ARCHITECTURAL
RECORD

Business Design Engineering
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November 1986


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Armstrong

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Letters

I find it bad enough that photographs published to illustrate an architect's vision realized instead prove to be fine examples of shoddy craftsmanship, but to glorify such inadequate work with a cover photo is an outrage [ARCHITECTURAL RECORD, August 1986].

An architect has a reponsibility to detail his project so that it can physically be constructed within the project budget. He or she must also insure that the contractor involved complete the work as specified, and to listen to and evaluate the contractor's suggestions where difficulties occur (as they so often do). When the details of a building fail, so does the overall concept.

Your displays of such poor work as the concrete rail for the Leverett Peace Pagoda (pages 102-103) and the cast-stone window surrounds at Princeton's Lewis Thomas Laboratory (page 107) shout to the world—poor craftsmanship does not matter, as only the "professionals" will notice any deficiencies.

Gerald Weinand
San Francisco

Your coverage of the Lewis Thomas Laboratory [RECORD, August 1986, pages 104-113] is very much appreciated, but it is unfortunate that you chose to print such a photograph as the one on page 107. This photograph had to be taken with the sun at a 2 degree or 3 degree angle to the facade, thus greatly exaggerating the poor quality of the cast stone. This is not meant to excuse the cast stone, but it is meant to point out an equally poor photograph.

In reference to the cast stone, your article should be corrected to say that it is the manufacture which has no excuse and not the installation. Princeton's Office of Physical Planning, the general contractor, and the architects went to great lengths to make the most of the cast stone. (The problem of wrong-colored bricks pales in comparison.) Finally, it should be mentioned that the installer of the cast stone, the John B. Kelly Company, has no responsibility for this problem and in fact did a tremendous job constructing the very complex facades.

Ronald McCoy, Architect
San Francisco

When the building was constructed, Mr. McCoy was project architect with Venturi, Rauch and Scott Brown.—Ed.

We have seldom found it necessary in our 30 years of practice to respond to articles about our work. However, your issue covering the Jacob K. Javits Convention Center [RECORD, September 1986, pages 106-117] contained a number of misleading statements which warrant correction.

With regard to cost, I was disappointed that your article did not attempt to differentiate between project costs and construction costs. The project costs increased from $375 million to $487 million; however, the hard construction costs, which included many owner-initiated program changes, reached a total of $310 million. Your article failed to mention the numerous other reasons for increased costs, such as the addition of a plaza, additional fixtures, furnishings, and equipment, increased owner administrative expenses, owner's legal fees, underwriting fees, the presence of over 60 prime contractors, the state of the marketplace, etc., which accounted for a significant portion of the project cost overruns.

Your characterization of the structure as "Tinkertoy-like" diminishes the seriousness of our efforts to utilize a space frame in an intellectually rigorous way. The article should have noted that the space-frame contract was based on a performance specification rather than a prescriptive specification. The specific structural design of the space frame, as well as the manufacture of its various components, was the responsibility of the space-frame contractor. It was not clear in your article that it was our inspectors, not the contractor, who discovered the flawed nodes and brittle rods, and it was through our efforts, in conjunction with experts from Lehigh University, that the contractor made the necessary corrections. The cost to replace these components and to accelerate the erection of the structure was $8 million, not $60 million, as your article states.

Your article stated that the Convention Center did not face 12th Avenue because of a desire by us to mask a proposed highway commonly known as Westway. In fact, we made a deliberate choice to orient the public activities of the building toward 11th Avenue and the view of Manhattan. One of our original charges from our client was that the building be deployed in a fashion that would help to revitalize that portion of the then moribund west side of Manhattan. Orienting the building toward 12th Avenue would have made a trucking street of 11th Avenue, and would have left it congested and lifeless. Therefore it made good urban sense to orient the public face of the project toward 11th Avenue. Finally, an entry on 12th Avenue would have required that the visitor rise a daunting 29

Continued on page 196

Calendar

November 12-14
"Decorative Metalwork in Architecture," a conference sponsored by the University of Minnesota School of Architecture and Landscape Architecture, Continuing Education and Extension, and the Minnesota Society American Institute of Architects; at the Radisson University Hotel, Minneapolis. For information: Jan Becker, Program Associate, Department of Professional Development and Conference Services, University of Minnesota, 131 Nolte Center, 315 Pillsbury Dr. S. E., Minneapolis, Minn. 55455-0118 (612/625-6616).

November 19
Special-interest-group meeting on architecture, housing, and the environment at the annual conference of the Gerontological Society of America; in Washington, D. C. For information: Victor Regnier, AIA, 2635 Hollyridge Dr., Los Angeles, Calif. 90068 (213/743-6060).

November 24-29
"Forum 86," annual meeting of the American Institute of Architecture Students; at Tempe Mission Palms Hotel, Tempe, Ariz. For information: AIAS National Office, 1735 New York Ave., N. W., Washington, D. C. 20006 (202/626-7472).

November 25
"Design and Construction of Concrete Slabs on Grade," a continuing education seminar sponsored by the American Concrete Institute; at Fort Lauderdale, Fla. The seminar will be repeated on December 4 in Detroit. For information: ACI Education Department, P. O. Box 19150, Detroit, Mich. 48219 (313/532-2600).

December 2-4
First National Conference on Rehabilitating Windows in Historic Buildings, sponsored by the National Park Service and a number of state and national preservation associations; at Sheraton Boston Hotel and Towers, Prudential Center, Boston. For information: The Window Conference, P. O. Box 27080, Central Station, Washington, D. C. 20038.

December 3 through January 3
Arata Isozaki: Architectural Drawings, an exhibit of sketches, drawings, and prints; at the Max Protetch Gallery, 37 W. 57th St., New York City.

December 4
"The Frank Lloyd Wright I Knew," a lecture by Edgar Tafel, sponsored by Architects/Designers/Planners for Social Responsibility; at Parsons Cinema Auditorium, 66 Fifth Ave., New York City.

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Publication Office: 1221 Avenue of the Americas, New York, NY, 10020.
ARCHITECTURAL RECORD (ISSN0003-858X) published monthly with additional issues in April and September by McGraw-Hill, Inc. Second-class postage paid at New York, NY and additional mailing offices. Postage paid at Windsor, Ontario, Canada.
Registration Number 9617.
Postmaster: Please send address changes to: Fulfillment Manager, ARCHITECTURAL RECORD, P.O. Box 2025, Mahopac, NY 10541.
THIS ISSUE is published in national and separate editions. Additional pages or separate editions numbered or allowed for as follows:
Eastern Section 32Ea through 32Ef.
Central Section 32Ca through 32Cd.
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Bertram Laudenslager and Arthur L'Esperance,
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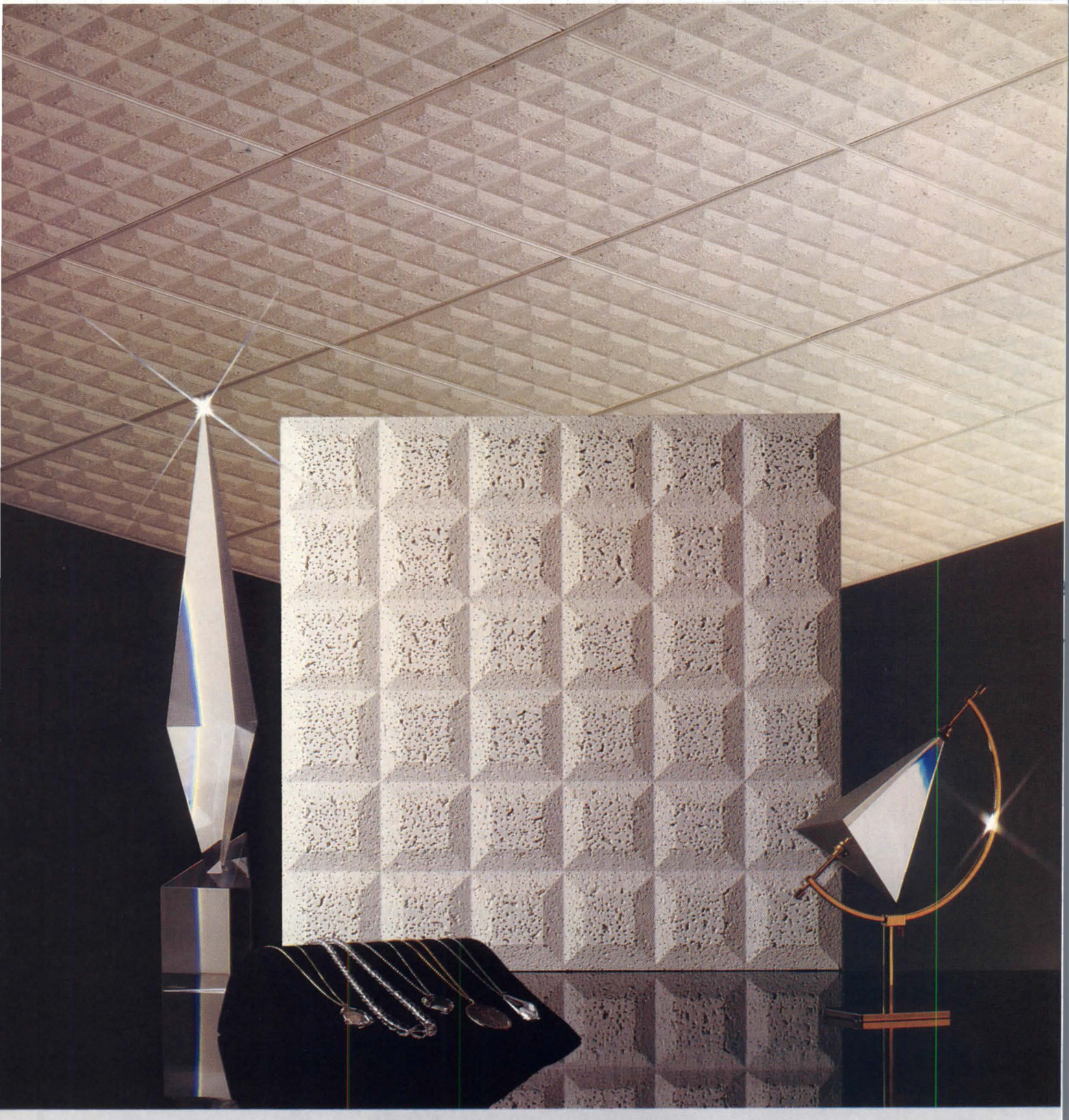

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A change of publisher: Paul B. Beatty resigns, Ted R. Meredith appointed

Paul B. Beatty, our publisher for the past six years, resigned last month to join CMP Publications, producers of newspapers and magazines in the fields of electronics, computers, communications, and travel. Paul changed for the better all the worlds he touched while here—editorial, circulation, promotion, and advertising—helping to maintain RECORD's position as the leading magazine in its field. To his further credit, he found time for the cause of architecture itself, choosing to volunteer in behalf of the next generation of architects by helping student chapters of the AIA, for which he raised money, made speeches, arranged symposia, and much more. He will be missed by all of us.

RECORD's new publisher, Ted R. Meredith, brings to us an entire working life in publishing, beginning right after college as a district sales manager for Chilton Company, and going on to become vice president and division manager at Magazines for Industry, Inc. He then joined Fairchild Publications as advertising director of *HFD*, a weekly trade newspaper for the home-furnishings industry, and was soon promoted to associate publisher with bottom-line responsibility for the publication. Directing both the sales and editorial departments, he increased advertising revenue significantly. Before coming to RECORD, he served as president of Dinan Communications, Inc., a company he cofounded, which publishes a bi-weekly business newspaper in the housewares market. In his six years as Dinan's entrepreneur, he achieved profitability in the company's third year—something of a feat, given the troubled history of magazine and newspaper start-ups.

RECORD will be a challenge and an opportunity for Ted, in what will be for him a new set of readers—architects and engineers—and a new set of advertisers—building-products and contract-furnishing manufacturers. Fundamental publishing principles, however, remain pretty much the same throughout the industry, whomever the readers or advertisers may be. Ted has played every major role in the business, achieving editorial quality and profitability in each position he has held. His outstanding experience assures RECORD's continuing success. We are in good hands.
Mildred F. Schmertz

Ted R. Meredith


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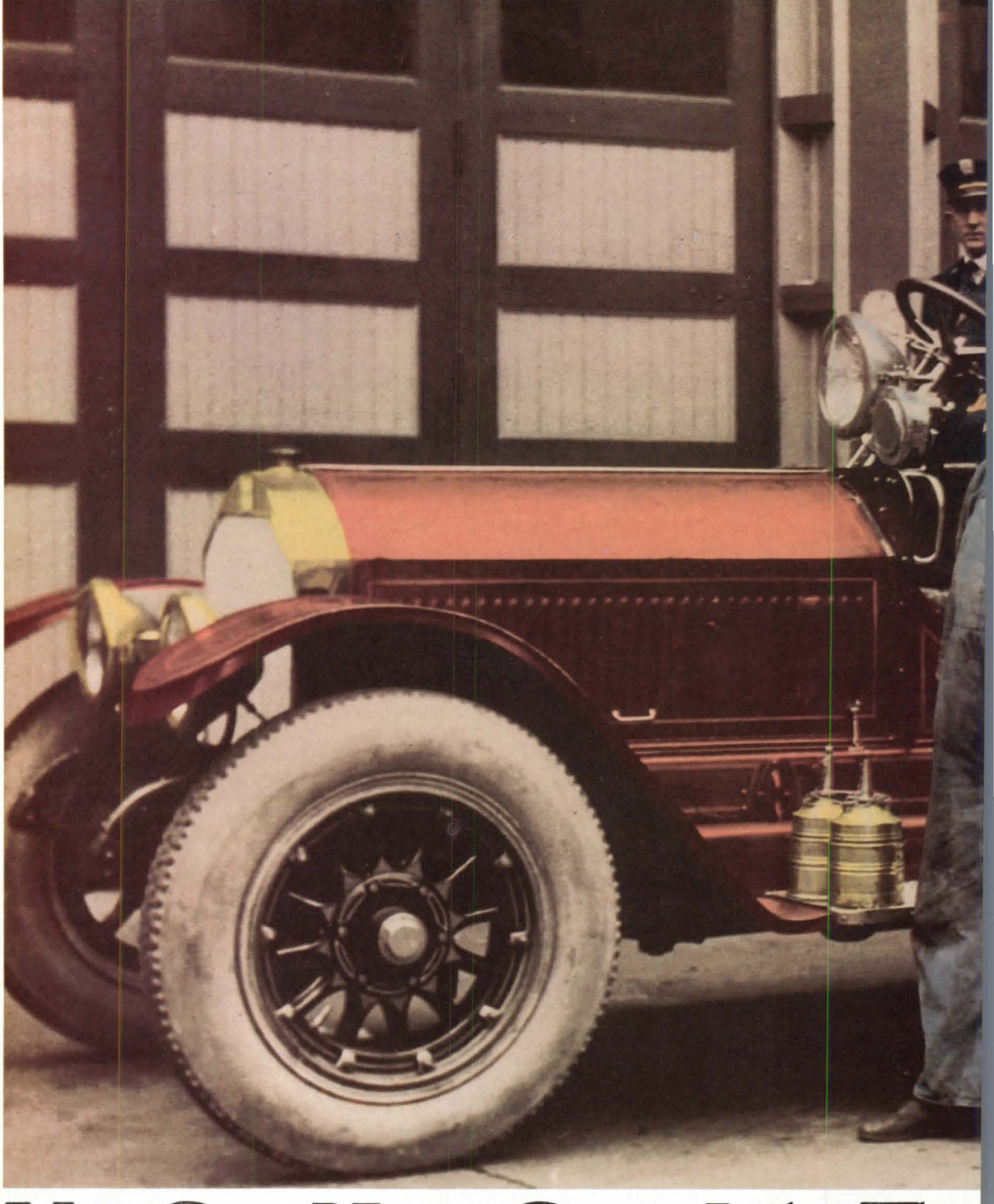

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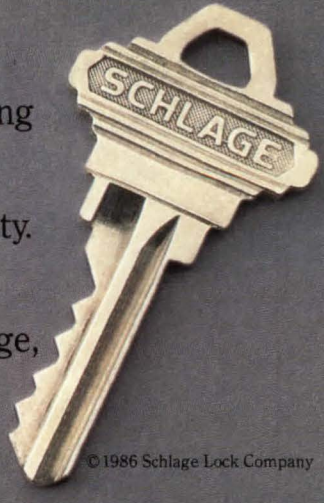

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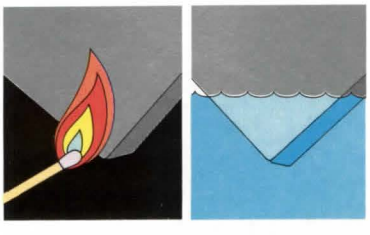

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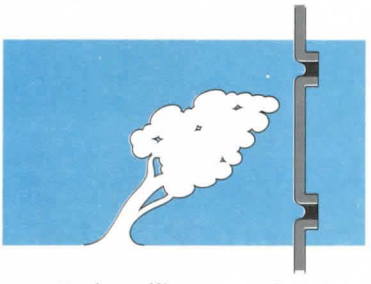

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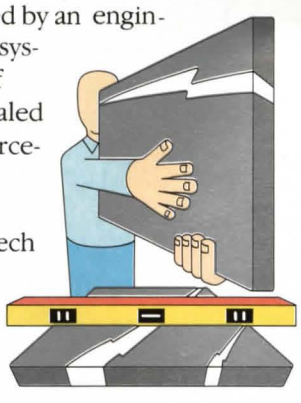

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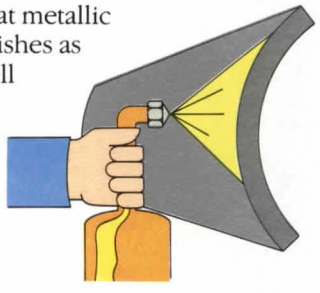

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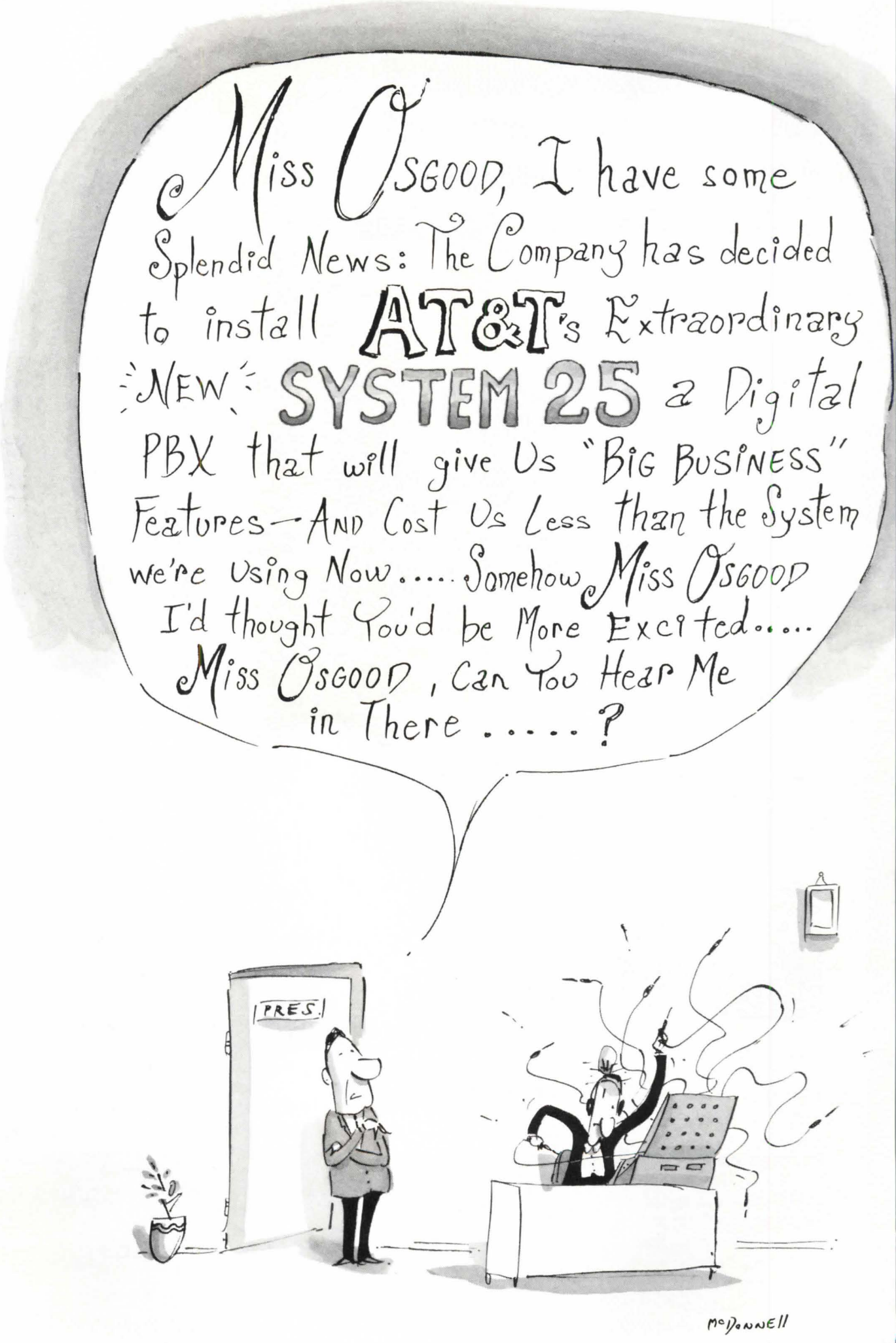
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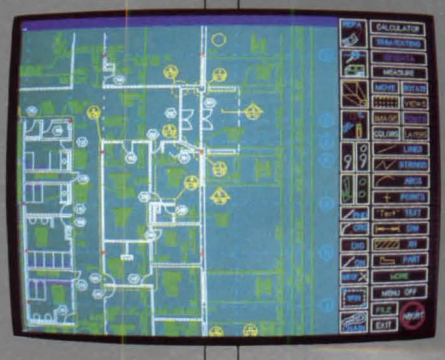

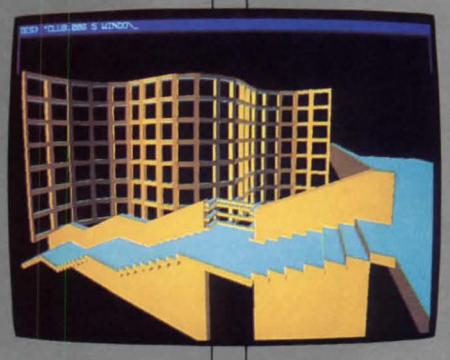

Get more business done. *On-screen menus (left screen) facilitate the production of contract documents. Drawing courtesy of Heard & Associates, Chicago, Illinois.*

Get more business. *Shaded pictures (right screen) like this help clients see your vision clearly from any perspective. An invaluable selling tool. Drawing courtesy of Stephen Douglass, Architect, Cambridge, Massachusetts.*

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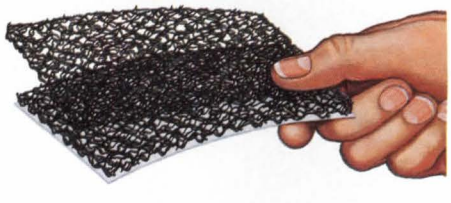

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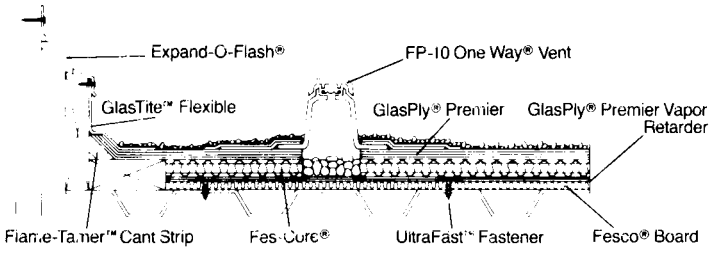
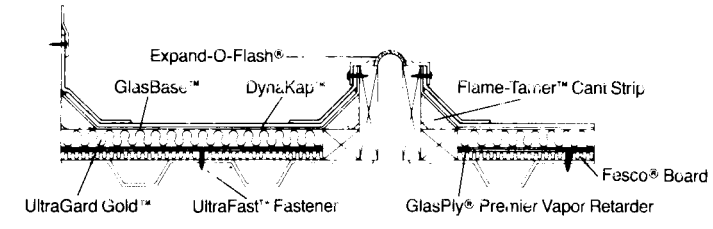


MODIFIED BITUMEN ROOFING SYSTEM



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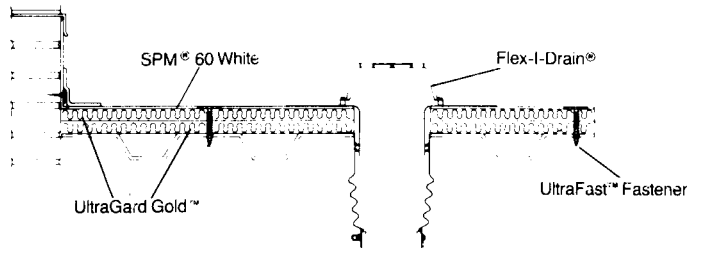
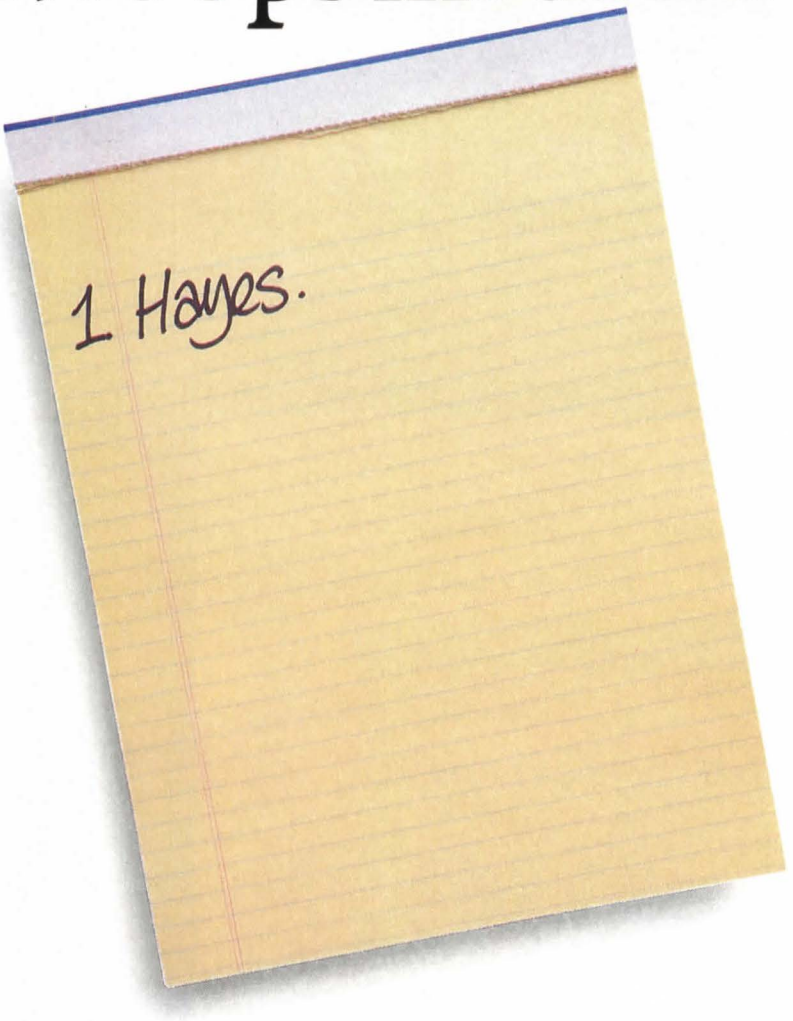


A complete list of things to know about 2400 bps modems.



Now that you've memorized that, here's a partial list of why a Hayes® Smartmodem 2400™ is best for you.

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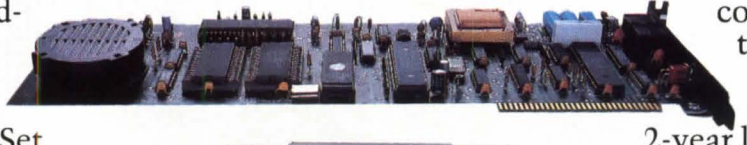

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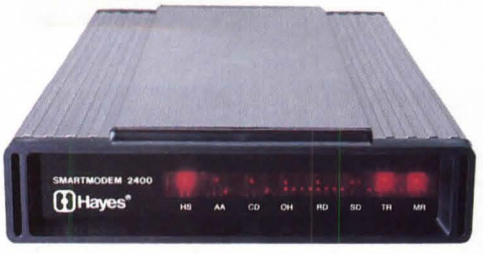

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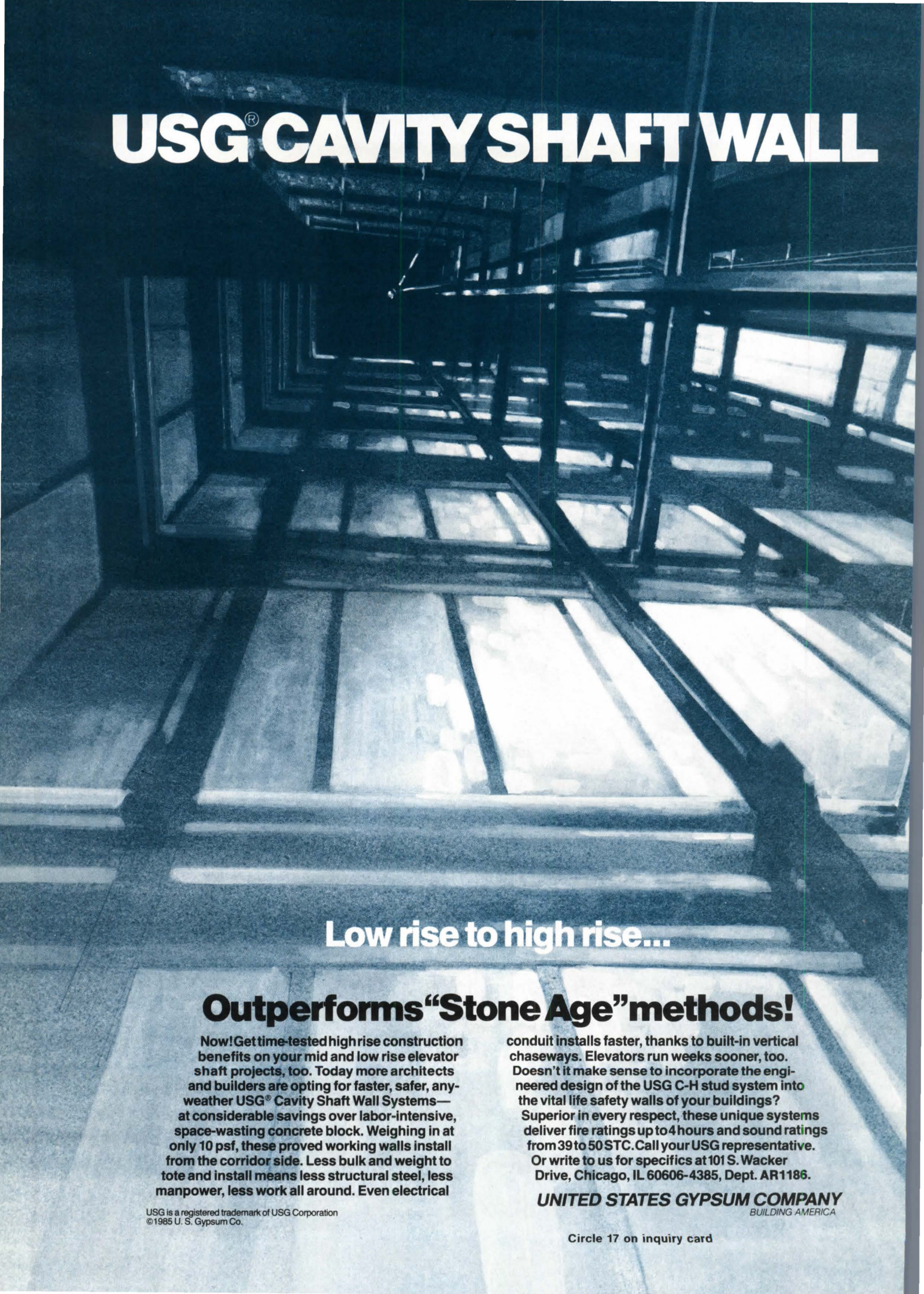

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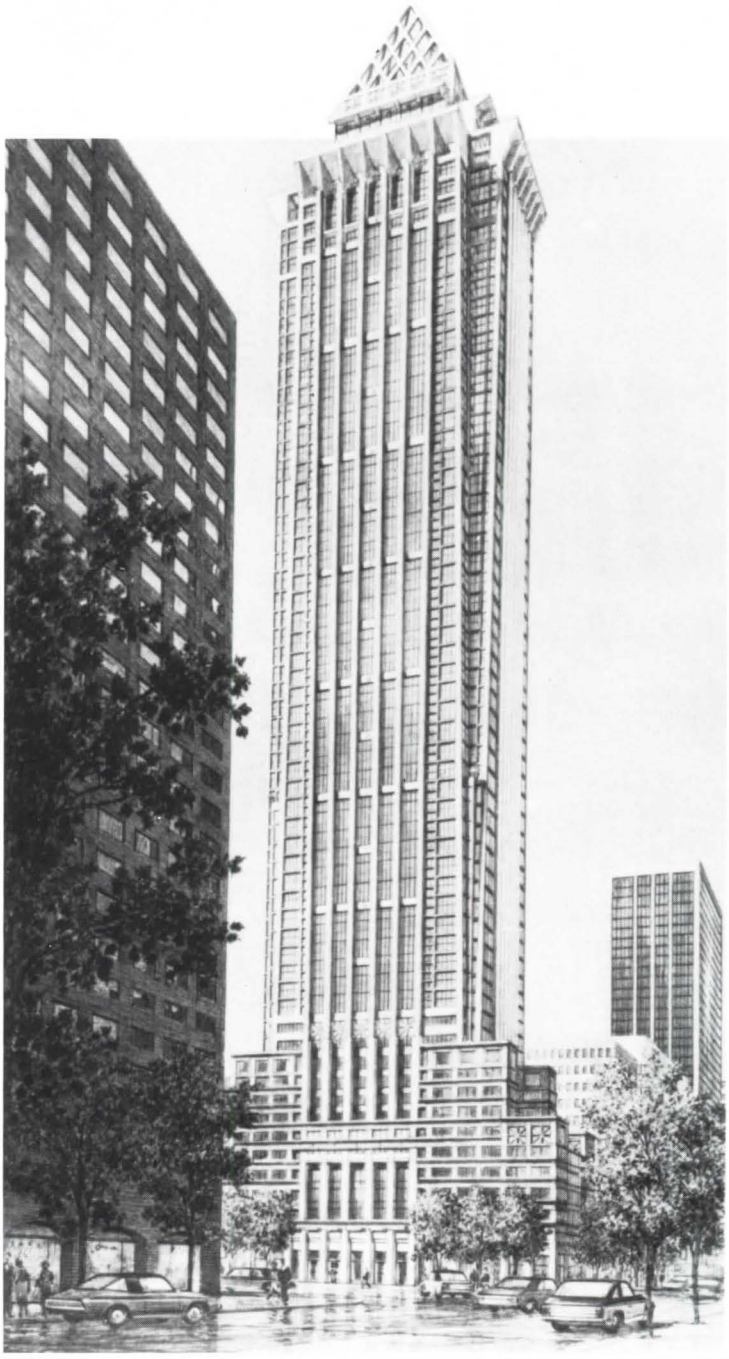
Plans revealed for Philadelphia's tallest office building



Mellon Bank East is planning a $200-million office building in Center City Philadelphia to consolidate its Philadelphia headquarters.

The new 1.38-million-square-foot Mellon Bank Center of which Mellon will occupy 40 percent takes up an entire city block, bounded by Seventeenth, Eighteenth and Market Streets and Kennedy Boulevard. It is currently occupied by a parking garage and a Greyhound bus terminal.

Designed by Kohn Pedersen Fox Associates, the new 56-floor Mellon Bank Center will be 880 feet high and will tower over the 548-foot-high statue of William Penn atop Philadelphia City Hall. For years, by gentlemen's agreement, developers limited new buildings to the height of Penn's statue. Last year, however, the precedent was broken with the start of the Liberty Place project, which has one office building that will rise 825 feet to the top of its roof structure (945 feet to the top of a spire).

A. Eugene Kohn, partner-in-charge of administration, a former Philadelphian, says the new Mellon bank project will be the highest yet (not counting the spire planned over Liberty Place).

The building will be obelisk-shaped with a tapered facade and an illuminated pyramidal crown. The structure will have a curtain wall of granite, marble and stainless steel at its base, and gray reflective glass and aluminum panels for the tower. The project will include a garden in a 7,500-square-foot skylit pavilion—the city's tallest occupied interior space. William Louie is partner-in-charge of design. Construction is set to start in March 1987, and completion is scheduled for 1989.

News briefs

January 1, 1987, is the entry deadline for the Annual Lumen Awards for lighting design, presented by the Illuminating Engineering Society. For information: Sara Schrager Lighting & Production, 245 West 107 Street, #11D, New York, N. Y. 10025 (212/865-0355).

The Architectural Bookshop in Boston, operated by the Boston Society of Architects as a service to the profession and the public, has recently initiated a special gift section. Designs of functional and frivolous items for the home and office are available. The bookshop handles mail orders through its catalog, available for $3.50 (deductible from first order). American Institute of Architects members receive a 10 percent discount. Order by phone or mail from the Architectural Bookshop, 66 Hereford St., Boston, Mass. 021115 (617/262-2727).

Peter Hugo Baldwin, a fifth-year architectural student at the University of Michigan's College of Architecture and Urban Planning, has been chosen the first recipient of the Albert Kahn Associates Fellowship, a major endowment fund established by Albert Kahn Associates, Architects and Engineers, of Detroit.

Master plan drawn up to rehabilitate historic seminary

A 20-year master plan to update New York City's 170-year-old General Theological Seminary, originally designed by Charles Coolidge Haight, has been devised by New York architect David Paul Helpern.

Interior alterations recommended by Helpern result in a more efficient use of existing space, thereby enabling the seminary to better utilize this crucial, limited resource. Distinct academic, administrative, and student centers were created. Some improvements to the 19 landmark buildings—located on a square block site in Manhattan's Chelsea section—will include rehabilitation of building facades, redesign of living quarters, the enlargement and consolidation of the library, relocation of the reading room, and repainting of the outer masonry walls.

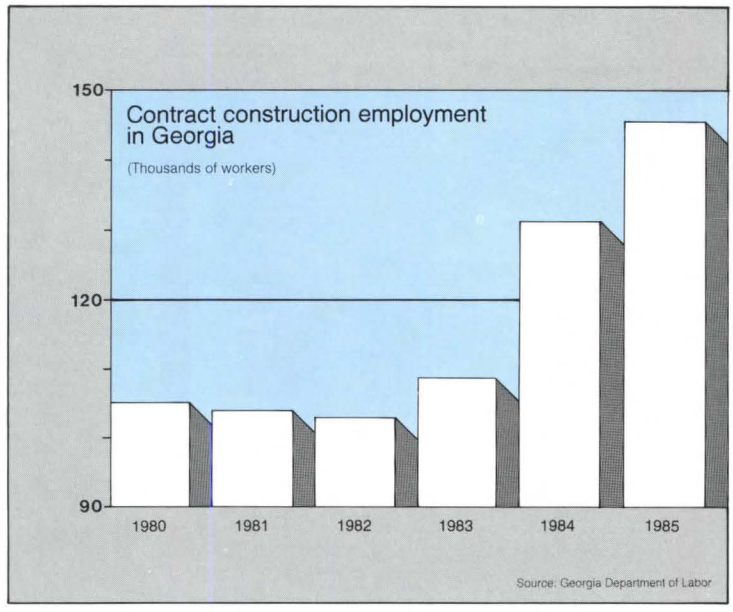
Renovated institute features learning and living space

The new John Hancock Institute in Boston, converted from the Chandler School for Women by architects Symmes, Maini & McKee Associates of Cambridge, offers its home-office employees and field associates a place where they can study and live in a hotel-like environment. The facility includes conference rooms, classrooms, training areas, and hotel accommodations.

Eastern economic report: Georgia remains resilient

Since Sherman burned it to the ground in 1864, Atlanta has come a long way, bringing the whole state of Georgia along with it. Georgia is now the 11th most populous state in the union, with six million people. It's also been among the fastest-growing states in recent years in income and employment. In response to this growth, construction has boomed. From 105,000 in 1980, the number of Georgia construction workers surged to more than 145,000 in 1985, and building-trades employment continues to burgeon in 1986. In Atlanta, according to Dodge/DRI, commercial-construction starts topped 30 million square feet last year, more than double the level of 1980. That made Atlanta the fourth busiest commercial construction market in the U. S.

As with many markets, however, Atlanta is probably overbuilt and will become victim to its own past success. But Atlanta, as well as the whole state, remains economically resilient, thanks to its diversity. For example, while manufacturing employment in the U. S. as a whole has been declining, it has been increasing in Georgia despite continuing layoffs in the state's main industry—textiles. Beyond manufacturing, Georgia is home to several major military bases; and of course, Atlanta is a convention, financial, and service center.



Atlanta, in other words, has become the quintessential modern city. In contrast, Savannah made its reputation by going nowhere, architecturally speaking. When Sherman, torch in hand, approached Savannah, the city fathers had no burning desire to fight. They instead welcomed the general, who in turn left the city unscathed. The result: downtown Savannah today contains one of the best collections of antebellum buildings in the country, a collection that forms the core of a thriving tourist industry. For architects in Savannah, rehabing neglected old buildings is therefore an important business. And while tax reform will reduce the credit for rehabs, it will not eliminate the credit altogether, making rehabilitation one of the few tax games left in town.

Calendar

November 12

BSA Lecture Series,"Boston's Neighborhoods: What was the plan—what is the reality?" Speaker: Ed Logue, city planner and former Administrator of the Boston Redevelopment Authority. Sponsored by the Boston Society of Architects; at the Boston Architectural Center, 320 Newbury, St., Boston. For information: Boston Society of Architects, 305 Newbury St., Boston, Mass. 02115 (617/267-5175).

November 19

"Build Boston '86," Annual New England Design Conference and Trade Show; sponsored by the Boston Society of Architects; at the Boston Architectural Center, 320 Newbury St., Boston. For information: Boston Society of Architects, 305 Newbury St., Boston, Mass. 02115 (617/267-5175).

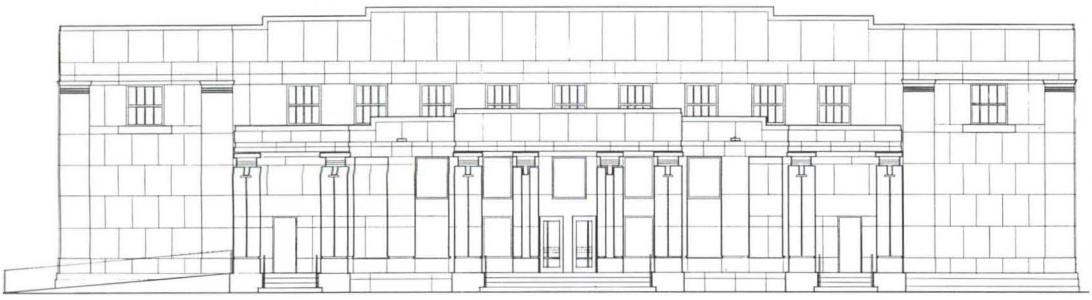
Atlanta preservation group receives grant to develop policy

The National Trust for Historic Preservation has granted $33,000 to the Atlanta Urban Design Commission to develop a city preservation policy. The grant must be matched dollar for dollar by local governments and organizations.

The Urban Development Corporation, which has been working with the Atlanta Preservation Center to rank all old buildings in the city in terms of their historic value, will now bring in civic and governmental officials, as well as developers, architects, other design professionals, and professional negotiators, to write a comprehensive city preservation policy and plan, to be presented to Atlanta City Council.

Under the plan, certain buildings are expected to be designated as historic landmarks protected from demolition. In terms of resolving the legal and financial aspects of the preservation plan, it is expected to take anywhere from 10 to 18 months. The plan is expected to be a fair alternative to Atlanta's current system of requiring preservationists to oppose building demolitions on a case-by-case basis. The new plan designates certain historic buildings to be saved and gives developers rules to go by when dealing with older buildings that they may want to demolish or replace.

Adaptive-use design for landmark New Hampshire post office



Construction is underway on the renovation of the former Manchester, N. H., post office into offices for a local law firm. Carl R. Flansburgh + Associates of Boston is the design firm responsible for the complex and unusual rehabilitation project.

According to Flansburgh, "Our objective on this project was to retain the historic character of the building while adding a totally new life to its interior and site orientation to reflect the stature of the firm in the legal community."

A major design element is the reversal of the main entry from the south to the north side of the building to face Manchester's Victory Park. A new portico, clad in granite, will be complemented by site improvements facing the park. An interior atrium will be provided by raising an existing skylight to the second level. A helix spiral staircase, rising from the basement to the second floor, is the focal point of the new atrium. The postal wall of the building's main lobby will be retained and refurbished.

The 54,000-square-foot building will be nearly gutted to accommodate the new design. The project is scheduled for occupancy by the end of 1986.

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2. THE AIA GOLD MEDAL
By Richard Guy Wilson. *246 pp., 222 illus. (8 pp. in full color), 8½ x 11*
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3. HOLDOUTS!
By Andrew Alpern, AIA, *and* Seymour Durst, real estate developer. *173 pp., 221 illus., 8½ x 11*
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5. AWARD-WINNING PASSIVE SOLAR DESIGNS Professional Edition.
By Jeffrey Cook, AIA. *288 pp., 208 illus. (including 68 photos), 8½ x 11*
These 41 winning designs from the First National Passive Solar Design competition demonstrate an impressive number of passive solar solutions for a diversity of structures, from commercial buildings to residences, in a wide variety of terrains and climatic locations. *Brand new!*

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8. SPECIFICATIONS FOR ARCHITECTURE, ENGINEERING, AND CONSTRUCTION Second Edition. *By* Chesley Ayers, AIA, P.E. *544 pp., 70 illus.*
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10. CONSTRUCTION DISASTERS Design Failures, Causes, and Prevention
By Steven S. Ross *and* the Editors of *Engineering News Record 407 pp., 144 photos, 62 line illus.*
The valuable lessons builders have learned from collapsed roofs, broken dams, floods, and earthquakes are packed into this survey of 24 major disasters of the past five decades — why they happened, and what would have minimized or prevented them. *New title!*

11. THE HANDBOOK OF CONSTRUCTION ACCOUNTING AND FINANCIAL MANAGEMENT Third Edition.
By William E. Coombs *and* William J. Palm
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13. PRESERVING AND MAINTAINING THE OLDER HOME
By Shirley Hanson *and* Nancy Hubby.
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How to accurately and sensitively repair, restore, renovate those treasured older homes (built between the 1800s and 1940) to bring out their best interior and exterior features, find trouble spots, modernize without disfiguring — *economically.*

14. SYSTEMS GRAPHICS Breakthroughs in Drawing Production and Project Management for Architects, Designers, and Engineers.
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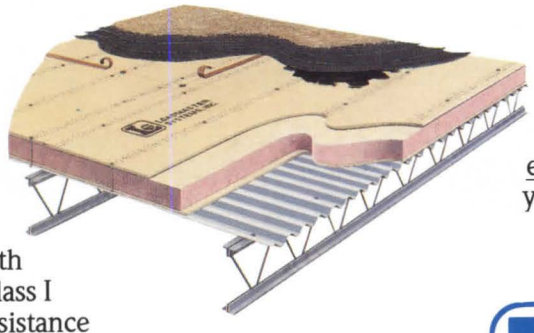

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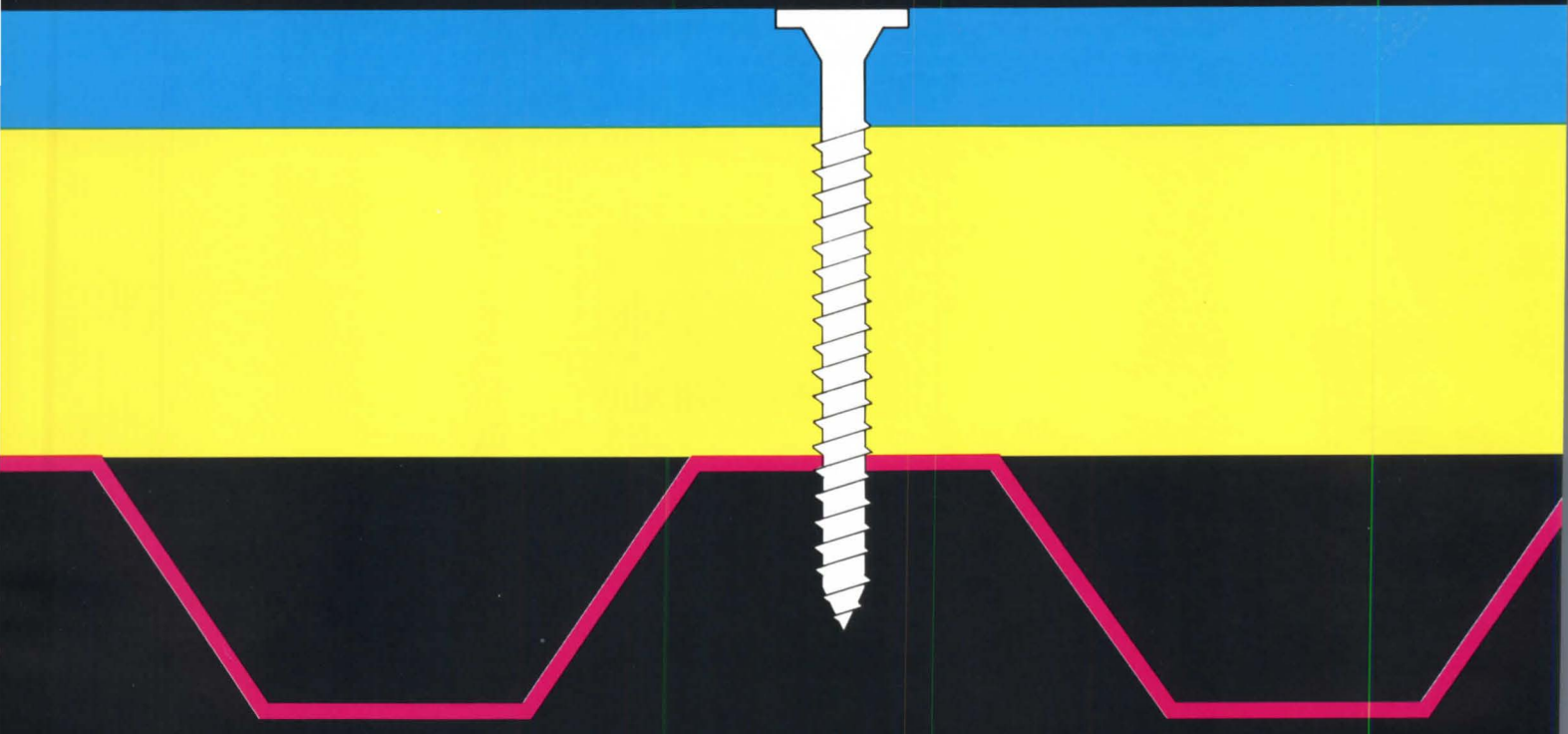

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Another push for prefabricated housing

"Innovations that could improve the quality and reduce the costs of American housing are being needlessly slowed by antiquated regulatory systems and inadequate research and development," according to a scalding report from the Congressional Office of Technology Assessment, which urges more factory construction. A report from the office points to other countries, especially Sweden and Japan, where prefabricated housing is both more widely accepted and more efficiently produced. While the office's latest research finds that a perhaps surprisingly high 35 percent of U. S. housing, not including mobile units, comes from this source, in Sweden the figure is 90 percent. And the edge in countries abroad is said to come from highly automated factories, heavy investments in research, and favorable regulations, while our inefficiency comes from wide fluctuations in house sales that discourage investment in capital equipment and the fact that codes and inspection are controlled by the plethora of local governments instead of being centrally focused.

What the Congressional office recommends, in addition to federal funding of research, is one of two measures: the modification of the central regulatory system that now governs the construction of mobile units to also govern prefabs, although the office acknowledges abuses and confusions in the system as it stands; or the coordination of local regulatory operations through a new uniform code and reciprocity by local governments on inspections. Models for a new code could be one already proposed by the National Association of Home Builders for conventional construction and one recently requested of Congress by U. S. appliance manufacturers. In fact, it is the recent invasion of foreign appliances, as well as other prefabricated building components, such as pre-hung windows, that may have prompted the committee's report. According to Henry B. Gonzalez, Housing and Community Development Subcommittee chairman, "As our nation moves into the 21st century, Congress must develop responsible housing policies that recognize the impact of technological innovation; this timely report provides a helpful focus for that effort." The report, *Technology, Trade, and the U. S. Residential Construction Industry,* is available from the U. S. Government Printing Office, Superintendent of Documents, Washington, D. C. 20402 (202/783-3238).

International group spurs technology as a solution to worldwide design problems

The Centre Scientifique et Technique du Batiment, known internationally as the CIB and in English-speaking nations as the International Council for Building Research, has not been all that familiar to Americans. But it is likely to be more so now.

At its first meeting in the U. S., more than 150 of this nation's building-design and construction professionals recently met with 400 of their counterparts from abroad where the group has been, up to now, more active. With a secretariat in Rotterdam, this organization has led building research in Europe for 30 years.

Some 20 percent of the 516 papers presented here were written by Americans. The group highlighted its growing international composition as well as the technological aspects of building research by unveiling the first international on-line database, ICONDA, headquartered in Stuttgart, West Germany. Doing the honors was Richard N. Wright, CIB's current president and director of the National Bureau of Standards' Center for Building Technology in Gaithersburg, Md.

ICONDA is operated by the Fraunhofer Society, a private research institute funded by the West German government. It currently contains some 130,000 citations of specialized literature in architecture, construction, civil engineering, and urban planning; its organizers expect it to grow by about 35,000 additions per year. Input is supplied by various professional groups and institutions in Belgium, France, the U. K., Hungary, West Germany, and the United Nations Center for Human Settlements in Kenya. In the U. S., it can be accessed through Pergamon Infoline, McLean, Va.

CIB operates a second database, CIBORG, headquartered in Budapest, Hungary, but at present it cannot be accessed on-line. CIBORG catalogs ongoing work while ICONDA describes completed research results. In its catalog, CIBORG lists contributions from MIT, NBS, and the U. S. Army Construction Laboratory.

The housing needs of developing nations was another major theme of this CIB congress. Ignatius D. C. Imbert, a professor at the University of the West Indies in St. Augustine, Trinidad, said in his keynote address that the growing gap between supply and demand is due both to scarcity and to improper use of financial, human, and technological resources.

Top priorities, he said, should be community participation in planning and design, the upgrading of managerial and technical skills, and "fundamental technological change"—by which he meant a move toward labor-intensive construction and the use of local materials. "With the scarcity of capital and foreign exchange, technological self-reliance is the only option to most developing countries if they are to have any success in dealing with the critical problem of shelter."

Dutch researcher Henk Meijer said growing international input will be an important part of the future for building research. "The notion that building research has global responsibilities is relatively new," he said. "Among other things, building researchers will have to address the down side of economic growth, such as acid rain and the buildup of heat-retaining carbon dioxide, fluorocarbons, and other chemicals in the atmosphere, which some scientists believe will cause a rise in sea levels. Meijer's current project involves an anticipated rise in the North Sea of about two feet in the next 30 to 50 years and ways to ameliorate the effects on low-lying Holland. "These developments are global, and there is no way back," he said. "There is no time to lose, and CIB can play a vital role in providing help." *Peter Hoffmann, World News, Washington, D. C.*

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Construction economy outlook: After a long period of expansion, it is time for the other side of the building cycle

Taking it from the top

By George A. Christie

There are only two ways to go from the peak of a building cycle: sideways or down. In 1986, the construction market extended the peak of three years of expansion by taking the sideways route. Improved housing activity made up for the recent slippage of commercial and industrial building, and total construction contracting—the sum of all newly started projects—added a fourth good year to the string that began in 1983.

The trade-off between residential and nonresidential construction that stretched the peak of total contracting through 1986 can't work much longer. Nonresidential building has been declining since late in 1985, and will slip more in the year ahead. Housing will remain the strongest part of the construction market in 1987, but not strong enough to continue offsetting the weakness in the nonresidential sector. Instead of another gain in housing next year, a modest decline is more likely as multifamily demand softens. When that happens, the momentum of overall construction will be lost.

After a longer-than-average period of expansion, it is time for a look at the other side of the building cycle. There's nothing new about the recurrence of a cyclical decline of construction activity. It happens about every six years, give or take a year. (The last two general downturns of the building market happened in 1980 and in 1974.) What makes the difference between one cyclical decline and another is the political and economic environment in which they happen. The downturn that is now beginning promises to be quite different from the previous one (1980-1982), principally because circumstances are anything but the same. The last time the building market came off a peak, its downfall was triggered by extraordinary credit conditions. When the Federal Reserve declared all-out war on inflation early in the 1980s, severe monetary restraint sent interest rates soaring. Not surprisingly, housing led the construction market into decline. Retail building soon followed. And as the monetary crunch ultimately threw the economy into general recession, industrial construction plummeted to its lowest volume in decades.

Curiously enough, some parts of the construction market were not only unaffected by the early 1980s recession, but actually prospered during it. Two legislative events made all the difference. One, the Economic Recovery Tax Act, became the basis for a boom in office building in the midst of economic adversity by providing the powerful incentive of accelerated depreciation. The other, the Surface Transportation Assistance Act, set up a comparable boom in highway and bridge construction with its five-cent-per-gallon fuel tax. As a result, the major impact of the last cyclical decline of the construction industry was borne by the housing sector, which shriveled under the heat of extreme monetary restraint.

And now, something different

One feature of the coming cyclical decline of construction activity that makes it different from the last one (and most others, for that matter) is already apparent. This one is developing within the *non*residential sector by a weakening of commercial and industrial construction, while homebuilding—usually the first to weaken—continues to flourish.

This unfamiliar experience of backing into decline through the nonresidential side of the construction market is symptomatic of the redirection of national economic policy over the past half-dozen years. As fiscal policy has become increasingly restrictive, monetary policy has become more accommodating. ERTA's supply side investment incentives have yielded to tax reform and the elimination of real-estate tax shelters—not good for offices or apartments. The ballooning federal deficit has triggered a mandate for systematic deficit reduction—not good for public works. Reduced inflation has led to monetary relaxation and the lowest interest rates so far in the 1980s—which is good for one-family housing and other credit-sensitive building types.

These issues—tax reform, deficit reduction, interest rates, and one other, the trade gap—are the ones that will shape the outcome of the building cycle that is now rounding its peak. This different environment for construction is bound to produce some unusual reactions. What happens in 1987 could set a pattern for the next several years.

Nonresidential building will fall but there will be bright spots in rehab and institutions, e.g.,

Nonresidential building turned the corner a year ago. It was in 1985's third quarter that contracting for new commercial, industrial, and institutional building reached its peak at an annualized rate of 1.45 billion square feet. In the four quarters that followed, nonresidential building slid to its current rate of 1.3 billion square feet. And it all happened in advance of tax reform, an event that will soon add another dimension to this already wobbly construction market.

The decline and fall of nonresidential building was consistent with a sputtering economy weakened by a flood of imports. As industrial output sagged and excess manufacturing capacity piled up, corporate America made the conventional response: a cutback of capital spending. Inevitably, construction of unneeded commercial and industrial facilities was deferred until better times. But that was only part of it. While the industrial crescent was adjusting to fierce competition from the Orient, the oil patch was having a recession of its own. The extraordinary Southwestern building boom of the early 1980s left that region overbuilt and vulnerable. When the shock of collapsing oil prices came, construction went. Contracting for nonresidential construction in the West South Central region (Texas, Oklahoma, Arkansas, and Louisiana) plummeted 26 percent in 1986 while the national total retreated 7 percent.

As the nonresidential building market adjusts to its 1986 problems, it must now prepare to cope with an additional handicap in 1987: tax reform. To no one's great surprise, real-estate tax shelters headed the list of reforms in the sweeping overhaul of the nation's tax system. The new legislation provides that depreciation on commercial buildings will be extended to 31.5 years from the current 19 years. It further prohibits the use of passive-investment losses to offset other income. For developers of office buildings (as well as hotels, apartments, and other income-generating properties), the new tax law means that these investments must now exist by rent alone. That is, they must earn a competitive return without the generous subsidy provided since 1981 when the Economic Recovery Tax Act offered the opportunity to create paper losses (by means of accelerated depreciation), which could be used to shelter investors' other income.

In addition, preferential tax treatment currently enjoyed by industrial-development bonds, private-waste-treatment projects, some recreational facilities, convention centers, and even low-income housing will be limited (capped) under the revised code. Public bond issues for roads, waste-water treatment facilities, schools, hospitals, and other local-government construction will continue to enjoy tax-free status and the lower cost financing it implies to the borrower, but on terms that are less favorable to institutional investors.

Although there are many other aspects of tax reform that will affect developers, contractors, designers, manufacturers, and investors, none will have the immediate impact that the elimination of real-estate tax shelters will. And the main impact will, of course, fall squarely on offices.

• *Offices.* Tax reform means getting back to basics—building offices intended to shelter workers instead of income.

To put this issue in perspective, it is well to keep in mind that tax reform will not take away much beyond the powerful but questionable incentive provided in 1981 by ERTA. Since then, the subsidy of accelerated depreciation has distorted this market by encouraging the creation of a huge inventory of empty offices. Lengthening depreciation by making it 31.5 years will not put the commercial-building market at any more of a disadvantage than before ERTA, except for the temporary problem of digesting the glut of vacant offices—the legacy of overstimulation.

Beyond this short-term adjustment, which requires a sharp cutback of new construction for a few years, any viable project (i.e., justified on the basis of need) will be just as viable after tax reform as it was before ERTA brought an element of artificiality to this market. Reform will *not* inhibit the long-term growth of commercial building, which is a matter of demographics and economics, not financial gimmickry.

What will reverting to the old math of real-estate development (accelerated depreciation being the new math) mean? To earn a return on investment with 31.5-year depreciation that is comparable to the return provided by ERTA's 19-year write-off will require a higher rent to offset the loss of the tax advantage. But rents will remain depressed until the excess supply of space is taken up. In the meantime, investors will be looking for other opportunities. The need to absorb upwards of 200 million square feet of surplus office space will severely depress new construction for several years.

During this re-entry to reality, a useful benchmark is 250 million square feet—the estimated annual volume of office building that is consistent with the mid-1980s growth of the white-collar labor force and other basic elements of the demand for space. After five years of building at a rate well in excess of this sustainable volume (1981-85 averaged 300 million square feet per year), new construction must fall well below the 250-million-square-foot level until equilibrium is re-established.

The adjustment is already in progress, but it still has a long way to go. The decline from last year's 342 million square feet to an

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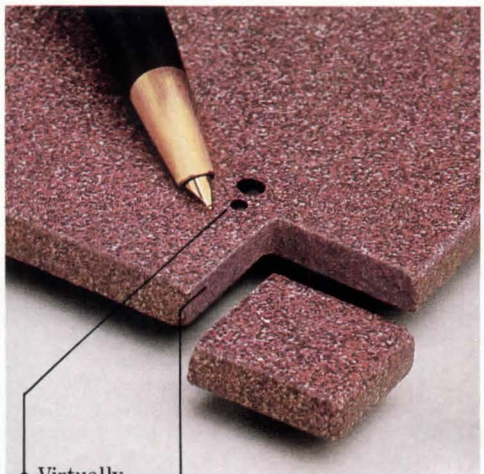

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1987 National Estimates
Dodge Construction Potentials

Nonresidential Buildings	1986 Preliminary	1987 Forecast	Percent Change 1987/86
Floor Area (millions of square feet)			
Office Buildings	265	210	–21
Stores and Other Commercial	575	535	– 7
Manufacturing Buildings	140	145	+ 4
Total Commercial and Mfg.	980	890	– 9
Educational	110	106	– 4
Hospital and Health	72	71	– 1
Other Nonresidential Buildings	138	138	—
Total Institutional and Other	320	315	– 2
Total Nonresidential Buildings	1,300	1,205	– 7
Contract Value (millions of $)			
Office Buildings	$20,200	$16,450	–19
Stores and Other Commercial	22,600	21,750	– 4
Manufacturing Buildings	6,700	7,300	+ 9
Total Commercial and Mfg.	$49,500	$45,500	– 8
Educational	$ 9,775	$ 9,925	+ 2
Hospital and Health	7,525	7,775	+ 3
Other Nonresidential Buildings	11,375	11,650	+ 2
Total Institutional and Other	$28,675	$29,350	+ 2
Total Nonresidential Buildings	$78,175	$74,850	– 4
Residential Buildings			
Dwelling Units (thousands of units*)			
One Family Houses	1,110	1,150	+ 4
Multifamily Housing	740	600	–19
(*F.W. Dodge basis)			
Total Housekeeping Residential	1,850	1,750	– 5
Floor Area (millions of square feet)			
One Family Houses	1,759	1,817	+ 3
Multifamily Housing	707	576	–19
Nonhousekeeping Residential	97	83	–14
Total Residential Buildings	2,563	2,476	– 3
Contract Value (millions of $)			
One Family Houses	$ 83,325	$ 89,075	+ 7
Multifamily Housing	29,625	24,950	–16
Nonhousekeeping Residential	7,000	6,225	–11
Total Residential Buildings	$119,950	$120,250	—
Nonbuilding Construction			
Contract Value (millions of $)			
Transportation Construction	$ 25,825	$ 24,175	– 6
Environmental Construction	13,400	13,850	+ 3
Total Public Works	$ 39,225	$ 38,025	– 3
Utilities	$ 2,000	$ 2,000	—
Total Nonbuilding Construction	$ 41,225	$ 40,025	– 3
All Construction			
Contract Value (millions of $)			
Total Construction	$239,350	$235,125	– 2
Dodge Index (1977 = 100)	170	167	

estimated 265 million in 1986 barely reaches the benchmark. To achieve a meaningful reduction of the near 20 percent vacancy rate, new construction will fall as low as 150 million square feet. A second step in that direction, to 210 million square feet, is anticipated for 1987, with still deeper cuts to follow.

If it were not for the concentration of the office surplus in the Southwest, the decline of contracting for new construction might be steeper and the adjustment process shorter. However, continued construction throughout the less overbuilt Northeast and North Central regions, at a moderately reduced rate over the next few years, will support national volume while the South gradually recovers.

• *Industrial.* The long-term decline of the industrial-construction market—from an annual volume of more than 300 million square feet in the mid-1960s to just over 200 million square feet by the end of the 1970s—accelerated in the 1980s as the widening trade gap hastened the shrinkage of the nation's manufacturing sector.

After making a good start at recovery from the recession of 1980-82, contracting for industrial construction stalled during the mid-1980s as imports displaced domestic output. In 1986, despite the improvement of the dollar against the yen and mark, the trade balance worsened, industrial production sagged, capacity utilization declined, and—not surprisingly—industrial construction slipped backwards. Contracting for new manufacturing facilities isn't likely to break out of the 140- to 150-million-square-foot range (where it has been since 1984), until industrial capacity utilization crosses the 80 percent threshold. And that won't happen until the balance of trade in manufactured goods is reversed.

Some of the conditions needed for an improvement in trade are already in place. With interest rates down and with exchange rates moving in favor of the dollar, the expansion of U. S. exports now depends on strengthening demand in sluggish European and Oriental economies. A gradual narrowing of the trade gap, beginning in 1987, should lead to stability of industrial construction at about 150 million square feet for the next several years. During this period, excess capacity will be absorbed and renewed growth will start toward the end of the decade.

• *Retail.* Of the three major categories of commercial and industrial construction, retail building offers the best opportunity for short-run support. In response to the current high rate of homebuilding, the derived demand for retail building, with its built-in lag, will remain at near-record levels while industrial and office building are temporarily depressed.

Contracting for retail building (stores/shopping centers, warehouses, garages/service stations, etc.) typically ranges from a low of 300 million square feet per year to a peak of 600 million as it follows the housing cycle. After soaring to 600 million square feet in 1985, retail building settled back to 575 million in 1986. Demand for stores and warehouses will ease further in 1987 to 535 million square feet as multifamily housing adapts to tax reform. But anything over 500 million square feet must be considered a good volume for retail building. When it happens three years in a row, it's very good.

• *Institutional.* The balance of the nonresidential building sector, which consists of schools, health-care facilities, public-administration buildings, etc., faces a period of unrealized potential.

Because the underlying need for schools and hospitals is geared to demographics, demand should improve slowly over the balance of the decade when the population pyramid will be growing faster at its extremes for a while. Kids and seniors are what institutional building is mostly about.

The gradual turnaround of more than a decade of waning demographic support comes at a time when local governments will be hard-pressed to respond to it. Municipal bonds, the mainstream of funding for schools, hospitals, and other public buildings, have survived the rigors of tax reform with their traditional tax-free status largely intact. They remain a dependable financial base for most institutional construction. However, the priority of federal deficit reduction targets means an ever-tightening squeeze on grants-in-aid to states and local governments at a time when the expiration of Revenue Sharing will be leaving a $4-billion annual gap in their budgets. The upshot: greater demands on limited local funds.

The stand-off of favorable demographics and restrictive economics suggests that the volume of institutional building will not increase much in the near future. Contracting is estimated at 315 million square feet in 1987, a total not far from the 1986 volume.

• *Total nonresidential building* Already a year past its peak and facing additional handicaps, total nonresidential building is heading for a 7-percent decline in 1987 to 1.2 billion square feet.

Commercial and industrial building, which slipped 10 percent in 1986 as economic activity lost momentum, now faces an equally

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1987 Regional Estimates
Dodge Construction Potentials

Northeast CT, ME, MA, NH, NJ, NY, PA, RI, VT	1986 Preliminary	1987 Forecast	Percent Change 1987/86
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	$ 7,875	$ 7,400	− 6
Institutional and Other	4,825	5,100	+ 6
Total	$12,700	$12,500	− 2
Residential Buildings			
One Family Houses	$14,400	$15,675	+ 9
Multifamily Housing	5,500	4,875	−11
Nonhousekeeping Residential	1,050	900	−14
Total	$20,950	$21,450	+ 2
Nonbuilding Construction			
Transportation	$ 5,200	$ 4,950	− 5
Environmental	2,225	2,425	+ 9
Utilities	450	425	− 6
Total	$ 7,875	$ 7,800	− 1
Total Construction	$41,525	$41,750	+ 1

North Central IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI	1986 Preliminary	1987 Forecast	Percent Change 1987/86
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	$10,475	$10,125	− 3
Institutional and Other	6,150	6,300	+ 2
Total	$16,625	$16,425	− 1
Residential Buildings			
One Family Houses	$13,900	$15,750	+13
Multifamily Housing	4,775	4,275	−10
Nonhousekeeping Residential	1,175	975	−17
Total	$19,850	$21,000	+ 6
Nonbuilding Construction			
Transportation	$ 5,975	$ 5,625	− 6
Environmental	3,125	3,275	+ 5
Utilities	300	250	−17
Total	$ 9,400	$ 9,150	− 3
Total Construction	$45,875	$46,575	+ 2

large decline in 1987 when tax reform becomes effective. The need to absorb the huge surplus of recently built office space is the single biggest obstacle in the nonresidential building market, but not the only one. The persistence of the trade gap will continue to depress industrial construction for the next two years at least.

Back-up support for the nonresidential building market in 1987 will be available from the types of structures that are associated with homebuilding. The sustained, high level of housing starts through 1986 and into 1987 will continue to create demand for retail facilities and other light commercial buildings as well as for several kinds of institutional construction.

Reaction to the office-building boom of the early 1980s will dominate the regional pattern of nonresidential building in 1987. All four major regions will experience a reduced volume of new construction next year, with the largest decline (10 percent) taking place in the overextended South. Nonresidential building in the West is forecast to recede in line with the national average of 7 percent, while the less overbuilt Northeast and North Central regions will show below-average declines of 6 percent and 3 percent in square footage started next year.

An average inflation rate of 3 percent for nonresidential building in 1987 (reflecting the changing composition of next year's building as well as the cost of materials and labor) will bring 1987 contract value to $74.8 billion, a decline of 4 percent.

• *Rehab.* Because the inventory of existing buildings not only grows larger each year but also grows older, there is a built-in element of growth in renovation work that is lacking in new construction.

Major alteration projects currently represent 17 percent of total nonresidential construction contract value, up from 12 percent at the last peak of nonresidential building and 7 percent at the one before that. This steady growth of alterations work offers an alternative market for building products which takes on added interest whenever new construction faces a period of cyclical decline.

Public works will continue with local funding as the federal government draws back

Even if the mandate to reduce the federal deficit to an "ideal" $144 billion this year misses that target by as much as $20 billion, something important will still have been accomplished. That's the reversal of a trend that has ballooned the annual deficit from $40 billion at the end of the 1970s to more than $200 billion seven years later. Progressive shrinkage of the deficit in the years ahead, even at a rate less than the ambitious Gramm-Rudman targets, will have important consequences for construction—directly, by limiting the availability of federal funds for public works programs and, indirectly, by easing pressure on the credit market.

Reducing the deficit from $200 billion to the targeted $144 billion (or even a more realistic $165 billion) in a period of weak economic growth, without raising taxes, requires more than mirrors and blue smoke. Although the 1987 budget was still not finalized by October 1, it was reasonably clear that federal public works programs are slated to be trimmed next year by at least 4 percent on average. This cutback would reduce disbursements for transportation and environmental construction programs below their 1985 outlays, with the intent of holding close to that level for several years.

Three major legislative bills currently under consideration by Congress—the Surface Transportation Assistance Act, the Omnibus Water Resources Act, and the Clean Water Act—tell something about the future of public works construction. In the spirit of the New Federalism, all three provide for the transition from federal funding to local government financing, or to increased reliance on user taxes, or both.

Although states and localities have already absorbed a larger share of total public works costs over the past several years, they now face new challenges. The elimination of general revenue sharing in 1987 will cut $4 billion from local government budgets. Localized recessions in the energy-producing and agricultural regions are temporarily turning state budget surpluses into deficits. Tax-exempt municipal bonds for private construction will be curtailed by the new reform code. The road to the New Federalism has many potholes.

• *Transportation.* Following the 1982 passage of the Surface Transportation Assistance Act with its nickel-a-gallon gasoline tax, highway/bridge construction went on a growth binge. Increases averaged 15 percent annually through 1985—mostly federally funded. In those three years, the STAA tax escalated the annual total of contracting from $12.3 billion to $19.6 billion but, in 1986, budgetary restraint called a halt to that burst of growth. A modest rise of 6 percent will occur this year, to $20.7 billion. It will stem entirely from the limited resources of state governments.

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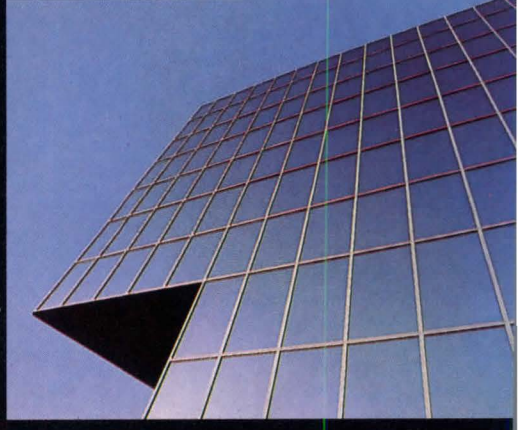

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1987 Regional Estimates
Dodge Construction Potentials

South — AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV	1986 Preliminary	1987 Forecast	Percent Change 1987/86
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	$18,650	$16,275	−13
Institutional and Other	10,750	10,950	+ 2
Total	$29,400	$27,225	− 7
Residential Buildings			
One Family Houses	$32,775	$33,900	+ 3
Multifamily Housing	10,225	8,150	−20
Nonhousekeeping Residential	2,600	2,450	− 6
Total	$45,600	$44,500	− 2
Nonbuilding Construction			
Transportation	$ 9,625	$ 8,900	− 8
Environmental	5,250	5,125	− 2
Utilities	575	625	+ 9
Total	$15,450	$14,650	− 5
Total Construction	$90,450	$86,375	− 5

West — AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY	1986 Preliminary	1987 Forecast	Percent Change 1987/86
Contract Value (millions of dollars)			
Nonresidential Buildings			
Commercial and Manufacturing	$12,500	$11,700	− 6
Institutional and Other	6,950	7,000	+ 1
Total	$19,450	$18,700	− 4
Residential Buildings			
One Family Houses	$22,250	$23,750	+ 7
Multifamily Housing	9,125	7,650	−16
Nonhousekeeping Residential	2,175	1,900	−13
Total	$33,550	$33,300	− 1
Nonbuilding Construction			
Transportation	$ 5,025	$ 4,700	− 6
Environmental	2,800	3,025	+ 8
Utilities	675	700	+ 4
Total	$ 8,500	$ 8,425	− 1
Total Construction	$61,500	$60,425	− 2

Legislation required to extend STAA beyond 1986 and provide future funding for highway, bridge, and mass-transit construction still awaits Congressional approval. This forecast assumes passage of the House bill which, though less restrictive than the Senate version, would nevertheless freeze federal funding of transportation projects for fiscal years 1987 through 1991 at a level 4 percent below 1986 outlays. The 1987 downward step in federal dollars, along with an expected cutback of state funding (according to a survey of state DOTs), points to an overall decline of 6 percent in current dollar contracting next year (a 10 percent reversal in constant-dollar value).

• *Environmental.* For the past 15 years, EPA construction grants authorized under the Clean Water Act have been the origin of funds for the construction of waste-water-treatment facilities. It is currently proposed, however, that, beginning in 1989, a program of locally administered loans be substituted for these federal grants. For the time being, construction of sewer and waste disposal facilities is dangling between the phase-out of one program and the start-up of the other.

The transition from grants to loans is to be specified in the still unsettled Clean Water Reauthorization Act. For 1987 it must be assumed that either this act or temporary stop-gap legislation will sustain EPA-grant funding at a level close to 1986 disbursements. With the recent high volume of residential building putting a strain on local waste-treatment facilities, higher local-government outlays—financed mainly by municipal bonds—will boost total contracting for sewer and waste disposal systems by 2 percent to 3 percent in 1987.

Water resources (dams, reservoirs, river and harbor development) are one part of the federal infrastructure budget capable of sustained expansion over the balance of the decade. Proposed legislation would authorize between 170 and 230 new construction projects (valued at $13 to $20 billion), and the Administration is willing to back such water-resource development as long as local beneficiaries are willing to share in the cost, as the bill requires.

• *Total public works construction.* Without the Surface Transportation Assistance Act, public works construction in the 1980s would have been another story entirely. In its first four years (1982-86), this user-fee program has channeled an extra $20 billion into the construction of roads, bridges, and mass-transit facilities, mainly through its five-cent fuel tax. The difference STAA has made amounts to roughly two-thirds of the entire increase in all public works contracting since 1981. Putting a lid on STAA disbursements, as forthcoming legislation proposes, will soon deprive the public works market of its major source of thrust. Nor is there much prospect for growth of environmental construction. The transition from direct federal funding of waste-water-treatment facilities to reliance on loans and user fees suggests, in the short run, that less rather than more construction will be taking place.

The five-year recovery/expansion of public works construction is now flattening out, but no serious setbacks lie ahead. Following the surge of transportation-related projects, which carried total public-works construction from $25 billion in 1981 to almost $40 billion in 1986, contracting is now settling into a $38- to $40-billion-a-year groove. It will stay there as long as federal funding is restrained.

One by-product of the Gramm-Rudman deficit-reduction targets will be an accelerated implementation of the New Federalism—the transfer of the responsibility for domestic programs from federal to local government. Public works construction will survive the change—mostly through increased state taxes and a wider application of user fees—but not without an extended period of adjustment when growth will be absent.

The big story on housing will be interest rates

The difference between a large and a small decline in total construction contracting next year depends on housing. As long as the residential side of the construction market can retain most of its current vitality, homebuilding will continue to neutralize some of the inherent weakness in nonresidential construction as commercial, industrial, and public works markets ride out their special problems.

The basics—the demographic underpinning of demand for shelter, and the credit that makes demand effective—will remain supportive for a while. But not even the housing market will be completely immune to the issues of 1987. Because rental housing has been overdeveloped in recent years by the lure of tax shelters, this part of the market (like offices, but not to the same extent) is due for a correction as tax reform is brought to bear. This puts the burden of sustaining of the critical residential sector squarely on single-family building. The problem: that building is already so good there's little room

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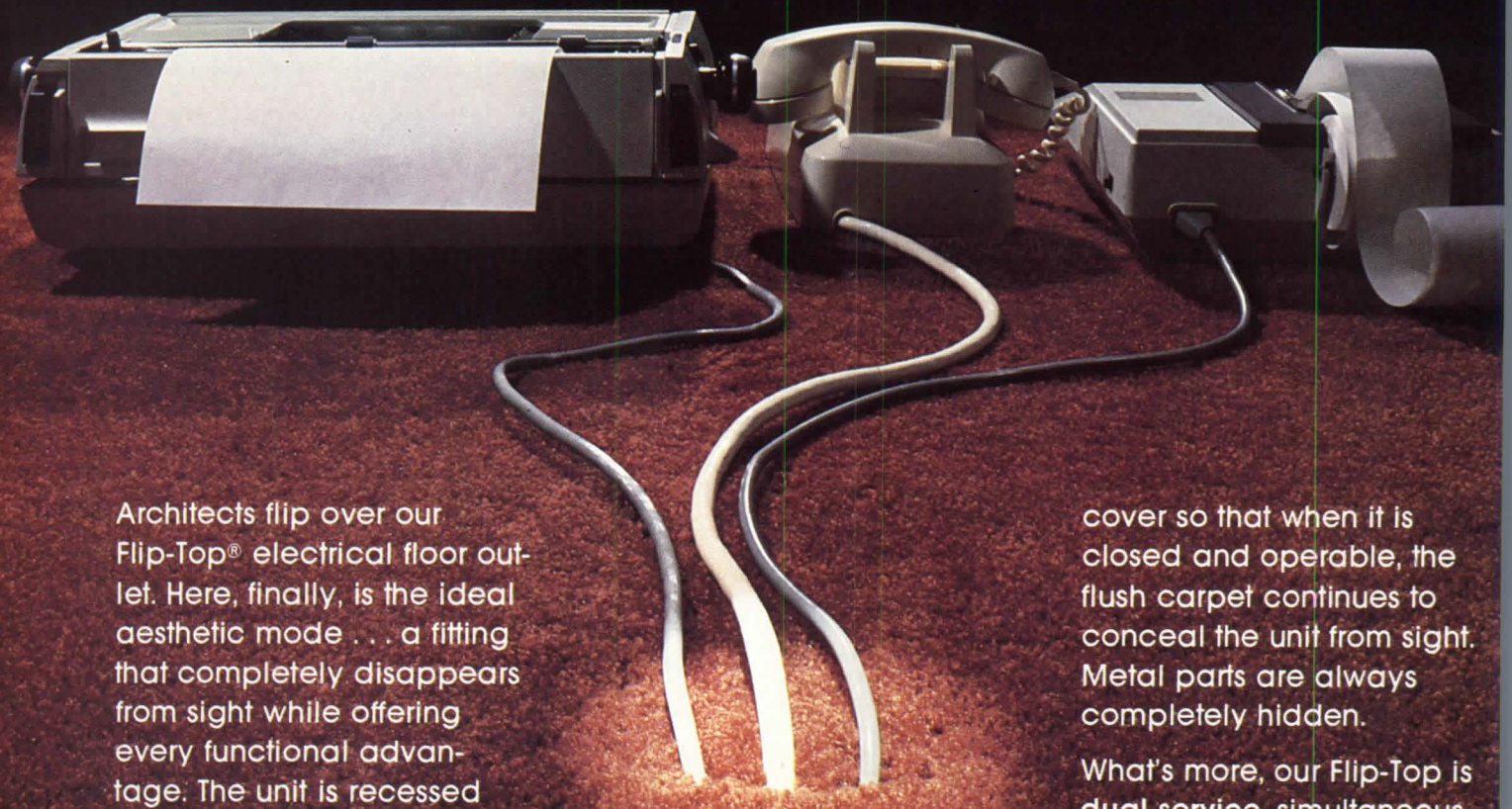

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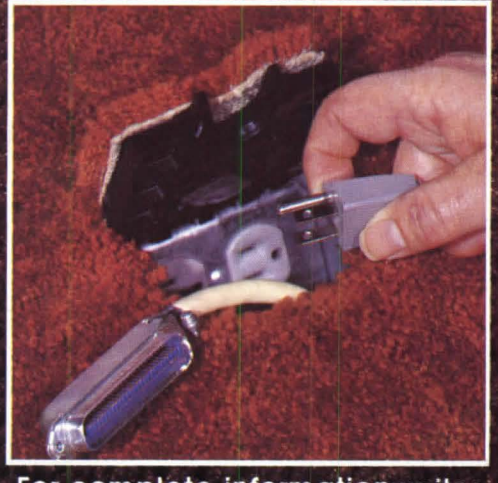

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for improvement.

The demographics of the housing market change little from one year to the next. Mid-1980's rates of household formation and replacement indicate an average annual shelter requirement of close to 2 million units. Nontraditional forms of housing (manufactured/mobile homes) supply about 250,000 units of this need, leaving the demand for conventional, site-built single and multifamily units between 1.7 and 1.8 million units per year.

For the past several years, housing starts have consistently reached the upper end of this range. Why? Falling mortgage rates offered the opportunity to satisfy an extra layer of deferred demand carried over from the depressed early part of the decade. Deferred demand is never a dependable market force and, at prevailing mortgage rates and housing prices, it appears to have subsided. In 1986, rising vacancy rates are an indication that for the first time in the 1980s, there is a moderate excess of rental housing. Its existence points up one limitation to sustaining this year's volume of 1.85 million units.

The interest-rate outlook is more reassuring. There is little justification for a rise in long-term interest rates in the foreseeable future, and more than enough reason why rates should hold (or better, decline a bit more). Inflation is not a serious threat. Stubbornly high real interest rates are an important contributor to the trade imbalance and need to be brought down. But more urgently, the combination of deficit reduction and tax reform in 1987 will bring an unwelcome dose of fiscal drag to an already burdened economy. As federal revenue outpaces expenditures, and as the business sector is required to bear a larger share of the tax load, the economy will be deprived of whatever stimulus it now draws from these sectors.

Fiscal drag is a handicap to economic growth under any circumstances. It is particularly unwelcome at a time when an adverse trade balance is already depressing the industrial sector. Without an offset to the repressive side effects of deficit reduction and tax reform (both desirable goals in themselves), the 1987 economic outlook becomes a choice between stagnation and borderline recession. This gives the Federal Reserve at least two good reasons for monetary accommodation: to support the domestic economy by leaning against the shift to restrictive fiscal policy, and to influence the dollar's exchange rate in international transactions. For the short run—1987—it is assumed that mortgage rates will not stray far from their recent 9 3/4- to 10-percent range, giving continued support to the credit-sensitive, single-family building market. Over a longer period—perhaps the rest of the decade—the forces that are bringing stability to interest rates are reshaping the entire construction market. Call it monetary/fiscal role reversal. For much of the early half of the 1980s, government economic policy could be described as "loose fiscal/tight monetary." Highly stimulative fiscal policy (the Kemp-Roth tax cut, ERTA's supply-side investment incentives, wide-open deficit spending) was accompanied by severe monetary restraint and sky-high interest rates. To the construction sector, this meant a three-year crunch for housing and a simultaneous boom for commercial building.

For several years ahead, Gramm-Rudman deficit targets and tax reform constitute a commitment to fiscal restraint. With inflation under control, monetary policy—through a series of cuts in the discount rate—has brought interest rates to their lowest since the 1980s began. For as long as it lasts—and that means as long as the deficit issue has a high priority—this radical turnabout of national economic policy reverses the basic thrust of the construction sector. It will be a handicap to high-rise commercial building as well as to public works construction. It will liberate the most credit-sensitive parts of the market: housing and its derivatives—stores, other light commercial building, and many kinds of institutional construction.

• *1987 housing outlook*

Evaluation of the key factors affecting housing demand in 1987 leads to a forecast of 5 percent fewer housing starts next year.

Tax reform will make the biggest difference, and the inevitable decline of multifamily building is already under way. Stability of mortgage rates will be generally supportive of single-family building through 1987, although regional dynamics indicate that next year's overall gain of up to 5 percent will be confined to the Northeast and North Central regions—the latecomers to the mid-1980s housing recovery.

The prospect for slightly more single-family houses and significantly fewer apartments adds up to a 5 percent decline of total dwelling units started in 1987 (1,750,000 vs. this year's 1,850,000). Owing to a different mix of housing, the decline of total square footage, which is a better gauge of building products demand, will be only about 3 percent. The aggregate value of next year's residential building, assuming 3.5- to 4-percent inflation, will remain even with the 1986 total of $120 billion.

What kind of decline is this?

Will 1987 bring a crash or a soft landing? In the absence of a credit crunch, the cyclical decline of the construction sector will be long and gradual rather than quick and severe. The initial step down in 1987 is likely to be a small one.

The arguments for an extended decline of construction activity that will cover most of the remainder of the decade are persuasive:

• Some construction markets face several years of limited demand. The commitment to deficit reduction implies a long stretch of budgetary restraint and a continuing scarcity of funds for public works construction. The troublesome trade gap, which is the most immediate impediment to GNP growth, will not be closed quickly. Substandard economic growth means excess manufacturing capacity, weak business capital spending, and little improvement in industrial construction in the foreseeable future. For these categories, conditions in the second half of the 1980s indicate stagnation rather than decline.

• Some construction markets will be making an overdue adjustment to excess supply. By revoking ERTA's accelerated-depreciation provision, the 1986 tax-reform act has greatly changed the mathematics of real-estate development. An extended period of sharply curtailed building is inevitable as the glut of tax-shelter offices, hotels, and apartments is absorbed. These building markets are where the deep declines will be concentrated during the next several years.

• Some building markets will provide a base of continuing support not usually available during cyclical declines. The prospect of relatively stable interest rates at close to current levels means that construction of owner-occupied housing (single family and condos) will achieve a high percentage of their demographic potential during the second half of the decade. In addition, the prospect of a shallow housing cycle implies sustained secondary support from retail building as well as some types of institutional construction. These building markets will help to limit the depth of the decline of total construction while the vulnerable markets adapt to change.

For some categories of construction, and for some regional markets, the reversal of the construction cycle has already begun and it will broaden and deepen over the next few years. In 1987, the trade-offs between strengths and weaknesses will not work as well as they have in 1986, when total construction contract value is rounding the peak.

A group of building types making up roughly half the total—commercial and industrial buildings, multifamily housing, and public-works construction—will decline an estimated 8 percent next year paced by a drop of nearly 20 percent for offices. The other half, consisting of single-family housing and institutional buildings, has a potential for a collective gain of as much as 6 percent, leaving 1987's total construction contract value at $235 billion, a setback of only 2 percent. Allowance for inflation indicates a 5 percent decline in the constant dollar value of newly started construction next year.

Prepared October 1986
by the Economics Department
McGraw-Hill Information Systems Company,
George A. Christie, vice president and chief economist

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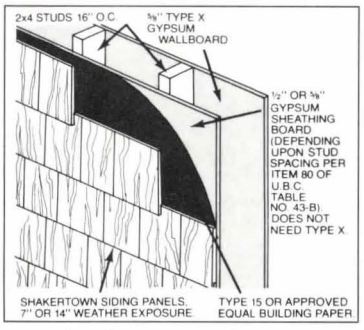

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Architect: David Furman/Architecture
Developer: The Lake Norman Company

Marketing: What's new in communications

This year's awards by The Society of Marketing Professional Services reveal the latest in materials and techniques used to reach clients

By Rolf Fuessler

Recently, a transplanted Bostonian returned after a four-year absence, only to stop in front of a building that architectural critics, neighborhood groups, and ordinary folk universally panned. He admired it for its green windows; for him, they had "a certain dramatic charm."

Like buildings, each design firm's brochure or other marketing-communications material is an amalgam of elements designed to evoke a reaction. Sometimes the reaction of potential clients isn't what the design firms wants.

Still, if we can imagine that 12 judges represent a microcosm of clients, their reactions to over 750 entries in the last three years to the SMPS awards program has been amazingly consistent.

The effect that design, image, and message had on the judges leads to a number of conclusions

• *If you can't say it briefly, don't say it at all.* One of the most frequent flaws of otherwise carefully designed and executed marketing material is an overabundance of copy. If our founding fathers could state in a few hundred words how this country would be run, a firm ought to be able to state what they will do in less.

• *Give your audience information it can use.* The most successful marketing communications are those that give the audience information on which to base a decision—whether it is immediately to contact your firm or to think about a need that might lead to that result. Two very successful special-market brochures in the past two years gave potential clients a framework for decisions in office-space planning. Little wonder that many clients did, in fact, commission the two firms that helped them know their needs.

• *Less in a layout is more.* The most striking printed communications are those that use sparse arrangements of photos and graphics. In observing how judges review brochures, I've noticed that they spend more time with those that follow this rule. By trying to cover everything possible, a firm indicates it doesn't know what it wants to say or what its audience wants to see.

• *Dare to be different.* As one judge stated last year, "Most material formed a middle ground of competent products that, like dutiful children, were marred by predictable sameness." Substituting one architect's name for another wouldn't have made much difference. Those communications that attempted to be different or unique, whether it worked or not, received more attention.

• *Be visually arresting.* Often, promotions material fails because of less-than-outstanding graphics or photography, even when it is sparsely arranged. If you line up eight or nine brochures, you quickly see which photography is outstanding and which is only adequate, and how outstanding graphic design draws your interest while mediocre graphics repel.

• *Research your market.* Spending thousands of dollars on a brochure, ad campaign, or direct-mail without research is, at best, roulette.

• *Make them laugh.* Often, humorous photos, headlines, or copy help draw people into promotional material—especially direct mail, advertising, and special events. Finding a humorous way to make your point sets you apart from your somber competition.

• *Be consistent.* Once a firm has decided on its "image," consistency in all its graphics and promotional messages is a key to having clients understand its identity.

How, then, would these principles apply to this year's winners?

The judges this year were: Greg Fern of architects Setter, Leach & Lindstrom, Minneapolis; Jon Amos of architects Loschky Marquardt & Nesholm, Seattle; Sally Rasmussen of architects, Smallwood Reynold Stewart & Stewart, Atlanta; Kirk Bobo of the Hnedak Bobo Group, Architects, Memphis; Barbara Welanetz of the Harvard University Graduate School of Design, Cambridge, Mass.; Dianne Ludman of architects Stubbins Associates, Cambridge; Gordon Wright, of *Building Design & Construction*, Des Plaines, Ill.; Tom Brightman of engineers Walter P. Moore and Associates, Houston; Mary Findlen of engineers Edwards & Kelcey, Livingston, N. J.; Lowell Williams of graphic designers Lowell Williams Design, Houston; Stephany Hamrill of engineers Syska & Hennessy, Culver City, Calif.; and Scott Robertson of BE&K Construction Company, Birmingham, Ala.

And what did these judges pick as the winning entries?

• Corporate brochures

(Jury chair, Sally Rasmussen).

In the more than 50 brochures submitted, there was a trend away from flexible binders in which material can be easily kept up to date. Brochures that impressed the judges came from research leading to particularly creative concepts and contained outstanding photography, sparingly used, and terse, well aimed messages.

First place: The *George Hyman Construction Co.*, Bethesda, Md. Restrained graphics produce the desired image of a big successful firm that hasn't lost sight of details, client concerns, nor quality workmanship.

Second place: *Clark Tribble Harris & Li Architects*, Charlotte, N.C. An aggressive positioning of the firm in the Washington, D. C. and New York City office markets is enhanced by an urbane brochure design.

Third place: Architects *Jung/Brannen*, Boston. The most flexible format among the winners allows the brochure to be sent out alone or in a special container along with various special-market pamphlets, reprints, etc.

• Special market brochures

(Jury chair, Dianne Ludman).

Most entries failed to rise above the industry norm of a professional approach to a one-time effort for a specific market. The winners again illustrated some or all of the successful principles seen previously.

First place: *Haley & Aldrich*, Cambridge, Mass. A book, whose pages of time-lapse photos are meant to be flipped, documents the dynamiting of a building to make way for new development. This arresting, unconventional concept engages the potential business client and makes him aware of the firm's involvement in the development phase of its projects.

Second place: *Gensler & Associates*, San Francisco. A report on the state of the art in law firm interiors goes beyond self promotion to educate potential clients. Containing informative text, charts, and statistical diagrams based on technical research, the report establishes the firm's expertise in this special market.

Third place: *Cox, James & Associates*, Phoenix. This brochure on commercial interiors demonstrates careful execution and sparse elegance. The photos and printing are of the highest quality.

• Magazines

(Jury chair, Gordon Wright).

Once again, the basic principles were borne out—including, in the honorable mentions, humor.

First place: *CH2M Hill*, Denver "Reports" is a 12- to 16-page quarterly publication with a circulation of 20,000. It has strong color photography and varied layouts of graphics and text to hold readers' interest, photo (1), page 47.

• Newsletters

(Jury chair, Stephany Hamrill).

First place: *International Design Center*, New York City. Large pages (11 by 17 inches) contain lively graphics and brief but informative text.

Second place: *Sverdrup Corp.*, St. Louis. Four-color augments well written text, all printed on high-quality stock.

Continued

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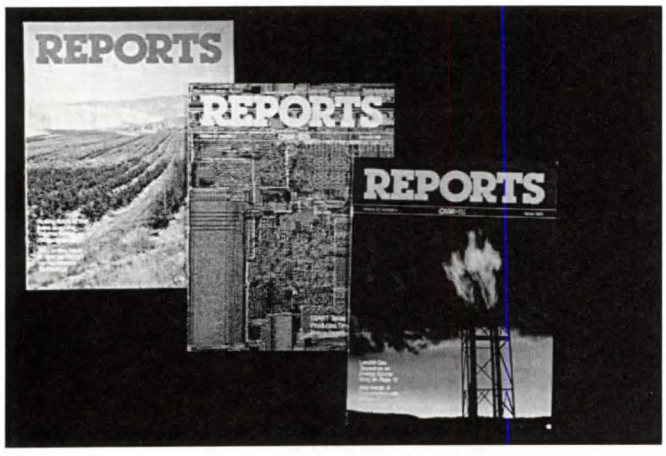

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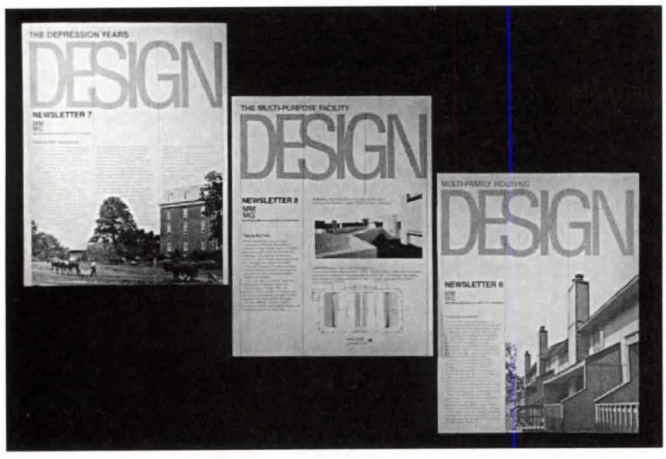

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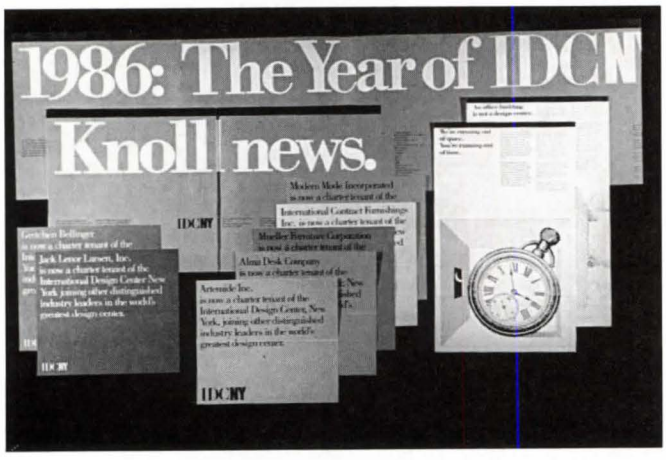

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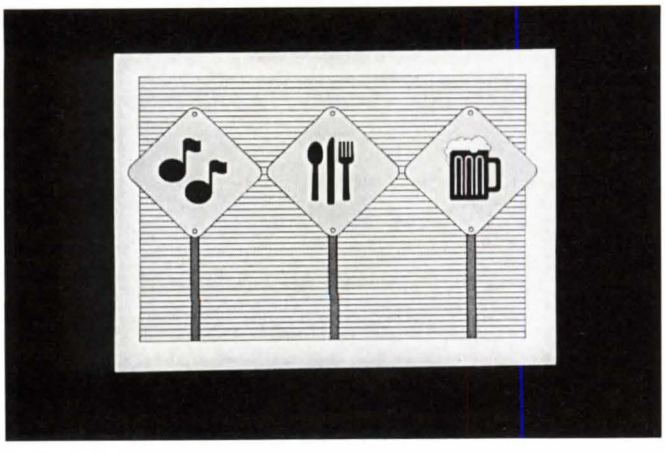

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Third place: *Mott Mobly McGowan & Griffin,* Fort Smith, Ariz. (2). Format and message are executed with ample clarity, forethought, and organization.

• Corporate identity

(Jury chair, Lowell Williams). This category had the strongest of the entries.

First place: *FORMA,* Seattle. The logo of a colored sphere is used on all printed matter and symbolizes the firm's global activities and ability to serve an international clientele.

Second place: *Henry Milton Roberts Tan,* Houston. A logo of four colors in a strong band symbolizes the four principals and stands out crisply on the page.

Third place: *Buss Silvers Hughes & Associates,* San Diego. These embossed, stylized letters form a logo that is, at once, humorous and disciplined.

• Direct mail

(Jury chair, Greg Fern). Effective direct mail must, above all other categories, offer something of value to the reader if it is to be read.

First place: *Earth Technology Corp.,* Long Beach, Calif. A limited edition of commissioned photographs in a handsome envelope portrays these consultant's sensitivity in working with the earth. The restrained execution and clearly defined objectives set this entry apart from all others in any category, resulting in its designation as "Best of Show."

Second place: The *International Design Center,* New York City (3). Multiple mailings, each with a brief, to-the-point message, are given consistency through bold graphic typography and a vibrant color palette.

• Special-event notices

(Jury chair, Tom Brightman). Submissions varied from a firm's extensive anniversary program to a notice of an emergency move after another firm's headquarters was destroyed by a tornado.

First place: *Vickery, Moje, Drinkard, Oakland, Architects,* Charlottesville, Va. Dramatic colors and graphics set apart an invitation to an open house and are well correlated with the text.

Second place: *Curtis Cox Kennedy,* Philadelphia. A pop-up announces an office move in a clear and memorable way.

Third place: *Ayres Associates,* Eau Claire, Wis. (4). "Traffic-stopping" graphics for a trade show party for highway officials are used on invitations, napkins, etc.

• Advertising

(Jury chair, Jon Amos). The caliber from designers has risen dramatically in the past three years. Firms are beginning to understand the delicate relationship between the intangible quality of their work and the power of visible graphic identity. Those ads most highly regarded by the judges had few images of architectural elements, but displayed firms' concerns for client needs.

First place: *ADD, Inc.,* Cambridge, Mass. A precisely aimed series promotes name recognition among developers in a new geographic region. Each ad shows spirit, action, and creativity and delivers a direct, memorable message that can be easily grasped in three to six seconds.

• Annual reports

(Jury chair, Scott Robertson). The entries were limited because few design firms are publicly held. However, other motivations may cause a firm to publish an annual report.

First place: *Greiner Engineering, Inc.* Photos of firm officials with clients emphasize the company's ability to work well with the latter group.

Second place: *CH2M Hill,* Denver. Although the firm is privately held, it finds an annual report to be a good marketing tool.

• Communications programs

(Jury chair, Barbara Welanetz). This category is for comprehensive coordinations of all of a firm's marketing efforts.

First place: *Gensler & Associates,* San Francisco. Jury members were unanaimous in their selection of this highly professional performance, all done with distinctive and distinguished graphics that clearly identify the firm and straightforward text.

Mr. Fuessler is head of Fuessler Communications in Boston, which specializes in public relations, advertising, and marketing for design firms. This year concludes his chairmanship of the awards program.

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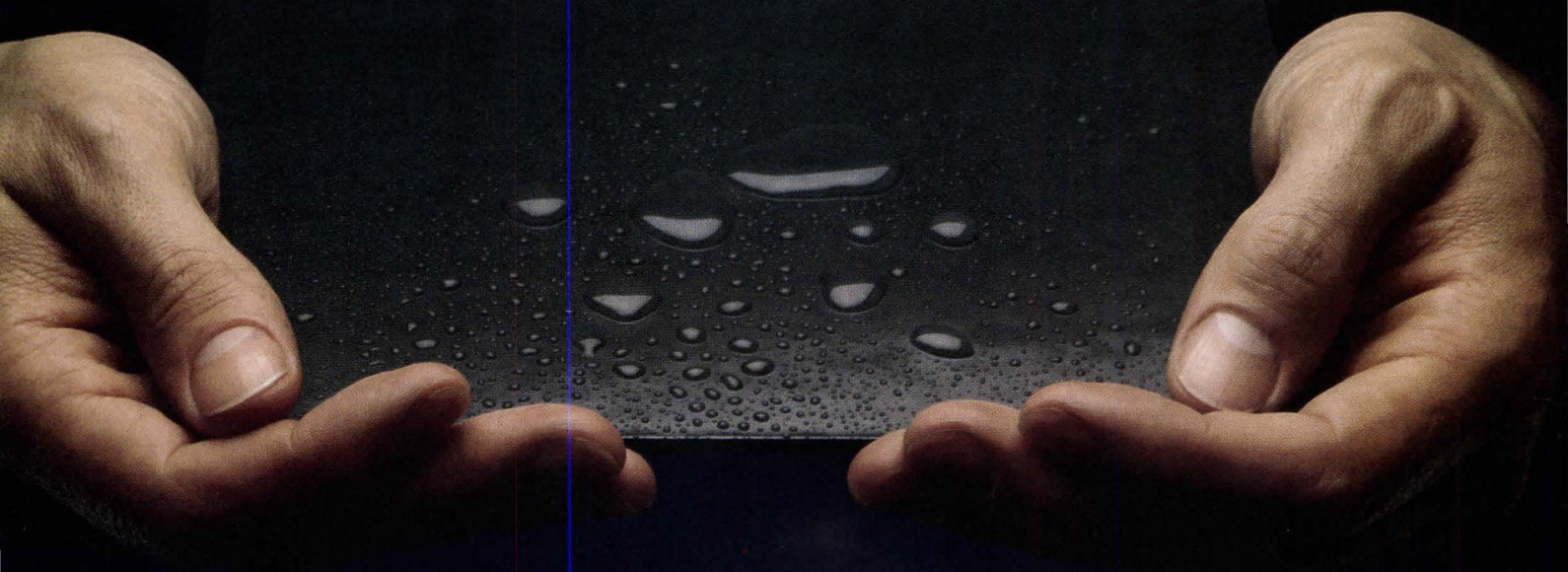

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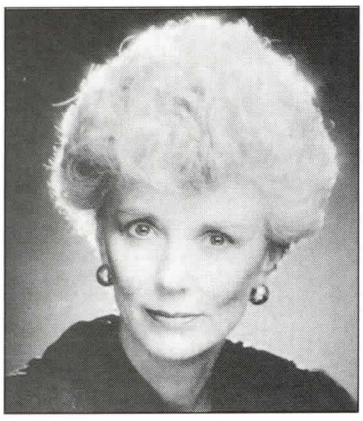
Architectural education: Is jury criticism a valid teaching technique?

The traditional system of jury criticism as a fundamental technique in architectural education has long been a point of debate. Dr. Dinham, after considerable research, shares her provocative thinking on the subject

by Sarah M. Dinham



"If you really want to know about our architecture program," they say, "come to our third-year jury next week. That'll show you a lot about what we do."

Well, yes. And then again, no.

Juries have long provided the fuel for heated discussion among students and faculties. Although some juries are models of educational stimulation, in general the widespread concern about juries yields no unanimity about remedies. In these pages, after casting architectural school juries in the context of architecture's traditions of criticism, I argue for a quality of juror termed the "reflective juror," after Donald Schon's "reflective practitioner."

Criticism is "what we do"

While the jury may be the educational mechanism, the underlying theme is criticism. Criticism is indeed "a lot about what we do." Rooted in the traditions of artistic judgment, the arts of criticism permeate every corner of the field. That criticism is fundamental to architectural thought is indisputable; it follows that criticism therefore must be fundamental to architectural education.

Every treatise on architectural criticism holds a message for architectural education. As one example, consider Peter Collins' *Architectural Judgement*[1], neither contemporary nor exhaustive, but influential in dissecting professional judgment for our scrutiny. Treating judgment as evolutionary, rational, and contextual, Collins implies criteria useful in designing our own juries. For example, his discussion of whether architectural judgment is rational challenges us to consider whether and how jury criticism may be a rational process. In discussing several contexts of critical judgment, he illustrates the multifaceted judgments jurors are called upon to offer. Even more pertinent to educational juries are Collins's discussions on the criteria by which judgments are made and conveyed. While his construction of scientific criteria for architectural judgment is inexplicably narrow—limited to building-performance research and questions about exact norms for architectural design—the larger question of architectural judgment by scientific *vs* artistic criteria is relevant for jurors.

There are pedagogical arguments as well as these philosophical arguments for basing juries in sound criticism. In their juries students see their first example of experienced, academic, practicing architects demonstrating the thinking that is at the core of the field. The tradition of criticism comes alive in the jury. If we want students to learn that *thinking architecturally* is more than adopting, executing, and defending personal likes and dislikes, the lesson must begin in the jury. Students whose jurors have over the years rested their arguments in their tenaciously held but unexplicated private opinions will come to believe that rigorous thinking is unnecessary in architecture. They will conclude that their passing opinions are the only criterion by which they should judge their own work.

We must design our juries as models for the thinking we value in our students. Our juries should demonstrate criticism at its very best: reflective, artistic, analytic, and eloquent expressions by thoughtful, experienced professionals.

Criticism of the jury

Juries are widely criticized—often superficially and negatively, often analytically and justly. Originating both within schools and without, both by students and by faculties and other jurors, including visiting practitioners, criticism of the jury system deserves attention.

Careful analysis of jury practices themselves can be traced as far back as Abercrombie's work at the Bartlett School, and more recent writers have highlighted problems with juries as they have scrutinized design teaching. Threaded throughout the report of the *Architecture Education Study*[2] are revealing vignettes of brilliant critiques, colossal miscommunications, jurors at cross purposes, student and juror vulnerability, eloquent discourses, revealing insights, and intricate interplays among critics and jurors. In that report, Argyris's chapter is among the most specific in analyzing the tension between jurors' avowed intentions and the realities of their actions and words. For example, he uses the term "mystery/mastery" to illustrate how critics and jurors will employ mystifying language both in juries and elsewhere to display their personal mastery of architectural wisdom and skill, often to the utter confusion of students or colleagues, who in turn must mask their confusion with impenetrability intended to convey expertise. While the *Architecture Education Study* was not intended to criticize juries, and in fact illustrates some remarkably able teaching and inspired juries, most architects confronted with the study's narratives of juries will agree that there is much to improve.

Confirming that the jury as an educational technique leaves something to be desired, Anthony's[3] current research finds that there is widespread discontent with the jury system in education, with only a "minimal level of learning about design" occurring at best, and at worst the most superficial, impulsive criticism being imposed upon psychologically vulnerable students in poorly designed educational contexts. The widely touted values of juries as scholarly seminars were rarely, if ever, seen. Altogether, the fine tradition of criticism escaped notice by the students, faculty, graduates, and jurors Anthony interviewed and surveyed.

In these pages some time ago, a passionate and protracted discussion about studio instruction raised several important themes that can illuminate our thinking about juries. Rapoport's (RECORD, October 1984, page 100) argument to reduce the dominance of the studio, a masterful argument for better—as well as less—studio instruction, included profound implications for juries. He argued that since there is no valid theory of design, and since there are few principles of design on which an overarching strategy of design instruction can be based, design instruction as we habitually practice it should be de-emphasized in favor of some other goals. Although subsequent (RECORD) writers opposed Rapoport's premises, many of Rapoport's points might also be made about juries. For example, we could heed his advice to stress ideas, theory, and knowledge, and to avoid the pretense of unclear evaluative criteria.

Hurtt (RECORD, January 1985, page 49) cast his comments on studio teaching, and particularly teachers' assessments of their students' work, within the traditions of criticism. Arguing for a knowledge base on which studio criticism should rest, Hurtt speaks as well to jurors: "The critic is obliged to place his criticism within the framework of a knowledge base available to the student. Veiling that knowledge base is anti-academic and less than honest."[4] Hurtt and others contributing to this series have exposed the lazy jurors who express likes and dislikes without foundation, who use the jury as a platform for rambling on whatever topics flit through their minds, who represent their private and unsubstantiated feelings as scholarly criticism.

Juries serve many purposes

As previous RECORD articles have illustrated, and as experienced architecture faculties and jurors know, architectural juries serve many purposes. Three categories of purposes have become clear in my own research on studio instruction; at least two, if not all three, purposes will be intermingled in any end-of-project design jury with advanced undergraduate students. I have seen no juries that addressed only one of these purposes. Shifts among purposes occur swiftly and often jurors are simultaneously addressing different purposes.

The jury might be intended to criticize *individual students'* own designing as it is demonstrated in the work they present. It is the individual-learning purpose to which Rapoport, Hurtt, and others refer when they discuss studio teaching and imply as well how juries might best be employed. It is this purpose that Anthony assumed was in the minds of students and jurors: both Anthony and the *Architecture Education Study* found that this purpose is not always adequately addressed.

Individually focused juries are also sometimes said to simulate the life of the practicing architect. Usually, however, when practice simulation is intended, the purpose is still individual criticism. What is simulated is external—for example the need for grace under pressure—rather than internal—the mental activity of a busy and skillful architect.

Or, the jury might be intended for *general instruction*—as a means of teaching the entire group of students about design. A jury solely for group teaching would be conducted differently from one whose sole purpose was criticism of individual student work; Anthony's

Sarah Dinham, Ph. D., is a lecturer in the College of Architecture and associate professor in the College of Education at the University of Arizona, Tucson. Her research examines teaching and learning in professional fields such as architecture and medicine. During her recent sabbatical leave she studied design education in several eastern schools of architecture. At the University of Arizona she continues research and writing on architecture education and teaches a seminar for architecture graduate students contemplating academic careers.

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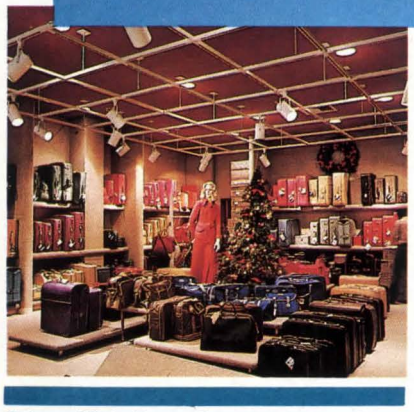

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recommendations include suggestions for such an approach. In our research we have seen skillful jurors shift gracefully from individual to group focus, making clear to students and fellow jurors the purpose of the shift; we have also seen clumsy jurors focus uselessly on an individual student when the entire group was the intended audience.

Additionally, the jury might serve the faculty and advanced students as an arena for *scholarly exchange*, as a seminar on topics of the jurors' special expertise. Seminar-juries are seldom advertised as such, except by rumor: "Be sure to hear Smith-Jones tomorrow afternoon: it'll be a terrific jury." More often these scholarly exchanges take place as part of a jury principally serving another purpose. Often they provide faculty members an opportunity for professional dialogue; faculty who seldom work together need to hear one another's views and want to keep up on one another's work. Indeed, these exchanges inspire and challenge faculty and student alike, providing singular opportunities for hearing new ideas, revisiting established theories, and exchanging views of architectural philosophy. The *Architectural Education Study* did find, however, that early and midlevel students learned little from seminar-juries when their own work was the stimulus for the seminar.

"Learning to think"

George Anselevicius commented at a recent NCARB meeting that in education—the schools' real task—students should be "learning to think." Nowhere do we stimulate "learning to think" so pointedly as in the studio and the jury. Particularly considering that in the studio students on the average spend only 30 minutes or less per week directly with their critics, the jury has the potential of being a powerful teaching tool for "learning to think."

What, exactly, are the jury's benefits for students? Beyond the experience of public demonstration and defense of one's work, the benefits narrow down to two: providing criticism to students about their design work so they will learn to design better, and exposing students to ideas beyond the realm of their individual projects and beyond their experience with a particular critic. Both benefits are, in the end, intended to influence students' learning to think.

If, as Beckley said in these pages (RECORD, October 1984, page 101), the studio is where a professional architect learns to make judgments, then the jury must be where those judgments and their design consequences are addressed directly and constructively, so that students' "learning to think" will be maximized. How can jurors ensure that maximum learning will take place?

The reflective juror

Truly master jurors we will call *reflective jurors*, after Schon's *The Reflective Practitioner*[5]. Reflective jurors of course carefully ponder the design criticism they offer and eloquently express their ideas. But further, they are simultaneously and continuously thinking and acting upon two other aspects of the jury: the design criticism under way, and the educational impact of the jury. Let's take these three tasks in order.

As experienced architects these jurors are, of course, appraising the work being presented, analyzing it, and designing their critique of it. The artistry of jury criticism should not be taken lightly. It is one thing to be a brilliant designer and quite another to be, further, a brilliant design critic. The virtuoso juror not only applies design expertise to the work at hand, but expresses criticism so others—the student, the student group, the audience—will all benefit. This artistry requires experience, brilliance, and the kind of thinking Schon calls reflection-in-practice. Yet beyond the mastery of skillful and eloquent design criticism, reflective jurors employ two further talents: reflection about design criticism, and reflection on education.

Reflection on design criticism occurs quite beyond the juror's critical contributions. Beckley quoted Schon in observing that teachers seldom comment on their own reflections. In the jury, the best way to offer students examples of thinking is to demonstrate for students the thinking behind jurors' criticism and also the nature of their reflections on their own critical thinking. Schon points out that "it would be easy for a student or observer to miss the fundamental structure of inquiry which underlies [the juror's] virtuoso performance"[6]. Students need to see that neither criticism nor thinking-about-criticism is casual, mere opinion, purely instinctive. Students will see—and presumably adopt into their own reflections—the discipline, criteria, wisdom of experienced criticism.

The reflective juror continuously appraises the jury itself: its purposes, educational intentions, timing, progress. This juror not only studies the program, listens to the student's presentation, obtains further information through questioning, listens to other jurors and considers how to supplement them, carefully designs commentary to benefit the student and other listeners. Reflective criticism is more. Reflective educational criticism means holding in mind and pondering continuously the jury's educational process: the quality of procedure and criticism, the level of discourse and appropriateness of communication. Reflective criticism means acting upon these as well as offering architectural criticism. Reflective criticism is contextual: suiting criticism to the present educational context challenges even the most experienced juror.

The competent reflective juror rises to the intellectual challenge of three simultaneous trains of thought. Extensive experience with architecture in general and design in particular means that the juror's architectural criticism, competently and eloquently expresssed, becomes second nature. The juror is freed to concentrate on the criticism process itself: to reflect and to act upon the criticism as it is offered and the educational experience as it progresses.

Some will disagree

Not every juror will agree with this picture. Another view is typified by a juror quoted in the *Architectural Education Study* final report: "Nobody can possibly evaluate a problem like this in such a short time. . . .The only reason why I am here is to talk about whatever this thing triggers in my mind"[7]. This juror, believing that juries are not necessarily intended for teaching, seems to expect that students can learn indirectly from the random discussion.

Students do often learn from discussion among jurors. However, they do not necessarily learn about their own thinking, their own designing, their own work. Because the seminar-jury discussion occurs at a level of abstraction suited more to the jurors than to the students, the language is often oblique, the nuances remote, discourse elliptical. Jurors assume students understand this oblique discourse, either because they think of designing as instinctive and therefore assume that able designers should understand the nuances of the discussion, *or* they assume that students follow the leap from the jurors' words to their own work, *or* the jurors are thinking of their own ideas and are not thinking of whether their ideas are understood.

Were the circumstances of juries different, some of these assumptions would be correct. Sadly, however, even the most motivated student cannot pursue the intellectual maze if exhausted from the charette. Even the most instinctive designer cannot make the leap if anxious for the critique to come, or puzzled by the critique just past. We want students to learn to think, but brain cells used for muddling through the jury's obscurity are brain cells unavailable for thinking.

Making students brave

In an article on the professoriate not too long ago, Paul Strohm quoted his favorite teacher's view that there are two philosophies of education: "scare them" and "make them brave."[8] He went on to point out that while it is sometimes useful to be jolted into a new way of seeing the world, in the long run bravery usually works better than fear.

For a juror, instilling bravery is also much more difficult than creating fear. The causes of fear in architectural studios and juries are legend; many are unnecessary. In contrast, experienced, skillful jurors regard the jury as an exercise in the field's highest thought process, the process of criticism. These jurors balance perceptions and instinct with rational, analytic assessment, communicated clearly and constructively. The jury's purposes are known and agreed upon, with purposes matched to students' level, and shifts among purposes clearly demarcated. These jurors not only offer experienced criticism but pay conscious reflective attention to that criticism and to the jury's educational intentions. They demonstrate for students, fellow jurors, and listeners alike a vivid picture of criticism at its finest.

1. Peter Collins, Architectural Judgement, *(Montreal: McGill-Queen's University Press, 1971).*
2. William A. Porter and Maurice Kilbridge, Eds. Architecture Education Study. *(Cambridge, Mass.: Massachusetts Institute of Technology Laboratory of Architecture and Planning, Undated).*
3. Kathryn H. Anthony, Private reactions to public criticism: *Students, faculty, and practicing architects state their views on design juries in architectural education. University of Illinois: Manuscript in preparation, 1986.*
4. Hurtt, Steven, "The design studio—Another opinion." ARCHITECTURAL RECORD, *January 1985, p. 49.*
5. Donald A. Schon, The Reflective Practitioner, *(New York: Basic Books Inc., 1983).*
6. Schon, op. cit., p. 104.
7. Porter and Kilbridge, op. cit., vol. II, p. 400.
8. Paul Strohm, "A portrait of the professoriate," Change Magazine, September/October 1985, p. 23-29.

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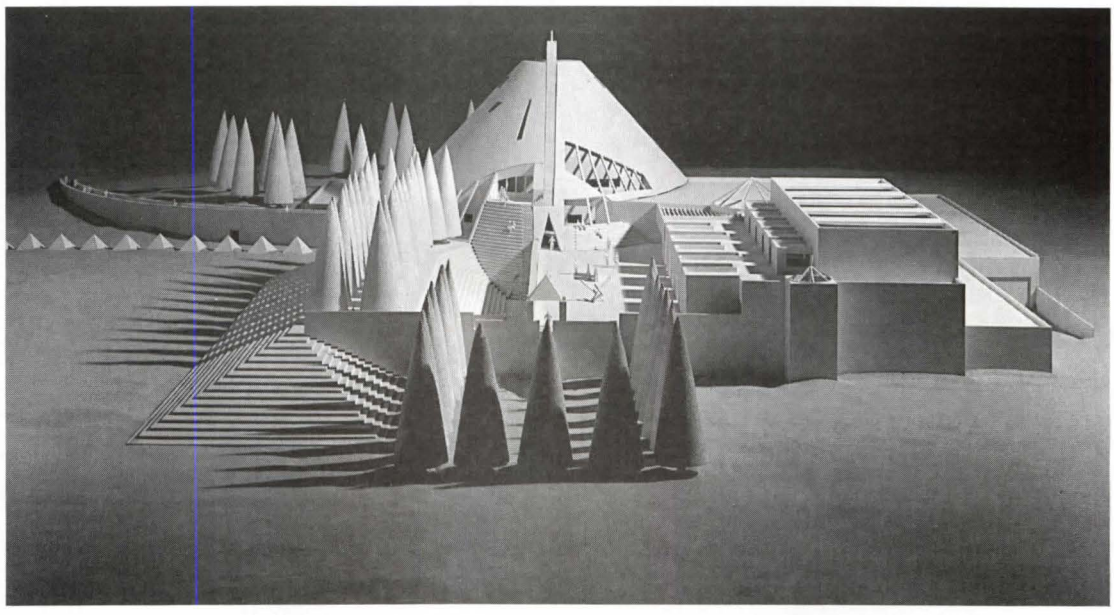
In Wyoming, a meeting of man and the mountains



Antoine Predock has won an invited competition to design the new American Heritage Center and University Art Gallery at the University of Wyoming in Laramie. Predock's design was selected over submissions from Cambridge Seven Associates, Edward Larrabee Barnes Associates, and Gunnar Birkerts and Associates. Rather than base his proposal on any regional architectural antecedent, Predock wished his entry to reflect "the organized gatherings of Native Americans, early trappers, and Oregon Trail emigrants which provided a sense of community in a landscape that resists settlement." Toward that end, he designed a reinforced-concrete, brick-faced "archival mountain" to house the American Heritage Center, and a concrete masonry-and-brick "clustered village" for the art gallery. These two discrete building typologies are intended to form "a consciously monumental landscape abstraction"—visible from nearby Interstate 80 and the adjoining university sports complex—and "a powerful statement of the spirit of Wyoming." The complex will rest on a base containing work and storage areas, outdoor seating, a sculpture courtyard, and a contemplative garden.

Horton Plaza: The saga continues

In the 15 months since its splashy debut, San Diego's Horton Plaza (RECORD, March 1986, pages 128-135) has become something of a model for cities seeking to infuse some vitality into faded downtown retail districts. Part of the project's allure seems to be its idiosyncratic architecture—a fanciful compendium of historicist modes and building forms, compiled by The Jerde Partnership, that are meant to echo European urban prototypes. Construction is now proceeding on phase two of the overall project—a 15-story, 452-room Omni Hotel, also designed by the Jerde office in joint venture with Py-Vavra Architects. Although the new building's references to styles of the past are clear, the allusions are mild-mannered compared to the exuberant Horton Plaza assemblage across the street.

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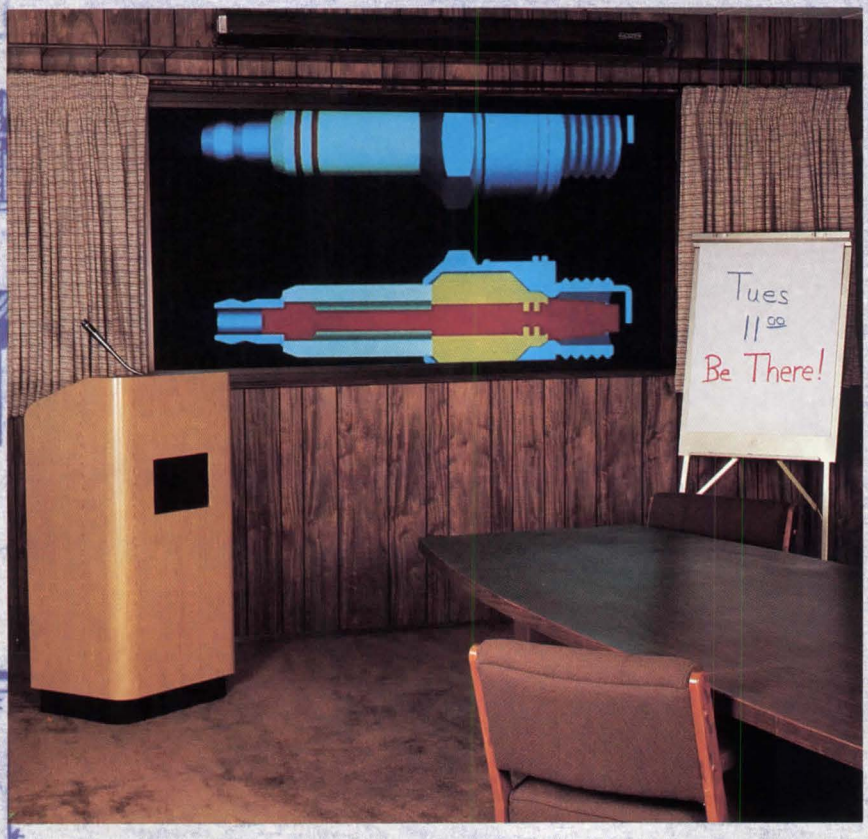

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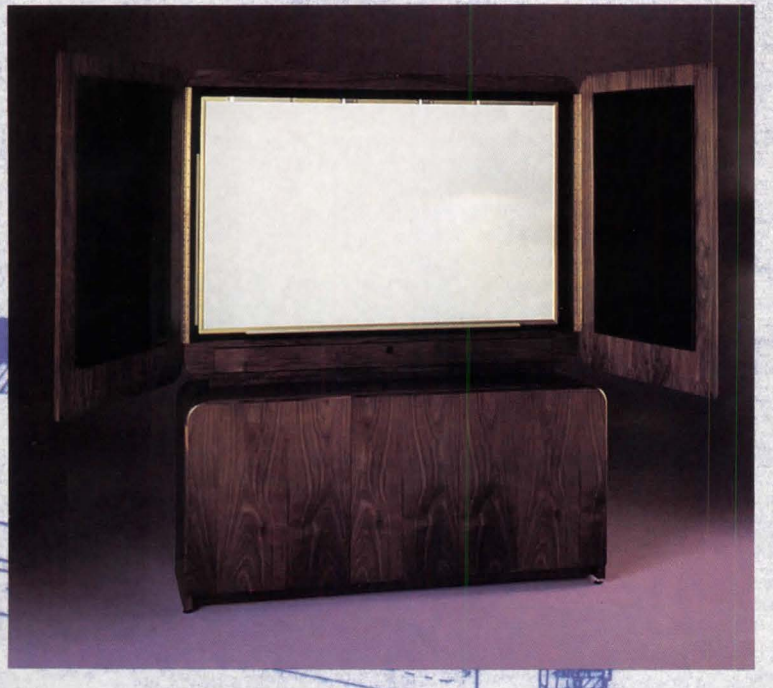
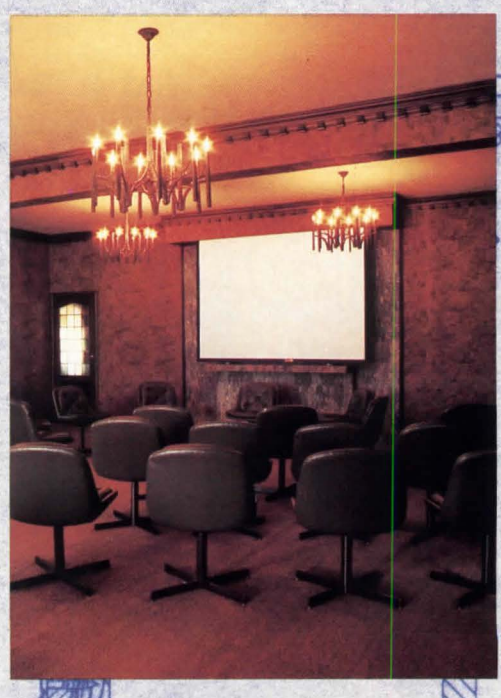




News briefs

Steven Izenour and Miles Ritter of Venturi, Rauch and Scott Brown have won a competition to design a lighting scheme for the Benjamin Franklin Bridge, a 60-year-old, 1,750-foot suspension span across the Delaware River linking Philadelphia and Camden, N. J. The premiated system features a computer-controlled "curtain" of light whose rippling effect will be activated by commuter trains moving across the bridge.

Clark & Menefee, the only locally based firm among five finalists, has been selected the winner of a national design charette competition for the proposed South Carolina Marine Science Museum in Charleston. The 40,000-square-foot aquarium will be built on the city's waterfront at the foot of Calhoun Street. The other finalists were Emilio Ambasz, Michael Graves, Antoine Predock, and Esherick, Homsey, Dodge & Davis.

Stanley Saitowitz has been selected to design a new facility for the California Museum of Photography. Currently situated on the University of California's Riverside campus, the museum will occupy renovated space in an old Kress variety store located on Riverside's downtown mall.

The Chicago Theater, a 3,800-seat movie palace on State Street built in 1921, has been restored and has reopened as a live-performance center. Restoration architects are Daniel P. Coffey & Associates.

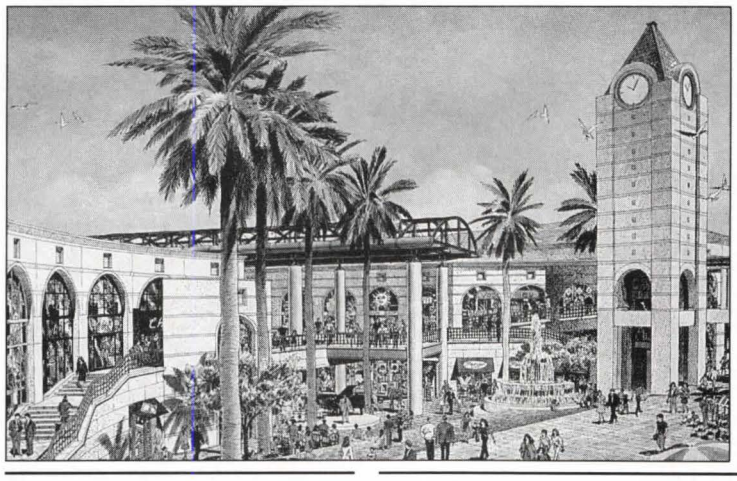
The Hillier Group and its head designer Alan Chimacoff have won an invited competition to design a major new facility for the College of Architecture at Arizona State University in Tempe.

The Williams College Museum of Art in Williamstown, Mass., has reopened after completing a major renovation and expansion designed by Charles Moore and Robert Harper of Centerbrook. The museum is featuring a retrospective exhibition of Moore's work, on view through Dec. 28.

Peter Eisenman and Josef Paul Kleihues have been named Irwin S. Chanin Distinguished Professors at the Cooper Union school of architecture in New York City.

Skidmore, Owings & Merrill has been selected to renovate and restore the Allerton Building, the original structure of the Art Institute of Chicago. The Beaux-Arts building was designed by Shepley, Rutan and Coolidge in 1893 for the World's Columbian Exposition.

Finding one's way to San Jose



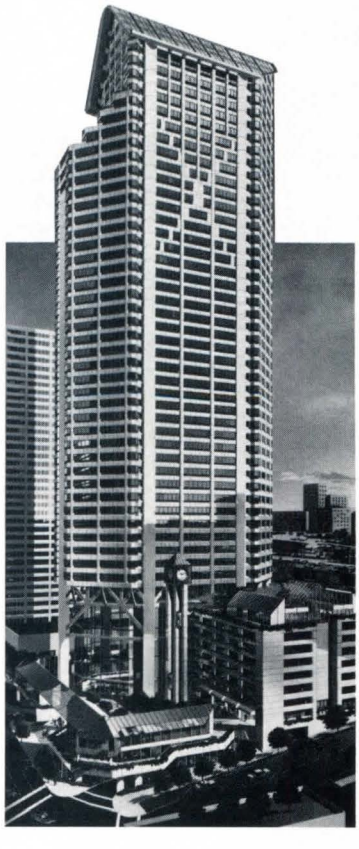
Mention San Jose, the oldest secular settlement in California and the 15th most populous city in the country, and the images conjured up are less of urban dynamism than of characterless suburban sprawl. And while this city at the southern tip of San Francisco Bay has certainly seen its share of decentralized growth over the past three decades, construction is underway on the first phase of a mixed-use development—dubbed Silicon Valley Financial Center and planned by Skidmore, Owings & Merrill around a series of midblock courtyards—that local powers-that-be hope will infuse economic vitality into a center-city core long ago laid waste by a ring of shopping malls. Occupying five downtown blocks bounded by Market, San Fernando, San Carlos, and Fourth streets, the project is situated at the intersection of two major legs of Santa Clara County's new light-rail transit system, scheduled to open next year. The first phase of the development comprises a 17-story SOM-designed office tower and 583-room hotel designed by Hellmuth, Obata & Kassabaum (top photo); a 145,000-square-foot retail center, called The Pavilion and designed by The Jerde Partnership (drawing); and a 185-unit apartment tower designed by Abraham Shapiro, Herbert Nadel & Partners.

Competition calendar

• The Rotch Traveling Scholarship program for 1987 will award one $14,000 stipend for eight months of foreign travel to an architect under 35 years of age. Applicants must have a degree from an accredited architecture school in Massachusetts and one year's experience. Application requests must be made by Jan. 2, 1987, to Norman C. Fletcher, Rotch Travelling Scholarship, 46 Brattle St., Cambridge, Mass. 02138.

• Du Pont Co. seeks entries to an awards program recognizing design excellence in completed buildings that utilize the company's *Hypalon* synthetic rubber roofing. Two cash prizes of $10,000 each will be awarded in new building and renovation categories. Entry deadline is Feb. 2, 1987. Contact Bill Onderick, External Affairs Dept., Du Pont Co., Wilmington, Del. 19898 (302/774-9471).

Northwest passages



The latest addition to Seattle's burgeoning skyline is Gateway Tower, a 62-story office building that will be, at 705 feet, the second tallest structure in the Washington metropolis. Designed by Bassetti Norton Metler Rekevics, the steel-framed, granite-clad building exhibits a number of distinctive features. For one thing, its unusual plan—something of an elongated hexagon—was designed to direct views around the neighboring, 954-foot-tall Columbia Seafirst Center, the city's loftiest building. Second, the tower's lower levels will be woven into the framework of two existing freeway ramps leading off Interstate 5. Finally, the architects placed mechanical systems on each floor (rather than on top of the building), which opened up striking penthouse views of Elliot Bay and the Cascade Mountains through a sloping, glass-enclosed roof.

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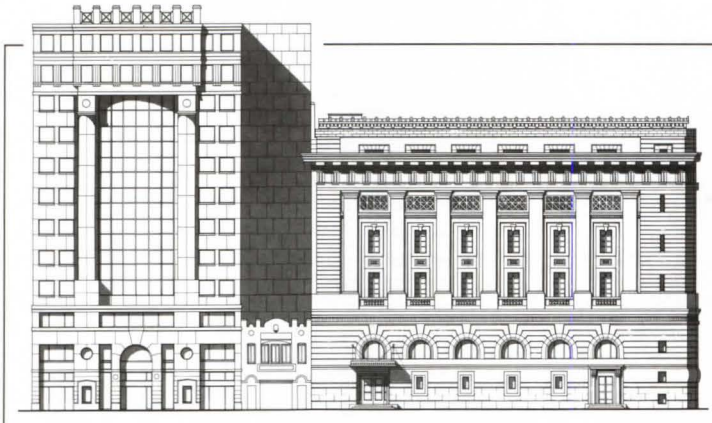
In harmony with an urban setting: Four projects by Keyes Condon Florance

1. 1212 New York Avenue and the National Museum of Women in the Arts
2. Resources Conservation Center, 16th Street elevation
3. Republic Place, 18th Street elevation
4. Square 223, New York Avenue elevation



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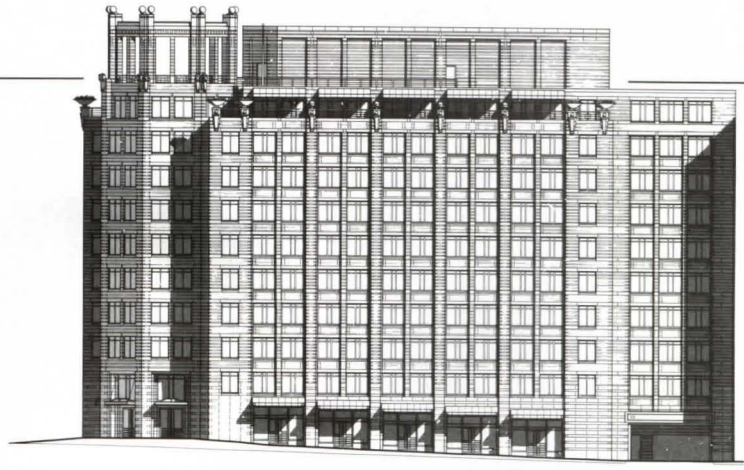

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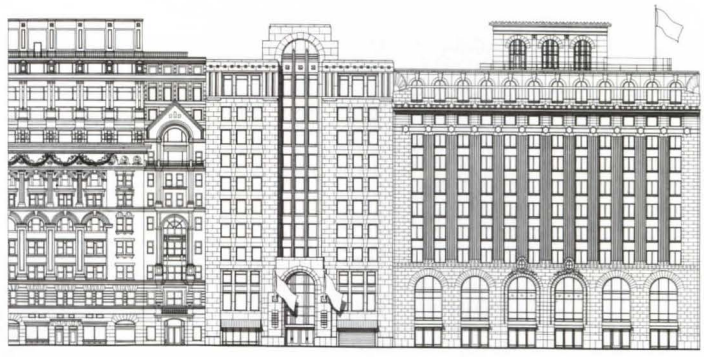

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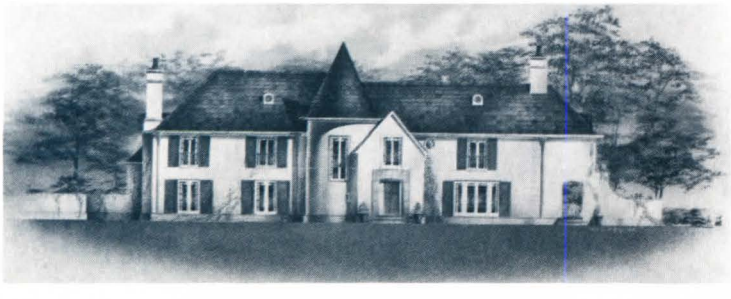
Contextualism is old hat in Washington, D. C., where stringent zoning ordinances and an implicit respect for the city's building heritage have combined to create the architecturally consistent metropolis we know today. A portfolio of four current projects by Keyes Condon Florance—all located in the traditional downtown business district—reveals one firm's response to Washington's written and unwritten codes. On a block near the convention center, the firm has designed a 12-story office building whose scale, materials, and abstracted detail are meant to harmonize with an adjacent former Masonic Temple, a Beaux-Arts structure currently being converted into the National Museum of Women in the Arts (1). Nearby, the Resources Convervation Center/Dupont Park project is a four-building complex that likewise combines renovation and new construction. One of the new structures, an office building that will serve as the headquarters for the National Wildlife Federation (2), has been designed to relate to the Edwardian and Tudor Revival apartment houses in the area. The most idiosyncratic building in the portfolio is a 10-story commercial structure (3) that is embellished with patterned brick, ornamental urns, and an octagonal corner tower topped by a loggia—elements intentionally *not* in context with the building's banal postwar surroundings. Finally, for a block near the U. S. Treasury, KCF has designed an infill structure (4) that attempts to mediate between the classically restrained Washington Building to its right and the more exuberant Bond Building to its left.

Suburban splendor, Stern style

"Homes like these have not been built in a subdivision since the 1920s," notes a modest Robert A. M. Stern. And indeed, the 33 detached dwellings that Stern is designing on a 44-acre tract called Milwin Farm in Monmouth County, N. J., do evoke a more gracious suburban past with their conical-roofed turrets and other Norman-inspired details. The price for Stern's brand of medieval splendor: $1 million.



An unconventional conversion for Jacksonville's new convention center

In one of the most intriguing adaptive-use projects in recent memory, Jacksonville's Union Terminal, a Neoclassical landmark that was designed by New York architect Kenneth Murchison in 1919 and abandoned by Amtrak in 1974, has reopened as the Prime Osborne Convention Center. The 265,000-square-foot Florida project involved the restoration of the terminal's imposing colonnaded headhouse (which now functions as the facility's main lobby and registration area), the renovation of a former passenger concourse into reception space, and the construction of a new wing (rear left in model photo) that houses a 78,500-square-foot exhibition hall, a 10,000-square-foot ballroom, and 22 multipurpose meeting rooms. Architects for the conversion were Reynolds, Smith and Hills.

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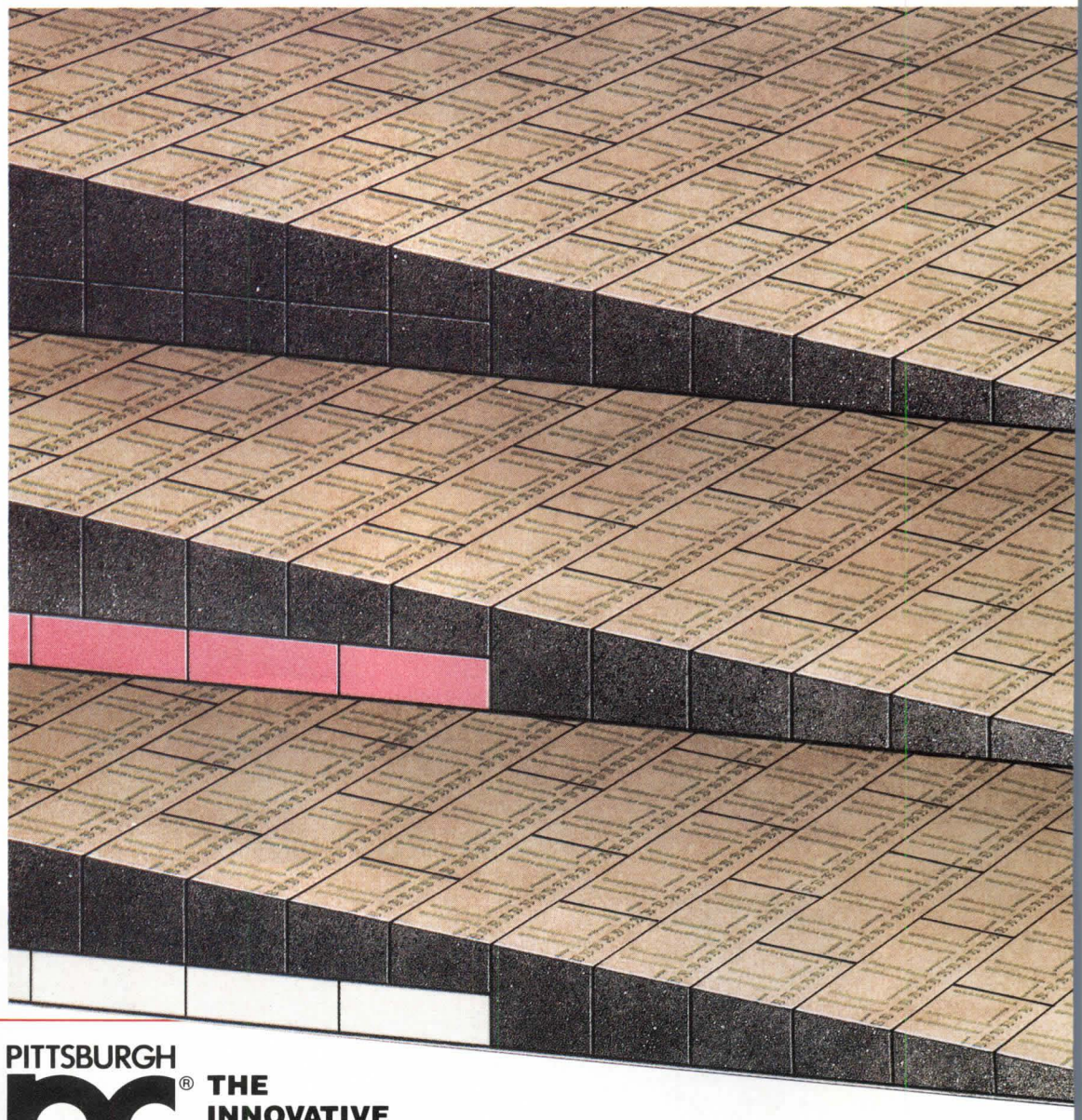

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High above Cayuga's waters, Modernism re-emerges

A small mixed-use building proposed by two recent Cornell graduates for a modest commercial site in Ithaca, N. Y., should dispel the notion that the lessons of the Modern masters are no longer applicable. Designed by Massachusetts native Paul Byrne and Vietnam-born Khoa Pham, the project calls for a seven-story structure consisting of two retail floors, one office floor, and four floors of duplex apartments. The building would be clad in a combination of brick and, budget permitting, marble panels, and has been consciously designed to relate in scale to existing commercial structures along the street. If the building bears more than a passing resemblance to work that Alvar Aalto completed during the 1930s—especially Aalto's Turun Sanomat Newspaper Plant in Turku—it is no accident. Both Byrne and Pham admit their affinity for the Finnish architect, and they contend that Aalto will emerge during the next few years as a major force in the continued development of what some have called "Neomodernism." The immediate goal of the Ithaca project, according to Byrne, is an "understated, contextual building, something that will complement and reinforce the street wall."

Plans finalized for Long Beach project

Just over two years ago, a master plan was unveiled for the 2.1-million-square-foot World Trade Center project in downtown Long Beach, Calif., that featured a pair of cylindrical, 40-story office towers (RECORD, August 1984, page 57). That scheme has evolved into a slightly more ambitious, though somewhat less dramatic, proposal comprising four rose-colored granite and reflective-glass office towers ranging in height from 25 to 35 stories, a hotel, a major retail center "with the finest shops between Beverly Hills and South Coast Plaza in Orange County," and a variety of low-rise commercial and cultural facilities topped by a landscaped plaza. Joint-venture architects for the 2.8-million-square-foot complex are Ross/Wou International and Daniel, Mann, Johnson and Mendenhall.

Guggenheim opposition goes underground

In the latest round of an ongoing struggle between New York's Guggenheim Museum and opponents of a proposed addition to the museum, the architectural firm of Michael Kwartler & Associates has drawn up alternative plans for an underground extension that would preserve the integrity of Frank Lloyd Wright's famous spiral. Hired by a group of area residents and civic groups opposed to the seven-story cantilevered tower proposed by Gwathmey Siegel & Associates, Kwartler presented his scheme at a recent meeting of the city's Board of Standards and Appeals. His so-called "vault alternative" calls for expanding the museum downward into existing basement and sub-basement levels. According to Kwartler, by replacing the Guggenheim's foundation walls with columns, the museum could develop over 33,000 gross square feet of new space under Fifth Avenue sidewalks to house administrative offices, a gallery for the museum's permanent collection, and art storage and conservation facilities. (The Gwathmey Siegel proposal would add about 30,000 gross square feet to the museum.) The Board of Standards and Appeals is expected to make a decision on the Guggenheim expansion sometime this month.

Letter from Paris: Reflections on architecture's new age of reason

"What's new in Paris?" The Institut Français d'Architecture (IFA) recently answered the question by canvassing 50 architects practicing in and around the capital for new work. Their responses—42 projects by 38 architects—were mounted in the basement gallery of the 18th-century Hôtel de Brancas, which serves as the Institute's home. The show will travel to Rouen this winter, and possibly abroad thereafter.

A visit with gallery director Alain Thiebaut made it clear that Paris is still growing and changing in the 20th century, though with more respect for its past than has recently been the case. The exhibition ignored the inescapable: Pei's pyramid at the Louvre and Jean Nouvel's sleek curvilinear glass Institut du Monde Arabe reflecting the Seine across from the Ile St. Louis. Rather, it concentrated on smaller projects tucked discreetly into the city's complex web, buildings a visitor might miss on a casual city tour. For example, Paul Chemetov, currently building the monumental Ministry of Finance at Bercy, is represented by a swimming pool sunk beneath Les Halles—concrete used with a graceful plasticity that makes a refuge out of a cave.

Thiebaut denied any attempt to be strictly representative of current building, but his "random sample" does reveal general trends. Nearly 60 percent of the projects are public initiatives, while very few are private dwellings. Moreover, design constraints vis-à-vis both project and client are greater than in the United States. The most prolific building type (40 percent of the exhibition projects) is multifamily housing, mainly middle- and lower-income. Public housing, neglected in the U. S., is important in France, attracting even the stars of the profession. Schools and offices are also well represented, while designs for interiors make up most of the rest. Interestingly, in a country where every hamlet has its church, where steeples still dominate the skyline, not a single ecclesiastical project was included among this work from 1984 to the present.

Turning from the buildings to their builders, Thiebaut noted that three generations of architects are currently active in France. The eldest faced the task of rebuilding after World War II. The machine-age rationality of Modernism suited their limited budgets and desire for new beginnings, but culminated in the tall buildings and new towns that have since fallen from favor. The most eminent among them are now receiving the plums of large public commissions. At the IFA, besides Chemetov, Roland Simounet

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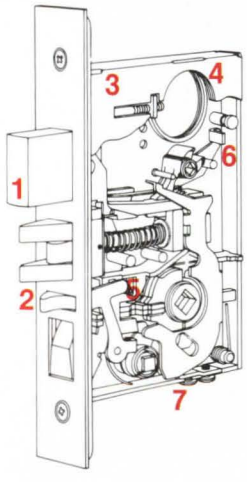

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is represented by his restoration of the Hôtel Salé for the Musée Picasso, Jean Charles Bernard by a complex of modestly scaled and ornamented apartment buildings in the 14th arrondissement.

The middle generation came of age during the social turmoil of the 1960s and the economic crisis precipitated by the oil embargo and rampant inflation—all of which curtailed building and stimulated theoretical work. Now dominant (with nearly 80 percent of the work in the show), they manifest a greater interest in contextualism, in regional and vernacular architecture, in the problems of social environments. Jean Nouvel and Christian de Portzamparc (not represented at the IFA but currently building the Cité de la Musique at La Villette) are luminaries among many talents. Styles range from a Corbu-bred Modernism of geometric volumes and industrial materials in apartment buildings by Marina and Christian Devillars to the brooding lyricism of Bernard Kohn in a factory converted into cooperatives almost medieval in its use of wood and stone.

The youngest group, just out of school and with fewer opportunities to build, has turned to interior design and defiant theory. The Atelier Canal (brothers Daniel and Patrick Rubin) use contrasting materials and colored light to create *trompe l'oeil* effects in the Centre National des Lettres. Ferrand, Feugas, and Leroy are other names to watch: their historicist Residence pour Personnes Agées is graceful and charming.

The buildings represented at the IFA have a number of points in common, similarities reinforced by any long walk through the city. Unlike the desire of an older generation to break free from the street grid, they seek to blend into the greater urban environment. Deference to the past is evidenced in cornice levels, street walls, and materials congruent with older structures. Individual expression comes in interiors (as befits a more private age), in courtyards whose walls become skeletons open to light, in contrasting materials used as accents to indicate function, in occasional angular play that enlivens flat facades. There is an affirmation of planar surfaces, windows punched into substantial walls, a loyalty to the simple columns of Modernism, and a general commitment to concrete cast in the colors of old Parisian stone.

This is not a spectacular architecture: it knows its limits. Perhaps a certain drama is lost, perhaps resignation lies beneath the playfulness. But there is reason at work here, coherent if not always legible on the surface, and a theoretical commitment to imagination exercised within the boundaries of tradition and function. "What's New in Paris?" is an affirmation of what is best in old Paris, an acknowledgement that deference need not be stifling. Would that the same lesson could take root across the sea!

Thomas Matthews

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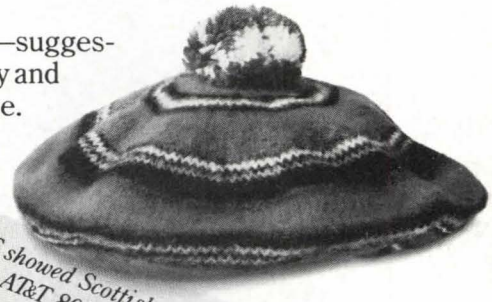

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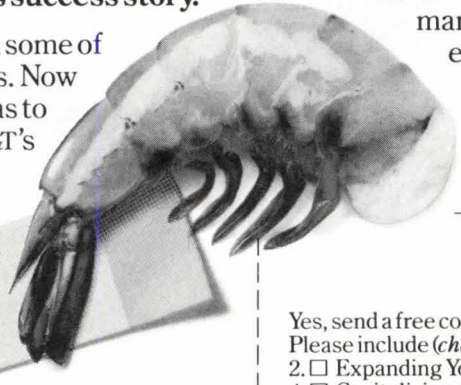

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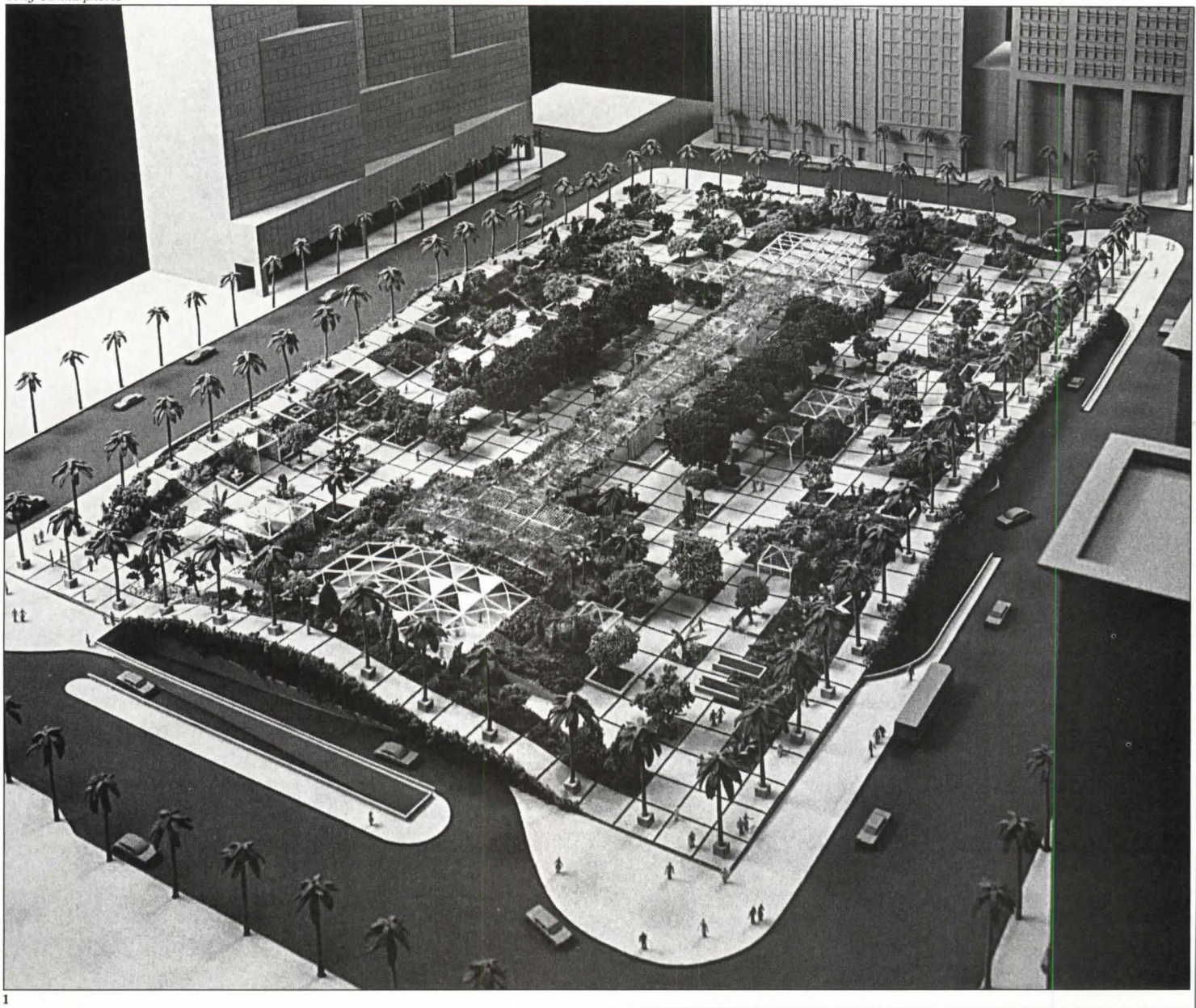
Design awards/competitions: Pershing Square International Design Competition

SITE Projects, Inc., the idiosyncratic New York firm whose work reflects a commitment to the self-styled concept of "narrative architecture," has won a major international competition for the redesign of Pershing Square in downtown Los Angeles. The revitalization of the historic five-acre park is viewed by city fathers as a key physical and psychological component of ongoing efforts to urbanize the commercial core of what is now the country's second most populous city. The $12.5-million project is a joint venture of the nonprofit Pershing Square Management Association and the

Tony Cunha photos



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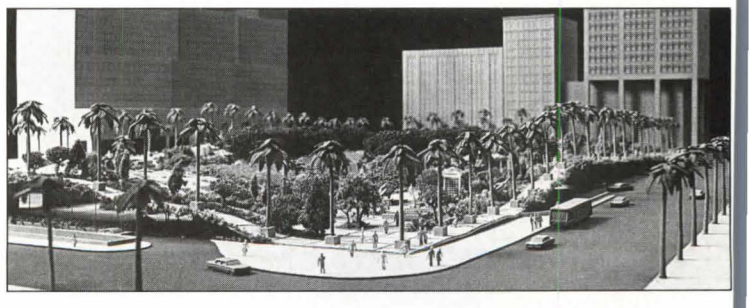
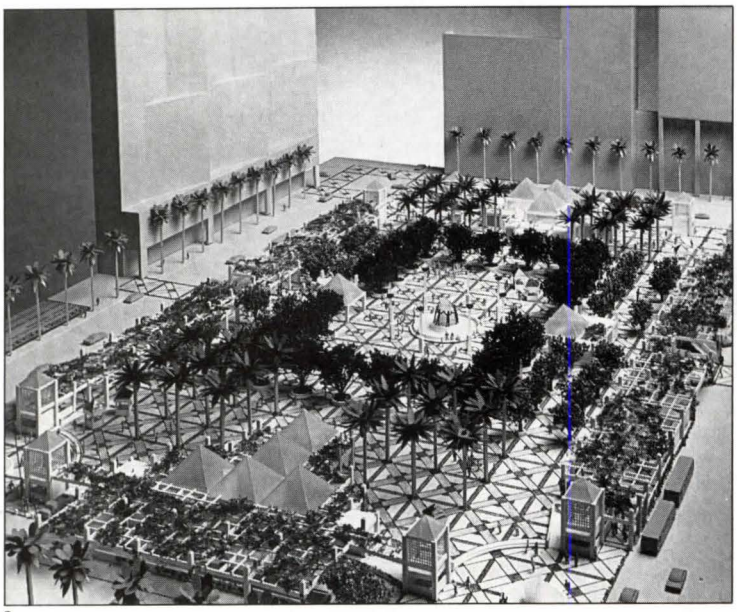
1. Premiated design: SITE Projects, Inc.
SITE's concept for the redesign of Pershing Square is meant to be "a visual and participatory microcosm" of the topography of the Los Angeles basin—a "metaphorical magic carpet," in SITE's words, that comprises a flat grid of city "streets" (illuminated at night) surrounded by undulating edges reflective of the region's coastal mountain ranges. These peripheral bulges, clearly the design's most memorable feature, are intended to allow pedestrian access into the square, shelter a restaurant and park administration headquarters, and, perhaps most significantly, conceal ramps leading into an existing subterranean parking garage. (The 13 1/2-foot-square module of the grid aligns with the garage columns, and transfer beams below deck distribute the weight of the cantilevered ridges.) The raised edges are also expected to provide an acoustical buffer protecting the park from the noise of adjacent city streets. Inside the square, SITE's grids are to be used to generate "mini-environments" relating to the city's distinctive vegetation, racial mix, and automobile and film-industry cultures. The architects' proposal to translate L. A.'s ethnic diversity into plant materials is especially innovative: Hispanic East Los Angeles, for example, is represented by citrus and bougainvillea, Oriental midtown by gingko trees, bamboo, and ferns. A trellis-covered processional makes up the square's central spine, connecting a glass-enclosed restaurant at one end with an outdoor performance area at the other. In premiating the SITE submission, the jury indicated that



it liked the proposal for its flexibility ("It can change over time without hurting the overall concept," observed juror Angela Danadjieva. "The scheme is like a 'silent movie' that allows each person who goes into the park to make possible his own script," added Charles Moore); for its appropriateness to Los Angeles ("The SITE proposal is about the form and context of this city," said Galen Cranz, a competition advisor. "It truly captures the character of L. A.," noted Jon Jerde, another advisor); and for its originality ("SITE has done an incredible job of working out the contradictions that are inherently a part of this problem," observed Craig Hodgetts. "It's almost a miracle to come up with a new idea in the design and art fields, but I think they have done it").

city's Community Redevelopment Agency. In triumphing over 241 other competition entrants, SITE has obtained its most highly visible commission to date—and one of its most problematic. Unlike the firm's successful work at the recently concluded EXPO 86 in Vancouver (RECORD, July 1986, pages 128-131), the Pershing Square project involves long-range urban design and planning that must both address the social and esthetic diversity of central Los Angeles and result in a striking new symbol for the city. SITE prevailed over its competition, said jury chairman Charles Moore, "because the design represented a new idea capable of changing the face of Los Angeles. While all the final schemes were exceptional, SITE's proposal encompasses the needs of all the people who will use the park." In addition to Moore, professional members of the 12-person jury included landscape architects Garrett Eckbo and Hideo Sasaki, urban planner Angela Danadjieva, artist Robert Graham, and designer Craig Hodgetts. Client jurors were Dollie Chapman, Frank Kuwahara, Dennis Luna, David Martin, Wayne Ratkovich, and Alan Sieroty.



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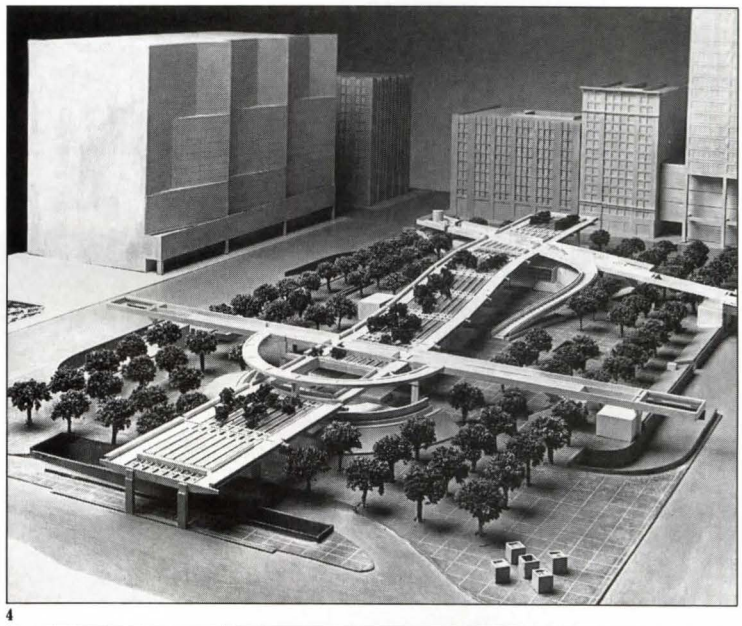

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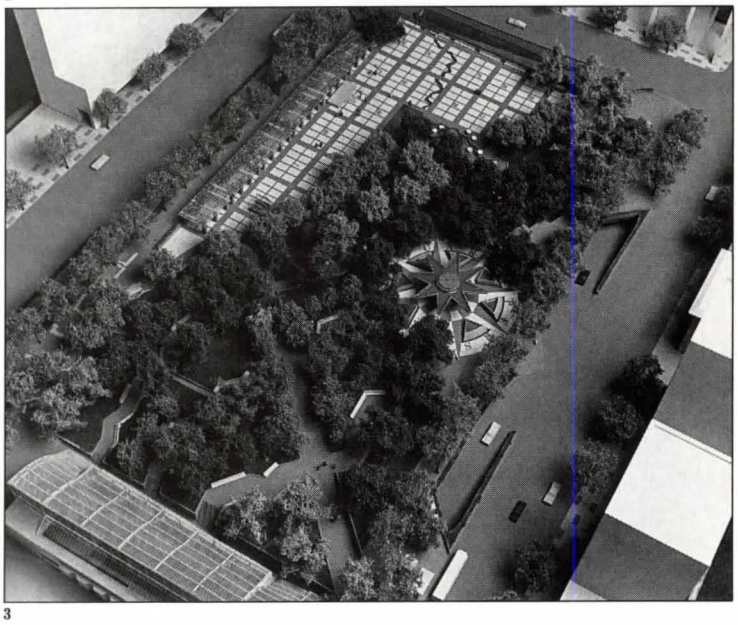

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2. Finalist:
Frank Welch & Associates
With its formal landscaping and central fountain surrounded by heroic bronze figures, this entry was perhaps the most traditional of the five final schemes—a classic plaza that some jurors felt was a fitting allusion to the city's Spanish origins. The jury also liked the proposal's system of pergolas that would mask existing parking ramps; its belfry-like corner gatehouses; and its circle of columns that would contain 16 uplamps casting a xenon beam visible throughout Los Angeles. Still, it was probably the design's underlying conservatism that led to its ultimate undoing: one juror noted that the plan's formality would allow little change over time, while another questioned whether the existence of this park would make downtown truly memorable.

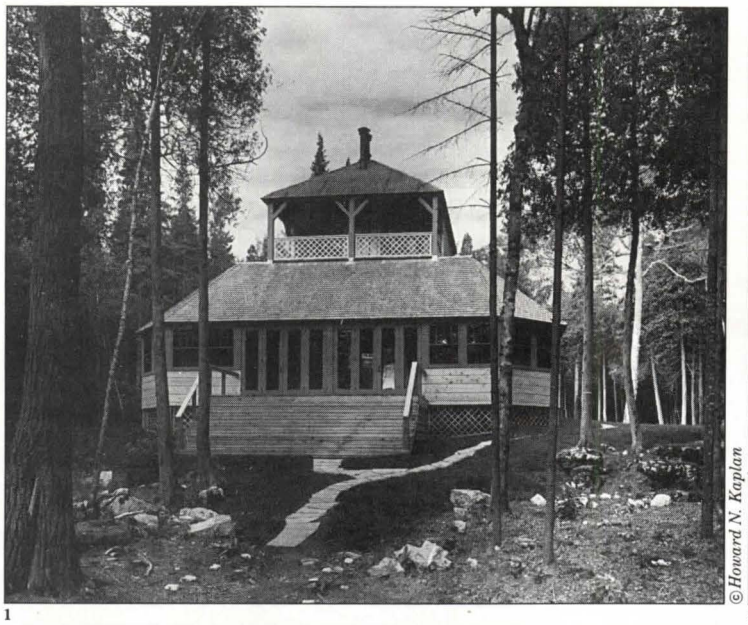
3. Finalist:
Phelps/Son Architects
The architects of this scheme sought to design a hybrid urban space by combining the "green park" attributes of a London square with the "civic room" qualities of an Italian piazza. Toward that end, they divided the square into two usage zones, dubbed The Terraces and The Plaza. The first section would comprise elevated walkways meandering through a heavily planted, manmade hillside; the second would be a public meeting area—paved in a red-and-buff sandstone replica of the 1849 survey of Los Angeles—that could accommodate crowds of up to 3,000. Although the jury admired the proposal for its lush vegetation and elaborate central fountain, some jurors felt that the scheme's heavy overlay of civic symbolism might be lost on many of the park's users.

4. Finalist:
Bone/Levine Architects
"Bold and dangerous," "a favorite icon in the city," and "a very strong architectural statement" were some of the jurors' comments regarding a striking proposal to rename the park Angelina Square and redefine it with a "structural arbor"—an obvious visual reference to the city's celebrated freeway system. The upper level of the arbor, reached by five stairways and an elevator, would contain exhibits on botanical life (aquatic and desert) and would serve as a second plane of horizontal pedestrian movement. The jury was clearly intrigued, but it wondered if this were the appropriate image for downtown's oldest park. Said one juror: "L. A. may be a freeway city, but is [Pershing Square] the right place to celebrate that means of transportation?"

5. Finalist:
The SWA Group
Probably the most patrician of the five final proposals, SWA's scheme is something of a compendium of architectural forms and urban activities that might be called an idealized vision of a classic downtown park. Pavilions and water columns define entrances, for example, and the central portion of the square is given over to a botanic garden—housed in two glass conservatories—that celebrates the history of horticulture in the Los Angeles basin. Obelisks, fountains, pergolas, and an amphitheater are additional adornments. "A fantasy paradise," said one juror; "the Tivoli Gardens of Los Angeles," remarked another. A third juror felt that the proposal, if executed, might be overpowering, and a fourth considered the scheme not especially unique to Los Angeles.

Chicago Chapter/AIA 1986 Distinguished Building Awards

Ten buildings by architects headquartered in the Chicago area have been honored in the 1986 Distinguished Building Award program, sponsored by the Chicago Chapter of the American Institute of Architects. This year's award jury consisted of Charles Moore, FAIA, of the Urban Innovations Group in Los Angeles; Mack Scogin, AIA, of Parker & Scogin in Atlanta; and John Locke, AIA, of Charles Herbert and Associates in Des Moines.



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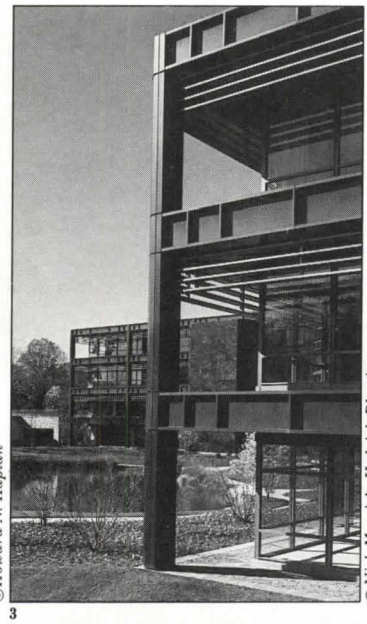

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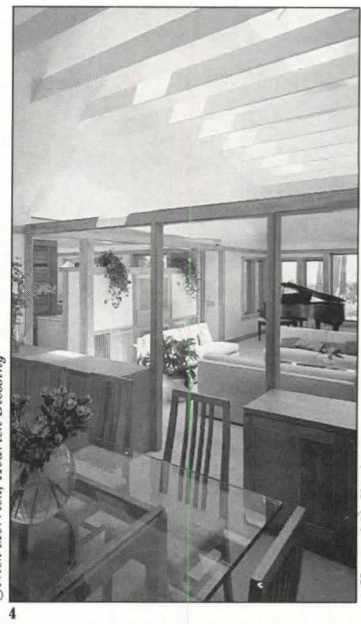

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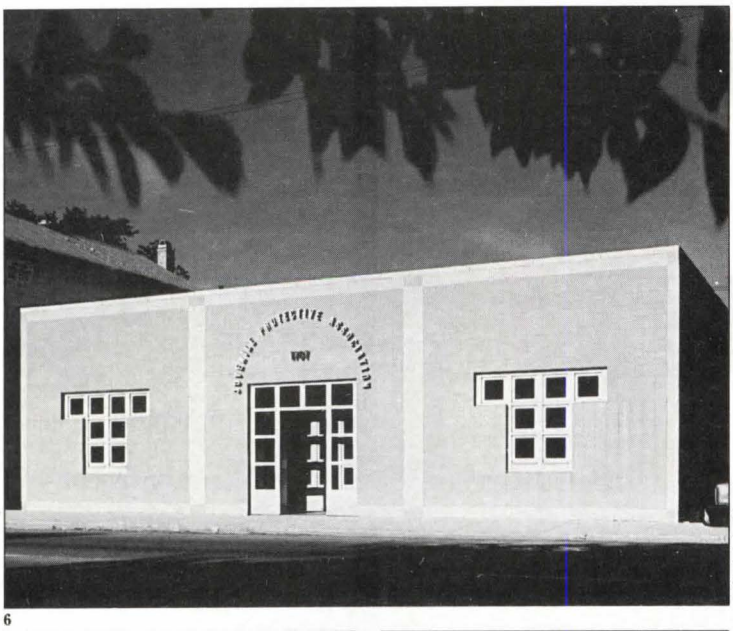
1. Vacation House, Door County, Wisconsin; Hammond Beeby and Babka, Architects. Situated in a sylvan setting dominated by tall pines, birches, and rock outcroppings, a year-round lakeside retreat is meant to reflect the wooden vernacular architecture of its rural context. An irregular grouping of gables and facade openings characterizes the main entrance side of the house, in contrast to the broad symmetry of the lakefront elevation (shown). The jury observed that the dwelling has an "informal, almost chaotic organization that resolves itself on the lakeside—a pleasant building with unexpected excitement."

2. Kersten Physics Training Center, The University of Chicago, Chicago, Illinois; Holabird & Root, Architects. "A meticulously detailed, well thought-out, and complete piece of architecture" was the jury's description of this three-story academic building, the final component of a science quadrangle begun at the university during the 1960s. In contrast to the building's street-facing facade, which is clad in limestone in deference to nearby neo-Gothic structures, the courtyard elevations reveal an exposed, glass-walled circulation spine and a classroom wing whose setbacks provide open terraces used for department experiments and an outdoor science gallery.

3. TRW World Headquarters, Lyndhurst, Ohio; Lohan Associates, Architects (RECORD, this issue, pages 100-103). The architects' stated goal in the design of this corporate headquarters near Cleveland was to "enhance the natural flow of the heavily wooded site [and] celebrate man's humanity within his technological world." Their solution incorporates four building wings that radiate from a central atrium and step down in a series of terraces that visually reduce apparent size. "The project is proof that the Modern movement is not dead and that it adapts well to the atrium formula," said the jury. "It is well-detailed and takes maximum advantage of site amenities."

4. Private Residence, Sheboygan, Wisconsin; Weese Hickey Weese, Architects. The program called for a year-round house for a family of four, located amid pine-covered dunes on the western shore of Lake Michigan. In order to create subtly defined, light-filled interiors, the architects specified ridge skylights, and they made extensive use of continuous wood trim that functions as open, room-dividing screens. North-facing public areas are extensively glazed to permit views of the lake. The jury commented that the house exhibits "an appropriate regional quality, so right for Sheboygan. The project is mature and straightforward, and there is a clarity of intent."

5. Bradford Exchange, Niles, Illinois; Weese Hickey Weese, Architects. The jury characterized the interior of this bi-level office expansion project, located just outside Chicago, as "an example of expressionistic architecture." Made up of 15 different overlapping fiberglass forms, the interior ceiling is an undulating tensile structure that encompasses both grand and intimate spaces punctuated by tent poles and cable ties. A garden extending from the existing office facility is spanned by suspended bridges that allow views of dining and meeting areas. The jury praised the office space for its "intriguing sculptural quality. It would be a wonderful place to work."



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James Steinkamp

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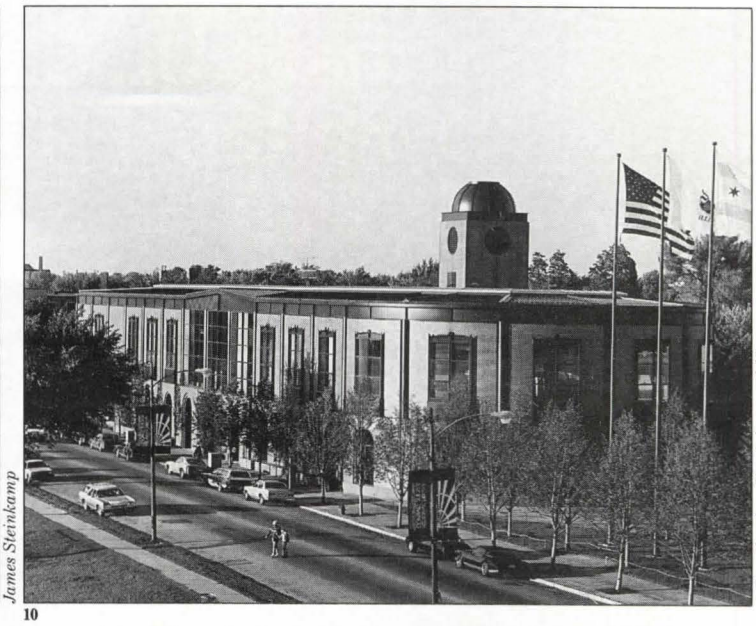

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6. Juvenile Protective Association, Chicago, Illinois; Tigerman Fugman McCurry, Architects. In designing new quarters for a not-for-profit agency that provides counseling to families that abuse or neglect their children, the architects wished to downplay institutionalism and create a humane, inviting atmosphere. Toward that end, they detailed individual counseling offices like small houses with French doors and multipaned windows, and arranged them around skylit atria. A lobby gazebo serves as a children's play area, reinforcing the village metaphor. "The project demonstrates maturity, control, refinement, and restraint," said the jury.

7. Stanley Korshak at the Crescent, Dallas, Texas; Himmel/Bonner Architects. This three-story, 37,000-square-foot store was designed as a street of individual boutiques arrayed along the arched entrance arcade of the Crescent, a major new office/hotel/retail development in Dallas. Crystalline steel-and-glass storefronts and display cases deliberately contrast with the rusticated masonry bays of the arcade. "There is a sense of drama about this project that speaks of its retail function," observed the jury. "It appears to have a high level of craftsmanship and detailing."

8. State of Illinois Center, Chicago, Illinois; Murphy/Jahn, Architects. "The Pantheon of Chicago" is the sobriquet that the jury bestowed on Helmut Jahn's now-celebrated state office building in Chicago's Loop. And, like its ancient Roman forebear, the 1.2-million-square-foot structure was designed as "a statement of the importance and dignity of state government that emphasizes an appropriate scale and urban monumentality," according to the architect. The jurors characterized the center as "a Chicago building . . . strong, powerful, and important. It breaks new ground in a city [known] for architectural risk-taking."

9. Santa Fe Center, Chicago, Illinois; Frye Gillan Molinaro, Architects. Designed in 1903 by Daniel Burnham, the 17-story Railway Exchange Building on Chicago's Michigan Avenue has been renovated and restored using guidelines established by the National Trust for Historic Preservation. On the exterior, deteriorated terra-cotta was repaired, new bronze storefronts installed, and old wooden sashes replaced by proportionally correct metal windows. In their rehabilitation of the lobby, the architects consulted Burnham's original drawings to duplicate elevator cabs and design a new skylight. "A sensitive and restrained restoration," lauded the jury.

10. Conrad Sulzer Regional Library, Chicago, Illinois; Hammond Beeby and Babka, Architects. Located on a busy street in Chicago's Ravenswood area, a 65,000-square-foot public library branch houses an auditorium, an audio-visual department, a children's section, and space for 250,000 books. The architects' goal was "to present the civic expression of classicism [while] employing Chicago's rich tradition of rational modern technology." "A powerful building," said the jury. "The strong exterior has an urban, Chicago look about it . . . and a humane quality that relates to the neighborhood. There is a sense of entry and a sense of control."

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Conference report: Housing and semiotics in New Orleans

By Roger Kimball

For four days in September, the Clarion Hotel near the French Quarter in New Orleans played host to the second annual Inter-American Forum for Architecture. Sponsored jointly by the New Orleans chapter of the AIA and the School of Architecture at Tulane University, the conference managed to attract some 100 people from Latin America and the United States—architects mostly, but also scholars, urban housing specialists, businessmen, government officials, and students—to discuss the theme of "Housing and the City." A publicity poster informed one that the conference was intended "to stimulate, at the highest national and international levels, a professional, academic, and policy discussion of issues relating to the urban environment," and parenthetically advertised a handful of distinguished participants—e.g., Rafael Moneo, Cesar Pelli, and Paolo Portoghesi, among others—of whom only Moneo was able to attend. In any event, the conference proceeded with the usual roster of exhibits, lectures, seminars, and roundtable discussions.

Formal lectures included a keynote presentation by Moneo, chairman of the Graduate School of Design at Harvard University, on "Urban Culture in the Americas: Turn of the New Century" and a handful of other papers and responses to papers on one or another aspect of urbanism. The real common denominator of the conference, however, was less the announced theme than each speaker's habit of presenting scores of slides in order to illustrate the problem of housing and the city—largely, it seemed, by reviewing his own architecture. The conference also featured "workshops" where two or three speakers addressed small audiences on topics as various as "Computer-Aided Design and Drafting in Architecture: A Hands-On Demonstration," "Alternative Approaches to Housing in Urban Latin Environments," and "Emergency Shelter and Transitional Housing for the Urban Homeless."

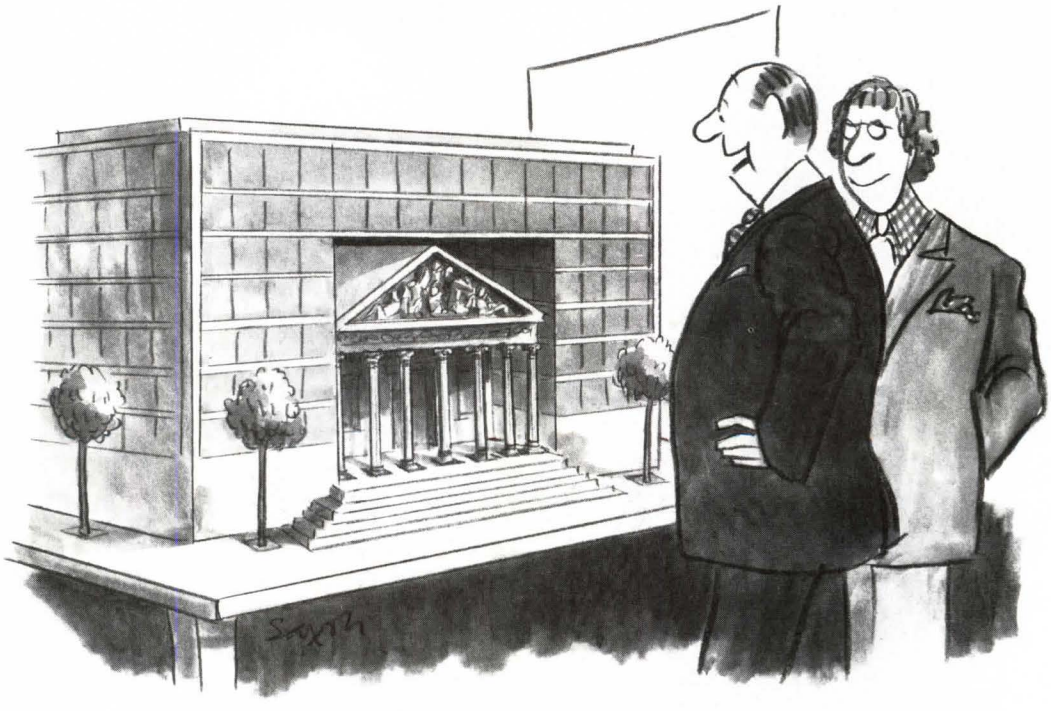
As one would expect, the presentations varied a good deal in cogency and interest. Moneo began his keynote address by suggesting that the future of our cities is already present in the form and organization of our cities today. Among other things, he contrasted European attempts at large-scale architectural preservation—most of which he seemed to feel had failed—with contemporary practices in America. Warning against the widespread habit of architectural nostalgia that is at work, for example, in the current infatuation with the Beaux-Arts tradition and other instances of Postmodernist fancy, he insisted that neither history nor tradition is geniunely salvaged by a self-conscious aping of historical forms. Moneo also showed a number of slides, including many of his new National Museum of Roman Art in Spain. Since the museum is modeled so carefully—not to say ostentatiously—on ancient Roman specifications, one was naturally led to wonder how it manages to escape the charge of self-consicous architectural revivalism, but this was a subject to which Moneo did not address himself.

According to the architect Norberto F. Nardi, co-director of the forum, one main purpose of the conference was to encourage communication among architects and city planners from either side of the Rio Grande. And because the problem of urban housing is—and will continue to be—so pressing, especially in developing countries, the Inter-American Forum had singled out the theme of housing and the city for special attention at this and the next few annual conferences. With respect to the former goal, I'm afraid that there appeared to be fairly minimal dialogue among the participants, most of whom, in truth, seemed interested mainly in advertising their own works.

The conference also suffered from its share of quasi-academic obscurantism. There was plenty of wearisome talk of architecture as a "text," of course, and one speaker even ventured to compare the city to an art museum and liken the facades of buildings to "pictures hung in a gallery." The most extreme—and most depressing—example of this estheticized approach to architecture was afforded by the Argentinean critic Jorge Glusberg, who delivered himself of an opaque semiotic disquisition on "The City as an Historical Document."

Other more sober presentations included talks by the Chilean architect Emilio Duhart on "The Challenge of Urban Housing: Insights from Latin America," and Francis Conway, an assistant director at the Agency for International Development, on "Public & Private Housing in Latin America." Both men began with a familiar but nonetheless chilling recitation of statistics about the situation of the world's rapidly expanding—and increasingly poverty stricken—urban population. Questioning the ability of "conventional methods" to accommodate this exploding urban growth Duhart called for a "new policy for the modern polis" that would rely on a combination of centrally planned "social architecture" and the widespread use of indigenous materials and construction methods. In what was one of the conference's most thoughtful and penetrating presentations, Conway reviewed efforts made by the Agency for International Development to help provide housing for the urban poor. His presentation did not by any means paint a rosy picture, though he did note that the agency's shift during the past decade from providing completed housing toward a strategy of furnishing "basic needs"—often simply a small plot of land, water lines, and rudimentary sanitary facilities—had enjoyed considerable success in sparking private initiative and local economic development.

In the end, the real virtue of the conference was in dramatizing once again the problem of urban housing for the poor. In essence, of course, this is more a social than a strictly architectural problem. But at the second annual Inter-American Forum for Architecture, this distinction was hardly recognized, which no doubt goes a long way in accounting for its general lack of architectural interest.



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Roger Kimball is a regular contributor to RECORD, The New Criterion, *and other publications.*

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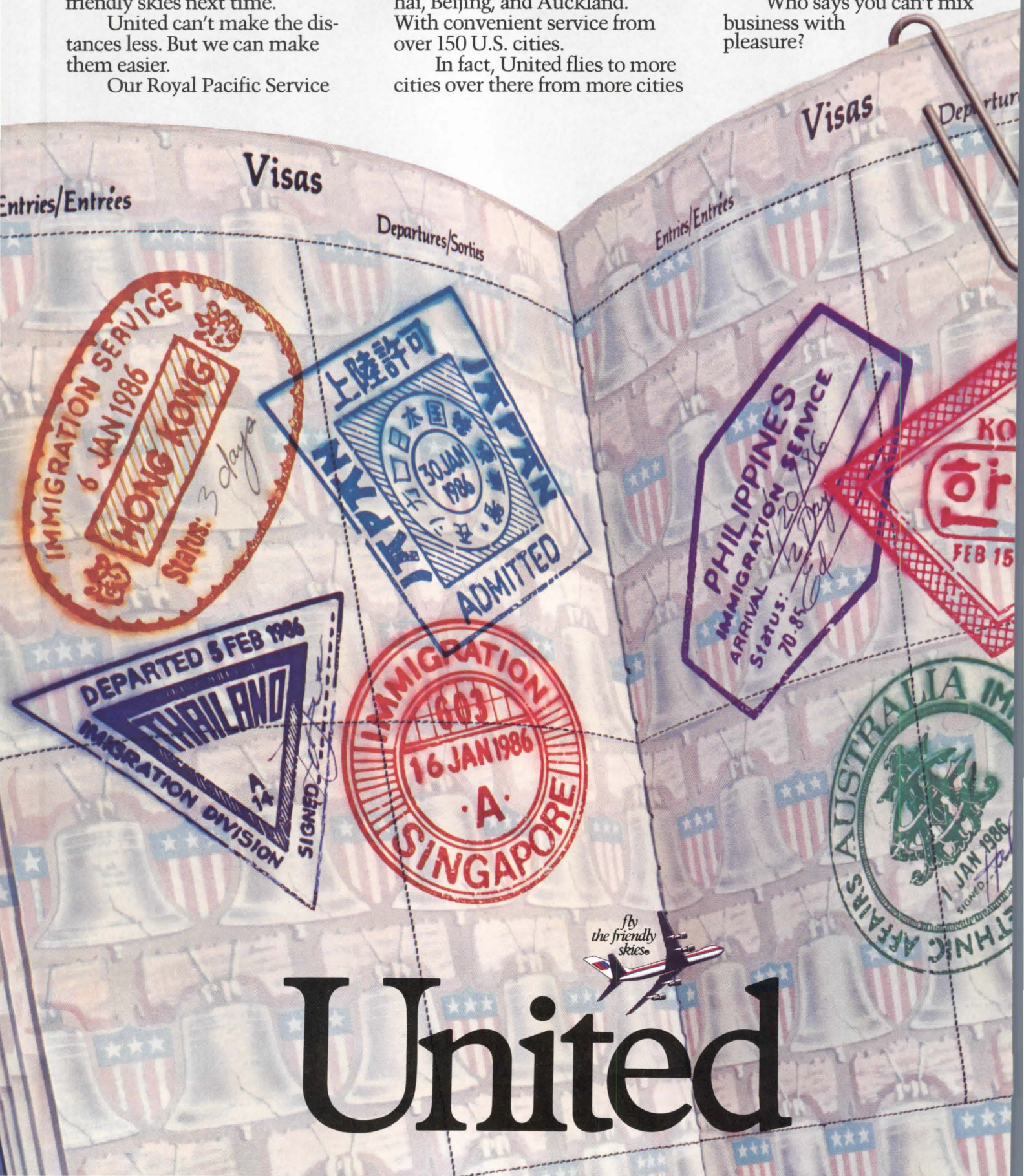

De Stijl distilled: A new look at the work of J. J. P. Oud

Top: Architect's rendering of the Café De Unie, designed by J. J. P. Oud in 1925 and recently reconstructed by the city of Rotterdam.
Bottom: Street view of the Kiefhoek workers' housing development in Rotterdam, designed by Oud in 1925.

By Tracy Metz

The Dutch architect J. J. P. Oud (1890-1963) was an enigmatic figure, a man to follow no one's advice but his own. Never one to shun conflicts, he was one of the originators of the De Stijl movement, yet also one of the first to distance himself from its suffocating dogmatism. During his lifetime he received general acclaim as one of Holland's great innovators—particularly in housing—and he was offered the position of Meister at the Bauhaus and professor at Harvard. Yet he resented what he felt to be a lack of recognition on the part of his most important employer, the city of Rotterdam. Almost 25 years after his death, however, reconstruction and renovation projects in both Holland and Germany are reaffirming Oud as one of the driving forces in European architecture during the 1920s and '30s.

Although Oud had intended to become a painter, he chose architecture at his father's urging. It is no surprise, then, that after meeting painter Theo van Doesburg in 1916, he joined the De Stijl movement at its inception in 1917. It is no coincidence that De Stijl was founded during one of the most chaotic periods in modern European history. The group's artists and architects wanted to create an overall plan, a blueprint that would supplant the randomness of the individual and supply a set of universal laws based on the principle of harmony through abstraction. The visual vocabulary was one of straight lines and right angles, the three primary colors, and the neutral shades of white, black, and gray. The Oud building where the influence of De Stijl is most apparent is perhaps the Café De Unie (1925) in Rotterdam. It has often been compared to Mondrian's Tableau I, and even though the painter and the architect only met once, the similarity in colors and arrangement of planes is striking. Oud had been called in to assist a café-owner who had submitted three different designs for his new building, all of which were rejected by the city. Though Oud's decidedly Modernist proposal raised many an eyebrow, it was ultimately accepted and built.

The city had intended to allow the café a life-span of just 10 years, but the building stood until 1940, when it was destroyed during a German air attack. Rotterdam city planner Hans van Zwienen remembered the building from his childhood, and in 1978 he suggested that it be reconstructed. An exact replica of the café, built at a cost of $60,000, opened in September of this year. The ground floor again houses a café and restaurant; the office spaces above, suitably enough, are for the city-subsidized Rotterdam Art Foundation. The Foundation has in turn underwritten a film telling the building's story. "It was difficult to find a site for the reconstruction," says van Zwienen. "The spot where it stood before the war is now occupied by a department store." Thanks to an article in the local paper, a real-estate developer was found who was willing to invest in the project. Only one significant change in the layout has been made—the addition of a small auditorium in back. And happy irony: at the insistence of the Rotterdam Art Foundation, the interior will look more like what Oud had in mind than it ever did in the original café.

Peter Verschure

Oud agreed with his De Stijl colleagues that Dutch architecture and painting after World War I were moving toward the universal and the monumental. But, at the same time he saw that architecture, more than painting, was tied to practical considerations. A hint of his future work can be found in a contribution to the first issue of the magazine *De Stijl*—an article entitled "The Monumental Townscape"—where he wrote that "the modern streetscape will be dominated by building blocks in which the houses will be placed in a rhythmic arrangement of planes and masses. . . . Building in blocks or large groupings will take the place of the individual house."

In 1918 Oud accepted a post as architect for Rotterdam's Municipal Housing Service, not so much out of enthusiasm but rather because it was the only way to stay out of the army. His irritation at the specific demands incumbent on housing projects soon gave way to a sense of the challenge they posed. "For the development of an architectural style, a good (in the sense of purely technological and practical) house is more important than a beautiful house," he wrote that same year. Oud, like Rietveld, sought the solution to modern architectural problems in rationalization and standardization. Mass production would give a sense of measure and proportion to the city image, he felt: "I await a style-defining crystallization of form through the standardization of building elements." That same year he wrote an article in *De Stijl* entitled "Art and Machine," stating that "for the modern artist the future line of development must lead inevitably to the machine, although at first the tendency will be to regard this as heresy. Not only because the machine can give more determinate plastic expression than the hand, but also from the social point of view, from the economic standpoint, the machine is the best means of manufacturing products which will be of more benefit to the community than the art products of the present time, which really only reach the wealthy individual." These views, as well as his work in Rotterdam, accelerated his estrangement from the De Stijl painters; there was too little sympathy for his striving to reconcile creativity with necessity. In 1921 Oud left the group.

"White Village"

In 1922 Oud designed his third project for Rotterdam, a triangular tract called the "Witte Dorp" (White Village). To his relief Oud was for the first time able to get away from the traditional Dutch building material, brick. The colors, again, are Mondrian's: white plaster walls, blue doors, red roofs.

For years now the White Village has been the subject of a fight between preservationists and the otherwise well-intentioned urban renewal department. The village was originally built as temporary housing for "antisocial" families and was not meant to stand for more than 25 years. For that reason the project—343 dwellings, eight shops, and a small firehouse—was built on concrete slabs instead of poles pounded deep into the swampy ground that are used for permanent structures. And that is the heart of the problem: now, 63 years later, the houses are lurching sideways, cracking, and leaking.

In 1977 the city of Rotterdam pumped 7.5 million guilders ($1.8 million) into partial restoration, but the deterioration has continued. The city had one last chance to declare

Tracy Metz, an American journalist living in Amsterdam, writes for the Dutch newspaper NRC Handelsblad.

Oud's contribution to the Weissenhof housing development in Stuttgart, West Germany, is a five-unit, poured-concrete block of terrace housing. Built in 1927, the structure was recently restored as part of an overall rehabilitation undertaken by the city.

©S. J. Gragnato

the village a landmark, but refused on the grounds that thorough restoration would cost $50,000 per dwelling, thereby using up all the money available for landmark preservation for the next 25 years. Moreover, hadn't the inhabitants themselves been pressing the city to give them better, more modern housing? The upshot of the issue is that, while Café De Unie has been rebuilt, Rotterdam is demolishing the White Village next year.

This decision has especially enraged Roland Gunter, a West German art history professor. He came to Holland last year to air his condemnation of Rotterdam's lax attitude. "How is this possible in a city with a university, an art foundation, an academy of architecture, and the future location of the national architecture museum?" he asks in astonishment. Gunter, who contends that a complete restoration would not be as expensive as the city claims, has an alternative to demolition. One of the inhabitants' complaints is that the houses are too small by contemporary standards, and he proposes rebuilding the houses, keeping the exterior the same but making four dwellings into three. If all fails, says Gunter, the White Village might well be reconstructed in Germany. "Dortmund and Hannover are interested. These are serious plans."

Rov Bijhouwer of Rotterdam's urban planning department, however, feels that keeping only the facades intact would be tantamount to building a stage décor. "The interior and the street pattern are just as essential to the character of a young landmark," he says. Three architects have submitted plans for new construction. None has suggested identical reconstruction, but in all three there are traces of Oud's work. In the Dutch tradition of community participation, the final choice will be made at neighborhood elections. In the meantime, the planners are compiling as complete a documentation of the existing project as possible. There is no doubt that a new White Village is an expensive proposition; not counting the actual construction costs, the city still has 9.5 million guilders in loans to pay off for the sloppy restoration in 1977, plus another 3.5 million to raze the buildings and prepare the site.

The Kiefhoek

Another of Oud's Rotterdam projects for low- and middle-income housing, however, has been landmarked. The Kiefhoek (1925-1930), comprising 298 white-plastered houses, two shops, and a church, was recently given what one might call a lick and a promise: new roofs, facades, chimneys, window frames, and paint. By using a municipal program for the jobless, the city was able to keep costs down to $7,000 per dwelling. "Oud had to economize drastically on his original plan," says Peter Verschure, of the Rotterdam urban development department. "He not only had to leave out conveniences like showers and built-in ironing boards, but here, too, costs were cut by building on concrete slabs. Just a year after the Kiefhoek was completed, the facades started to crack. One block of eight houses is in such poor condition that the city is seriously considering tearing it down. And there's no talk of real restoration until after 1990."

While working on the Kiefhoek, Verschure became increasingly fascinated by Oud's visual vocabulary. "He was doubtless under pressure from the city to attain a high density. But even within that demanding program, you can see that he enjoyed finding refined ways of using symmetry, asymmetry, and repetition. It is very subtle, more so than in the Witte Dorp. It grows on you."

The Weissenhofsiedlung

Whatever the fate of the White Village, its construction in 1923 encouraged the city of Stuttgart to invite Oud in 1927 to participate in the Weissenhofsiedlung, an experimental housing project under the artistic direction of Mies van der Rohe. Sixteen prominent architects—among them Walter Gropius, Le Corbusier, Hans Poelzig, Mart Stam, Bruno Taut, Max Taut, and Hans Scharoun—were asked to build a total of 60 dwellings on a hill northeast of the city in what was to be the first international manifestation of *Neue Zachlichkeit*, or New Objectivity.

The idea for the project originated with the Deutsche Werkbund, a group founded in 1907 to improve the position of German goods in the international market by introducing a higher standard of design. Like De Stijl, there were profound differences of opinion among the Werkbund's members, but through frequent exhibitions and publications the group fostered a common sense of purpose. The architects in particular felt they were working together to improve the nation's industrial culture. Because of the Werkbund's prestige, the Stuttgart city council incorporated the Weissenhof into its regular building program and provided the land.

Oud's contribution was a compact row of five one-family houses. Stuttgart is now renovating the entire complex—including an apartment block by Mies van der Rohe—and the restoration of Oud's building was finished just over a year ago. The previous inhabitants have returned to four of the five houses; the fifth house has been given to Sibylle Heeg, an architect at the University of Stuttgart. She is, to put it simply, thrilled and was more than happy recently to give a guided tour. "Oud was really ingenious," she notes, pulling open a cupboard. "You see how thick the walls are inside? The heating was hidden away here inside the wall so that the hot air would circulate throughout the house. In every possible spot he used the space between the walls to build cupboards and closets, a system well-known in America but unusual here. There is space for utilities on the north side; that is why there are no windows on the ground floor. Above the utilities on the second floor, there is a small room that my son uses as a playroom."

Oud, it appears, was remarkably adept at finding places to let in daylight. The house has three double skylights—including one in the bathroom—that can be easily opened with pulleys. In all three doors on the second floor there are little eyeholes of glass surrounded by a chrome disc, a seemingly maritime motif. "Ostensibly to let in more light," says Sibylle, "but personally, I think that was just legitimization for a design element he liked." The only change to the interior was breaking out part of the wall between the kitchen and the living room. For the rest Sibylle has tried to keep to the spirit of the architect, and she consulted the Landmarks Commission regarding the original colors of the woodwork. Moreover, the English company that had manufactured the original window frames still exists and was commissioned to make new ones just a few inches longer to accommodate the extra thickness of the added insulation.

In the Weissenhofsiedlung Modern architecture "went public" for the first time. In his opening-day speech, Mies van der Rohe called the project "part of the great struggle for a new way of life." There was criticism, of course—it was labeled "Stuttgart's Folly" and "a suburb of Jerusalem"—but for several months after completion 20,000 people a day visited it. This had a two-sided effect: on one hand it promised wider accpetance of the clean white surfaces and flat roofs that characterized the new architecture; on the other, it accelerated the process of polarization in Germany between the National Socialists and left-wing architects. It is not surprising, then, that in 1938 Hitler condemned the project as *Entartete Kunst* (degenerate art) and slated it for demolition, to be replaced by new headquarters for the Wehrmacht General Command. Although these plans never materialized, some of the Weissenhof buildings were used to accommodate anti-aircraft troops, and Mies's complex was turned into a children's hospital.

After Oud suffered breakdowns in 1927 and 1932, he was dismissed by the city of Rotterdam. Following the war he was disillusioned when he received no commission to help rebuild the shattered city. He was posthumously honored, however, by two building projects—a convention center and a town hall—that were executed by his son Hans, a civil engineer who recently completed a Ph. D. thesis on his father. And, for the demolition of the White Village, there is some compensation—and belated recognition—in the resurrection of Café De Unie and the renovation of the Kiefhoek and the Weissenhofsiedlung.

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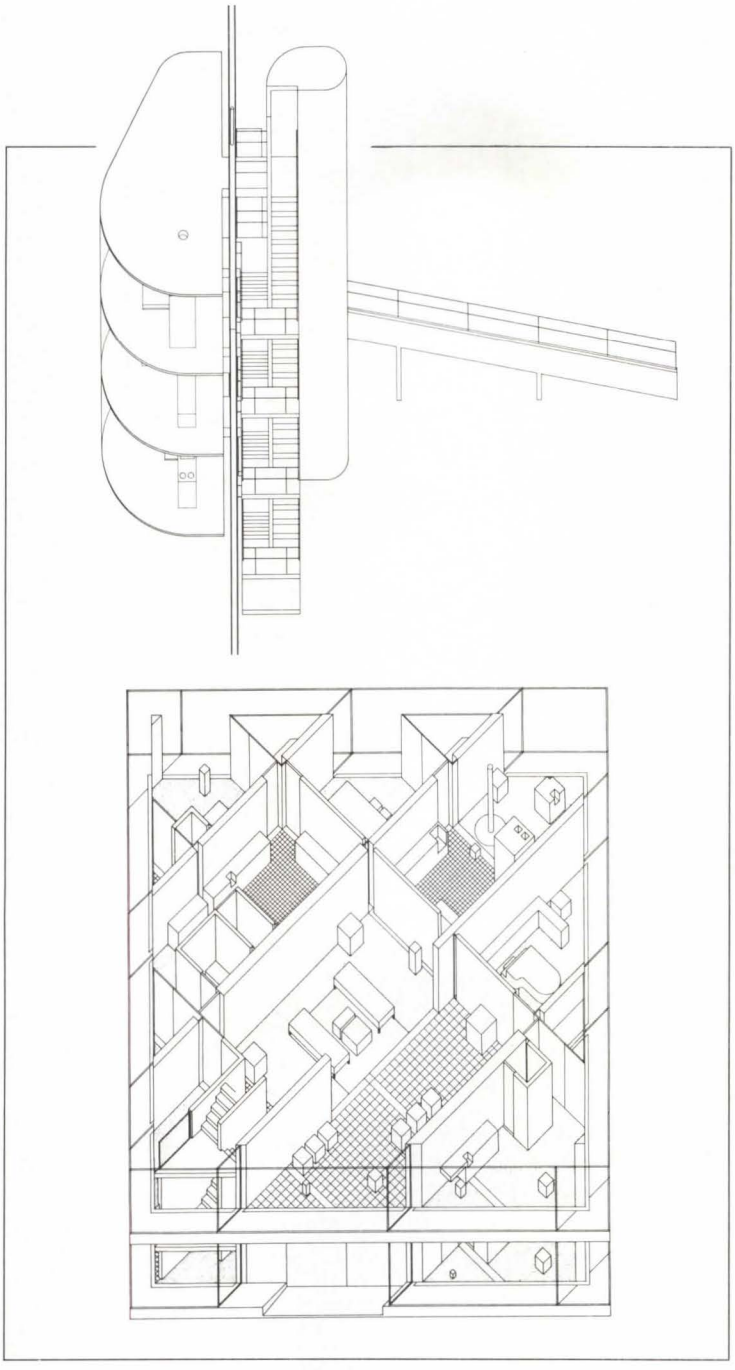

Top: Wall House 1, axonometric, 1968-74; bottom: Diamond House B, axonometric, 1963-67. From Mask of Medusa, *by John Hedjuk.*

Mask of Medusa, edited by Kim Shkapich; introduction by Daniel Libeskind. New York: Rizzoli, 1985, $50 ($35 paperback).

Reviewed by Michael Sorkin

When Kim Shkapich returned from Japan where she'd been supervising the production of John Hejduk's book *Mask of Medusa*, she was naturally full of stories. She seemed particularly struck by the wizened gent who'd directed the printing of the book, a man officially designated a "Living National Treasure." Our system of honorifics somehow doesn't embrace this kind of reverent national sentimentality, but if it did, Hejduk would top my list for enshrinement.

John Hejduk is an architect about whom it's only possible to write an homage or a diatribe. His work is situated with such precision and produced with such commitment that its ambiguities can only be seen philosophically, as didact's gaps, designed to query and to lead. Seeing his beautiful oeuvre of over 30 years assembled in *Mask of Medusa*, one cannot resist its power of instruction. It exposes its issues in the best way, not through harangue or seduction, but by example. More than any other architect producing today, Hejduk is engaged in exemplary research. He teaches by inviting witnesses.

For the past 10 years, Hejduk has been the dean of the school of architecture at Cooper Union and has fashioned the place into what is easily the most singular and visionary architectural school in the world. At a time when most schools are heavily invested in the evasions of pluralism or in selling out to the spurious practicalities of "development," Cooper remains dedicated to architecture's prosody. It's all Hejduk's doing. The school doesn't exactly institutionalize his sensibility as much as it depends on it for inspiration and protection. Hejduk—the eternal investigator, the "paper" architect—is a larger-than-life vision of what a student should be, in every way attenuated. He's literally large, a gigantic six-foot eight, and filled with the congenial madness of the romantic, framing delicate metaphors in his almost impossible Bronx accent.

Hejduk began his own architectural studies at Cooper, went on to Harvard in the early 1950s, had a Fulbright in Rome, worked in various offices—a broad, if not immediately exceptional route. His early work is very much of its time, the sort of organicized Modernism that sought to enrich pared forms with a more fecund sense of shape and material, modestly sensualizing received models with fieldstone and curves. In 1954, however, he was offered a job at the University of Texas, where Harwell Hamilton Harris had just been installed as dean. Hired with Hejduk were Colin Rowe (a theorist of great influence in American architectural education) and the painter Robert Slutzky, educated under Albers and devoted to the investigation of De Stijlian rigors. The three annointed themselves "The Texas Rangers."

The time in Austin proved incredibly fertile for Hejduk. He immediately set himself a project which was clearly informed by what must have been a most happy symbiosis among the Rangers. It was to be a suite of 10 houses, each an investigation of the nine-square plan of the canonical Palladian villa (the subject of Rowe's later essay "The Mathematics of the Ideal Villa"). As a compositional discipline, the Mondrianesque paradigm—the enrichment of an abstract minimum—was paramount. As a more strictly architectural investigation, the Miesian mode, with its fascination for the details of pure intersection and its distilled strategy of elements, suffused.

Hejduk completed seven of these Texas studies, and they are a remarkable corpus, austerely drawn with the hardest leads, toying persistently with the edge of the envelope beyond which architectural abstraction becomes mere composition. Unbuilt, perhaps unbuildable, the drawings nevertheless motivate production, presaging the derived investigations of influenced architects like Peter Eisenman and establishing the parameters of the nine-square problem, one of the classics of architectural pedagogy. They also lead directly to Hejduk's next series of studies.

In *Mask of Medusa* the Texas Houses are presented in plan, elevation, and axonometric, the preferred Modernist mode of representing three dimensions. Axonometric projection is privileged for its "objectivity," for the fact that, unlike perspective, its every dimension is true to scale, yielding a favored flat, anti-illusionistic space. In making his projections of the Texas Houses, Hejduk used generating angles of 30 and 60 degrees. What this yielded on the page were (given the square basis for the underlying plans) a series of shapes that approached the diamond, unbalanced in a kind of latent aspiration to a 45-degree relationship to plan. I impute this latency not simply because of what came next for Hejduk, the Diamond House series, but also because of historical precedent in the work of Mondrian and van Doesburg.

In any event, the subsequent Diamond projects represent a striking development. The act of rotating the plan to yield the diamond, while still indebted to cubistic concerns, proved to be a tremendously stimulating move. First, it generated a system in which the third dimension seems intrinsic rather than derived, in which space is subsumed by plan rather than simply its by-product. Its visible rotatedness also implies the fourth dimension in its irruption of the stasis of the square. The diamond thus becomes more strictly architectural even as it becomes more purified in its abstraction. And, as Hejduk himself has noted, the diamond is also a kind of ideogram for perspective, diagramming station point, cone of vision, vanishing point, and—along its hypotenuse—picture plane.

The discovery of this hypotenuse marks a crucial divide in the evolution of Hejduk's work. For Hejduk, the hypotenuse became architecturalized as a wall, the moment of "entry-exit," a plane of transformation as well as designation. This retrieval of the wall marks the point at which Hejduk's architecture becomes truly temporal and spatial, resulting in a number of consequences. Most immediately, it liberated subsequent work from the hemming frame of the Texas and Diamond series, that circumscribing residue of painterly inspiration. Thus untrammeled, the work became newly free, and Hejduk's forms emerged as autonomous objects, rather than operations within a system. A series of projects in the late '60s and early '70s

Michael Sorkin is a practicing architect in New York City and the architecture critic for The Village Voice.

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celebrates this literal pulling apart of elements, the freeing of shapes from rationalist compaction. An increased use of models is another pleasure of this conquest of air.

But, most dramatic of all, was Hejduk's invention of the wall house, the creation of what to me are his first really great works. The wall is architecture's most intrinsic datum. By discovering the wall through the long compositional research of the Texas and Diamond projects, Hejduk was able to use it in a new way. His enormously influential 1973 scheme for the Bye House, designed for a site in Ridgefield, Conn., is seminal. Floating in front of a wall compounding both backdrop and frame are three sinuous room/elements, foregrounded like scenographic clouds in a theatric sky. Behind the wall is an apparatus of support comprising stair, plumbing, another chamber, and a long perpendicular hallway which elongates the composition and adds ritual duration to the physical movement among the elements.

The wall projects represent both a turning point and a point of great maturity in Hejduk's research. They stand at the peak of a trajectory of investigation that, for all its originality, was centrally engaged with issues at the formal core of "classical" Modernism. As the Texas Houses were in many ways enlargements of preoccupations that had stirred Mies and Mondrian, so the wall projects were partially the product of an awakened interest in Le Corbusier—in his plasticity, color, sense of space and motion, and his certain way of deploying multiplicity. This interest in Corb coincided with a larger absorption in things French: a fascination with Parisian surrealism, a new attention to the novel, to Flaubert and Stendahl, to Robbe-Grillet, to an idea of risk and the fascinating tenuousness of narrative.

Hejduk sometimes describes the subsequent transformation of his work as a movement from an architecture of optimism to one of pessimism, a description that both occludes and reveals. Certainly, he has exceeded the minute certainties of geometric investigation and become absorbed in the resonance of dissonance. His recent work has also left behind the centering certitudes of the received architectural program. This "pessimism" is one which no longer finds sufficiency in "the house" as a research armature and which is no longer able to treat any aspect of architecture as, in effect, a given. Much of the more recent work has been produced under the rubric of "Masque." The intent, it seems, behind this invention is to extend the lyricism of his architectonic concerns to the structures of life.

The Masque abets architectural narrative-making by allowing a retrieval of the mimetic. Hejduk is interested in the line between masque and mask, in architecture as both the guise and the concealment of social life. The creation of these architectural dramas entails much risk. The poet's search for penetrating realignments of the familiar can lead—as is the case with so much architecture nowadays—to depressing recapitulations of the banal, to a pseudo-mystic poetics of kitsch. Hejduk's work, though, is so achingly genuine, so affecting both formally and dramatically, that there is never any doubt of the profundity beneath the simplicity. It may be pessimistic work in its persistent disengagement from conventionalism, but it's sheer optimism in its longing for an architecturally angelic, for strategies for reuniting space with an idea of the sacred.

The project for The 13 Watchtowers of Cannaregio, designed in 1979 for a campo in Venice, is structured around a narrative program which proposes that the city designate a lifetime inhabitant for each of the identical towers, to pass life in monumental, watchful solitude. The program also includes a sort of on-deck house in the campo, where another citizen awaits a vacancy on the death of one of the 13. Elsewhere in the city is a "House for the Inhabitant Who Refused to Participate." Working from this outline, Hejduk crafts a lapidary exploration of the dimensions of the distance between this regulated content and a form which artistically redeems its essence. Central to the success of the project is an acute interpretation of the typology of the tower and of the historically mesmerizing character of Venetian space, a hoary artistic objective and an object of persistent fascination for Hejduk. The more recent "Berlin Masque" fixates another terrain. If the Venice project was preoccupied with rituals of solitude, Berlin is concerned with forms of propinquity. A fun-fair-like spray of objects is arrayed on a hedge-hemmed site. Each piece is designed independently but enjoys a clear familial relation to the others. The forms are compounded of simple, materially straightforward elements that create a landscape of both repose and rebuke. The whole comprises a carnival of conciliation aimed at inventing an ambiance of contemplation and humility. Sitting, as it does, near the wall and the former headquarters of the Gestapo, it counterposes its own frailty and lightness to the oppressive banality of the adjacent evils, like grass growing on the tracks to Auschwitz.

Let's hope for another 30 years of such work, collected in as handsome a volume. This beautiful book is a tribute to the craft of both living national treasures involved with it.

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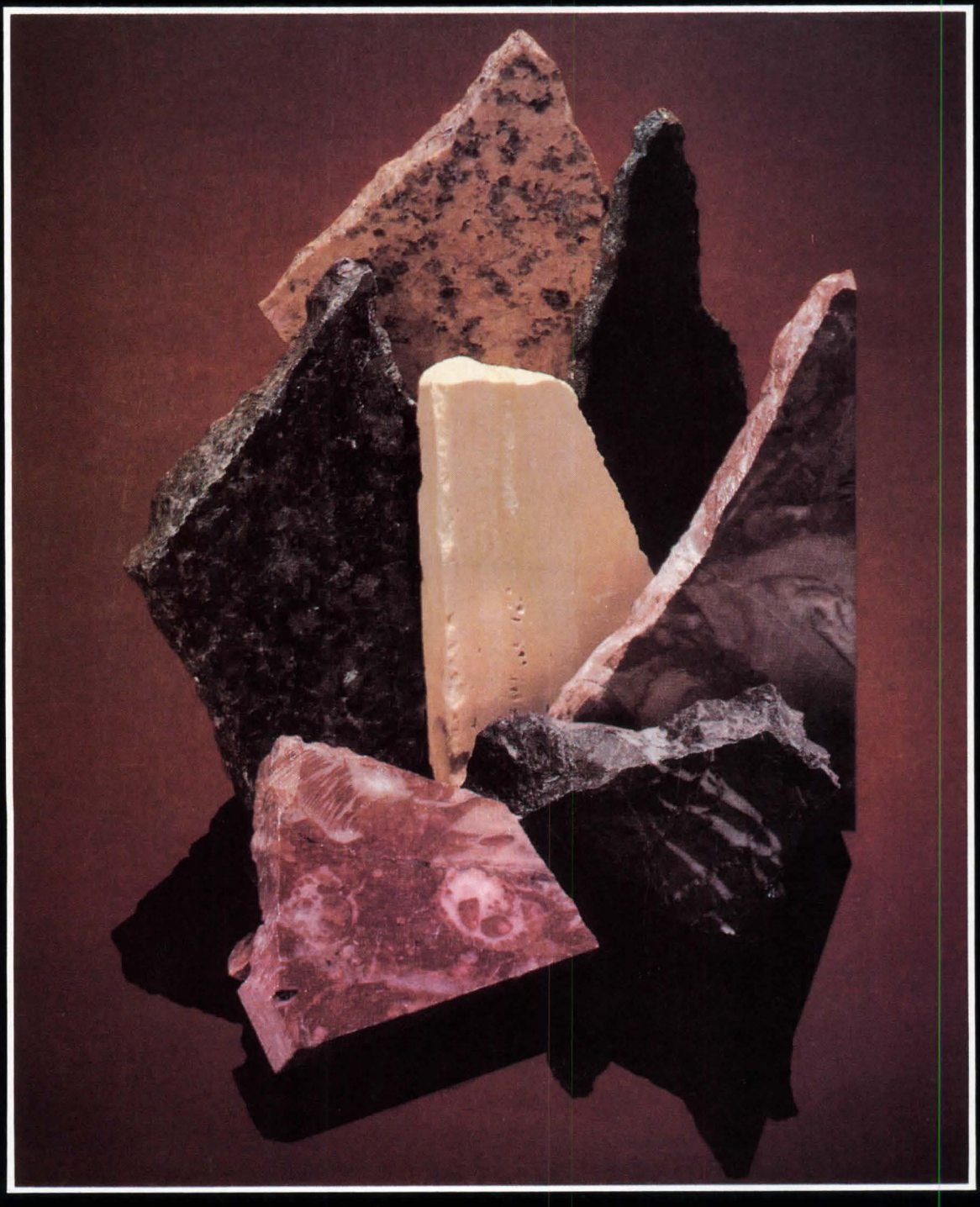

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Image, identity and appeal

Despite all those measured voices of the economists (for how many years now?) foretelling an end to the extraordinary and somewhat unpredictable boom in office-building construction, it has, until now at any rate, continued apace.

When that inevitable slowdown *does* occur, it will probably only ramify the tendency for clients to insist that whatever office structures *are* built have a strong, marketable "identity" or "image." That trend, however sensible in its long-ago origin, sometimes recently has crested in some excessive, nonsensible eccentricities—caricatures of regionalism, symbolism, whatever style you can name, or just overwhelming glitz.

Perhaps, for the sake of those future office buildings—in whatever quantity—we should add another simple word, "appeal," to the short list of marketable aims—an assured individuality doesn't *have* to have exhausting pyrotechnics!

This study includes four low-rise projects that, among them, use a lot of the usual devices—but with just that iota of restraint necessary for a longer-lasting, and real, appeal.

One, in Las Vegas, is a center for small rental offices that rediscovers the time-honored allure of a desert oasis. Another, offices for a law firm in Columbus, Ohio, offers civic hospitality with a fairly sprightly, and eye-catching, variant of traditional legal dignity. Regionalism gets a slightly Postmodernist transfusion in a rural Pennsylvania insurance company headquarters. And a high-technology corporation abets its desired image with a very crisp modern, but also very humanistic and sympathetic, building in a wooded expanse outside Cleveland.

Each of these buildings is obviously trying to "sell something" for the owner, even if it is only friendliness or an eye-appealing projection of self-esteem. But each goes beyond mere "packaging," and tries—through well-considered planning and design—to provide some really genuine, and lasting, answers to that problem. *Herbert L. Smith, Jr.*

Renaissance Center
Office Park, Phase II
Las Vegas, Nevada
Leason Pomeroy Felderman
Associates, Architects

Vistas for Vegas

© *Wolfgang Hoyt/ESTO photos*

A somewhat daunting challenge faced the architects of this village-like center for small rental offices: to create enough appeal to lure pedestrian traffic in the intense desert climate of Las Vegas. The problem was not so much to design for a forceful, overall impact, but to provide an appropriate atmosphere and identity for each of the tenants, and to beguile their visitors and clients to seek them out.

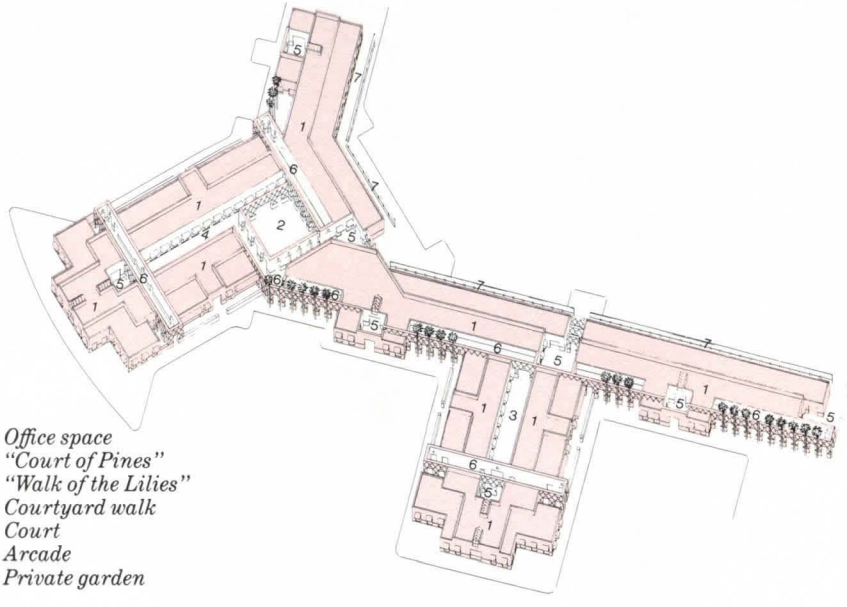
With possibly a few hints from the Alhambra and Luis Barragán, a meandering oasis was created, with unexpected pockets of shaded arcades and courts, replete with pools, fountains, plants, patterns, and colors. As William Bigelow, partner-in-charge for architects Leason Pomeroy Felderman Associates, comments, "All elements of the architecture are not apparent until one begins to explore. We wanted to create a sense of mystery and surprise for visitors. People don't expect to go around the corner and suddenly find themselves in a turquoise courtyard filled with water and an island of pine trees." And, he adds, "The tenant spaces here are quite simple and flexible. This is an architecture where the spaces between are more important. The courtyards and gardens are visual and contemplative; the arcades, which provide access to lease space, are linear and active." As directional guides, areas for pedestrian circulation are in shades of blue in the otherwise rose-toned, stuccoed building.

This latest addition to the 35-acre Renaissance Center backs up to the earlier Phase I buildings for commercial retail and larger corporate tenants. This second phase is designed as a multitenant structure easily subdivided into air-conditioned spaces as small as 800 square feet—with the average about 1,500 square feet. The entire angled building contains 76,284 square feet.

A final phase of additions to the office park, which will be complementary to this Phase II and flank it on either side, is now in production by the architects. All the buildings are separated by drives and planted "auto courts" for parking. The entire project is located in a primarily residential area of Las Vegas, and is all one story in height to keep in scale with the neighborhood.

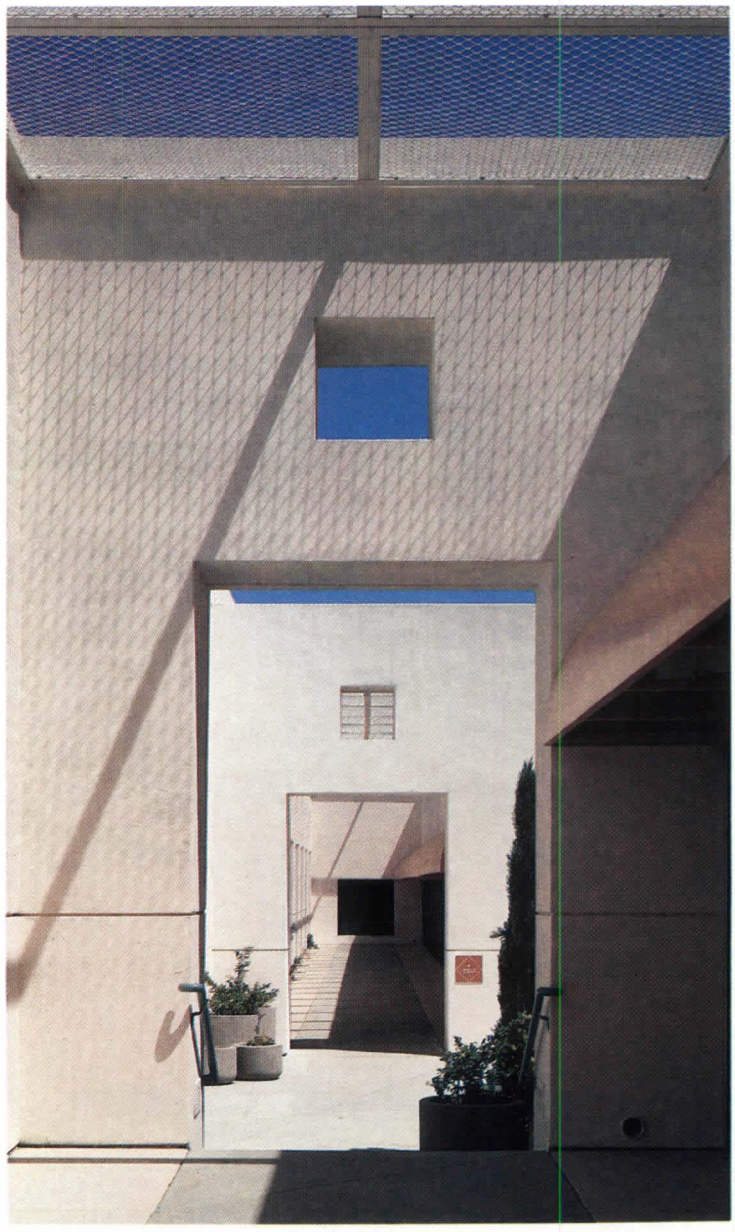
Buildings with such a simple but sophisticated appeal as this are refreshing to those of us whose mental image of Las Vegas is that of the bright lights of the casinos. But it seems to work. There is a major and growing daytime business community. Michael Saltman, managing general partner of the Vista Group—owners and developers of the project—says that, "The design of the project was atypical for Las Vegas. It took time to be accepted—the look was not familiar. But once we were able to draw in tenants to have a look and experience the atmosphere, the leasing program took off."

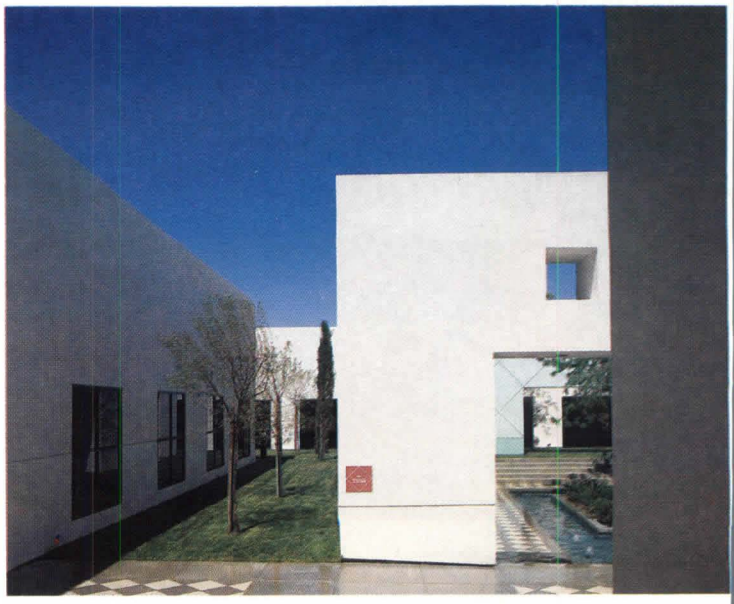
A lot of surprises and lush vistas greet the visitor in this new rental center for small offices. From the auto court (bottom), entrance loggias lead the eye into arcades (top left). These, in turn, open into courts—such as the "Walk of the Lilies" (center left), and the cloistered pools of the "Court of Pines" (below). The sketch shows the extent of the walks and courts, which help give identity for the tenants.



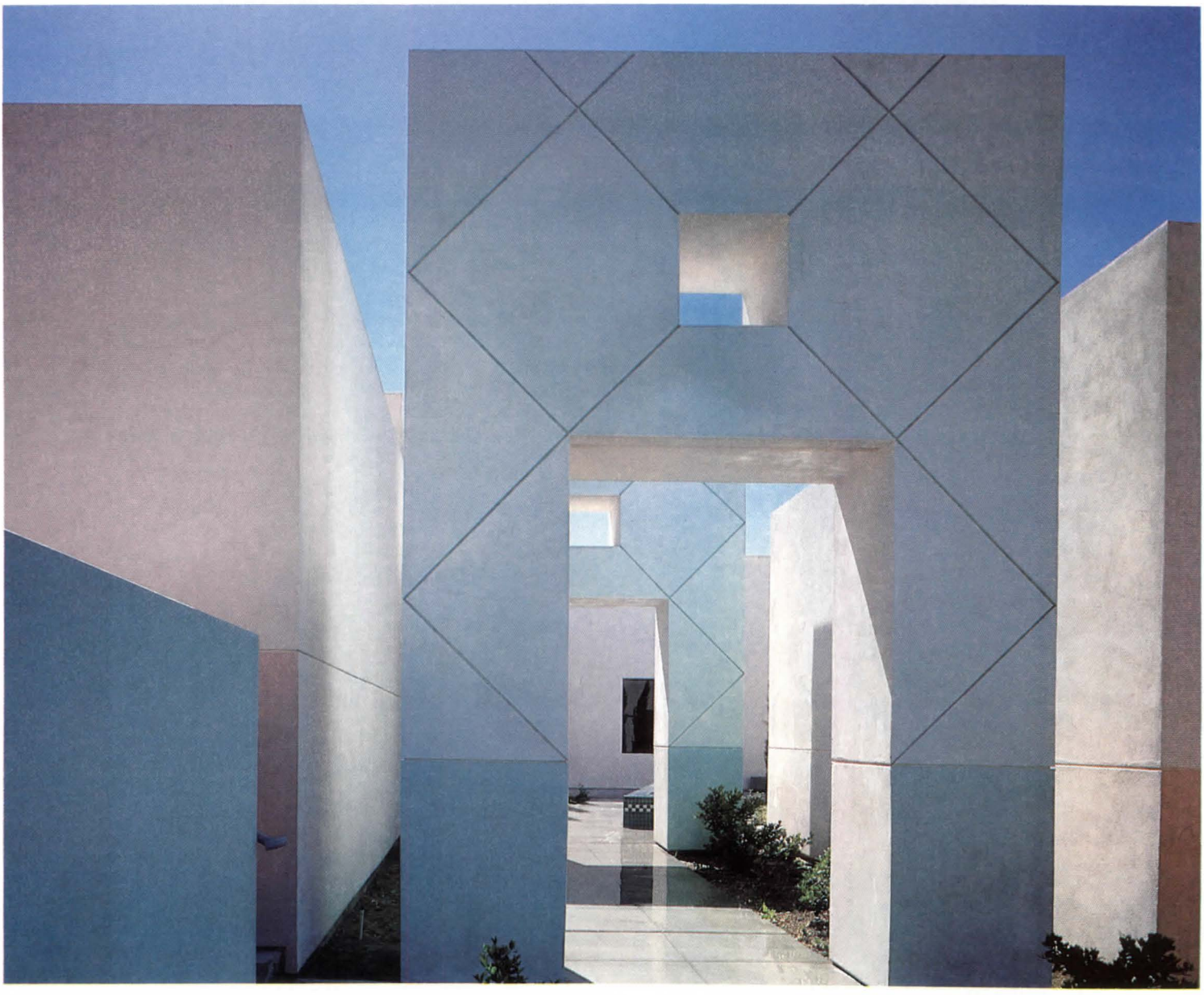
1. *Office space*
2. *"Court of Pines"*
3. *"Walk of the Lilies"*
4. *Courtyard walk*
5. *Court*
6. *Arcade*
7. *Private garden*

The interplay of simple forms, patterns, and soft colors give a constantly changing montage as one progresses through the arcades and courts of the office center—as these photos clearly show. Many of the walks are topped with a chain-link and steel frame system (directly below) which will support wisteria vines and form a luxuriant, shady ceiling. The arcades are oriented to shield the buildings from the intense western sun. All the phases of the development—retail and offices—are expected to work well together through complementary user needs. And the potential market seems to be increasing, with a lot of nationally known corporations recently establishing new, major operations in the city. As a sensitive effort to create an appealing desert architecture, it deserves every hope for success.





Renaissance Center
Office Park, Phase II
Las Vegas, Nevada
Owner:
The Vista Group
Architects:
Leason Pomeroy Felderman Associates—William H. Bigelow III, partner-in-charge; William H. Bigelow III, Richard Clark IV, Helen Bowling, design team; Philip L. Kroeze, project architect; James T. Wirick, project manager; Craig M. Shulman, job captain
Engineers:
R.L. Foley & Associates (structural); Tsuchiyama & Kaino (mechanical); R.E. Wall & Associates (electrical)
Landscape architect:
POD
General contractor:
Grove Construction



Headquarters for
Porter, Wright, Morris & Arthur
Columbus, Ohio
Warren Platner Associates,
Architects

Tradition transformed

The specially created garden court forms an eye-catching space for functions, and a lush outlook for all the conference and waiting rooms. Exuberant planting extends from the sculptural tubs, with their polished-stone inserts, through undulating balconies and plant boxes, to a hanging trellis at the top. As can be seen, all is dramatically lighted, within and without, for evening entertaining.

A big infusion of Warren Platner's special flair has created an unusual combination of sprightly dignity and traditional quality (from occasionally surprising means) for these new headquarters for Porter, Wright, Morris & Arthur—one of the nation's larger law firms.

The basic program requirements included some challenging ones of functional efficiency and economy: 530 people (330 with private, preferably windowed, offices) were to be comfortably fitted into six floors (totaling 150,000 square feet) of a new speculative office building. There were to be no general office spaces. According to Platner, this is half again as many people for the area as is usual in law firms.

Typically, the lawyers also needed lots of storage and file space; conveniently placed, semiprivate secretarial stations; a legal reference library; inviting reception and waiting areas; and lots of conference rooms of varying sizes. And, of course, computer terminals.

However, in addition to all these work a day needs, the lawyers especially wanted facilities that would enhance their community position as hosts and leaders. This entailed not just a design "image," but appropriate spaces that could be made available to clients and civic "movers and shakers" for receptions, public events, fund-raising, and the like.

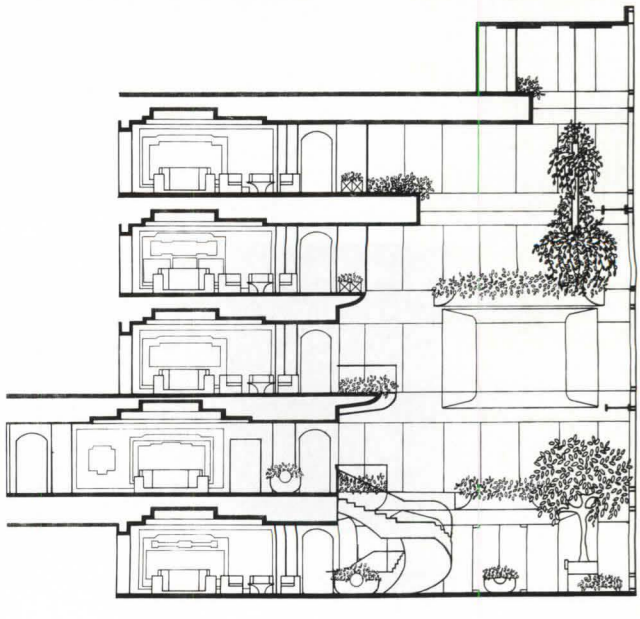
To solve these ambitious space problems, Platner enclosed an existing light well, which extended into the firm's six floors, to create a rather schmaltzy garden courtyard. This not only added room for crowds, but gave a unified identity for the firm's spaces. The court was flanked by overlooking stacks of dual-purpose conference/dining rooms and reception/waiting areas (drawings and photos overleaf). Any or all of these spaces may be used in combination for entertaining. Projections for balconies and plant-bays create undulating "shelves of gardens" as focal points for all six floors of the offices. And festive lighting extends use of the areas for evening functions.

On the efficiency side, Platner's "first task was to design the corridors," which were of necessity very long, due to so many private offices. He decided to make double duty of all that space, and use the halls as "corridor file rooms with aisles." Lateral files and cabinets are inset into the walls, and lighted by elegant, functional fixtures.

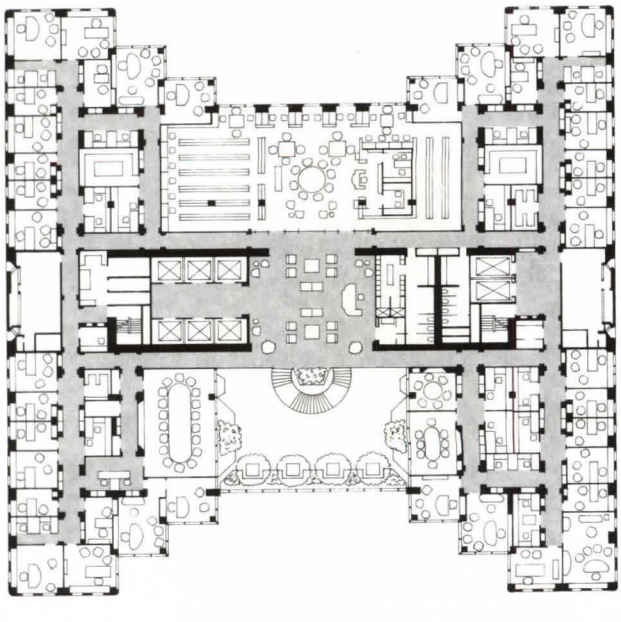
For economy, the interiors are "basically a plasterboard job," layered to form subtle panels. For a bit of traditional luxury, travertine is used sparingly in public areas for borders and corners, and mural-like panels of wood or fabric are used in conference rooms. Carpets are set into polished wood borders to give the appearance of area rugs. This touch of the sumptuous and, maybe, just a hint of gilt-glitz, is restrained enough to succeed very well, indeed.

Jaime Ardiles-Arce photos

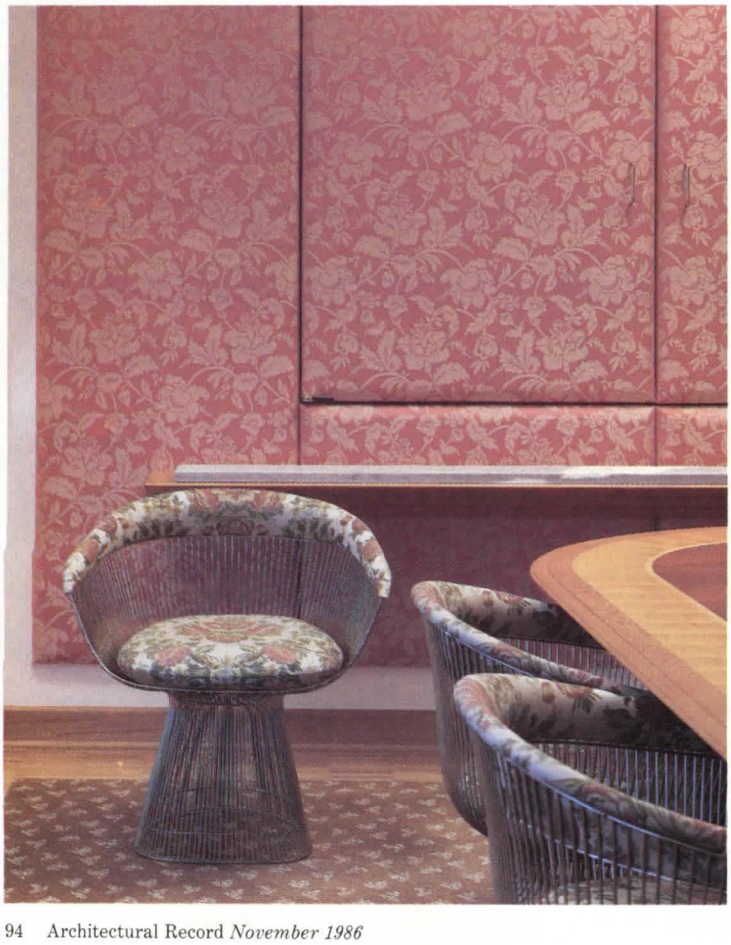
The evocation of a "traditional" ambience for the lawyers is done with insouciance and wit. Always an individualist in his design approach, Platner concerns himself with both the grand effects and the smallest details—and especially with design congruities that will create a little stir. All the furniture used here is modern, and of Platner's own design—some of it very well known, such as his elegant, spare, wire tables and chairs. Platner has—with some bravura—upholstered all seating with varicolored, floral tapestry, set it on busily patterned carpets he designed, and backed it (in the conference rooms) with panels of floral linen or richly grained, inlaid wood. This onrush of pattern is added to by the shadows and configurations of the plasterboard panels and coffered ceilings. These perhaps surprising combinations

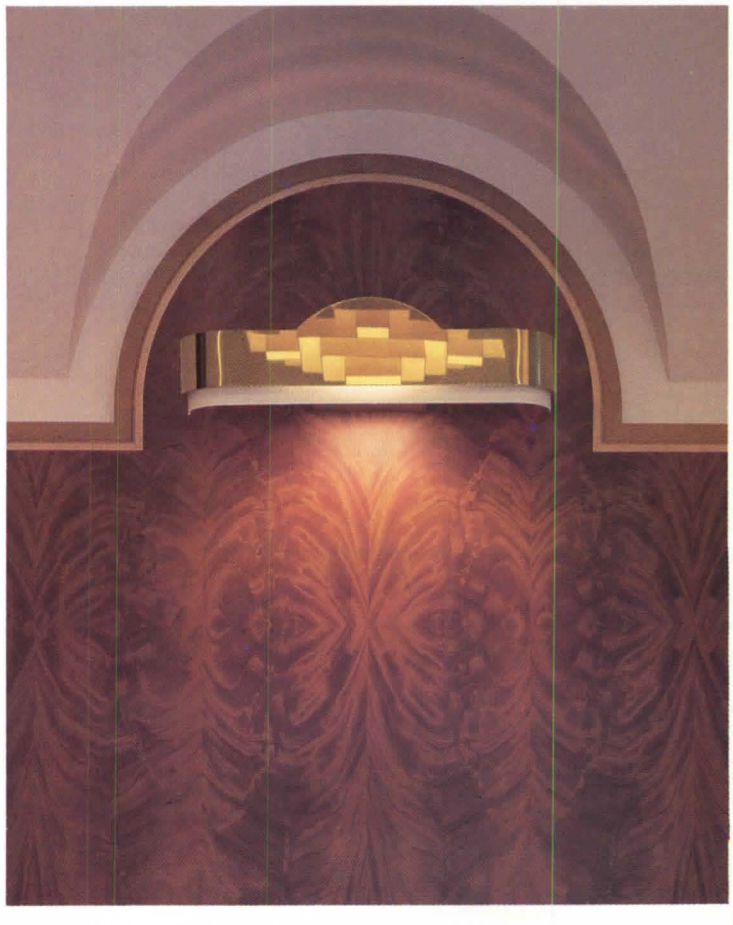


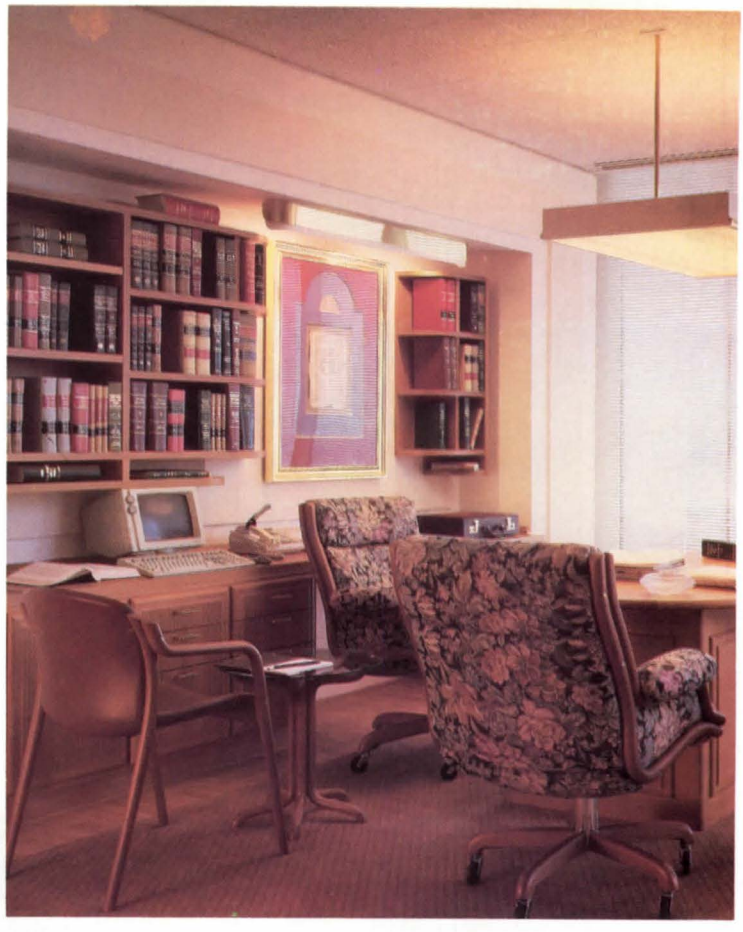
could easily have become stridently off-beat—but here, give an aura of quiet assurance. A typical conference/dining room (below left) shows clearly how a custom-crafted, inlaid table and wall panel, and end-walls of fabric (see details overleaf) give a fresh echo of yesteryear. The Platner-designed carpet is used small-scale in conference rooms and halls, larger in reception areas (below right). For the rather spectacularly framed "arts program," Platner evolved a collection of historic legal documents (researched and found by his office), which—partly because of their basic interest, and partly because of their framing and positioning, are singularly arresting. The end effect of all this attention to detail is one of a comfortable club with much to intrigue the mind and the eye.



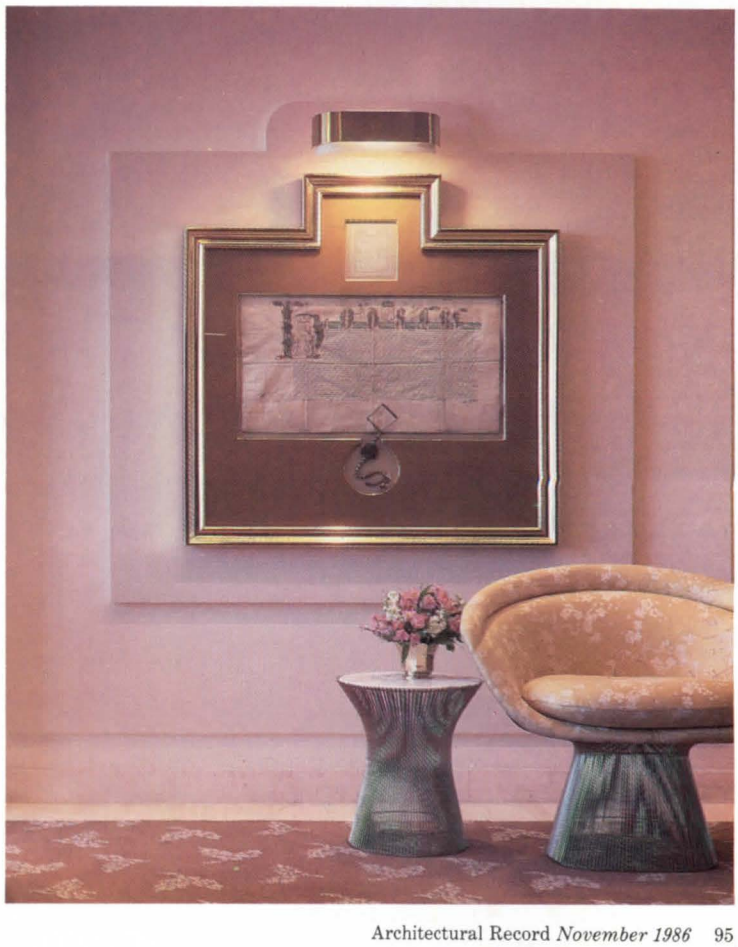
Platner has created focal points throughout, whether at corridor ends, or through the glass-walled library (above left). The length of the file room/corridors (above) is broken by arches and by widening at entrances to the secretarial spaces (opposite left) and the lawyers' offices (opposite right). Details are important, as can be seen in the photos below of a conference/dining room. At left can be seen the effect of the multiple patterns of carpet, upholstery, wire furniture, inlaid tables, and fabric panels (which open to reveal tackboards). A special wall panel and light fixture in a similar room are shown below. The legal documents shown opposite below are a 19th-century plasterer's apprentice contract, whimsically framed in rough plaster, and a Henry VIII contract giving a confiscated monastery to a friend.







Porter, Wright, Morris & Arthur Headquarters, Columbus, Ohio
Owner:
Porter, Wright, Morris & Arthur
Architects:
Warren Platner Associates—associates of Warren Platner on this project: Carl Gottschalk, Mark Morgaridge, Robert Brauer, Lee Ahlstrom, David Parisi, Kathy Pope, Linda Muirhead, Jim Wiebe, Eileen Shields
Consulting engineers:
I. A. Naman & Associates, Inc. (mechanical/electrical/plumbing); Skidmore, Owings & Merrill (structural); Jules Fisher & Paul Marantz, Inc. (atrium lighting consultants)
Construction manager:
Gerald D. Hines Interests
General contractor:
Dugan & Meyers/Newberg, a joint venture



PHICO Group Corporate
Headquarters
Mechanicsburg, Pennsylvania
Metcalf and Associates, and
Keyes Condon Florance,
Architects in joint venture

Regional recalls

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Regional Pennsylvania Dutch recalls abound in this company headquarters. The main facade (above top, and large photo opposite) echoes typical great, patterned-brick country houses nearby. The back (above) recalls a farmyard, framed by outbuildings. The end facades (photos bottom and right) forcefully symbolize over-scale barns and silos—here, glass block encloses fire stairs in the insets.

In the search for a design image that is friendly with its surroundings, recalls of regional motifs have, of course, long been a recurrent favorite. But it is a technique that can occasionally perpetrate some dubious extremes—from overly quaint sentimentalism on the one hand, to abstruse, far-fetched abstractions on the other. In this new headquarters for PHICO, an insurance company in the health-care field, regionalism succeeds in a strong, fresh way.

Located in largely rural Pennsylvania Dutch country, the building makes forthright use of local forms, materials, and patterns. Recognizable allusions are made to barns, big country houses—even to steel mills and antique quilts. But it is done with a reasoned, innovative eye. It is treated as a "straightforward object, set squarely in the wildflower meadows without apology," comments Philip Esocoff, project designer for Keyes Condon Florance. "Barns don't need to blend in—they can sit out there and not be an intrusion."

The structure is steel frame, with 10-foot ceilings, raised floors for conduits, and 30- by 55-foot bays, which give big, column-free areas for flexibility and future change. The exterior has a granite base, and is surfaced with patterned courses of unusual-sized glazed brick—8-by-8 and 2-by-8. An occasional sprinkling of bright red bricks sparks the otherwise monochromatic pattern. The roof is copper, which will eventually turn green. The scheme is almost, but not quite, symmetrical: the upper floor is inset on one side, flush on the other; fenestration is slightly, but calculatedly, off-balance.

Primarily planned for general office use, the headquarters is fairly "full service," and also includes a number of multipurpose conference rooms (with rear-projection facilities), a cafeteria, a health and fitness center, a library, a computer center, and a basement television studio to make educational tapes for clients. A soon-to-be-built wing will provide a big lecture hall and guest quarters. Loading docks are underground, and approached by an exterior ramp. Entrances for the flanking parking areas are via glass-enclosed links to the wings at back.

Several energy-saving factors were designed into the building. The main facades are oriented north-south, with south windows recessed for shading, and fitted with "light shelves" to reflect natural light into the building. East and west walls have limited glazing. Photo-sensitive cells adjust artificial lighting. The three atriums were designed to add natural light to the center of the building, while reducing the exposed perimeter.

All in all, the building is a suitably functional and very interesting one, which demonstrates that, perhaps, the answer to regionalism is not to be timid about it—and to use a lot of imaginative care.

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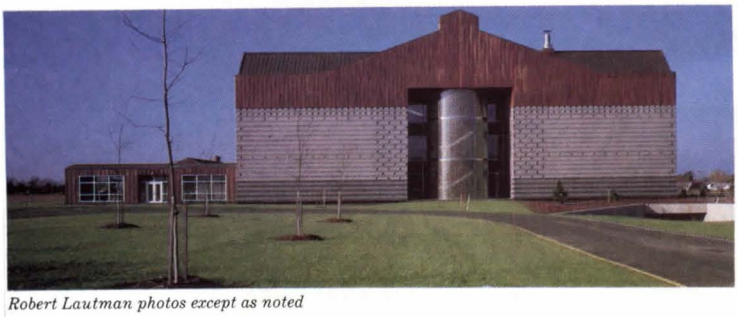
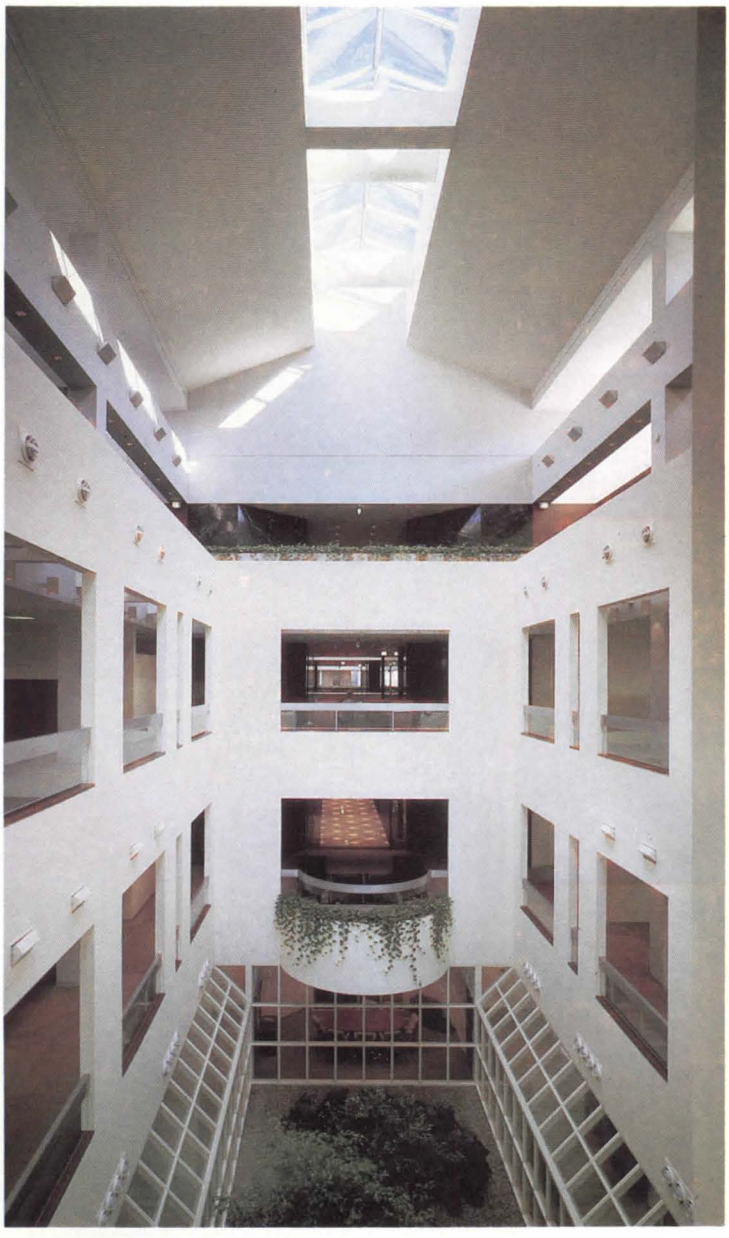
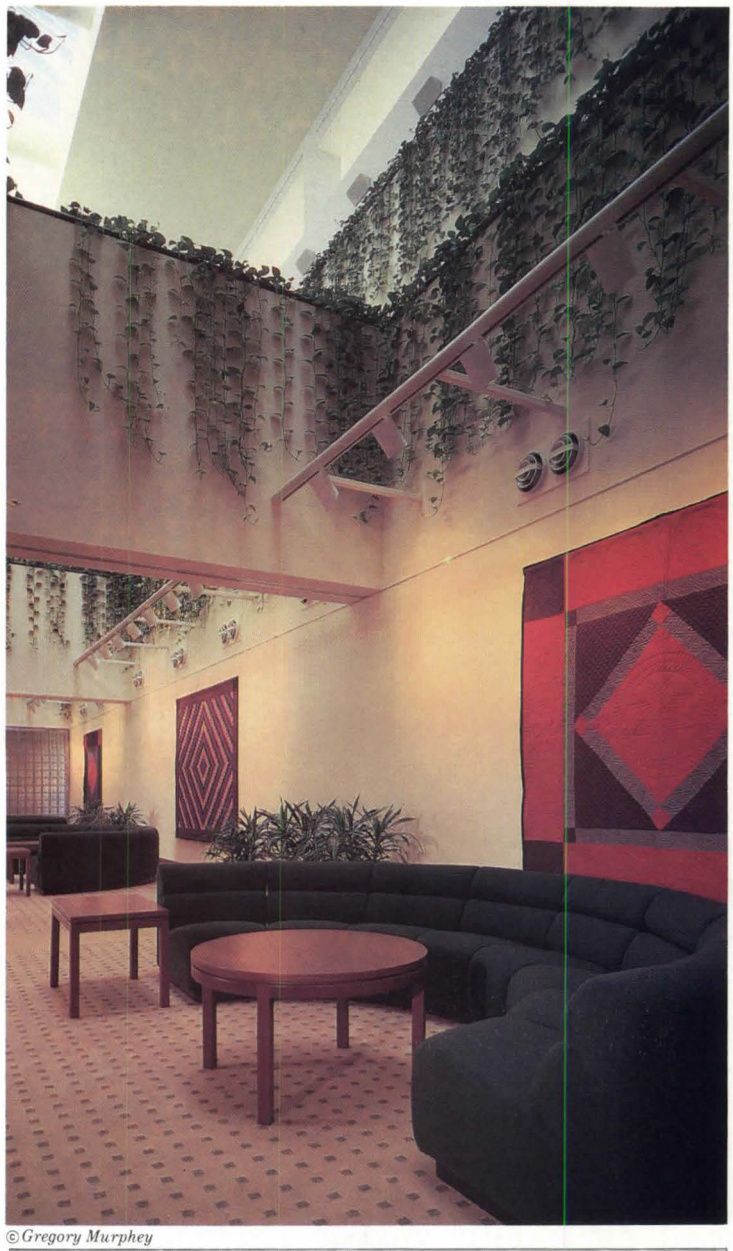


Robert Lautman photos except as noted

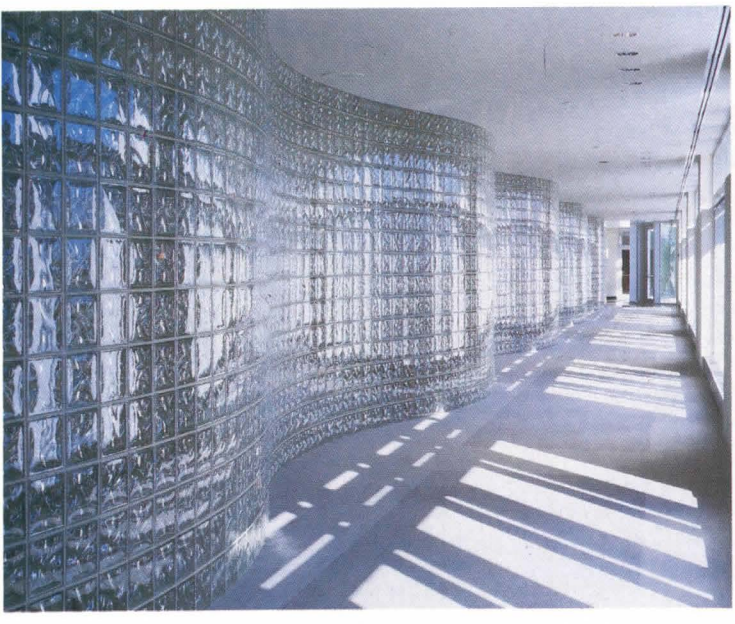
Internal, natural lighting was a major concern for the architects, who created three tall, bright atriums, and used a fair amount of glass block. The west atrium (below left, and section) uses a skylight and bounced light from clerestories to reach a planted garden and the offices at basement level. As can be seen in the photo, that lower level had to be wire-glazed because of fire laws. The east atrium (directly below) has its planting on balconies, and is used as a lounge. It also features a collection of Pennsylvania Dutch quilts. The regional quilt patterns are used as design motifs for the inlaid marble floors in the entrance areas (opposite, top left). The completion of the auditorium wing in the near future (shaded in plan below), will help enclose the garden off the cafeteria, and provide good-weather outdoor dining spaces.

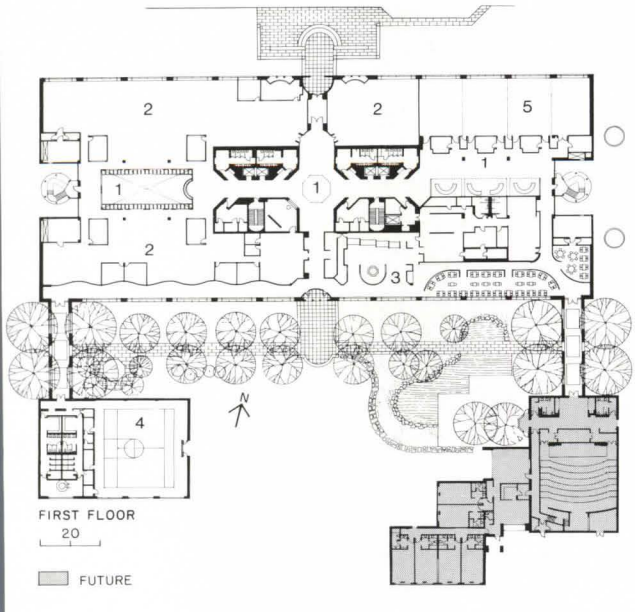




WEST ATRIUM LOOKING WEST

PHICO Group Corporate Headquarters
Mechanicsburg, Pennsylvania
Owner:
PHICO Insurance Company
Architects in joint venture:
Metcalf and Associates Architects—William H. Metcalf, Jr., partner-in-charge; Harold E. Davis, Jr., project manager; Kenneth Kajiwara, William Jones, project team
Keyes Condon Florance Architects—Colden Florance, partner-in-charge; Philip A. Esocoff, project designer; Steven Kleinrock, Amy Semmes, William Spack, project team
Engineers:
Syska & Hennessy, Inc. (mechanical/electrical); MMP International, Inc. (structural)
Consultants:
Kenneth Parker Associates (interiors); H. Edward Black & Associates (civil & site landscape); Oehme & Van Sweden (associate landscape architects); Hysen Associates (kitchen); George Sexton Associates (lighting); Hubert Wilke (audio-visual); Cerami Associates (acoustics); Olivier Strebelle (sculptor)
General contractor:
Gilbane Building Company

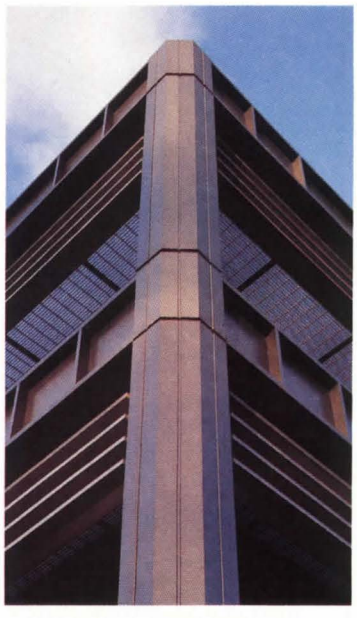




1. *Atrium*
2. *Offices*
3. *Cafeteria*
4. *Gymnasium*
5. *Meeting rooms*

Environmental empathy

TRW World Headquarters
Lyndhurst, Ohio
Lohan Associates, Architects



Almost as precisely and knowingly detailed as the high-technology concerns of its owners, this crisp, rhythmic, suburban headquarters gains its strongest identity and appeal from its major concerns for the environment—with great sympathy both for the site and for the personnel inside.

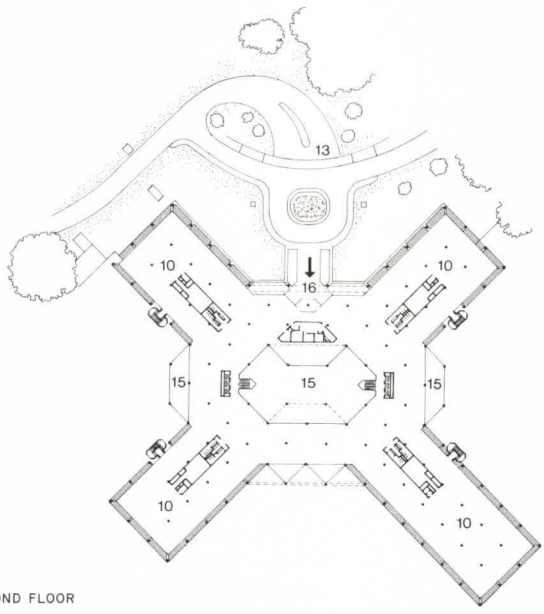
These new facilities for TRW, Inc.—an international company involved in such areas as aerospace, computer technology, and energy—are located in a rolling, beautifully wooded 134-acre tract in a suburb of Cleveland. It is a sizeable building: 450,000 square feet to accommodate 700 employees, plus 300,000 square feet for two levels of underground parking. It is sited on a central plateau, and approached by curving drives through woods, small valleys, and meadows. Roads are set somewhat below the surrounding grades to reduce their own visual impact on the terrain.

The building itself is also kept low in profile, with four slightly offset, terraced wings radiating from an atrium, to reduce apparent size. Materials mix machine precision with quiet, receding forest colors, which are used also to articulate function. Set on a base and substructure of Ohio sandstone, the building is framed in steel clad in a dark anodized aluminum. Nonstructural elements, such as window frames and sun screens, are expressed in lighter-colored anodized aluminum. Glass exterior walls are recessed six feet behind the structure for shade. Vertical circulation elements—fire stairs projecting outside, and elevator cores within—are surfaced in green marble. Entrance plaza and atrium pavers are brown granite. The atrium is the grand focus of the interiors (overleaf). Not only does it serve as the major circulation hub for the building—from the below-grade parking to the fourth floor—but its balconied levels provide sumptuous reception, lounge, and dining areas for visitors and the entire office staff alike.

For maximum flexibility and future ease-of-change, working areas in the wings are largely open-plan around four service cores, and have raised floors for easily accessible cables and conduits. The interior designers devised a demountable system of custom partitions, which provide low-walled workstations at the perimeters, and glass-fronted enclosed offices near the cores, so all may share the views of the surrounding parklands. Sun screens outside the glass walls, and adjustable, see-through blinds within, shade the glass for clear visibility.

All-in-all, it is an extremely considerate building—for people and for nature—and will undoubtedly provide all-season pleasure and efficiency for a long time to come.

©Nick Merrick, Hedrich-Blessing photos

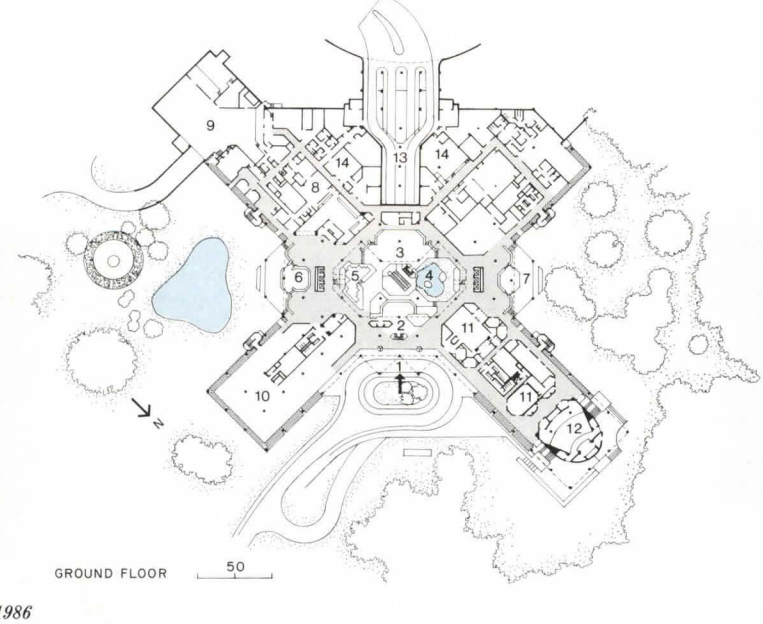


SECOND FLOOR

The aluminum-clad steel structure also provides the main visual interest for the big, glass-roofed atrium. Balconies at the different levels vary a bit in shape and size, forming an interplay of projections and insets. Lounges and dining spaces are replete with plants, art exhibition areas, and a waterfall that cascades down to the parking levels.

TRW World Headquarters
Lyndhurst, Ohio
Owner:
TRW, Inc.
Architects:
Lohan Associates—Dirk Lohan, principal-in-charge; Mel Wilson, project architect; Joseph Caprile, Jerome Jones, project managers; John Arnold, Joseph Doliner, Geoff Hamburg, Leonard Koroski, Jeanne Marker, Stephen Yas, project team
Engineers:
KKBNA (structural); Environmental Systems Designs (mechanical/electrical); Bevins Consultants, Inc. (civil)
Interior designer:
Interspace Incorporated
Architectural adviser:
Herbert H. Swinburne
Landscape architect:
Sasaki Associates

Consultants:
Howard Branston Lighting Design (lighting); Robert A. Hansen Associates (acoustical); The Wilke Organization (audio-visual); Ronald J. Goodrich & Associates (behavioral psychologist); Project for Public Spaces Inc. (atrium); Rolf Jensen & Associates (life safety); Paul Alan Magil & Associates (security); Heery Energy Consultants (energy); Cini Gissom Associates (food service); Art Options, Inc. (art)



GROUND FLOOR

1. *Visitors' entrance*
2. *Reception*
3. *Exhibition*
4. *Atrium/pond*
5. *Garden dining*
6. *Terraced dining*
7. *Main lounge*
8. *Food service*
9. *Loading dock*
10. *Office area*
11. *Meeting rooms*
12. *Auditorium*
13. *Ramps to parking*
14. *Service areas*
15. *Atrium—open to below*
16. *Employee entrance*

Lloyd's
London, England
Richard Rogers Partnership,
Architects

Lloyd's of London

It has been almost a decade since the completion of the Centre Pompidou, but the Parisian "cultural fun palace" continues to haunt Richard Rogers as his best-known building. Though the architect has moved on to design industrial commissions and urban projects without his former partner and Pompidou co-designer, Renzo Piano, the only other Rogers-designed building that has received much attention in this country—primarily because it was constructed in Princeton, New Jersey—is the PA Technology Laboratory and Corporate Facility, a modest American version of his innovative Inmos factory in South Wales. The main reason for Rogers's low profile in the U. S. is that many of his important recent projects, such as the Coin Street redevelopment on London's South Bank, have addressed localized planning issues, or have remained unbuilt. However, the completion of Lloyd's of London will no doubt catapult the 53-year-old, RIBA Gold Medal winner back into the architectural limelight. The new headquarters not only houses one of Britain's most internationally prestigious and venerable institutions, but marks a significant new design direction for Rogers. A mere glance at the dizzying network of gleaming ductwork and service towers that crowds its glass and concrete exterior is enough to convey the message that Lloyd's stands as a far cry from the simple, well-serviced sheds of Rogers's past. Making the colorful, steel-braced rectangle of Pompidou look almost spartan by comparison, Lloyd's virtuoso display of structure and services is remarkable testimony to the potential richness and variation of late Modernism.

Like Norman Foster's Hongkong Bank, to which Lloyd's will be inevitably compared, Rogers's latest effort raises the science of building to a heroic art. It is an architecture to be envied by architects, inviting professional scrutiny and awe as to how each exposed, custom-designed detail was intensively developed and exquisitely crafted. As reflected by each of their new urban towers, both Rogers and Foster share a common belief in an uncompromised rationalism of prefabricated components and exoskeletal structure that often is achieved in close collaboration with the same engineers. Though the former partners' work has grown more closely allied in recent years since Foster moved away from the minimalism of the thin-skinned Willis Faber and Dumas building toward a more "honest" expression of structure, Lloyd's and Hongkong serve as reminders that the two practitioners still approach their shared obsession for technology from different perspectives. While Foster concentrates on single-mindedly devising the perfect object with Miesian elegance and restraint, Rogers assumes a more ad hoc approach to a changeable kit of parts that gives his buildings a less finished look. "Norman has the wonderful magic of making everything look absolutely completed and wrapped," states Rogers, who characterizes his own creative process as "a more open-ended proposition between transformation and permanence."

It is the adaptable nature of his work that won Rogers the chance to design Lloyd's, a commission that began in 1977 as a limited competition among six architectural firms (including, most notably, I.M. Pei and Partners and Foster Associates). Rather than proposing a finely tuned solution for the expansion of Lloyd's from its 1958 headquarters to an underwriting marketplace three times the size, the architect presented four alternative schemes. Each analyzed the insurance company's potential for growth on a small, awkwardly shaped site seemingly carved out from the City of London's cheek-by-jowl assortment of stone buildings. To maintain an uninterrupted area for "The Room," the open floor where Lloyd's underwriters lease work space, Rogers's winning design establishes a rectangular clear span at the center of the site and relegates the services to six external towers inserted into the leftover corners. It is a deceptively simple plan that focuses inward to a daylit atrium—one that belies the complexity of the building's setbacks and busy elevations, and that owes an obvious debt to the "servant-served" philosophy of Louis Kahn. Rogers readily admits this influence, noting that a visit to Kahn's 1953 New Art Gallery at Yale inspired him to design in concrete, resulting in Lloyd's crisply detailed, column-supported beam grid. He also pays homage at Lloyd's to another long-admired Modern master, Pierre Chareau, whose Maison de Verre is recalled in the new building's prismatic, translucent glass skin.

While Rogers hardly can be accused of overt historicism, his established practice of structural and mechanical exposure has assumed a more boldly scenographic quality in recent years. Lloyd's corkscrewlike staircase towers and Paxton-inspired, barrel-vaulted atrium are elements echoed in the architect's urban projects designed in the early 1980s, such as the proposals for Coin Street, the Whittington Avenue office complex for a site adjacent to Lloyd's, and the National Gallery extension. Rogers rationalizes this new elaboration at Lloyd's as a contextual attempt to capture the dynamic quality of the City's medieval layout of narrow, winding streets, and it does succeed in breaking down the scale of the building. More exuberantly decorative than the cool, streamlined abstractions of his previous work, it imparts the Gothic image of a cathedral still under construction. The "turrets" of the stainless steel-clad staircases, the "buttressed" overhangs of the mechanical rooms, the ornate filigree of ductwork, the "flying" bright blue service cranes, and the vaulted "nave" of the atrium create constantly shifting compositions of silvery forms, rather than discreet elevations, that make the profile of Foster's Hongkong Bank appear absolutely self-contained. Contrary to criticism of Rogers's design before completion, the 14-story structure does not dominate its immediate surroundings—it is unfortunately overshadowed by the dark presence of the expressionless Nat West, P&O, and Commercial Union towers to the north (preceding spread)—but stands as a welcome addition to the City's skyline of Wren steeples and Modern slabs, especially when viewed from across the Thames.

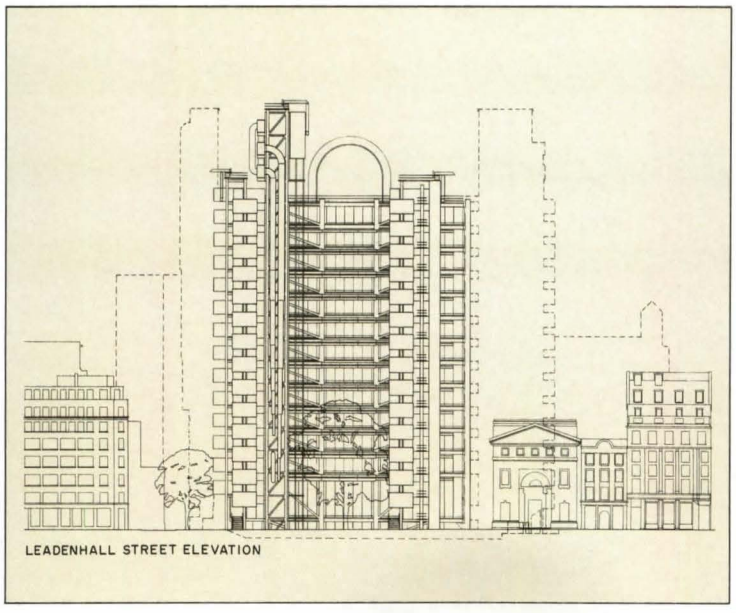
As at Pompidou, Rogers has attempted to enliven the ground floor of Lloyd's with public activities, such as a bookshop, an information center, and a café as an extension of the adjacent shopping arcade of the Victorian Leadenhall Market. Access to these spaces, however, is made a half level below grade from a gloomy perimeter walkway distinctly separate from established circulation patterns of the street. Other shortcomings of Lloyd's are evident inside the building. Due to the slender proportions of the 240-foot-high atrium, the effectiveness of natural illumination from its skylight is diminished, except on the sunniest of days. Though sophisticated luminaires inserted into the ceiling coffers compensate for this loss, they have been fitted with cool fluorescents surrounded by black shields, a combination that distorts color and makes the ceiling appear lower on the office floors. On the two administrative levels, a last-minute decision by Lloyd's management to commission a French interior designer has resulted in the oddly surreal mix of traditional décor inserted into Rogers's techy kit of parts, including an authentic Robert Adam room preserved in a rusticated, fibrous plaster box that floats in the middle of the 11th floor. Despite this incongruity, Rogers should take satisfaction in the fact that, while most contemporary offices pay lip service to "flexibility" by providing a few movable partitions, Lloyd's achieves it through a raised floor system that incorporates a spacious plenum for air distribution, electrical outlets, and computer cabling.

Predictably, Rogers's new building has been met with the same skepticism that greeted Pompidou. Opponents of the architect's work who continue to dismiss his mechanistic preoccupations as expensive styling devoid of innovation, however, will have missed the point. For the strength of Lloyd's lies not in "high" technology, but in a rigorous adaptation of current engineering and building methods, applied with unswerving logic and control. As Rogers succinctly notes, "There *is* no low or high technology, just appropriate technology."

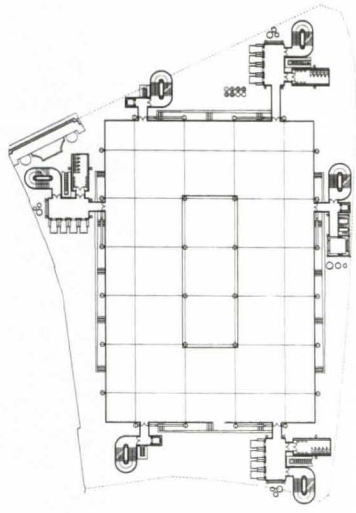
Deborah K. Dietsch


MILANO
GRILL

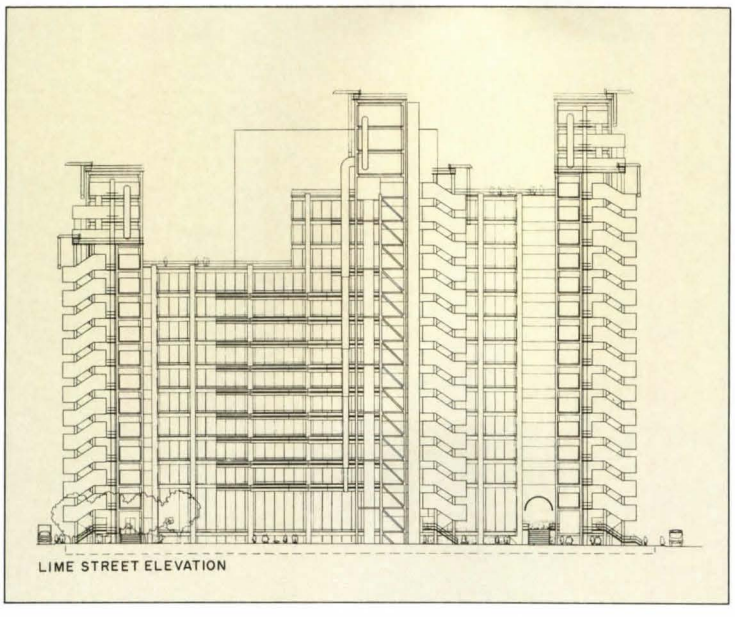
Since its beginnings in a 17th-century coffeehouse, Lloyd's of London has continued to outgrow a succession of buildings in the capital's financial district known as "The City." In more recent times, the insurance company's headquarters have included a 1928 neoclassical building, demolished—except for the gratuitous preservation of its portico (right of top elevation)—to make way for the Rogers design, and a 1958 stone structure, located across the street from the new building (right of facing page). To facilitate future expansion, Rogers devised a parti that achieves a high ratio of floor area to site (8:1) by placing the structure and services outside a doughnut-shaped plan. A skylit atrium provides an uninterrupted rectangle of usable space on the first floor for "The Room," the underwriters' traditional marketplace (middle plan). Overlooking this common space are 12 gallery floors that can be used by Lloyd's as extensions of The Room or leased as tenanted offices, according to changing market demands (top plan). Escalators in the atrium provide a secondary means of circulation to the stair towers, linking the ground floor entrance (bottom plan) to The Room and to four galleries now occupied by underwriters. In stark contrast to the simplicity of its plans, the building's glass-enclosed volume is chiseled into a series of irregular setbacks, stepped down toward the south (axonometric). The composure depicted in the drawings of the Leadenhall Street (top) and Lime Street (bottom) elevations is never actually experienced from the narrow, curved streets surrounding Lloyd's. More true to life is the fragmented view of the building's stainless-steel-clad service towers from the east (facing page).



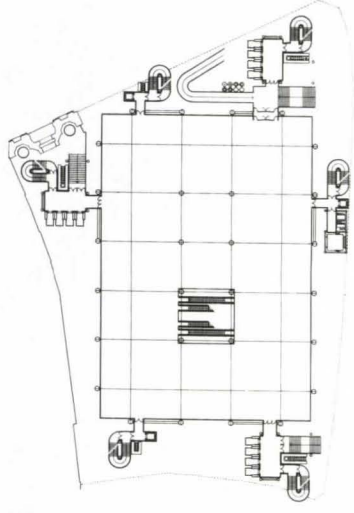
LEADENHALL STREET ELEVATION



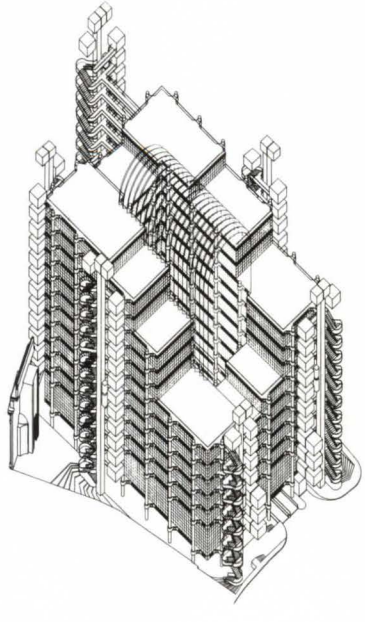
GALLERIES 3, 4, 5 AND 6

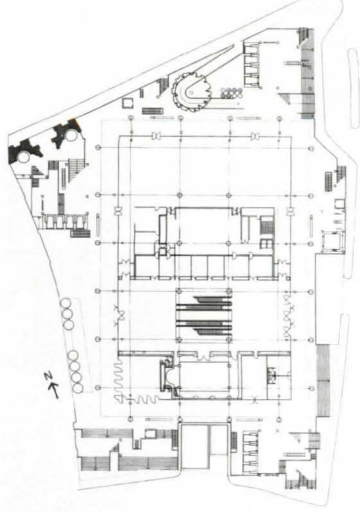


LIME STREET ELEVATION

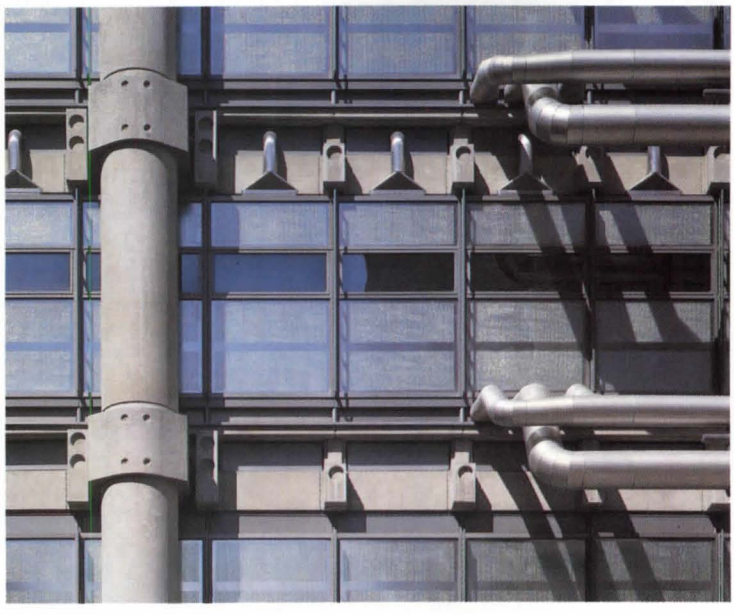


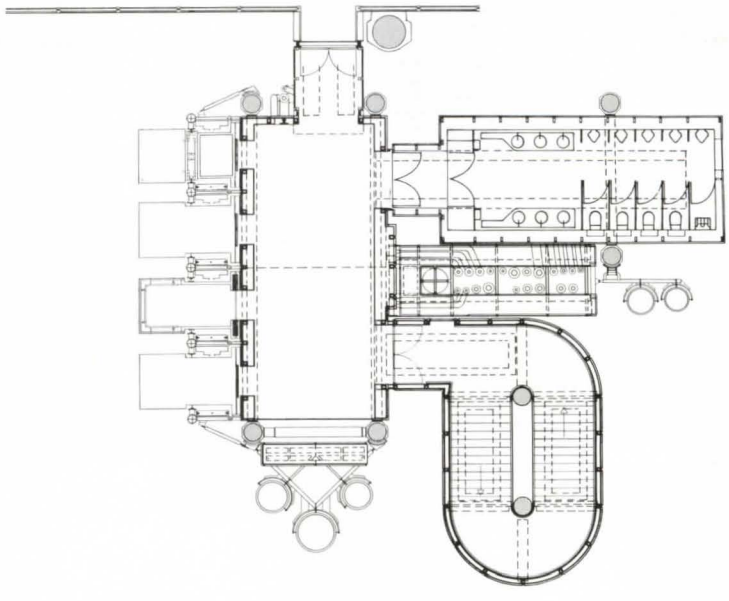
ROOM LEVEL





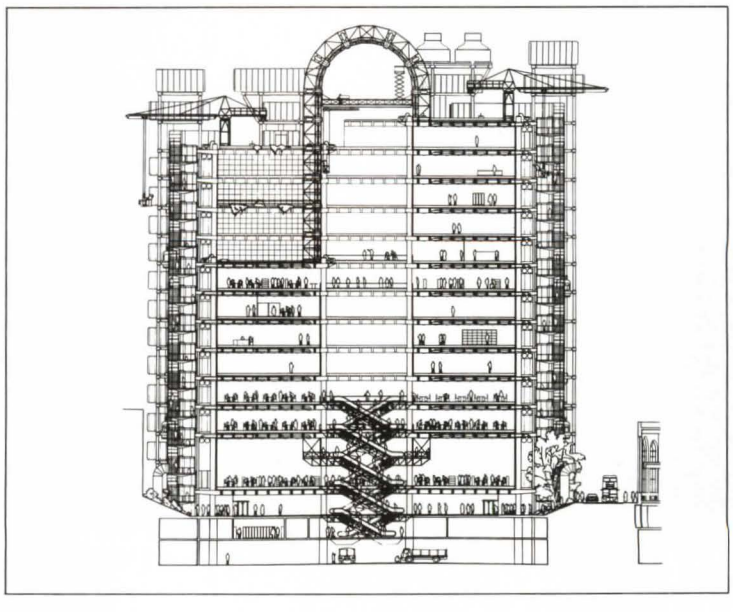
LOWER GROUND FLOOR



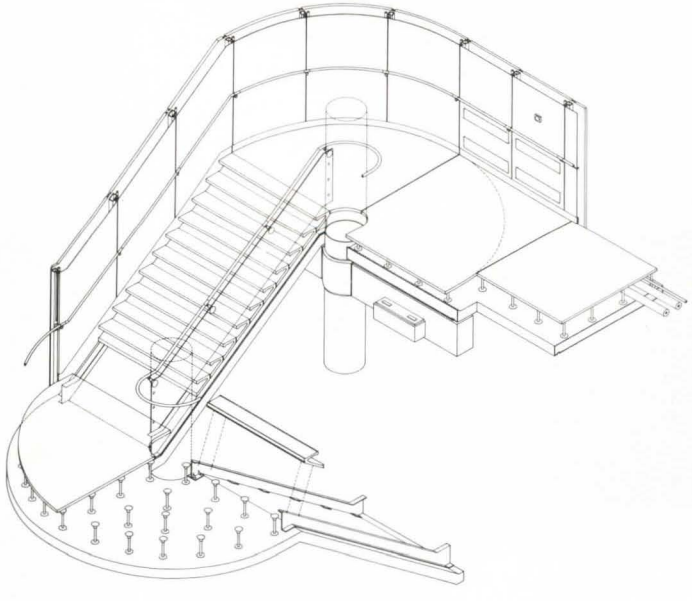


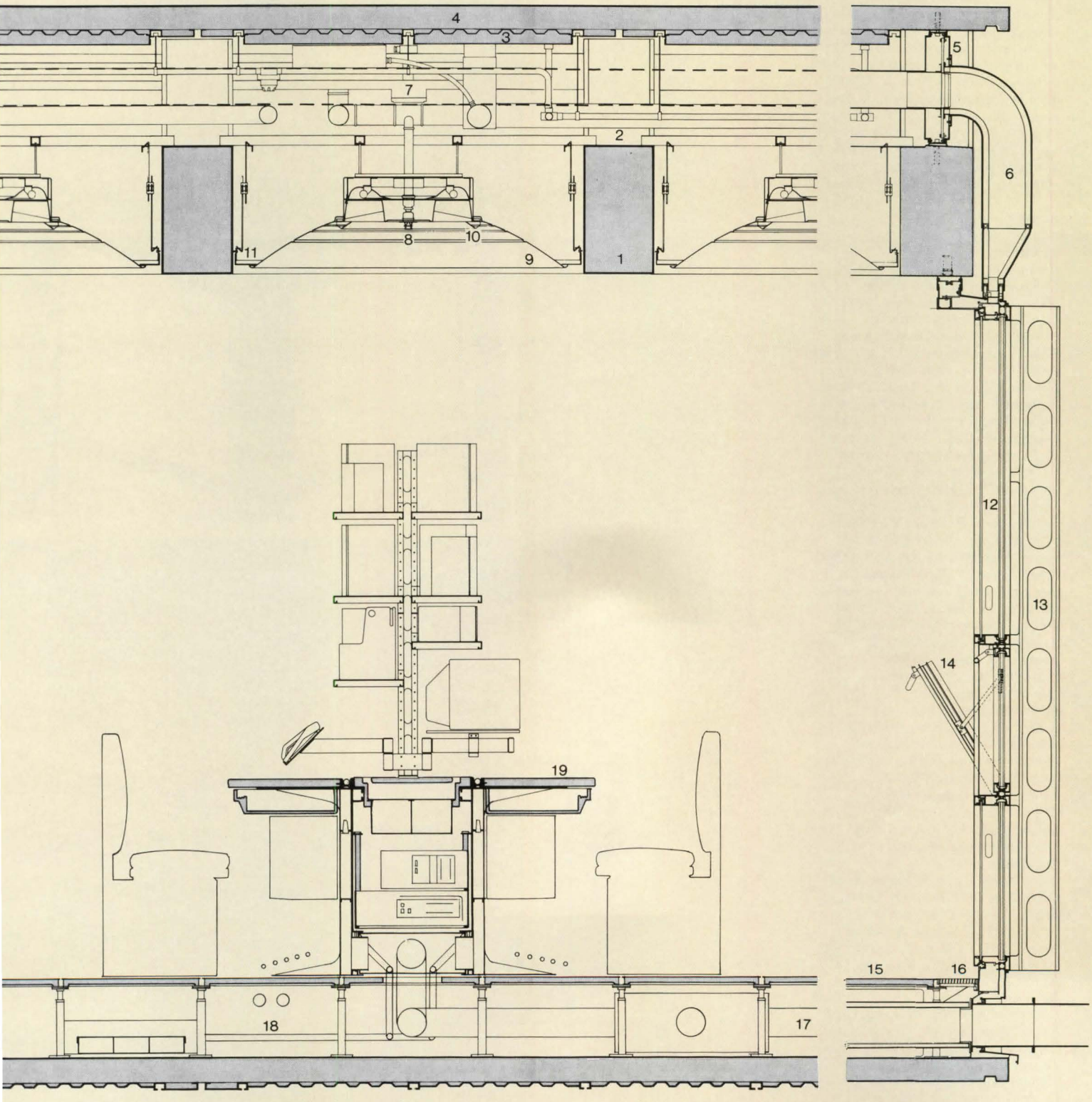
Much of the rococo exuberance of Lloyd's emanates from the six satellite towers that service the main building. Clad in gleaming stainless steel, each structurally independent tower is assembled from a staircase, a bank of four glass-enclosed elevators, a bathroom module, plumbing, and hvac ducts (plan), and is crowned by a bulky, three-story mechanical-equipment room (facing page). In typical Rogers kit-of-parts fashion, the concrete structural frames and slabs, the cladding, and the interior components of the service towers were precast and prefabricated off site. The stacked bathroom modules (left of top photo) were custom-built and fully outfitted in Bristol (including their marble basins), lifted into place on site, and connected to the plumbing stacks—a process of assembly that recalls the 1960s "plug-in" cities of Archigram. To facilitate cleaning, repair, and replacement of the exposed service components, bright yellow cradles (top left) are lowered down the sides of the building from bright blue, permanent maintenance cranes located at the top of the towers (facing page). The decorative rationalism of the service satellites is extended to the main building's exterior panels of "pimpled" translucent glass, perforated, anodized aluminum fins and mullions, and silvery ductwork (bottom left). The "strapwork" banding the exposed, reinforced concrete column is a precast yoke that, with a precast bracket, supports the beam grid construction of the floors. Over the exposed edge of the floors, "fishtail" exhaust ducts are arranged to evoke a classical order, like high-tech triglyphs in a concrete frieze (bottom left). "The legibility of the parts gives the building texture, scale, and shadow," explains Rogers.

The dramatic focus of Lloyd's is a 240-foot-high atrium, crowned by a glazed barrel vault that looks as though it was designed in the late 19th-century (right). Under its steel trussed skylight beats the heart of "The Room," Lloyd's bustling marketplace of more than 2,000 underwriters who trade from computerized workstations called "boxes." Rogers has deferred to the traditions of Lloyd's by enshrining its ornately carved caller's rostrum, crowned by bell, canopy, and clock, as the focus of the atrium's marble floor (photo facing page). The black circles on the floor distribute air upwards from the raised floor plenum. Around the atrium's perimeter, the plenum of each level is exposed to reveal the hvac and sprinkler systems. The underside of the concrete floor construction, supported by eight bracketed columns, also is exposed to form a sharp-edged, gridded ceiling pattern of raw concrete that is infilled by aluminum-shielded luminaires. Since the building opened, three gallery levels have been taken over by Lloyd's underwriting syndicates, proving that Rogers's design accommodates future expansion in the way that he intended. Escalators, supported by steel trusses between the columns, link The Room to these galleries (section), and the kineticism of their exposed machinery, boldly outlined in yellow, heightens a sense of movement throughout the building (facing page). At the south end of the atrium, a seven-story-high cathedral window, framed by a three-story concrete crossbrace, suffuses daylight into the interiors (right). While the lower galleries remain open to the atrium, the upper office floors are sheathed in aluminum fin-braced glass to meet fire codes.



Tradition and technology sit side by side at Lloyd's, as depicted in the juxtaposed view of the caller's rostrum and the "magic mushroom" information towers that supply underwriters with telephones, granite writing tablets, and color monitors (top right). Though Rogers doesn't believe in a distinction between interiors and architecture, he enlisted Eva Jiricna of Jiricna Kerr Associates to supervise his team's custom design of Lloyd's lighting, furniture, finishes, dining rooms, and executive suites. Best known for her minimalist shop interiors, Jiricna first applied her rigorous skills to devising a prototype for the underwriters' "boxes." Veneered in teak, the demountable workstations are anchored by a steel superstructure that holds shelving for books and computers, conventional underdesk storage units, lift-up seats and tops, and upholstered benches (bottom right and facing page). Each box is supplied with its own electrical and computer outlets, and an individually controlled air-conditioning supply that rises from the floor through a vent on the desk top. A sophisticated ceiling luminaire, housing fluorescent lighting and sprinkler heads, channels the exhaust air to a "fishtail" duct on the exterior which blows it down through a cavity between the triple glazing of the exterior wall (facing page). The glass panels of the skin were rolled to produce tiny prisms that create a shimmering wall of light (bottom right). Inside the service towers, the staircases are assembled from prefabricated, anodized aluminum panels, raised flooring, and aluminum extrusions incorporating a tread and a riser in one unit (axonometric).

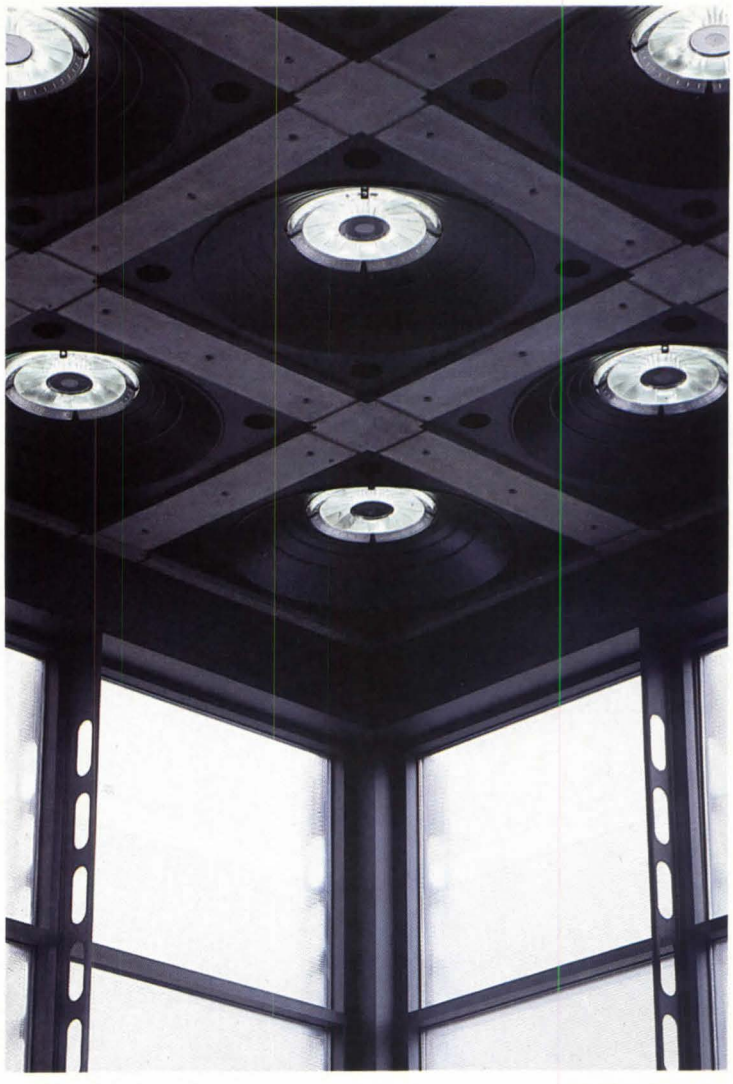




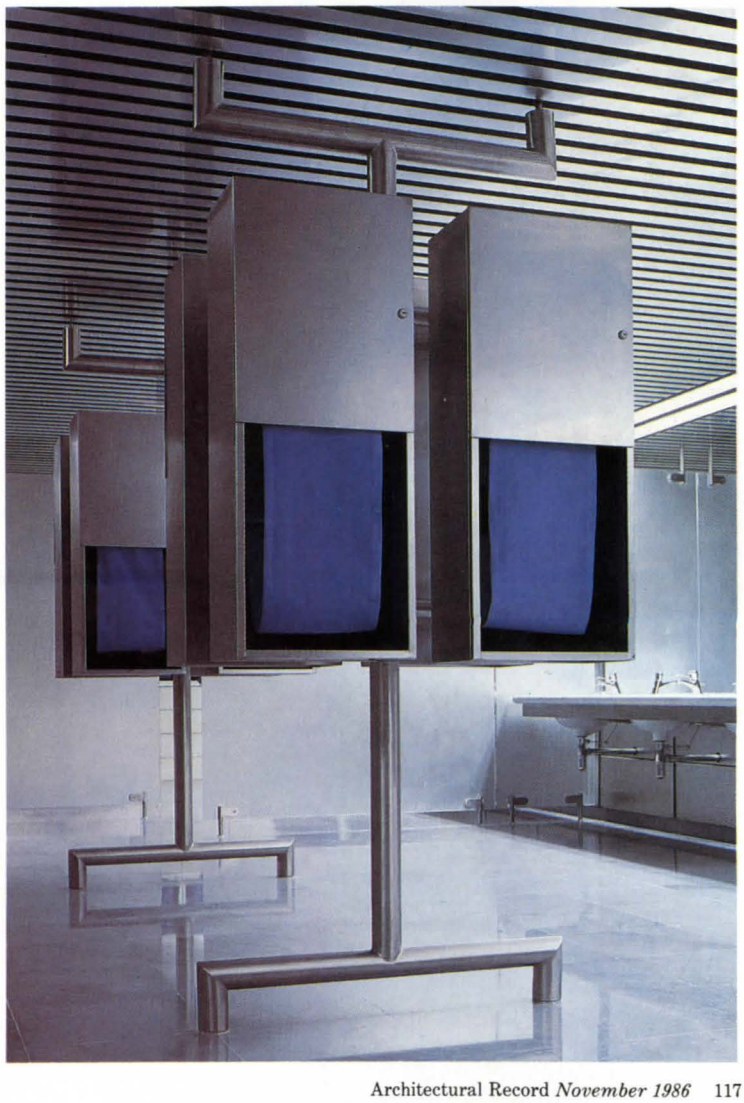
1. *Concrete beam*
2. *440-mm.-deep services plenum*
3. *Steel formwork incorporating acoustical panel*
4. *100 mm. concrete slab*
5. *One-hour fire-rated anodized aluminum panel*
6. *Insulated, stainless-steel "fish tail" exhaust duct*
7. *Exhaust air duct through light fixture*
8. *Sprinkler head*
9. *Black-painted spun aluminum luminaire shield*
10. *Silver aluminum light spill-ring*
11. *Black-painted perforated metal coffer infill panel*
12. *Anodized aluminum cladding with triple glazing and ventilation cavity*
13. *Anodized aluminum wind bracing fin*
14. *Clear double-glazed operable window*
15. *600 mm. X 600 mm. lightweight concrete-filled steel floor*
16. *Extruded aluminum air diffuser*
17. *Insulated galvanized supply air duct*
18. *300 mm.-deep raised floor plenum*
19. *Underwriters' "box"*

Rogers's mania for crafted technology has been extended to every detail of Lloyd's, as evidenced by the ceiling luminaires (top right), stainless-steel railings around the entrance ramp (bottom right) and atrium galleries (top right, facing page), dining room waiters' station (top left, facing page), underwriters' workstation, signage (bottom left, facing page), and bathroom towel stands (bottom right, facing page).

Lloyd's
London, England
Architects:
Richard Rogers Partnership Ltd.—Richard Rogers, John Young, Marco Goldschmied, Mike Davies (directors); Richard Marzec (project administrator); Laurie Abbott, Ian Davidson, Malcolm Last, John McAslan, Michael McGarry, Henrietta Salvesen, Kiyo Sawoaka, Richard Soundy (analysis); Jamie Troughton, Chris Wilkinson with Marcus Lee, David Mark, Peter McMunn (substructure); Richard Soundy with Colin MacKenzie, Maureen Diffley (superstructure); Stephen Le Roith with Graham Fairley, Ivan Harbour, Elizabeth Post, Niki van Oosten (cladding); Frank Peacock with Amarjit Kalsi, Peter St. John, Clare Strasser (service towers); Graham Anthony with Robert Barnes, Kieran Breen, Graham Stirk, Peter Thomas, Andrew Weston (services); Michael Elkan with Joseph Wilson (plant rooms); Stig Larsen (mechanical systems)
Interior designers:
Richard Rogers Partnership Ltd. in association with Jiricna Kerr Associates—Eva Jiricna with Kathy Kerr, Mark Guard, Philip Gumuchdjian, Roger Huntley, Andrew Jones, Andrew Morris, Robert Peebles, Stephen Tsang, Yasu Yada; Jacques Grange
Engineers:
Ove Arup & Partners—Jack Zunz, Peter Rice, Tom Barker with David Atling, Peter Bolingbroke, John Burrows, Glen Calow, Richard Cowell, Brian Duck, Paul Duizend, Martin Hall, Martin Harrold, Rob Kinch, Margaret Law, John McGregor, Duncan Michael, Turlogh O'Brian, Peter Platt-Higgins, Geoff Powell, John Roberts, Harry Saradjian, Andrew Sedgwick, John Thornton, Paul Wellman
Management contractor:
Bovis Construction Ltd.
Consultants:
Monk Dunstone Associates (quantity surveyors); Anstey Horne & Co. (rights of light); Montagu Evans & Son (planning consultants); Sandy Brown Associates (acoustics); GWP Associates (catering); Theatre Development Ltd. (audio visual); Friedrich Wagner, Lichttechnische Planung (lighting); Pentagram Design Ltd. (signage)

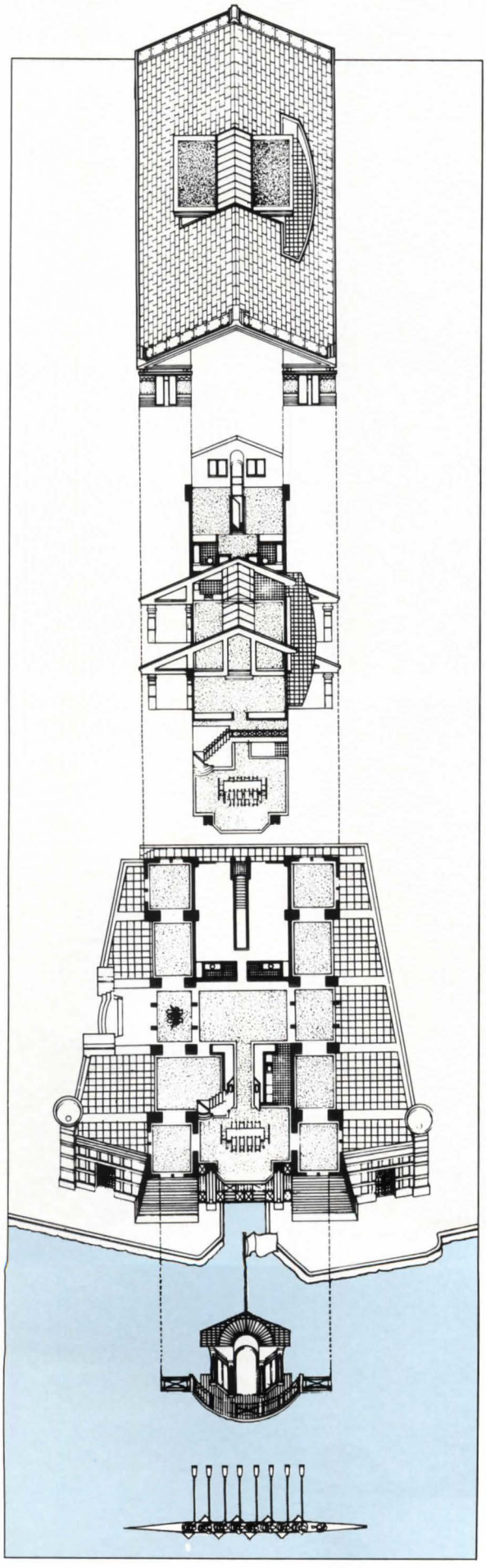



EXIT



Henley Royal Regatta
Headquarters
Henley-on-Thames, England
Terry Farrell Partnership,
Architects

Racing ahead



By Colin Amery

Every summer, on one of the most beautiful stretches of the River Thames, the old town of Henley is the scene of the great British celebration of rowing. Until this year, the world-class event, known as the Henley Royal Regatta, had been organized from offices in a nondescript riverside building. Now housed in a handsome headquarters over a boathouse that recalls American precedents along the Charles and Schuylkill rivers, the regatta organization took a bold step by commissioning Terry Farrell to design this small but prestigious building. Since turning away from the high-tech style of his former partner, Nicholas Grimshaw, Farrell has become Britain's leading proponent of Postmodernism. But, unlike Michael Graves, he does not paint, nor does he employ the subtlety of the Gravesian palette. Farrell's brand of new classicism is reminiscent of American architecture of the 1920s, and it is hard for him to shake off a certain Hollywood insubstantiality. The new headquarters for the Henley Regatta clearly illustrates the strengths and weaknesses of this style.

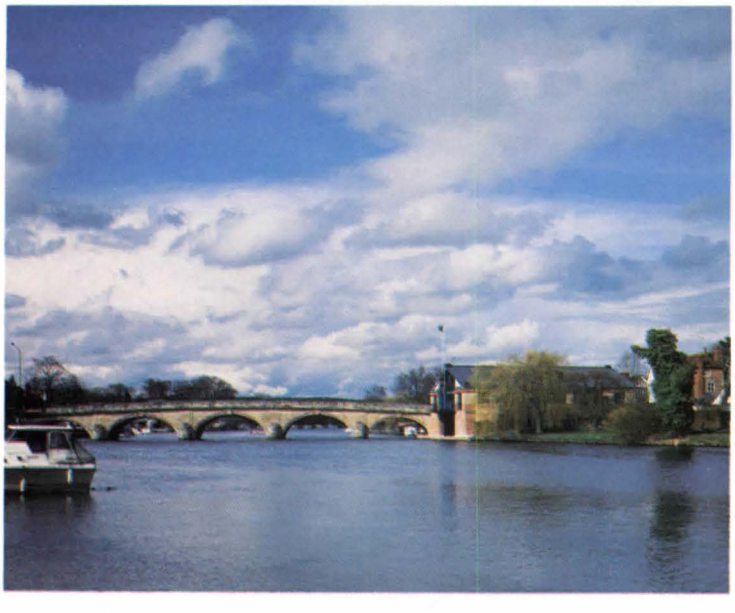
As somewhat of an esprit, the structure stands by the town's 18th-century stone bridge like a new temple, strangely proportioned, but ingeniously planned. The great interest of this building lies in its invention of a lightweight classical language. There is nothing earth-shaking here, but a playful and colorful translation of old elements into modern materials and forms. The most impressive of these elements is a high, battered-brick plinth. Carefully detailed, it stands exactly at the height of the bridge, and reflects the spirit of the town's beautifully cut, carved, and rubbed 18th-century brickwork. The building would have been more sympathetic if it had been built entirely of brick with real stone trimmings. Instead, the use of stucco, wood, and a great deal of colorful paint makes it appear too flimsy. The main floor, which sits on the great plinth and is entered at bridge level, however, is elegantly planned. A generous hall occupies its center, from which a low passage leads to the double-height main committee room—a great *coup de théâtre* because the room seems to defy the small scale of the whole building. As seen from the facade (isometric and opposite page), Farrell has turned the inside of the great pediment and its supporting roof into one grand room. It is the space that in any 18th-century country house simply would have filled the triangular pediment itself and not the floor below. What is particularly ingenious is the merging of a Venetian window with a classical pediment, an idea which must be a Postmodern first. Although well within the canon of classical experiment, it is not, I suspect, as adventurous as James Gibbs adding a spire to his columned temple of St. Martin-in-the-Fields. Throughout the main floor and within the regatta secretary's two-bedroom apartment on the top floor, Farrell has utilized the space in an appropriately nautical manner. Like a well-designed ship, each corner is filled with crafted joinery—shelves, cupboards, and galleries.

Is the Henley boathouse a cynosure of Farrell's development? At the very least, it is a promising omen. The architect has always been admired in England for his planning skill. In London's Covent Garden and on the site for the proposed (now never to be built) Mies van der Rohe office tower, Farrell has demonstrated alternatives for the reuse of older buildings and for the adaptation of urban space. It is this gift that has given him the opportunity to redesign three whole areas of the capital. London's South Bank arts center, a typical example of concrete brutalism of the 1960s, is to receive the Farrell treatment with the removal of high-level walkways and the insertion of new classical elements. On the other side of the Thames, he is scheduled to build over Charing Cross station and to do what he is best at—create new spaces where no one thought possible. Likewise in the City of London—its financial center—he is replacing 1960s office blocks with his own brand of urban classicism. If Henley is a taste of his skills, then London undoubtedly will become a much more elegant and colorful place.

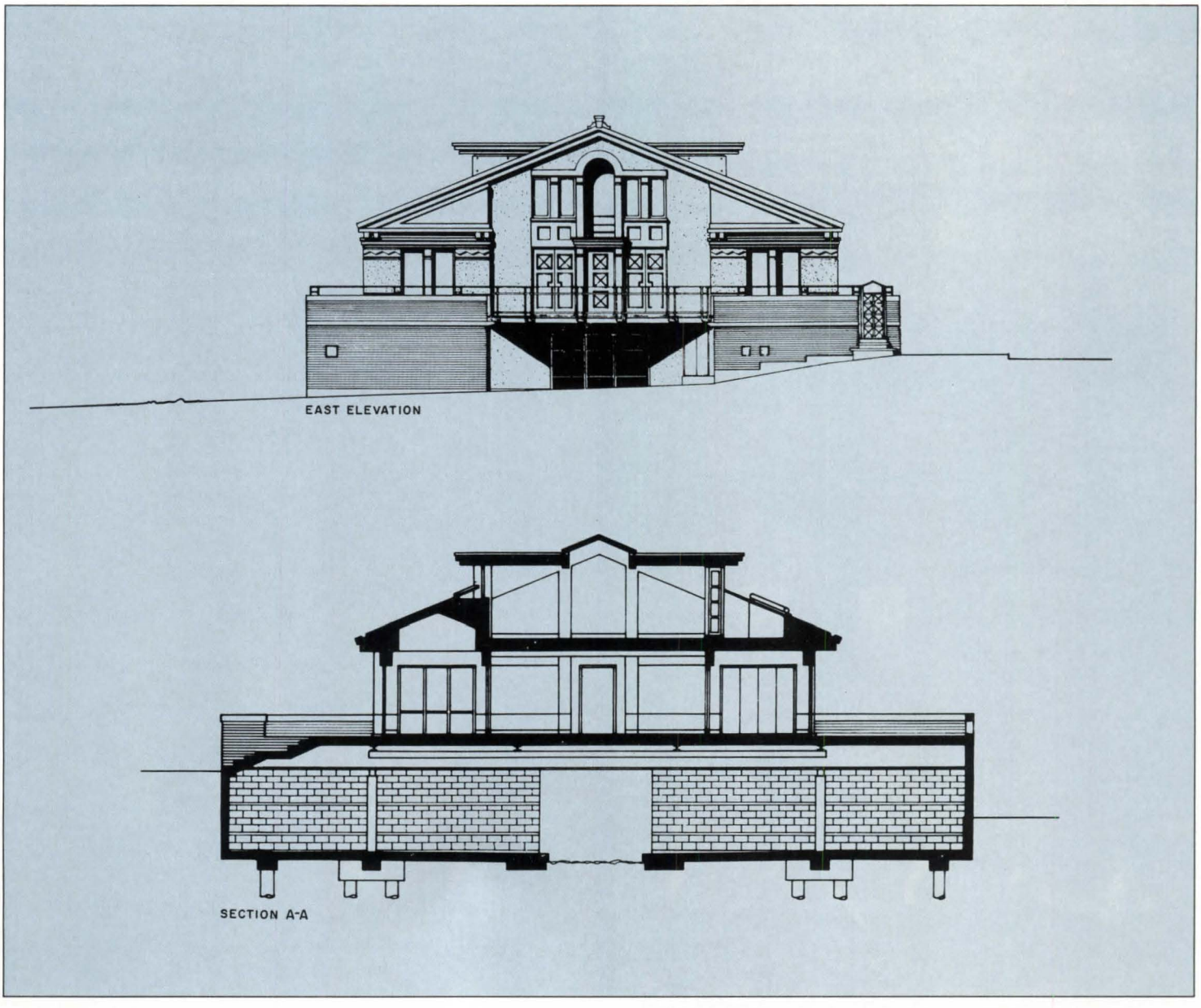
Colin Amery is the architectural critic for the Financial Times.

Terry Farrell has designed the Henley Regatta headquarters, including a boathouse and a top-floor apartment (isometric drawing), to acknowledge the civic role that the annual rowing championship plays in the life of the town. Built upon a brick plinth in scale with the adjacent historic stone bridge over the River Thames (bottom), the building echoes the vocabulary and proportions of Henley's 18th-century brick architecture. Its pedimented riverfront facade is focused on the balconied Venetian window of the main committee room above the wet dock entrance to the boathouse (below). The prominence and historical importance of the regatta headquarters' riverfront site necessitated the consultation of 27 different planning and conservation authorities.

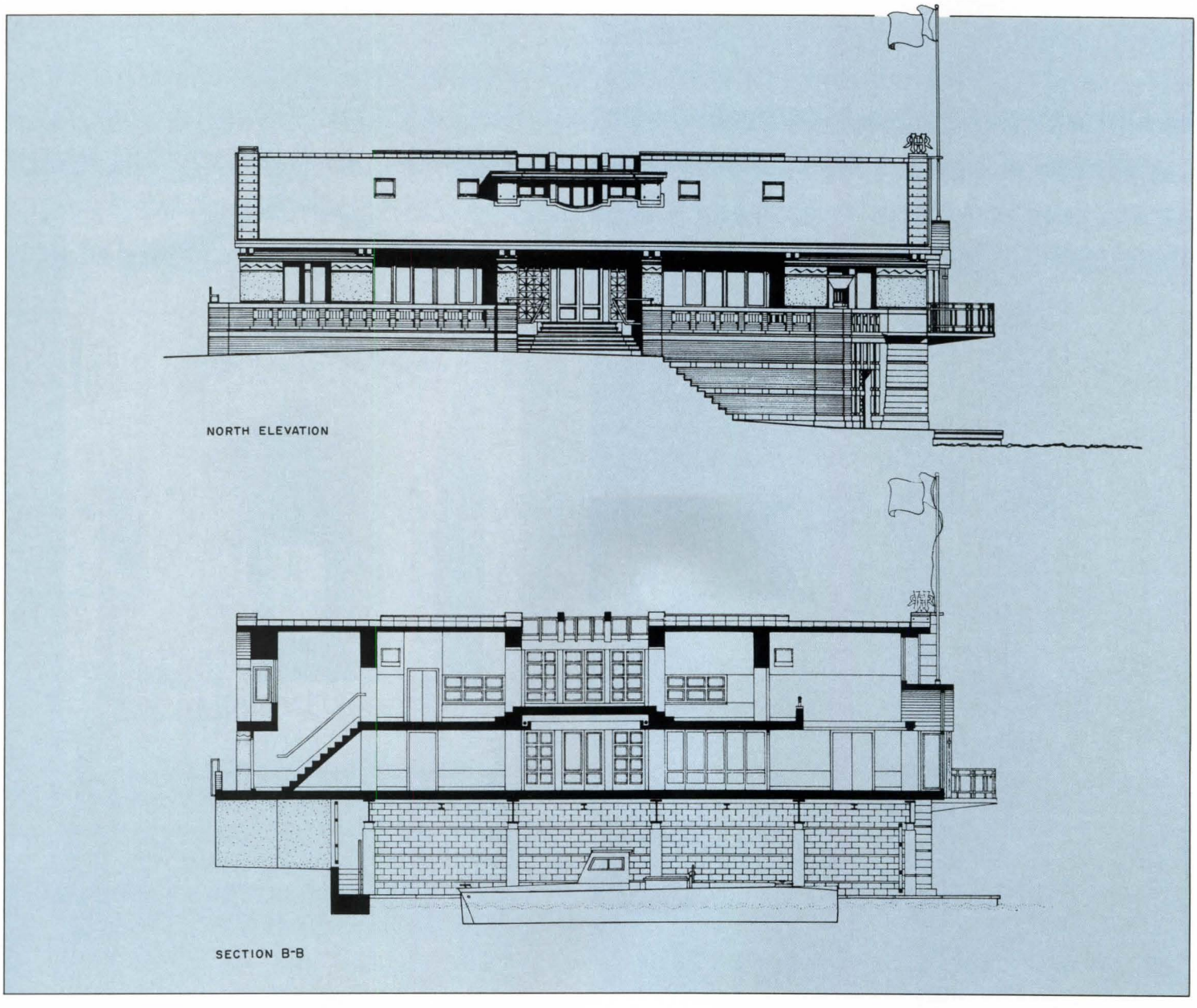
Richard Bryant photos



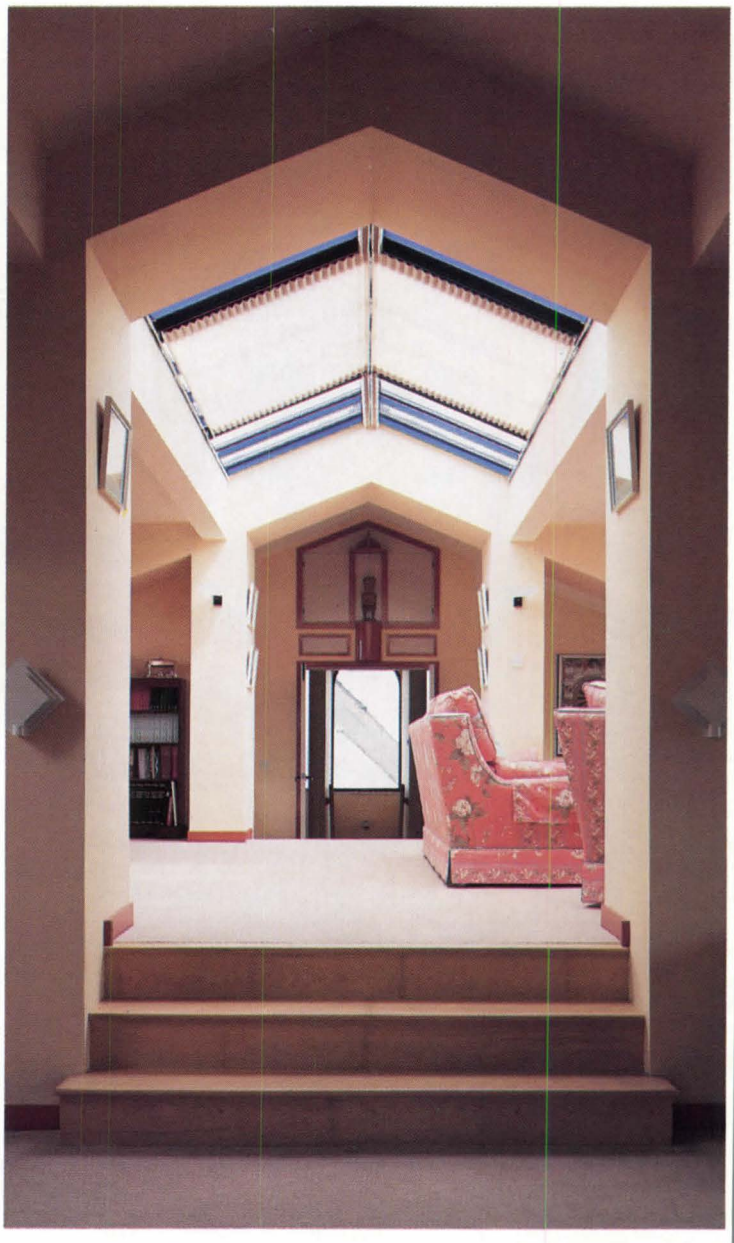
Elevation and section drawings (below and facing page) reveal the ingenious way Terry Farrell has organized the regatta headquarters to house discrete functions on each floor and utilize every inch of the 12,000-square-foot structure. The boathouse below the building's brick plinth contains a wet dock and spacious storage area for river markers and booms (bottom of sections). On the terrace level, the regatta club's reception area, offices, and committee room are designed with a pleasing variety of ceiling heights (middle of sections). The apartment for the club's secretary is nestled below the eaves, and entered from the rear of the building (elevation below) or from the committee room's library mezzanine (right of section facing page). Its entrance staircase and bedrooms are lit by a Palladian

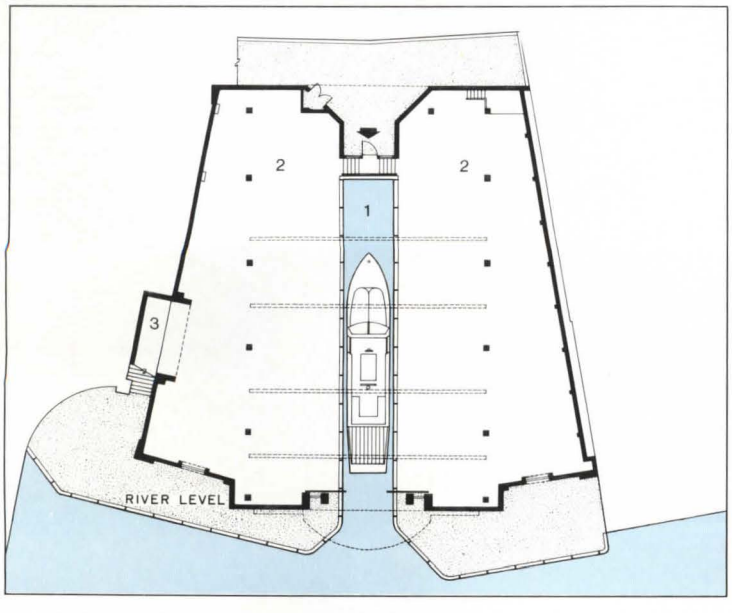


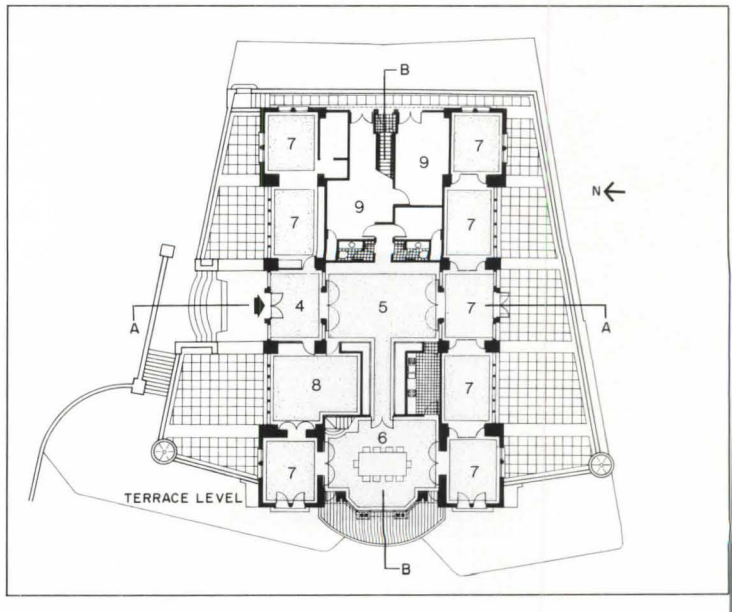
window located within the oversized pediment formed by the angle of the roof and guttae-studded moldings above the ground floor (facing page). Close-up views of the rear elevation (bottom and facing page) show how Farrell has rendered his classical language in stucco and wood trim above the structure's brick plinth. The north elevation containing the public entrance reflects a more picturesque approach, with dormer windows positioned within the roof to illuminate the secretary's apartment (below). The longitudinal section (below) indicates the building's orientation toward the River Thames, with a balcony projecting from the double-height committee room. The brightly colored paint scheme of the exterior (bottom) was chosen to reflect the festive spirit of the regatta's annual parade of blazers, badges, and ties.



Farrell's reputation for skillful planning is apparent at Henley in the way in which he vertically telescopes each floor, from the ample storage area under the building's brick plinth to the narrow layout of the secretary's apartment under the roof (plans). This spatial ingenuity is underscored by shiplike joinery and cabinets that fill every nook and cranny of the interiors, such as the shelving that surrounds the entrances to the regatta secretary's apartment (right and facing page). To emphasize the views of the river and to bring daylight into the compact rooms of the building, the architect has positioned windows wherever possible: the overscaled, steel-mullioned Venetian window of the committee meeting room (left) and skylight over the secretary's living room (right) are but two examples.

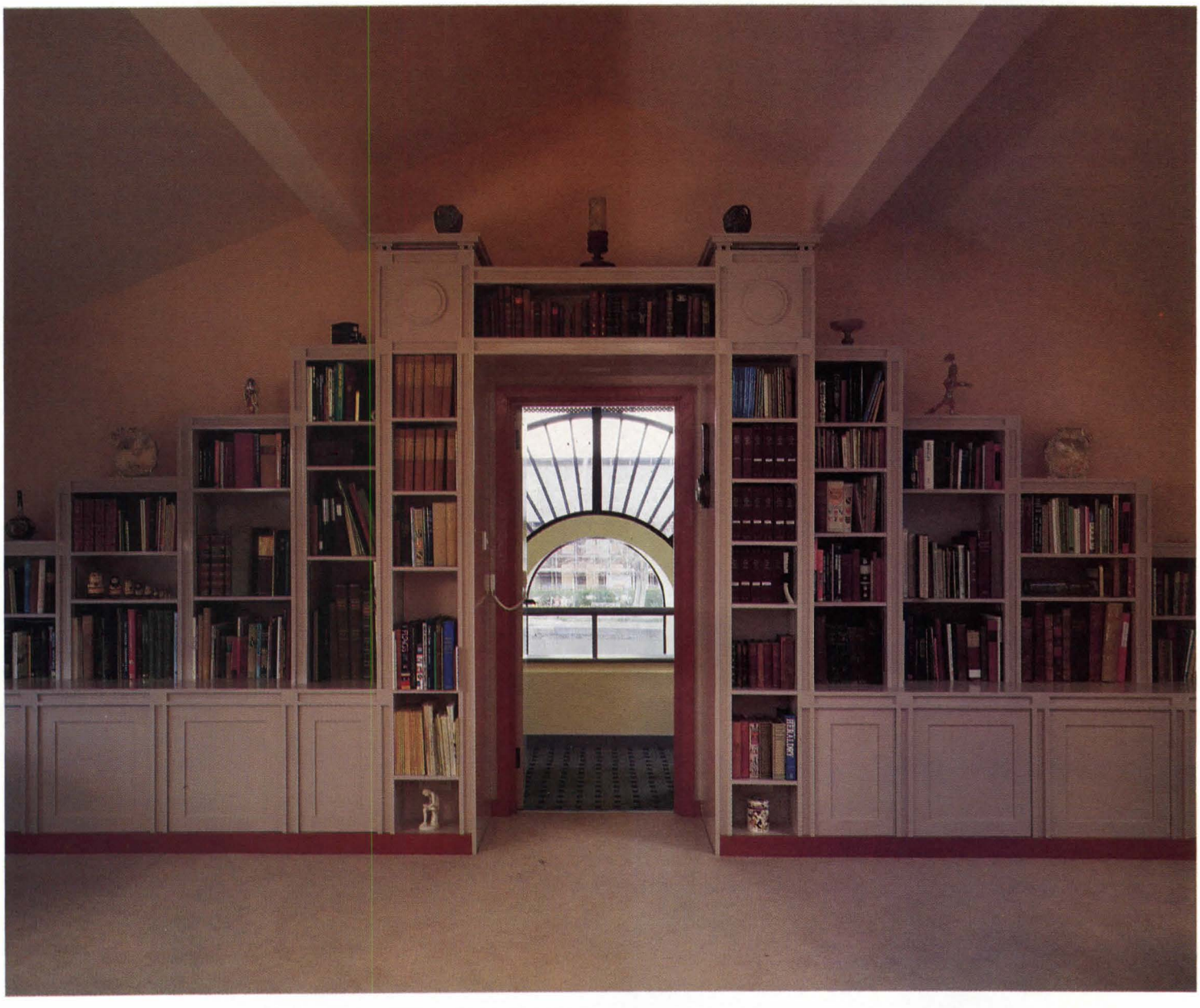


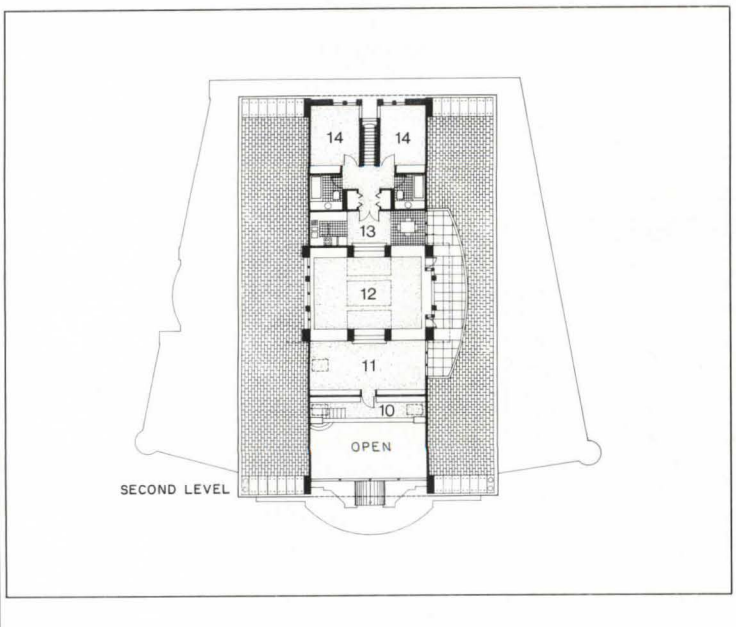




Henley Royal Regatta headquarters
Henley-on-Thames, England
Architects:
Terry Farrell Partnership—Terry Farrell, Joe Foges, John Letherland, Ian Scott, Doug Streeter, Keith Williams, design team

Engineers:
Peter Brett Associates (structural); Building Energy Partnership (mechanical)
Consultant:
Michael Edward (quantity surveyor)
General contractor:
J. M. Jones and Sons Ltd.

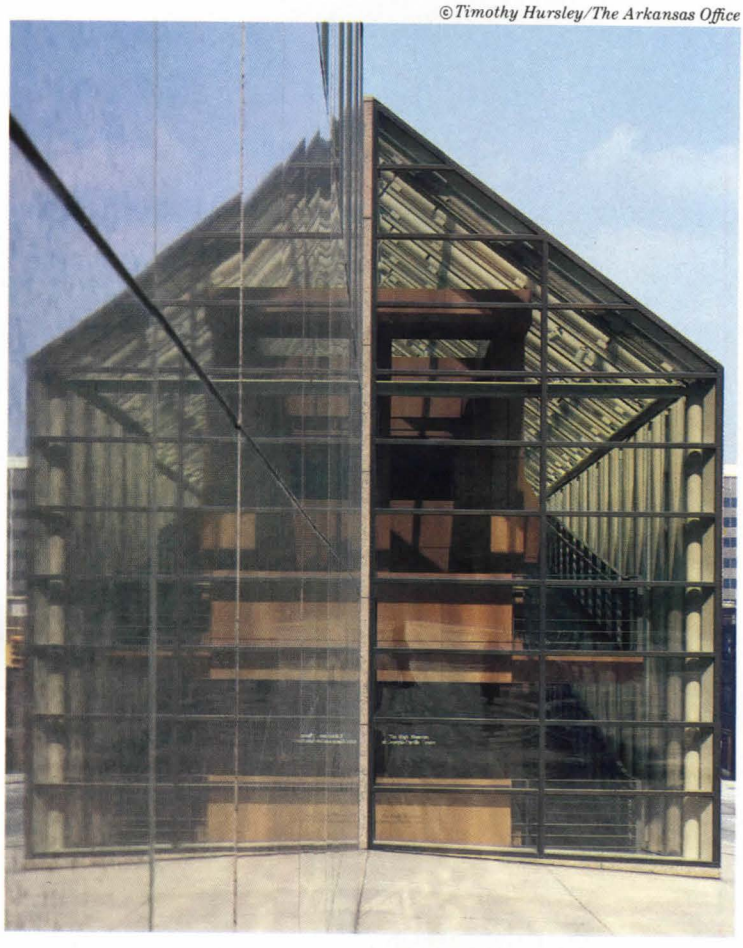


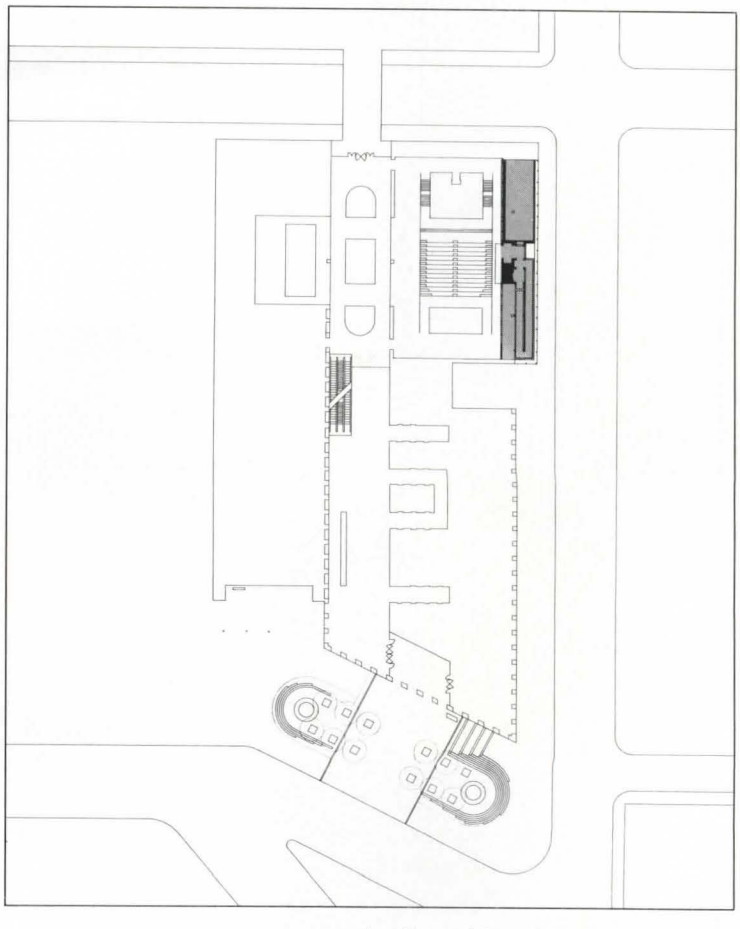


1. *Wet dock*
2. *Boathouse equipment storage*
3. *Excavated stone arch to 11th century bridge*
4. *Main entrance*
5. *Reception*
6. *Committee room*
7. *Offices*
8. *Crew room*
9. *Storage*
10. *Library mezzanine*
11. *Study*
12. *Living room*
13. *Kitchen/dining*
14. *Bedroom*

The framer's art

The High Museum
at Georgia-Pacific Center
Atlanta, Georgia
Parker and Scogin Architects, Inc.





As art objects in their own right, some modern museums almost steal the show from the collections they house. No architectural star turn exemplifies this phenomenon more brilliantly than Richard Meier's High Museum in Atlanta (RECORD, January 1984). Regardless of whether one judges it successful as a place in which to view art, the High is a tough act to follow. Such, at least, is the predictably skeptical response to news that another architect, the Atlanta firm of Parker and Scogin, has designed satellite galleries for Meier's great white mother ship, and installed them in the base of Skidmore, Owings & Merrill's Georgia-Pacific Center, a pink granite office tower. There is no mystery to the rationale for establishing this cultural outpost, whose existence relies on the collaboration of corporate, public, and institutional sponsors: the main museum is nearly two miles north on Peachtree Street, beyond the pale of Atlanta's traditional business center, and the downtown "branch" represents a brave incursion of art into a district till now devoted wholly to commerce. Appropriately, the new galleries (which are intended for loan exhibitions and selections from the High's own holdings) occupy space originally set aside for a public exhibit of Georgia-Pacific's industrial wood processes (colored area in plan).

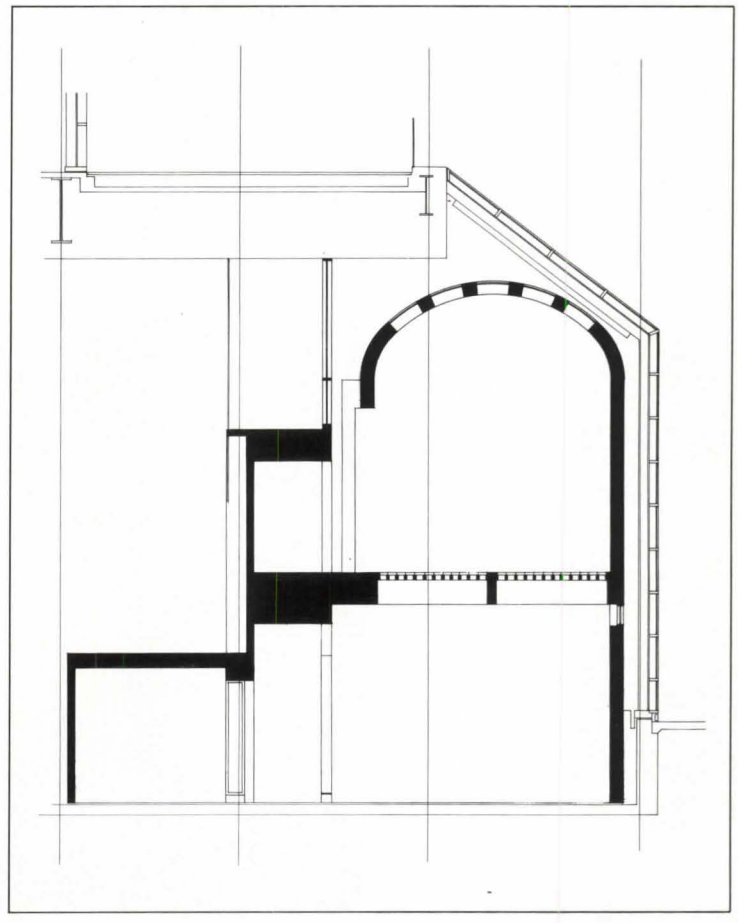
A tall, narrow, greenhouselike shed, directly exposed to the southern sun and linked to the front lobby by the foyer of a glass-walled auditorium, the extant shell was a singularly inhospitable place for displaying or conserving art. With hindsight, it might seem inevitable that the need to install adequate hanging surfaces, protection against natural light, an independent climate-control system, and security barriers would require the museum to take the form of a building within a building. That these practical demands should inspire a coherent architectural composition was, on the other hand, by no means self-evident; but Parker and Scogin's scheme plays up the ambiguous autonomy of the galleries within a larger surround as an organizing esthetic idea. Happily, one can overlook the trivial games with nesting-box or Russian doll motifs this strategy might have prompted and admire instead a structure whose beauty is both intrinsic and *substantial*—an "interior" architecture seemingly more solid than many freestanding buildings. This effect of palpable substance does not depend on literal-minded use of materials and ornament—faux or genuine—conventionally associated with exterior construction. On the contrary, Parker and Scogin clad the outer surfaces of the galleries in exotic wood veneer, announcing frankly that, in physical reality, the museum is as much an indoor artifact as any fine piece of furniture.

The abstract configuration of walls, volumes, and passageways within the existing transparent envelope is nonetheless emphatically architectural, with a "facade" that separates the museum from the Georgia-Pacific Center lobby and auditorium, a portal that gives onto a clearly articulated processional route, and a sequence of rooms defined as worthy destinations. How to insert display spaces flexible enough to accommodate a changing array of art works in various sizes and diverse media was a multidimensional puzzle; bringing people to them was another challenge. Fortunately, as it turned out, strict limits on manageable program area set by museum administrators left ample room for circulation. Beginning with the orientation of the museum entrance to a cross-axis through the Georgia-Pacific auditorium, a series of intersecting enfilades directs the visitor beyond existing concrete columns and down switchback ramps into galleries on two lower levels. The resulting parti is inherently symmetrical and orderly in spite of sudden turns, dramatic vistas up and down an open core, and unexpected views of city streets that confound too easy an understanding of the museum as a simple, self-contained geometric figure—too easy, that is, if one conceives such a building as a metaphoric invitation to discovery. If this emblematic role is subtler here than at Meier's High, it is no less effective in conveying its message: art can command attention with sheer virtuosity, but it is sometimes more compelling when it beckons quietly. *Douglas Brenner*

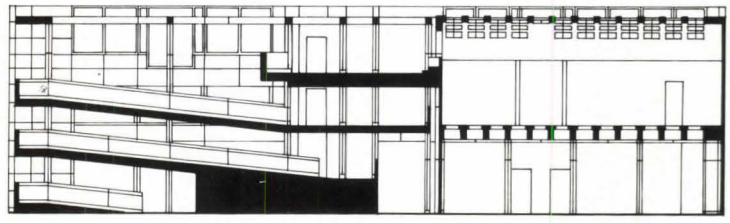
Because the new High was built on the south side of the Georgia-Pacific Center, where the tower's base steps down from the main entrance on Peachtree Street to the west, lobby access conducts visitors to the uppermost of the museum's three tiers (plans overleaf). Fully glazed windows in the museum entry "facade," a necessary barrier for security and climate control (top right, this page), overlook the roof and interior of a barrel-vaulted gallery as well as the ramps that lead to lower levels. A landing and balconies beyond the threshold offer more dramatic views indoors and through the glass shed to downtown Atlanta (opening page, opposite, and this page, middle right and below). Sightlines not only help to connect different strata within a compact vertical layout, but also reinforce the museum's presence in the downtown business center.

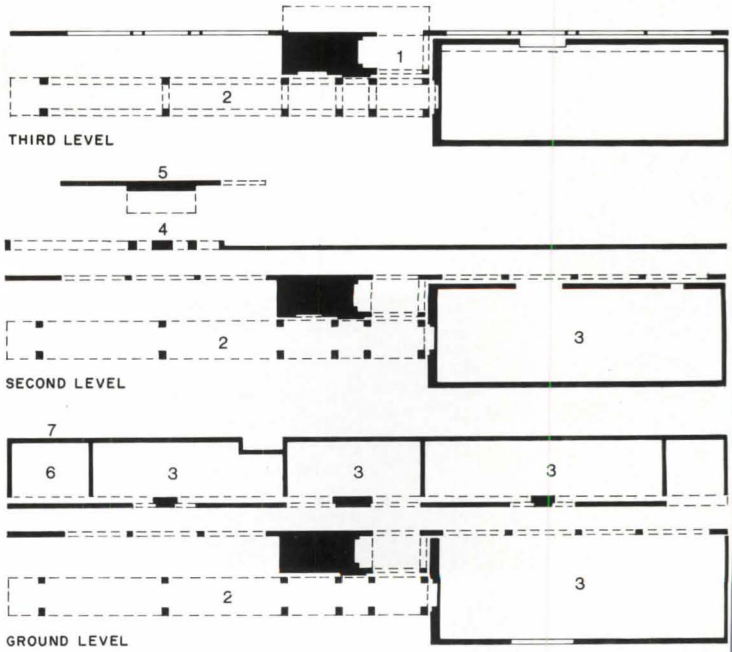
Color, texture, and geometry articulate and enrich the otherwise undecorated building-within-a-building. Parker and Scogin coordinated its scheme to preexisting structural columns, but painted them white to stand apart from the museum's paneled "exterior" walls and loggialike central circulation spine. These architectural elements are veneered in African anigre, a wood remarkable for the fineness of its grain and golden-tawny hue, qualities that subtly contrast with the bolder markings and deeper tones of mahogany and teak woodwork in the Georgia-Pacific lobby. Anigre's close grain also minimized the complications of matching pattern and color in three dimensions—around window frames, soffits, even the convex top of the barrel vault. Parker and Scogin personally selected some 80,000 square feet of flitches, of which approximately 30,000 square feet found their way into book- and slip-matched surfaces. Woodwork was assembled in traditional fashion, with panels indented to overlap recessed splines, from which they hang on metal clips. Painted and welded steel railings differentiate ramps outside the central spine from the axial passageway with its wooden parapets. Floors are hand-chiseled slate.

Provided with its own art-handling area, offices, bookstore, and some 4,200 square feet of gallery space, as well as access to restaurant and conference facilities in the Georgia-Pacific Center, the High's downtown satellite enjoys nearly all of the perquisites of many independent museums. The two grandest galleries stacked under the glass-shed roof combine with more intimate rooms carved out of the base of the tower,

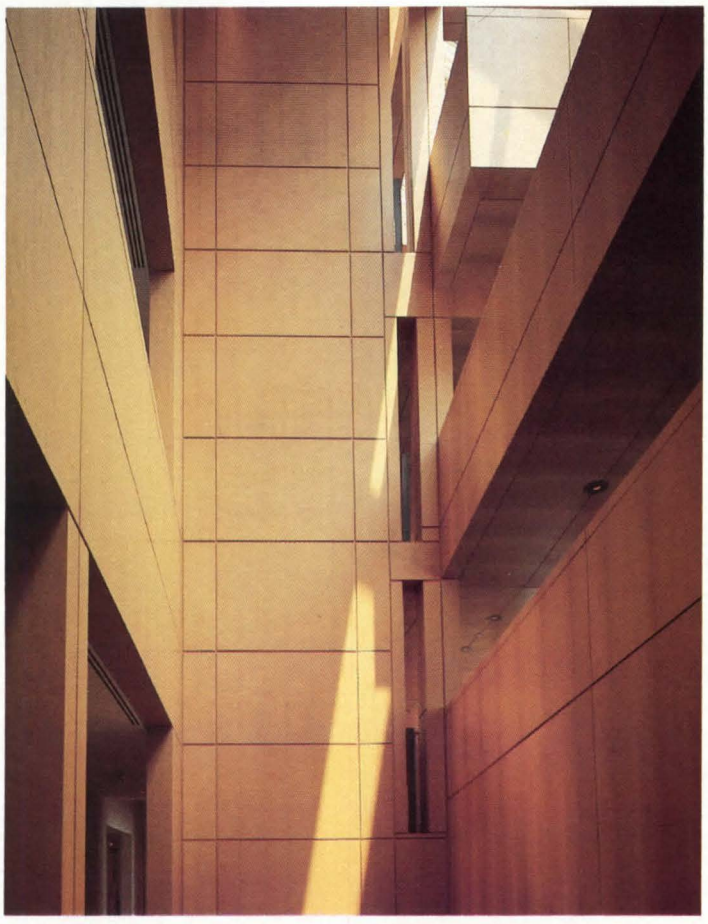


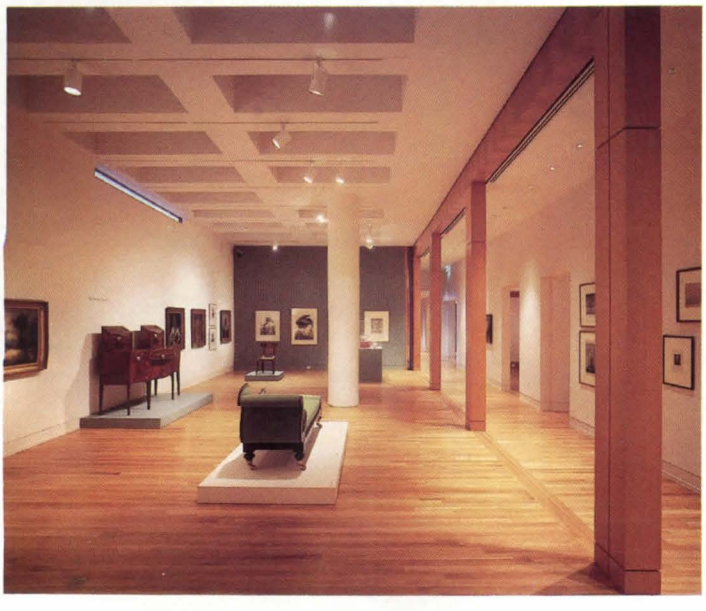
and a complement of niches and multistory open wells, to create an adaptable exhibition environment. Individual spaces can be closed to the public while displays are installed or dismantled without interrupting circulation through the rest of the museum. The contrast of wood paneling outside the galleries with gypsum-board walls inside (specified to meet curatorial standards set at the parent High) intensifies the particularity of each room. Following generally accepted conservation guidelines, direct exposure to sunlight was avoided wherever art might be shown. Indirect illumination, however, safely infuses a daylit ambience. Translucent panes overhead in the vaulted upper gallery (these pages) can be dimmed with fabric filters or opaque shutters inserted above the coffers. Floor-mounted glass blocks transmit light to (or from) the gallery downstairs.





1. *Entry*
2. *Ramp*
3. *Gallery*
4. *Shop*
5. *Offices*
6. *Art handling*
7. *Shipping/receiving*





The play of daylight admitted through the glass shed animates a constantly changing show of chromatic and plastic effects. Such ephemeral beauty is thematically appropriate to a museum amid the corporate world, where brief moments for connoisseurship may have to be seized from a crowded agenda. The busy urban milieu also encourages experimental ventures, for which the new High affords a congenial setting: the possibility for installing large sculpture or environmental constructions in the full-height areas alongside the ramps remains to be investigated, as does the potential for the vaulted gallery. As a background to art in other media, the museum is suitably deferential without sacrificing its own esthetic integrity. Precise geometry, definite juxtapositions of materials, and clear spatial intervals accentuate the discrete tectonic identity of every element in Parker and Scogin's composition. Narrow slits between the towerlike elevator housing and the open framework of the central ramp, for example, separate different esthetic and functional entities (top left and opposite). Vertical extension of the wood-paneled "facade" downward among the painted walls of lower-level galleries demarcates the theoretical boundary of the building-within-a-greenhouse, beyond which the museum has annexed basement space inside the office building proper (bottom left). The museum's steel-frame structure rises above the mechanical room for the entire Georgia-Pacific Center, a location that precluded laying new foundations. New beams below the slab carry columns for the galleries and central ramp framework, from which the outer ramp is cantilevered. Because the High requires its own museum-standard hvac, fire-control, and security systems, it actually operates as a self-sufficient environment.

The High Museum
at Georgia-Pacific Center
Atlanta, Georgia
Owner:
GA-MET, a Joint Venture of Georgia-Pacific Corporation and The Metropolitan Life Insurance Company
Architects:
Parker and Scogin Architects, Inc.—Mack Scogin with Merrill Elam, Lloyd Bray, Dick Spangler, Gil Rampy, Isabelle Millet, George Johnston, John Lauer, design; W. Ennis Parker, project director
Engineers:
Browder & Guizamon and Accociates, Inc. (structural); Jones, Nall and Davis (mechanical/electrical)
Woodwork:
Woodwork Corporation of America
Consultants:
Ramon Luminance Design (lighting); Costing Services Group
General contractor:
The Winter Construction Company


Arts in America:
The Colonies and Early Republic

Spanning the Grand Canal

By Tom F. Peters

For the Third International Exhibition of Architecture, a part of the 1985 Biennale of Venice, an international competition was announced for the design of ten projects to be sited in Venice and the Venetian hinterland. One of the sites—a 190-ft stretch over the Grand Canal separating the Campo della Carita in front of the Academy of Fine Arts from the Campo San Vidal in front of the church of that name—entailed the replacement of the decrepit Academy Bridge. One hundred thirty-five proposals from 23 countries were submitted for a new and more appropriate structure. Four of those projects are illustrated on the following pages, and discussed below by Tom F. Peters, associate professor in the school of architecture at Cornell University. Though not an encapsulation of the submitted designs, this select representation demonstrates poetic solutions that regard the bridge as both a prominent element to be woven within a rich, multilayered urban landscape and as a discrete object of rational study within the realm of engineering-as-art. Though the competition has been judged, none of the projects are being considered for execution.
What presumably will happen is that the old bridge will be restored, a safe, albeit timid, measure.

One of the wonderful things about bridges is that they are quintessentially structural objects, and there are only a few basic structural types from which to choose. Any variation must be subtly conceived so as to complement or interpret the structural necessity. A concern for context provides a motive for variation, and the problems posed by a new bridge for a prominent Venetian site entail significant contextural concerns. Apart from urban form and historical precedence, a contextual aspect that distinguishes all Venetian bridges from others is the visibility of their two primary aspects: axial and frontal. The canal is as important a thoroughfare as the footpath. Although almost all bridges, both modern and ancient, are indeed designed in profile, comparatively few are true portals for the traffic they carry. This dual role, then, is an attraction in Venetian design.

Most proposals in the competition, viewing the contextual problems as more important than the structural, succumbed to the temptation to decorate a simple structure rather than to interpret it, which is a more difficult task. Of those projects favoring structure, there were several designers who used it as a logical basis for form. Simply supported beams, fixed arches, and two- or three-hinged arches take traffic clearance and almost certain subsoil instability into account. All these make sense structurally. Others, such as cable-stayed structures, particularly the one-sided ones, also make economic sense for such a short span. On the other hand, large trusses and suspension bridges are vastly over-instrumented for such a short span and light pedestrian load. They contradict the apparent logic of the structural choice without making an architectural quality of that conflict, quite apart from the fact that the formal qualities of Venice lie in small-scale design rather than in megastructure.

The projects illustrated were among the proposals that attempted to integrate structure, function, and form. Curiously enough, many of the most refined and simplest solutions were designed at schools of architecture. One proposal from Syracuse University's Florence Program, done under the guidance of Joel Bostick, was among the most elegant in the competition. Designed by Hans Brower and Michael Castro, the bridge is symmetrical and conceived as a construction in glass (page 137). There were several projects that envisioned the structural use of Venetian glass, but no others, to my knowledge, attempted to document in detail how the material was to be used. The structural use of glass in loadbearing situations is, of course, problematical, but many advances have been made in that field over the past decades, and this project may be understood as a contribution to the technical discussion.

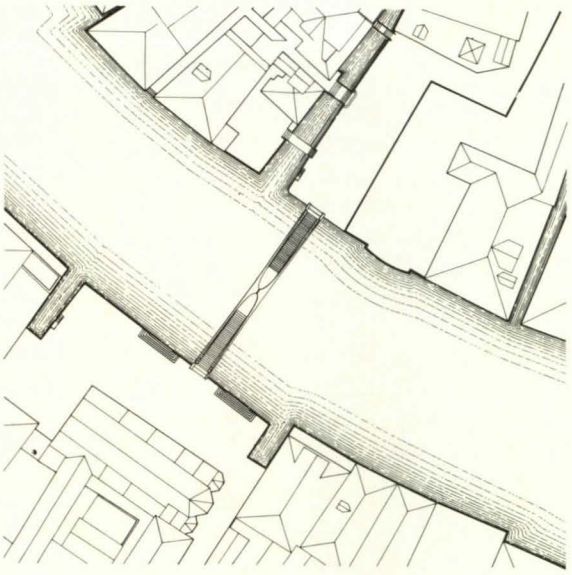
The design submitted by Manuel Schupp, a student from Stuttgart working in Fabio Reinhart's studio at the ETH in Zurich, is just as simple as the Syracuse projects and also proposes detailed structural solutions of exceptionally high formal quality. Schupp's proposal is a trussed, three-hinged arch in steel with Maillart-like subtlety of cross-sectional development, profile, and proportions (pages 134-135). A second project issuing from the same studio, that of Knut M. Longva from Alesund in Norway, demonstrates conclusively that structurally based projects need not be formally predetermined. Longva suspends his polygonal stair and platform from a two-hinged plate arch at the transition points between them (facing page). In this manner, he zones the bridge using the structure in a very simple and straightforward manner. It is a pity that Longva did not incline his arches more laterally to meet at the crown. This would have provided added lateral stability. It would also have formed the cross-section into a pointed arch, purely structural in form, and yet evocative of Venetian gothic decoration in a far more profound fashion than through the use of pastiche so widespread in the majority of the proposals. Longva's viewing platform would then have projected balcony-like laterally beyond the structure, strengthening its functional purpose and enhancing the frontal portal effect by shadowing it. This inherency makes the Longva project the most fascinating in this group.

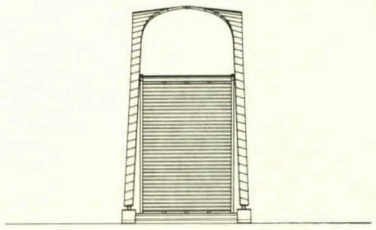
Perhaps the most complex design of all is that of Claudio Sgarbi, Antonello Bellucci, and Mauro Cuoghi, who proposed a two-level bridge as a beam over an arch (page 136). The architectural and planning implications of this idea for both sides of the bridge are well worth examining, and one can imagine the San Vidal as well as the Carita side of the canal evolving a spatially and functionally intricate split-level character based on the bridge. The split-level was designed to incorporate the existing situation of both sides of the canal, heightening the relationship between bank and bridge, and creating a new spatial and functional relationship between both banks. The bridge thus became an elevated part of the campi, intended both for viewing the canal and, even more importantly, visually connecting the two spaces. It also became part of the access to and functional organization of the adjacent buildings. However, the bridge itself ignores the structure implied by its form. The designers' strength lies in their understanding of the bridge as a projection of the surrounding conditions out over the water meeting in the middle, but they did not succeed in completing their design process and treating the bridge as an object. An integrated, structurally monolithic deck-stiffened arch of reinforced concrete such as Maillart's Klosters Bridge in Switzerland of 1930, or the more recently celebrated 1982 Ganter Bridge by Christian Menn, also in Switzerland, would have been far more appropriate to this bridge than the additive stone-supporting-steel-supporting-timber of the proposal. Such a monolithic structure would integrate the two levels structurally and formally in the piazza at mid-span.

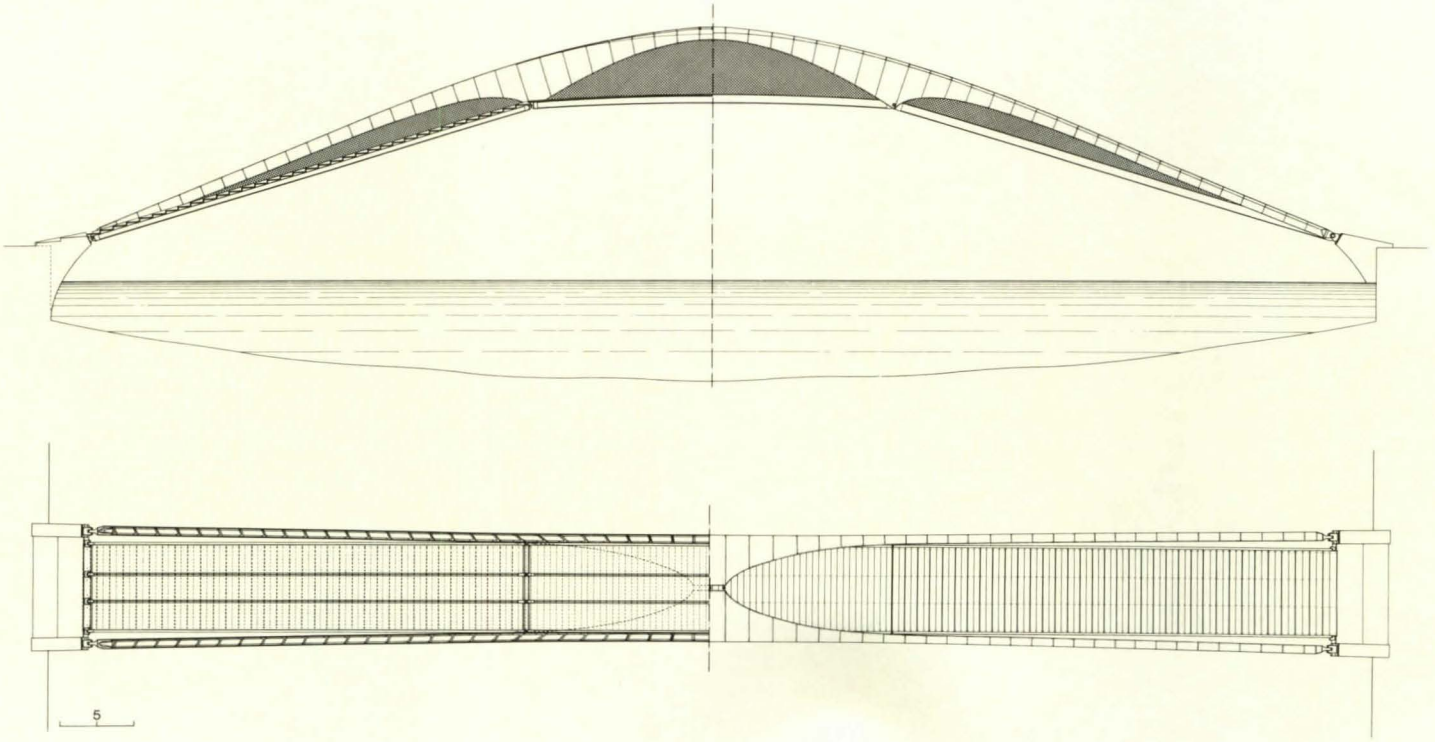
Longva's proposal, and that of Sgarbi, Bellucci, and Cuoghi, are the best of the group, being the most pregnant with formal, structural and functional possibilities. The first bridge exemplifies the structural tradition in bridge design, transforming the abstract structural model into architectural expression, infusing both form and structure with new meaning. This approach celebrates the bridge as an object in its own right. The latter project goes even further due to its urbanistic connotations. Although it originated as an extrusion of the two public spaces, it transforms them, imparting a two-level function with the surrounding buildings that may well have been implicit before. But now, through the two-level bridge—in itself a synthesis of arch and beam—the two-level campo becomes explicit and transcends the tradition of Venetian spatial organization in a synthesis of what was Venice and our 20th-century design concerns. These projects thus exemplify the two essential aspects of bridge design in an urban context that formed the crux of the problem to be solved by the competition.

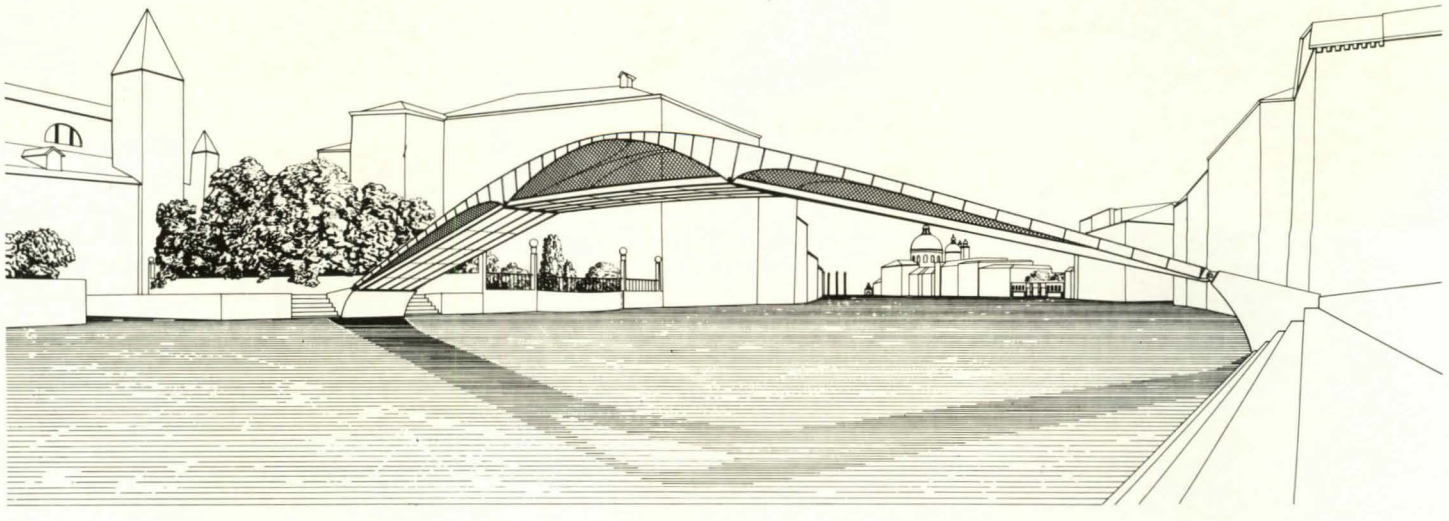
Two-hinged, double plate arch

Norwegian Knut M. Longva's conception for a new Academy Bridge entailed a two-hinged, double plate arch of steel with suspended stair and deck. His formal manipulation of the structural system demonstrates very clearly that the form of the bridge is not predetermined by the structural system chosen. The intrados of the arch dips to meet and suspend the deck where the platform meets the stair, thus zoning the bridge spatially, using the structure in a very simple and straightforward manner.

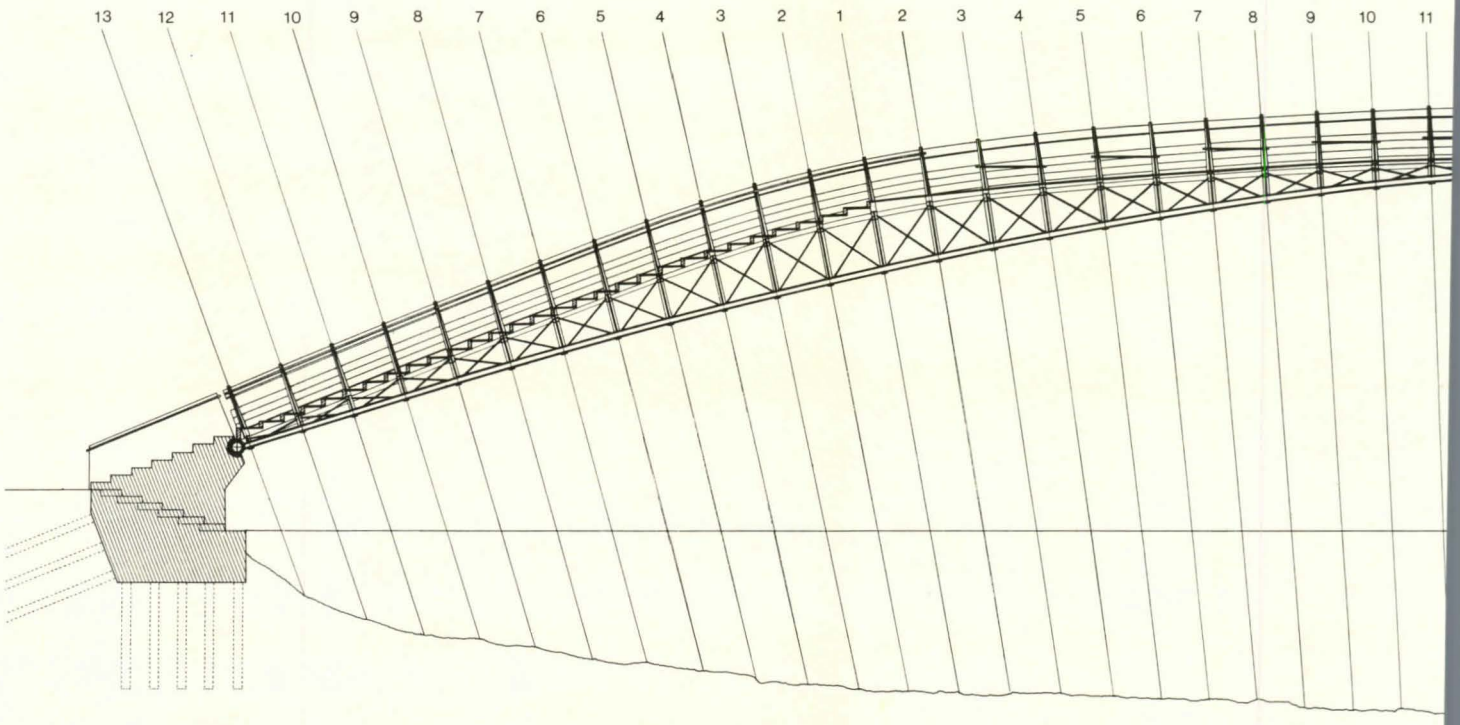


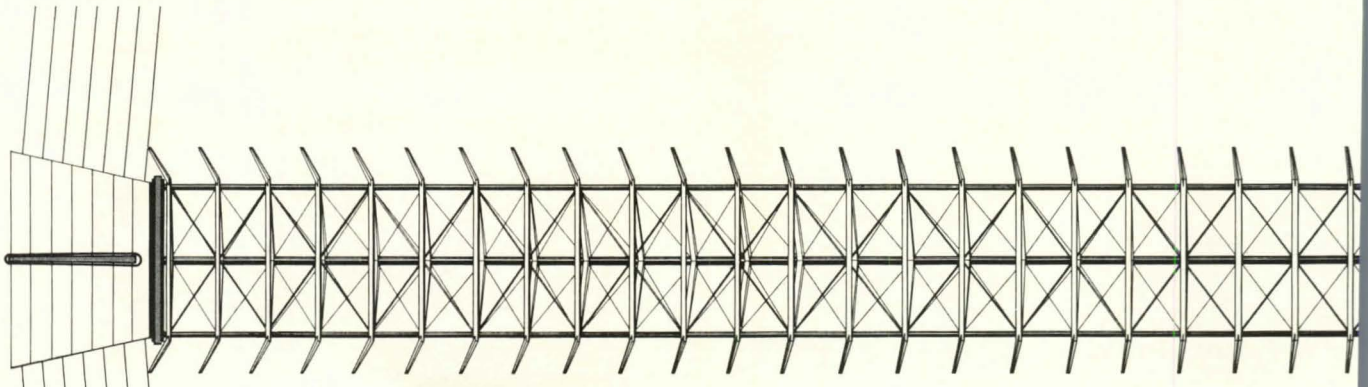


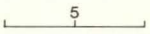


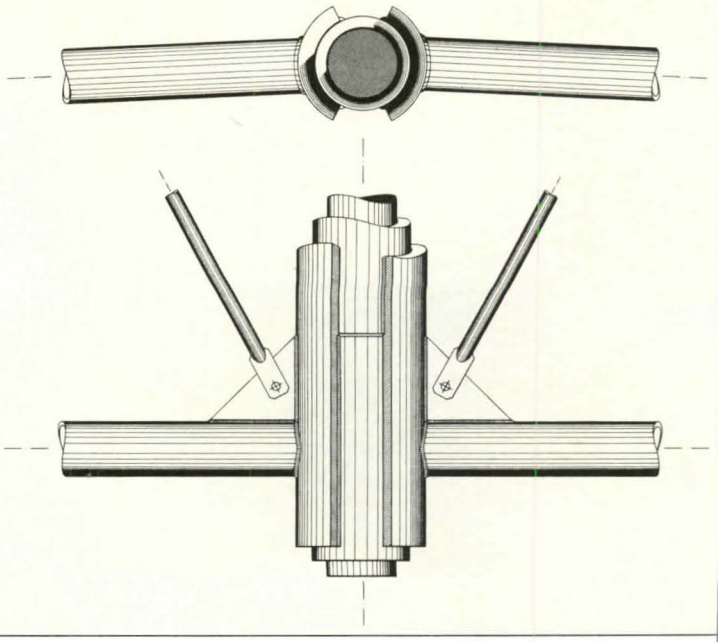


Three-hinged trussed arch

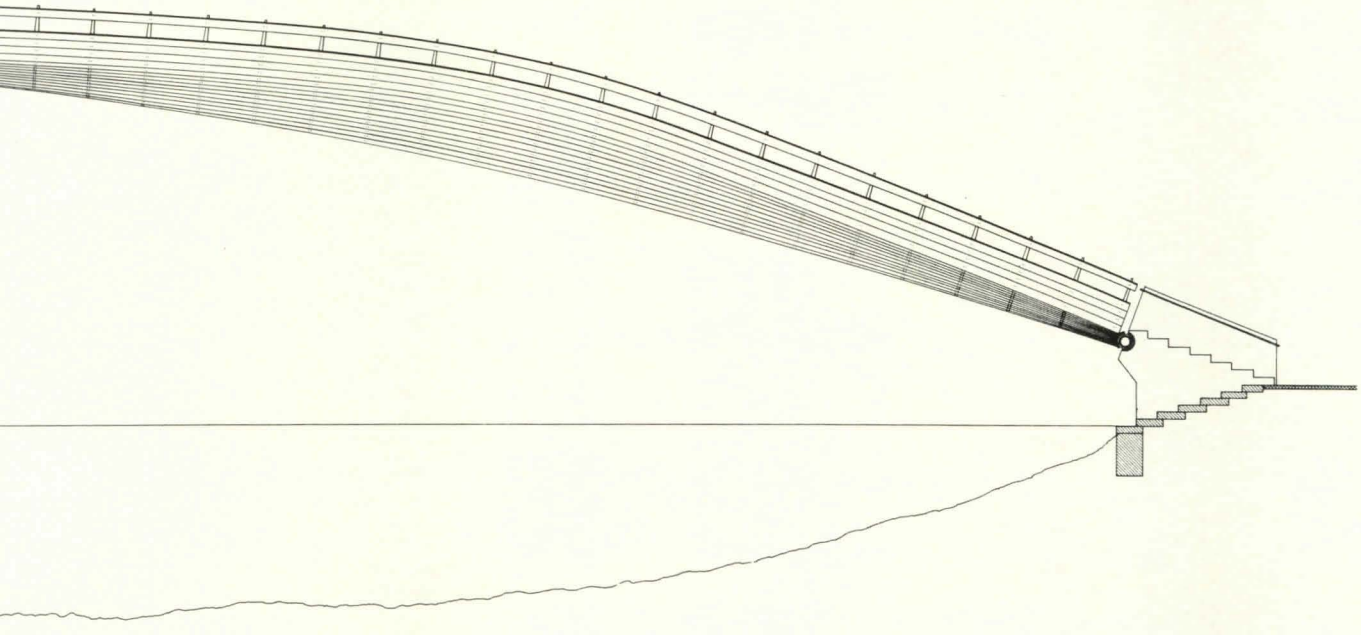


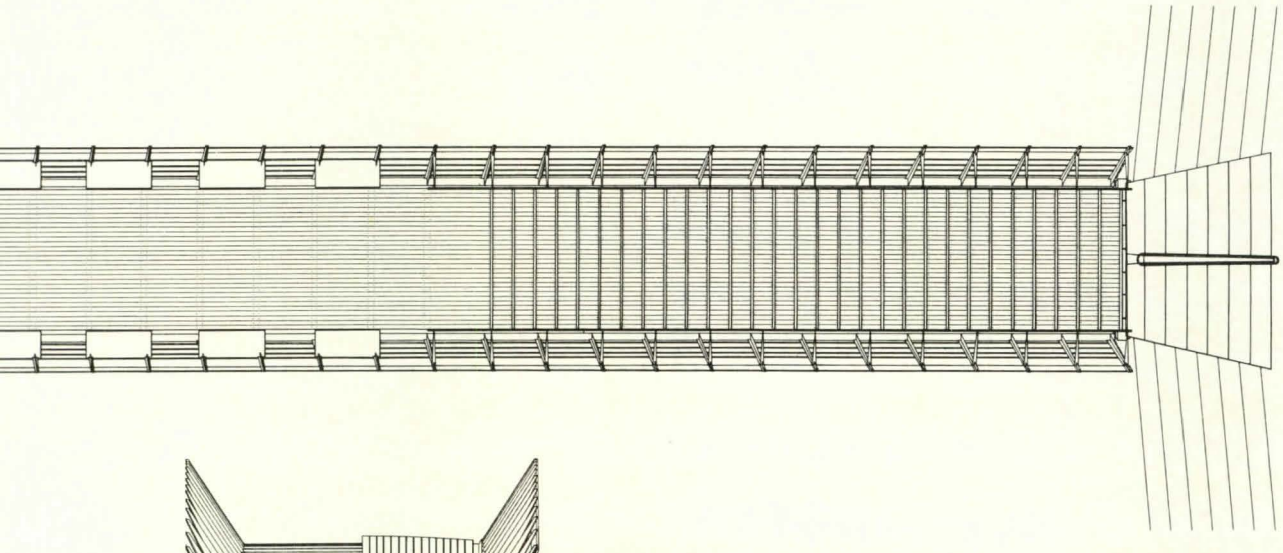


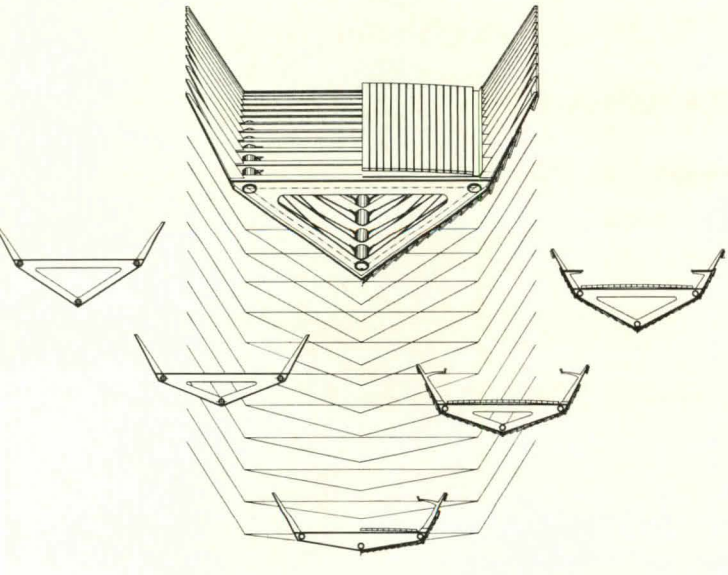




The proposal by West German Manuel P. Schupp envisions a three-hinged trussed arch in steel that uses the stair and deck as the top cord. The detailed structural solution Schupp proposed is of exceptionally high formal quality, with Maillart-like subtlety of cross-sectional development, profile, and proportions. Both two- and three-hinged arches are appropriate for bridge structures on unstable foundations, such as those encountered in Venice, since they can adapt their geometry to changes in position of the abutments without introducing additional bending moments.

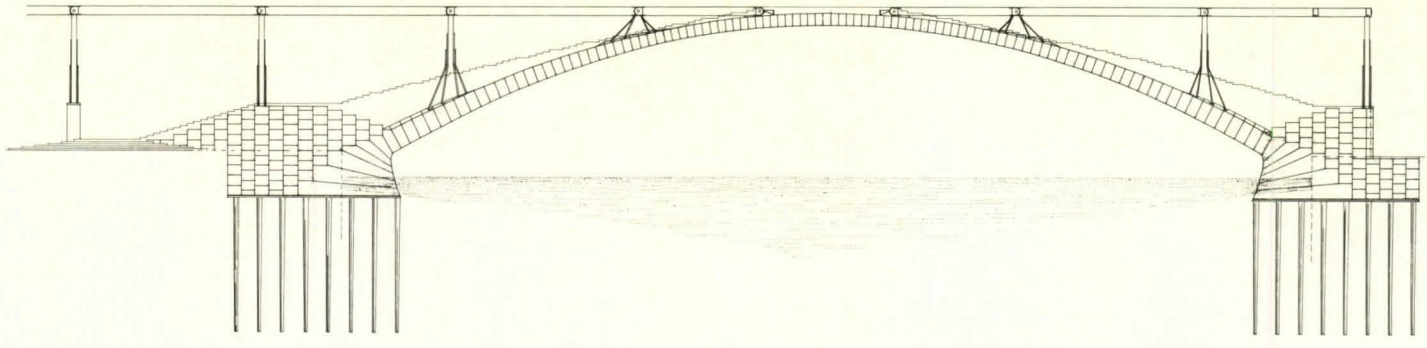


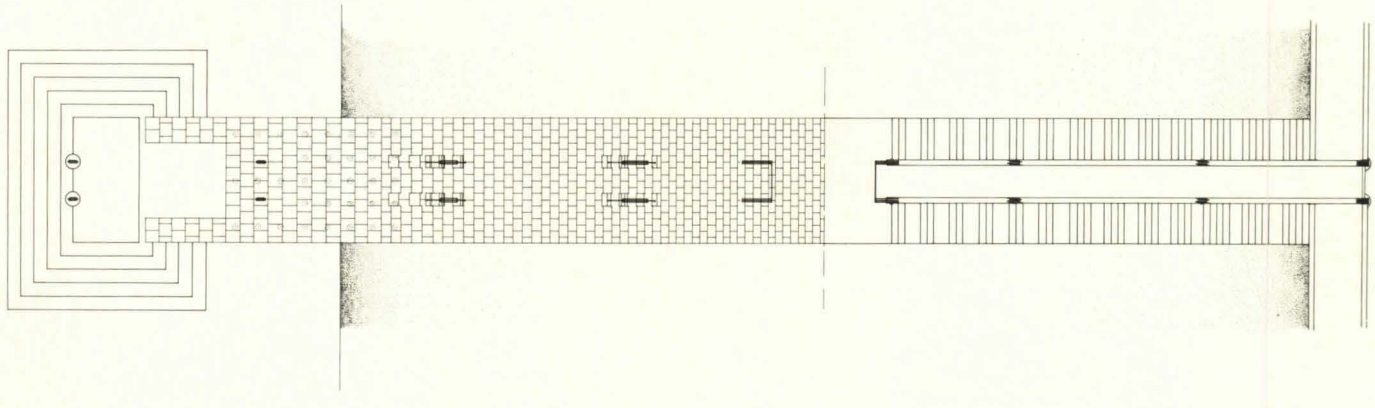


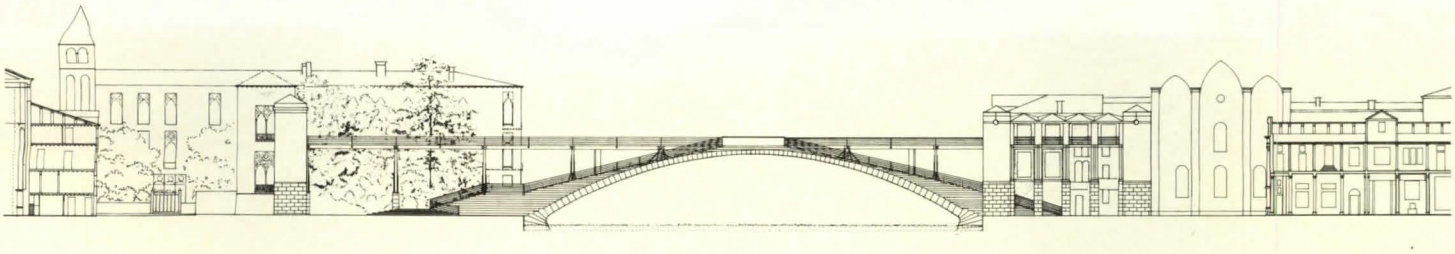


Two-level bridge

This proposal by Italians Claudio Sgarbi, Antonello Bellucci, and Mauro Cuoghi is a composite beam bridge of steel and wood, superimposed on a stone arch, but its chief fascination lies in the urban connotation rather than in the formal interpretation of structure. Both the arch and the beam are designed as pedestrian paths, which greatly aid the formal experience of the bridge by the user. The two levels correspond to a spatial and functional interpretation of the campi on both sides of the canal, uniting the two levels at the viewing platform at mid-stream. The platform is not only intended for viewing the canal, but also as the synthesis and amalgam of the two opposing banks.

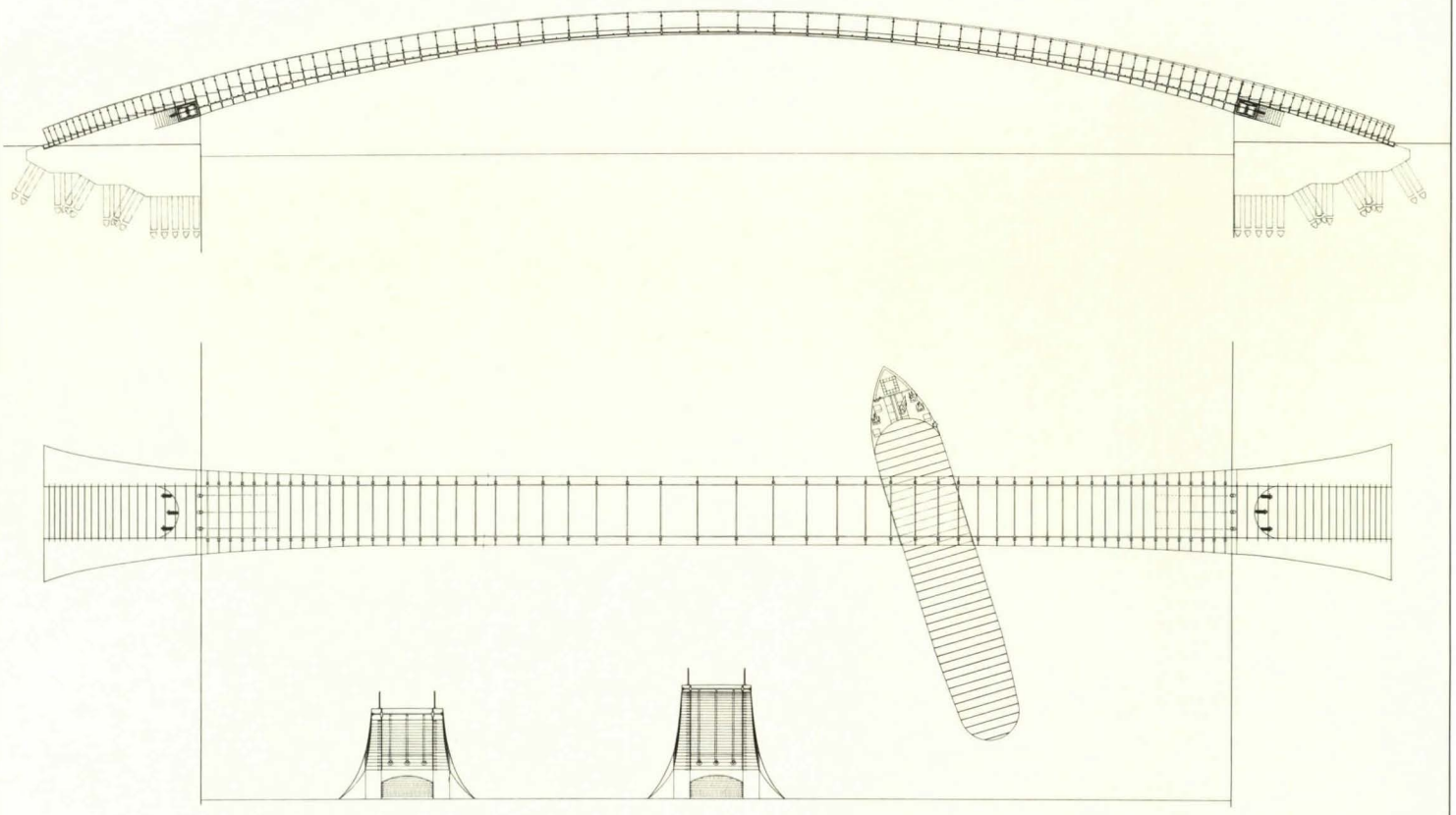


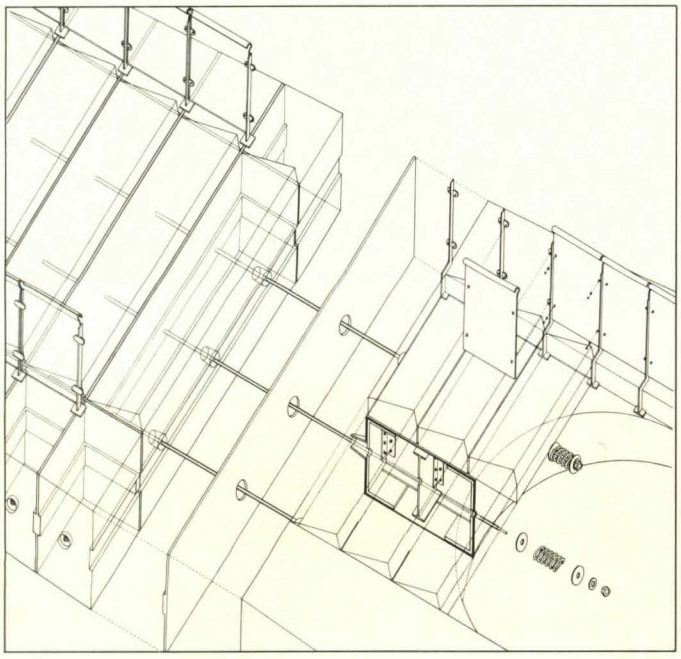


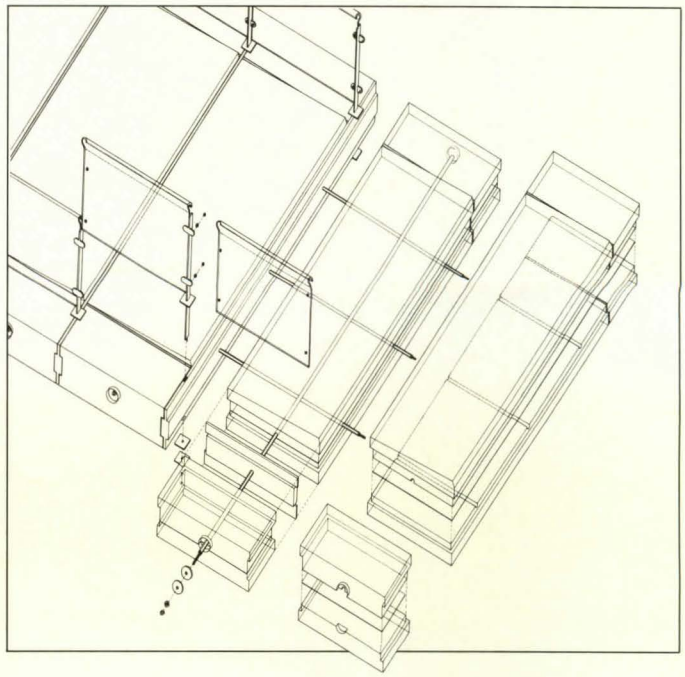


Glass bridge

Hans Brower is a student at the University of Southern California, Los Angeles, and Michael Castro a student at Syracuse University. Their project evolved in the studio of professor Joel Bostick in the Syracuse University's Florence Program. The main interest of this proposal lies in the interpretation of the structural use of glass. The fixed, post-tensioned arch of prefabricated glass blocks with glass parapet (axonometric details below) proposes formally intelligent and structurally very simple details.

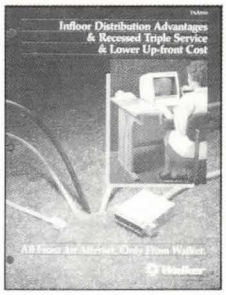






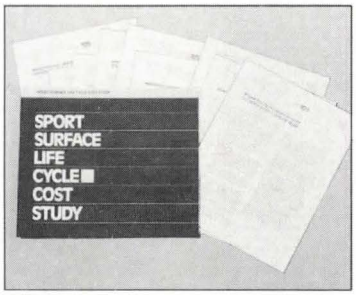
Product literature

For more information, circle item numbers on Reader Service Card



Wire raceway system
The manufacturer's recessed, triple service afterset insert is featured in a 4-page color brochure. The literature compares traditional preset wiring inserts with afterset inserts in terms of six major design criteria. Cost requirements and recessed activation alternatives are also described. Walker, Parkersburg, W. Va.
Circle 400 on reader service card

Asbestos abatement
An 8-page color brochure outlines the company's capabilities as asbestos-abatement specialists. Services include building inspection and evaluation, as well as total removal and replacement of asbestos-contaminated material. Secondary options are also described. W. T. Stephens Contracting, Inc., Houston.
Circle 401 on reader service card



Sports surfaces
The results of a three-year study comparing installation, maintenance, and life cycles of northern maple and synthetic sports surfaces are available in a file of case studies. Specification information for new or replacement sports surfaces is also included. Maple Flooring Manufacturers Assoc., Northbrook, Ill.
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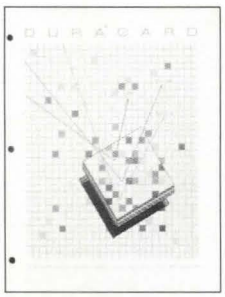

Coating system
The manufacturer's *Duragard* corrosion-resistant coating system, based on a modified urethane primer and said to offer 100 percent formability, is featured in a 4-page brochure. Included in the literature is a specification sheet outlining product features and technical data. E. G. Smith Construction Products, Inc., Pittsburgh.
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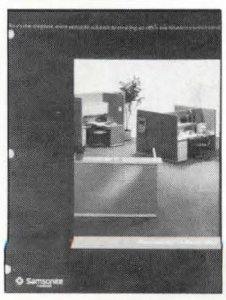
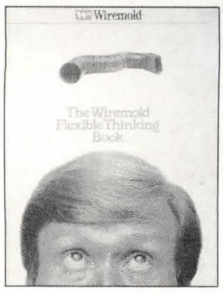


Workstations
An 8-page color brochure, including a template designed for planning configurations of workstations, is available for the manufacturer's line of office furniture and accessories. The template is a plastic planning and drawing guide that works on a scale of 1/4-in. to 1 ft. Samsonite Furniture Co., Murfreesboro, Tenn.
Circle 404 on reader service card



Flexible duct materials
A 12-page brochure presents several applications where flexible duct material was used to solve rigid problems. The booklet suggests new uses of flexible duct for directing, distributing, or transferring matter, including self-threading funnels and heat dispersion. The Wiremold Co., West Hartford, Conn.
Circle 405 on reader service card

Moisture-control products
The manufacturer's line of moisture-control building products, including decorative waterproof coatings, between-slab-and-foundation waterproofing, water repellents, mastic dampproofing, PVC sheet waterproofing, and metallic waterproofing, is featured in a 4-page brochure. Rexnord Chemical Products, Minneapolis.
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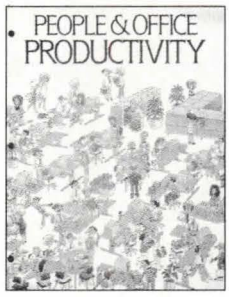

Office productivity
An 8-page brochure describes the role of people in the computer workplace and the effects of the office environment on worker productivity. The report details time utilization, workstation design, furniture payback period, and return-on-capital-investment. Human Factor Technologies, Inc. Londonderry, N. H.
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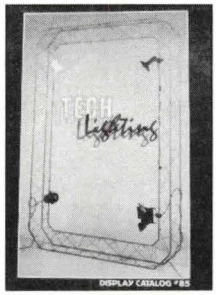
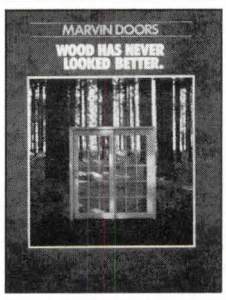


Display lighting
The manufacturer's line of display lighting fixtures is featured in a 10-page color brochure. Product descriptions, power requirements, lamp life, and examples of applications are included in the literature. Tech Lighting, Inc., Redford, Mich.
Circle 408 on reader service card

Loading-dock equipment
A 16-page color brochure reviews the manufacturer's line of universal loading docks and dock adjustment equipment. The literature contains product descriptions with dimensional information, as well as architectural specifications and schematics. Advance Lifts, Inc., St. Charles, Ill.
Circle 409 on reader service card



Doors
A 24-page color catalog features the manufacturer's line of doors, including patio, terrace, clad terrace, and French doors. Detailing and sizing information is included, along with dimensional diagrams and cross-sectional drawings. Installation and ordering data is also contained. Marvin Windows, Minneapolis.
Circle 410 on reader service card

Bent glass
An 8-page color brochure contains 19 photographs of applications using curved architectural glass, as well as brief product descriptions. A slip sheet is also included, which details the types of bends that are available, along with instructions on how to accurately order the glass. Standard Bent Glass Co., Inc., Butler, Pa.
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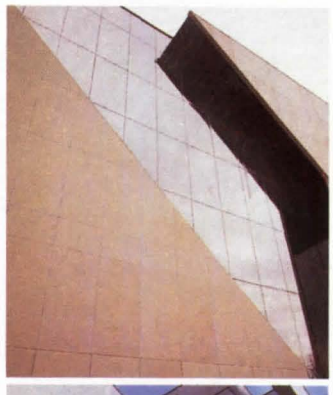

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Acknowledged Industry Leader New	Antron Precedent New
400,000 traffics	400,000 traffics
1,000,000 traffics	1,000,000 traffics

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Product literature *continued*

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Metal building products
The manufacturer's line of sealants, caulking guns, and engineered construction fasteners are featured in a 4-page brochure. The *Flo-Seal* system of fasteners, featuring a compression seal, is highlighted, in addition to the *Stalgard* corrosion-resistant coating. Elco Industries, Inc., Rockford, Ill.
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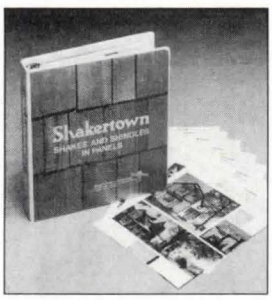

Cedar shingles
A line of panelized cedar-shingle siding and decorative cedar shingles is featured in an 8-page binder entitled *Architect Design Portfolio.* The portfolio features several applications ranging from light commercial to multifamily projects to single-family residences. Shakertown Corp., Winlock, Wash.
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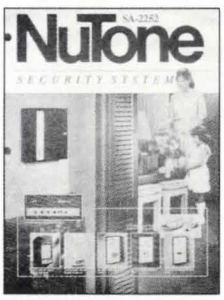

Security systems
A 4-page brochure features the manufacturer's line of residential security systems. The literature contains detailed product descriptions, including dimensional information and diagrams. Additional information on optional fire circuits, intruder detectors, and other accessories is also included. NuTone, Inc., Cincinnati.
Circle 414 on reader service card

Lateral files
The manufacturer's *Spectra-One* lateral files, featuring an integral drawer-front design, is highlighted in an 8-page color brochure. The literature contains a color selection chart and photographs of the files surrounded by fabric swatches. Allsteel, Inc., Aurora, Ill.
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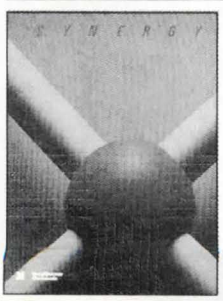

Thermoplastics
Design Synergy, a 22-page color brochure, features engineering thermoplastics designed for the medical, transportation, telectronics, leisure, and consumer products markets. The brochure reviews color, texture, snap-fits, and temperature resistance. Borg-Warner Chemicals, Inc., Parkersburg, W. Va.
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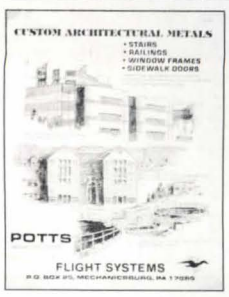

Industrial railing
A 4-page brochure highlights the manufacturer's custom architectural metals for stairs, railings, window frames, and sidewalk doors. The brochure contains a product presentation, including more-detailed descriptions of stairs, ladders, and railings. Potts Manufacturing, Div. of Flight Systems, Mechanicsburg, Pa.
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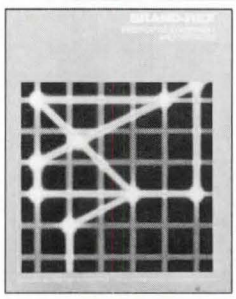

Flat cable
The *Tape Cable* line of flat flex cable is featured in a 22-page brochure. The catalog includes specifications and performance ratings for cables designed for signal or power transmission in a variety of applications, including inside or outside cabinet, over or under carpet, and indoor or outdoor. BRIntec Corp., Willimantic, Conn.
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Structural adhesives
Included in the manufacturer's information kit is technical data on *Versilok* acrylic, *Fusor* epoxy, *Tyrite* urethane, and *Chemlok* cyanoacrylate adhesives. The adhesives are said to bond similar and dissimilar load-bearing materials and withstand salt spray, acid, and alkali immersions. Lord Corp., Erie, Pa.
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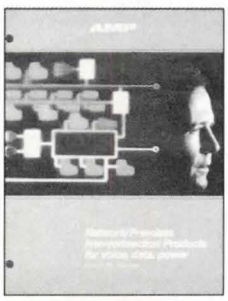
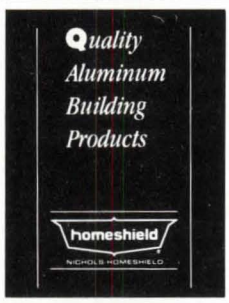
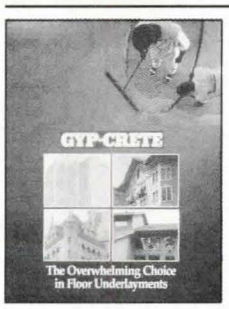


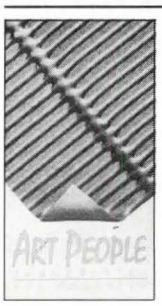
Premises' wiring products
An 84-page catalog features more than 2,000 products for networking and premises' wiring of voice and data, along with related power distribution and grounding devices. The catalog reviews coaxial cable, interconnection products, and multiconductor copper systems. Support products are also reviewed. AMP, Inc., Harrisburg, Pa.
Circle 420 on reader service card



Aluminum building products
A line of aluminum building products is featured in a 10-page color brochure. The literature includes detailed product descriptions, diagrams, specifications, and ordering information. Products reviewed include alloy nails, rain-carrying systems, and roll flashing. Nichols-Homeshield, Aurora, Ill.
Circle 421 on reader service card



Floor underlayment
An 8-page color brochure describes the manufacturer's floor underlayment products designed for multifamily, commercial, renovation, and single-family home markets. The brochure includes information on fire- and sound-control ratings, as well as product specifications. Gyp-Crete Corp., Hamel, Minn.
Circle 422 on reader service card



Wallcoverings
An 8-page fold-out brochure describes the manufacturer's design philosophy for its collection of handcrafted wallcoverings. The brochure provides a brief description of the materials used in the designs, along with examples of possible applications. Art People, New York City.
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XEROX

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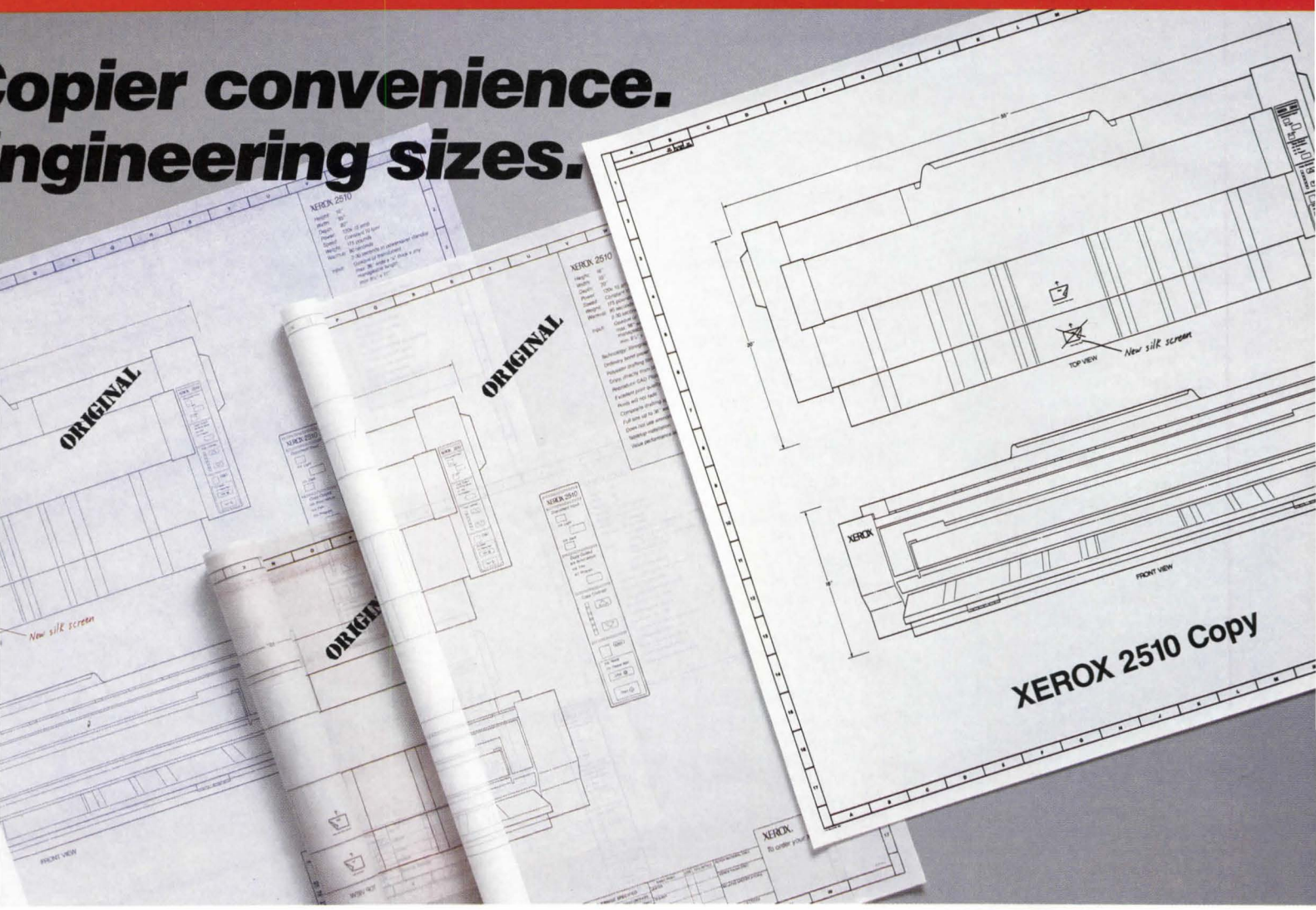

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New products: Designer's Saturday

*This year's Designer's Saturday, which took place in early October, had all the hoopla of its 18 predecessors—and then some. Coinciding with the grand opening of the International Design Center (*RECORD, *June 1986, pages 144-153), New York became the site of a design extravaganza. With much of the action taking place at the Long Island City address of the IDCNY, many of the 57 Designer's Saturday members had temporary, if not permanent, showrooms set up there. Amidst the receptions, parties, previews, and seminars, a variety of new products were introduced, some of which are featured on these pages.* E. G.

1. Chair
This as-yet-unnamed chair, designed by Paolo Favaretto, features a cantilevered frame created to enhance not only visual appeal, but comfort as well. The back and "floating" seat are molded structural urethane and may be specified in *Kintone* or black. The frame is available in 24 *Kinkote* colors or chrome. According to the manufacturer, the affordability of this chair helps to extend its use beyond offices and institutions into recreational and hospitality environments. Kinetics, Rexdale, Ontario.
Circle 300 on reader service card

2. Chair
The *Villa Ast* chair is the latest addition to the manufacturer's ongoing "Re-Creation: Josef Hoffmann" collection that began in 1975. Designed by Hoffmann in Vienna for the Ast Villa in 1911, the *Villa Ast* chair features an ebonized or mahogany stained beech frame and an upholstered foam-padded seat. International Contract Furnishings, Inc., New York City.
Circle 301 on reader service card

3. Office system
The *Morrison System*, designed by Andrew Morrison, features a range of components based on a 6-in. module that can be used to create open office plans or freestanding *furniture*. Freestanding vertical panels made of hardboard septum, steel ribs, and fiberglass are available in four heights. The system also features overhead storage cabinets, shelves, and worksurfaces that are cantileverd from the panels by brackets which fit into a recessed connector track. Knoll International, Inc., New York City.
Circle 302 on reader service card

4. Spotlamp
Designed by Ernesto Gismondi, the *Giove* table spotlamp is made of die-cast aluminum, has a grey lacquer finish, and houses an Osram 150w HQI metal halide lamp. The head diffuser rotates 180 deg and comes with a shatterguard. *Giove* may be used for a variety of applications, including display windows, industrial interiors, and recreational facilities. It is also available as a wall spotlamp. Artemide, Inc., New York City.
Circle 303 on reader service card

5. Office system
The *Com Office System*, an IBD Gold Award winner, features acoustical panels, a full-wire management system, overhead storage shelves, and hang-on storage cabinets said to improve paper-management capabilities. Work surfaces may be panel-suspended, affording additional storage under the work surface and greater design versatility. Krueger, Inc., Green Bay, Wis.
Circle 304 on reader service card

6. Casegoods
The *Edgewood* line of casegoods, designed by Robert Taylor Whalen, features mitred tops and several options such as integral pulls, and coordinated hardware. The line is available in a variety of finishes, including cherry, sapeli, walnut, and white oak. Trim colors may be specified in chrome, bronze, or black. Stow & Davis, Grand Rapids, Mich.
Circle 305 on reader service card

7. Lounge seating
Colorado, a seating system designed by Michael McCoy, includes four seating and two table units that may be arranged in lines, circles, or serpentines, with seating on either one side or two. *Colorado* is supported by a fully upholstered column with tubular metal armrests that may be used as intermediate or terminal support. The seat and back are also upholstered and are joined by a plastic profile. Krueger International, New York City.
Circle 306 on reader service card

1

2

For more information, circle item numbers on Reader Service Card

3

4

5

7

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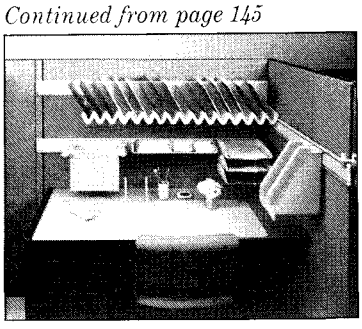
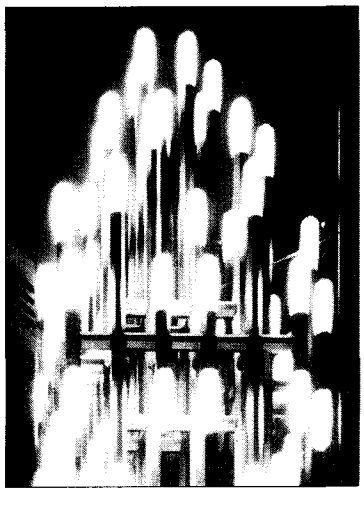
Continued from page 145

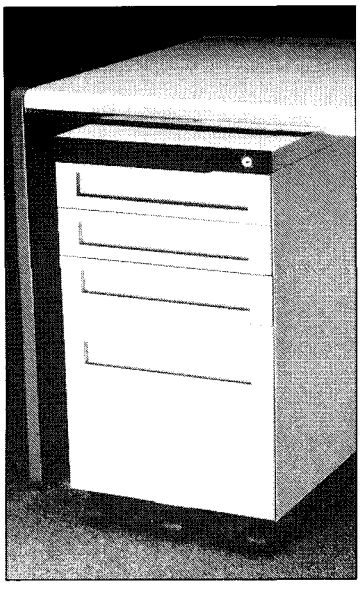


Workstation accessories
Designed for both partitions and permanent walls, the manufacturer's *Walmaster Systems* line of interchangeable components attaches to a universal bar, thereby allowing for change or additions. The system can be used to hang files, printouts, binders, and magazines. Abbot Supply, Farmingdale, N. J.
Circle 307 on reader service card

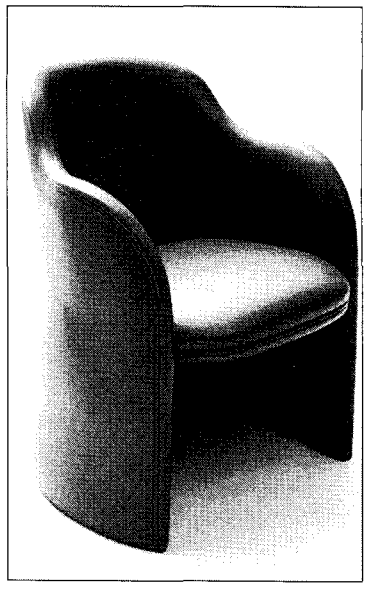
Laminated architectural glass
The manufacturer's process for encapsulating fabric within laminated architectural glass is said to provide superior soundproofing, shatter resistance, and security. To maintain clarity, *Butacite* polyvinyl butyral resin sheeting is used as the glass innerlayer. Du Pont Co., Wilmington, Del.
Circle 308 on reader service card



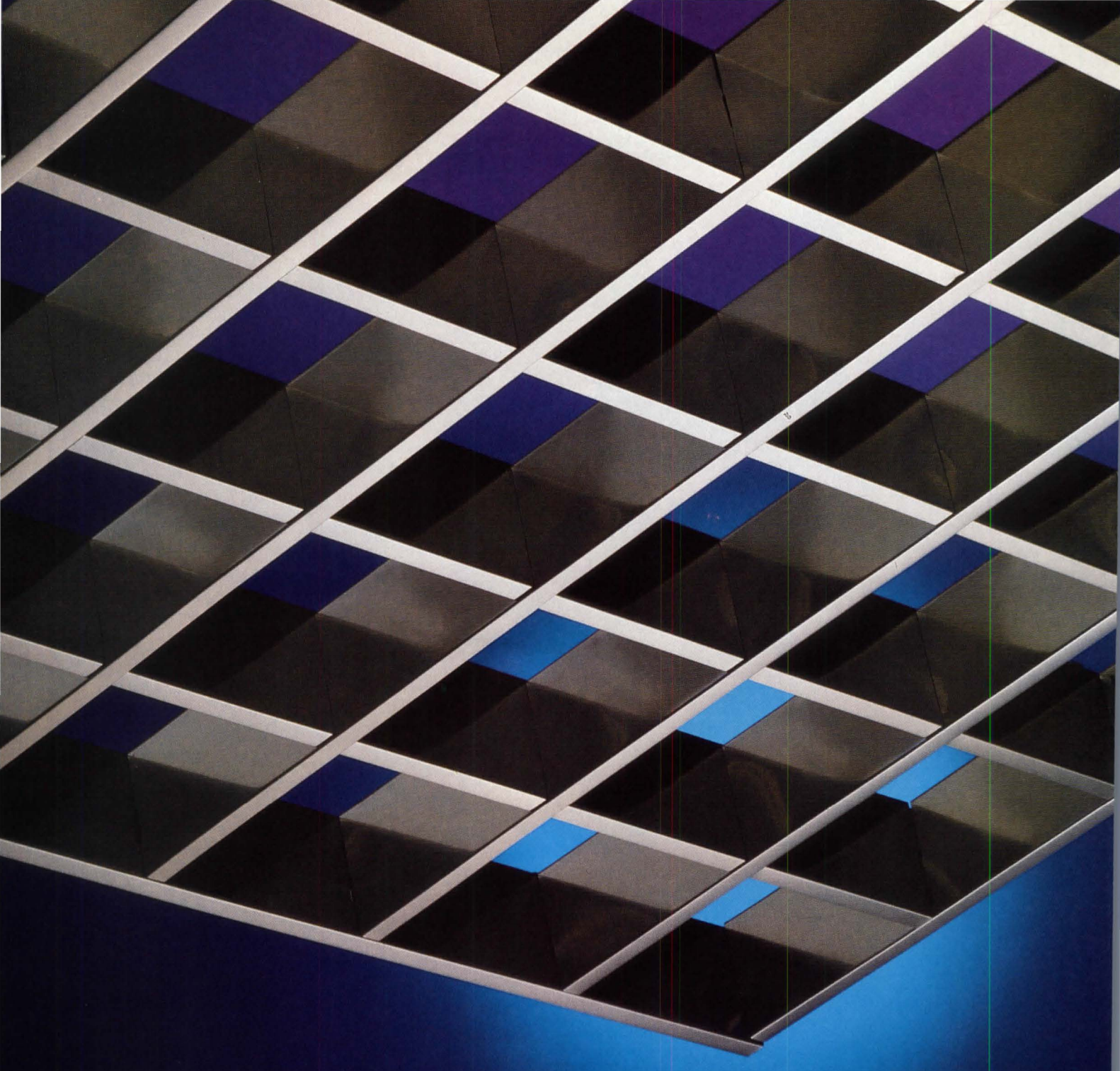
Lighting system
The manufacturer's *PL-50* lighting system consists of a group of components which are combined to form chandeliers, ceiling fixtures, and wall brackets. The main components of the system include a 13-watt twin-tube fluorescent lamp, an octagonal aluminum extrusion, and an acrylic snap-on diffuser. American Lightsystem & Luminaire, Newburgh, N. Y.
Circle 309 on reader service card



Mobile files
The *Mobile Pedestal Series* of 24-in. high files features five dual-wheeled casters designed to give additional stability when the bottom file drawer is open. Three standard drawer sizes can be ordered in a variety of configurations. Cole Business Furniture, York, Pa.
Circle 310 on reader service card



Chair
The manufacturer's *CH-72-SV* club dining/pull-up bucket chair, designed by Nicos Zographos, is fully covered in leather. The chair measures 24- by 24- by 32-in., and was introduced at Designer's Saturday. Zographos Designs Ltd., New York City.
Circle 311 on reader service card
Continued on page 149



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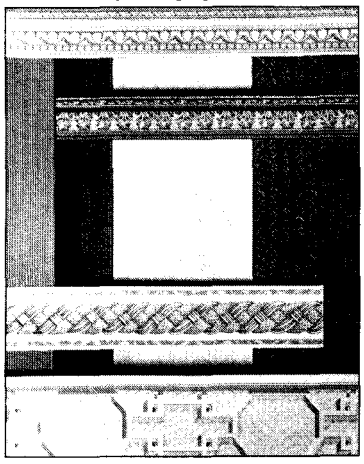
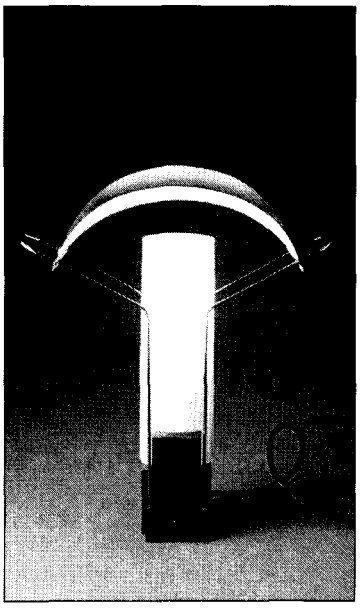
Continued from page 147



Wallcoverings
The *In Residence* collection of wallcoverings and borders features an impressionistic-styled palette of colors said to unify the borders and papers. According to the manufacturer, the collection was designed to be "mixed and matched." Lee Jofa, Carlstadt, N. J.
Circle 312 on reader service card

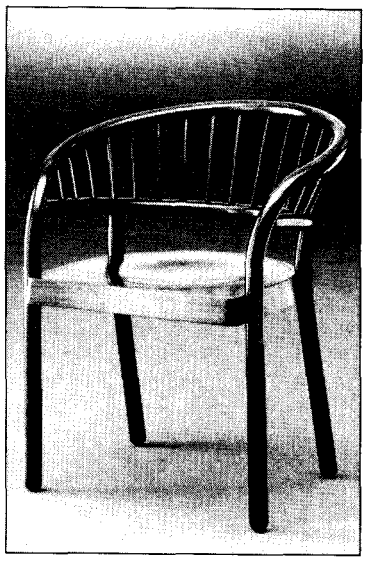
Chair
The *Figura* executive chair, designed by Mario Bellini, has no visible shell, protruding levers or buttons, and may be specified with or without armrests. The chair is available in leather or removable fabric covers. The lower part of the seat's back has a padded "belt" for lumbar support which can be ordered to match or contrast the color of the chair. Vitra Seating, Inc., New York City.
Circle 313 on reader service card

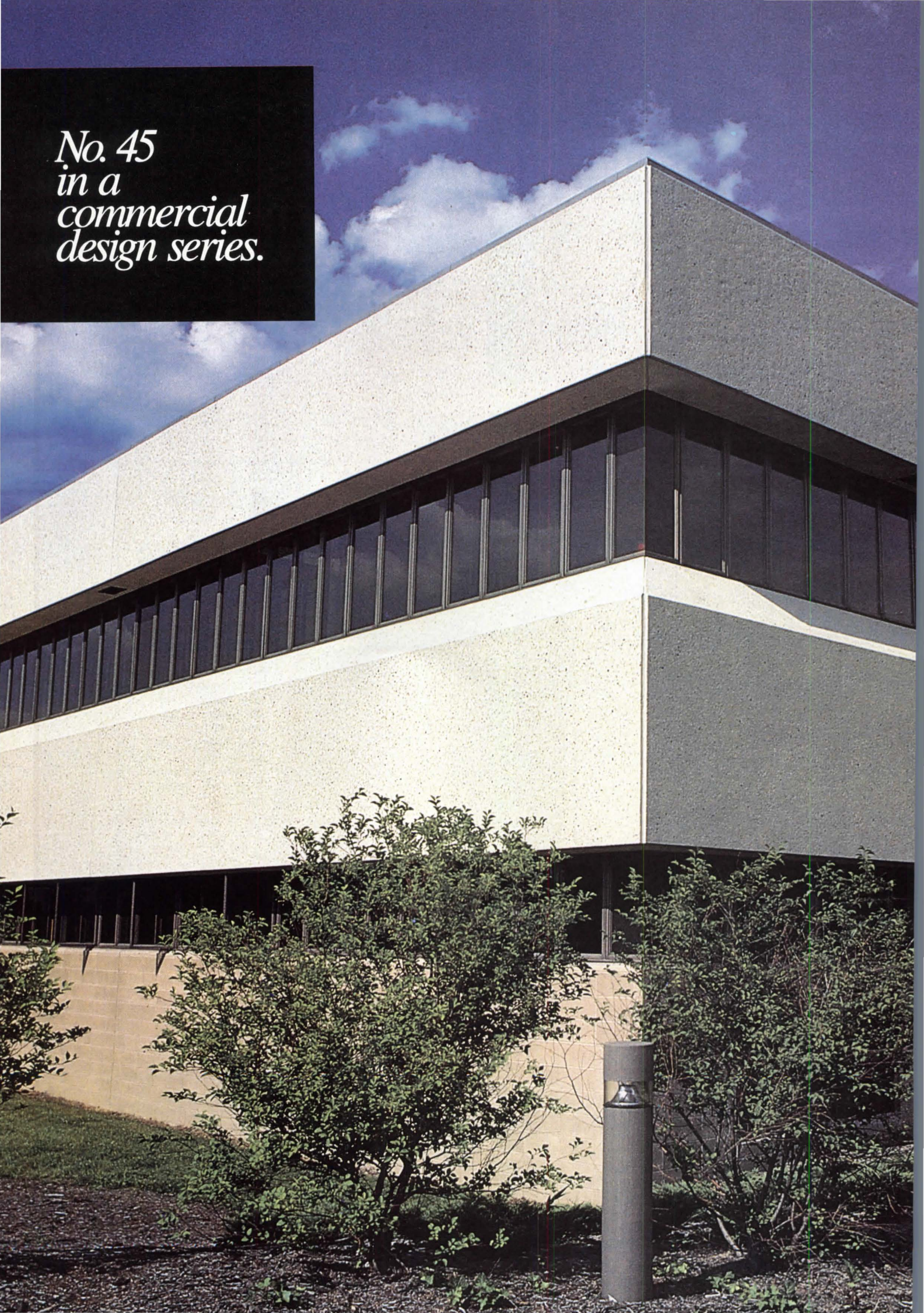
Work surface
The manufacturer's panel-mounted wraparound work surfaces are available in two basic models. A notched wraparound surface features a recessed keyboard pad and measures 48-in.-wide by 24- or 30-in.-deep. The curved wraparound surface is available in two sizes: 36- by-24-in. and 48- by-24-in. Haworth, Inc., Holland, Mich.
Circle 314 on reader service card



Lighting fixture
Palio, a crescent-shaped table/task lamp, designed by Perry A. King and Santiago Miranda, features an elliptical, opal glass diffuser body and an aluminum reflector suspended by chrome-plated brass rods. Atelier International Lighting, New York City.
Circle 315 on reader service card

Chair
Fuso, an arm chair designed by Adam Tihany and Joey Mancini, is available in beechwood, mahogany, pearwood, honey stain, and high-gloss and matte lacquers. The seat may be specified in a selection of fabrics, leathers, and wood. Innovative Products for Interiors, Inc., Long Island City, N. Y.
Circle 316 on reader service card
Continued on page 152

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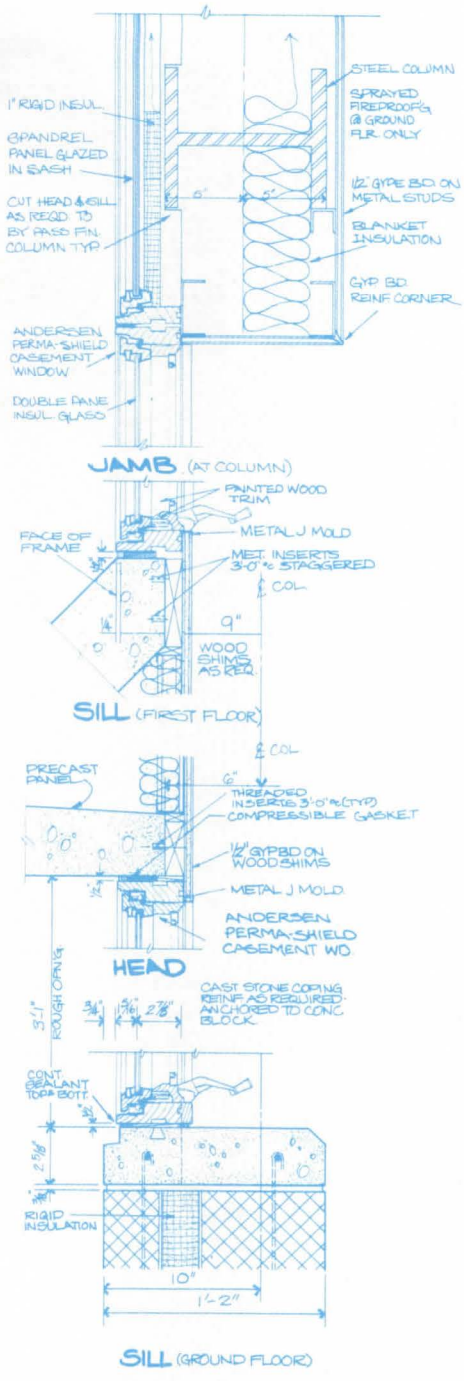
*Source: Benefits of Daylighting, Cost and Energy Savings. ASHRAE Technical Paper, J.W. Griffith, 1977.



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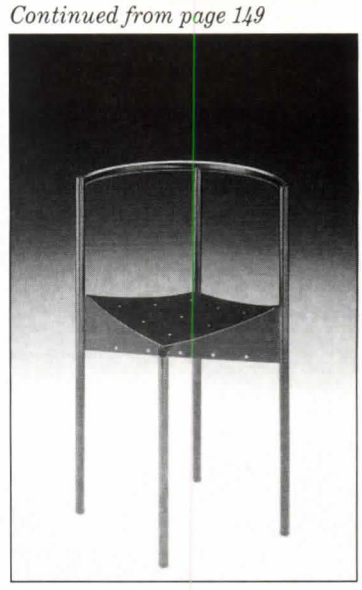
Continued from page 149



Chair
One of French designer Philippe Starck's newest pieces of furniture is the *Wendy Wright* chair, introduced at the 1986 Milan Furniture Fair. The lightweight chair features a perforated metal seat and a tubular back rest. SEE, New York City.
Circle 317 on reader service card

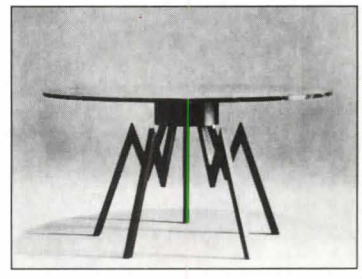
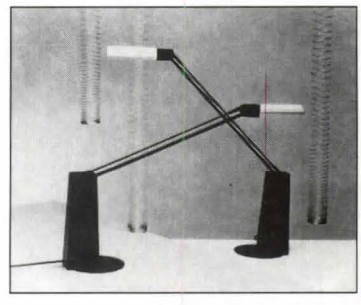
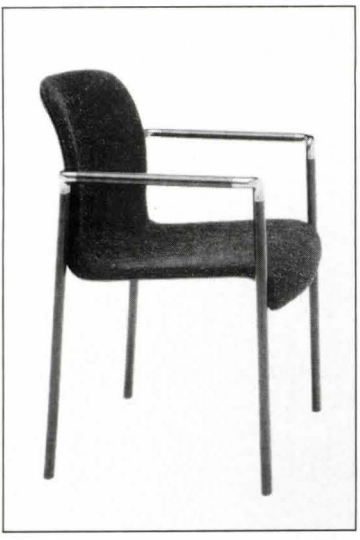


Table
The *Black Widow* table, designed by Stanley Jay Friedman, features a cyclindrical steel center supported by five articulated steel legs. The round tabletop is available in clear or tinted cut glass, polished and filled marbles, or a selection of woods. The table may be specified in a flat black enamelled finish, or any of 125 standard colors. Brueton Industries, Inc., Springfield Gardens, N. Y.
Circle 318 on reader service card



Lighting fixture
Cygno, a task lighting fixture designed by Ron Rezek, features an adjustable 20-in. vertical range. The unit's fluorescent bulb is shaded by either a translucent white diffuser or an opaque gray reflector that is said to make it especially well-suited for use with computers. Artemide, Inc., New York City.
Circle 319 on reader service card



Chair
Designed by Dragomir Ivicevic, the manufacturer's *Proper* chair features a lightweight construction said to provide comfort and convenience in stacking. The arms and legs of this occasional chair are made of oval steel tubing. Screws and fasteners are not visible from any angle. Herman Miller, Inc., Zeeland, Mich.
Circle 320 on reader service card

Seating
The *Barto* chair was designed by Richard Schultz and features a fully upholstered back. The upholstery is applied over an accordian-pleated plastic fan back which, in turn, is stretched over a U-shaped steel frame with elastic webbing suspension. The chair is available in three versions. Domore, Elkhart, Ind.
Circle 321 on reader service card

Seating
The manufacturer's *delos* series of office, conference, and lounge seating includes armchairs with cantilevered or four-legged bases, a tilt-swivel manager's chair, and lounges available with a standard 18-in. seat. The series may be specified in leather upholstery or a selection of fabrics, and is set off by polished chrome or epoxy-coated frames. Fixtures Furniture, Kansas City, Mo.
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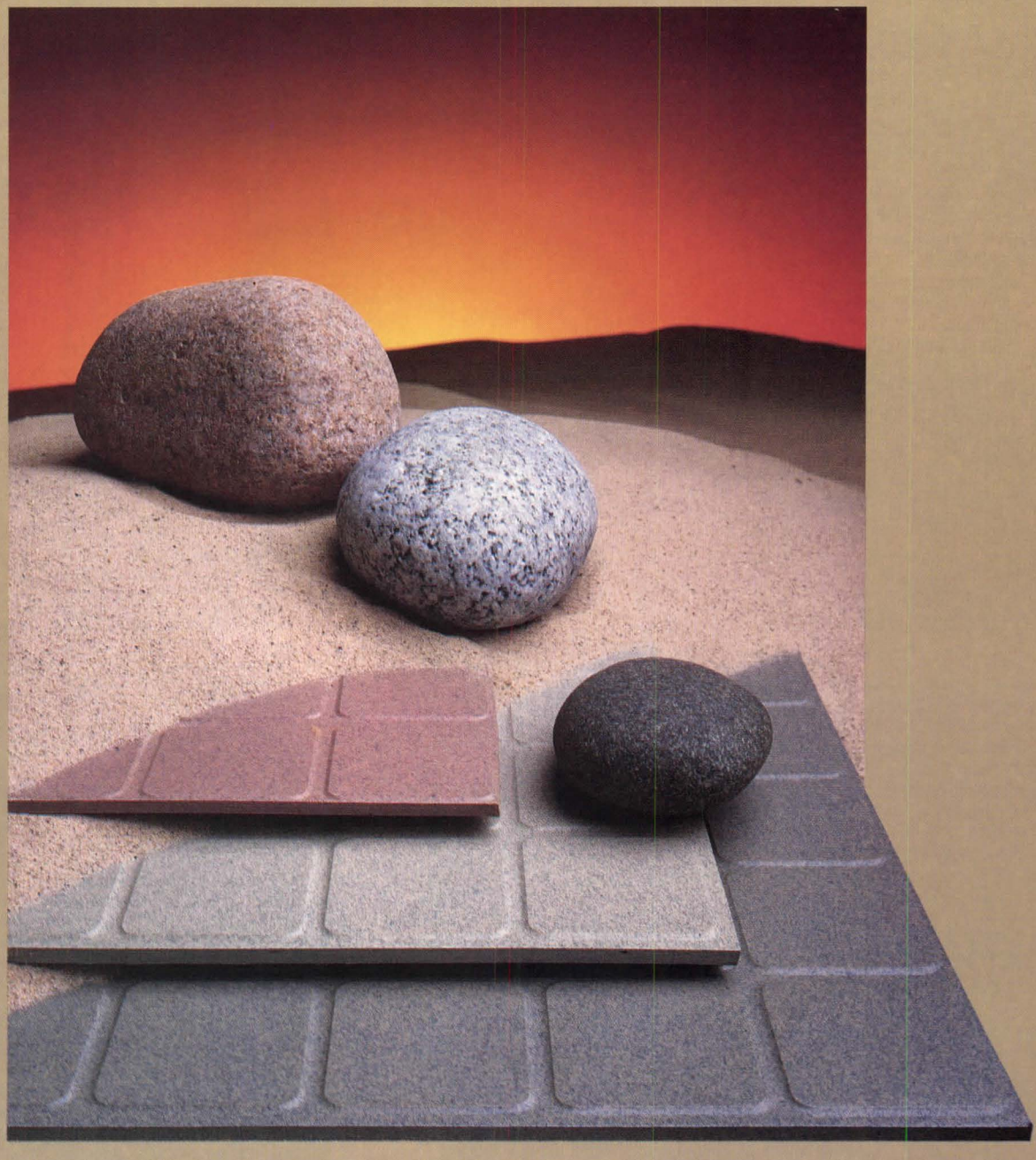

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Manufacturer sources

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 86-89
Renaissance Center Office Park, Phase II
Leason Pomeroy Felderman Associates
Roofing: Flintkote. Skylights and windows: Western States Glass. Glazing: P. P. G. Outdoor lighting fixtures: McPhilben; Prudential; Kim; Devine. Tile: Dal-Tile.

Pages 90-95
Porter, Wright, Morris & Arthur Headquarters
Warren Platner Associates Architects
Pages 90-91—Bronze/glass railings: Tomco Metal Fabrication, Inc. Lighting fixtures: Lite Lab Corp. Tables: Valley Marble.
Page 92—Chairs and tables: Knoll International. Table linen: James G. Hardy & Co. Carpeting: Brintons Carpet. Credenzas: George A. Merritt Co.
Page 93—Seating: Tudor House Furniture. Chairs: Knoll International.
Pages 94-95—Letter trays: Smith Metal Arts. Floor lamps: Koch & Lowy, Inc. Desk: Custom, fabricated by Gordon Russell, Ltd. Metal files: Storwal Intl. Inc. Pendant fixtures: Kenneth H. Walker Assoc., Inc. Millwork: Thomas W. Ruff Co.

Pages 96-99
PHICO Insurance Co.
Metcalf/KCF Joint Venture Architects
Pages 96-97—Granite: New England Stone. Glazed brick: Hanley. Curtain walls: Kawneer. Tinted glass: P. P. G. Glass block: Pittsburgh-Corning. Skylights: Fisher. Ventilators: Aerovent. Entrance: Falcon.
Pages 98-99—Lighting: Lightolier; Edison Price; Elliptipar.

Pages 100-103
TRW World Headquarters
Lohan Associates
Pages 100-101—Curtainwall: Antemex/Harmon. Entrance: BWN Industries. Skylight: Lord and Burnham. Roofing: Carlisle.
Pages 102-103—Marble: Vermont Marble. Ohio sandstone: Briar Hill Stone Co. Granite: Bussiere. Interior cladding: Zimmcor. Bronze handrails, atrium glass: Livers Bronze. Lighting: Edison Price. Ceiling: Armstrong. Carpet: Scott Group. Sunshades: Mecho. Blinds: Louverdrape. Paints: Sherwin Williams. Planters: Supreme Aluminum. Spotlights: Thorn Co.

Pages 124-131
High Museum, Atlanta, Georgia
Parker Scogin Architects
Page 124—Graphics: APCO Graphics, Inc.
Pages 125-126—Flooring: Virginia Slate Corp. Paneling: Woodwork Corp. of America. Downlights: Lightolier. Railings: Wilfab, Inc. Sprinkler heads: Gem.
Page 127—Diffusers: Titus Corp. Paints: Glidden; E.I. DuPont De Nemours & Co. Carpeting: Knoll International. Ceiling panels: Woodwork Corp. of America. Spotlights: Lightolier.
Pages 128-129—Support panels, illuminated floor: Circle Redmont. Glass bricks: Pittsburgh-Corning. Skylight glazing: Rohm & Haas Co. Security equipment: Doorguard, Honeywell. Flooring: Kentucky Wood Floors, Inc. Finish: Minwax Dura-Seal.

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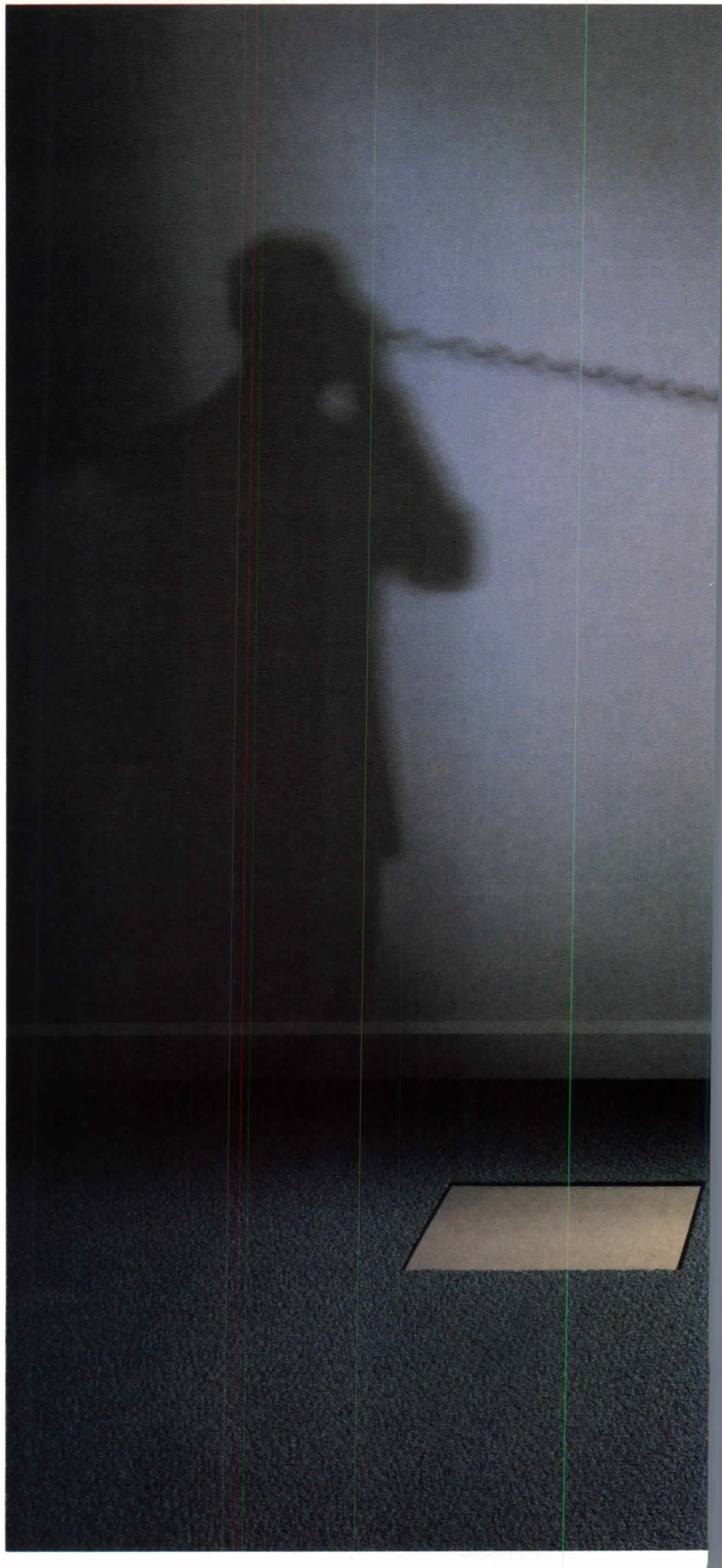

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Modular carpet systems by Lees in over 200 colors and patterns. Photography: Fred Schenk. ©1985 Burlington Industries, Inc.

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The glass of choice is Sunglas HP Reflective — used here with a durable silver coating applied to clear glass for 8% nominal light transmittance. This version (S1-08) provides a subtle reflectance of the harbor's ever-changing color as well as a reduction in the hotel's air conditioning installation and operating costs.

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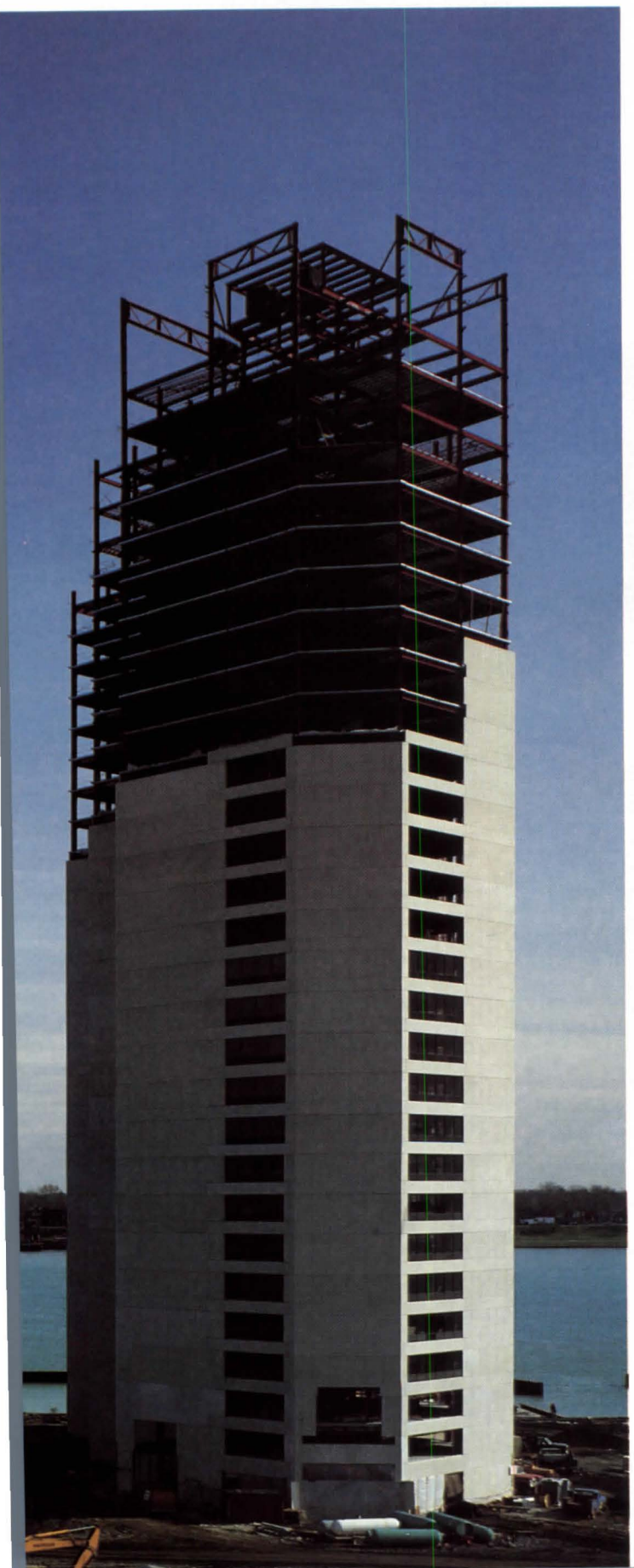

After carefully evaluating the costs of traditional systems including composite design structural steel and reinforced concrete, the designers and builders of the Riverfront Apartments in Detroit chose an innovative alternative in high-rise structural design. By using Vulcraft steel joists, the construction of the 29-story twin towers stayed on time and on budget.

Since Vulcraft steel joists are easier to handle and erect, we were able to help expedite construction on a tight schedule that went straight through the Detroit winter. Vulcraft joists also provided significant savings within the building design itself through their lightweight, open web configuration.

By also supplying steel deck in addition to our steel joists, Vulcraft was able to facilitate the progress of the Riverfront job with well-coordinated delivery schedules. Deliveries were carefully maintained and controlled over a 6-month time frame by using our own fleet of trucks. In short, Vulcraft delivered what was needed when it was needed.

So, by providing steel joists and steel deck for these 29-story twin Riverfront apartment towers, Vulcraft contributed to an exciting new addition to the Detroit skyline while reducing the job's bottom line.

For more information concerning Vulcraft steel joists, joist girders and steel deck, or copies of our joist and steel deck catalogs, contact the nearest Vulcraft plant listed below. Or see Sweet's 5.2/Vu and 5.5/Vu.

VULCRAFT

A Division of Nucor Corporation

P.O. Box 637, Brigham City, UT 84302 801/734-9433
P.O. Box F-2, Florence, SC 29502 803/662-0381
P.O. Box 169, Fort Payne, AL 35967 205/845-2460
P.O. Box 186, Grapeland, TX 75844 409/687-4665
P.O. Box 59, Norfolk, NE 68701 402/644-8500
P.O. Box 1000, St. Joe, IN 46785 219/337-5411

Owner: Riverfront Associates/Builder: Barton Malow/Architect: The Gruzen Partnership/Structural Engineer: The Office of Irwin G. Cantor, P.C./Steel Fabricator: RCVNS Joint Venture (Ross Structural Steel Inc., Corvo Iron Works Inc., Vulcan Iron Works Inc., Noreast Erectors Inc., and Structural Steel Inc.)

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How The Top Restaurant Chains Invite Customers In

Marlite® Brand Planks have a way with modern chain customers. The warm rich woodgrain designs are an inviting, familiar view to even the most hurried diner. Perhaps that's why they return time and time again.

Of course, the invisibly protected, richly textured surfaces only need an occasional wipe with a damp cloth to keep the warm attraction that first caught a customer's eye.

But customers aren't the only ones to have a strong affinity for Marlite® Brand Plank. Only the most important. Owners and contractors are fervent fans, as well. With good reason. The prefinished surfaces cut time from building schedules. And the 16″ wide, tongue and grooved modules are easy to handle while cutting down on waste.

Is it any wonder that Marlite® Brand Plank sets the tone in almost all of the top 25 restaurant chains?

No wonder...but no accident, either

The crafting of Marlite Brand Planks is a time-perfected labor. Skilled Masonite Corporation plate-makers create precisely grained textures using a Masonite patented electroform process. These are matched to specimens of natural lumber. Then, in a multi-step process, the rich prefinished tones are applied. Automated, precision carving tools cut scorelines and trim tongues and grooves into each plank. And, in a unique flow-coat process, a clear finish is applied for maximum protection in commercial environments.

Find out for yourself what the most successful chains already know. Marlite Brand Plank brings the customers in. Write or phone for FREE information.

Above: Marlite® Brand Plank gives interiors a rich warm ambience, but is easy to maintain. An ideal combination in high-traffic restaurant environments.

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COMMERCIAL DIVISION
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A comprehensive range:
Door Hardware, Railing Systems, Cabinet Hardware, Bathroom Accessories.
A range of high quality nylon items that allows versatility in combination and individuality of expression. Pleasant to the touch, wear resistant, colored throughout. All items are available in 13 colors.

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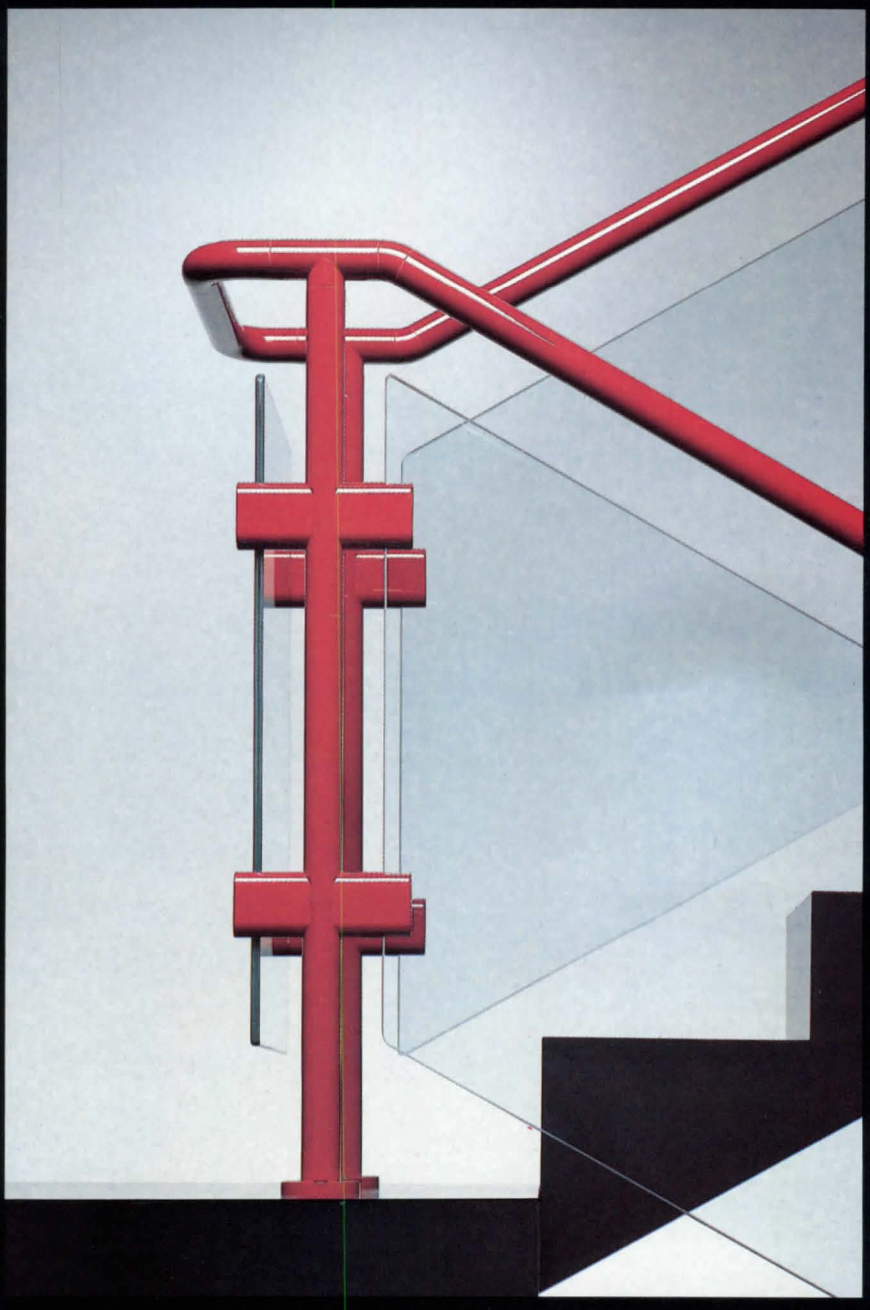

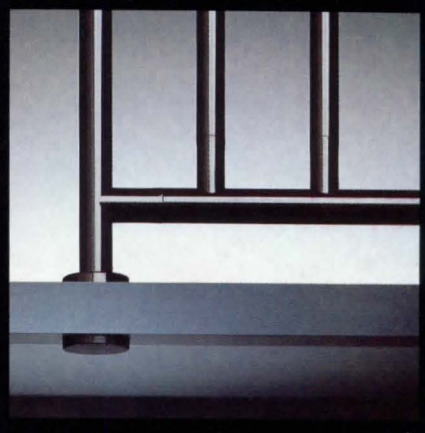

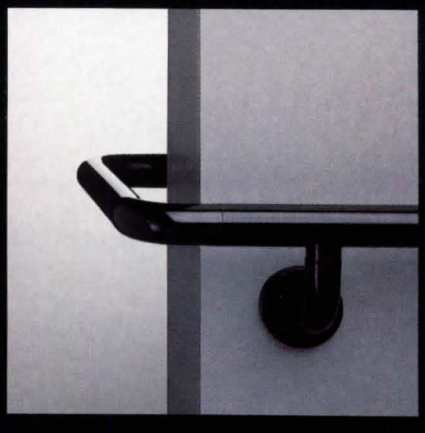

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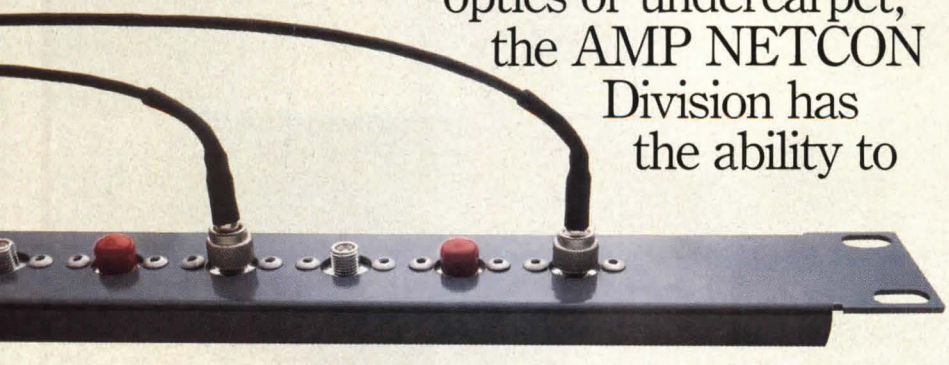
Today there is a new entity in networking and construction. It draws the considerable expertise of a number of AMP technologies into a single cohesive force that can help solve your networking problems. It is the AMP NETCON Division.

Whether your media is twisted pair or coax, fiber optics or undercarpet, the AMP NETCON Division has the ability to interconnect every major technology.

As the world leader in interconnection technolog we recognize that networ ing is a concept for wiring management as much as is a hard-wired idea. Our whole heritage is in findin better ways in dealing wit



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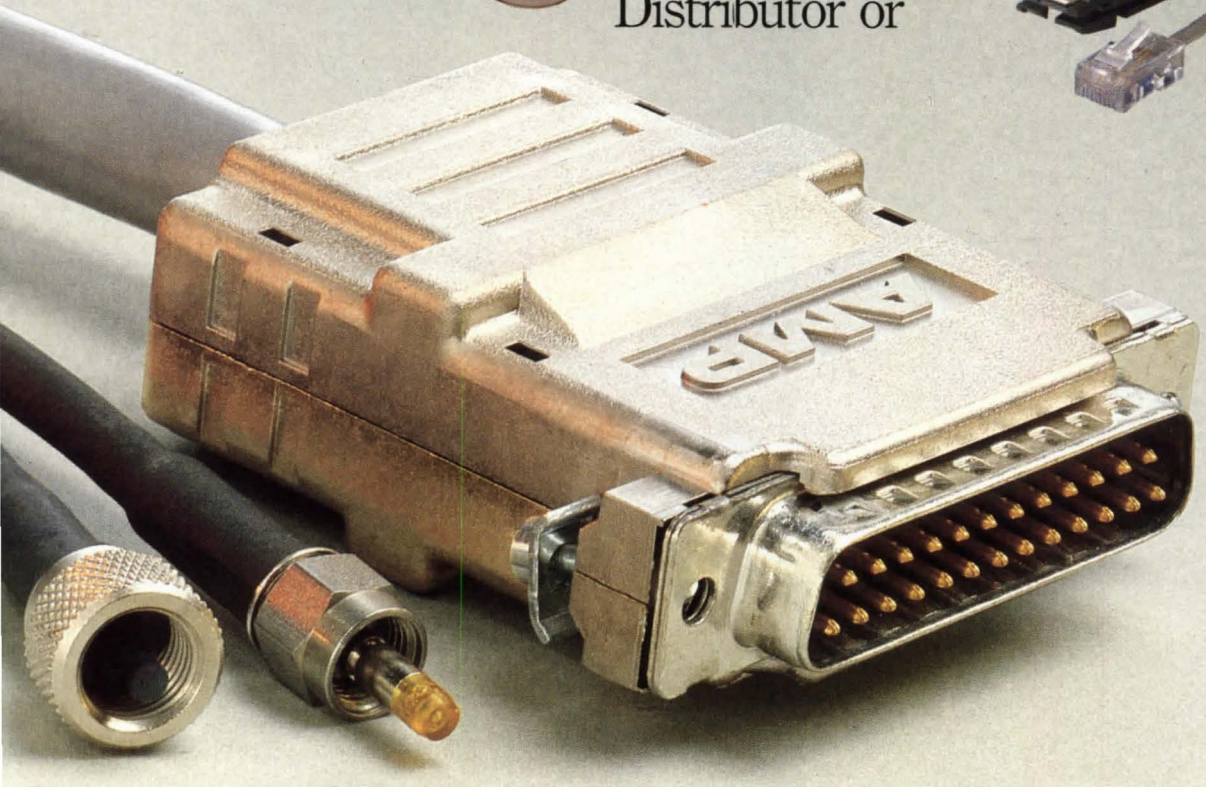

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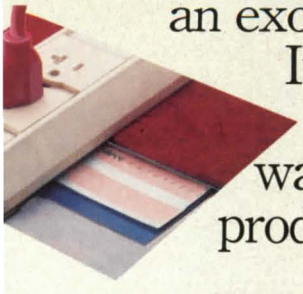

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And Kawneer windows are not only constructed to meet AAMA performance standards, but standards much higher. Our own.

Kawneer windows. They let you look at your design in a whole different light.

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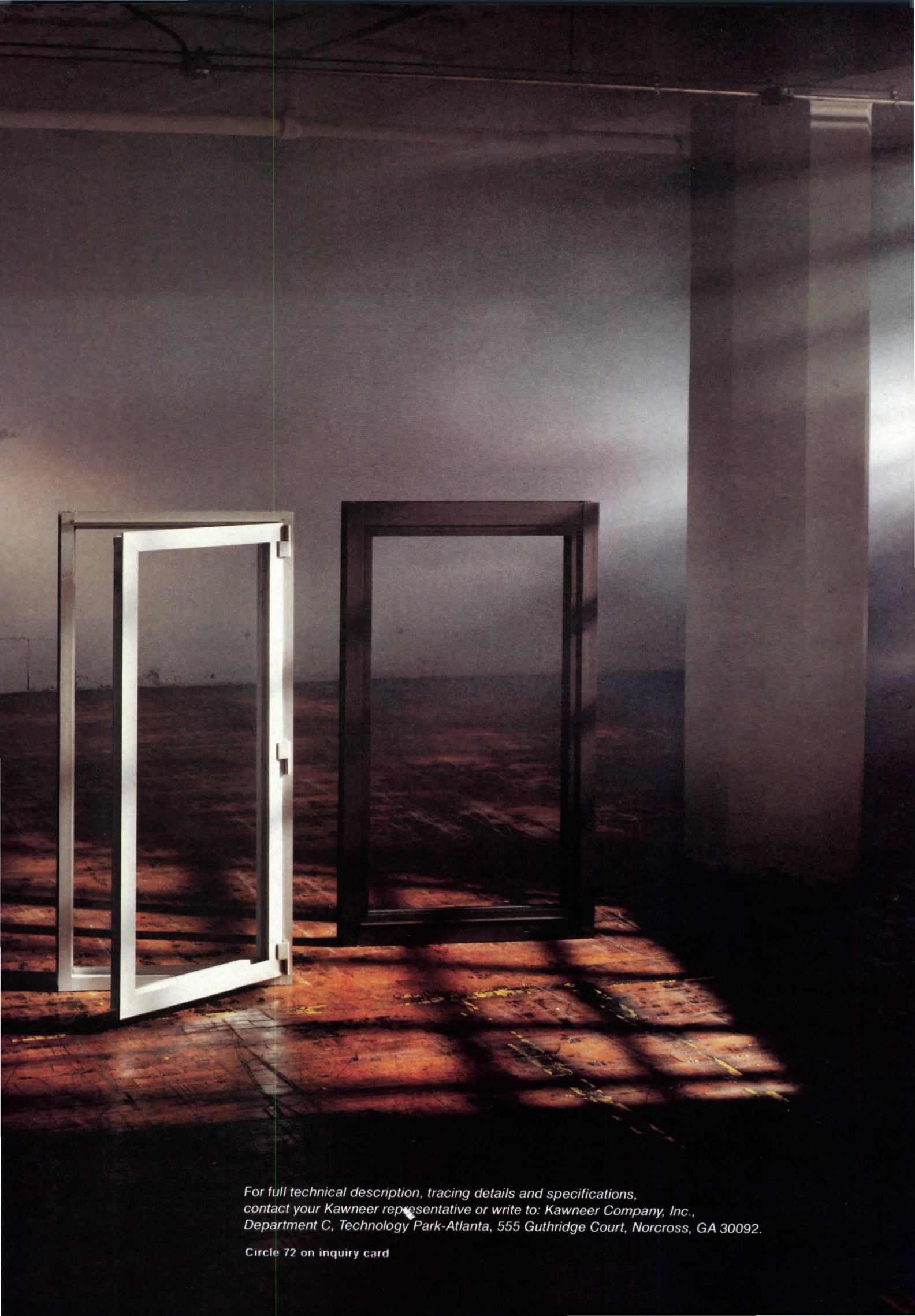

For full technical description, tracing details and specifications, contact your Kawneer representative or write to: Kawneer Company, Inc., Department C, Technology Park-Atlanta, 555 Guthridge Court, Norcross, GA 30092.

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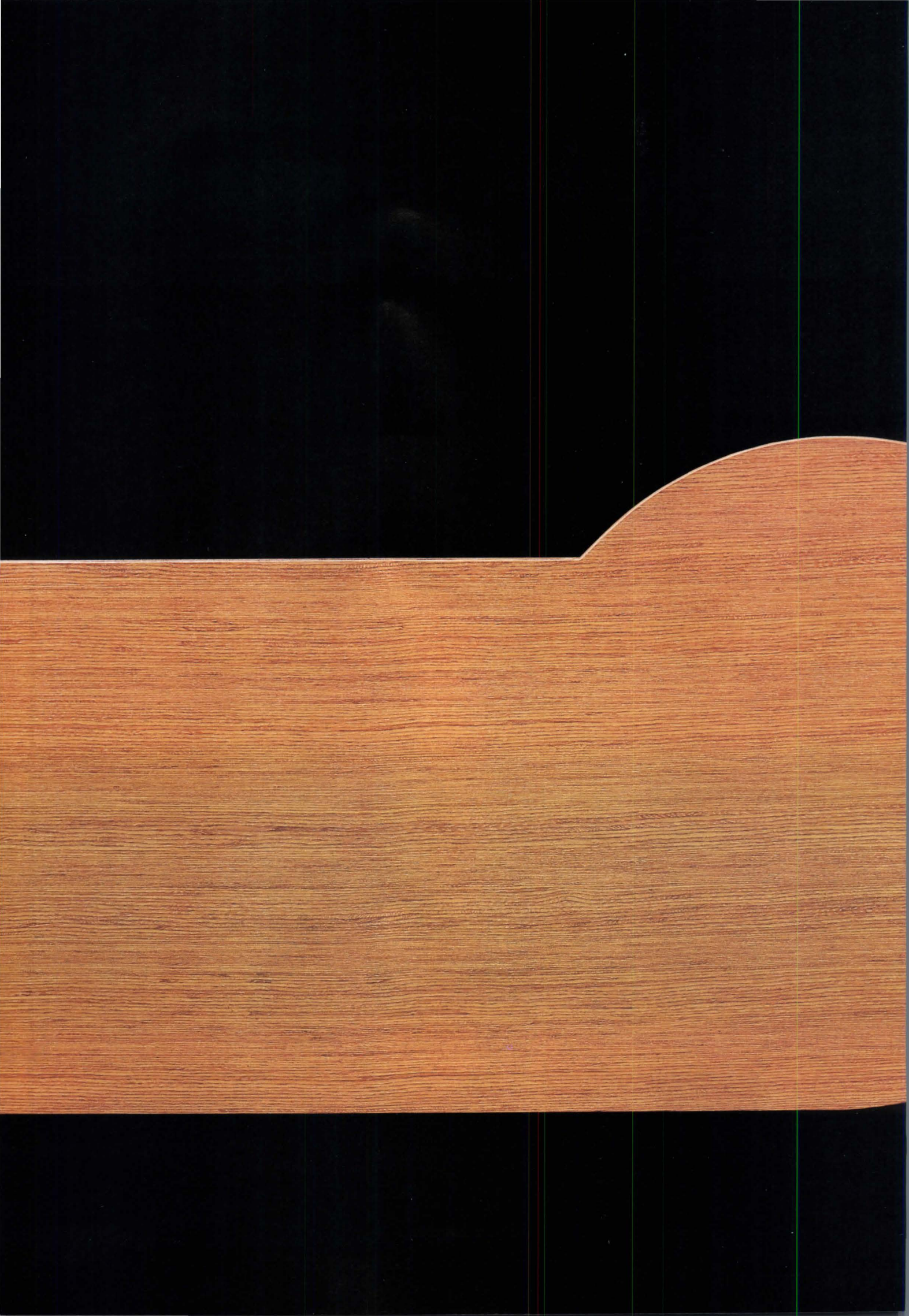

WES-GROUP™ SHAPES THE EXECUTIVE WORKSPACE.

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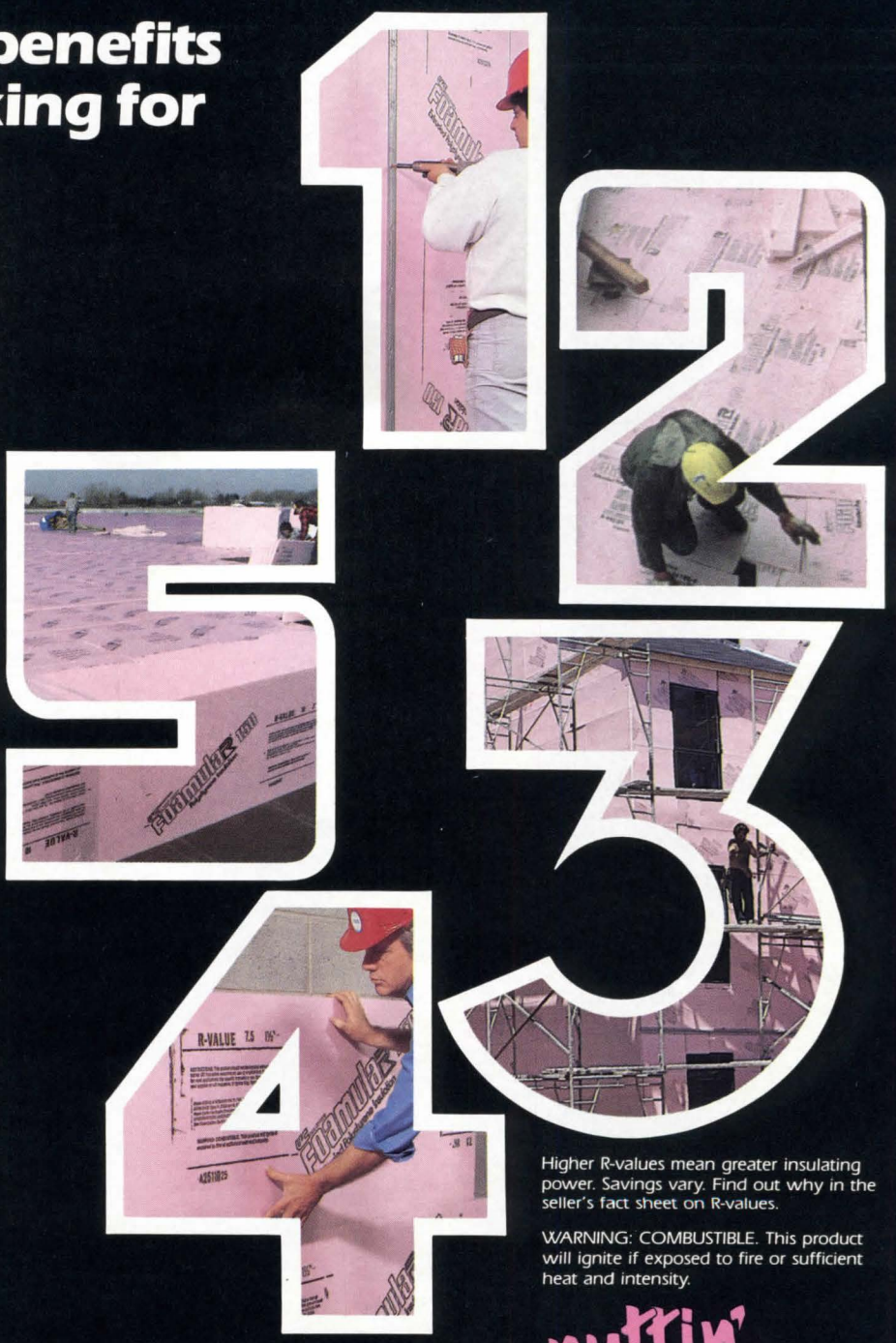
Foamular®

Aren't these the benefits you're really looking for in an insulation?



1. HIGH INSULATING VALUE. Foamular® gives an *R*-value of 5 per inch of thickness — higher than many commonly used rigid foam insulations. And it's an *R*-value that won't significantly diminish over time.

2. OUTSTANDING MOISTURE RESISTANCE. Because Foamular is an *extruded* polystyrene insulation, produced by means of our patented process technology, it's highly resistant to moisture. So, year after year, it keeps its superior level of insulating performance even after exposure to moisture of all kinds.

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5. WIDE APPLICATION USE. Foamular is available in a variety of sizes and thicknesses, and complies with a broad range of codes and standards, for sheathing, cavity wall, foundation/perimeter, underslab, wall furring, single-ply roofing, high strength, and other commercial, residential, and industrial applications.

Higher R-values mean greater insulating power. Savings vary. Find out why in the seller's fact sheet on R-values.

WARNING: COMBUSTIBLE. This product will ignite if exposed to fire or sufficient heat and intensity.

Write or call for complete technical and application literature.

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GN-1

ONE LOOK AT A WINDOW OPENS TWO WAYS. AN REASONS TO SPECIFY IT

Turn the handle on a Marvin Magnum Tilt-Turn 90 degrees and the window swings into the room for cleaning. Turn the handle a full 180 degrees and the window tilts into the room for ventilation.

Close the window and it will exceed any commercial performance code. Radically. It's another first for Marvin. One other manufacturers are watching closely.

EVEN WE WEREN'T EXPECTING A WINDOW THIS GOOD.

When we began developing this window, we knew the combination of precise technology and Marvin craftsmanship would result in a commercially viable wood window. When we saw the test results, we were amazed:

Air infiltration: .01 cfm @ 25 mph. .02 cfm @ 50 mph (10 times lower than the toughest proposed standard).

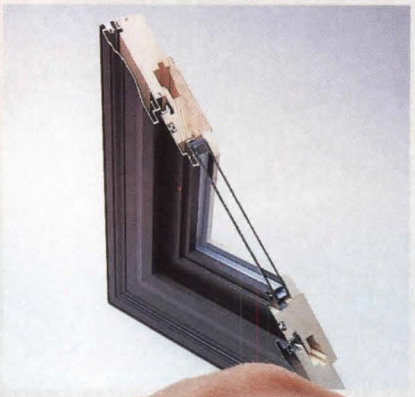
Wind load: 200 mph positive pressure. 256 mph negative pressure.

Water infiltration: 0 @ 66 mph.*

U values: As low as .22.

R values: As high as 4.55.

In engineering this window to open two ways, we engineered it to perform better than any commercial wood window on the market. It didn't just meet commercial standards. It shattered them.



MARVIN'S MASTERPIECE.

We didn't compromise the wa this window looks. If anything we raised our already high standards a bit.

Pride. Attention to detail. Beautiful western Ponderosa pine. All the traditional Marvi trademarks are here. So, too, are a variety of styles, includin Round Tops and a simulated double hung. There's even a tilt-only Magnum Hopper an an authentic double hung.

The lines are long and graceful. And versatile. The Marvin Magnum Tilt-Turn ca bring beauty and performance

*Test results for 48" x 64" Magnum Tilt-Turn.

THAT THREE GOOD

igh-rise, low-rise, hospitals, ools or office buildings.

RE'S WHAT YOU GET ANDARD. PLUS A FEW TIONS.

ery Tilt-Turn comes with gh, heavy-duty hardware, luding adjustable hinges l locks for a perfect fit. For extra tight seal, we weld weatherstripping at all r corners.

The wood is pressure ated with insecticide and er repellent solution protect against rot l decay.

Then there are options. e maintenance-free erior finishes (a medium nze cladding or Polycron™).

Or glazings. Marvin Magnums are available in single pane, 7/8" insulating, 1" insulating, solar

bronze, solar gray, solar cool, Low E, or Low-E with Argon. And sizes. Tilt-Turns are available from 17" x 23" on up.

Just as important is the option these windows give you to explore new applications. No window is better suited to renovation. No window performs as well in new construction.

Take a good look at this window that opens two ways. Then, for more information, or the name of your nearest Marvin distributor, call toll-free **1-800-328-0268** (in Minnesota 1-612-854-1464). Or write Marvin Magnum Windows, 8043 24th Avenue South, Minneapolis, Minnesota 55420.

After all, we didn't just engineer these windows to open two ways. We engineered them to open your mind.

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MARVIN MAGNUMS

ENGINEERED TO OPEN THE MIND.

Koppers Rx® Insulation

WILL RETAIN ITS "R" VALU

For the first time ever, a foam plastic insulation is *guaranteed* to retain its "R" value for 20 years. Our 8.3 "aged" "R" value per inch is the best in the industry.

Koppers Rx Insulation will not lose "R" value over time. Koppers Rx is a rigid, thermally efficient phenolic foam board insulation, providing superior long-lasting energy efficiency.

Rx Insulation is the best value in roofing, wall, and ceiling insulation today...tomorrow...and into the 21st century. Koppers guarantees it!

The Koppers Guarantee

If the "R" value of Koppers Rx Insulation fails to meet our published specifications—anytime within *20 years* of installation—Koppers will pay the resulting difference in heating and cooling costs. See warranty for conditions and details.

Are you getting the long-term "R" value you specified?

The standards of the Roof Insulation Committee of the Thermal Insulation Manufacturers Association (RIC/TIMA) require an evaluation period of 6 months for determination of "aged" "R" values of foam plastic insulations. The Midwest Roofing Contractors Association has sponsored recent studies which conclude that "the RIC/TIMA 6-month room temperature 'aged' 'R' values claims...are not realistic to use as the basis for the design of 10 to 20-year roof life." (See RSI Magazine article, July, 1986, p. 38).

TO THE NEXT CENTURY

Koppers Rx goes much further than the dard 6-month "aged" "R" value rating, guar-eing its high in-service "R" value into the 21st ury!

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- Insulation is non-corrosive.
- Insulation is dimensionally stable and exceeds industry standards.

Value-added "R" value

Koppers stands behind the best insulation value with the best guarantee in the industry. Rx Insulation is a truly "value-added" material. It adds value in terms of most "R" per inch and long-term energy savings...so why settle for less.

To learn more about Koppers unprecedented 20-year guarantee, call 800-558-2706 or write:

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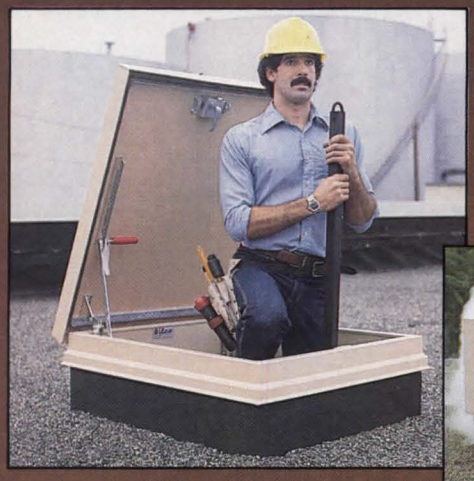

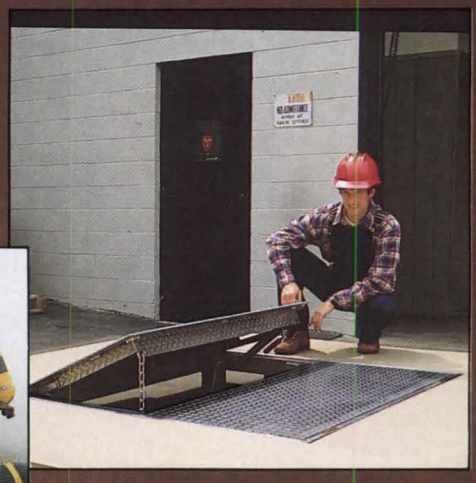

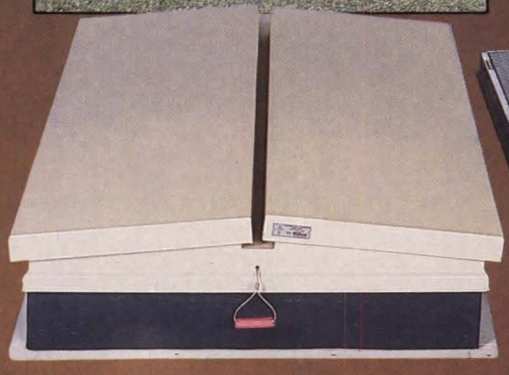

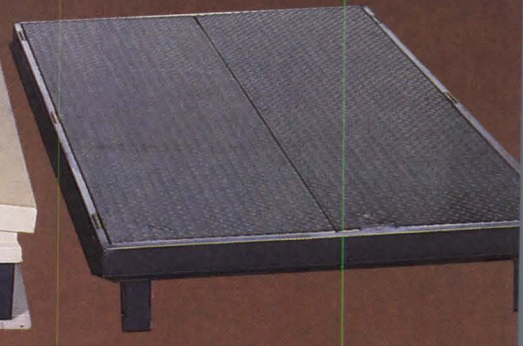

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from the way they're built... to the way they work.

When you specify Bilco horizontal doors or automatic fire vents, you specify products that are built to give long, trouble-free service. Products that are designed to work. Smoothly, easily, reliably.

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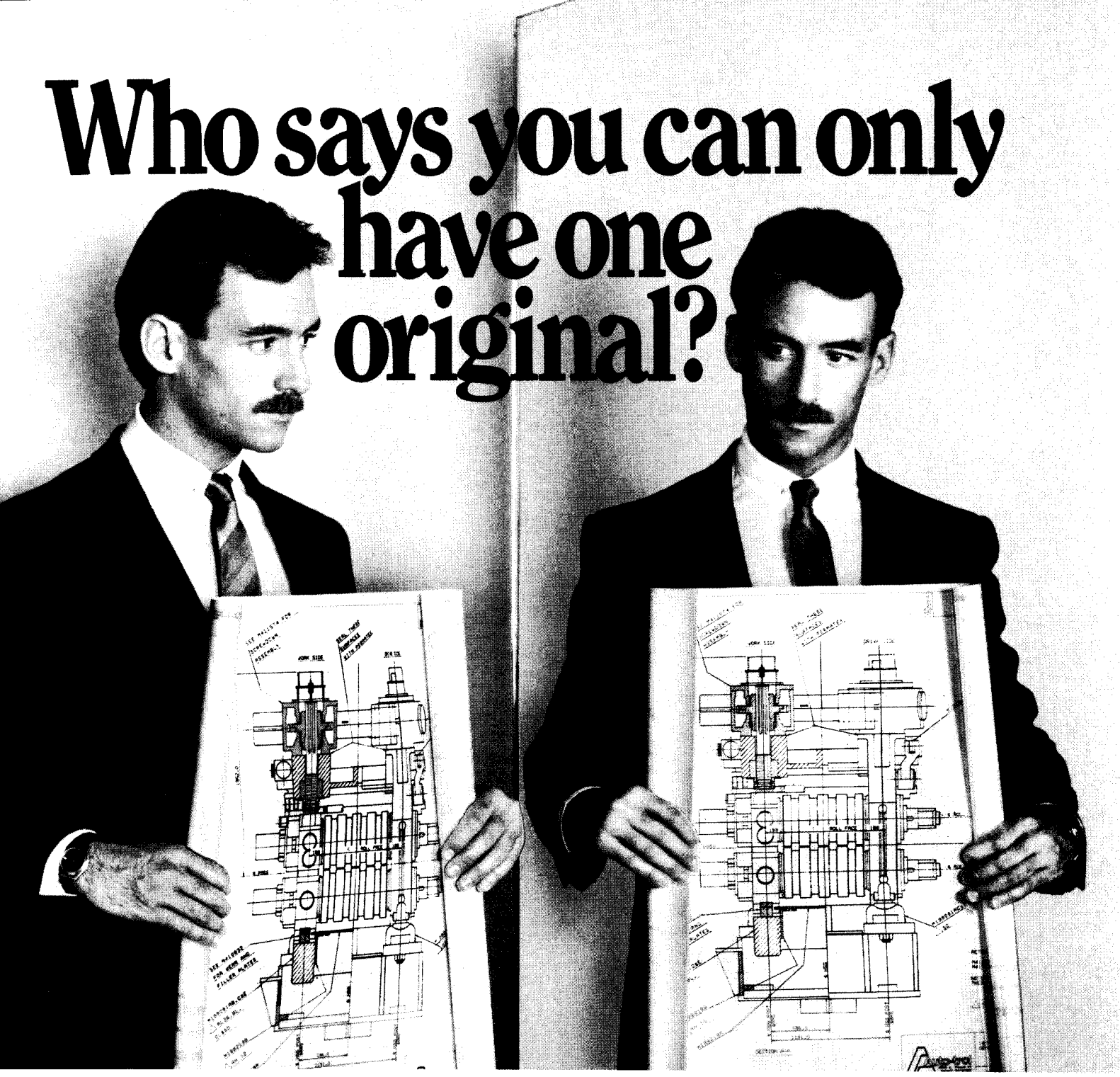

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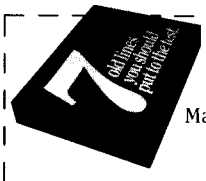

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Hitachi HICAD GM-1000™ micro-CADD software. Now, for $1,950, you can use the design tool that's #1 in Japan.

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HITACHI

Image courtesy
Ragan Design Gro

inally, a multi-plan ceiling you and our acoustical consultant will love.

When your floor plan calls for mixing private and open office spaces, acoustical specialists usually call for you to specify two different ceilings.

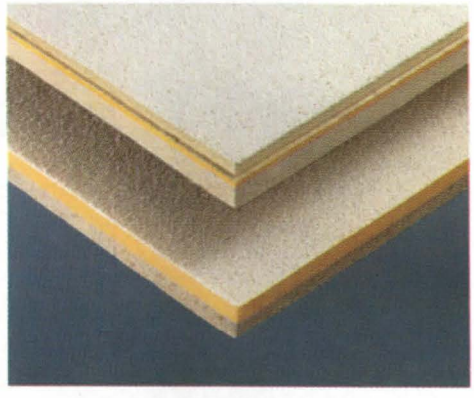
But now, there's an alternative.

CapCore Multi-Plan™. The first dual-purpose acoustical ceiling.

The performance of two ceilings. The convenience of one.

CapCore is really two ceilings in one. Its unique, sandwiched construction combines high-density glass fiber, to absorb sound in open areas, plus perforated mineral board, to block sound transmission from enclosed spaces.

All of which means you can specify CapCore Multi-Plan throughout any office. And enjoy the



convenience, visual continuity, and cost savings of specifying one ceiling, without sacrificing a single decibel.

A look you'll love.

CapCore Multi-Plan ceiling panels look as good as they sound. The woven fabric finish comes in 85% light-reflectant white, or a variety of designer colors. There's a choice of edge detail, too. In addition to the standard square edge, CapCore is available with a flush reveal edge for a refined, monolithic look. Or choose CapCore bold reveal for a more dramatic look.

Ask your acoustical consultant about CapCore Multi-Plan today. Or, contact Capaul for more information and a free sample. Either way, you'll find CapCore Multi-Plan is the one acoustical ceiling you and your consultant will both love.

For more information, write: Capaul Corporation, 1300 Division Street, Plainfield, IL 60544. Or call toll free number: 1-800-421-8368 [In Illinois, (815) 436-8503].

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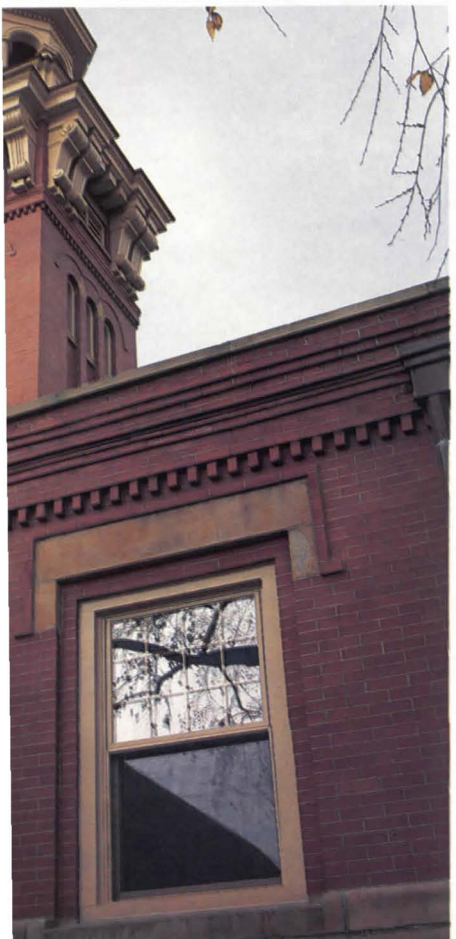

There's little evidence this courthouse has been renovated. And custom Pella Windows are sworn to secrecy.

A passion for authenticity in restoration and renovation sometimes goes unnoticed. And nothing could make the architects of this municipal building renovation happier. They gleefully recall a local resident's comment: "I looked at the building and I don't see that you did anything. Why did they pay you to do nothing?"

Nothing, indeed. The historic 1914 Municipal Building in Sewickley, Pennsylvania, has been restored inside and out. Council chambers have been renovated, administrative offices expanded, a conference room added along with an elevator tower and a wing for fire department apparatus. The intent was to restore the existing building and have all additions match the original in kind, in both materials and design. It shows, or doesn't show, in everything from the original brass hardware to the red common brick of the new additions to the custom Pella Windows.

Custom Pella sizes and colors.

Custom Pella Windows were a vital part of the project. No other wood window manufacturer could provide the custom sizes and custom clad color the project required, with the quality the architects demanded.

Drafty, white double-hungs and basement windows were replaced with custom Pella Clad Double-Hung and Awning Windows. The architects "didn't want to look at the building and see a window and a window and a window" but rather intended the whole of the exterior to work together for a monolithic look. So Pella Clad Windows were specified in a custom tan enamel finish that matches the cleaned Cleveland limestone of the building's foundation.

Only Pella offers custom colors in aluminum cladding, adding just a week to normal delivery time. The baked enamel finish resists fading, chemical attack, chalking, chipping, peeling and cracking so the windows need no painting.

Inside, the natural wood beauty of Pella Windows complements the original oak woodwork, doors and molding which were carefully preserved.

The Pella Clad subframe system neatly covers the exterior of the old wood frame and allows for installation from indoors. Since no scaffolding or cranes were needed, the Sewickley Council of Garden Clubs could do the landscaping unimpeded.

Lower heating and cooling costs.

Some things, like the charming hose-drying tower, are used today as they were in horse-and-firewagon days, but many things needed a drastic update. The building's energy efficiency, for instance. Pella's Double Glazing Panel System was specified for all Pella Windows, giving nearly an inch of insulating air between panes. The perfect space for the removable wood muntins, safe from dust and damage.

Another of Pella's seven glazing and shading options, Type E Slimshade® blinds can be specified or retrofitted between the panes of the Double Glazing Panel System, where they help give Pella Windows a low U value of .23, actually outperforming triple glazing.

As for maintenance economies, Pella Double-Hung, Awning and Casement Windows pivot or rotate toward the center of the frame for easy cleaning from indoors.

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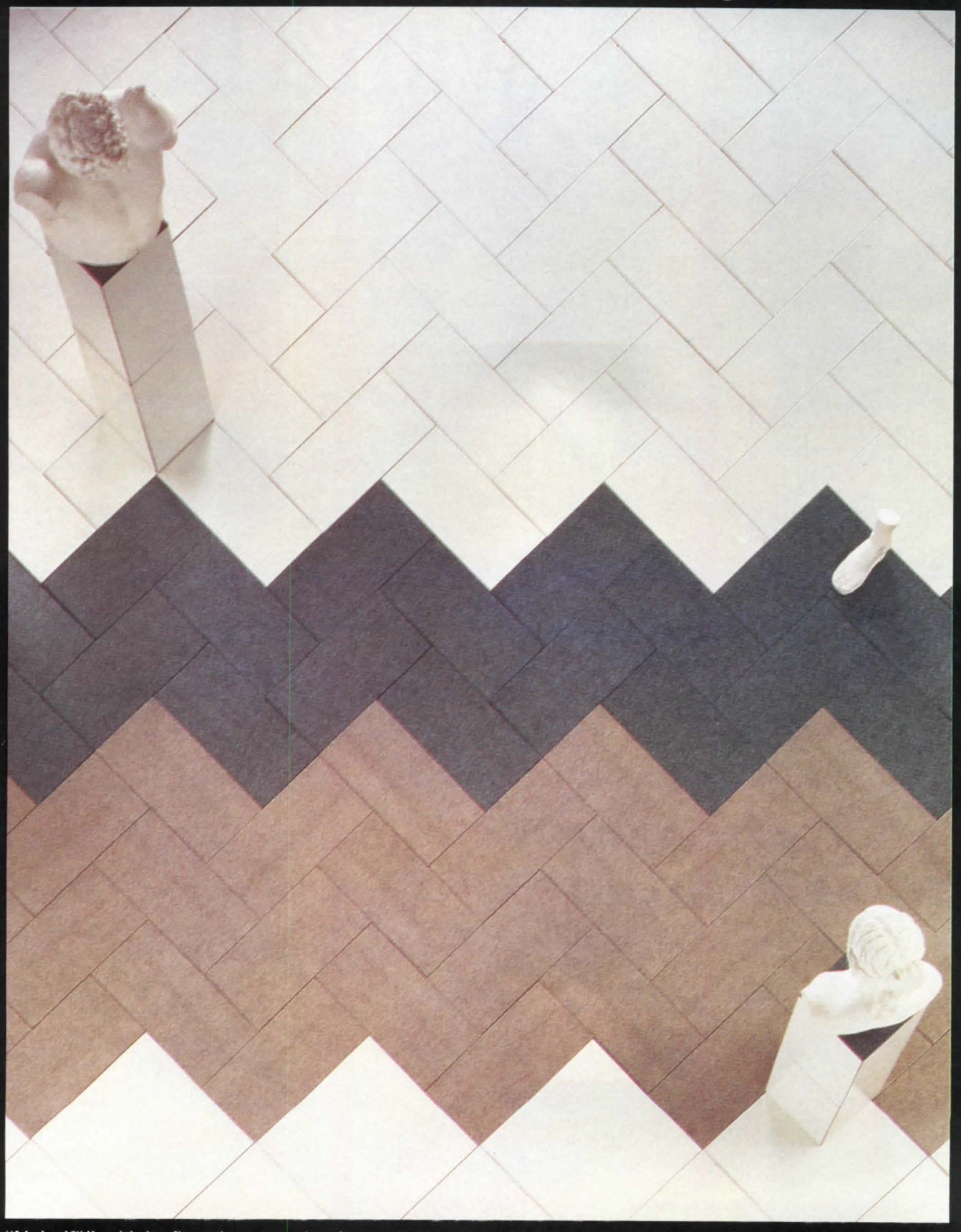

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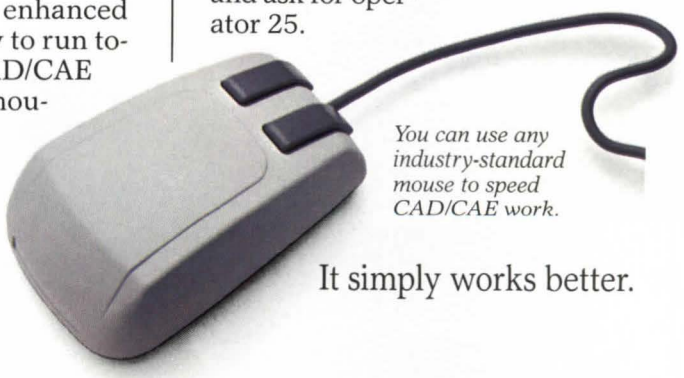

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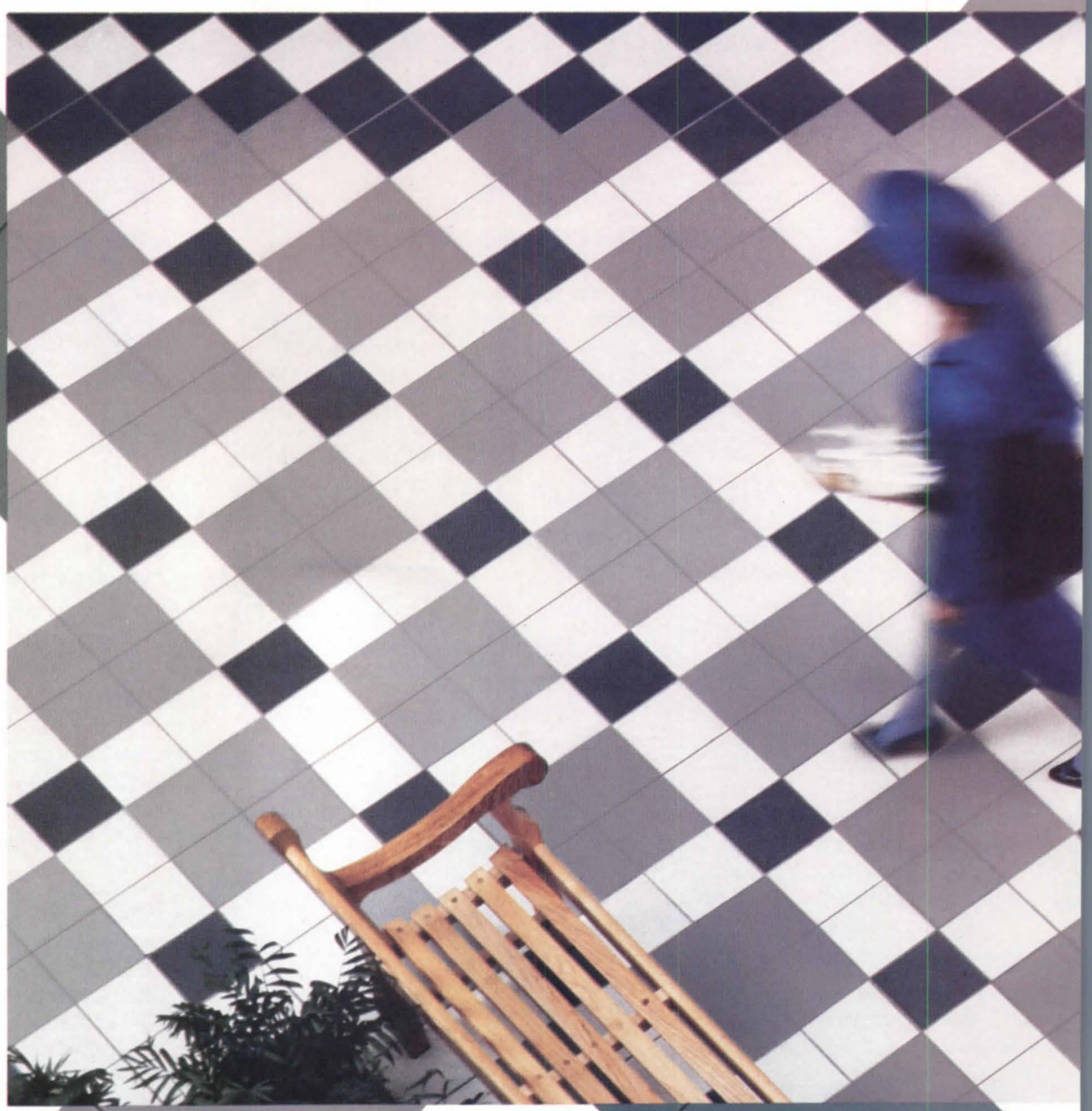

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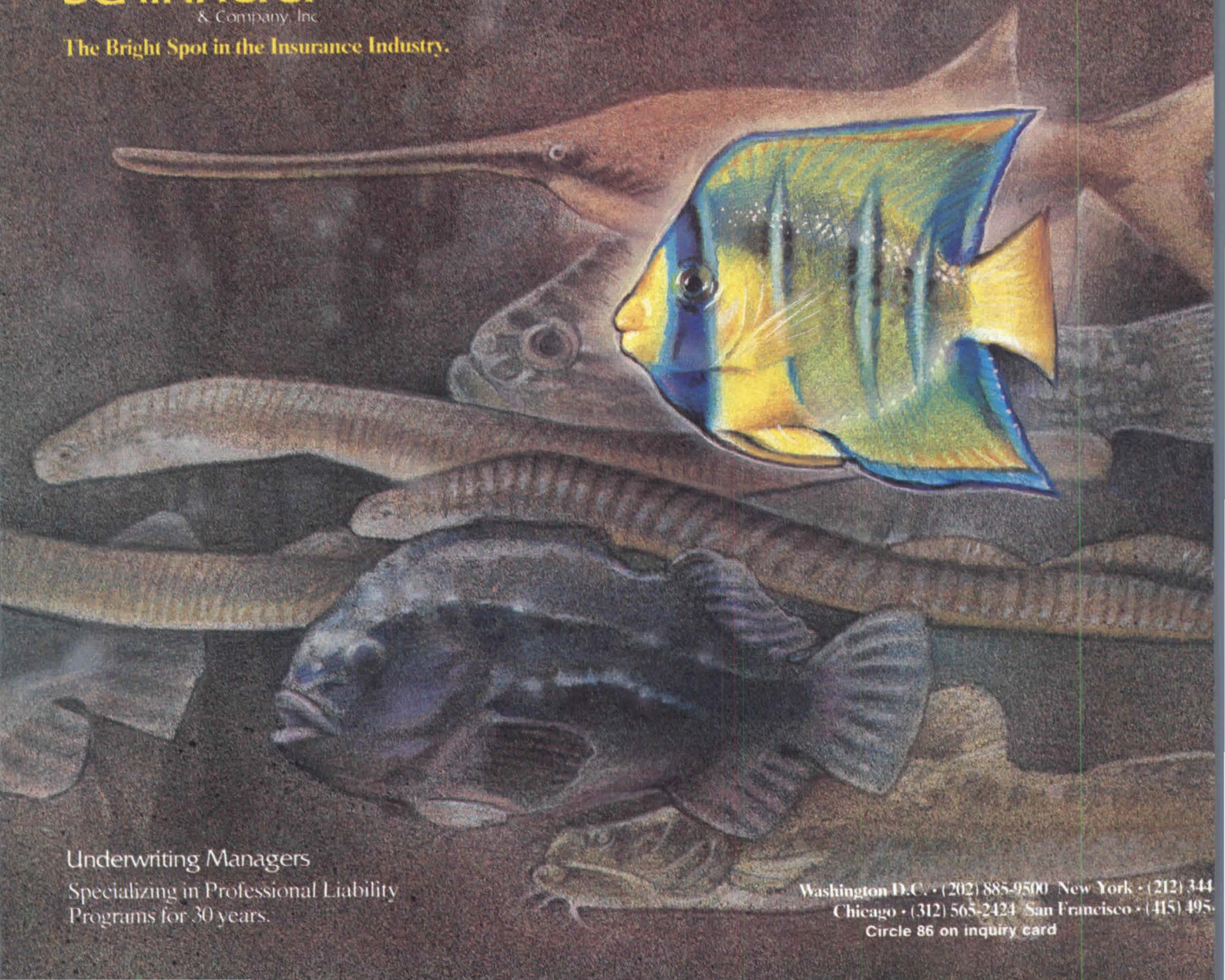

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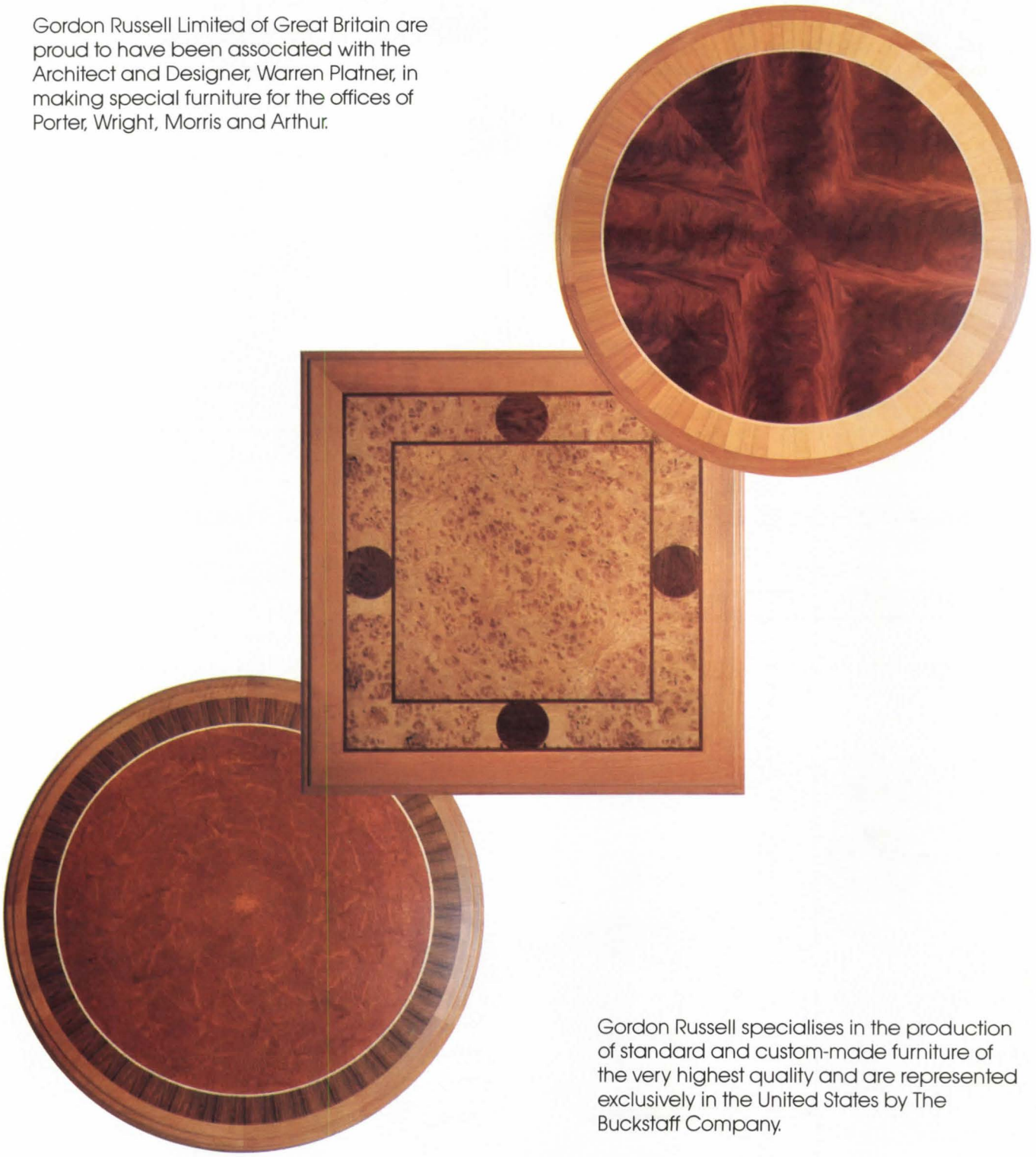

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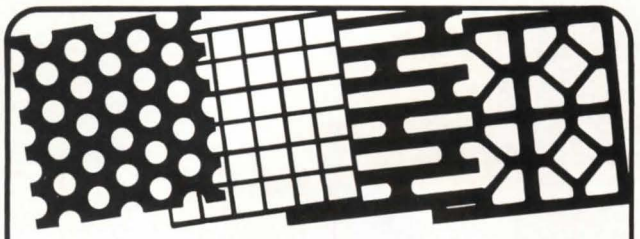

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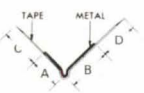

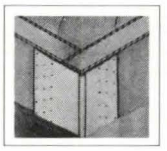

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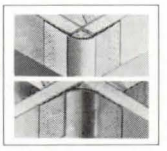

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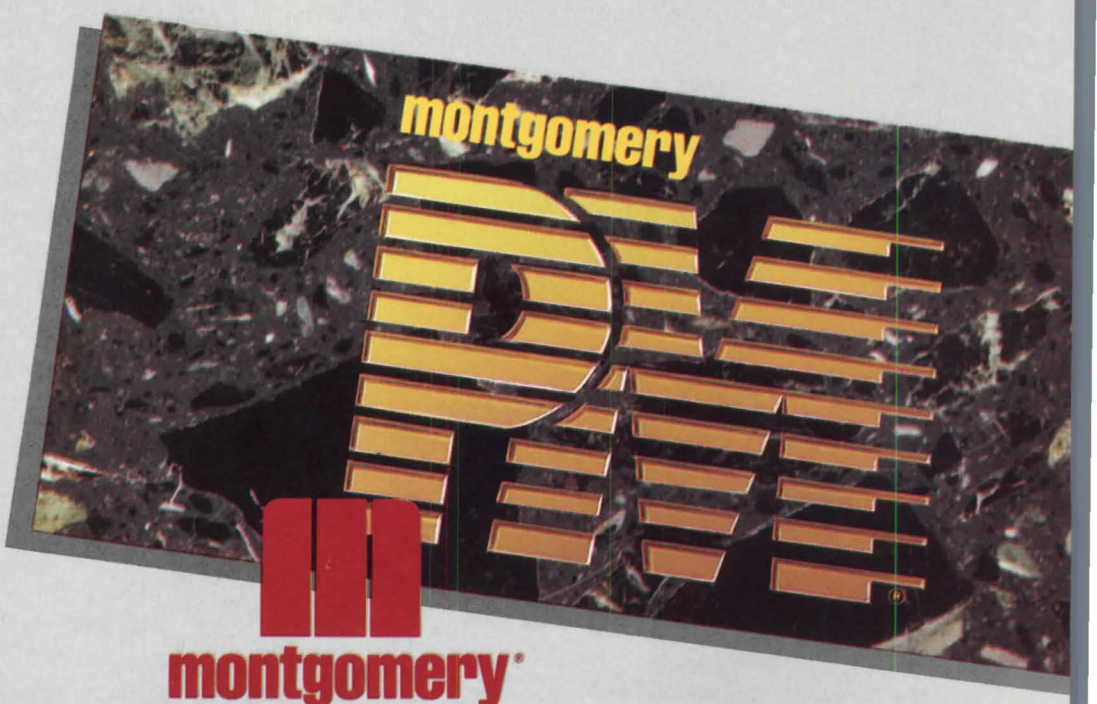

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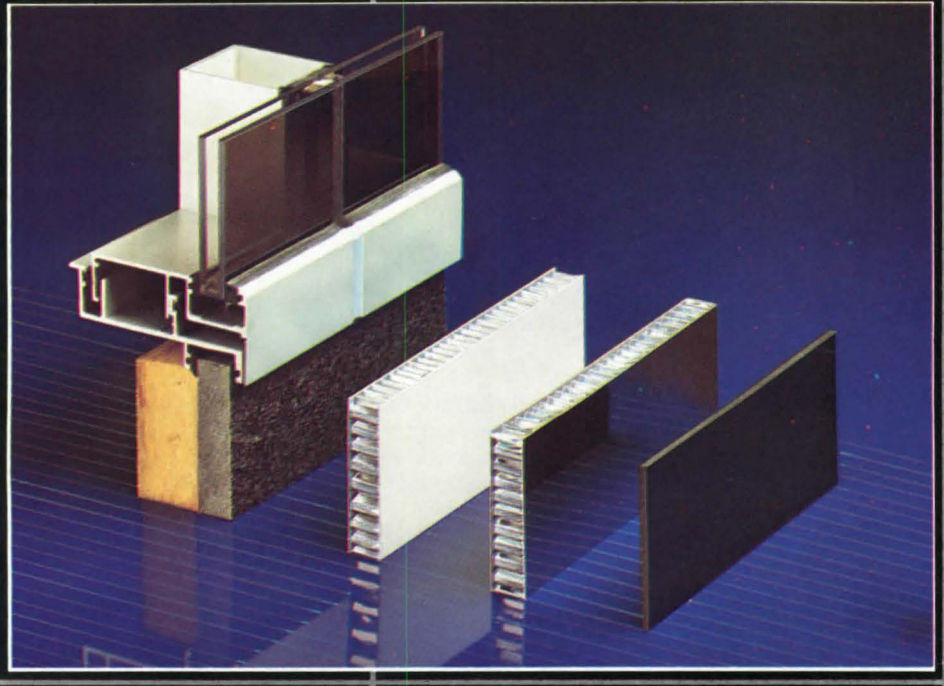

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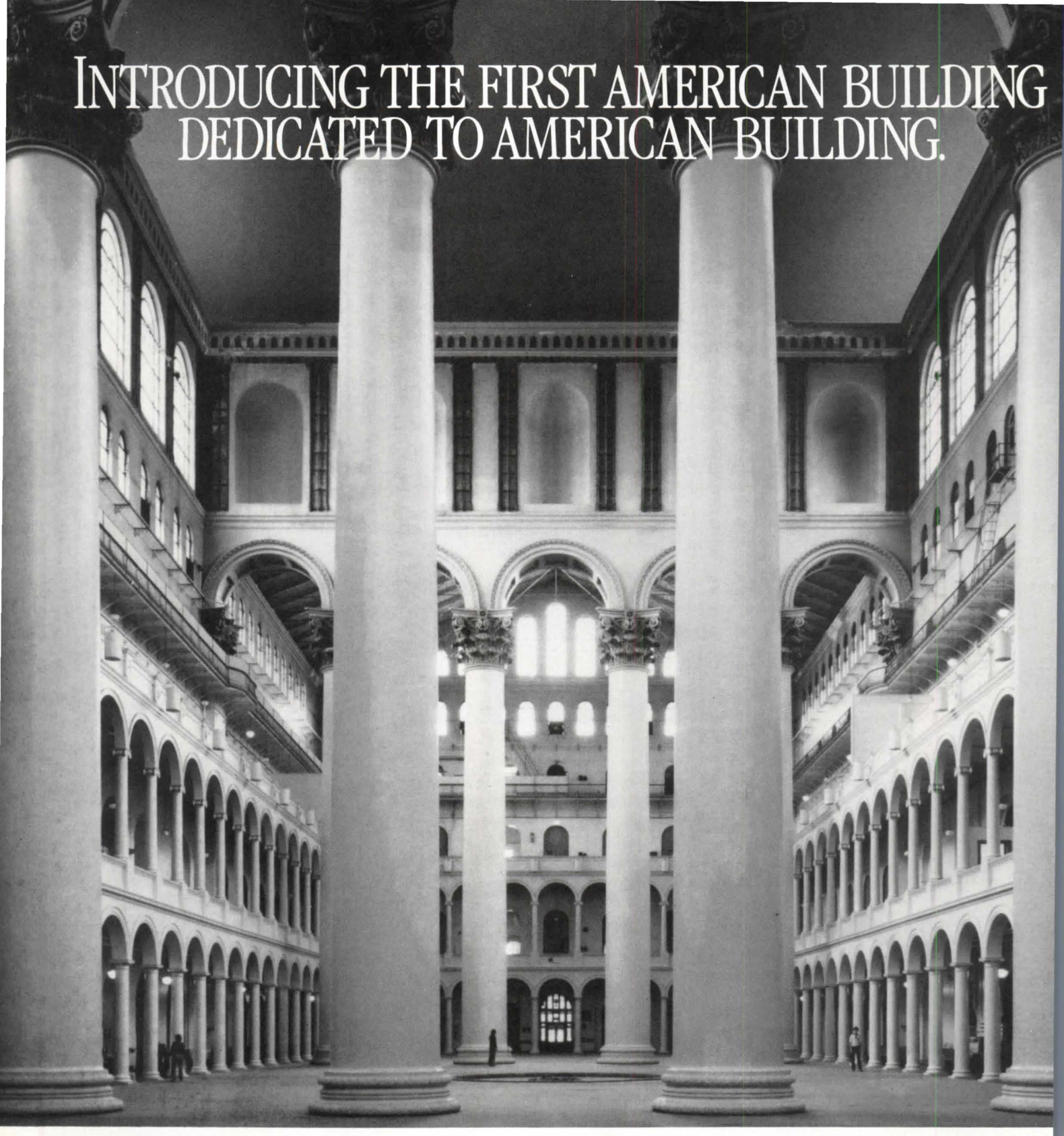

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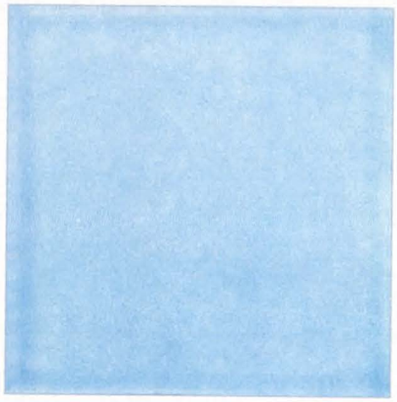

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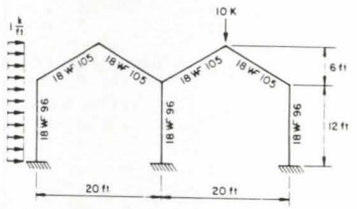

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Letters continued from page 4

feet to the main exhibit floor.

The issue of transportation has often been misunderstood and misstated, and your article reiterated old assumptions without presenting the actual facts. First and foremost, it must be understood that the Jacob K. Javits Convention Center is located in Manhattan, where dependency on private automobiles for visitors, common in other American cities, is not the norm. Even if one were to ignore the Environmental Impact Report for the project, which indicated that a public parking garage here could not pass federal clean air regulations, it is good practical sense in Manhattan to make use of one of the most highly developed public transportation systems in the country. The project is currently served by two (not one) crosstown bus lines, the 8th Avenue subway (a few blocks away), taxis, and convention-oriented shuttle buses from the major hotels. Since the majority of the Center's bookings are trade shows rather than public shows, most visitors travel to the Center in shuttle buses or taxis from their hotels. After six months of actual operation, the traffic problems predicted by many people have simply not developed.

Lastly, I find the closing statement of your article vexing and inappropriate. It appears to be a quote by me (one that I did not and indeed would not make) that trivializes an extremely serious problem—namely, the crisis of credibility that ambitious public architecture finds itself in today. I would have applauded a serious discussion of this issue, including the political, financial, legal, construction, and bureaucratic constraints on significant architectural initiatives in the public realm.

Inasmuch as ARCHITECTURAL RECORD is a critical publication, the conclusion of whether the building succeeds or not as architecture is certainly yours to make, but accuracy and care should inform the facts by which such a conclusion is illuminated.

James Ingo Freed
I. M. Pei & Partners
New York City

As confirmed by Allen Y. Lew, Executive Vice President/Chief Operating Officer of the Jacob K. Javits Convention Center Operating Corporation, the cost overruns due to delays in construction totaled $69 million. This figure reflects the replacement of the nodes, the space-frame structure (including labor), in addition to administrative costs, legal fees, and insurance costs of the total project. $3.6 million represents the actual cost of the Japanese-manufactured nodes and replacement of previously existing components.—Ed.

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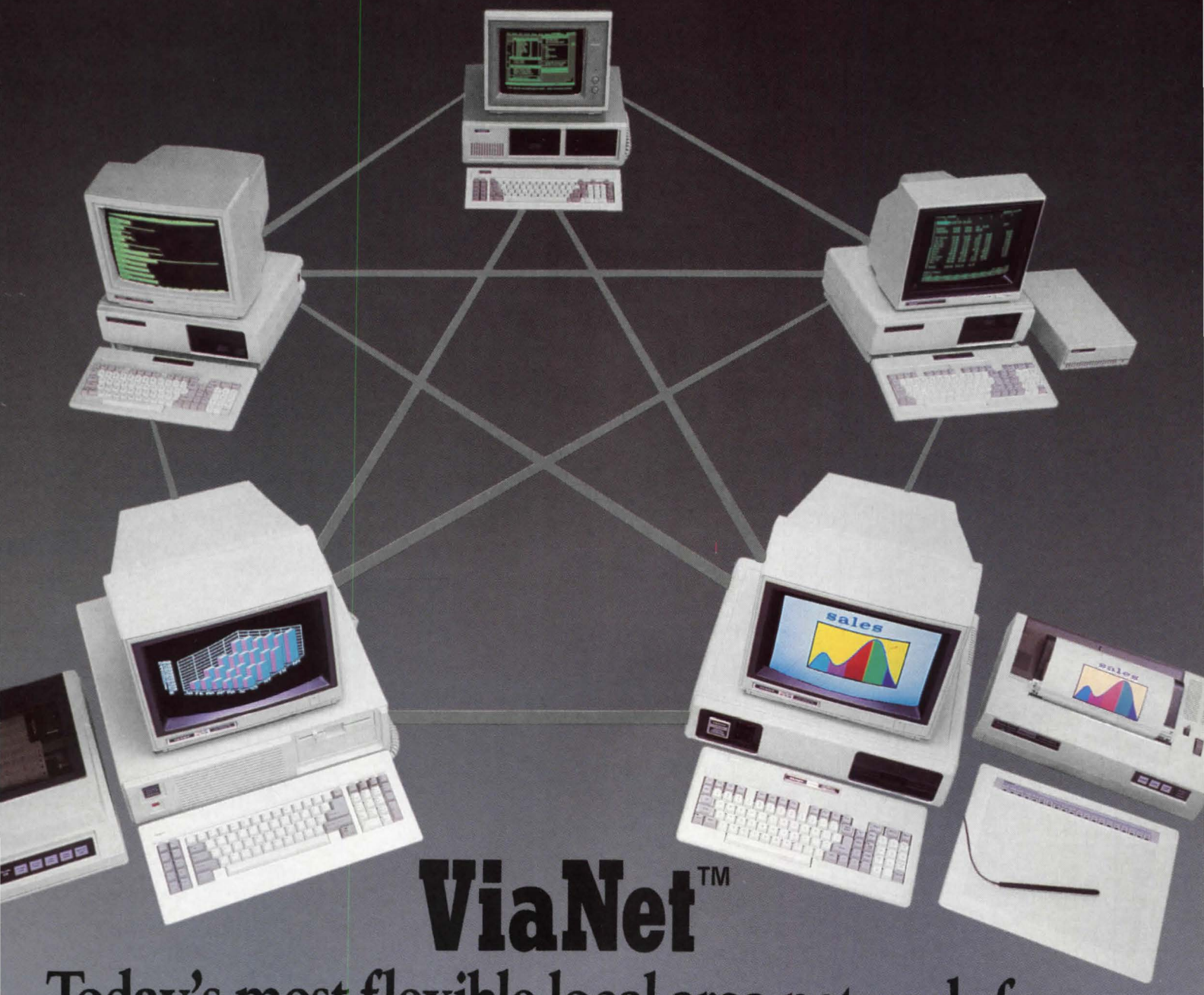

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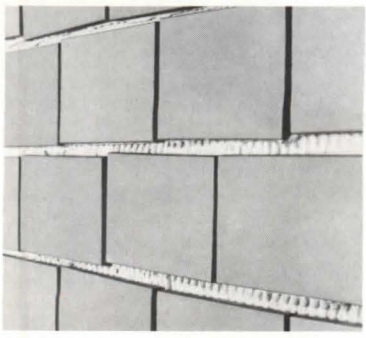

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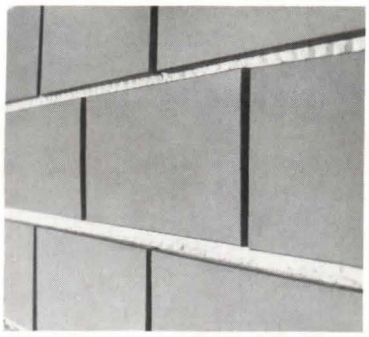

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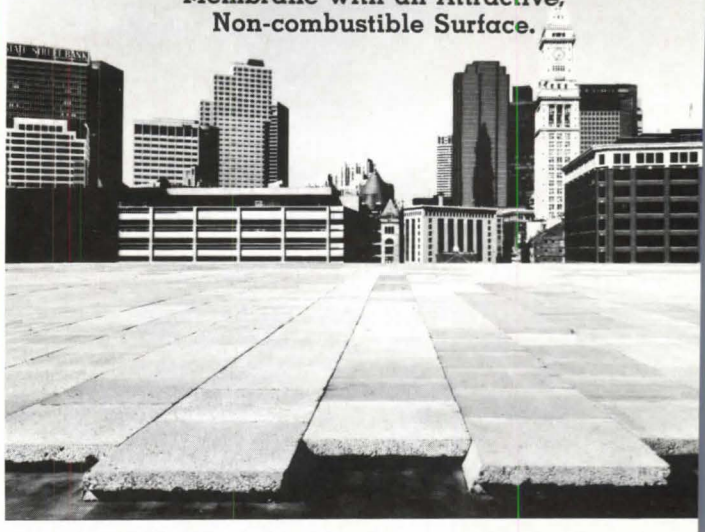

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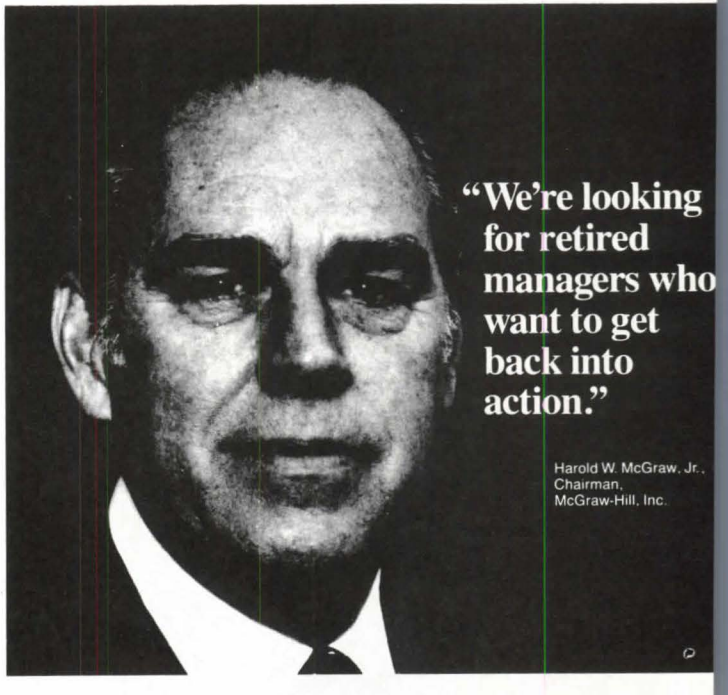

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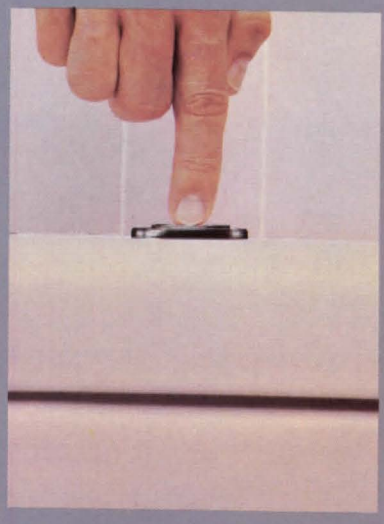

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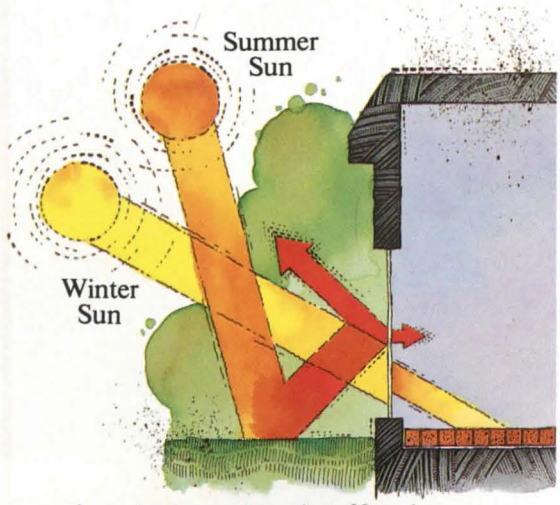

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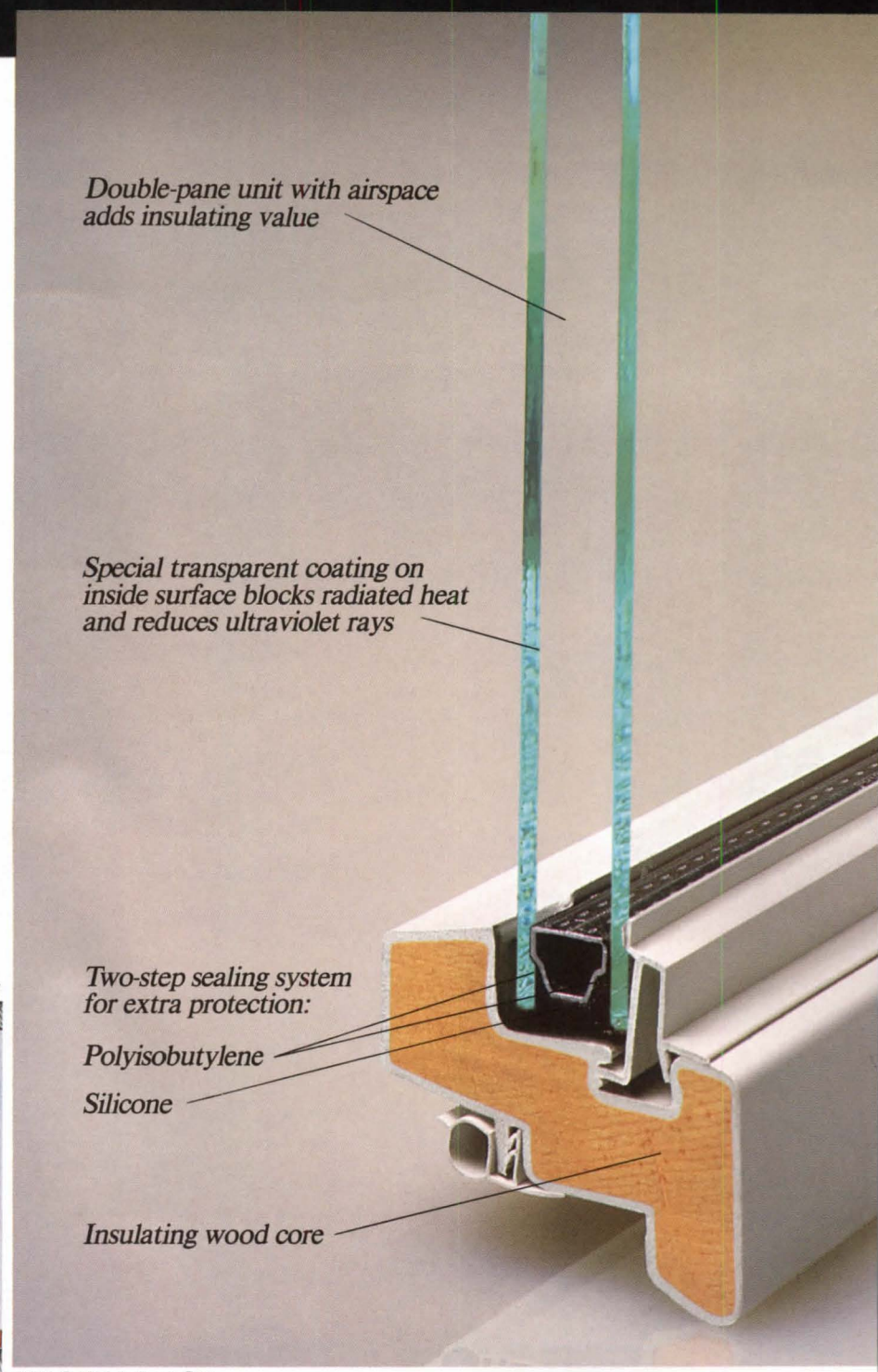

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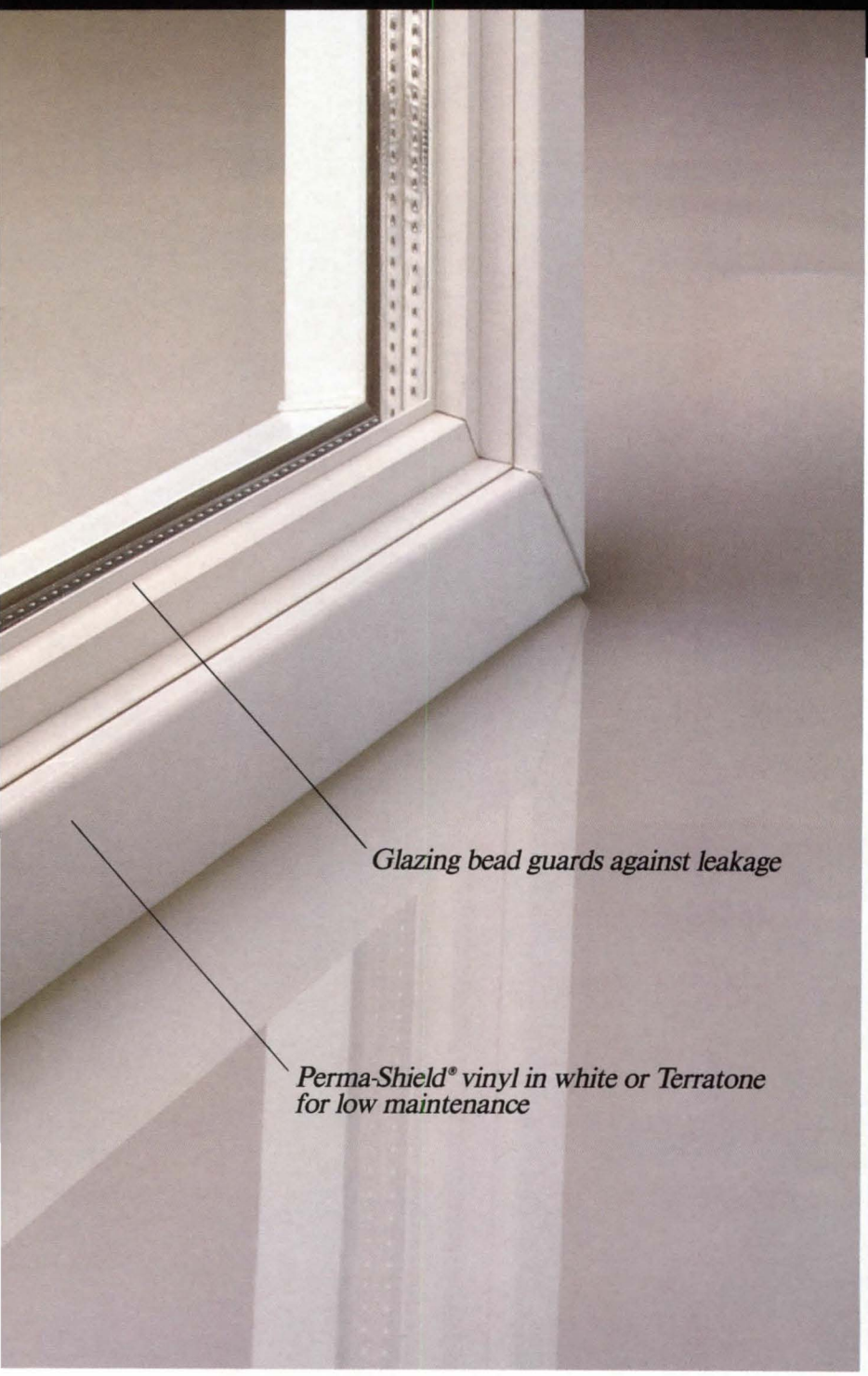

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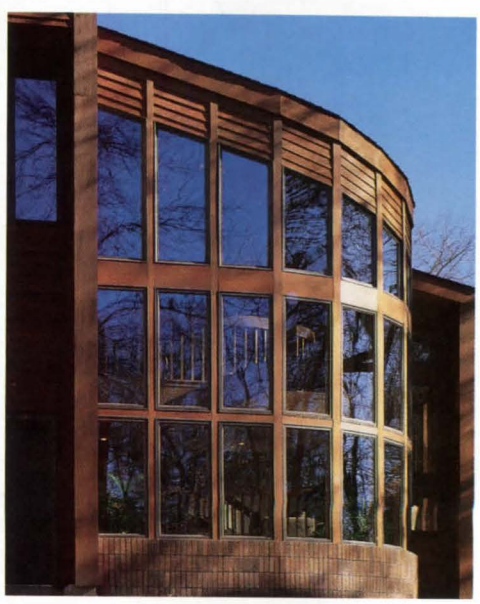

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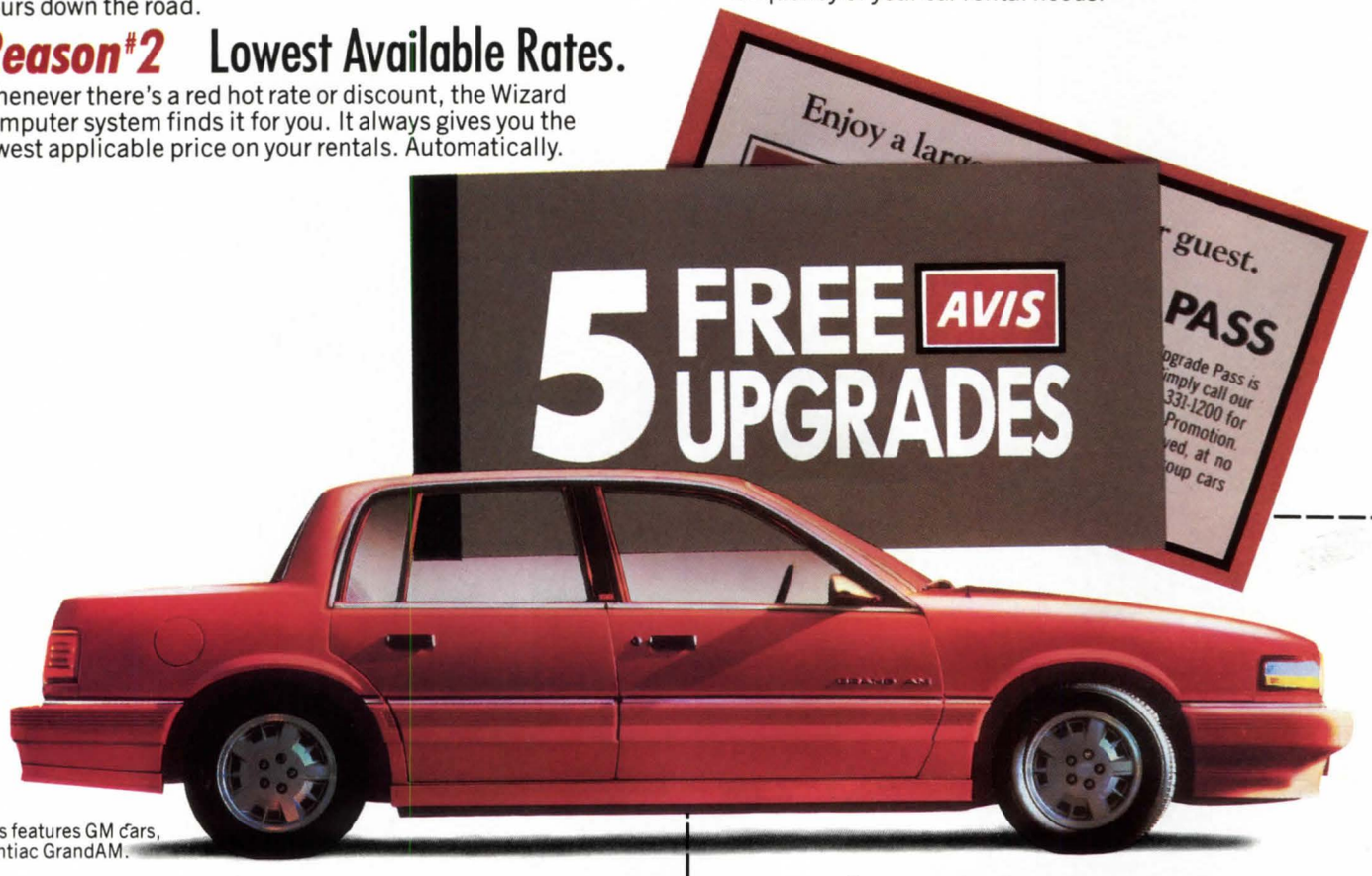

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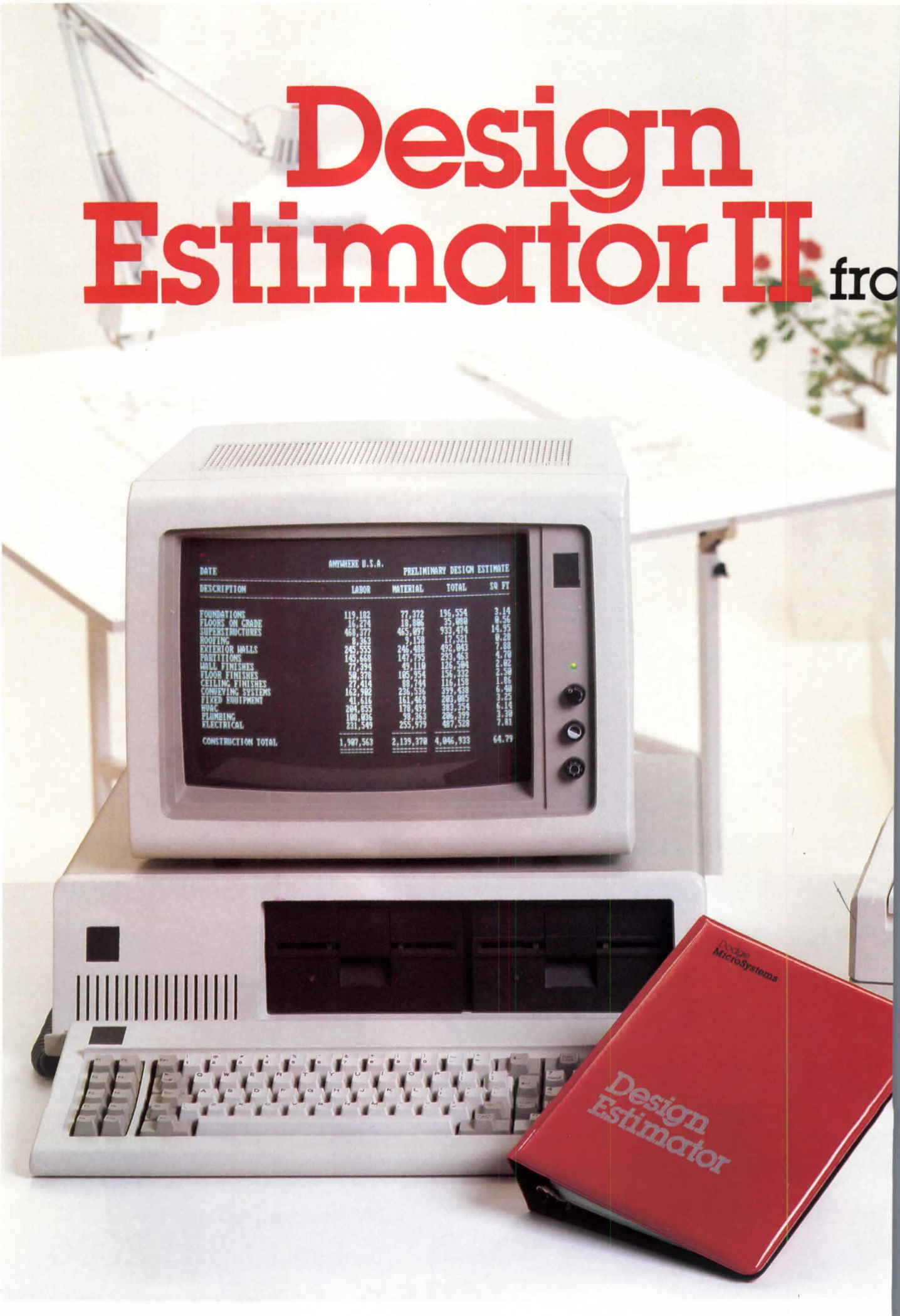

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1. Title of publication—Architectural Record (ISSN0003858X) (combined with American Architect, Western Architect and Engineer).

2. Date of filing—October 1, 1986

3. Frequency of Issue—Monthly with additional issues in April and September. Number of issues published annually: 14. Annual subscription price: $35.00.

4. Complete Mailing Address of Known Office of Publication—1221 Avenue of the Americas, New York, NY 10020.

5. Complete Mailing Address of Headquarters of General Business Offices of the Publisher—same as above.

6. Full Names and Complete Mailing Addresses of Publisher, Editor and Managing Editor—Publisher: Paul B. Beatty, 1221 Avenue of the Americas, New York, NY 10020; Editor: Mildred F. Schmertz, 1221 Avenue of the Americas, New York, NY 10020; Managing Editor: Carolyn De Witt Koenig, 1221 Avenue of the Americas, New York, NY 10020.

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9. Not applicable.

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A. Total number of copies printed—average number of copies of each issue during preceding 12 months, 82,562; actual number of copies of single issue published nearest to filing date, 83,105.
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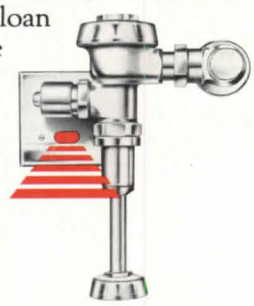

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