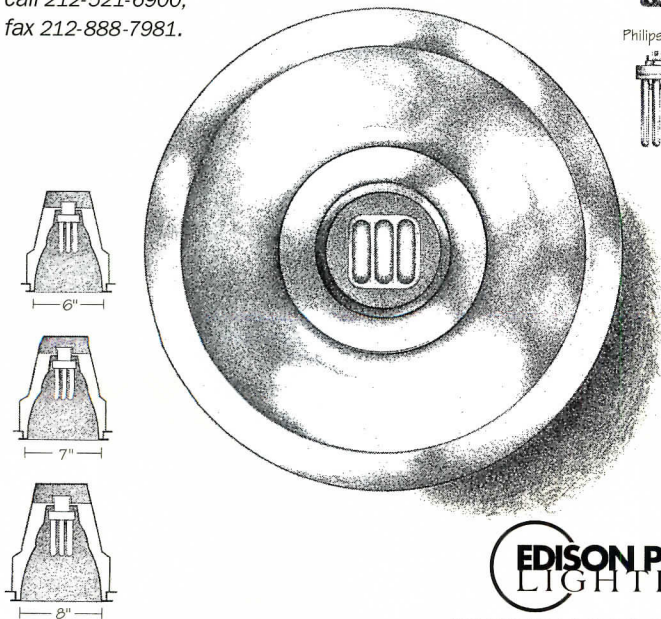
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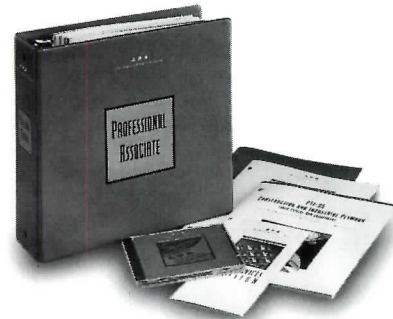


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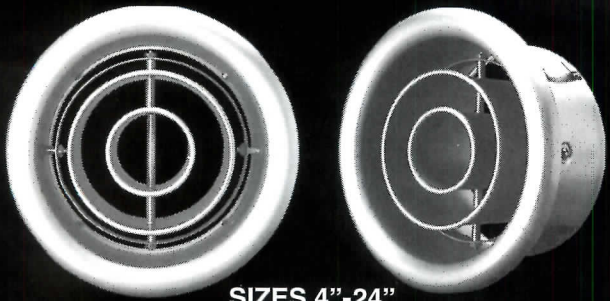
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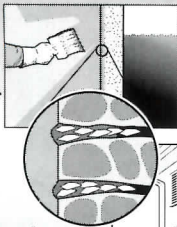
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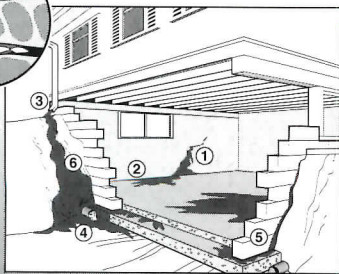
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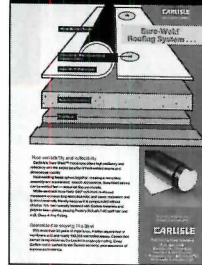
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Product Literature



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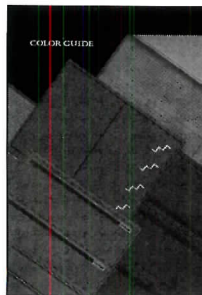
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203. Fire-rated aluminum doors

An architectural brochure describes the vision-light, finish, and extruded-frame options offered by Raco aluminum doors for commercial and institutional interiors. Glazed with Superlite I wireless glass, doors can carry a 20-minute fire rating (pairs or single units). Frame details available in DXF format. Ragland Mfg. Co., Houston. *



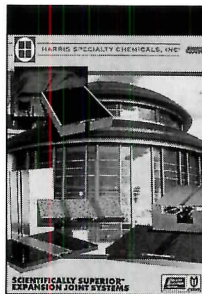
204. Not just battleship gray

A new Color Guide introduces a palette of 60 paint shades—including purples, reds, yellows, and micas—available as a standard chip-resistant electrostatic finish on this maker's files and storage products. Selected to reflect future design trends, color lets files contribute to the interior design scheme of an office. Office Specialty, Holland Landing, Ont.



205. EIFS application tips

A 24-page pamphlet recommends procedures and gives guidelines for applying Class PB exterior insulation and finish systems, as well as tips for filling voids in insulation boards, rasping, backwrapping, creating textures, and using sealants. Contains a glossary of over 30 EIFS terms. Fax requests: 813/726-8180. EIMA, Clearwater, Fla.



206. Expansion joints

A 28-page brochure introduces Seis-MaxPlus, Accent ADA, Weather-Seam, and StadiaFlex—the newest Watson-Bowman-Acme joint systems for engineered structures. Illustrates covers that simulate granite, marble, or tile, as well as plates in aluminum, brass, bronze, and stainless steel. 800/537-4722. Harris Specialty Chemicals, Inc., Jacksonville, Fla.

* Product Data on CAD disk

For more information, circle item numbers on Reader Service Card.



207. Swimming-pool equipment

A catalog groups pool-deck and underwater equipment into functional groups for different competitive-swimming and recreational applications. Products include the Track Start platform, portable lifeguard chairs, and railings; drawings detail all products. Also in AutoCAD format. 914/769-6221. Paragon, Pleasantville, N.Y. *

CALL FOR ENTRIES

RECORD HOUSES 1997

The editors of ARCHITECTURAL RECORD announce the 42nd annual RECORD HOUSES awards program. This program is open to any registered architect. Of particular interest are projects that incorporate innovative programs, building technologies, and use of materials. Work previously published in other national design magazines is disqualified. There is an entry fee of \$15 per submission; please make checks payable to ARCHITECTURAL RECORD.

Submissions must also include plan(s), photographs (transparencies, slides, or prints), and a brief project description bound firmly in an 8-1/2- by 11-in. folder—and be postmarked no later than October 31, 1996. Winning entries will be featured in the 1997 RECORD HOUSES. Other submissions will either be returned or scheduled for a future issue. If you would like your entry returned, please include a self-addressed envelope with appropriate postage.

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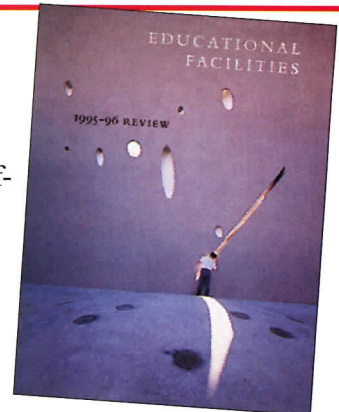
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Calendar *continued from page 8*

There is a \$75 fee for ARCHITECTURAL RECORD subscribers and Cooper-Hewitt members; \$35 for students; \$100 for all others. To register, call the Cooper-Hewitt at (212) 860-6321.

November 2-3

The Institute for the Study of Classical Architecture and *Traditional Building* magazine are holding a seminar on "Classical New York, Classical America." On the first day, prominent professionals and educators will talk about subjects ranging from "Townhouse Design in New York (Mark Hewitt) to "The Archeology of New York" (Celia Bergoff, New York University) to "The Clubs of New York" (Gary Brewer, Robert A. M. Stern Architects). These lectures will be in the Tishman Auditorium, Vanderbilt Hall, NYU School of Law. On the second day, hands-on workshops and demonstrations, and walking tours will cover the Great Interiors of New York, the Clubs of New York, Drawing Classical Ornament (workshop), and the Classical Order of Architecture (workshop), among other topics. That day's activities take place at the Real Estate Institute at NYU's 11 West 42nd St. location. Registration is \$95 per day, or \$195 for both

days. Call Judith Lief at 718/636-0788 for more information, or fax her at 718/636-0750.

November 7-9

Interplan '96 will hold its (formerly Designers Saturday) show at the New York Coliseum, with seminars and an interior-design and planning exposition. The A&D building also plans to expand exhibitor space at its West 58th St. location. Call 800/950-1314, ext. 2611 for more information.

Through January 19, 1997

"Three Buildings by Frank Lloyd Wright: American Spirit Alive in Japan" traces the history of the only three non-U.S. buildings Wright designed and built: the Imperial Hotel, Yamamura House, and Jiyu Gakuen Myonichikan School. Through photos, drawings, models, and correspondence, the exhibition explores the context for each building. At the National Building Museum, Washington, D.C., 202/272-2448, fax 202/272-2564.

Competitions

◆ The "Inside out Outside in" competition for the AIA San Francisco interior-architecture awards are due Sept. 15. Entrants from the nine-county Bay Area can submit projects built anywhere; non-Bay Area architects must submit projects built in the nine-county area within the last two years. Call AIASF at

415/362-7397 for a call-for-entries form.

◆ "Unbuilt Architecture" competition submissions are due Sept. 26. Entry fee is \$50 for each submission. Call Boston Society of Architects, 617/951-1433 ext. 232, for details.

◆ A competition to design Greenport (Long Island, N.Y.) Waterfront Park and Harbor Walk offers up to \$20,000 plus a commission to further develop the winning design. Registration closes Oct. 4; submissions must be postmarked by Nov. 8. Call 516/477-3000, fax 516/477-2488 for more information.

◆ Society of American Registered Architects (SARA) invites architecture students to submit work done in conjunction with a school or independently. Entrants must register by Oct. 6, and submit projects by Oct. 13. Call 708/932-4622 for details.

◆ International Making Cities Livable Conferences is calling for submission of papers and exhibit proposals by Oct. 15. The first IMCL conference will be March 8-12, 1997, in Charleston, S.C.; the second April 15-19 in Santa Fe, N.M. Call Suzanne H. Crowhurst Lennard at 408/626-9080 for details or fax her at 408/624-5126.

◆ Shinkenchiku Residential Design Competition entries, which will be judged by Jean Nouvel, are due Oct. 18. Contact Shinkenchiku-sha Co., Ltd., 31-2 Yushima 2-chome, Bunkyo-ku, Tokyo 113, Japan.

◆ Submissions to the biannual Rudy Bruner Award for Excellence in Urban Environment are due Dec. 13. First-prize winner receives \$50,000; honorariums of \$1,000 go to each of four additional finalists. Contact Bruner/Cott & Associates for an application form or more information at 130 Prospect St., Cambridge, MA 02139; phone 617/492-8400; fax 617/876-4002. ■

Corrections and Clarifications

◆ Several names should have been included in the credits for Casa Italiana [ARCHITECTURAL RECORD, July 1996, page 82]: Jon Ambrose, Luis Estrada, Janier de la Garva, Sara Kaplan, Anatole Plotkin, Robert Wildermuth, project team; F. J. Sciame Construction Co., Inc., construction manager.

◆ The Computer Delineation award for the Landa residence [RECORD, June 1996, page 50] should have included the names of Cameron Crockett and Mark Sich, both with Morphosis at the time the project model was built, as delineators.

◆ The illustrations for the Berlin Embassy [RECORD, March 1996, pages 36-43] should have been credited to the following perspectivists: BCJ and Swerdrup, drawn by Lebbeus Woods; Moore Ruble Yudell with Gruen Associates, drawn by Douglas Jamieson; Kallman McKinnell & Wood, drawn by Steve Oles. ■

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Firms continued from page 48

Boston-based alumnus of Benjamin Thompson Associates to form Wood and Zapata. Yazdani moved on in 1994 to become design director of Dworsky Associates, and has helped raise the profile of the Los Angeles-based firm. Ellerbe Becket recently closed its New York City office, and has focused on its traditional strengths: health care, corporate facilities, and academic work.

Have portfolio, will travel . . .

Yet another firm is embarking on the path that Ellerbe Becket pioneered 10 years ago and, intriguingly, with a similar cast: Seattle-based NBBJ. Not only has Pran moved there as a principal but, just a few months ago, the firm lured Mike Hallmark, Dan Meis, and Ron Turner, whose signature sweeping roof-lines had given Ellerbe-Becket a high profile in sports-facilities design after Hallmark and Meis had moved to the firm from HNTB. They are heading up a sports-facility and entertainment-focused office in Los Angeles.

The firm has also added Jack McAllister to lead its San Francisco office. He had been president of Anshen + Allen, a California-based firm that often competed with NBBJ on health-care work. "We're shifting into a more aggressive market- and firm-building strategy," explains James Jonassen, partner and CEO of NBBJ's Western operations. This is to be accomplished in two ways: by getting into new markets (NBBJ has also been affected by the health-care slump) and by building the design profile of the firm.

It is the latter area where Pran comes in. "He adds another voice to our design dialog," says Jonassen, "and we're stretching that dialog from one end to the other." McAllister, with his experience with projects ranging from Louis Kahn's original Salk Institute project to Anshen + Allen's recent addition represents the "other" with his "thoughtful and well-executed work," says Jonassen.

Pran took with him a major project—the 50-story Graha Kuningan tower in Jakarta—on which he was the design principal. Pran is likely to be joined at NBBJ on this project by other New York City designers he nurtured. Pran will focus on NBBJ's overtures in Asia, but will also be involved in projects among the firm's five other offices in the U.S. Jonassen observes that Pran will be crucial in the Far East, where clients seek name designers. "We can compete effectively with HOK, but not with Pelli," says Jonassen. "Peter's name has value in that marketplace, and he can open doors."

Merging service and design cultures

Is NBBJ restructuring to become some fundamentally different kind of firm? "This is not a sea change," replies Jonassen. "These changes absolutely fit into a strategy we have been following for eight or nine years, when we said our vision is to be the best design firm in the world." Jonassen feels the firm can support this vision through "a studio approach that balances design, technology, process, and communication."

With design not so high on many clients' agendas, would NBBJ be wiser to follow McClier's path? The two firms' approaches seem to differ more in degree than in fundamentals. "We pioneered the expanded-services approach in the 70's," says Jonassen. "We were the first strong group to do financial analysis; we are doing some program management and some construction management." But the firm feels it will be more successful by remaining all-architecture. He says NBBJ never accepted the split conceptualized by management consultant Weld Coxe, who has urged firms to choose whether they are a business-focused practice or a practice-oriented business. "You've got to recognize

the business climate and what clients want," he explains, "but that doesn't mean you don't want to deliver the best-designed product. Our view is 'best in product, best in service.'"

Is there a moral in the experience of McClier, Ellerbe Becket, and NBBJ? For now it is that they are confident enough to try new directions, and if those don't work, to try another way. But how successful these approaches turn out to be a few years hence may say a great deal about where the profession is going. *M. J. C.*

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Duschqueen's patented design has something for everyone. A stock unit that looks, works and sells like a custom enclosure. With a double-bent, tempered glass door and a full 27" opening, the unit fits most standard 42" neo bases. It ships in one box and is easily installed by the contractor.

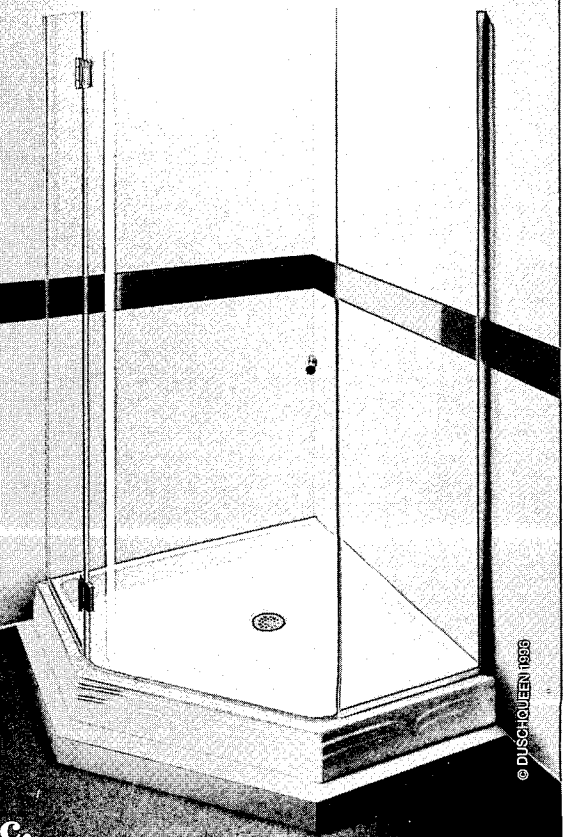
Invisible vinyl profiles and no metal at the top lend a soft, sculptured look — it seems to float in space. The unit is guaranteed watertight.

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Manufacturers' Spotlight

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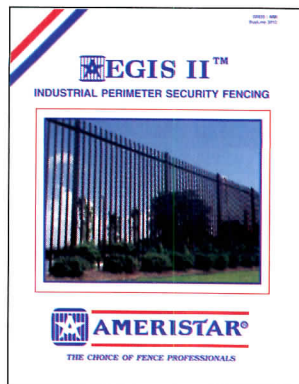
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The TOTAL DOOR® SYSTEM



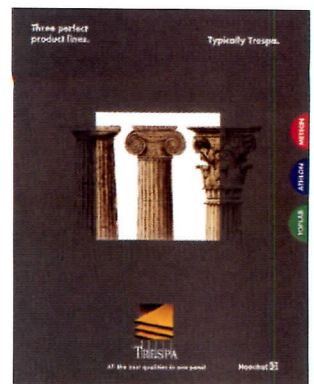
Is an architect-designed integrated door assembly. It includes prefinished door panels and all hardware. Fire rated pairs do not require coordinators, vertical rods, astragals, flush bolts or floor strikes. Will retrofit to any frame. Meets all codes and ADA. Wood and metal faces available to 3 hours. Lifetime limited warranty on locks and panics.

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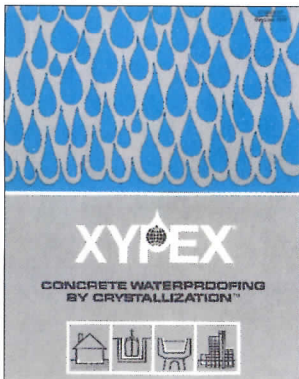


Toplab® chemically resistant laboratory grade panels for benchtops, work surfaces, shelves. Athlon® sanitary grades for toilet partitions, lockers, vanities. Meteora® UV colorfast grade for exterior cladding, soffits, fascias, balcony panels. All grades are durable, available in colors, and proven performers in these applications. 1-800-4-TRESPA.

Hoechst Celanese Corp.

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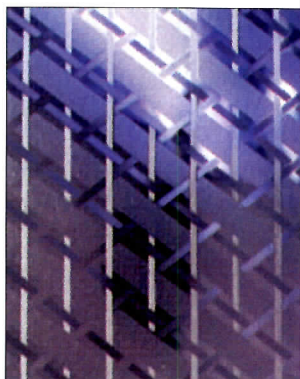


Applied as a slurry coating, Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that 'plugs' the pores of the structure preventing water seepage. Xypex is ideal for use on the 'inside' of wet underground structures.

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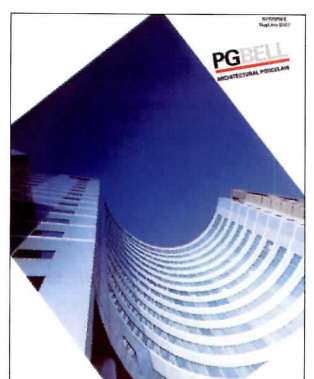
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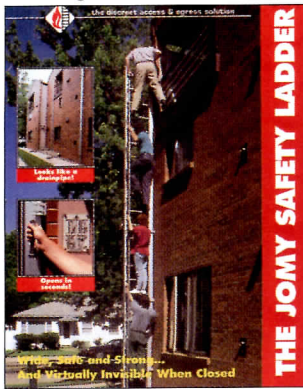
PG Bell

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Manufacturers' Spotlight

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Fax: 212-512-2074

The Discrete Access & Egress Solution



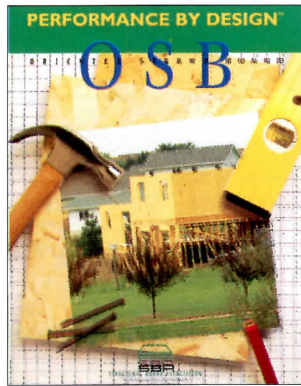
Security requirements, space constraints and esthetic considerations are a few of the problem solving applications for the JOMY Safety Ladder. The ladders discrete appearance makes it an ideal solution for access and egress requirements. The ladder looks like a drainpipe when closed, but opens to a heavy-duty ladder with slip resistant rungs and a safety rail.

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Jomy Safety Ladder

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Structural Board

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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.

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Heat-N-Glo

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New Anchoring Systems from Strong-Tie®



This brand new 36-page reference for architects and structural engineers combines Epoxy-Tie™ adhesive and retrofit bolts with Strong-Tie®'s line of load-rated mechanical anchors, including Wedge-All™, Sleeve-All™, and Mascru™ products. Complete load specifications are included, plus recommended anchor spacing, edge distance, hole sizing and embedment depth.

Simpson Strong-Tie Co., Inc.

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Atlas Fire Door Systems



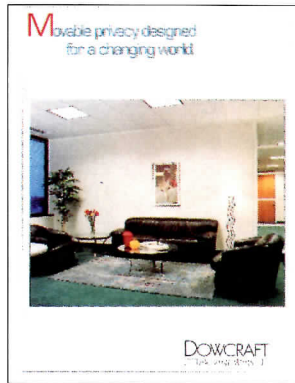
The increasing demand on ADA, life safety issues, and code compliance has been simplified with Atlas Door's integrated line of fire doors, fire shutters, and control devices. Proven service, quality, and experience ensure the most advanced fire door system available in the market today.

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Atlas Door Systems

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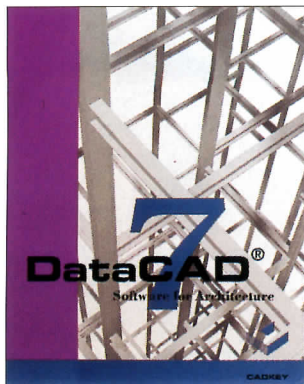
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Chief Architect

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Manufacturers' Spotlight

New DataCAD® 7



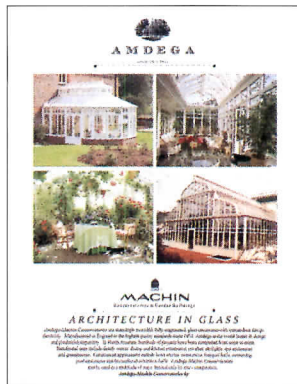
Award-winning DataCAD allows you to professionally draft, edit, and prepare precision construction documents. From 2D drawing to 3D modeling, DataCAD offers effective and affordable solutions for designers needs.

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Cadkey Inc.

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Amdega-Machin
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Senergy

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Melton Classics

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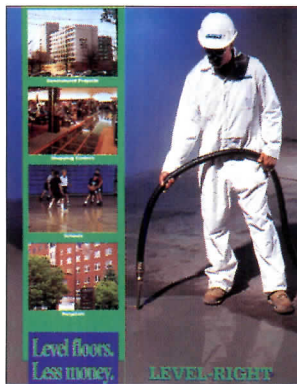
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Patio Enclosures, Inc.

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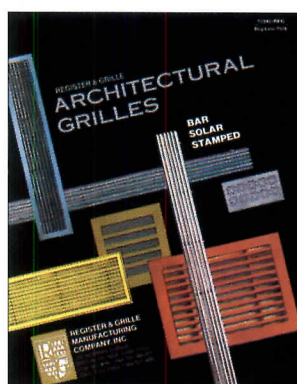
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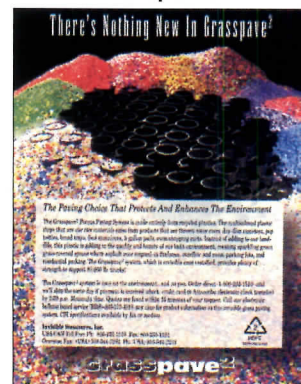


Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R&G offers architects and interior designers many ways to express the changing forms of metal with the integrity of R&G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your decor. 202 Norman Ave., Bklyn. NY 11222. 800-521-4895. Fax: 718-349-2611.

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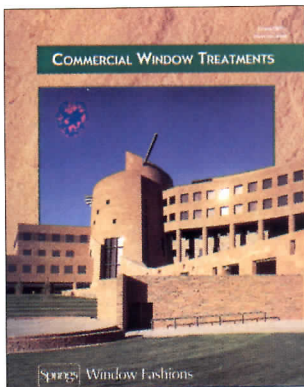
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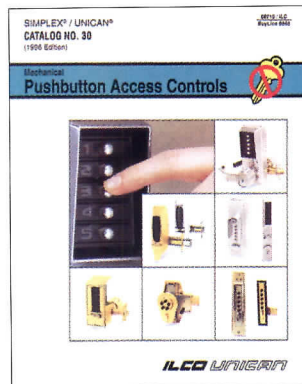
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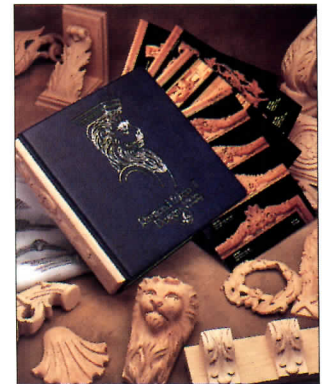
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Catalog free of charge.

Jacuzzi Whirlpool Bath

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Architectoral Woodcarvings



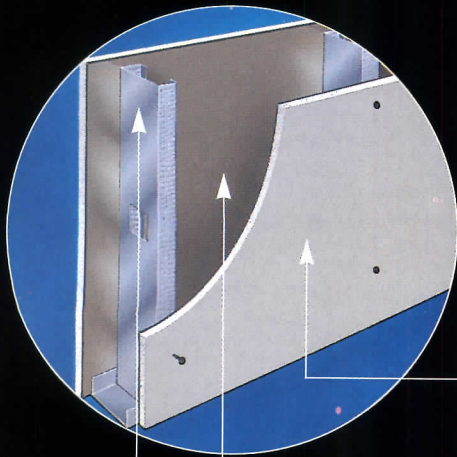
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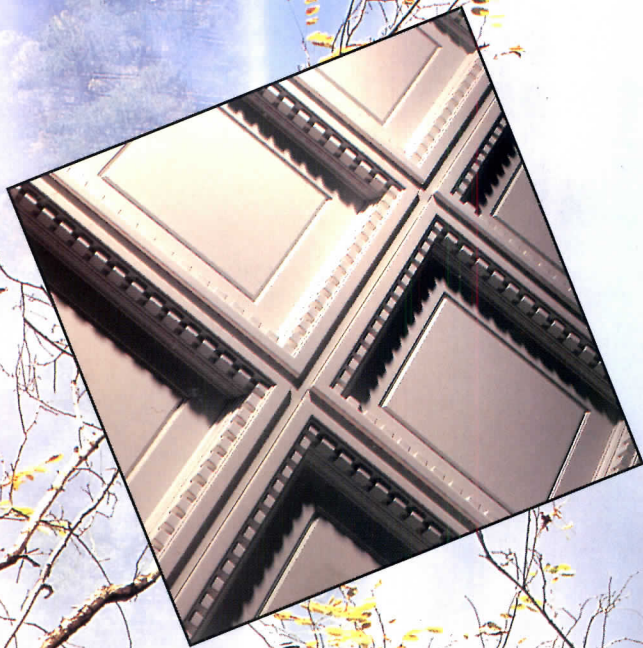
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