Progressive Architecture

MAY 1987

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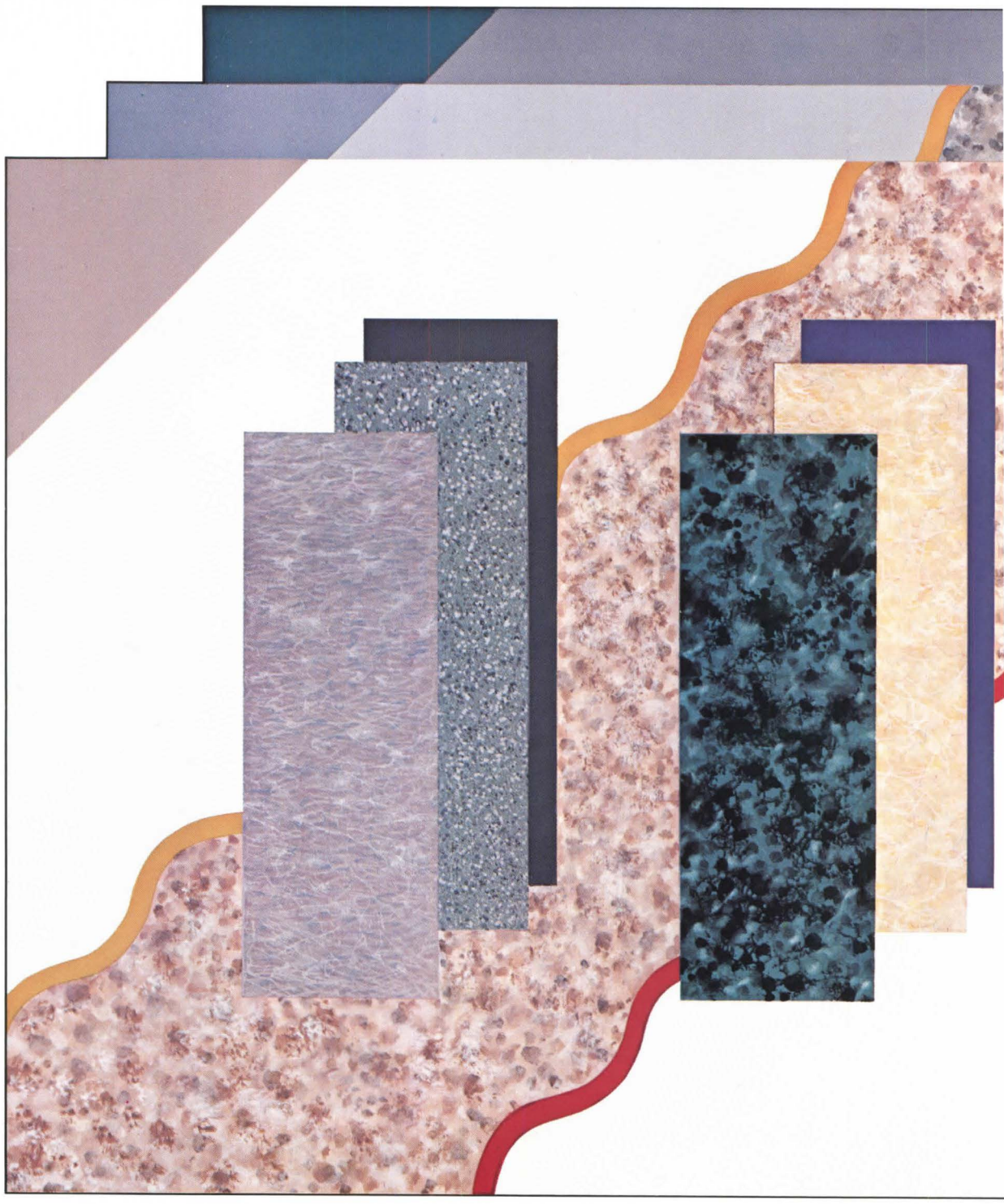

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MAY 1987

Progressive Architecture

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ABP ABC MPA

ARCHITECTURAL DESIGN

Editor in charge: David Morton

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Cover
The Menil Collection, Houston, by Piano & Fitzgerald (p. 87). Photo: Paul Hester.

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Who Wins

As we find out the winners of this year's major awards for architecture, it is reasonable to ask what the choices mean, and beyond that, who really benefits?

BY the time you read this issue, all of this year's national awards for architecture will be publicly known—with the big exception of the AIA Gold Medal, which the institute keeps secret until its national convention in June. Those announced so far include the P/A Awards (January issue), the AIA Honor Awards (p. 29), and the AIA Firm Award (Feb. issue, p. 24). On the international scene, the winner has been announced for the American-sponsored Pritzker Prize (p. 29) and the RIBA Gold Medal (p. 30).

It is always tempting to try to read some trends into such choices. In the case of the P/A Awards, the jury itself observed that there was only one obviously Post-Modern winner among the 13 they selected for architectural design; and they hoped they were recognizing a renewed emphasis on socially responsible projects. *Los Angeles Times* critic Sam Hall Kaplan reported on their choices, quite thoughtfully, under the heading "Post-Mortem for Post-Modernism." Like the numerous obituaries for P-M that have appeared, this autopsy may have been premature. Kaplan had not yet heard what had been chosen for AIA Honor Awards, a selection that P/A Senior Editor Daralice Boles calls "ecumenical" (page 29). Among those 20 works, after all, are two by Michael Graves, two for which the Venturi, Rauch & Scott Brown firm shares credit, and one for which Charles Moore does.

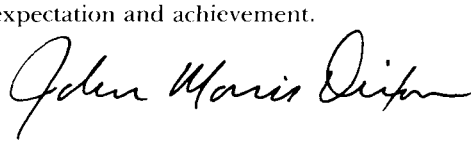
This year's selection of Kenzo Tange for the Pritzker Prize could be interpreted as an endorsement of Modernism, to which he has been an unwavering adherent. It would be a mistake, however, to look to this prize for indications of trends: sometimes it goes to orthodox elders like Tange or Pei, sometimes to mid-career innovators like Stirling or Meier or to iconoclasts like Hollein or Böhm. The pinnacle of AIA awards, the Gold Medal, is also bestowed on architects who fill different kinds of roles. This year, AIA may or may not be trying to tell us something by its appointment of Tange as honorary chairman of its convention; does this mean he is getting the medal? More likely, that several on the deciding board favored him, but they could not muster enough votes. His unusual convention billing could mean that nobody is going to receive the gold this year.

For the recipients of all these various awards, what are the benefits? After that moment in the spotlight, awards can be positive effects on getting new commissions, having more clout with clients, recruiting good staff members, being invited into competitions or onto juries. There are all manner of advantages, if the firm is able to exploit the honor—a nasty word, "exploit," but it is accurate for the process of bringing that recognition to bear where it will count. No honor has sure-fire magic: Even winners of the AIA Gold Medal and the Pritzker Prize lose some commissions to firms with no such credentials.

For the profession, the awards set benchmarks, standards to strive for or rebel against. They should present case studies to examine and discuss. And they should bring the attention of the public to bear on the work of architects and how its quality is measured. That in turn should help the public to recognize good architecture, strive for it, and get it.

But there are serious weaknesses at the public benefit end of the sequence. These awards get moderate amounts of coverage in some of the big newspapers, a little on local TV and radio, maybe a mention in a national newsweekly. But that is just about the only exposure these honors get to people who neither attend awards presentations or read architecture magazines.

For impact on a broad public, we need events in the places where the architects work and the buildings stand, for instance, or commemorative programs on local TV, efforts that are hard for the local public to ignore. Activities such as these, of course, need funding; we cannot ask clients, even wealthy ones, to foot these bills, since they have already done their part. Funding would take some ingenuity, but it should be worked out by those with no direct interest in the project (local AIA chapters?). Whatever kind of event is staged, the main point is that some amount of money and imagination must be committed to publicizing these winners, if they are to be known to more than an informed few, if they are to have their intended effect on our levels of architectural expectation and achievement. ■



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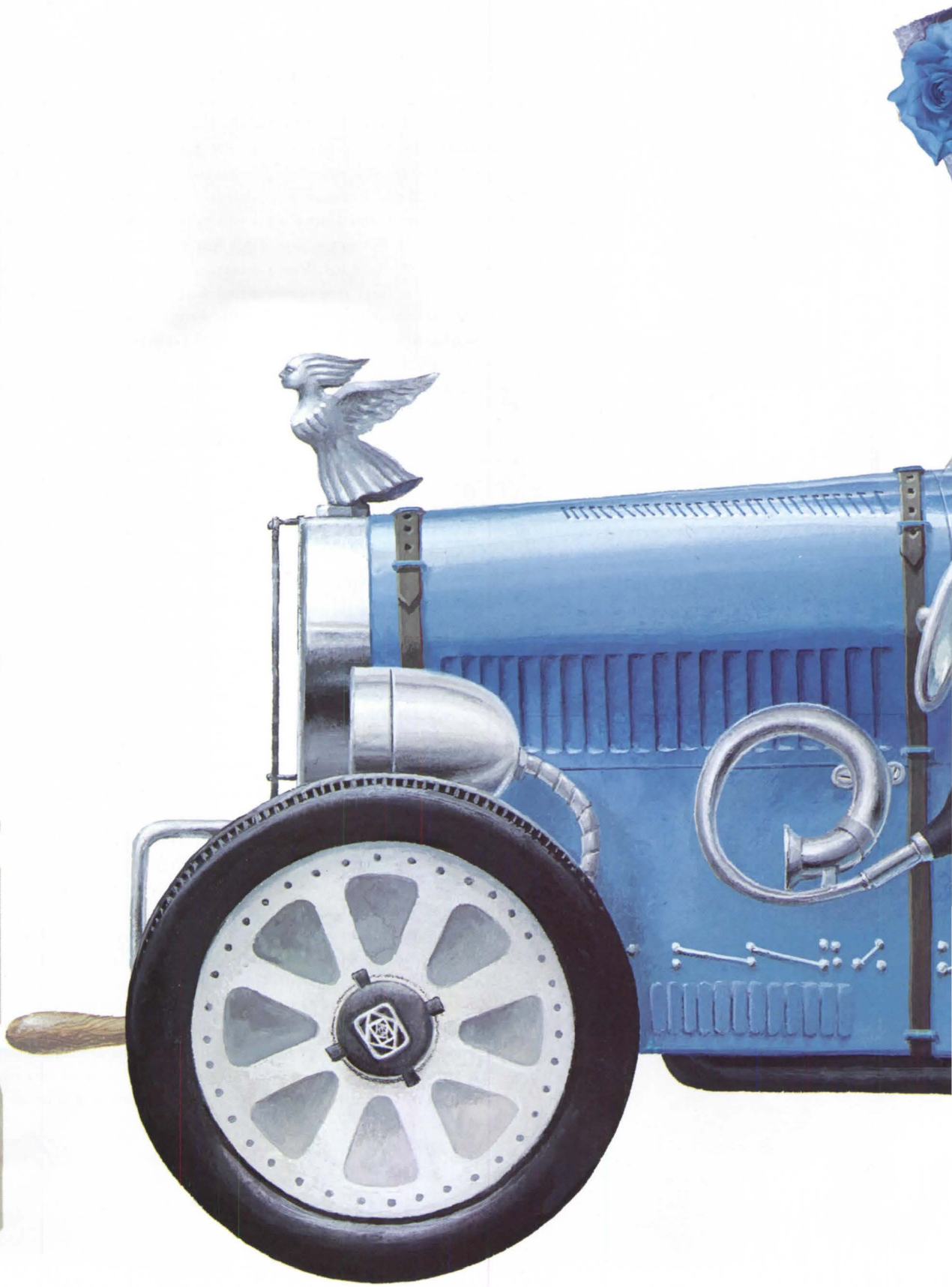


Lighting the Corridor

It's time to rethink.

New lighting technology makes the old answers obsolete.

Your first true impression of a building's interior comes when you leave the lobby and enter the corridors.

The picture below demonstrates the kind of impression a corridor can make. When you walk into this corridor, every part of it seems washed in a soft, even glow. An effect like this requires exceptionally consistent, comfortable illumination at a high enough level to make the corridor clearly "well lighted."

Contrast this image with the dozens of unfortunate corridors you've encountered over the years: the gloomy hotel corridor, the glaring hospital corridor, the bland office corridor. In each case, the blame falls on an outdated lighting system.

High illumination: up instead of down

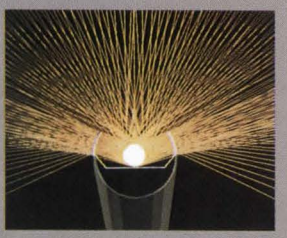
Almost every corridor in America with a high illumination level uses a down light. If the floor is reflective, as in the hospital corridor, you find yourself staring into what amounts to a second set of light fixtures on the floor, throwing uncomfortable light over every surface.

If the floor has a medium to dark carpet, downlights won't reflect light back into the ceiling. The fixtures stand out as glaring spots on a dark surface. You end up with a half-lit space: well-lit floor and lower walls, under-lit ceiling and upper walls.

The corridor in the picture demonstrates a lighting concept developed in the early 1980s and now beginning to gain broad acceptance. A lensed indirect fixture with an unusually wide distribution turns the whole ceiling into a single light source, creating smoother, more pleasing illumination.

The secret to the distribution lies in the Peerless Softshine Optical System. The strip of visible lens at the sides of the fixture has a pleasant, low-brightness glow from a normal viewing angle. But from just above viewing angle, it throws great amounts of light out to the upper walls.

It also makes you feel the corridor is better lit. In a comparison study, Penn State University discovered that a visible lens like the one in the photo raises perceived light levels about 20%.



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Views

To the Architects' Credit
Your material, "Artist's Renderings" (P/A, March 1987, p. 7), regarding the lack of recognition for architects is well taken. However, as public relations experts will attest, recognition is neither free nor easy. Your suggestion to "monitor the publications and write indignant letters" is a reactive, rather than proactive, approach to the problem. If individual architectural firms want to be recognized in the press, they need to initiate the contact themselves.

Public relations is an integral part of a firm's marketing mix and is too often overlooked. Simply waiting for a publication to request art work or photos and then stamping a requirement on the back to get recognition is just wishful thinking. Architectural firms must start doing public relations for themselves—write press releases, send out pitch letters, do whatever is necessary.

If architects want the respect they deserve, they are going to have to work for it.
Michelle A. Brown
Marketing Director
S.I.L.O. Architects Ltd.
Denver, Colo.
[Good point. Architecture firms and organizations such as AIA chapters must, of course, take initiative to get effective, as well as accurate, press coverage.—Editor]

Architects: "Earnest Dreamers"?
In your February editorial, "Storybook Architects" (p. 7), you contrasted a rather unflattering portrait of an architect in Donald Barthelme's new novel, *Paradise*, with the portrait of architect William Rawn in Tracy Kidder's nonfictional book, *House*. Although you correctly describe the "clammy-handed anxiety" involved in Rawn's efforts, the rest of your remarks seem to express a large sympathy, even an admiration for his efforts at "adapting to this world."

Although I sympathize with any architect who falls under a journalist's microscope while working on an unfamiliar building type, my feelings after reading the book were starkly different from yours.

As an architect who came to the profession, like Rawn, after a liberal arts degree, I remember what it was like to not be obsessed by architectural form and theory. This recollection helps me to communicate with and understand the wishes of normal people, i.e., nonarchitects. Therefore I was embarrassed by the depiction of an architect as presented in *House*. He typified the view held by many in the construction and development industry: the architect is a dreamer who is not technically adept, holds up the work with his obsession with relatively unimportant details, and in other ways expresses a subconscious disregard for the client's wishes or eventual mortgage payments.

As the principal in a small office, the largest problem I face is convincing potential clients of the value of an architect's services versus that of engineers, contractors, lawyers, and *even* real estate agents. In other words our fees are too low.

Nonfictional best sellers that depict architects as "earnest . . . dreamers" certainly do not help all of our efforts to raise both the compensation of our profession and its image in the professional community.
David R. Weaver, Architect
DRW Associates
Los Angeles, Calif.

The Hague City Hall
Richard Meier, a participant in The Hague City Hall Competition (Koolhaas and OMA Win The Hague City Hall Competition, P/A, Apr. 1987, p. 27), has informed us that the actual award for the commission to design the building will not be determined until results are known of the City Council vote, which is to be held on May 10. We will keep you informed. The Editors.

Housing Acknowledgment
In the February issue of P/A (pp. 92–95), my article on industrialized housing in the Technics section was inadvertently submitted for publication without the acknowledgments. Last month, in Views, a brief note mentioned the contributions of Dr. William Coaldrake, Dr. Michael Joroff, and Yujiro Kaneko. This note, while accurate, is a wholly inadequate reflection of their value to the article.

The characterizations of Japanese industrialized building practice are based, in part, on an excellent series of articles written by Bill Coaldrake for *Japan Architect* magazine (Aug.–Oct. 1986, Jan. 1987). His observations related to Japanese marketing and design techniques, and the similarity between the automotive and housing industries, are perspicacious. They were drawn upon to relay a vivid picture of the industrialized housing process. I inadvertently included direct quotations and several extensive paraphrasings from Dr. Coaldrake's articles without adding the customary quotation marks and acknowledgment of direct derivation from another author's work. This four-part series is a seminal exposé on the roots and current status of the factory-built home industry in Japan. They are *must* reading for anyone with a serious interest in the Japanese home building industry. In addition, I would be remiss not to mention Dr. Coaldrake's prowess as a tour guide and interpreter.

My time in Japan was made more rewarding by both his and Michael Joroff's insights into the complex underpinnings of the home building industry. Further, on short notice, Dr. Joroff was instrumental in organizing a nonstop tour of some of the key home building facilities in Japan.

Finally, my thanks to Yujiro Kaneko of the Building Center of Japan, who orchestrated my tour. Mr. Kaneko provided myriad insights into the Japanese view of housing and encouraged a continued and expanded dialogue between our two industries.
Emanuel Levy, AIA
The Levy Partnership, Inc.
New York

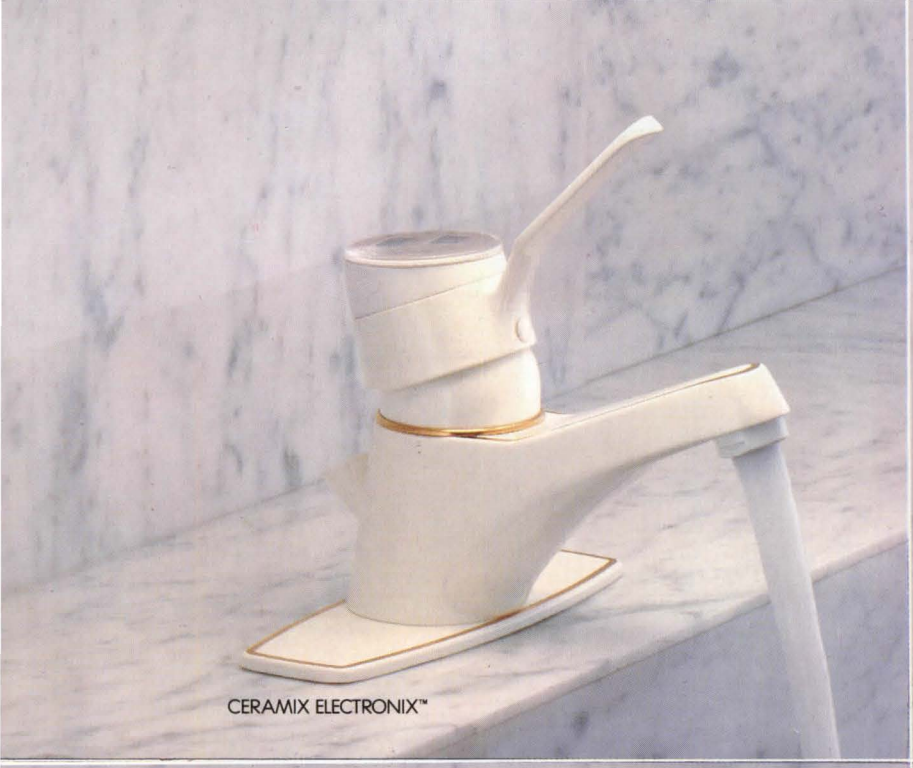
Product Clarification
This letter is in response to your article in the March issue of *Progressive Architecture* (pp. 108–113) regarding the Best Products Corporate Headquarters Phase II.

We at Tectum Inc. appreciate the recognition of the use of our products such as the wall panels used at Best Products. Although the photos were very flattering, the description missed the mark.

Tectum™ wood fiber products have been manufactured since 1950. In those early years, Tectum roof deck products were very well known and widely used in the building industry. Since those early days, a complete line of Interior Products has also been added. Today, Tectum Interior Wall & Ceiling panels account for a large percent of our total shipments. . . . They have been used in a wide variety of applications from office buildings such as Best Products to schools, restaurants, theaters, and many other public areas.
Mike Massaro
Interior Products Manager
Tectum, Inc.
Newark, Ohio

Product Name Correction
The listing for Artemide in the Lighting World section of P/A (April, p. 45LW) should have said "Aton Modular System."

Photo correction
The photo of carpet, Products and Literature (April, p. 206), should have appeared with the write-up for Collins & Aikman's Contessa from their Eligere group (p. 205).



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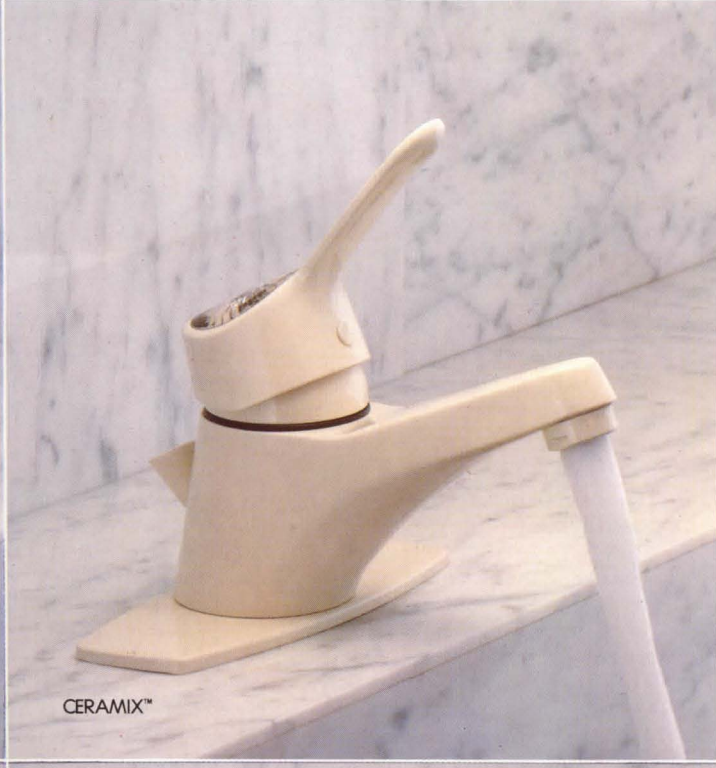

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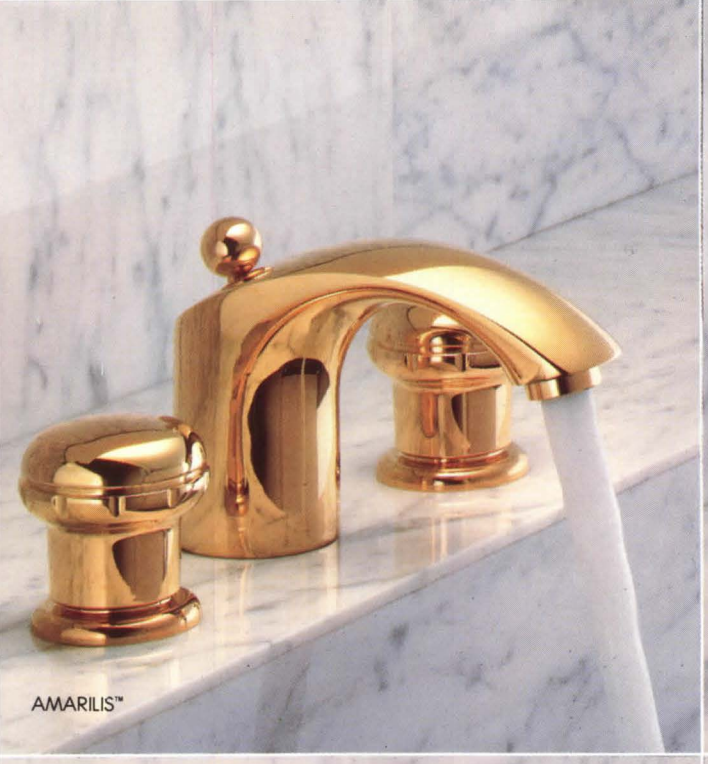

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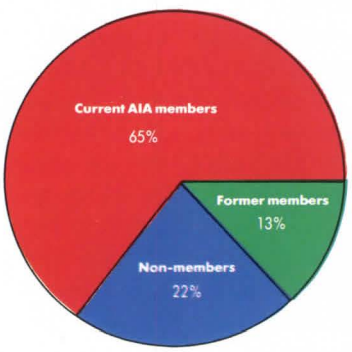
P/A Reader Poll
Value of the AIA

The fourth P/A Reader Poll found widespread dissatisfaction with the American Institute of Architects among members and nonmembers who faulted the AIA's priorities and its performance.



Three previous P/A Polls have examined reader views on general issues of compensation, liability, and career satisfaction. This fourth Poll considered a more specific topic—the American Institute of Architects. While membership in the AIA is voluntary, no other organization plays so central a role for the architectural profession, as the arbiter of professional activities and public advocate for architects. Indeed, as this poll proved, all architects—AIA members and nonmembers alike—are acutely aware of the AIA's powerful position.

Although nonmembers and former members tended on the whole to express more negative opinions of the AIA's performance, the survey indicates that members too are far from satisfied. Indeed, more surprising than the differences of opinion between members and nonmembers are the many points of agreement, most significantly in the ranking of goals both groups would like to see the AIA pursue (see Priorities, below).

Responses paint the disturbing picture of an organization fundamentally at odds with its constituency. Nearly two-thirds of all respondents felt that the AIA is not a good value for the dues it collects. Only 15% of current AIA members reported that the organization had a positive effect on them as an individual professional, and 44% felt the AIA was not at all effective in helping them personally.

The Sample (Figure 1)

Over 1000 readers answered this poll. Most responses came from individuals in architectural or A/E firms (80%), of small (53%), medium (29%), or large (22%) size.

As has been the case for previous P/A Reader Polls, the largest category of returns represented firm owners or principals (59%). Project managers and staff architects were also represented (20% and 16% respectively), as were, to a lesser extent, designers or draftsmen (5%). Not surprisingly, architects with less than four years of experience in the profession (6%) were the least likely to respond to the poll while architects with 11 or more years experience (63%) were the most likely to reply.

Both AIA members (65% of the sample) and nonmembers (35%) responded to the survey. Morrison & Morrison, consultants for the P/A Reader Polls, consider this mix to be proof that architects in general are concerned about the organization and its impact on the profession, regardless of their own membership status.

The majority of current AIA members in the poll were full corporate members (85%). Half of all present or former AIA members report that they have been somewhat active in the organization; one quarter report they are or were very active, and one quarter are or were not active at all.

Non-AIA members fell more or less equally into three categories: former members (36%), nonmembers who expect to join the AIA in the future (31%), and nonmembers who have no interest in joining (33%).

Although one quarter of the architects polled belong to one of four other professional organizations listed on the questionnaire, participation in these

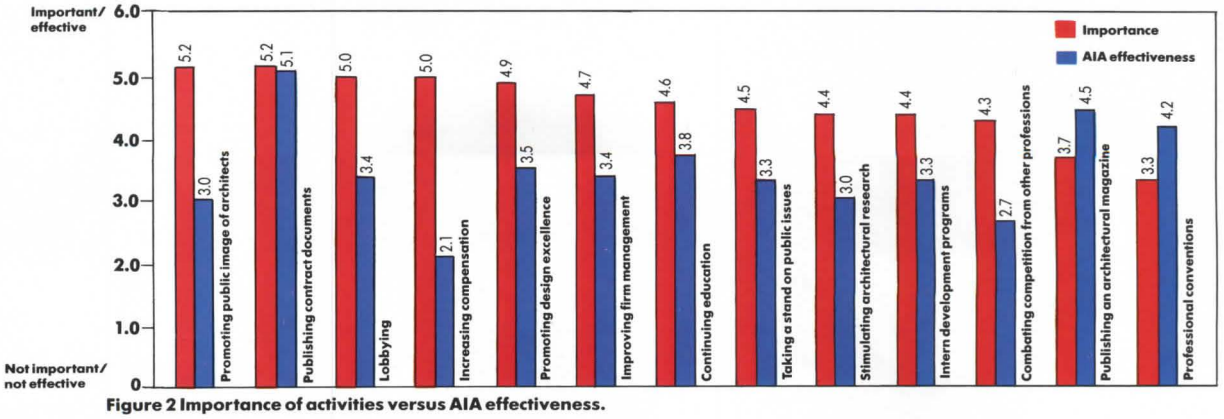
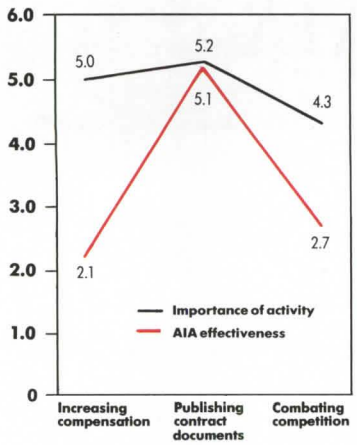
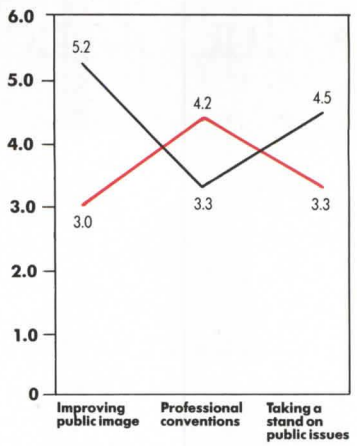
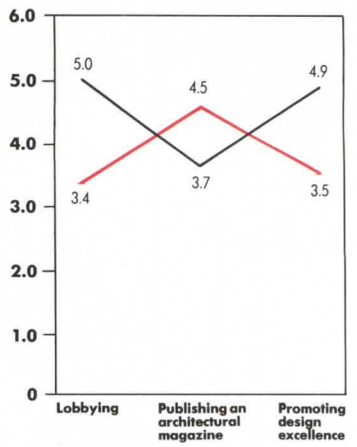


Figure 2 Importance of activities versus AIA effectiveness.







Figures 3, 4, 5 Priorities versus performance.

groups did not differ between AIA members and nonmembers. There is no evidence to suggest that other professional organizations—including local architecture associations not affiliated with the AIA—benefit by recruiting non-AIA members. The Morrisons conclude that architects regard membership in a professional organization as a "black-and-white" choice.

Priorities (Figure 2)

What issues should a professional organization of architects address? At the top of the readers' agenda are improving the public image of architects (an average of 5.2 on a scale of 1 to 6) and publishing standard contract documents (5.2). These priorities are followed closely by increasing compensation levels (5.0), lobbying for laws benefiting architects (5.0), and promoting design excellence (4.9). Clustered together at the middle of the scale, in the order of their importance, are helping architects improve firm management (4.7); sponsoring professional seminars and continuing education courses (4.6); taking stands on public issues (4.5); supporting or stimulating architectural research (4.4); administering intern development programs (4.4); and combating competition from other professions. The two issues considered the least important for a professional organization are publishing an architectural magazine (3.7) and holding conventions (3.3).

The Morrisons observe that this ranking holds for all groups surveyed, regardless of membership status, position in firm, or size of firm. The single exception occurs in the case of staff architects who rank increasing compensation as their top priority. "As seen in other P/A polls," the Morrisons comment, "this group is the most money-oriented segment of the profession, and their priorities generally revolve around achieving personal financial success."

Performance (Figures 2–5)

How effective is the AIA in addressing these priorities? Fair to middling for most, with exceptions at both ends of the scale. Contract documents remain the AIA's strong suit, compensation its Achilles heel.

With the notable exception of contract documents, however, AIA performance never matches reader priorities. The AIA earned only a weak 3.0 average for its effectiveness in improving the public image of architects, yet this issue was considered by readers to be the number one priority for a professional organization. The discrepancy is still greater in the category of compensation where the AIA's abysmal 2.1 effectiveness rating falls a full 2.9 points short of the importance attached to the issue by readers (5.0).

Conversely, the AIA earned above-average marks for publishing an architecture magazine (4.5) and sponsoring conventions (4.2), yet these activities fall to the very bottom of the list of priorities. This seesaw effect suggests alarming discrepancies between the organization's goals and those of its constituency. Only in the production of standard contract documents do reader priorities and AIA performance match (5.2 for importance, 5.1 for performance).

Publishing contract documents is also the one activity for which AIA ratings rise above 4.5. Ranked in order from there are conventions (4.2); seminars and continuing education (3.8); promoting design excellence (3.5); helping improve firm management (3.4); lobbying for relevant laws (3.4); speaking out on public issues (3.3); sponsoring intern development programs (3.3); promoting the public image of architects (3.0); sponsoring architectural research (3.0); combating competition (2.7); and increasing compensation (2.1). [The Justice Department's interpretation of antitrust laws raises obstacles to concerted action in this area.] The average performance rating over 13 categories is a middling 3.5.

While nonmembers and former members tended to rate the AIA's effectiveness slightly lower than did present members, both groups agree on the relative ranking of AIA efforts, as they did on the ranking of activities by importance. Moreover, the figures for AIA members show considerable division of opinion concerning the perceived effec-

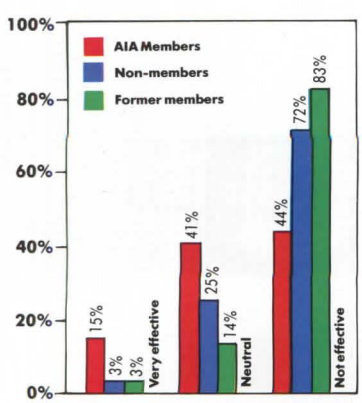


Figure 6 AIA effectiveness at level of individual professional.

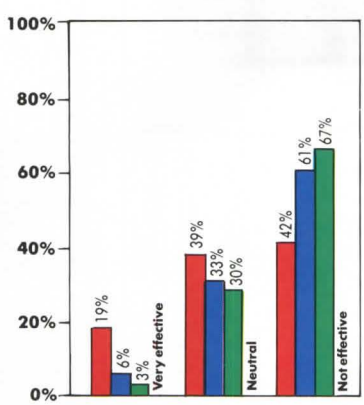


Figure 7 AIA effectiveness at local level.

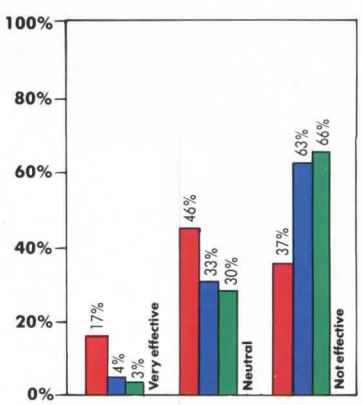


Figure 8 AIA effectiveness at state level.

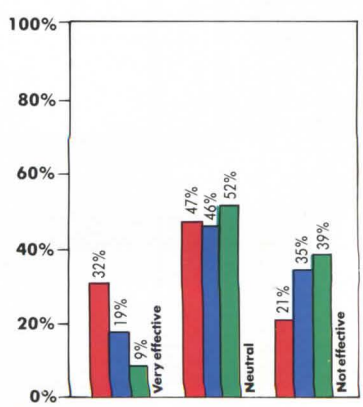


Figure 9 AIA effectiveness at national level.

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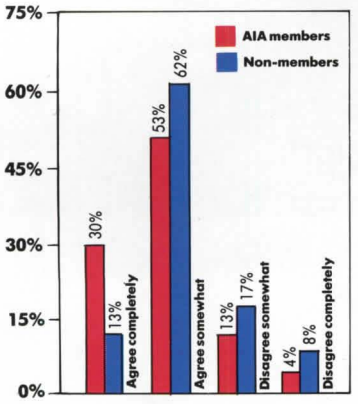

Figure 10 The AIA is an effective information source.

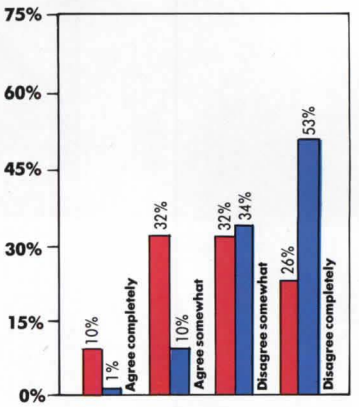

Figure 11 The AIA is a good value for the dues it collects.

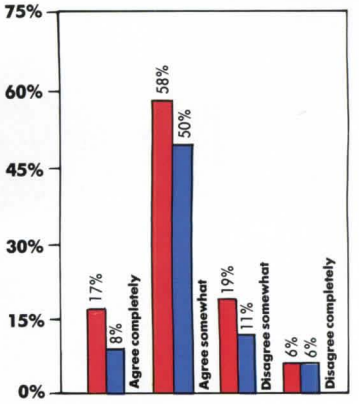

Figure 12 The AIA is staffed with competent dedicated employees.

tiveness of the AIA. Members tended to agree that the AIA is most effective at producing standard contract documents and least effective at increasing compensation levels or combating competition from other professions.

They divided sharply, however, on the categories of improving firm management; lobbying; improving public image; sponsoring intern programs; speaking out on public issues; sponsoring architectural research; and promoting design excellence. In each of these categories, about half of the AIA members took a neutral position, giving the organization an average grade. The other half, however, split between opposite ends of the spectrum, with one quarter rating the AIA as highly effective and the other quarter as not effective at all.

The Morrisons consider these results unusual. "The AIA appears to contain what we may call radical segments among its members," they write. "While many members feel the organization is doing a moderate job at addressing issues, it cannot be ignored that the remainder seem to be divided between staunch advocates and strong critics. . . . The AIA must begin to settle internal differences before it can launch a united front against the profession's problems." The Morrisons also consider the unusually large number of unsolicited comments, delivered by over 5% of the sample, as proof that the AIA is indeed an emotional subject for architects.

Overall Ratings (Figures 6–9)
Statistics on the overall effectiveness of the AIA at national, state, local, and individual levels suggest a profound and widespread dissatisfaction. While members tended to rate the AIA's effectiveness slightly higher than did nonmembers, their lukewarm response is perhaps the most damaging of all statistics collected in this poll. Member approval ratings never rise above an average 3.7 out of 6.0 at the national level, sinking to 3.1 at the state level, and 3.0 at the local level.

Only 15% of the current members consider the AIA very effective in helping them as individual professionals, while 44% believe the AIA has no effect at all at that level. Former members and nonmembers are still more negative: 83% of the former and 72% of the latter consider the AIA to have no effect whatsoever on them as individual practitioners.

Perceptions (Figures 10–15)
What are the strengths of the AIA? Members and nonmembers alike regard the AIA as an effective information source. The majority (69%) agree that its staff is composed of competent, dedicated employees. Elected officials did not get quite the same vote of confidence, but earned a respectable enough approval rating (56%).

However, nearly 70% of the architects polled—and 50% of the AIA members—felt that the AIA was not a good value for the dues it collects. A full 72% of the readers polled consider the AIA slow to act on critical issues, while only 43% consider the AIA responsive to the changing needs of the profession.

Again, nonmembers tended to be most critical of the AIA, but their concerns were echoed in member replies. Less than 5% of the current members, for example, could strongly agree that the AIA is quick to respond to critical issues.

Conclusion
Overall, the AIA is not perceived to be particularly effective at any level of professional involvement. While nonmembers and former members are typically more critical of the AIA's performance, the statistics show considerable dissatisfaction among the AIA's own membership. All parts of the poll point to the same conclusions: The AIA is perceived as slow to act on critical issues and only moderately responsive to the changing needs of the profession. Improving the public image of architects, lobbying for laws benefiting them, and increasing compensation levels—these are the top items on the readers' agenda. The challenge to the AIA is to improve its performance in these categories, while maintaining those in which it currently excels. *Daralice D. Boles* ■

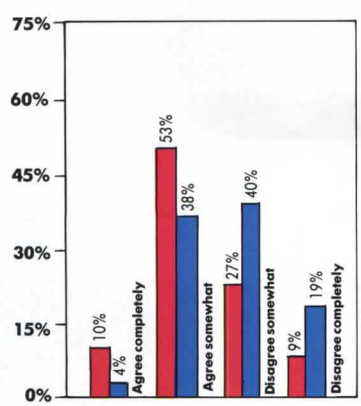

Figure 13 The AIA is led by effective elected officials.

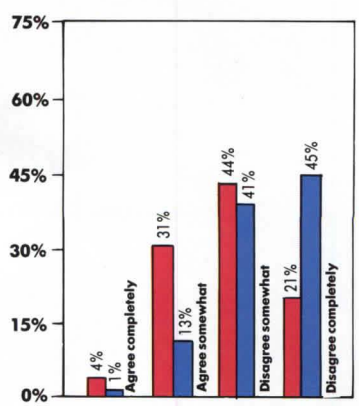

Figure 14 The AIA is quick to act on critical issues.

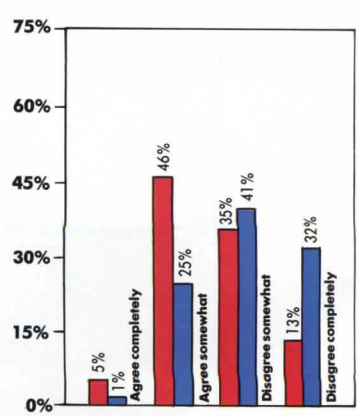

Figure 15 The AIA is responsive to the changing needs of the profession.

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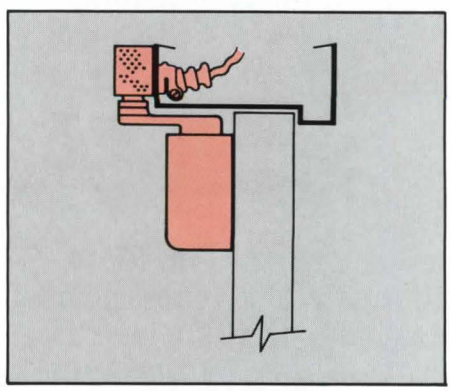

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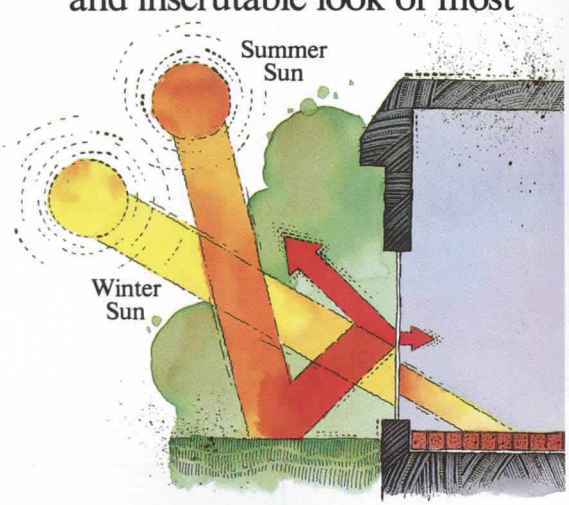

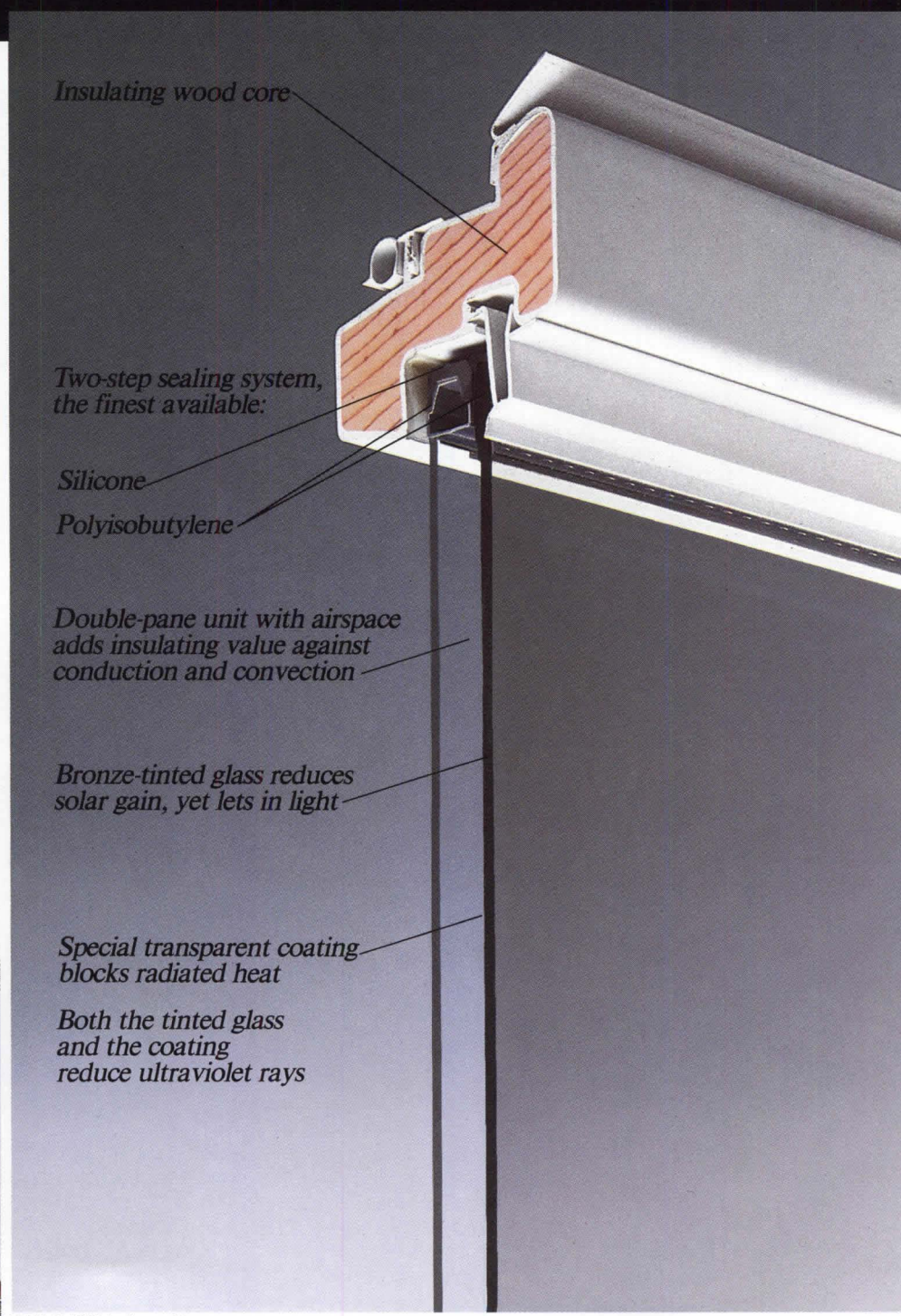

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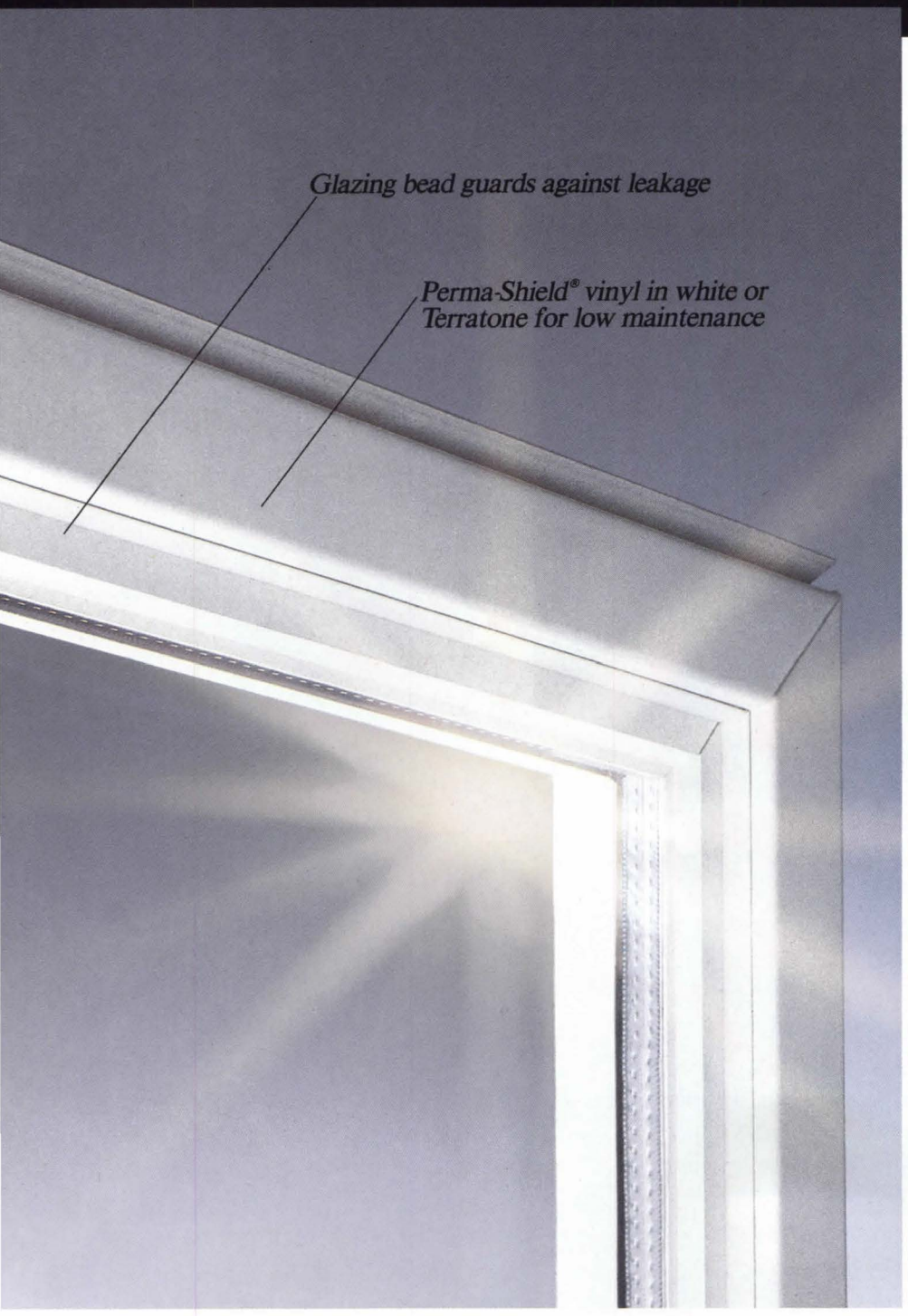

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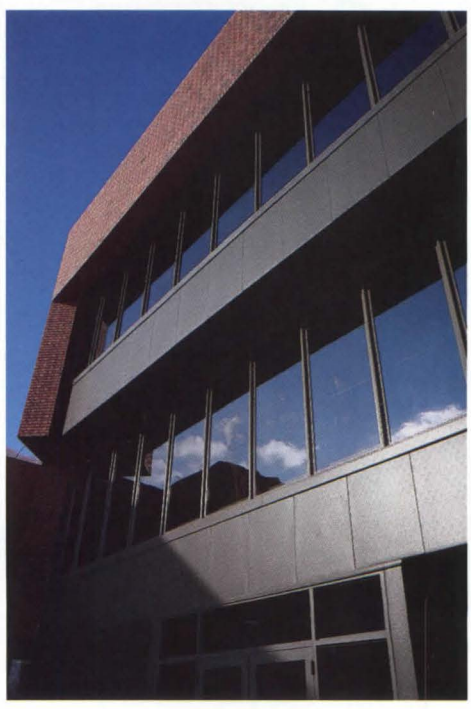

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To make the grade, a Stevens roofer goes to school.

On the surface, we may appear to be a little tough on the folks who install our roofs. But, to us, the only way to make sure a roof is done right is to make sure it was done right.

So before a Stevens applicator goes up on your roof, we make sure he's done his homework. Which means he's been trained. Studied our procedures. And our specifications. Like how to attach the Hi-Tuff membrane to a flat edge scupper. (Very, very carefully.)

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Now, once a Stevens applicator gets up on your roof, he doesn't

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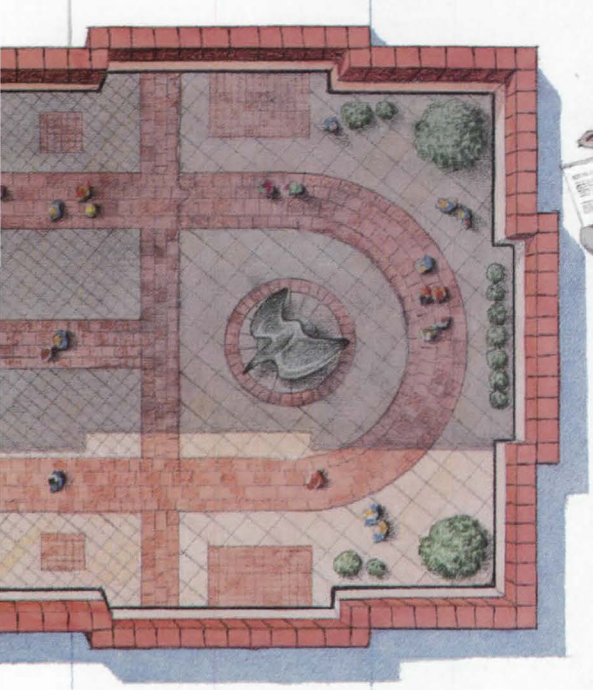
your roof, to tear it apart.



come down until everything's right.

You have our word on it.

Who says so? Our inspector does. (That's him again, just under your right thumb, making sure nobody cut corners in the corner.)

He goes over the roof to make sure it meets our tough standards. He checks the big things. Like the spacing of the mechanical fasteners. Then he checks the not-so-big things. Like the width of the weld on the sheet edge.

If our inspector approves the job, we issue the Stevens Hi-Tuff warranty. (It covers you in case our roof doesn't.) If not, the applicator stays up on the roof until he's done the job right. (Which generally doesn't take too long. It gets lonely up there.)

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Question: What's your name and what's your address?

To answer, just call 413/586-8750 and ask for Bruce Abbott or Dave Brown. Respond correctly, and you'll receive a free packet of information about the Stevens Hi-Tuff roofing system.

Respond incorrectly, and somebody else will.

STEVENS
Roofing Systems

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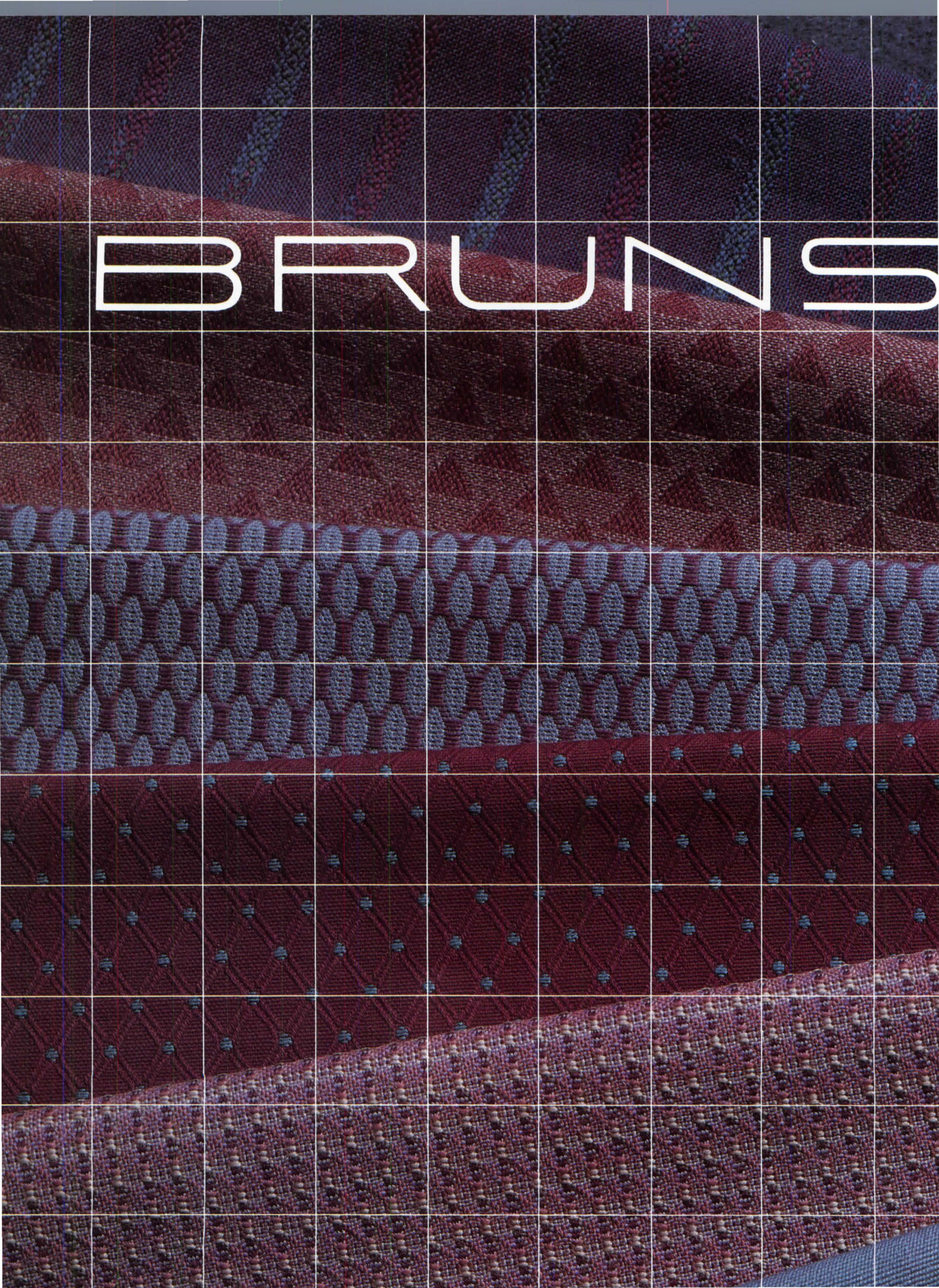
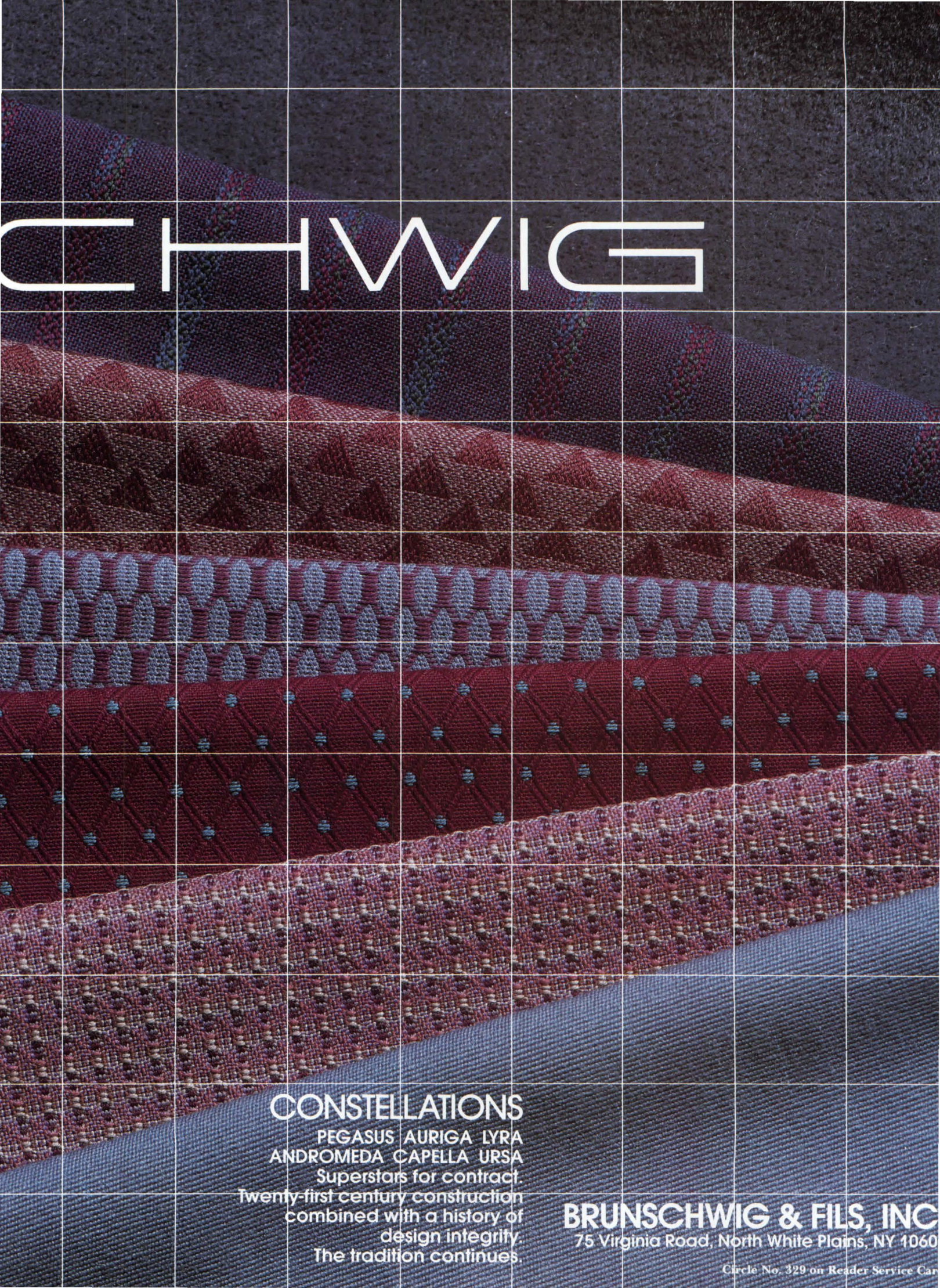

BRUNS



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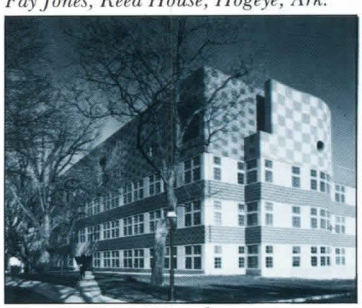
P/A News Report

Ezra Stoller/ESTO Photographics

Richard Meier, Museum, Frankfurt.

R. Greg Hursley

Fay Jones, Reed House, Hogeye, Ark.



Matt Wargo

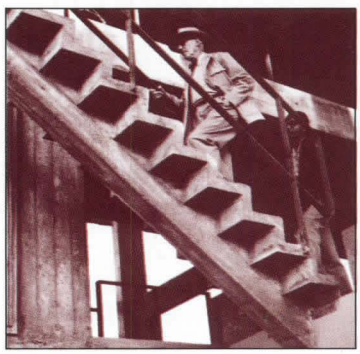
Payette and VRSB, Laboratory, Princeton, N.J.

Ecumenical Honor Awards

Twenty buildings from around the country have been selected to receive this year's American Institute of Architects Honor Awards. The list includes three corporate headquarters, five private residences, three university laboratories or computer centers, three museums, two restoration projects, a library, a hotel, a bakery, and an airport terminal.

The projects awarded, listed alphabetically by architect, are: O'Hare International Airport Rapid Transit Extension, Chicago, by the City of Chicago Department of Public Works, Bureau of Architecture with Murphy/Jahn, associate architects; Middleton Inn, Charleston, S.C., by Clark & Menefee with Charleston Architectural Group, associate architect (P/A, May 1986, pp. 83–91); the New York Public Library Restoration, New York, by Davis Brody & Associates (P/A, Aug. 1986, pp. 88–95); Information and Computer Sciences/Engineering Research Facility, University of California at Irvine, by Frank O.

(continued on page 32)



B.V. Doshi

Le Corbusier at Chandigarh.

Le Corbusier in London

Following two years after a popular Lutyens exhibition, the Arts Council's "Le Corbusier: Architect of the Century" (Hayward Gallery, through June 7) may seem to many a case of "Modernism strikes back." For as Adrian Forty writes in an accompanying essay on Le Corbusier's British reputation, "Le Corbusier . . . is Modernism itself as far as the British are concerned." In fact, a Corbusier exhibition was envisaged long ago for this, the centenary of his birth, and the principal organizers Tim Benton and Chris Green

(continued on page 30)

Radical Regionalism

In his brief introduction to "Radical Regionalism" (San Francisco Arts Commission Gallery, March 20–May 1), curator Daniel Gregory explained that the subject matter was architectural "imagery suggested by a particular context. . . . It's about designs that tell a story; maybe not a whodunnit, but a wheredunnit."

Four of the five firms: ACE Architects (Lucia Howard & David Weingarten), Fernau & Hartman Architects, Kotas/Panteleoni Architects, and Toby S. Levy & Associates are local heirs to the Bay Region tradition. The fifth, Robert A.M. Stern Architects, New York, has designed a set of houses that respond conscientiously to their neighbors on Russian Hill, an acropolis of Bay Region buildings.

As architectural traditions go, the Bay Region is soft-edged, not to say blurred. Yet, these architects are quite clear about the standards and tone set by founders Ernest Coxhead, Willis Polk, and Bernard Maybeck, among others. Though most of the projects are residential, ex-

(continued on page 32)

Richard Bryant

The Tate Gallery's new wing, dedicated to the work of British painter J.M.W. Turner, is architect James Stirling's answer to critic Colin Rowe (p. 43).

Tange Wins 1987 Pritzker

The jury for the nine-year-old Pritzker Prize continues its short history of surprising and unexpected choices. This year's laureate, the 73-year-old Kenzo Tange of Tokyo, has more in common with the Pritzker's first winner Philip Johnson than he does with his immediate predecessors, the younger Hans Hollein of Austria or the lesser-known Gottfried Boehm of West Germany. Like Johnson, Tange is an elder statesman, revered not only for his own work but for his influence on younger architects such as Arata Isozaki or Fumihiko Maki, a member of this year's Pritzker jury. The jury explains its choice as follows: "Given talent, energy, and a sufficiently long career, one

(continued on page 31)

Pencil Points

Ralph Erskine has been named 1987 Gold Medallist for the Royal Institute of British Architects. Erskine, a British architect who moved to Sweden in 1939, is best known for his housing projects and educational buildings including the Stockholm University library, student center and sports hall P/A, Aug. 1984, pp. 35–36).

Emilio Ambasz has won the International Interior Design Award for his Financial Guaranty Insurance offices, New York. The £10,000 prize is to be presented in London this month. Also in the running were Henning Larsen, Copenhagen; Shin Takamatsu, Kyoto; and Leila and Massimo Vignelli, New York.

Gustav Peichl, Vienna, has won a competition to extend the Stadel Art Institute in Frankfurt with a wing of 20th-Century art.

The American Society of Architectural Perspectivists and the Van Nostrand Reinhold Company have established an annual award for excellence in architectural perspective drawing. For information on the Hugh Ferriss Award, contact ASAP, 320 Newbury Street, Boston, Mass. 02115.

Steelcase, Inc., has acquired Metropolitan Furniture Corporation.

Herman Miller, Inc., will become the exclusive importer and distributor in the United States of B&B Italia products this June.

Seven design professionals have been named 1987 Prix de Rome winners by the American Academy in Rome. Theodore Brown, Princeton, N.J.; Mary-Ann Ray, Venice, Calif.; and George Queral, New York, were awarded fellowships in architecture. Interior designer Joseph D'Urso, New York; architects Ralph Lerner, Princeton, and Thom Mayne, Los Angeles; and landscape architect Michael Van Valkenburgh, Cambridge, received Advanced Fellowships, supported by the National Endowment for the Arts.

The Art Institute of Chicago opens this month a permanent installation of over 50 building fragments tracing the history of Chicago architecture. Related panel discussions run from June through September.

Tim Benton

Le Corbusier, Villa Schwob, La Chaux-de-Fonds, 1917.

Corbusier *(continued from page 29)*

deny any polemical timing.

Nevertheless, given the virulently anti-Modern tone of recent British intellectual opinion, this show is bound to come as a provocation. Critics don't know quite what to make of it, or its subject. "Misguided genius, wonderful but terrifying," was one reaction.

As Tim Benton pointed out in an interview, "There is a fundamental difference between the English scene at the moment and almost any other European response to Le Corbusier. In every other country, the debate about the consequences has gone hand-in-hand with the attempt to reanalyze and reinterpret the man and his theory." The "consequences" to which he was referring are of course those mangled and impoverished misversions of Corbusier's urban schemes that were hurriedly put up by public authorities during the 1950s and 1960s to deal with housing shortages.

The bulk of the original material in this exhibition is borrowed from the archives of the Fondation Le Corbusier, along with some rarely seen drawings from Zurich for the League of Nations building. Some 150 drawings, plus paintings, sculptures, tapestries, models, publications, furniture, and photographs shape an impressively complete and didactic exposition.

Six sequential but overlapping sections take the visitor on a "progression through the man." The opening, devoted to six private houses beginning with the Arts and Craftsish Villa Fallet, makes a clever appeal to English preferences. This section then moves through the familiar Villas Schwob, Stein, and Savoye, with the Five Points of the New Architecture expounded along the way. "The Architect as Artist" explains the aesthetics of Purism and its *objets types*. The third section, "The Era of the Great Projects," takes on those grand schemes such as the Palace of the Soviets, the Pavillon Suisse, and the Cité de Refuge.

A relief of the Modulor opens the second half of the exhibition, which is split into "Urbanism" on one side and on the other "The Sacred and the Search for Myths." At this stage a more expansive and rhetorical tenor emerges, with reconstructions of the Ronchamp doors and a cloister screen from La Tourette, plus larger maps and perspectives illustrating the Ville Radieuse and Unité d'Habitation.

Sacred and profane are then joined in a study of the church and community buildings of Firminy. This is the only part of the exhibition to document the political and social context and aftermath of any Corbusier projects. As such, it seems intended to stand for what would in fact amount to another exhibition on the vicissitudes of Corbusier's own work and his influence on others.

In the final section, "Le Corbusier in India," the rhetorical and affirmative impulse is, perhaps understandably, at its strongest. Benton, who is elsewhere careful to maximize the explanatory rather than the persuasive element of his exhibition, describes this section as "rousing stuff, a chorus." And so it is, with a marvelously rich, bazaarlike array of colored sculptures, tapestry studies, enamels, models, inspirational drawings, and vast color photographs.

Once again, I was reminded of the Lutyens exhibition with its climactic celebration of the great New Delhi works (which Le Corbusier apparently admired). But this dense and complex exhibition does something more important and more difficult than mere celebration: namely to represent to a wide audience at many levels the full scope of what remains the greatest modern attempt to reconcile in one continuous architectural vision mankind's most centrifugal and contradictory needs, dreams, and aspirations. ***Brian Hatton***

The author writes for the London-based publication Building Design.

Eighty Pence for Eisenman

Peter Eisenman's apartment building near Checkpoint Charlie (P/A, March 1987, pp. 84–91) has been selected to appear on a West German stamp commemorating the 750th anniversary of the city of Berlin. The anniversary is being celebrated this year, as is the culmination of the IBA, the International Building Exhibition, for which Eisenman's building was designed.

It is interesting to note that the stamp also unwittingly fulfills part of Eisenman's philosophical agenda. In reducing the three-dimensional building to postage stamp size it reinforces the architect's thesis of a unified theme crossing all scale boundaries. ***Susan Doubilet*** ■

Stamp honoring Eisenman's IBA building.

Tange's winning proposal for Tokyo City Hall.

Tange *(continued from page 29)*
may pass from being a breaker of new ground to being revered as a classic. This has been the happy fate of Kenzo Tange."

Educated at the University of Tokyo in the 1930s and 1940s, Tange is perhaps best known for his 1964 Olympic Complex and for his 1960 Plan for Tokyo, which filled the Tokyo Bay with manmade islands and megastructures. Tange designed master plans for parts of San Francisco and Baltimore in the late 1960s and early 1970s, but the architect has only one completed building in the United States: the1975 expansion of the Minneapolis Art Museum.

Although his firm completed an astonishing amount of work in the Middle East and Asia over the past twenty years, Tange has been overshadowed in his own country by younger architects. His firm again returned to prominence last year, however, winning the prestigious Tokyo City Hall competition. Tange himself has just completed a fourteen-part series published by *Japan Architect* in which he reviews his own career and urges Japanese architects to secure their professional status, independent of the large construction conglomerates that now dominate building in Japan. The Pritzker thus comes at a peculiarly appropriate time for this architect.

Daralice D. Boles ■

Murphy, Pidgeon Honored by AIA

James A. Murphy, P/A Profession and Industry Editor, is one of 73 members of the American Institute of Architects advanced to the Institute's College of Fellows. Fellowship in the AIA is conferred on members of 10 years' good standing for their "notable contributions to the profession." It is the highest honor the AIA bestows on any member with the exception of the Gold Medal. The new Fellows will be invested in the College of Fellows at the AIA Convention in Orlando next month.

Monica Pidgeon, former editor of the *Journal* of the *Royal Institute of British Architects* and present London correspondent for P/A, has been named an honorary Fellow of the AIA. Pidgeon is recognized not only for her contributions as a journalist but for her tape and slide library on architects and architecture. ■

Church Crisis Continues in Boston

After eight months of "an unholy war" between the Jesuits who dismantled the interior of their historic church and Bostonians who want to save it, the Immaculate Conception Church comes up for landmarking this month.

In a dark-of-night attack unseen in recent years, the church leadership ravaged the 120-year-old church in order to make room for offices and apartments in the structure and on the adjacent site. Days before the original landmark petition was to be heard, the church leadership shut the doors and attacked the interior on Oct. 8. "Restoration" was the word they used to describe the assault.

When Boston Landmarks Commission members gained access and saw the rubble-strewn interior with its spraypainted "x's," splintered pews, mutilated chandeliers and paneling, they responded with outrage. Neighbors, worshippers and organ music enthusiasts rallied with preservationists who had collected 5000 signatures to send to Rome. All praised the elegance of the church's details and the majesty of their integration in the whole 1858–1861 design by Patrick Keely and Arthur Gilman.

Coverage of the destruction by the press was extensive. "Deception, disinformation and good old-fashioned lies," Harvard art professor Edward Goldberg was quoted as saying. The Jesuits were "caught with blood and dust on their hands and lies on their lips," said Leslie Larson, former head of the Society of Architectural Historians.

While preservationists collected signatures, a steering committee sat down to work towards an accommodation with the Jesuits. The committee met through the winter months and should issue a report just before the petition to landmark comes up for its hearing.

"They've got some real tough issues of renovation, and they've got some tough issues of artifacts versus religious freedom," consulting architect Simeon Bruner of Bruner/Cott comments. Project architect Michael Leu of The Architecture Team says he thinks a solution will be reached "that would serve the needs of the user and yet satisfy preservationists." Restoring the sanctuary to its original splendor is, however, not one of those solutions, he says.

Satisfying preservationists may therefore also not be an option. Still smarting from the destruction of St. Mary's, another Keely church, and disappointed by the compromises that turned the 19th Century Kennedy's and Exchange Buildings into mere façades for new glass towers, the Boston Preservation Alliance seems ready for this crusade. It has prepared its petitions for both Rome and the Landmarks Commission, enjoining battle on religious and political fronts to protect the church.

Jane Holtz Kay ■

Sam Sweezy

Peter Shilland

Immaculate Conception, before (above) and after (below) dismantling.

Installation of "Radical Regionalism."

Regionalism *(continued from page 29)*
ceptions range from the Lakeside Delicatessen by ACE to the U.C. Santa Cruz Student Union by Fernau & Hartman.

The firms designed their own installations. Happily, the 3000 square feet of gallery space was not compartmented into tight little alcoves. Instead, the installations feed into each other. The viewer can see through each to the next stop. The potential collision of forms, colors, and materials was rescued from chaos by the curator's skillful refereeing. For if the work is serious, its presentation has a madcap quality that could easily have got out of hand.

If the exhibition gains fame as another example of California Crazy, it will be largely because of the ACE installation. There, plywood Holstein cows, which will enliven an ACE shop called "Country" at Pier 39, vaulted the walls. The viewer was greeted with agonized cries and moans issuing from a blind door at the back emblazoned with a skeleton. If this does not seem to be the stuff of this world, never mind this region, it did pique one's curiosity.

The message is that the region still inspires those who seek its roots. Moreover, the tradition is, above all, permissive. As Gregory aptly put it, it is "design without dogma." ***Sally Woodbridge*** ■

West Week '87: A Place in the Sun

The skies were clear, the sun warm, and the mood festive as 28,000 interior designers and architects converged upon the Pacific Design Center in Los Angeles for West Week, the March 25–27 furnishings market event. The conference, subtitled "Structures and Substance," had a strongly Modernist cast, and featured speakers such as architects Norman Foster, Emilio Ambasz, John Lautner, and Mario Botta, all of whom lectured to packed houses. Those two megastars of French interior design, Andrée Putman and Philippe Starck, entertained an SRO crowd ("Average age about 19," cracked one observer). Malcolm Forbes, Jr., spoke on today's business climate, and other star-studded panels addressed such topics as hospitality design, lighting, visual language, creativity, and corporate communications.

On the showroom/product scene, however, many manufacturers were relatively quiet. The loudest buzz was about Steelcase's acquisition of Metropolitan Furniture, the San Francisco-based firm known for its high-design products. Metro's temporary showroom was pulled together with speed and style by designer Robert Arko, whose polyester-scrim "rooms" were illuminated from within by colored lights. Knoll International made a splash with its Mandarin chair, designed by Sottsass Associati, while Atelier International introduced the first of a series of products designed by Europeans but made in the U.S. Tapestry and damask fabrics were much in evidence at showrooms such as Brickel, Design Tex, Unika-Vaev, SunarHauserman, Greeff, and Brunschwig. Formica, which has no showroom at the PDC, made its presence felt nonetheless with a gigantic piece of A2Z's "building jewelry," a necklace, made of new Formica laminate patterns, which was strung across the entrance to the building. Meanwhile, the steel was going up for the 175,000-square-foot first phase of the PDC expansion by Cesar Pelli with Gruen Associates. And, for the first time, showrooms in the neighborhood surrounding the PDC were included in the festivities, in the Avenues of Design program. ***Pilar Viladas*** ■

Art and Life in Boston

"The Art that is Life" is the latest "total show" to turn its museum into a period showcase. The exhibition, subtitled "The Arts and Crafts Movement in America, 1875–1920" (Boston's Museum of Fine Arts through May 31), tries to do for its time and period what "The Machine Age in America" (P/A, Nov. 1986, pp. 110–115) or "Americans and the Aesthetic Movement" (P/A, Dec. 1986, p. 28) did for theirs.

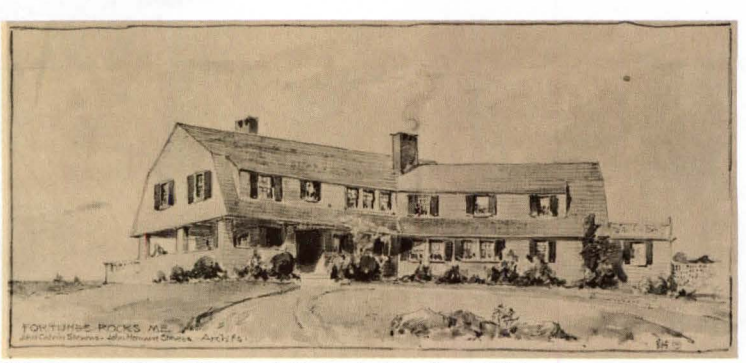
Alas for architecture enthusiasts, or those looking for the integration and democratization of art suggested in the show's title, this exhibition skimps on architecture and its enhancement by objects.

Organizer Wendy Kaplan has mined the crafts that emerged in the movement to present 225 exhibits. The show tries to show how the "Lamp of British precedence" lifted by John Ruskin and William Morris influenced Americans. By and large, it does so verbally rather than visually. Rich designs from the hands of H.H. Richardson to Frank Lloyd Wright glut the period, but not this exhibition.

There is nary a photograph of, say, Greene and Greene's Pasadena house—a seminal work of the period—and far too few photos suggesting how the objects on view were slotted into their original settings. One has no sense of how the radiant Low Art Tiles fitted into their architectural frame, or little notion of how the stained glass of La Farge and the ornament of Louis Sullivan appeared originally.

Finally, even the spare and sprawling installation in the Gund galleries undercuts the nature of the period by overemphasizing its modernity—its anti-Victorian, anti-clutter quality—at the expense of its rich, low-keyed colors and density of design, whereby even the most modest bungalow featured deep-toned paneling, decorated fireplace, rugs, and other ornament.

Perhaps the show simply overreaches itself, stretching improbably from the California bungalow community of Heinerman and Heinerman to Boston settlement houses of the early century to an unbuilt house of Irving Gill. This promising show is never whittled down or organized into the kind of seamless world its theme suggests. ***Jane Holtz Kay*** ■



Etherington Cottage, Biddeford, Maine, in "Art that is Life."

AIA *(continued from page 29)*
Gehry & Associates (P/A, Oct. 1986, pp. 90–97); Emory University Museum of Art & Archaeology, Atlanta, by Michael Graves (P/A, Sept. 1985, pp. 127–134); the Humana Building, Louisville, by Michael Graves, with associate architect John Carl Warnecke & Associates (P/A, July 1985, pp. 21–22); Claudia's storefront bakery, San Diego, by Grondona/Architects (P/A, Sept. 1986, pp. 117–121); Conrad Sulzer Regional Library, Chicago, by Hammond Beeby & Babka, consulting architects to the City of Chicago Department of Public Works, Bureau of Architecture (P/A, Dec. 1985, pp. 51–61); House on Long Island Sound, Stony Creek, Conn., by Steve Izenour with Christine Matheu of Venturi, Rauch & Scott Brown; Reed House, Hogeye, Ark., by Fay Jones and Maurice Jennings; Computer Science Building, Columbia University, New York, by R.M. Kliment & Frances Halsband; Procter & Gamble General Offices, Cincinnati, by Kohn Pedersen Fox Associates (P/A, Oct. 1985, pp. 71–87); Museum for the Decorative Arts, Frankfurt, West Germany, by Richard Meier & Partners (P/A, June 1985, pp. 81–90); Hood Museum of Art, Dartmouth College, Hanover, N.H., by Charles W. Moore and Chad Floyd of Centerbrook (P/A, Jan. 1986, p. 30); Lewis Thomas Laboratory, Princeton University, Princeton, N.J., by Payette Associates and Venturi, Rauch & Scott Brown; Fuller House, Scottsdale, Ariz., by Antoine Predock; Restoration of the Frank Lloyd Wright Home and Studio, Oak Park, Ill., by the Restoration Committee of the F.L. Wright Home and Studio Foundation; National Commercial Bank, Jeddah, Saudi Arabia, by Skidmore, Owings & Merrill; and Private Residence in Western Connecticut by Tigerman, Fugman, McCurry.

The 1987 roster offers overdue recognition to a number of notable buildings conspicuously absent, although eligible, in previous years. The Humana Building, the Frankfurt Museum, and the Procter & Gamble headquarters are three such selections.

Indeed, the list of 20 holds few surprises. The jury covered all bases without bias—a consequence, no doubt, of its composition. "As in recent years, widely divergent intentions and attitudes were represented in the jury as well as in the projects under review," wrote jury chairman Henry Cobb. Noting that *(continued on page 34)*

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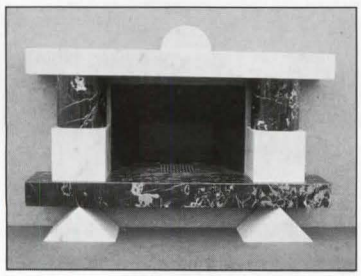
AIA *(continued from page 32)*
the jury voted unanimously for the majority of awarded projects, he claims that "in current architectural practice both the achievement of quality and its recognition are matters that quietly transcend the noisy arena of theoretical and stylistic debate."

We are left, then, to imagine the discussion between such polar opposites as jurors Joseph Esherick and Robert Stern, George Hoover and Anthony Vidler. Also serving on the jury were Princeton University student Janet Abrams, architect Rebecca Binder, Associate AIA member Nora Klebow, and curator John Zukowsky of the Art Institute of Chicago. The 1987 AIA Honor Awards will be presented at the AIA Convention in Orlando next month.
Daralice D. Boles ■

Best Small House of 1987

Cosponsored by the American Wood Council and *House Beautiful* magazine, the Best Small House competition is now in its fourth year. Architect Walter Chatham of New York, selected from an invited list of young architects, designed this year's showcase, located in Blue Bell, Pa., with Richard Lowell Neas, interior designer.

Chatham's single-story 1500-square-foot residence attempts to suggest larger interior volumes through the use of high ceilings rising 16.5 feet, corner fireplaces and windows, skylights, and French doors opening to outdoor decks. Two single-car garages are separated from the house as freestanding pavilions and roofed, like the living room and bedroom wings, with a massive cedar-shingle form. Clapboard siding and wood pillars outside, beaded pine ceilings, pine moldings, and other interior details demonstrate wood's versatility. ■



De Pas, D'Urbino, Lomazzi, fireplace.

Italian Stone in New York

In March, the Italian Trade Commission sponsored at the Puck Building in downtown New York an exhibition of works in marble and other stone, and a four-session seminar. One of the most interesting of those evening sessions was the first, which included *New York Times* architecture critic Paul Goldberger as moderator, with architects John Burgee, Henry Cobb, Malcolm Holzman, and Cesar Pelli—all of whom are particularly identified with works in stone. In this "Stone in Contemporary Architecture" session (others were on interiors, preservation, and landscape), Cesar Pelli asserted that "stone today is a thin veneer, which you can choose to make look thick, but for me I want to work with the nature of the material as a thin veneer, an exterior finish." John Burgee added, "We do it both ways . . . we can make it look the way we want . . . there's nothing wrong with making stone look like stone."

In the accompanying exhibit, over 50 extraordinary works in stone were shipped from Italy, including several furniture pieces by Ettore Sottsass, tables by Aldo Rossi and Paolo Portoghesi, and even some building segments by Marco Zanuso, Ignazio Gardella, and Carlo Scarpa. It is a shame that these weighty but very beautiful works were dispatched back to Italy after only ten days in New York.
David Morton ■

Matt Wargo

Chatham, Best Small House 1987.

Like Woody Allen's film character Zelig, the Clore Wing of the Tate Gallery in London, designed by James Stirling and Michael Wilford, changes character to suit its surroundings.

Photos: Richard Bryant

Contextualism Run Rampant: Stirling's Tate

"Keep them together." J.M.W. Turner's bequest to the British nation of his estate contained also this request: that all 300 oils and 20,000 watercolors be exhibited together. Only now, with the opening this spring of the Clore wing of the Tate Gallery in London, is this condition fulfilled. The center for Turner studies designed by James Stirling, Michael Wilford & Associates of London comprises 330 meters of gallery walls, plus lecture halls, studio, print room, and reading room.

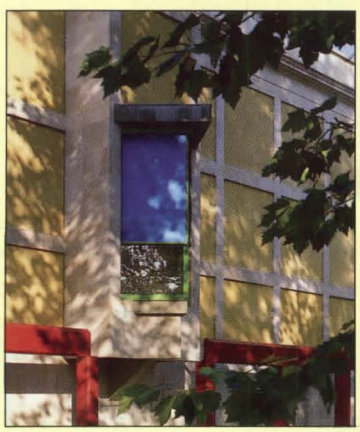
Turner was always interested in how his paintings were viewed, and, like his friend Sir John Soane, designed toplighted galleries for their display. After Turner's death, John Ruskin called for an elaborate Turner gallery, "each picture with its light properly disposed for it alone—in its little recess or chamber. Each drawing with its own golden case and closing doors—with guardians in every room to see that these were always closed when no one was looking at that picture. . . . The roof of double plate-glass of the finest kind."

In the new Turner galleries, automatic louvers and ultraviolet filters replace the guardians and double plate glass. It is a paradox that the greatest painter of light and sky should now be viewed in a kind of optical prison, into which the daylight funnels obliquely, as though into an underground greenhouse.

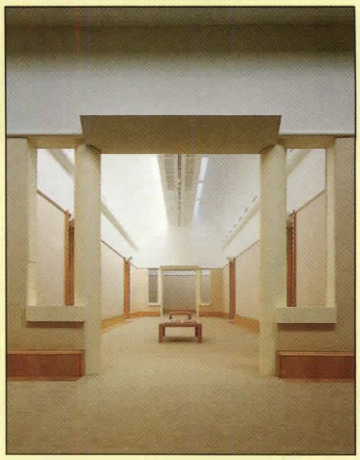
If the inner walls of these chambers are lighted with the most brilliant of Turner's images, they set on their outer aspects the most severe terms for architectural discourse. It is to these terms—the articulation of blank public walls—that Stirling addressed himself. Indeed, Clore's decorated walls seem to stand as direct rebuke to Colin Rowe's complaint, in his introduction to the recent Stirling monograph (Rizzoli), that the Stuttgart museum (P/A, Oct. 1984, pp. 67–85) "is a building with no face." The Clore wing is nothing but "facial" elevation.

The addition is intended to hold a "conversation," as Stirling puts it, with the Neo-Palladian Tate. It is a conversation in the most mixed of idioms. Like Wittgenstein's "Family Resemblances"—overlapping sets in which A resembles B and B

(continued on page 44)



Top: Clore Gallery's main entrance hall and staircase viewed from gallery level; right: main entrance; above: peep window at gallery level.



Richard Bryant

Turner galleries prior to installation.

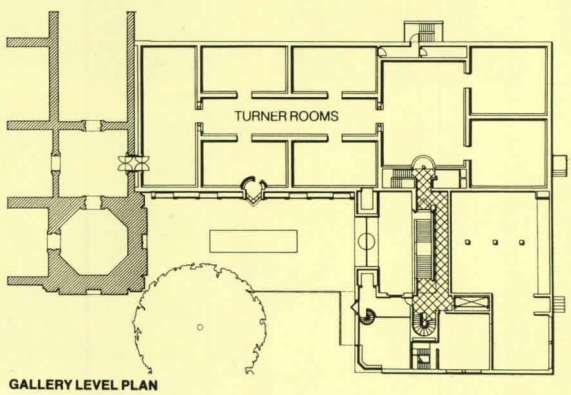
Stirling *(continued from page 43)* resembles C, but A and C share nothing in common—so the Clore wing is set between the main Tate building and a separate red-brick Queen Anne-ish lodge facing the Thames. Stirling carries over traces of both adjoining buildings into his collage. And on the rear façade, where it faces a 1960s office building with glass curtain wall, the Clore changes yet again to a Modernist vocabulary of yellow brick and strip windows.

If anything holds this "conversation" together, it is the square grid, outlined in the same light stone as the portal entrance. Yet even this rule seems to exist purely for the pleasure of exceptions. Just as some of the basement stones are "mislaid," so windows are "misaligned" like axonometric strays forward or aft of the wall plane and off the grid. Most of the grid panels are filled with yellow roughcast, but towards the corner facing the red-brick lodge, bricks of like color begin to occupy its cells, as if the lodge were somehow exerting a mutant influence.

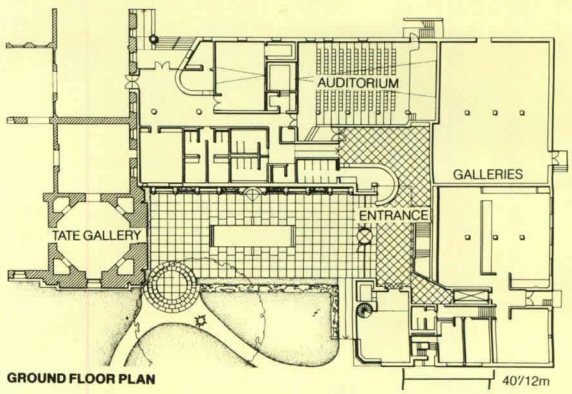
This heavy-handedly humorous subversion of the Clore wing's own integrity is perhaps a deliberate and ironic exaggeration of a very English predicament: namely, the futility of trying to be all things to all men. It is also an ironic exaggeration, amounting to a mockery, of the present English prejudice that all new buildings remain "in keeping" with whatever genteel objects of sentiment lie within eyeshot. This inane passion for the insipid "blending" of old and new—a familiar picturesque "townscaping" idea fallen among burghers and planning committees—and Stirling's satire thereon, is a joke that is probably comprehensible only to an English public.

For others it will remain just another, and especially elusive Stirling farrago, to be enjoyed or rejected according to one's Post-Modernist taste. Yet this particularly singleminded attempt at architecture parlante fails ultimately to come off. In the end, the "play of signifiers" borrowed from other buildings is no substitute for formal or plastic invention—or "Vision and Design," as Roger Fry once wrote. The Clore remains a sophisticated riposte to a depressing cultural condition, rather than a visionary contribution towards the transcending of that condition. That, given Stirling's great talent, is a great disappointment. ***Brian Hatton*** ■

The author writes for the London-based publication Building Design.



GALLERY LEVEL PLAN



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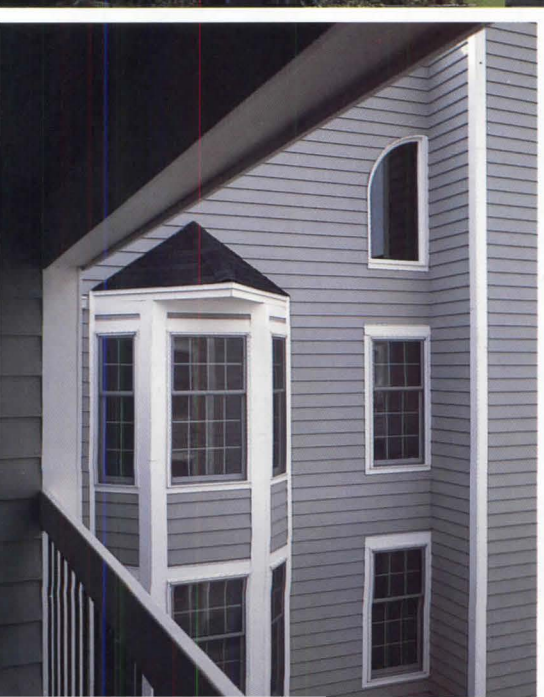

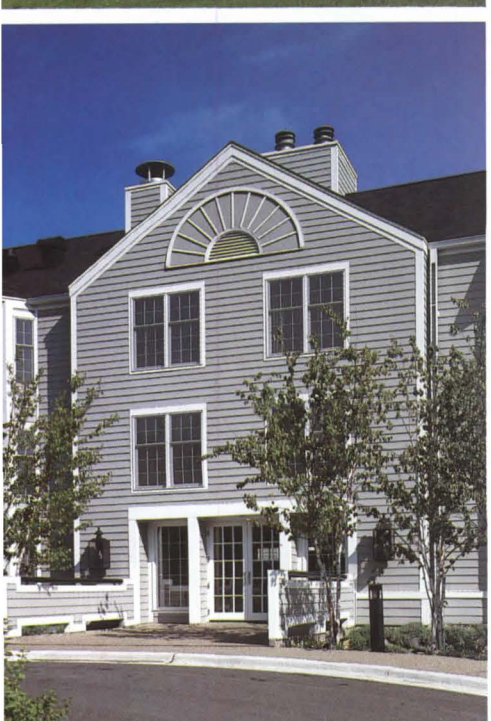

To give everyone a view of the lake, the building shape had to repeat itself. So Pella was chosen to say "quality" over and over.

The people of Excelsior, Minnesota, have long held a sentimental attachment to a historic parcel of land on the shore of Lake Minnetonka. That's why they made waves any time anyone proposed to develop it. And now — where streetcars from Minneapolis dropped vacationers from around the world, where a landmark amusement park had stood — stands Excelsior Bay Gables.

Miller Hanson Westerbeck Bell Architects have succeeded admirably in recalling the excitement, texture and scale of the community's past in this luxury condominium development. For this upscale market and this beloved site, nothing but the best would do. And that meant Pella Windows and Doors. Through double-hung bay windows and sliding glass doors, each of the 52 units is afforded equal orientation to the lake.

The creative interlocking of dwellings resembles a New England fishing village in its traditional materials, forms and colors. While reminiscent of grand old Excelsior resort hotels, mass is broken into a residential scale that is sympathetic with this quaint community of wood frame houses.

Pella standard and custom windows and doors.

Pella offers a range of standard and custom windows to suit almost any new or retrofit project, with a variety of glazing and shading options. At the Gables, Pella Double-Hung Windows are arranged in bays, while custom Pella springline quarter circle windows light up third story lofts.

Here, custom height Pella Sliding Glass Doors help hold in the heat from fin/tube radiation below the sill. The sliding door panel is mounted to the outside, so the harder the north wind blows off the lake, the tighter the weatherstripping seals. Pella doors are among the industry's best performers for air and water infiltration, so there will be no damp carpeting under the grand pianos at the Gables. And those doors offer excellent security, either locked closed or open about three inches for ventilation.

Pella says quality in custom colors.

MHWB specified Pella Clad Windows and Doors for the Gables. No matter what color a project calls for, Pella's low-maintenance, aluminum cladding with baked enameled finish assures exceptional color stability, resistance to chemical attack, chalking, erosion, chipping, peeling and cracking.

Pella's warm wood interiors enhance the traditional feel at the Gables. And removable wood muntins and pivoting sash make Pella Double-Hung Windows easy to wash from indoors.

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Excelsior Bay Gables Condominums
Excelsior, Minnesota

Developer: Keewaydin Development Group, Inc.
Minneapolis, Minnesota

Architect: Miller Hanson Westerbeck Bell Architects,Inc.
Minneapolis, Minnesota

Contractor: John Lambin Construction Company
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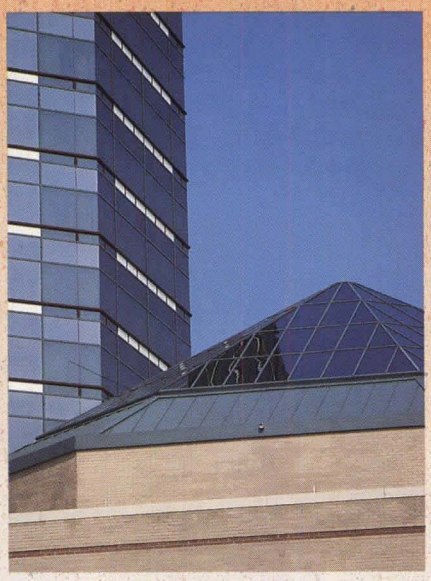

Project: Sheraton Inn and Conference Center
Owner: S.R.S. Properties
Chevy Chase, MD
Architect: L B C & W Architects, Engineers & Planners
Falls Church, VA
General Contractor: Eugene Simpson and Brother Inc.
Alexandria, VA
Roofing Contractor: James Myers Co.
Beltsville, MD
Product Finish: 24 ga. Galvanized PAC-CLAD
Rikyu Grey

See our catalogs in Sweet's: file numbers 07610/PET, 07715/PET and 10440/CHC.

The new Sheraton Hotel in Tyson's Corner, Virginia, is a striking example of our work in custom colors. The architect, L B C & W of Falls Church, Virginia, designed the project to incorporate extensive metalwork, including more than 50,000 square feet of metal roofing.

The color, Rikyu Grey, was selected to be an exact match to the spray-coated extrusions of the curtainwall system. The result: uniformity of color throughout the project.

PAC-CLAD is a full Kynar 500® product available in twelve standard colors on 24 ga. G-90 galvanized steel and six standard colors on aluminum .032 ga. to .080 ga. Non-standard colors are available on projects of 15,000 square feet or larger.

Our staff is prepared to discuss job costing, feasibility and information regarding finish and color selection. For more information regarding the Petersen product line, please call us toll free (1-800-PAC-CLAD) or contact our local representative.

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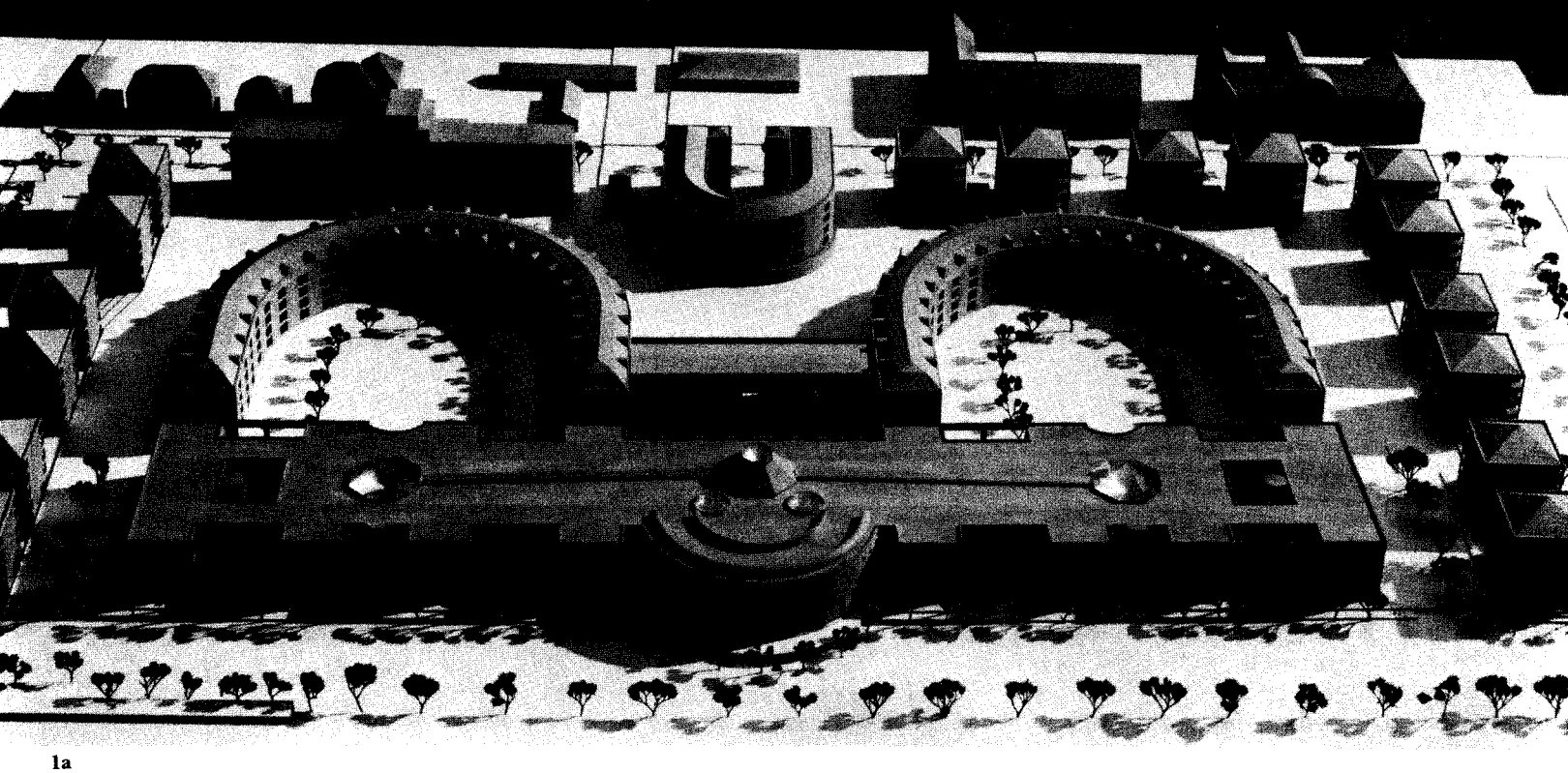
or 312-228-7150

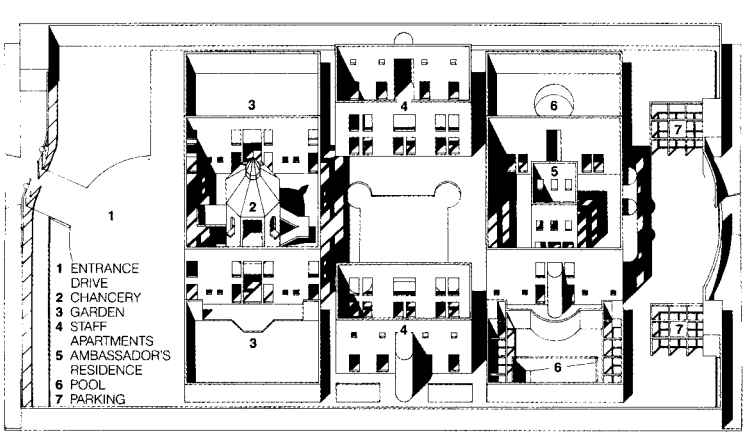
In Progress

Two projects by Danish architect Henning Larsen accompany coverage of his Riyadh Ministry (p. 110), followed by projects by Koetter Kim, Tai Soo Kim, and Gruzen Samton Steinglass.

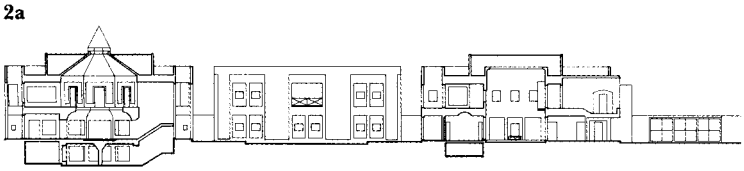


1a

1b BUSINESS SCHOOL GROUND FLOOR PLAN



2a



2b

1 Business School and Housing, Frederiksberg, Copenhagen, Denmark. *Architects: Henning Larsen, Copenhagen.* This new business school and its 475 units of housing occupy the site of a former cable and wire production plant. The three-storied business school block is organized along an internal skylighted street. Two U-shaped housing blocks contain 238 housing units, with the remainder in "high-rise villas," which mediate between the campus and adjacent residential neighborhoods. The complex is to be completed in 1989.

2 Royal Danish Embassy, Riyadh, Saudi Arabia. *Architects: Henning Larsen, Copenhagen, Denmark.* The decision by the Saudi Arabian government to transfer the capital from Jeddah to Riyadh made this new embassy necessary. The walled compound consists of four buildings—the chancery on the main boulevard, two residential blocks, and the ambassador's residence—grouped around a common courtyard. The chancery itself centers on a two-story, skylighted octagonal hall.

(continued on page 51)

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There's an Ikegami ultra-miniature ICD-200 solid state chip camera available. Shock- and vibration-resistant, it provides steady, distortion-free performance even in strong magnetic or electrical fields. The ICD-200 even resists sensor burn for long, operational life. Also available in 24 volt AC, line-lock, phase-adjustable configuration.

Need remote capability? consider the ITC-420 ⅔" Vidicon camera, which adds low-cost installation to economical price. A single coaxial cable transmits both power and video signals. Automatic beam control circuit assures consistent operation, while a cable length compensation switch provides accurate control.

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And for cost-savings on ultra-high sensitivity and high resolution, Ikegami offers the ITC-510 1-inch video camera. Featuring resolution of 850 lines or better for magnificently clear images. Rugged, heat-dissipating aluminum enclosure. Featuring line-lock and genlock. Low-Light version available, too.

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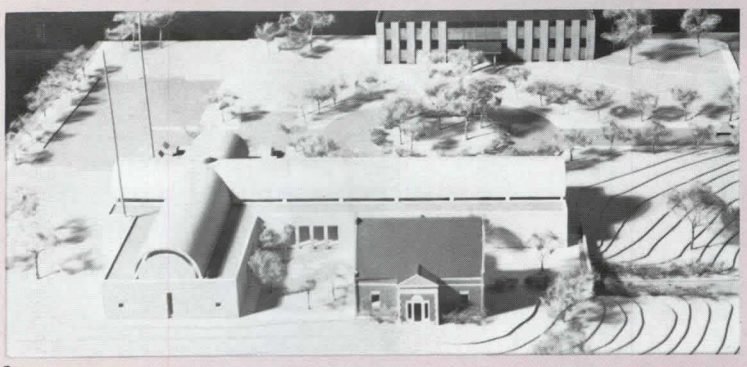

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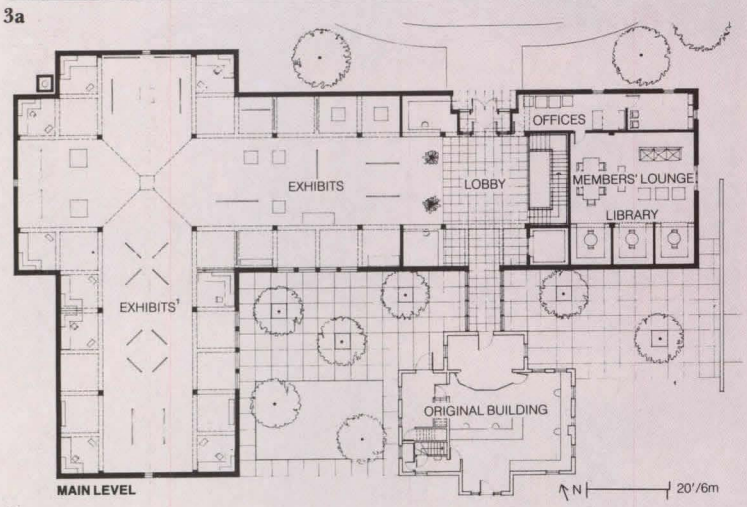

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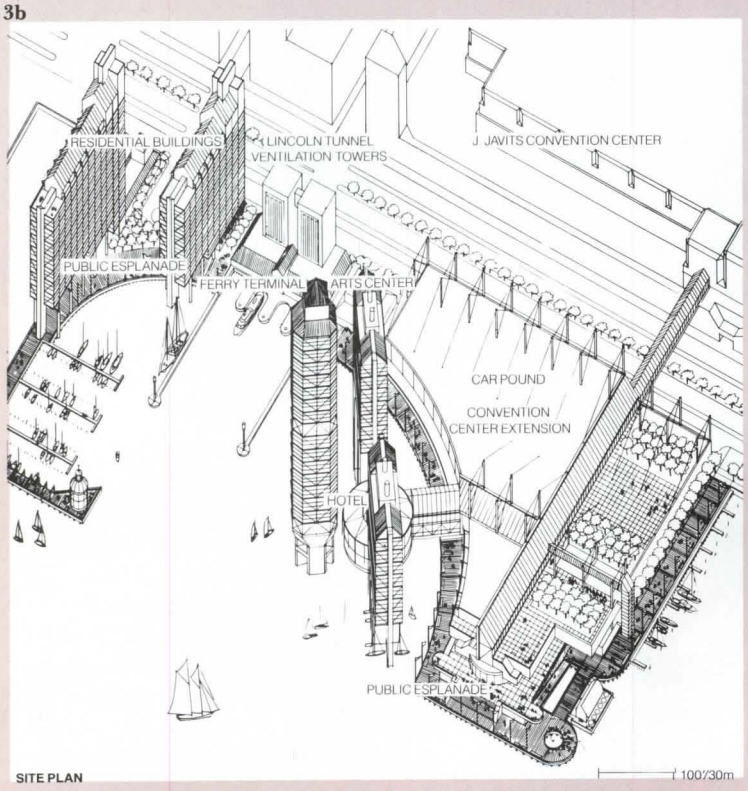

4

3 American Radio Relay League Museum and Visitor Center, Newington, Conn. *Architects: Tai Soo Kim Associates, Hartford, Conn.* The League's historic station is the centerpiece of its new museum, which will chronicle the history of amateur radio operation. The 13,500-square-foot, white limestone building surrounds the smaller red brick station with galleries, auditorium, shop, and members' library.

4 Hudson River Center, New York. *Architects: Gruzen Samton Steinglass, New York.* Winner of a select competition between three developer/architect teams, this scheme includes three hotels, two apartment buildings, a marina, retail, and arts center, all constructed on a platform. Also included is an extension of New York's new convention center and a new municipal car pound replacing that now on the site.

(continued on page 53)

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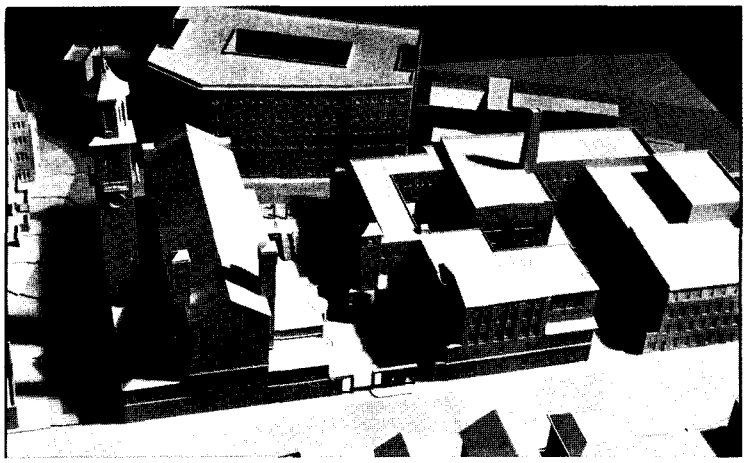

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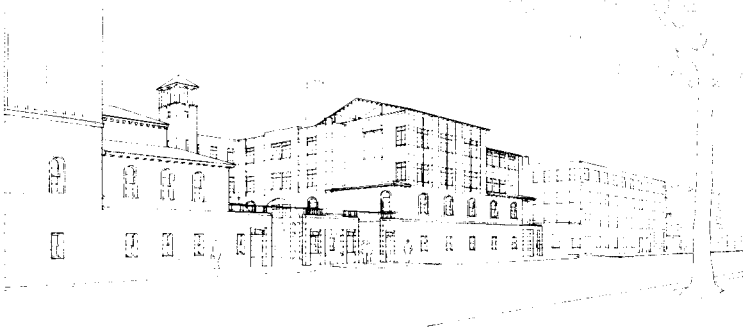

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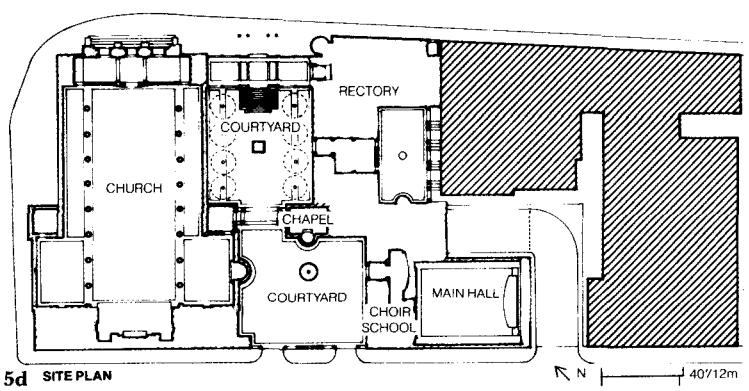
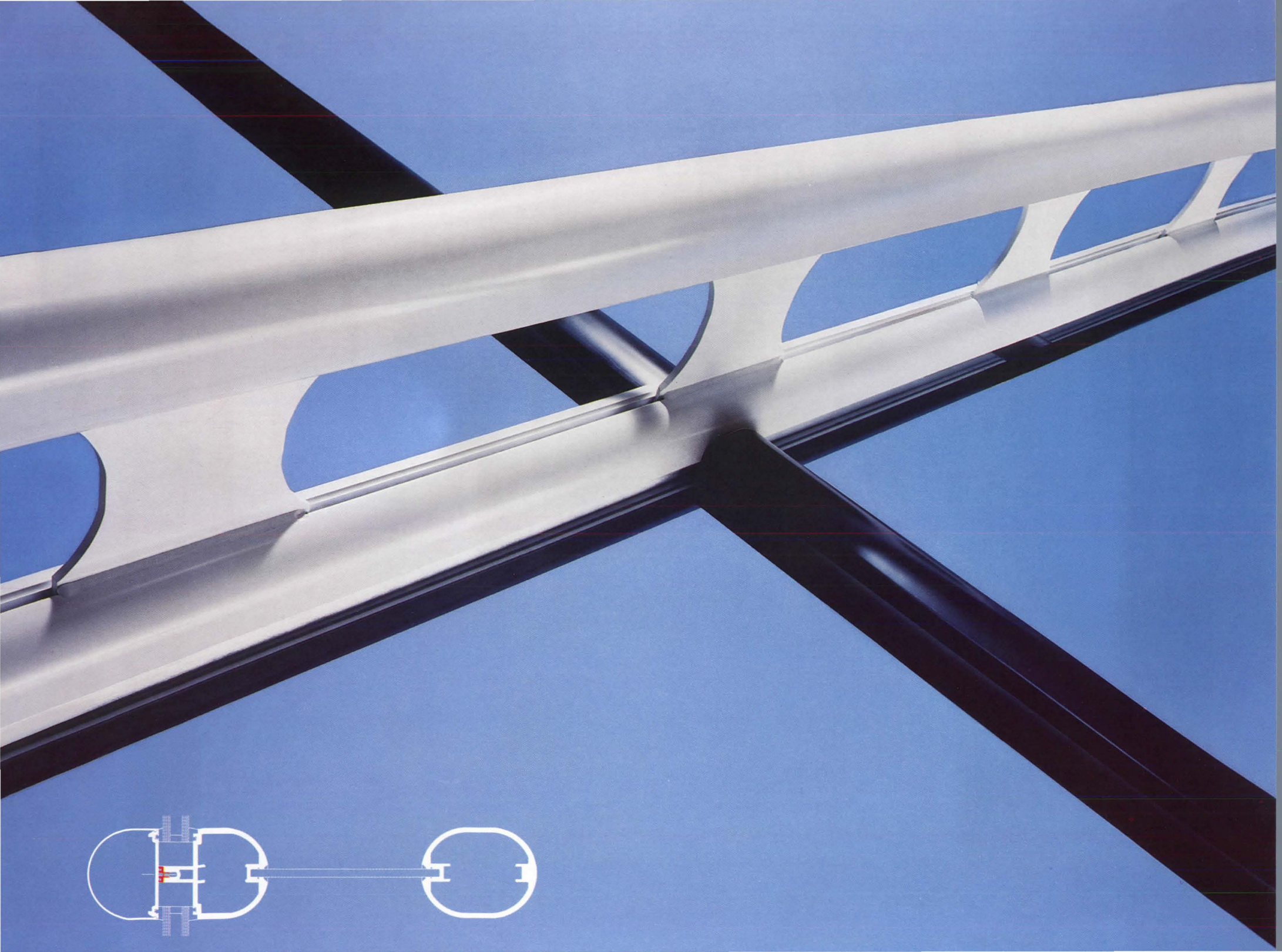
5c



5d SITE PLAN

5 St. Paul's Roman Catholic Church, Cambridge, Mass. *Architects: Koetter, Kim & Associates, Boston.* This 32,000-square-foot program organizes a variety of diverse elements—parish facilities, rectory, Archdiocesan Choir School, Harvard Radcliffe Catholic Student Center, and parking for 26 cars—to shape two connected, public courtyards bounded on one edge by the 1925 Italian Romanesque revival St. Paul's Church. A bridge connection from the new building to the church defines the courtyards' shared edge, with a chapel below. Design and materials—red brick, cast stone, stucco, and wood windows—complement both the old church and its Cambridge setting.



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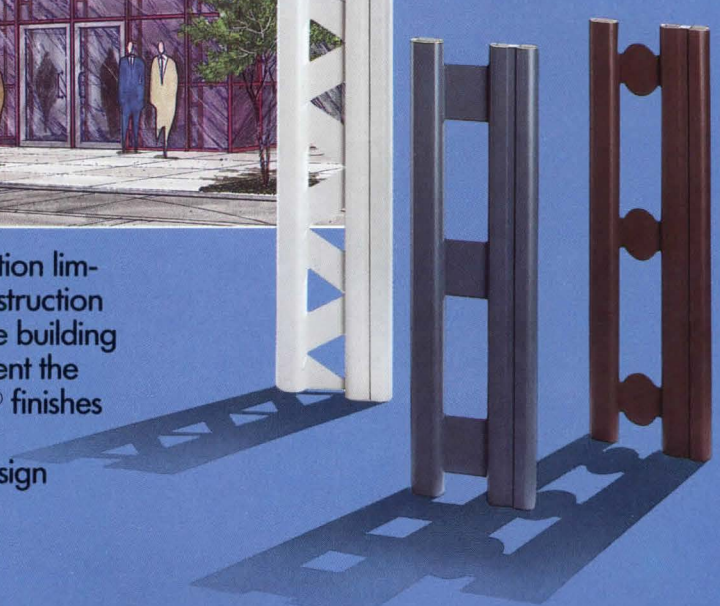

For product information on Trusswall contact:
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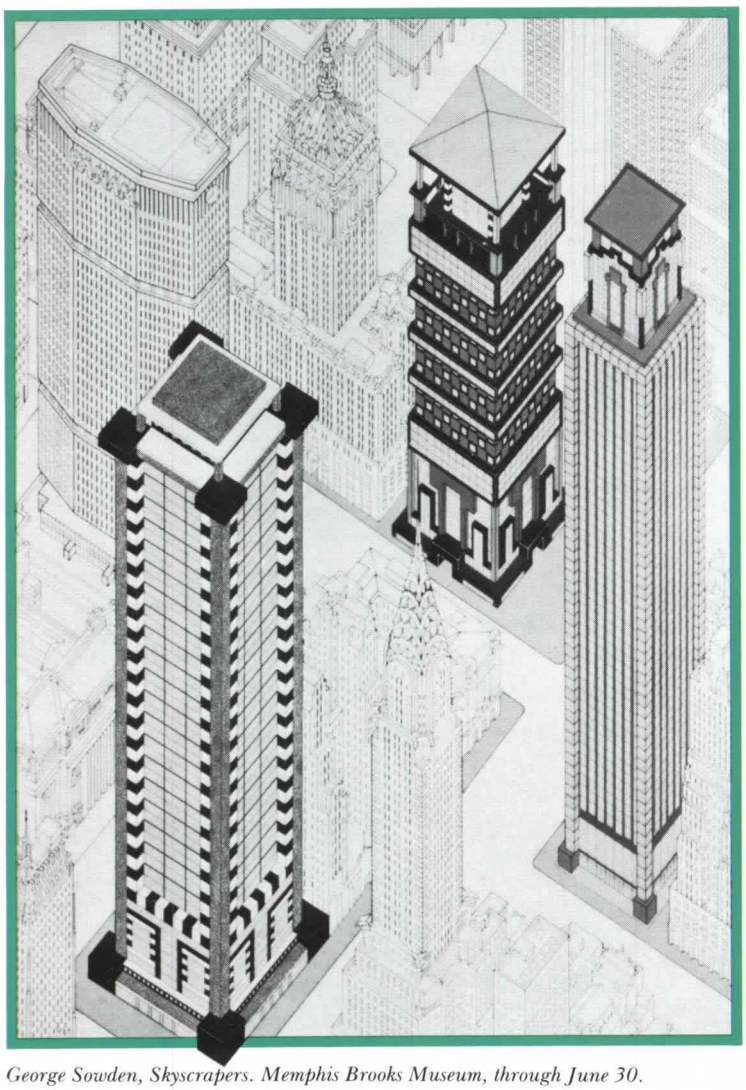
P/A Calendar



George Sowden, Skyscrapers. Memphis Brooks Museum, through June 30.

Exhibitions

Through May 23
Room in the City, proposals for tenement housing in New York. The City Gallery, New York.

Through May 24
The Golden Age of Ottoman Architecture: Sinan, Sultan Suleyman's Court Architect. The Octagon Museum, Washington, D.C. Also, **June 13–September 6,** The Art Institute, Chicago.

Through May 24
Le Corbusier: Sculpture, Painting and Drawing. Carpenter Center for the Visual Arts, Harvard University, Cambridge, Mass.

Through May 25
Decorative Brickwork: Instant Style for New & Old. Glen-Gery Brickwork Design Center, Washington, D.C.

Through May 26
Le Corbusier: Five Projects. Museum of Modern Art, New York.

Through May 31
Le Corbusier at Geneva (1922–1932), Immeuble Clarte & Galerie Bonnier, Geneva, Switzerland.

Through May 31
The Art that is Life: The Arts and Crafts Movement in America 1875–1920. Museum of Fine Arts, Boston. Also, **August 16–November 1,** Los Angeles County Museum of Art.

Through June 7
Le Corbusier: Architect of the Century. Hayward Gallery, South Bank Centre, London.

Through June 8
Ornamental Architecture Reborn: A New Terra Cotta Vocabulary. Atlanta Historical Society, Atlanta, Ga.

Through June 8
Hans Hollein: Metaphors and Metamorphosis. Georges Pompidou Centre, Paris.

Through June 9
Gaudí in Context: Building in Barcelona, 1873–1926. Cooper-Hewitt Museum, New York (See P/A, April 1987, p. 27).

Through June 28
The Function of Ornament: The Architecture of Louis Sullivan. Cooper-Hewitt, New York (See P/A, Nov. 1986, p. 26).

Through June 28
The Machine Age in America 1918–1921. Museum of Art, Carnegie Institute, Pittsburgh, Pa. (See P/A, Nov. 1986, p. 110).

Through June 30
What Could Have Been: American Unbuilt Architecture of the 80's. Memphis Brooks Museum of Art, Memphis, Tenn.

Through July 17
Interlacing: The Elemental Fabric, curated by Jack Lenor Larsen. American Craft Museum, New York.

Through July 19
American Decorative Window Glass, 1860–1890: The Home as Heaven Below. National Building Museum, Washington, D.C.

Through July 20
Die Revision Der Moderne: Postmodern Architecture 1960–1980. Williams College Museum of Art, Williamstown, Mass. (See P/A, Sept. 1984, p. 26).

Through July 26
American Art Deco. Renwick Gallery, Washington, D.C.

Through July 29
Frank Lloyd Wright and the Johnson Wax Buildings: Creating a Corporate Cathedral. Cooper-Hewitt, New York (See P/A, April 1986, p. 27).

Through July 31
New and Different: Home Interiors in 18th Century America. Museum of American History, Smithsonian Institution, Washington, D.C.

May 14–June 13
Terry Farrell—In The Context of London. Royal Institute of Architects' Heinz Gallery, London.

May 18–June 5
Toronto Modern: Architecture 1945–1965. Toronto City Hall, Toronto, Ontario.

May 28–June 26
The Art of Tall Building. Gallery at the Old Post Office, Dayton, Ohio.

June 3–July 2
Zaha Hadid: Architectural Drawings. Max Protetch Gallery, New York.

June 8–July 19
Graphic Madrid: Contemporary Spanish Architectural Drawings. Octagon Museum, Washington, D.C.

June 27–July 4
Landscape Pleasures: Designers Collaborate with Nature. Participants include Paul Segal, Richard Meier, Robert A.M. Stern, and others. The Parish Art Museum, Southampton, N.Y.

June 30–September 30
Robert Adam and Kedleston Hall: The Making of a Neoclassical Masterpiece. Cooper-Hewitt, New York.

July 21–October 11
Art Nouveau Bing: Paris Style 1900. Cooper-Hewitt, New York.

Competitions

June 1
Deadline, Work Space Design Competition. Contact LIMN Company, 821 Sansome St., San Francisco, Calif. 94133 (415) 397-7471.

(continued on page 58)

Calendar *(continued from page 57)*

June 5
Application deadline, Architectural Awards Program of the Red Cedar Shingle & Handsplit Shake Bureau and the AIA. Contact Red Cedar Shingle & Handsplit Shake Bureau, 515 116th Ave., N.E., Suite 275, Bellevue, Wash. 98004 (206) 453-1323.

June 15
Deadline, ACSA/General Motors Interdisciplinary Design Research Competition. Contact Daphne Scott, The Association of Collegiate Schools of Architecture, 1735 New York Avenue, N.W., Washington, D.C. 20006 (202) 785-2324.

June 15
Deadline, East Meets West in Design. Contact East Meets West, P.O. Box 974, Rockefeller Station, New York, N.Y. 10185 (212) 586-6314.

June 15
Application deadline, Fulbright Scholar Awards. For program details contact Council for International Exchange of Scholars, 11 Dupont Circle N.W., Washington, D.C. 20036-1257 (202) 939-5401.

June 15
Call for entries, Craft/Architecture Exhibit. Contact American Craft Museum, 40 W. 53 St., New York, N.Y. 10019 (212) 956-3535 or call Anne Travers, American Craft Magazine (212) 869-9422.

June 19
Deadline, Town of Leesburg Design Competition. Contact Competition Project Director, Town of Leesburg, 15 West Market St., P.O. Box 88, Leesburg, Va. 22075 (703) 777-2420.

July 20
Deadline, West Hollywood Civic Center Design Competition. Contact Helen J. Goss, City of West Hollywood, 8611 Santa Monica Blvd., West Hollywood, Calif. 90069 (213) 854-7461.

July 31
Deadline, 1987 Professional Design Awards. Contact Prestressed Concrete Institute, 175 W. Jackson Blvd., Chicago, Ill. 60604 (312) 786-0300.

Conferences

May 18–20
IAQ 87: Practical Control of Indoor Air Problems, Arlington, Va. Contact American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle, N.E., Atlanta, Ga. 30329 (404) 636-8400.

May 29–June 2
Environmental Design Research Association Conference, Ottawa, Canada. Contact Conference Secretariat, 275 Bay St., Ottawa, Canada K1R 5Z5 (613) 232-8228.

June 1–4
RETSIE/IPEC 87, The Renewable Energy Technologies Symposium & International Exposition/The International Power Exhibition & Energy Conference, Anaheim Convention Center, Anaheim, Calif. Contact TMAC, 945 Front Street, Suite 106, San Francisco, Calif. 94111 (415) 398-4800.

June 9–12
NEOCON, The Merchandise Mart and Expocenter, Chicago, Ill. Contact Exhibit Manager, Expocenter/Chicago, 350 N. Orleans St., Chicago, Ill. 60654 (312) 527-7633.

June 14–19
Success and Failure, 37th Annual International Design Conference, Aspen, Colo. Contact International Design Conference in Aspen, P.O. Box 664, Aspen, Colo. 81612 (303) 925-2257.

June 17–22
3rd International Making Cities Liveable Conference, Venice, Italy. Contact Making Cities Liveable Conference, Center for Well Being, P.O. Box QQQ, Southampton, N.Y. 11968 (516) 283-0207.

June 19–23
Architecture '87: Fact, Future + Fantasy, American Institute of Architects' National Convention, Orlando, Fla. Contact Joy Brandon, AIA, 1735 New York Ave., N.W., Washington, D.C. 20006 (202) 626-7464.

June 23–25
Intellibuild '87, Washington, D.C. Contact International Intelligent Buildings Association Press Staff, 1815 H St., N.W., Suite 1000, Washington, D.C. 20006-3604 (202) 295-6320.

June 23–26
A/E/C Systems '87 and DesCon '87, Washington, D.C. Convention Center, Washington, D.C. Contact Conference Director, P.O. Box 11318, Newington, Conn. 06111 (800) 445-7790.

June 23–26
AutoCAD Expo '87, Washington Convention Center, Washington, D.C. Contact Marketing Communications, Autodesk, Inc., 2320 Marinship Way, Sausalito, Calif. 94965 (415) 332-2344, Ext. 706.

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Now divide it all with the installation efficiency, modular flexibility, and economy previously found in conventional exposed systems. Then figure in Spectra's 18 available colors, including reflective metal finishes.

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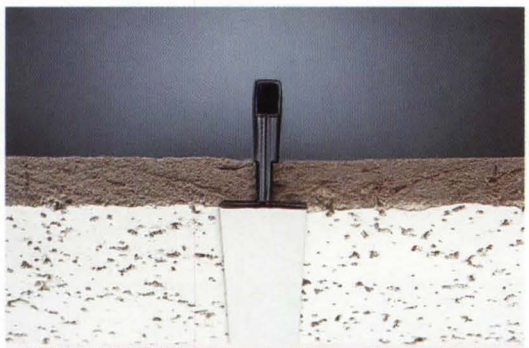
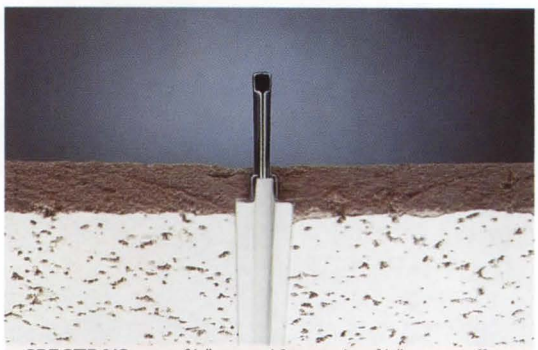


STANDARD GRID *with its wide 15/16" exposed face provides for a ceiling design that is coarse by today's standards.*
Shown above with standard square-edge lay-in panels.



SPECTRA'S *narrow 9/16" exposed face, cut by a 3/16" regress, offers 60% less visible metal at the ceiling plane for a refined look.*
Shown above with standard square-edge lay-in panels.

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Spectra 3700 in a brasscoat finish with contrasting white scored ceiling tiles.

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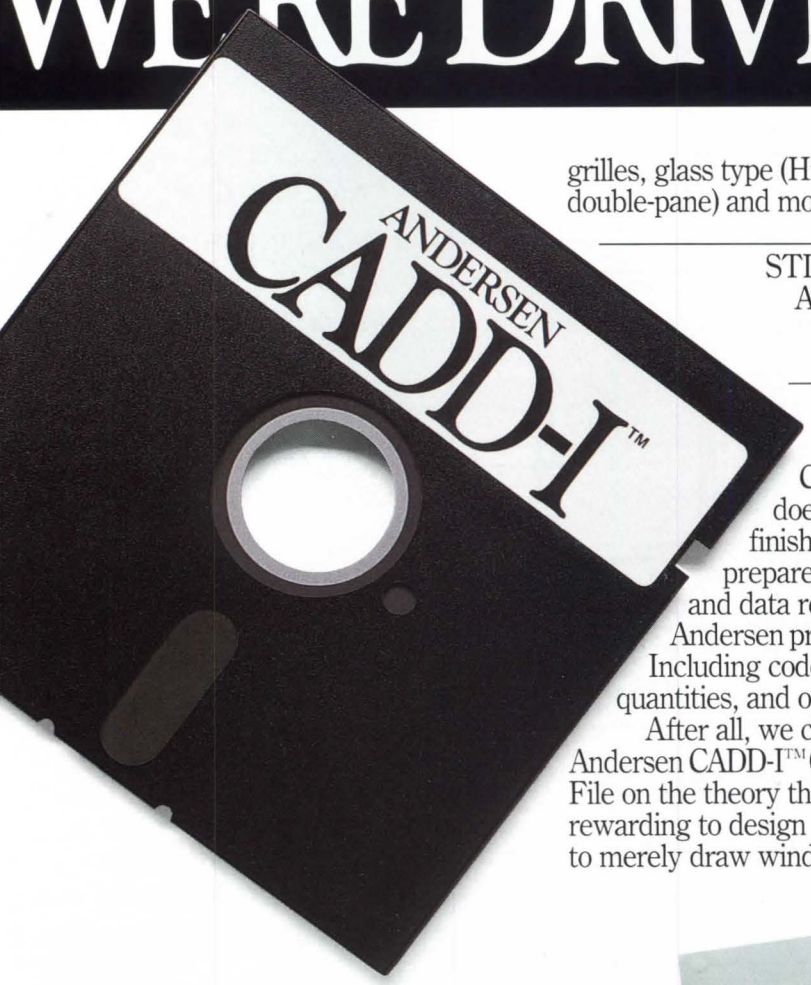

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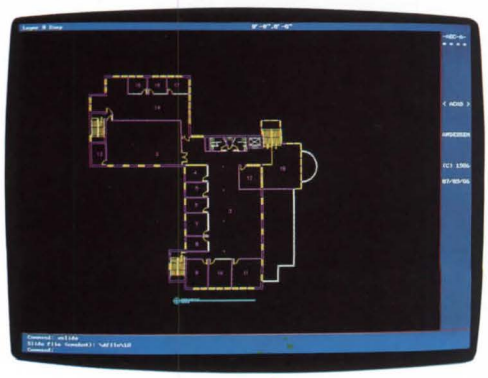

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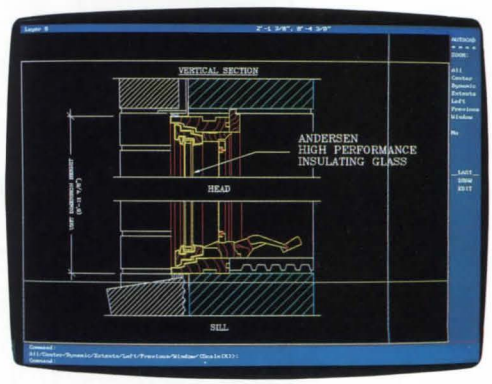

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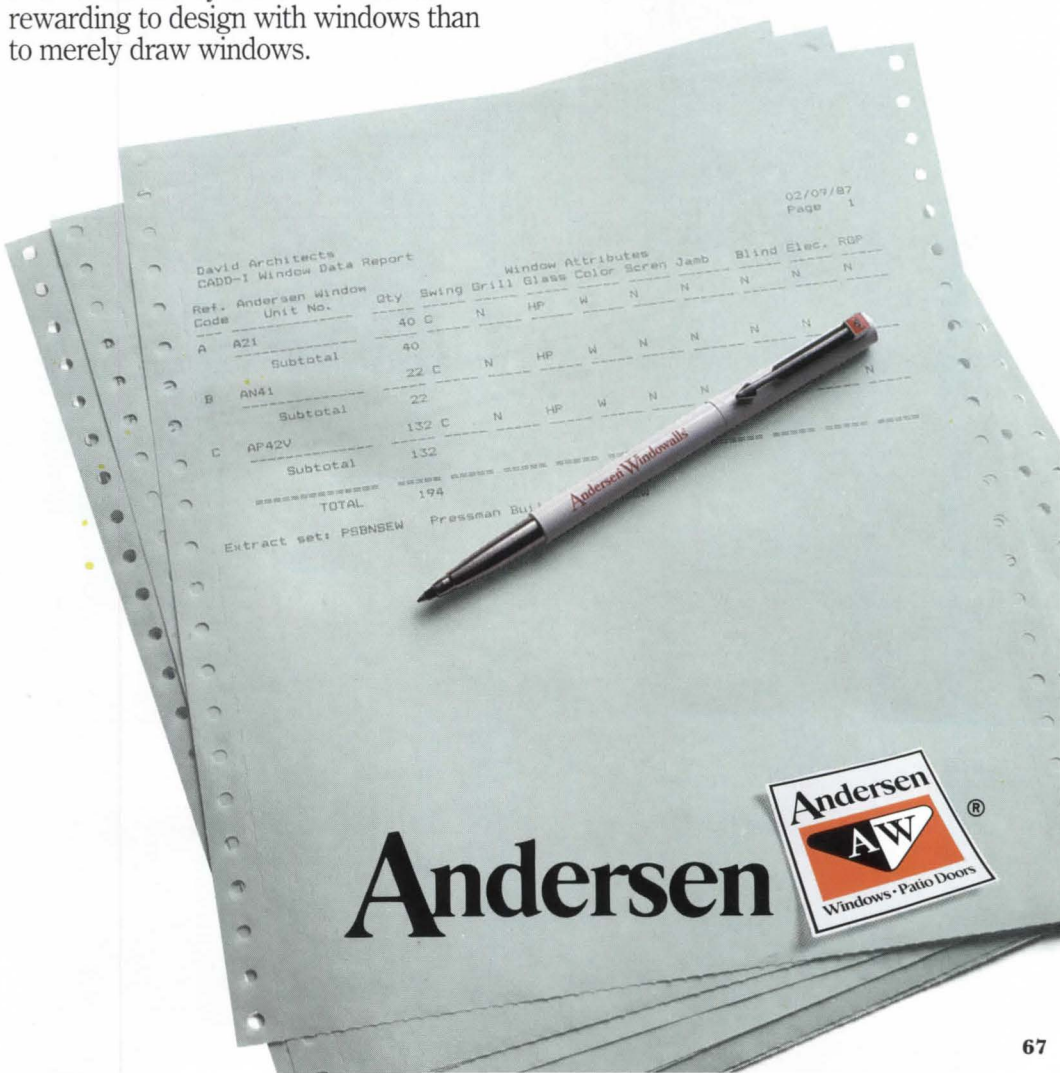
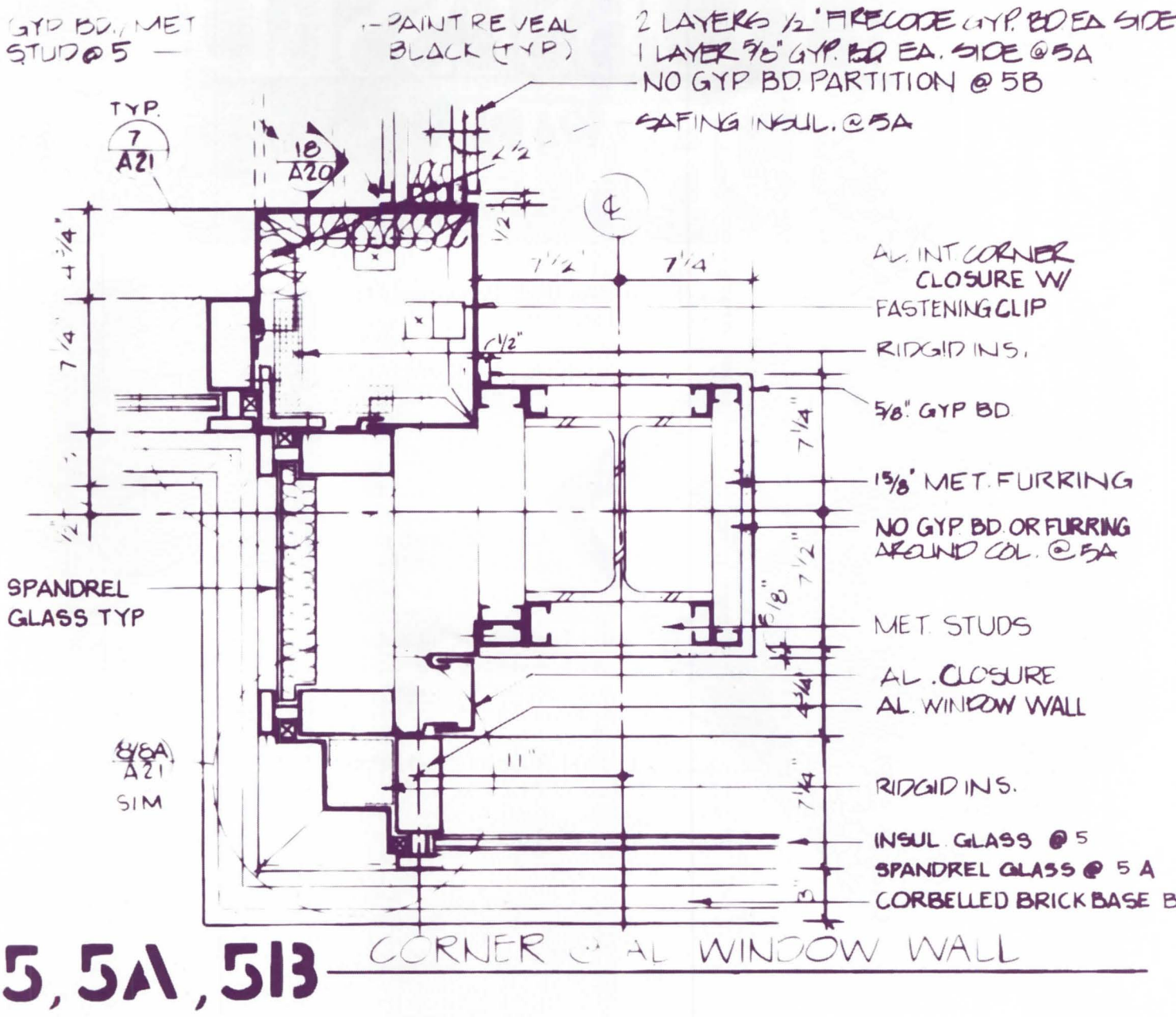
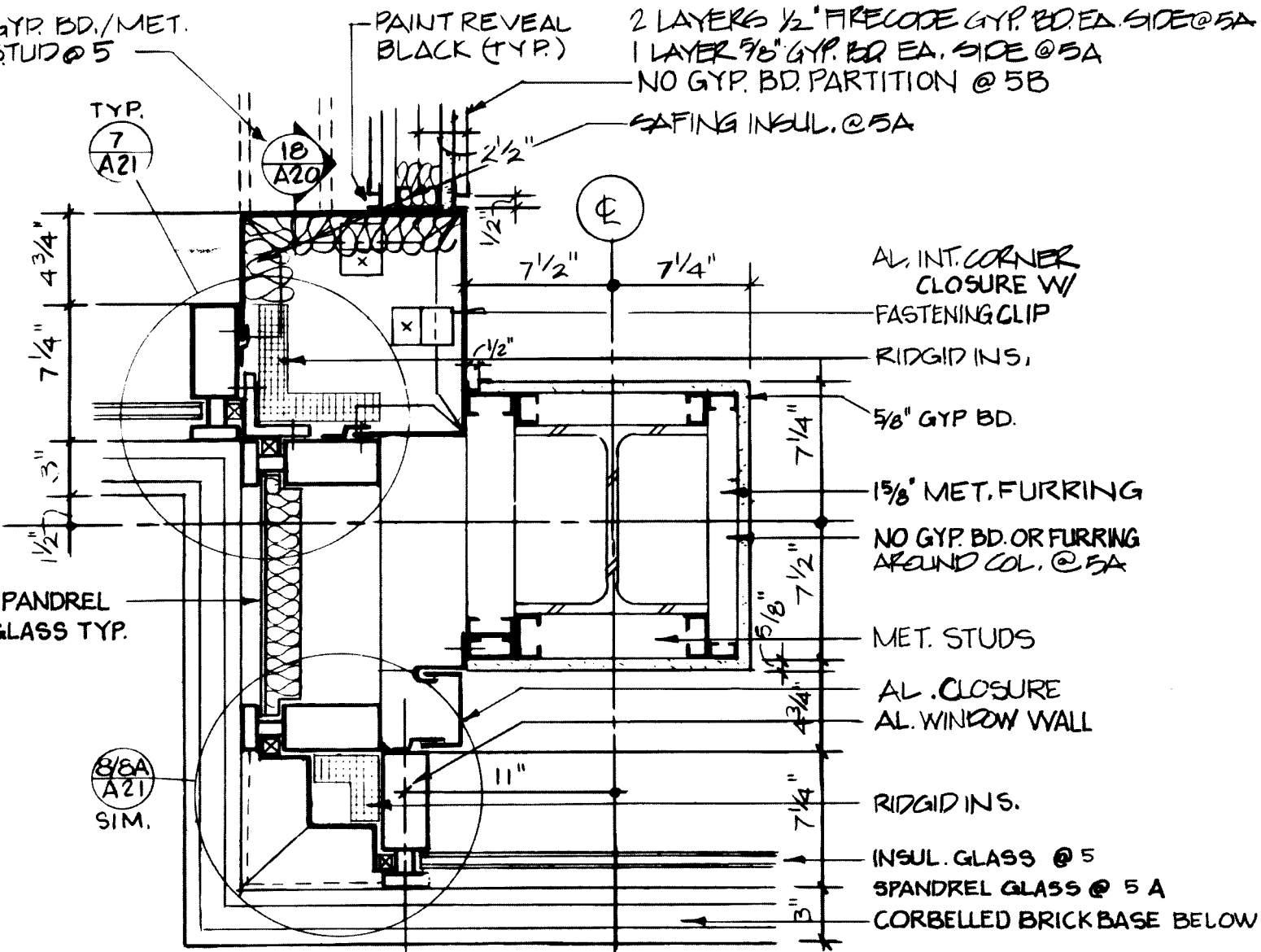




5, 5A, 5B CORNER @ AL WINDOW WALL

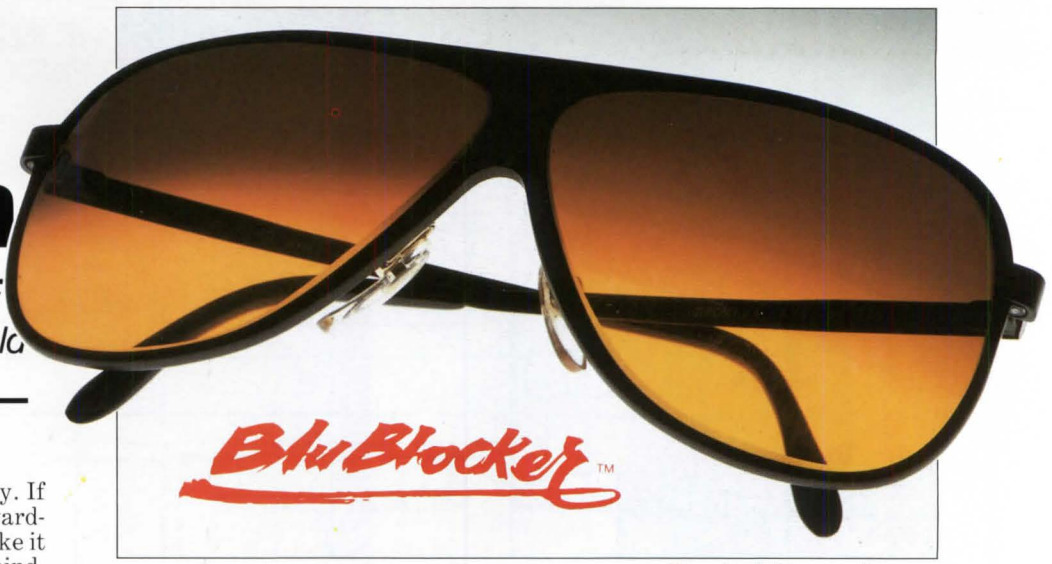
Which one would you choose



5, 5A, 5B CORNER @ AL. WINDOW WALL

Vision Breakthrough

When I put on the pair of glasses what I saw I could not believe. Nor will you.



They look like sunglasses.

By Joseph Sugarman

I am about to tell you a true story. If you believe me, you will be well rewarded. If you don't believe me, I will make it worth your while to change your mind. Let me explain.

Len is a friend of mine who has an eye for good products. One day he called excited about a pair of sunglasses he owned. "It's so incredible," he said, "when you first look through a pair, you won't believe it."

"What will I see?" I asked. "What could be so incredible?"

Len continued, "When you put on these glasses, your vision improves. Objects appear sharper, more defined. Everything takes on an enhanced 3-D effect. And it's not my imagination. I just want you to see for yourself."

COULDN'T BELIEVE EYES

When I received the sunglasses and put them on I couldn't believe my eyes. I kept taking them off and putting them on to see if indeed what I was seeing was indeed actually sharper or if my imagination was playing tricks on me. But my vision improved. It was obvious. I kept putting on my cherished $100 pair of sunglasses and comparing them. They didn't compare. I was very impressed. Everything appeared sharper, more defined and indeed had a greater three dimensional look to it. But what did this product do that made my vision so much better? I found out.

The sunglasses (called BluBlockers) filter out the ultraviolet and blue spectrum light waves from the sun. You've often heard the color blue used for expressions of bad moods such as "blue Monday" or "I have the blues." Apparently, the color blue, for centuries, has been considered a rather depressing color.

For eyesight, blue is not a good color too. There are several reasons. First, the blue rays have one of the shortest wavelengths in the visible spectrum (red is the longest). As a result, the color blue will focus slightly in front of the retina which is the "focusing screen" in your eye. By blocking the blue from the sunlight through a special filtration process, and only letting those rays through that indeed focus clearly on the retina, objects appear to be sharper and clearer.

The second reason is even more impressive. It is harmful to have ultra-violet rays fall on our eyes. Recognized as bad for skin, UV light is worse for eyes and is believed to play a role in many of today's eye diseases. In addition, people with contact lenses are at greater risk because contacts tend to magnify the light thus increasing the sun's harmful effects.

SUNGLASS DANGER

Finally, by eliminating the blue and UV light during the day, your night vision improves. The purple pigment in your eye, called Rhodopsin, is affected by blue and ultraviolet light and the eyes can take hours to recover from the damage.

But what really surprised me was the danger in conventional sunglasses. Our pupils close in bright light to limit the light entering the eye and open wider at night like the lens of an automatic camera. So when we put on sunglasses, although we reduce the amount of light that enters our eyes, our pupils open wider and we allow more of the harmful blue and ultraviolet light into our eyes.

DON'T BE CONFUSED

I'm often asked by people who read this, "Do those Blu-Blockers really work?" They really do and please give me the opportunity to prove it. I guarantee each pair of BluBlockers to perform exactly as I described.

BluBlocker sunglasses use ophthalmic-quality CR-39 lenses with a hard anti-scratch coating. Over 85 percent of all doctors' prescriptions are now filled with CR-39. I have taken no shortcuts.

The black, light-weight anodized aluminum frame is one of the most comfortable I have ever worn and compares with many of the $200 pairs you can buy from France or Italy.

The weakest link in any pair of glasses is the hinge. So I have designed a screwless precision two-way tension hinge that not only bends when you close the pair, but is spring-loaded to bend outward too. You get a completely flexible frame that will comfortably contour to your face.

I also have two other exciting models. One is a clip-on pair that weighs less than one ounce and fits over prescription lenses and the second is a precision-molded plastic frame that looks identical to the aluminum model but without the tension hinge. All models include a padded carrying case and my personal one-year no nonsense limited warranty.

I urge you to order a pair and experience your improved vision. Then take your old sunglasses and compare them to the BluBlocker sunglasses. See how much clearer and sharper objects appear with the BluBlocker pair. And see if your night vision doesn't improve as a direct result. If you don't see a dramatic difference in your vision—one so noticeable that you can tell immediately, then send them back anytime within 30 days and I will send you a prompt and courteous refund.

DRAMATIC DIFFERENCE

But from what I've personally witnessed, once you wear a pair, there will be no way you'll want to return it.

Pilots, golfers, hunters, athletes and anyone who spends a great deal of time in the sun, who drives a car or who just wants to protect their vision—all will find BluBlocker sunglasses indispensable.

Our eyes are very important to us. Protect them and at the same time improve your vision with the most incredible breakthrough in sunglasses since they were first introduced. Order a pair or two at no obligation, today.

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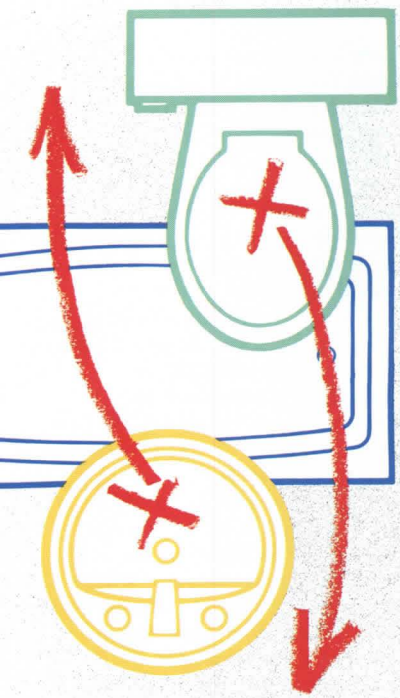
P/A Practice

Specifications: Walter Rosenfeld discusses how to handle related work items in a project manual.
Law: Norman Coplan probes the ethical as well as the legal implications of the design-build concept.



Specifications: Working Relationships

Coordinating the work of the various trades in the specifications is one of the specifier's most important tasks. Done well, it prevents duplication of effort and overlapping of responsibilities (so the owner doesn't pay for the same work twice), and it prevents unintentional omissions in which neither of two trades has included necessary items (so the owner doesn't pay extra later on).

Yet whenever something is written about this responsibility to sort out the work of different trades, architects are quick to respond that it's not their job. The AIA General Conditions (A201) say so:
1.2.4 "The organization of the Specifications into divisions, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Sub-contractors or in establishing the extent of work to be performed by any trade." and
4.3.1 "The Contractor . . . shall be solely responsible . . . for coordinating all portions of the Work under the Contract."

While it's unquestionably true that the actual performance of work is under the contractor's control, and should be, the project manual cannot be presented to bidders or builders as an amorphous mass of disorganized instructions. Long traditions of documentation as well as the 16-division format developed by the Construction Specifications Institute clearly indicate that specifications are organized on a trade-by-trade basis. Though the decision as to who will actually do the work is the contractor's, the decision as to what section it will appear in is the specifier's. And it's equally clear from experience that where the work is specified can significantly influence which trade does it.

None of the objecting architects would put electric wiring in the masonry section or lavatory sinks in the carpeting section; doing things like that would make them appear totally out of touch with the realities of construction documentation and industry practice. So the question they raise is not one of principle but merely one of degree.

The need to assign each item of work to some specific section is clear in the minds of specifiers, and the appropriate location is usually obvious; but there are often gray areas in which informed judgments must be made. Among the things to be considered are: labor cost (Do tile setters or masons set interior brick paving?), labor jurisdiction agreements (How thick is the "brick" to be set?), local traditions, statutory requirements for public work, and the need to unify responsibility for several related items under one trade.

Beyond establishing the need and the responsibility, what practical techniques can the specifier use to make this complex task a little easier and the intention more understandable to bidders? Here are three.
1. Assignment: The work is directly assigned by including it in one section rather than another.
2. Scope: The work to be done is described in a separate paragraph in Part 1 of the section. While this may be helpful in a long broadscope section devoted to a complex trade, for a narrowscope section or a simple trade item it's usually cumbersome and redundant. Many specifiers just make a general statement about the section's work and don't spell out each item in Part 1.
3. Related work: A separate paragraph listing related work to be done under other sections is written for each section. This very useful technique is often underestimated or even overlooked by less experienced specifiers, though it is much valued by sub-bidders trying to determine the limits of their responsibilities. Knowing what you don't have to do because someone else is doing it is obviously a great help when you are

(continued on page 74)

Law: Design-Build Liability

Is the development and increasing popularity of the design-build concept in the best interest of the architectural profession? This is a controversial subject having economic, ethical, and legal implications. Under a typical design-build contract, a developer or contractor undertakes to provide the design of a project and to construct the same under a cost-plus-fixed-fee type of arrangement. As part of the design-build team, the developer or contractor retains an architect or engineer as a subcontractor to perform the design. Thus, the architect's client is the developer rather than the owner, and the developer is responsible to the owner for providing an appropriate design. The relationships among the parties are therefore nontraditional in nature and engender novel problems.

The proponents of the design-build approach contend that it reflects the "wave of the future" to which architects must accommodate, and that this concept will provide economic opportunities that would otherwise be unavailable to practicing architects. Opponents of the concept argue that this approach subverts the status of the architect, creates ethical dilemmas, and deprives the owner and the public of the protection normally afforded by a licensed professional who is not subject to control by a contractor or developer.

The American Institute of Architects has developed design-build contract forms reflecting pressures within the profession to take advantage of this approach. When these documents were being developed, some state chapters brought to the attention of the National AIA that the design-build approach might violate the registration and licensing laws of certain states, since nonlicensed persons would be offering to provide or furnish architectural services. In

(continued on page 74)

Specifications *(continued from p. 73)*
competitively pricing work.

"Related Work" is not always an easy paragraph to write. It requires asking the questions a bidder on work of the section would ask and putting yourself in his or her place. Think first: which other trades do similar work? (For ceiling sections, suspended plaster ceilings, suspended gypsum board ceilings, and suspended acoustical tile ceilings are related work.) Then, what parts of the work of this trade precede or follow the work of other trades? And which items are sometimes done under one section and sometimes under another? (Such as factory- rather than field-glazing windows.)

It's best to write very short descriptions of such related work, and not really necessary to pinpoint each location elsewhere in the project manual. Just knowing an item isn't included is usually enough; but if bidders do want to check the indicated relationship further, the project manual's table of contents will generally lead them to it.

The Related Work paragraph can be expanded, if need be, to include related work to be done by the owner or by separate contractors. Where only a few such items are involved, a parenthetical explanation will probably do; if there are many, separate paragraphs for "Work to be done by Owner" or "Related Work under other Contracts" can be developed. And work under allowances and alternates can be signaled here as well.

While contractors are very much aware that they ultimately control who gets subcontracts for any items of work and often use their own judgment and experience to combine two or more specification sections into one inclusive subcontract, the specifier doesn't have to guess exactly what's going to happen later on in the process in order to be effective. Preparing clear contract documents with the work properly sorted out for consistency and completeness presents the best opportunity for the architect to promote precise bids and economical construction. Having the work of each trade clearly defined, accurately described, and carefully related to the work of other trades is essential to producing a good project manual and to eliminating confusion over responsibility and cost which may later result in delay, extra expense, and conflict on the job. ■

Walter Rosenfeld, AIA, CSI

The author is an architect and specifications consultant in Newton, Mass.

Law *(continued from page 73)*

New York, for example, the prevailing rule of law appears to be that only a licensed architect can offer to provide architectural services as well as actually to furnish them. The design-build concept appears to affront that principle. Nevertheless, the AIA made the forms available.

From the ethical point of view, opponents of the design-build concept contend that the architect, as subcontractor, may be required to subordinate his professional judgments to the economic objectives of the developer, thereby leaving the owner unprotected and jeopardizing the interests of the general public. Proponents of the concept argue that this is not a realistic concern and that an architect, even though part of a design-build team, is still in a position to make appropriate professional decisions. Ethical and legal considerations aside, however, there is a real risk that the design-build concept can increase the potential liability of architects who participate in such an approach. An example of such risk is reflected in the recent decision of the United States Court of Appeals in the case of Arkansas Rice Growers' Cooperative Association v. Alchemy Industries, Inc. et al.

This case involved the claim of an owner for damages arising from the failure of a design-builder to achieve performance criteria for which it had contracted in connection with the construction of a processing plant. The design-builder, in addition to constructing the project, was to provide the necessary engineering plant layout and equipment design, on-site engineering supervision, and start-up engineering services. The design objective was to produce a plant that would use no fuel other than rice hulls. More specifically, the design goal was to provide a hull by-product facility capable of reducing a minimum of 7.5 tons of rice hulls to an ash, and producing 48

(continued on page 76)

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Law *(continued from page 74)*

million BTU's per hour of steam at 200 pounds pressure.

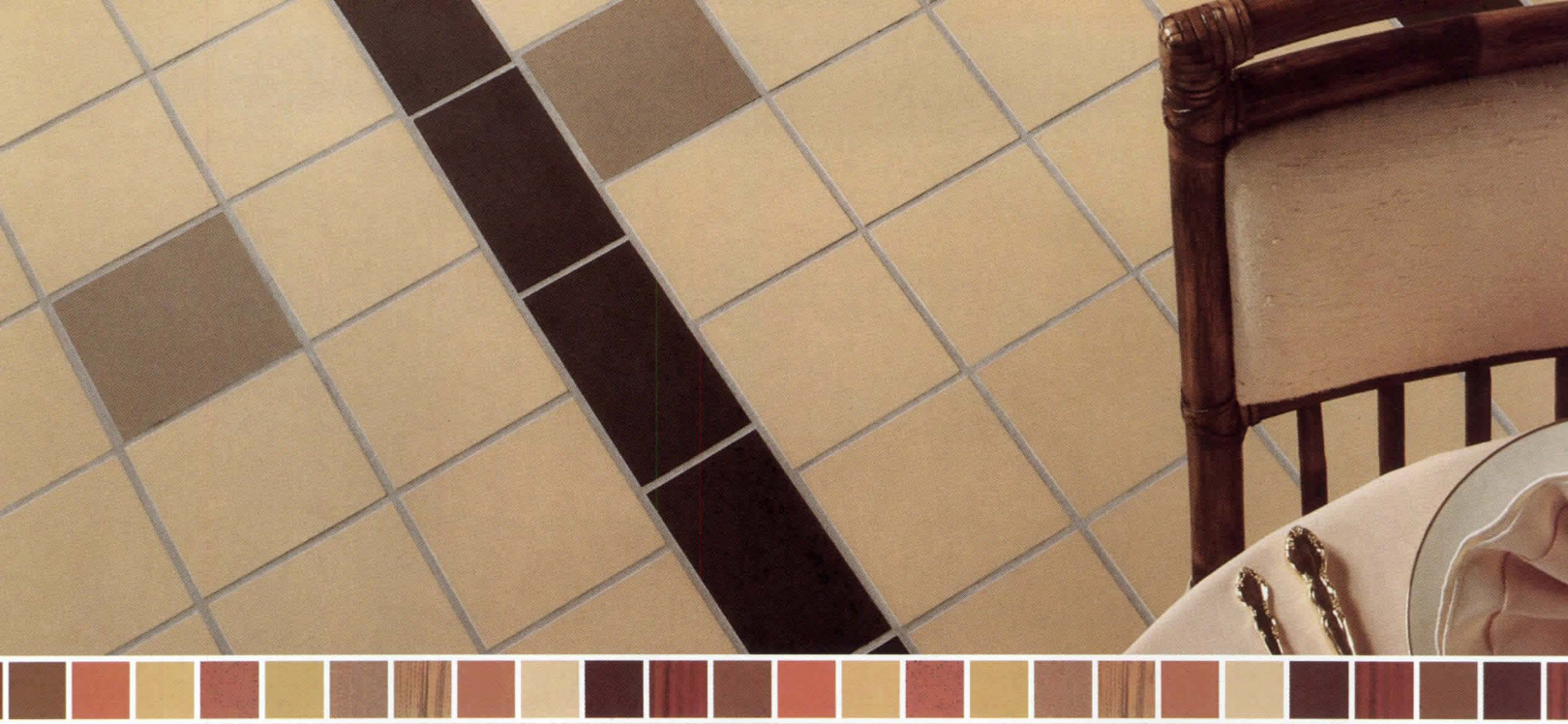
When the plant was constructed, it failed to satisfy the foregoing criteria when the outside temperature was less than 50 degrees. As a consequence, the owner sued the design-builder for breach of warranty under the design-build contract and also sued the engineer as a third party beneficiary of the contract between the builder and the engineer. In finding liability against both the builder and the engineer, the Court concluded that the engineer was responsible to the builder, under the contract between them, for an appropriate and adequate design and that the owner was entitled to redress from the engineer as a beneficiary of that contract. The Court treated the engineer as if he was responsible for breach of warranty under the design-build contract, even though he was not a party to that contract and had provided no direct warranty to the owner.

In concluding that the builder and engineer were equally culpable for the failure to satisfy the requirements of the design-build contract, the engineer was held to a level of responsibility not generally assumed in traditional practice. A professional designer is not normally subject to liability unless he failed to exercise due care in the performance of his function. Architects and engineers do not usually warrant their performance or guarantee a particular result. In general, third parties are not considered to be beneficiaries of the architectural or engineering contract. By ruling that the owner was a third party beneficiary of the contract between the design-builder and the engineer, and in subjecting the engineer to a standard of liability based upon breach of warranty rather than negligence, the Court, in the above case, not only put the engineer at risk beyond that usually and normally assumed in the performance of professional design services, but charged him with a responsibility not usually covered by liability insurance.

This case would seem to suggest that, if an architect is to participate in a design-build arrangement, he exercise caution so that the contractual relationships do not subject him to an abnormal potential liability.

Norman Coplan, Hon. AIA ■

The author is a member of the law firm Bernstein, Weiss, Coplan, Weinstein & Lake, New York.



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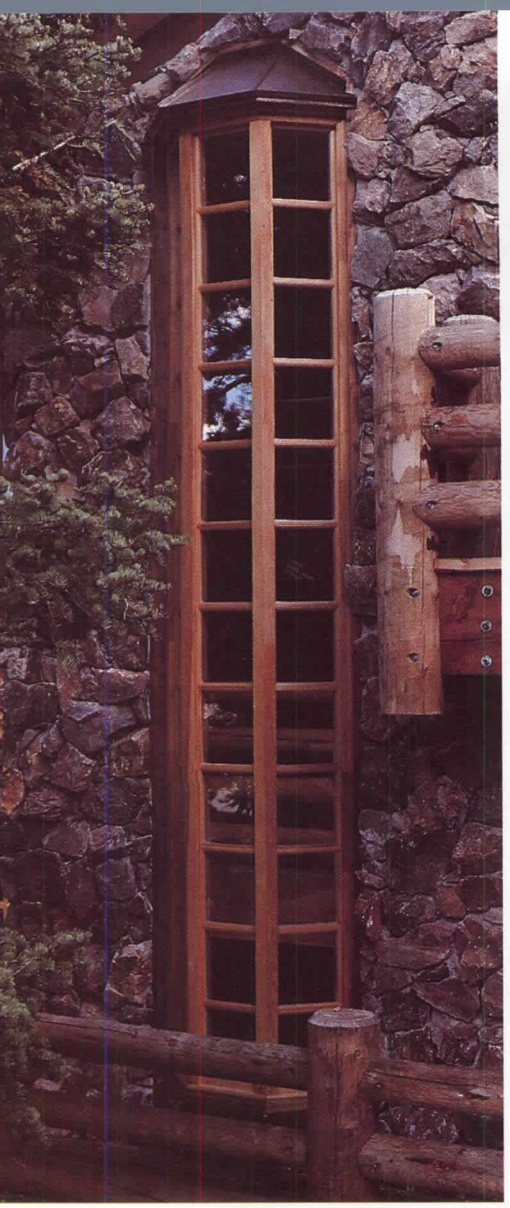

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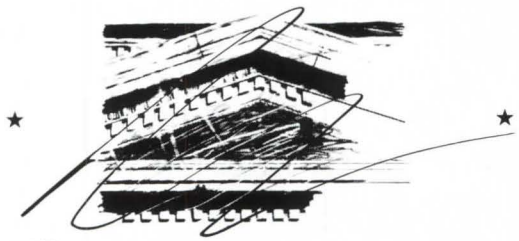

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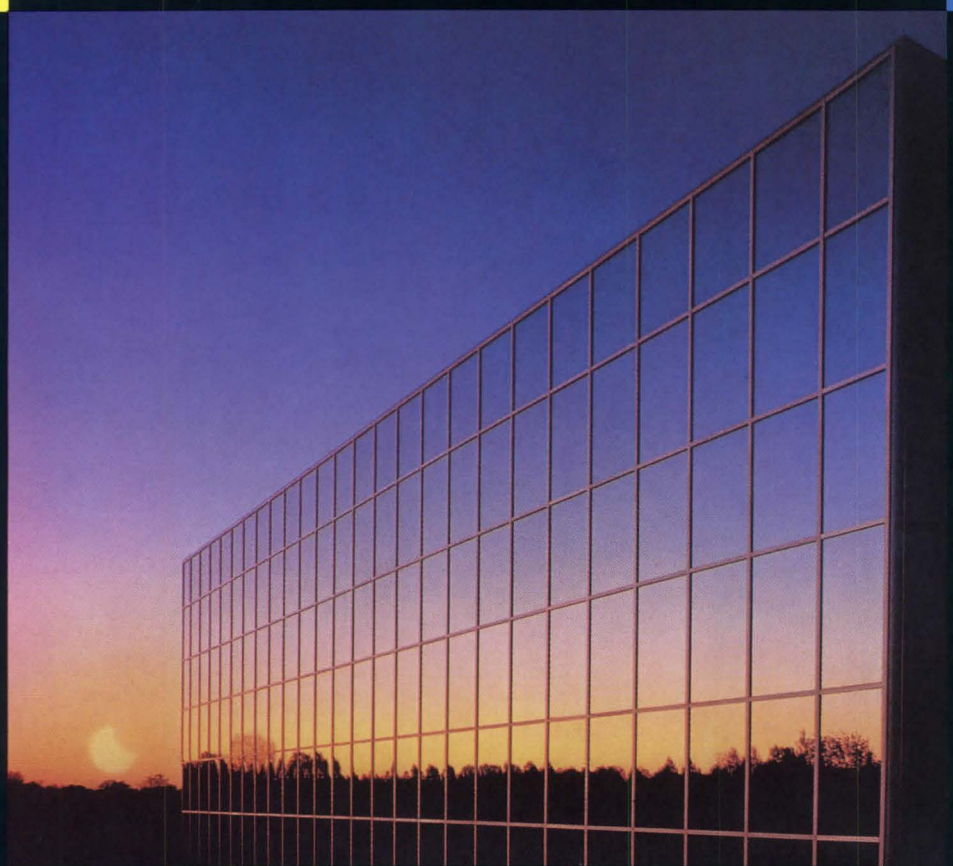

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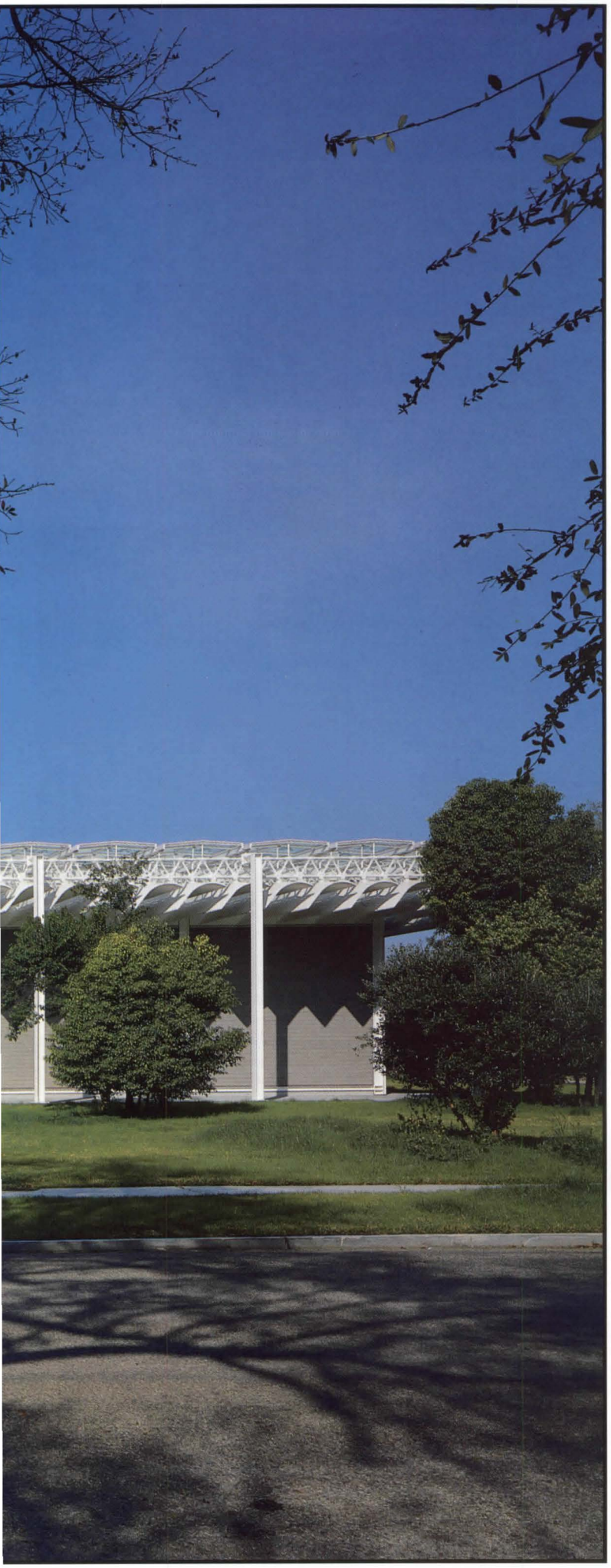
Public entrance to the Menil Collection.

The Menil Collection
Houston



IN terms of the world of art, the collection assembled by Dominique de Menil and her late husband John is one of the richest intact embodiments of a mid-century intellectual position. As a piece of architecture, the museum designed by Renzo Piano and developed with Ove Arup & Partners and the joint venture team of Piano & Fitzgerald (formed from the Building Workshop of Genoa, Italy, and Houston-based Richard Fitzgerald & Partners) is a statement whose visual character stands in opposition to much of present design. In the context of Houston, the way the Menil Collection will conduct its business and house its collection suggests alternatives that demand consideration in a city whose mood has changed from that of the halcyon days of the early 1970s. Finally, as an institution, the Menil Collection presents an ascetic image that is demanding of the individual and is intended to be enlightening about the true meaning of the art it is designed to support.

The Menil Collection opens in early June as a showcase for the major elements of the de Menils' lifetime as collectors, and nothing is to be included beyond John de Menil's period (1904–1973) or as Director Walter Hopps characterizes it, his "regard." Its four primary areas comprise Antiquities, Tribal Arts, "Modern" (School of Paris, Surrealism), and American 1960s–1970s. The mandate was to provide a secure but accessible home for the over 10,000 pieces in various media, accommodating functions of storage and curatorial maintenance, scholastic resources, and didactic exhibition. Each of these purposes was given a special definition reflecting the specific point of view of Dominique de Menil and her colleagues, making the museum design a response to a clear intellectual, humanistic position.

The basic issue was the perceived living nature of the collection. Its sheer size meant that exhibition spaces would continually change and that only a percentage of objects would be on display. Inevitably, the Menil Collection will be a part of the national cultural network, lending pieces and also borrowing pieces, initiating shows and participating in shows, so that the museum will handle external materials. Storage of art was conceived as being largely another issue of accessibility, for Dominique de Menil wanted pieces to be viewed readily and also brought out for direct experience, either for scholars or classes from local universities.

The Museum and its Neighborhood

The idea of the museum has been developed over a decade and a half, beginning with the intention of remaining in Houston, where John de Menil is buried and where he and his wife had spent their lives. At one point there was a rumor that the Getty was interested in the collection, but the response was for Houston contributors, ultimately including the Cullen and Brown Foundations, to ensure its remaining. Early on, a site was offered near the Museum of Fine Arts and the Contemporary Arts Museum, a "cultural corner" that has been reinforced by completion of the Cullen Sculpture Garden (see P/A, July 1986, pp. 25–26). The chosen site, however, is near the small University of Saint Thomas, on whose Board the de Menils had sat when its campus was developed in the mid-1950s to the designs of Philip Johnson. The principal property adjoins the Rothko Chapel, another de Menil project completed in 1971 with Houston architects Barnstone & Aubry.

The site lies in the heart of Houston's Montrose Area, the most diverse mixed-use community in the city, as well as the most culturally permissive. Dominique de Menil clearly saw the location in relation to alternative communities, including the black enclave of the nearby Fourth Ward. She was sympathetic to its landscape of 1910–1940 cottages, which had succeeded in coexisting with local institutions and other uses. To this end, a program of acquisition was gradually undertaken whereby the final museum site of some three acres would be part of a network of parcels over 20 acres. Years before the museum was begun, the surrounding cottages began to sport a color scheme of gray paint and white trim, with several cottages becoming administrative and service functions and featuring the black canvas awnings; this became the de Menil "look," and the area was affectionately and knowingly dubbed "Do-ville," after its patron.

An Image of Industry

The Menil Collection was conceived not only as a teaching collection but also as a place of work; it was to project a conscious image, as Walter Hopps has suggested, "a little bit like a shop, or light industry." Dominique de Menil wanted to suggest direct access, with certain curatorial functions located so that visitors "could peek through windows." She was concerned about illumination by controlled daylight, as well as to consciously getting a certain distance from "architecture," particularly its more elitist qualities. Her close friend Pontus Hulten, Director of the art museum at the Pompidou Center, first suggested Renzo Piano, realizing that what would be of ultimate importance would be the collaboration between her and the museum's designer. Hulten also called to her attention a small provincial museum in Israel that had successful use of daylight, and in late November 1980 she and Piano visited it. The trip was less useful as a search for a prototype than for the architect-client communication that resulted.

What appealed to Dominique de Menil was Piano's elegant clean-industry aesthetic. His minimalist use of technological components revealed their inner nature, an approach with which she was in sympathy, and his uses of "soft" technology for conservation and rehabilitation, as with the UNESCO workshop for Otranto (1979) or the Commune of Turin (1981) reflected attitudes compatible with the progressive liberalism that the de Menils had represented in Houston. It was logical to expect that Piano could respond sympathetically to the existing urban context being maintained under the site acquisition procedure.

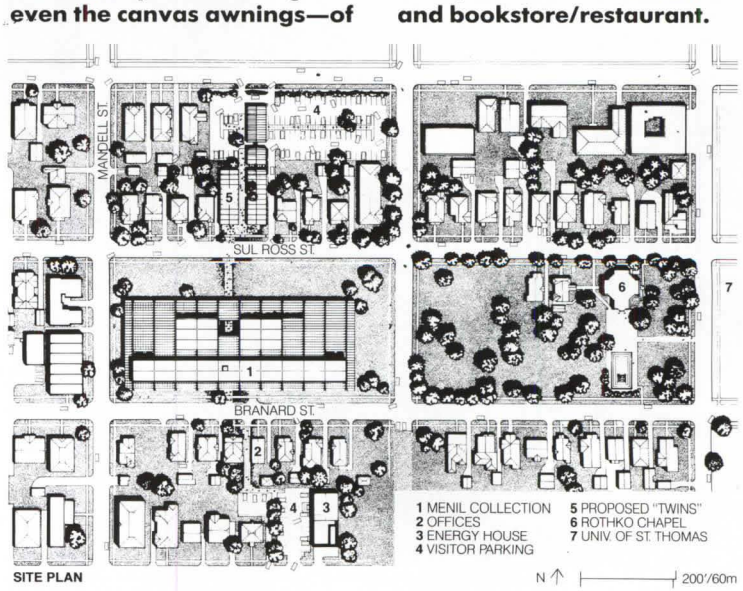
Piano's interest in an aesthetic of minimalism clearly runs counter to prevalent surface-ornamented and figurative compositions, that he refers to as ". . . fake creativity and sterile showiness . . ." and ". . . ineffective and nostalgic operations." He has spoken of "making architecture," and his particular European technological milieu has facilitated a rapport between design and technology, between craftsmanship and mass production. As has been said of his mentor Franco Albini, for whom "every work is a unique object, constructed with pieces that can be reproduced," so Piano has stated, "Each design constitutes a separate history instead of just being a stage in a consistent artistic development." The process of "making" is for Piano a hands-on design activity, conditioned by a European production system that fostered his evolution as a kind of an industrial artisan.

Piano's design disposition would appear well suited to a program where the principal issues were a degree of spatial neutrality responsive to change, and a rigorously controlled interior environment. Yet here the lightweight, clear-span, high-tech, visibly serviced exoticism of Piano's previous work has been replaced, or at least bypassed, by a more understated and visually neutral environment. Certainly, the Pompidou Center (in partnership with Richard Rogers; see P/A, May 1977, pp. 84–89) was the rhetorical culmination of ideas that had gained strength in the mid-1960s, but other examples of Piano's work, up to the early 1980s, demonstrate an interest in clear-span, space-frame enclosures where the means of fabrication becomes the medium of expression.

Development of the Museum Design

Although modified since the first proposal of 1981, the design concepts developed by Renzo Piano, with Peter Rice and Tom Barker of Ove Arup & Partners, were process-oriented from the beginning. Research and development of components were critical to the design solution. As Piano has stated, "It is frequently a mistake to start from the general and so descend to the particular." The Richard Fitzgerald & Partners office team, which has previously associated with architects such as I.M. Pei, Johnson-Burgee, and Charles Moore, found itself doing complementary research, translating and coordinating European and American processes. Their joint venture was a request of the client, and all construction documents were produced by the Houston firm. Richard Fitzgerald characterized the experience as "a lot more time spent on thinking out the building," with the client wanting to look at all options, including studying elements in mock-up.

The museum's 402-foot south flank (top) faces modest houses typical of those on surrounding blocks. These bungalows (above)—all owned by the Menil foundation and some used for its offices—were painted a uniform gray and white years before museum construction. Façades of the museum continue the scale, as well as colors and clapboard siding—even the canvas awnings—of these buildings. The shaded portico along this front (facing page) displays the "leaf" system of sunlight control and recalls in form and scale the canopied sidewalks once typical of downtown Houston. Site plan (below) shows proximity to Rothko Chapel and St. Thomas University, as well as the location of proposed "twin" buildings, of bungalow scale, to house an auditorium and bookstore/restaurant.



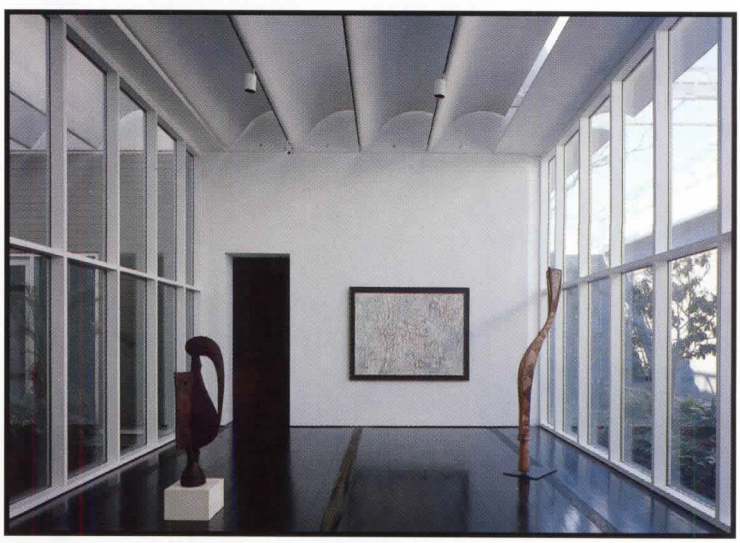
SITE PLAN

Special consultants in Texas ultimately refined the wall section in relation to hurricane forces, a common Gulf Coast problem (a plywood sheet was added to the outer face of steel studs in an otherwise conventional dry-wall system), and a Toronto research group analyzed severe wind loads on the leaf shapes (actual uplift forces were reduced by the shape). Every three to six months, design development sets were subjected to pricing by the general contractor, E.G. Lowry Company, who were involved from the beginning, and went to Piano and the Arup team for review; the final drawings were printed by four-color offset, so that integrated systems could be seen in direct relationship.

The charge given by Dominique de Menil was to be "big inside, small outside"; at 402 feet by 142 feet, with a maximum height of 45 feet, there is no mistaking the museum for a cottage. Occupying an entire city block, the museum is clearly the most dominant form. Its module of a 40′ x 20′ bay organizes the basic mass; the 40-foot dimension is the span of the composite leaf elements and, being the principal measure on North and South elevations, loosely refers to the proportions of the cottages that line the East-West streets. The city grid and its subdivisions were conscious references in the ordering of the building. Piano was also intrigued by the potential for establishing context rather than having to make a fine-grain response, observing that in America "historical memory of the past is not necessarily related to place."

Actually, a number of houses were relocated, and selected program elements were decentralized, in order to enhance a complex use pattern within the overall site. Part of this strategy involves design of two new facilities, called "the Twins," which will be located among the cottages on the North site and loosely recall their forms; these will contain an auditorium, and a bookshop/restaurant. The building's mechanical plant, dubbed the "Energy House," was pulled out of the museum building, and its administration offices will continue to be in a cottage renovated by Houston architect Anthony E. Frederick, as is a library for The Image of the Black in Western Art (a special long-term project by Dominique de Menil).

The visual theme of gray clapboard, white trim, and black canvas awnings was a "given" for The Menil Collection, with the wood siding specifically requested by the client. The complex theme of decentralization continues through scattered-site parking for visitors, and in a recently completed renovation by Anthony E. Frederick, a 1930s supermarket located a block away was restored and converted to a 10,000-square-foot alternative space for performances and special exhibits. The color themes continue in this component as well. The outcome is not a single object, but a complex network of uses, of which the museum may be centerpiece, but it ultimately suggests the feeling of "a village green," as Tom Barker characterized it, with the Rothko Chapel implicitly read as part of the grouping.

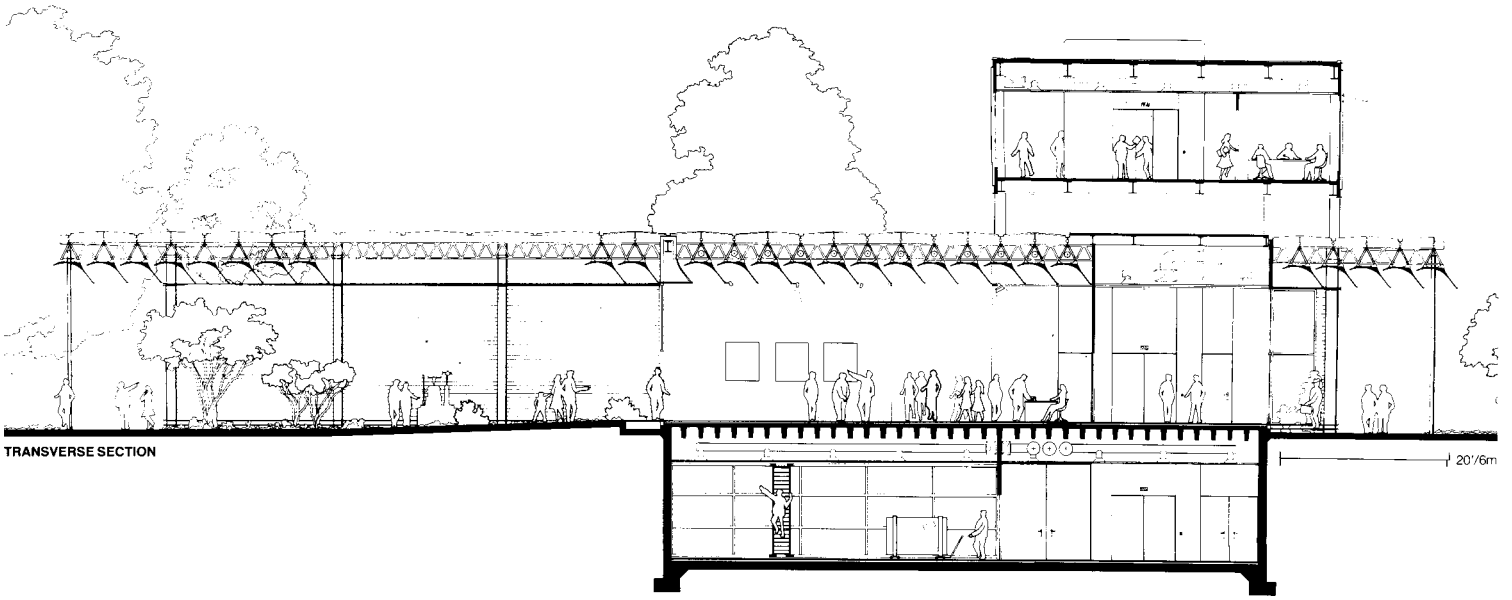


The Menil Among Piano's Works

In contrast to other Piano projects, The Menil Collection appears conventional. To an extent, elements such as the clapboard infill and the color scheme reinforce this image. Its main structure is a simple trabeated grid of standard proportions. To an extent, Piano felt the conventionality had an ideological basis, for in an era of cultural mystification, art could be seen as inaccessible, and the purpose of the design was to break down such barriers.

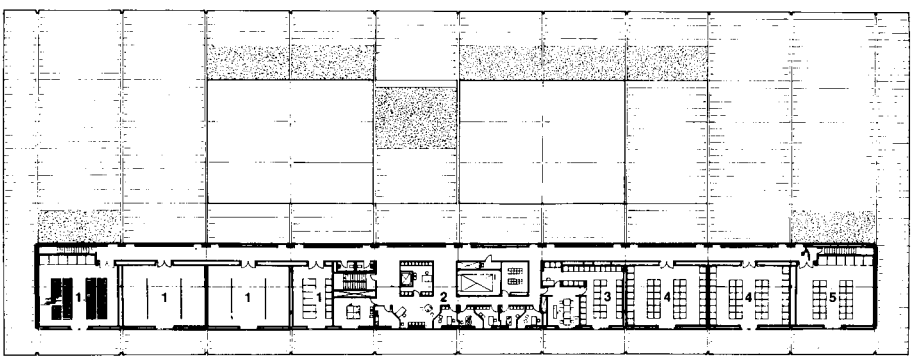
In the design parti uses are clearly articulated in both horizontal and vertical zones. The metaphor of the urban grid is combined with the image of an interior pedestrian street running East-West, divided by a cross-axis marking the principal entrances. This spine also suggests a division into "back of the house" and "front of the house" functions, with gallery spaces facing North and support components facing South. The cross-axis divides galleries into temporary on the West, more permanent thematic installations toward the East.

Vertically, the design provides a partial basement for storage, fabricating shops, photography, staff facilities, and mechanical spaces for the lower zone. The ground floor contains galleries, public access, and selected curatorial elements (registrar, framing,



TRANSVERSE SECTION

All galleries are in a one-story portion of the museum (plans and building section), with the "treasure house" of accessible art storage in a penthouse over first-floor service areas. This upper volume is separated from the main one by a six-foot gap, some of which is used for air-conditioning units. Most of the gallery area is skylighted, but some rooms have conventional, unpierced roofs to allow for specially lighted installations (see roof portion of upper floor plan). Horizontally, galleries are separated from service areas by an access spine (facing page, bottom); in a reading alcove here an 18th-Century Peruvian *Virgin of Belem* is displayed. Where the leaf system meets the wall, a "false nose" partially duplicates the contour of a leaf—and fulfills its light-blocking function. The primitive galleries surround a tropical garden (top and middle, facing page), unroofed but shaded by "leaves." Works placed in these galleries for photographs include (top) a New Hebrides split drum, (middle, left to right) a bird sculpture from the Ivory Coast, Ernst's *Heaven Marries the Earth,* and a serpent figure from Guinea (middle photo). The sunlight-control system (drawing, right) is composed of ferrocement "leaves" suspended on ductile iron trusses, both cast with contours and textures to yield diffused, shadow-free light.



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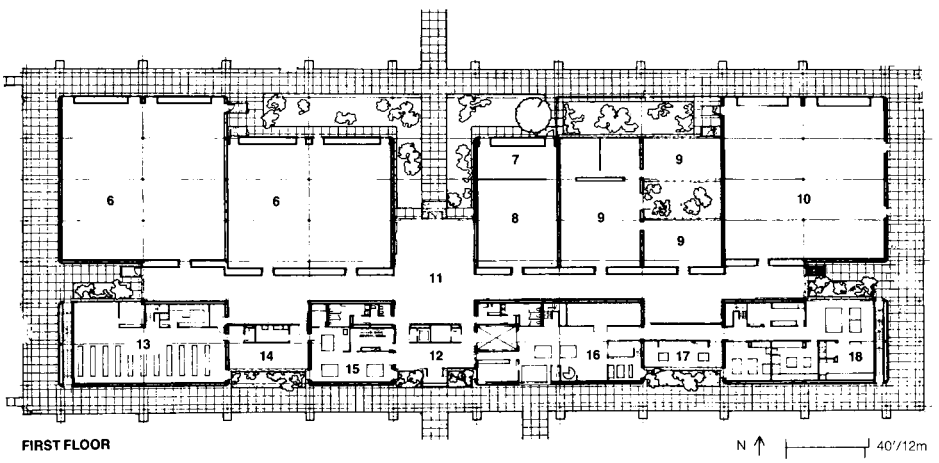

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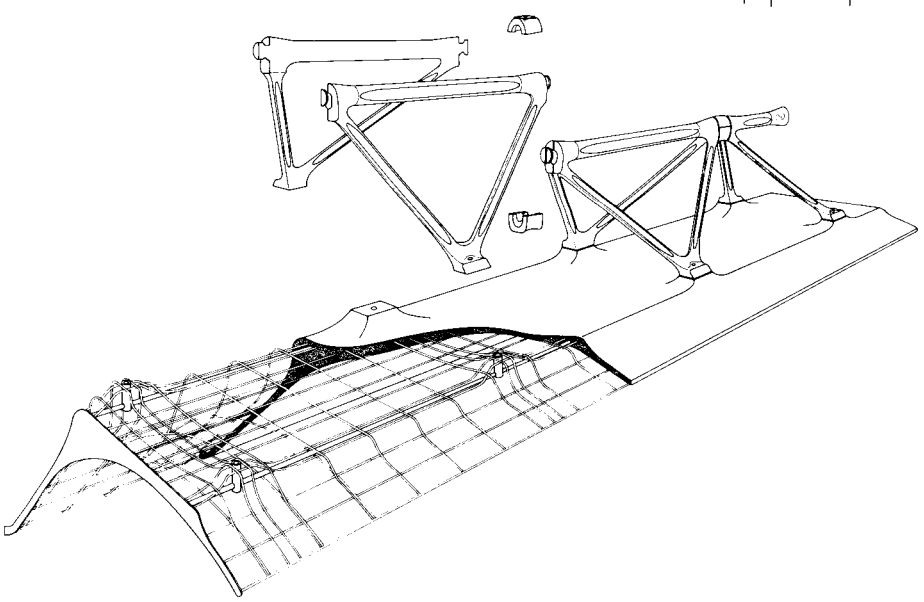


EXPLODED PERSPECTIVE, LEAF SECTION

conservation, exhibition planning, and library); the offset placement on the site provides primary public access from the north, across a lawn into the deeply recessed porch, while staff entry is directly across the street from the cottage containing administration. In cross-section, there is a series of secondary mezzanine spaces related to ground-floor uses.

The principal articulation occurs in the expressive representation of the other primary function of the Menil Collection, which is "visible storage." The greater bulk of objects is intended to be accessible and occupy a continuous penthouse over the service elements, taking the form of a raised "Treasure House," where primary scholastic and curatorial research is conducted. A physical gap exists in section, some six feet from its slab to the platform roof; a portion of this zone contains mechanical rooms that service the "Treasure House." Its being raised as a penthouse is both pragmatic (Houston is subject to extremes of street flooding; see P/A News Report, December 1976, pp. 32–34) and symbolic, emphasizing both the serious purposes of a working collection and the bulk of materials yet to be seen in the galleries.

Within the galleries, some of which are modulated by lines of structural columns, the relationship between the objects in the collection and the enclosure would seem to be based on their independence. The extent to which interior exhibition partitioning as it develops allows an autonomous reading of the architectural enclosure will be a measure of the extent to which the client comprehends Piano's design intent.

The Canopy of "Leaves"

The one dominant visual element is the platform roof. This is what makes the Menil Collection more than just a box. The extruded roof leaf-shapes offer an elegant counterplay to the severity of the gridded container, their variable cross section and delicate curve throwing life into the simple forms, and the texture of shadows rendering a volumetric density and constantly changing character to the building exterior.

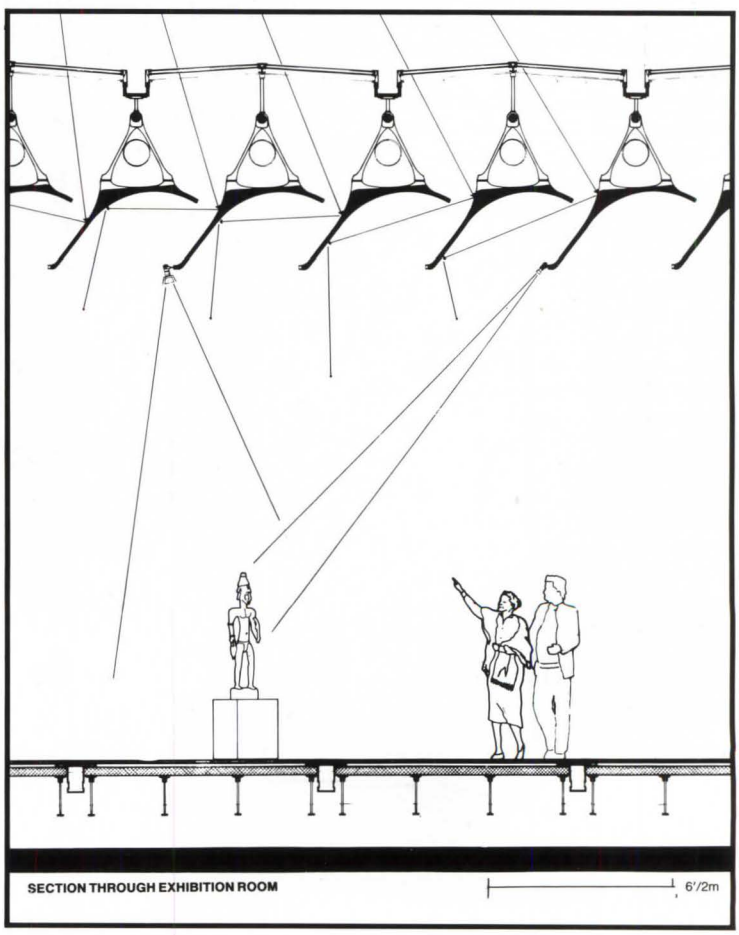
The delicate shapes evolved primarily as a device that would allow continual, evenly distributed natural illumination without glare. At the same time, their profile is such that one may look up beyond the pattern of baffles and catch a glimpse both of structure and the sky beyond. Dominique de Menil was particularly keen on being able to catch views, which is why the galleries also have windows in addition to the overhead system. Tom Barker sees the image as the "sophistication of the Twentieth Century laid over a fundamental building."

The roof system is composed of ferrocement leaf elements and ductile iron components as principal structure; the ductile iron was chosen not only for assembly, but also because the elements could be thin enough to prevent interior shadows caused by focused sunlight. The ductile iron truss elements are bolted to the ferrocement leaves, and in turn are joined together by a clamping system employing a metal-filled epoxy resin. Their finish, resulting from a sand-casting process, helps in diffusing spectral light, as does the finish of the ferrocement leaves, which is likewise as removed from their molds.

By excluding direct sunlight and eliminating ultraviolet rays, designers were able to maintain a fairly bright level of light in the galleries, while allowing them to reflect changes in weather and time of day. The gradient across wall areas remains fairly even because of the control of diffusion, but both subtle light changes and the visual connections to the exterior give a "life" to the natural light here.

The shape of the leaves evolved from months of study, involving specific properties of materials, structural behavior, and optimization of lighting angles. The initial concept was of leaves in the form of flattened quarter circles, connected by a truss derived from the Arvedi tubular system; the final shapes were developed by computer-generated modeling and actual physical mockups. Ultimately, a prototype room was built near the building site and "tested" with pieces from the actual collection (see P/A News Report, September 1982, p. 40).

A view of the Contemporary galleries (facing page) shows the building's 20′ x 40′ bays unobstructed. Similar bays in the Modern galleries (above) are subdivided by removable partitions. Overhead, the "leaf" canopy permits views of north sky through the glazing above (section below); lower edges of leaves have continuous lighting tracks. Stained pine floors include wood air-supply grilles. Paintings seen in these pre-installation photos include (above, left to right) Magritte's *Evening Falls,* Leger's *Mother and Child,* and Picasso's *Skull and Pitcher,* and (facing page) Novros's *Untitled 9* with Chamberlain's sculpture *Nanoweap.*



Strict attention was paid to long-term performance of materials, even to the bonding agents used in specific components such as plywood sheathing (formaldehyde was avoided). The mechanical system is a minimum fresh air, constant volume, recirculating system in order to minimize the intake of polluted air and to mitigate against Houston's humidity. The floor is a raised wood plank system with all services running below, including air conditioning, which is released through low-velocity continuous wood grilles at nearly room temperature. The shading function of the leaves moderates solar gain by reflecting the heat back outside and forming a barrier above which the heated air collects. Return air ducts are threaded through the open trusses, vertically down exterior walls and through the interstitial floor.

Piano's original idea of the platform roof as the great mediator in controlling the protected environment included adjustable baffles that could also be set to shut off light, making a series of "black rooms." These darkened spaces were to be used for shows demanding an ambience of their own, more theatrical in intent. Ultimately, the decision was made to have two gallery spaces on either side of the entry (twelve bays total) permanently dark, with conventional construction and a built-up roof. Another bay of skylight glazing is deleted for an interior tropical garden that punctuates the Tribal Arts galleries, although the leaf structure is left exposed to filter light.

It should also be noted that the exterior expression is not quite a pure representation of construction. While the building's perimeter arcade is supported by structural wide-flange columns, the "frame and infill" appearance of the enclosing wall depends, in reality, on decorative exterior architectural steel channels clipped onto square interior tube columns.

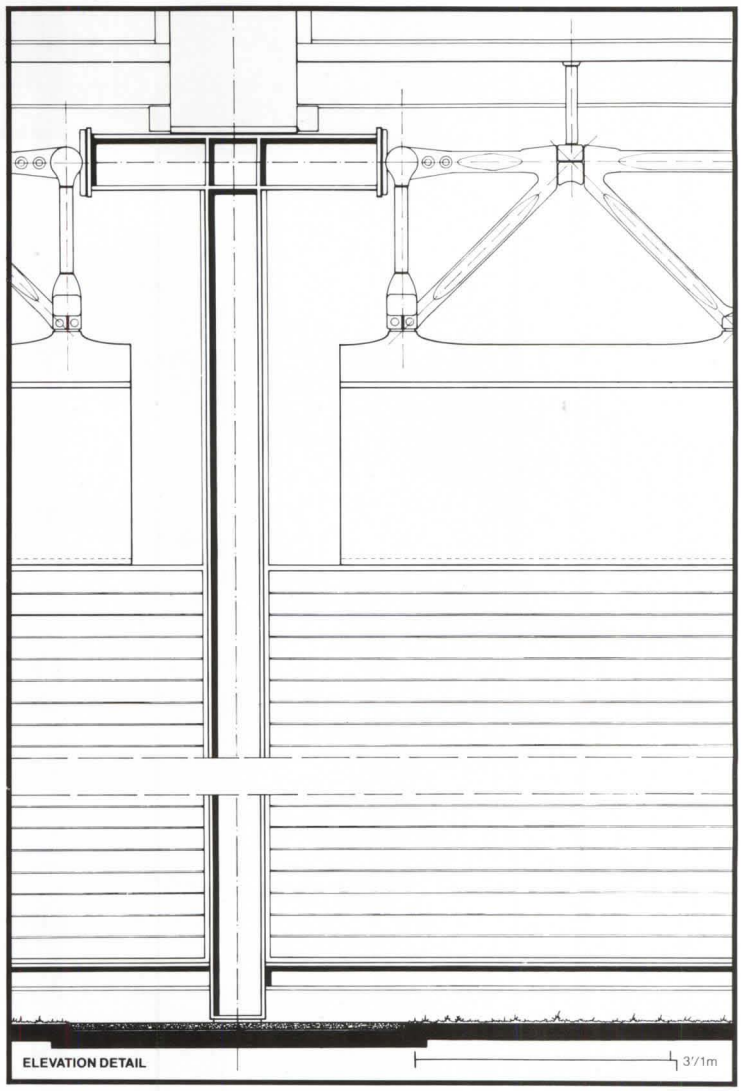
Not for Technology's Sake

Close examination of the Menil Collection shows it to be less of a systematic high-tech solution than it is a circumstantially adjusted one. Piano has criticized the high-tech approach as being one in which the problem is invented and made complex in order to solve it, thereby making it the "language" of the solution. His design for the Menil Collection deals with its real problems, not translating them rhetorically. He saw Dominique de Menil's desire for contemplation, and as Richard Fitzgerald observed, to "take inherent qualities and see their beauty." Piano further qualifies his approach that "if you are precise, you are conventional."

The Menil Collection also recalls other dispositions from the client. Its organization, for those who have had the experience, is like Dominique de Menil's own home designed by Philip Johnson. Walter Hopps had been the director for the Pasadena Museum, and his sensibilities were conditioned by the California Case Study Houses of the 1950s and 1960s and one cannot help recalling certain parallels with, if not similarities to, Louis I. Kahn's Kimbell Art Museum in Fort Worth (P/A, November 1972, pp. 25–29), both in the sense of natural light and in episodes such as the deeply recessed exterior entry porch and punctuating interior courts.

The Menil Collection is an environment concerned with turning inward, with art as a medium of human expression about humanity. Its clear precision and simplicity foster a direct relationship to its primary purpose, confrontation with the collection itself, in a protected environment that intensifies and enhances the connection of the user to the work of art.

If the Menil Collection eschews the commercial frenzy of many museums' "Van Gogh Boutiques" to exploit the public's response to art, it is because its mandate does not require popularity. It is in its philanthropic nature to present its collection didactically. Its shows will be mounted to remain up for longer periods, as long as nine months. The ambience is one of directed discovery, for as Dominique de Menil has observed, "the great things are those you discover." In its neutrality and absence of pretense, Renzo Piano's design is a fundamental response that provides for the greater number of possibilities and readings. ***Peter C. Papademetriou*** ■



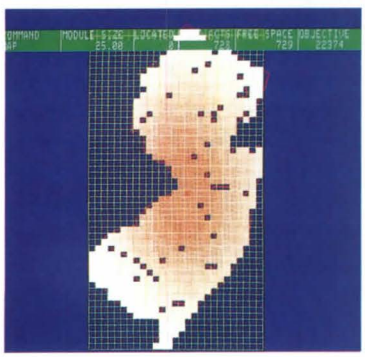
Details of leaf canopy are revealed at ends of the building (elevation above and photo, facing page). Main gutters occur along column lines, and outriggers pick up the ductile iron trusses that support the ferrocement leaves. For a detail view at a right angle to these, see Cover.

Project: *The Menil Collection, Houston, Texas.*
Architects: *Piano & Fitzgerald, a joint venture of Building Workshop, Genoa, Italy, and Richard Fitzgerald & Partners, Houston (Renzo Piano, partner in charge of design; Shunji Ishida, Mark Carrol, D. Michael Downs, Ed Huckaby, Leland Turner, Chandra Patel, Bernard Plattner, Thomas Hartman, project design team; D. Michael Downs, project manager, construction phase).*
Client: *The Menil Foundation, Inc./The Menil Collection.*
Site: *2.9-acre city block in a neighborhood near downtown, composed mainly of 1920s bungalows.*
Program: *exhibition galleries, art storage, library and rare books storage, research areas, labs, shops, and staff facilities. Total gross area: 106,304 sq ft. Total usable area: 77,251 sq ft. Net exhibition space: 23,956 sq ft.*
Structural system: *steel and concrete composite frame; ductile iron and ferrocement space frame.*
Major materials: *red cypress siding, insulated glass skylight and windows, built-up roofing (see Building Materials, p. 198).*
Mechanical system: *hot water, chilled water, and electrical power delivered to museum HVAC units from off-site mechanical plant.*
Consultants: *Ove Arup & Partners, London (Peter Rice, Tom Barker, with Alistar Guthrie, Neil Noble, John Thornton), structural/mechanical engineers; Haynes Whaley Associates, Houston, associate structural engineers; Galewsky & Johnston, Beaumont, associate mechanical engineers; Curtainwall Design & Consulting, Dallas, and Don Workman & Associates, Houston, skylight and curtainwall consultants; Rolf Jensen & Associates, Houston, fire protection consultants; E.B. Brown/Thomas Electronics, Fort Worth, security consultants; Lockwood, Andrews & Newman, civil engineers.*
General contractor: *E.G. Lowry.*
Costs: *not available.*
Photos: *Paul Hester.*

The Fittest Survive

In the new world of healthcare cost containment, hospital administrators use marketing techniques to compete for patients. And architects help.

The marketing strategy of the healthcare industry calls for a "user-friendly" image, and architects gladly comply. For the new Center for Women's Health at Cottonwood Hospital, Utah (above, right, and p. 100), Kaplan/McLaughlin/Diaz designed a villagelike complex in brick, with care taken in the details.



Center Research Incorporated's new planning tools: CRI, a research group in Princeton, N.J., is developing methods of displaying the geographic relationship between patterns of demand and the location of health facilities providing these services. For the New Jersey State Department of Health, for example, CRI is developing predictive tools for testing the impact of DRG case mix on space use and the need for new construction. They are also developing new regulatory approaches to facility performance standards. The above maps represent part of a demographic study of the state, population ages 17 to 24 (top) and a facility location study (bottom), shaded area indicating the most cost effective place to locate a facility, near Trenton. **(See also New Planning Tools, p. 102.)**

BETWEEN 1965 (when Medicare and Medicaid were created) and 1985, the total expenditures on healthcare in the United States rose from under $50 billion to over $400 billion. And as every consumer of healthcare cannot have failed to notice, the payers with clout—insurance companies and the government—observed an aging population, envisioned a future of increasingly escalating costs, and took drastic action. Let hospitals, doctors, and patients beware, they seem to have declared, costs are to be contained.

The result has greatly altered the way hospitals operate and doctors manage their practices, and this has had a major impact on the building and retrofitting of healthcare facilities. With capital cost containment, pessimists predicted a severe reduction in work for architects specializing in healthcare facilities; but they were wrong. Both healthcare administrators and their architects have had to learn the Darwinian principle: The fittest survive. The hospitals have had to reposition themselves to meet the new conditions; and they have needed architects to help them.

DRG's and the Shorter Hospital Stay

The most noticeable move to limit costs came with the introduction (federally in 1983) of a system, called Diagnosis-Related Groups (DRG), by which Medicare reimbursement would be made. Rather than paying individually for all tests and procedures a doctor saw fit to order, and paying for hospital stays on a per-diem basis, this system in general pays a lump sum for a given problem—a gall bladder operation, say—based on the usual cost for this problem's solution. If the patient has fewer complications than average and can leave the hospital sooner than predicted, and if the hospital is efficient, the hospital makes a profit. If the opposite occurs, the hospital shells out. Insurance companies also introduced methods to limit expenses.

The effects on hospitals were extensive. Their administrators obviously wanted to shorten stays in the hospital. Yet if they serve only the same number of patients as before, their facilities, built up in the profitable 1960s and 1970s, would remain partly empty. An empty bed does not make money, and for both nonprofit and for-profit hospitals, the line between red and black is fine.

What did the hospitals need to do? Attract new patients. How could they do this? As every good American knows, the answer lies in marketing: meet demands, create new demands, advertise your product.

Meeting Market Needs

It benefits the community when needs are met efficiently and without unnecessary duplication. It also benefits the healthcare consumers when new demands mean improved standards, and as the population finds it difficult to judge medical standards, the obvious improvements tend to be environmental. Hospital administrators have found that user-friendly architecture is a good advertising tool. Hospitals are revamping to look less forbidding than they used to, and it is easier to find your way into and around them. In the stampede to attract patients, healthcare facilities are bending to meet popular tastes, and some are even organizing in shopping mall-like configurations, with retail shops intermixed. Thus the familiar American drug of shopping can be administered to distract and pacify the anxiously waiting patient, who is given a beeper so that he can be called back to the doctor when his turn is reached. The mall configuration also responds to the increasing demand for parking space.

Factors in the Equation

There is a further factor in the reimbursement equation. Certain procedures are considered losers in the DRG game, and where possible, hospitals avoid these like (excuse the expression) the plague. Transplants and open-heart surgery are said to be losers, for example. The well-publicized cases of those procedures were probably carried out for that very purpose—publicity. While market studies identify needs, fiscal studies determine whether these needs are met. It is up to the government to adjust inequities.

HMO's and the Trend Towards Ambulatory Care

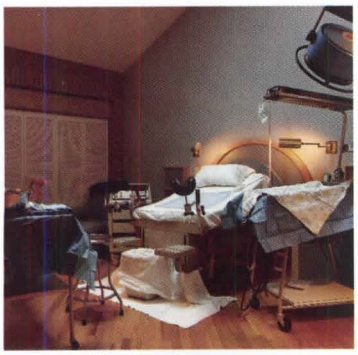
Reimbursement policies by Health Maintenance Organizations (HMOs), which levy a fixed annual fee from participants for health coverage, and by insurance companies, have forced hospitals to become more competitive in terms of price as well as image. If a hospital charges more than what the insurance company considers appropriate, the patient himself pays the difference; so the patient shops around for a cheaper facility.

These companies have had an additional, profound effect on healthcare. As they pay for procedures for which they approve (in terms of how, where, and how much), they, like Medicare, have encouraged the dependence on outpatient treatment, even for numerous surgical procedures, rather than hospitalization. Clearly it costs less to treat a patient by day and then send him home rather than hospitalize him. All hospitals have had to increase their outpatient facilities markedly in order to keep patients.

Studies have shown that the increase in outpatient care is a sound tendency. There is less chance of infection if hospitalization is avoided, patients tend to get better more quickly in familiar surroundings, and the cost to society is less. But as Richard Sonder of Russo + Sonder Architects, specialists in the design of healthcare and research facilities, points out, the shortness of hospital stays has to bottom out at some point. As patients are being sent home sooner and sicker, the need for professional home-care providers is increasing, especially as the number of traditional stay-home wives is dwindling. Home-care proprietary chains are already proliferating. Thus the overall savings to society in shortening hospitalization becomes debatable after a certain point.

Community Hospitals

Rumors abound that the community hospital is on the way out, to be replaced on the one hand by outpatient clinics in shopping mall settings, and on the other by high-powered university centers.



TYPICAL CORNER

Community Hospital Cottonwood Hospital in Murray, Utah, increased its market share by 30 percent by adding a new Center for Women's Health (above and on p. 98) designed by Kaplan/McLaughlin/Diaz. The Center is divided into six components: an entry hall; clinic and education spaces; birthing suites of seven rooms and support spaces, designed for flexibility to accommodate other treatment procedures as programs develop; women's nursing units that can be zoned by medical specialty; normal and high-risk nurseries; and a high-risk suite with three operative-capable delivery rooms. The $2.5 million center includes 15,000 square feet of new space and 7500 square feet of renovated space.

The building is designed to have a residential character both on the exterior (p. 98) and the interior, and has been greeted enthusiastically by the community.

But news of the death of the community hospital is premature, says Sonder. The few hospitals that closed were probably marginal, and did not offer a "differentiated product." The successful ones streamline their act; increase their outpatient facilities; and study and respond to their market.

Streamlining their act means keeping patients in hospital beds a shorter time. The patient receives intense, concentrated attention, somewhat akin to the intensive-care patient of old, with numerous diagnostic procedures to eliminate unnecessary invasive procedures. Movement through the system must be efficient and quick, and architectural intervention can help, where necessary and possible, by reconfiguring inefficient buildings.

Close to 40 percent of all surgical procedures in a community hospital can be performed on an outpatient basis, says Sonder. It is no wonder, then, that community hospitals include in their plans the addition of large ambulatory facilities.

Differentiating the product requires examining the market to see what medical procedures are needed in the community, and then responding by building the necessary facilities. The facilities and equipment must be of a caliber to attract well-educated, young, productive doctors, so that the hospital gains a reputation in the field and can attract the desired patients. The buzz-word here is "Centers of Excellence," and this is what hospital administrators want to create and accentuate.

Cottonwood Hospital in the Salt Lake Valley of Utah is an extreme example of a center of excellence created in order to achieve a competitive edge. Community interest in the alternative birthing movement prompted Cottonwood to "reconsider its role and how it could contribute to the objectives of its parent corporation, Intermountain Health Care," noted Kaplan/McLaughlin/Diaz, its architects. Its Center for Women's Health (above) has increased market share by more than 30 percent since it opened two years ago, and the hospital has increased its number of births, which is significant in that the birth rate in the area has been declining. The facility's program and its warm architectural image have both contributed to its notable success.

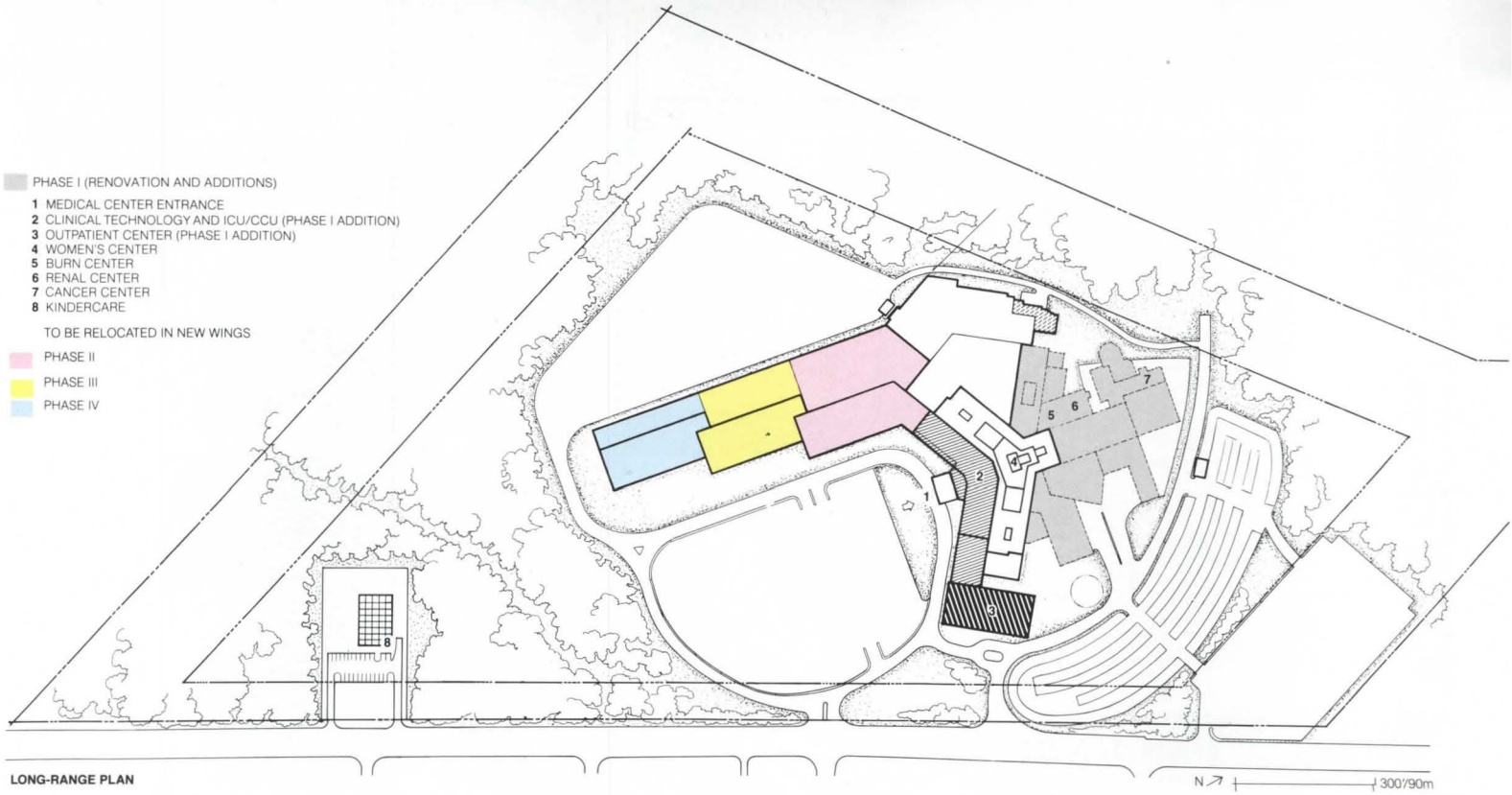
Saint Barnabas Medical Center in Livingston, N.J. (facing page, top), is an example of a very large community hospital that took itself in hand in order to improve its competitive position vis-a-vis neighboring institutions. It had a master plan prepared in 1984 by Russo+Sonder, with short-range plans to emphasize centers of excellence, and long-range plans for expansion.

University Hospitals

University hospitals not only have to compete for patients as the community hospitals do, they also have to wage a fierce battle to attract the superstar physicians. The key to this lies in well-equipped research facilities, but comfortable and convenient offices count as well. And convenience for doctors is sometimes in conflict with the needs for patient convenience. A professor of immunology, say, wants his own office to be next to his departmental office and his examining room, and near the related inpatient beds and his research lab. This traditional organization along departmental lines, explains Thomas Payette of Payette Associates, makes it difficult for the patient who comes in to see one doctor and must be referred to another specialist at the other end of the campus.

Payette explains that there is now a tendency towards more interaction among diverse specialists. University doctors are getting the better research labs they ask for, and along with the up-to-date equipment they get labs that are more open and more flexible, and that encourage interaction and communication among the various researchers. In Payette Associates' Genetics Institute, an offshoot of Harvard University, the labs are built around an atrium, which the users claim is the soul of the building.

At the same time, says Payette, physicians at some university centers are being forced to move out of the traditional department-related office to



LONG-RANGE PLAN

Community Hospital
The Master Plan for Saint Barnabas Medical Center (above) in Livingston, N.J., by Russo+ Sonder, Architects, lays out short- and long-range plans that aim to reduce the present bed count of 700, increase ambulatory care, and build on its strengths with centers of excellence. With only 20 percent of its 65-acre site left to develop, the long-range plan calls for a modular expansion to the south, shedding in phases the most obsolete wings on the north. According to the master plan statement, the linear expansion, with a clear circulation spine, is the key to a "flexible and open-ended scheme."

The short-range plan calls for building a new outpatient wing, consolidating the high-tech services—a relocated burn center and clinical technology, a new Intensive Care and Cancer Care Unit, and a renal center—in one floor, and improving the Women's Health Center. A daycare center for employees' children is proposed. And the inpatient setting will be improved by reducing the number of beds.

central ambulatory care buildings. Payette is currently preparing plans for Johns Hopkins University Ambulatory Center, in which there will be a central corridor with all the various specialists along it. This will not only be more convenient for the patients, it will also provide better medical care, says Payette, as necessary medical overlaps will more easily occur. If an ear-nose-and-throat patient is found to have an eye problem, an ophthalmology resident may be nearby and available.

But not all university hospitals can meet the growing need for ambulatory facilities. At the University of Washington Hospital in Seattle (p. 103), another tack is being considered: to refer some outpatients to other facilities. The hospital is the primary medical education facility in the Northwest, and is already linked to a system of hospitals in Seattle and in several nearby states. Students move from hospital to hospital for their education, notably to receive training and experience in the Family Practice specialty. And patients are referred from hospital to hospital for certain specialties. The University of Washington Hospital supports the region in primary care (intensive care, major surgery, traumatic care including major burns) and has recently undergone a major phased renovation and expansion designed by CRS Sirrine, with Robert Douglas Associates as programmer. Now, with outpatient needs already outstripping the projections made five years ago in the original master plan, and with the medical center's somewhat constrained site, the architects, in a POE study, pose the possibility of looking for opportunities for decentralization of functions to affiliate hospitals, thereby "freeing up" new opportunities at the University Hospital campus.

Indiana University Medical Center is another example of a university hospital intensifying its center of excellence. Already known for pediatric work, the hospital decided to build an extension to its center for children with complex medical problems. The James Whitcomb Riley Hospital for Children expansion (p. 104), designed by Ellerbe Associates, opened last fall, effectively doubling the size of the original facility.

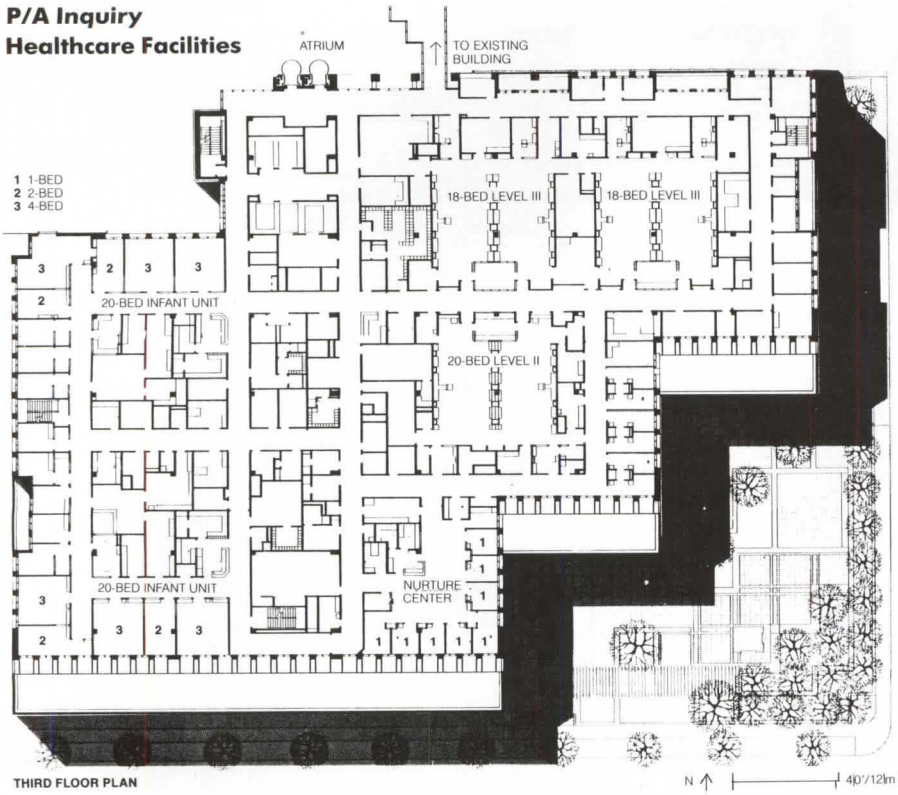
Ellerbe Associates also designed a new medical research center for Indiana University. John Gaunt of Ellerbe points out that research has once again become an area of dramatic growth, offering opportunities for architectural work. Air handling is an especially important consideration in designing research laboratories, and the plan usually works best with labs surrounding a central service core. In the Indiana University lab, as in Payette Associates' Genetics Institute, the central core is expanded and used for architectural advantage as an atrium.

Sharing Facilities

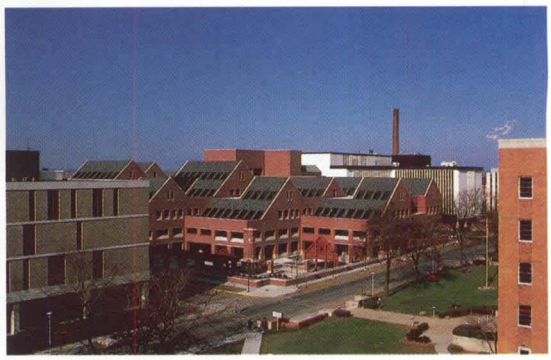
Some hospitals link together to share specialties, as in the case of the University of Washington Hospital. Another way in which sharing is proving economical is with the use of portable technological units. Units carrying lithotripters, magnetic resonance imaging scanners, and even catheterization labs move several hundred miles a week, being driven up to loading docks at each of the hospitals in the consortium. Freestanding catheterization labs, nonportable, can also be shared by a group of neighboring hospitals, each of which does not then need to build its own.

The Doctors' Initiative

"Physicians always have had an ambivalent relationship with hospitals," says Robert D. Brooks, a consultant who advises doctors on the economics of their practice. In relying upon hospitals to grant them operating privileges, the doctors have had to give up a certain amount of control. Now, says Brooks, doctors have been able to regain their autonomy thanks to the recent laws that permit some surgical procedures to be performed on an outpatient basis. Doctors have been able to bypass hospitals by forming small groups and building their own surgical clinics. With small, independent outpatient clinics they are able to charge lower fees



THIRD FLOOR PLAN



University Hospital Indiana University Medical Center in Indianapolis recently added a new pediatric wing to its James Whitcomb Riley Hospital for Children (above). Already known for pediatrics, this expansion by Ellerbe Associates allowed it to intensify its "center of excellence."

The four-story expansion addressed the need for an increase in intensive care beds for newborns, infants, and older children. In doing so, it expanded the state's only comprehensive Level III Newborn Intensive Care Unit, created a Nurture Center for critically ill infants facing extended hospital stays, and doubled the pediatric intensive care beds to 36. Beds for adolescents with chronic diseases were added. Improved, larger radiology and nuclear medicine and surgical suites were part of the expansion.

The architecture strives to look as homey and noninstitutional as possible. Landscaped terraces and a large atrium introduce natural lighting and planting.

than hospitals with huge overhead—even lower than ambulatory clinics associated with hospitals—and they have thus gained the patronage of HMO patients, for example. With less bureaucracy to deal with, it seems, doctors can process more patients, make more money despite lower fees, and still have more time to play golf. The opportunity was not lost on numerous doctors. And there were architects ready to serve this new group of clients.

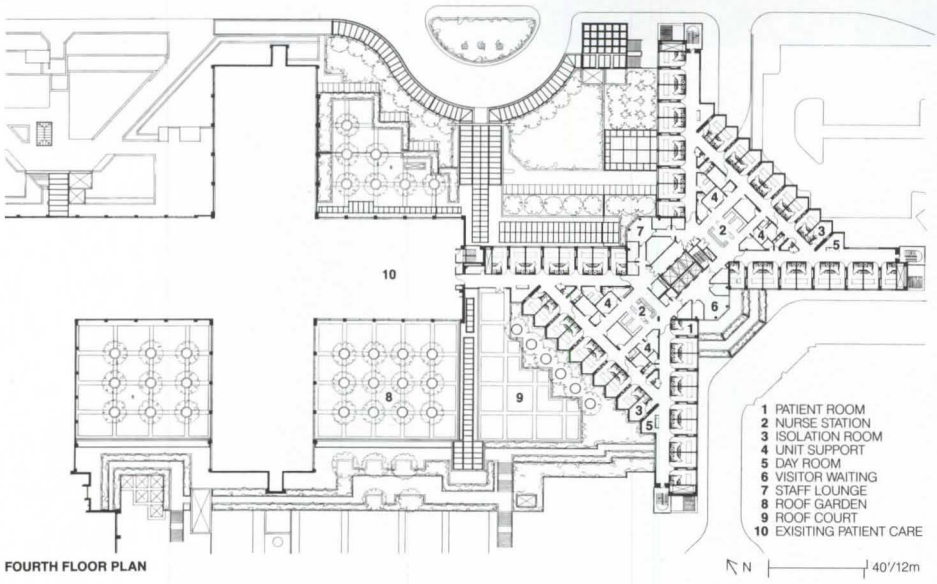
Patients feel that a hospital is where you go to die, says one such architect. An independent surgical clinic, possibly located next to or in a shopping mall, has no such connotation. Audio-visual rooms can be important ingredients of these clinics, both to distract the patient while waiting and prepare him for the medical experience that awaits him. One architect feels that not only the environment but also the medical service is improved, as the arrangement is more efficient, and medical tests—e.g. mammographies—can be done on the spot, rather than prescribed and then ignored by the patient. Some surgicenters (especially for plastic surgery) have motel-like units nearby, so practically the full service can be offered (privately reimbursed, of course).

Oral and plastic surgeons first developed surgicenters, ophthalmologists have been prominent users (cataracts pay well), and ear-nose-and-throat doctors and orthopedic surgeons are predicted to be ripe for surgicenter growth. Some predict that groups of various specialists will join together to form mini-hospitals of their own. Others wonder about the control of medical quality in such independent groups.

New Planning Tools

"Now more than ever, incisive tools are needed for healthcare planning," says Philip Allsopp of Center Research Incorporated, a Princeton-based not-for-profit research group (P/A, June 1986, p. 108). "The healthcare environment is beginning to buckle due to runaway costs, and federal programs are being cut." Last year, for example, the decision was made, federally, to do away with Health System Agencies, which on a local level had been meant to ensure equitable distribution of healthcare. "If planning is done statewide rather than locally," explains Allsopp, "data must be especially carefully built up and organized." To do this, CRI is using the McDonnell Douglas GDS CAD system to layer DRG data with census, Medicaid, Medicare, infrastructure, and boundary data, currently unrelated databases (see maps, p. 99). The challenge is to create a computing environment that allows an efficient and useful accessing of a wide range of data, and to ensure that the data are "clean," or valid. Objectives include the determination of areas that are defined as "medically underserved"; and the investigation of other issues, such as the correlation of traffic accidents to geographical locations, and the effects of competition on health facilities. The New Jersey State Department of Health has commissioned CRI to apply its tools to medical planning and to the investigation of issues of epidemiology. Using morbidity and mortality statistics from hospital admission data, the group is able to display emerging patterns of disease at a very high level of detail. It raises important issues by relating the incidence of specific diseases to location, for example, socio-economic factors, and environmental conditions.

CRI also uses its research tools to assist individual healthcare facilities to increase their efficiency. By integrating functional and financial strategies, they can help the facility to develop a compromise plan allowing objectives to be reached without necessarily demolishing existing physical plants. CRI's principals, all of whom are architects, feel that architects can have a major impact on trimming healthcare costs by reducing rampant inefficiencies in hospital traffic patterns. They have carried out systematic studies of interactions within and between departments and have been able to reduce misspent staff time for their clients, who include Christ Hospital and Medical Center in Chicago and Jordan Health Center in Rochester, N.Y.



FOURTH FLOOR PLAN

University Hospital
The University of Washington Hospital (above) in Seattle has undergone a major renovation and expansion designed by CRS Sirrine, with Robert Douglas Associates. All areas, from laboratory units to administrative quarters, were expanded and the inpatient facilities were increased to 500 beds.

The first three floors are devoted to hospital support services and public spaces. Underground areas contain laboratories and supply warehouses. On the upper levels are the patient rooms (plan above), taking advantage of views of Mount Rainier and the surrounding area. The "primary care nursing unit" concept of patient care was accommodated in a double-triangle floor plan that optimizes the one-to-one patient relationship.

The architects prepared a thorough post-occupancy evaluation study after the first phase of the work was complete. One of the significant points it made was that, rather than adding outpatient facilities as originally planned, the hospital might depend on affiliate hospitals for these functions, and use its limited site for other, more specialized purposes.

Other Problems, Other Directions

With the changing nature of the healthcare industry, architects listen for predictions of where the action is likely to be. With HMOs and the insurance companies controlling the business, experts predict that development will be in HMO offices and specialty clinics with high-tech facilities. The "winners" as far as DRGs go change cyclically. At this time, Robert E. Mikrut of The Ritchie Corporation points out that rehabilitative medicine pays well DRG-wise and is relatively untouched. Geriatric healthcare is still a growing field.

Putting big buck opportunities aside, there are problems—old and new—that must be met. Jim Diaz of Kaplan/Mclaughlin/Diaz discusses the problems of the indigent (those with no coverage at all) and of AIDS patients. The former, not desired by any hospital, are cared for in, for example, county hospitals. His firm is working on a couple of such hospitals, including Santa Clara County Hospital in San Jose, where there is economic hope for the institution because it has centers of excellence—newborn intensive care, rehab, and trauma and burn centers—and is making additions in the acute care and psychiatric areas. Diaz points out that the treatment of AIDS is still a highly politicized issue, especially in terms of separation of patients.

Marketing

Architects, gladly accommodating to the "user-friendly" image of the health industry's marketing strategy, have responded in fairly predictable ways. Warm materials are preferred—brick on the exterior is a favorite, carpet where possible as flooring on the interior, while glass is used plentifully to allow sunlight to pour in. Color is bright, but not too bright, to give a cheerful, "noninstitutional" look. Where space permits, buildings are broken down to give the appearance of a residential community—as at Cottonwood (p. 100) and at Riley (p. 102). Outdoor terraces and gardens are favored, as are playgrounds where applicable. To replace the lack of, or supplement, outdoor spaces, atriums are highly favored. Atriums also recall the popular shopping mall image, where Americans feel happy, according to marketing wisdom. Parking is kept as close as possible to the healthcare facility and, where necessary, is connected by a bridge to it. A very few hospital administrators are beginning to notice that all of this can have a formulaic look, and in isolated incidents to achieve a fresh image they have hired, generally to work along with hospital experts, big-name design architects not known for hospital work—for example, Cesar Pelli for the Cleveland Clinic, Frank Gehry for Yale University's adolescent schizophrenic center, Mayne/Rotondi for the Comprehensive Cancer Center in Los Angeles (P/A, Jan. 1987, pp. 112–114), and Moore Ruble Yudell for the University of California, San Diego, Medical Facility.

But generally, as Thomas Payette points out, it is enormously difficult to convince doctors and hospital administrators to allow architects to do leading edge design. The medical industry is technologically driven, it is conservative, and few architects, even "specialists," understand the technology well enough to see where its needs can be met in a new way that still permits a humane environment.

For architects in the healthcare field, there is another side to marketing they must consider: marketing their own services. They must promote services to an industry that, last year, spent half a billion dollars on advertising and over a billion to pay marketing consultants. Architects find they must speak the language to play the game. Some, in the field a long time, say they have a nagging feeling that their professional status is being compromised. But as far as marketing goes, healthcare is big time. ***Susan Doubilet*** ■

Crosby Arboretum Interpretive Center
Picayune, Miss.

The Poetics of Revealed Construction

The philosophy of organic architecture espoused by Fay Jones finds full expression in this pine forest pavilion.

Seen from the highway, the timbered Crosby Arboretum Interpretive Center hovers gracefully in a landscape of native grasses, shrubs, and pine trees.

FIFTY miles north of New Orleans and 45 miles south of Hattiesburg, Miss., is Picayune, a little town most people pass by. The completion of the Crosby Arboretum Interpretive Center, called Pinecote by its architect E. Fay Jones, puts Picayune on the map of small towns with significant examples of contemporary architecture.

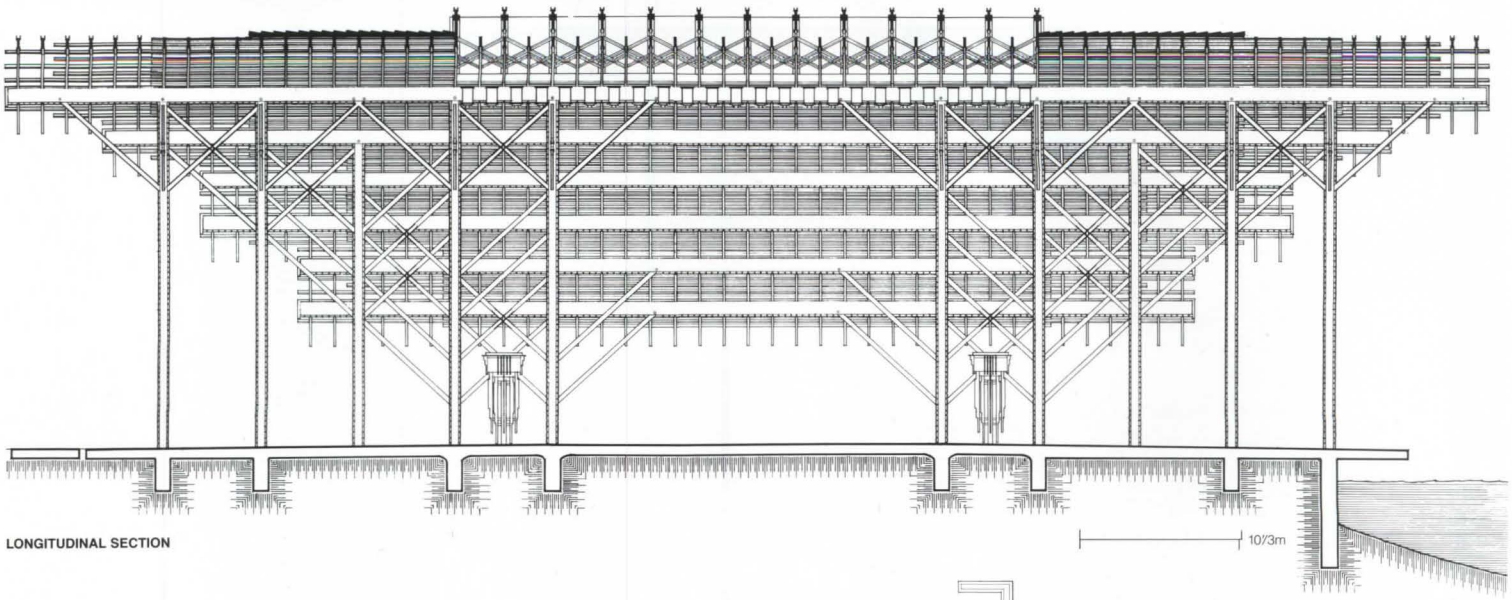
Surprisingly accessible—physically as well as visually—the pavilion is sited in a stand of slash pines, a landscape that looks deceptively simple and even unremarkable to the untrained eye. This pine savanna, however, is actually a landscape of great subtlety and sophistication. Eight years ago, Lynn Crosby Gammill and her brother L.O. Crosby III took steps to preserve it, founding the Crosby Arboretum as a tribute to their late father, L.O. Crosby, Jr., a philanthropist and pioneer in the South Mississippi lumber industry.

From its inception, the Arboretum has sponsored an ambitious program of exhibits, lectures, and field trips to educate the people of South Mississippi about their ecological heritage. Consultants from other parts of the country (notably Andropogon Associates of Philadelphia, who devised a master land use plan for the 64-acre preserve) as well as from the three major universities in Mississippi were engaged to guide the process, and in 1984 landscape architect Edward Blake, Jr., was hired as the Arboretum's director.

The Arboretum and its newly dedicated Interpretive Center are part of a network of ten self-contained yet interrelated environmental systems covering 1600 acres in four counties in South Mississippi. These natural habitats are preserved, maintained, and enhanced to give plant scientists, ecologists, students, and the general public an extraordinary opportunity to, in the words of Crosby's brochure, "enjoy the rich diversity of the region's botanical heritage and to investigate the larger questions of man's evolving relationship with the environment." This custodial approach reflects the current notion that cultural facilities, especially zoos and nature centers, should interpret local conditions, not foreign ones. Rather than a collection of exotics in the 19th-Century style of arboretums, the Crosby Arboretum offers an opportunity to observe what grows on this site naturally and to study how native plants might be used in contemporary landscapes.

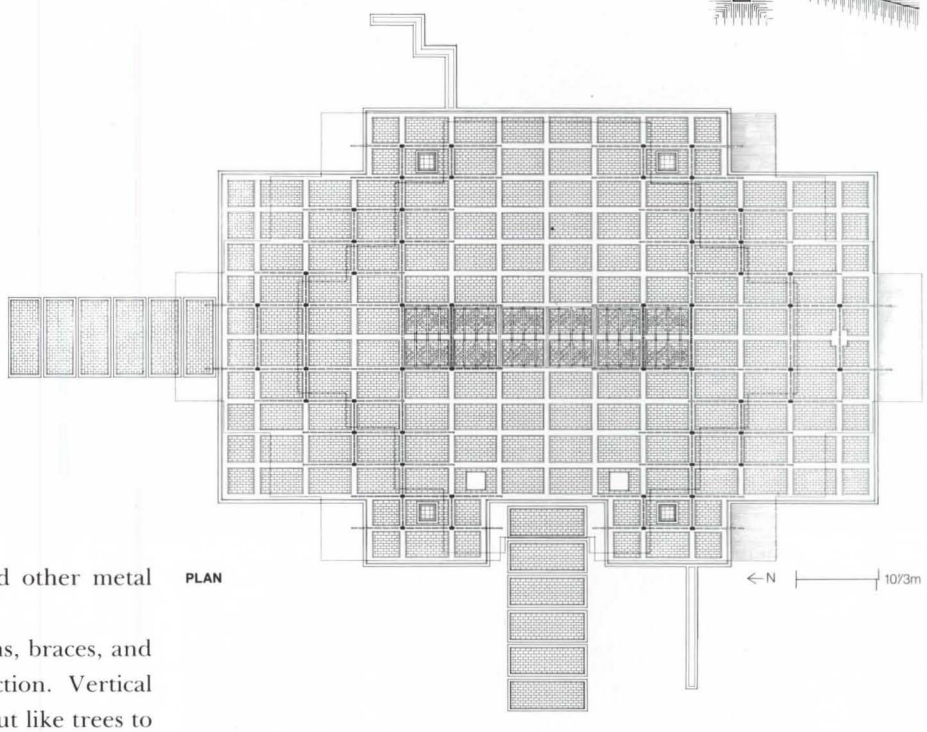
The choice of Fay Jones and Maurice Jennings as architects was felicitous. A protégé of Frank Lloyd Wright, Jones is known primarily for Thorncrown Chapel in Eureka Springs, Ark., as well as for residential structures throughout his native state of Arkansas. Heretofore, Jones has designed for dramatic sites with natural rock outcroppings and significant changes of level—natural grist for his Wrightian mill. Yet the Center's flat site proved to be as rich a source of inspiration for Jones as anything in the Ozarks. The results make us realize once again how architecture can grow organically from its site as well as from its function.

The pavilion, much like the celebrated Thorncrown Chapel, is not a complicated structure but a simple idea executed with consummate skill and sensitivity. The rectangular shed rises from a base of earth-toned brick. Surrounded by native vegetation (pine trees as well as wild flowers and shrubby undergrowth) on three sides and water on the fourth, the all-wood structure is built of an indigenous material—



LONGITUDINAL SECTION

Furnished only with wooden benches and light standards, the pavilion provides a flexible space for nature talks, concerts, exhibits, and other events (facing page). At the dedication ceremony last fall, the space was filled with folding chairs for speeches and performances by a chamber orchestra and local gospel choir. The slender columns, echoing pine tree trunks, frame strange and wonderful views of the surrounding landscape.



PLAN

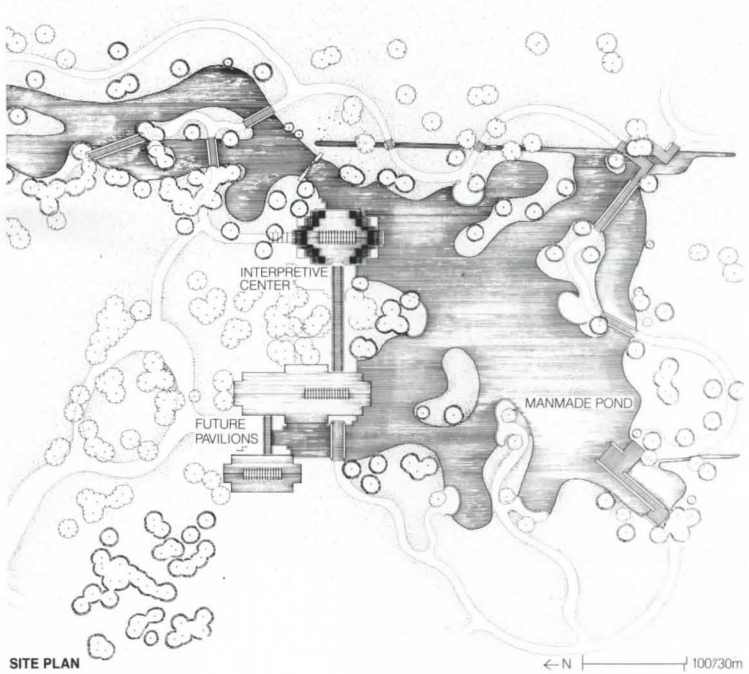
pine—and fastened together with nails, dowels, and other metal connectors.

As at Thorncrown, every element—columns, beams, braces, and connections—performs an essential structural function. Vertical members rise from the brick pavement and spread out like trees to support the roof. The roof surface, too, thins at the edge, disappearing into the woods that surround it. On another level, the roof expresses the natural process of "organic unfolding, or blossoming," in Jones's words. Its wood shingles "emulate and recall many of nature's surfaces—the bark of trees and the wings of birds."

This is a bare-bones building, ornamented only by the intricacies of its structure and the interplay of light and shadow through the cycle of day and night and the seasons of the year. It is a timeless building, a structure that captures the spirit of its place and purpose. In a part of the country that shows little evidence of the influence of the Prairie School or its leader Frank Lloyd Wright (there is but one residence by Wright in Mississippi) the pavilion irrefutably reaffirms Wrightian notions about architecture and place. More important, however, is the success with which this building captures the charge of the client to create a place to celebrate the native flora of this environment and to explore our relationship to it.

William Lake Douglas ■

The author, a landscape architect, is Director of Public Art for the Arts Council of New Orleans.



SITE PLAN

Fixtures set in the brick pavement provide dramatic night lighting of the pavilion's skeletal structure, its hovering roof and Wrightian skylight outlining what Jones calls the "poetics of revealed construction" (above and facing page). Four large light standards (left) are placed where the roof edges nearly touches the ground. While related to the architect's well-known Thorncrown Chapel, Pinecote is larger and lower than that structure, its design reflecting the flat landscape of the Mississippi pine savanna.

Project: *Crosby Arboretum Interpretive Center, Picayune, Miss.*
Architects: *Fay Jones and Maurice Jennings, Architects, Fayetteville, Ark. (E. Fay Jones, Maurice Jennings, David McKee, Leroy Sharfenberg, Larry Fox, project team).*
Client: *Lynn Crosby Gammill, Crosby Arboretum, Hattiesburg, Miss. (Edward Blake, Jr., director).*
Site: *64 flat, wooded acres, with predominantly pine trees.*
Program: *4000-square-foot, open-air pavilion used for nature talks, exhibits, performances, and social gatherings.*
Structural system: *reinforced concrete foundation walls; brick paving over concrete slab; wood columns, beams, bracing, and decking.*
Major materials: *concrete, brick, yellow pine, glass (see Building Materials, p. 198).*
Consultants: *Andropogon Associates and Edward Blake, Jr., landscape.*
Costs: *withheld at client's request.*
Photos: *Tim Hursley, The Arkansas Office.*

Diplomatic Club
Ministry of Foreign Affairs
Riyadh, Saudi Arabia

P/A Portfolio
Desert Buildings

Two new buildings in Saudi Arabia take some inspiration from traditional architectural form, yet both reinterpret those forms in widely varying ways to produce buildings that show no historical pastiche but are clearly representative of contemporary architectual form.

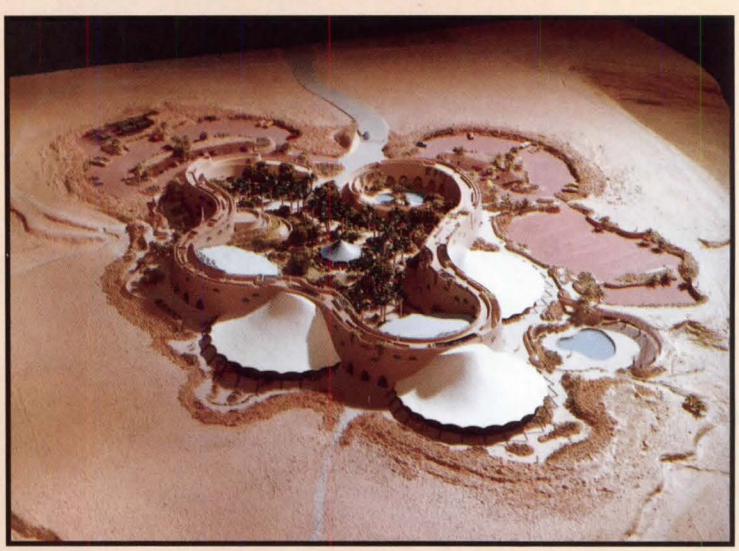
The new Diplomatic Club on the outskirts of Riyadh was designed by the international consortium of Frei Otto, Buro Happold, and Omrania under the name of OHO Joint Venture, but this collaboration was not formed in the usual way.

In the spring of 1980, the Riyadh Development Authority held a competition for a social club for foreign diplomats, which was to be located in the new diplomatic quarter being developed in the desert just out of town. Both the Otto Partnership and Omrania submitted entries. Otto's was a free-form, organic solution that blended into the site. Omrania's was an orthogonal response composed of horizontal layers and interconnecting volumes that became an extension of the wind-swept, rock-carved desert plateau. At the request of the client, the two firms agreed to collaborate, and they were later joined by Buro Happold, who acted in primary engineering capacities.

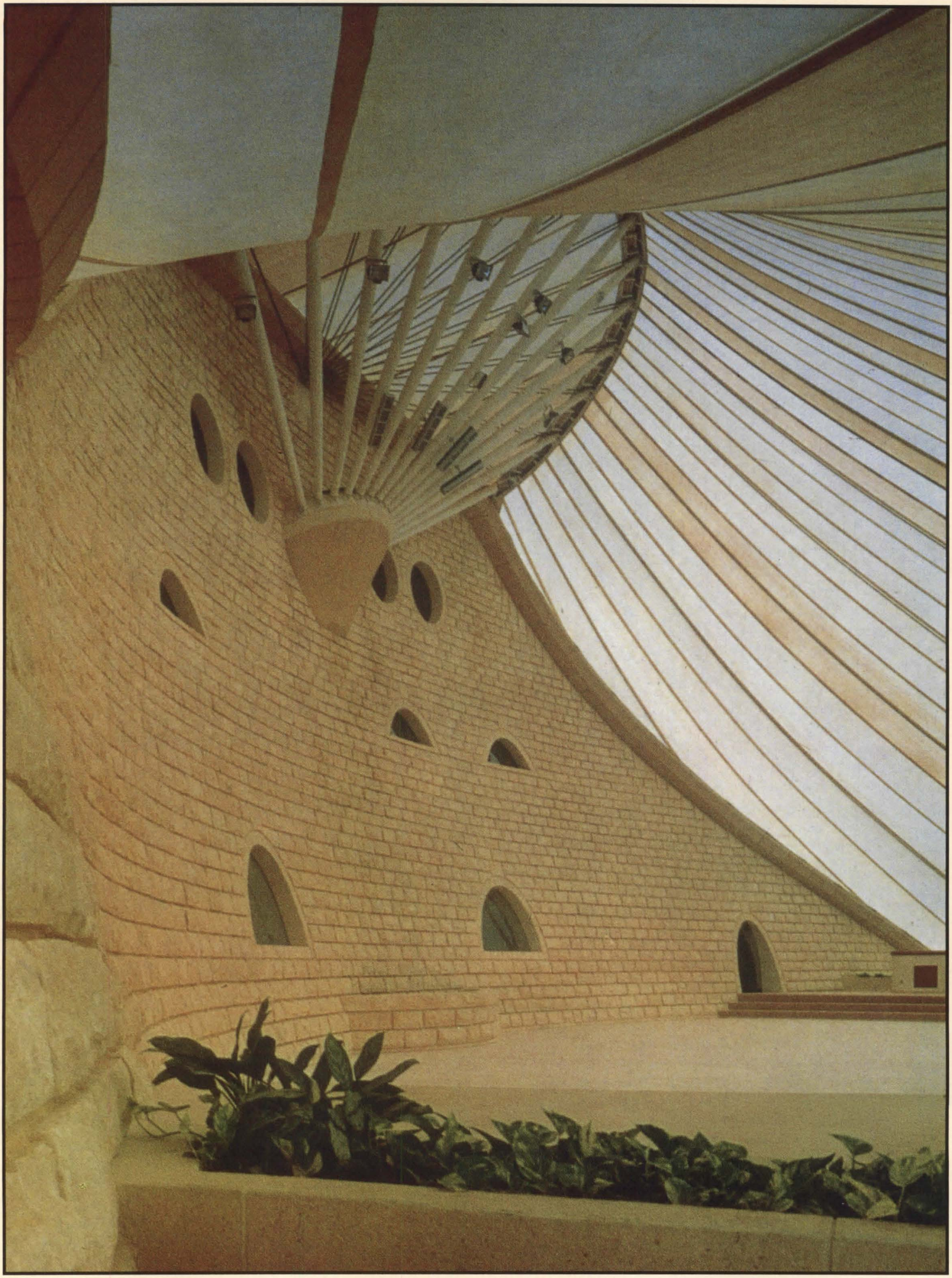
Some clear principles were set forth for the design of the club. Primary was respect for the outstanding natural qualities of the site, as well as clear acknowledgment of the harsh climate. Since the club is also to be used by the local community, respect for Saudi social and cultural traditions was also to be seriously considered.

Other primary concerns of the client stipulated that since the building would become a landmark by virtue of its outstanding site, it should be interpreted as a building *in* the desert, with particular regard given to the silhouette it would create on the plateau. Finally, any form of revival or copying of traditional patterns or details was to be absolutely avoided, although materials, proportions, and dimensions were to respect the type, nature, and details of the local environment.

The resulting building, which is four stories high, is a 12-foot-thick undulating concrete form that follows topographical features of the site and encloses an inner courtyard of terraces and gardens. With a series of appended Teflon-coated glass-fiber tents, a wide range of facilities, lounges, and guest rooms are provided for the foreign diplomat.



Project: *Diplomatic Club, Riyadh, Saudi Arabia.*
Architects: *OHO Joint Venture (Frei Otto, Warmbron, West Germany; Buro Happold, Bath, England; Omrania, Riyadh, Saudi Arabia).*
Client: *Riyadh Development Authority.*
Site: *barren and exposed limestone plateau of 20 acres outside city.*
Program: *a club and hotel accommodations of 240,000 sq ft for foreign diplomats.*
Structural system: *cast-in-place concrete walls with precast stub girder beams supporting in situ concrete floor slabs founded on concrete strip footings. Tension structures with Teflon-coated glass fiber fabric and ceramic tile clad cable nets anchored by rock anchors.*
Major materials: *concrete with rigid closed cell insulation board on outer face; Riyadh limestone; smooth plaster painted; travertine, terazzo, and carpet floors; ceilings surfaced in hardwood.*
Mechanical system: *fully air conditioned by air-cooled chillers and mechanically ventilated.*
Consultants: *Omrania, landscape; OHO Joint Venture separate contract with Omrania design responsibility, interiors; Buro Happold, structural, mechanical.*
Costs: *$32,000,000; $133.00 per sq ft.*
Photos: *Crispin Boyle, except bottom, p. 110, Ward Thompson.*



Ministry of Foreign Affairs

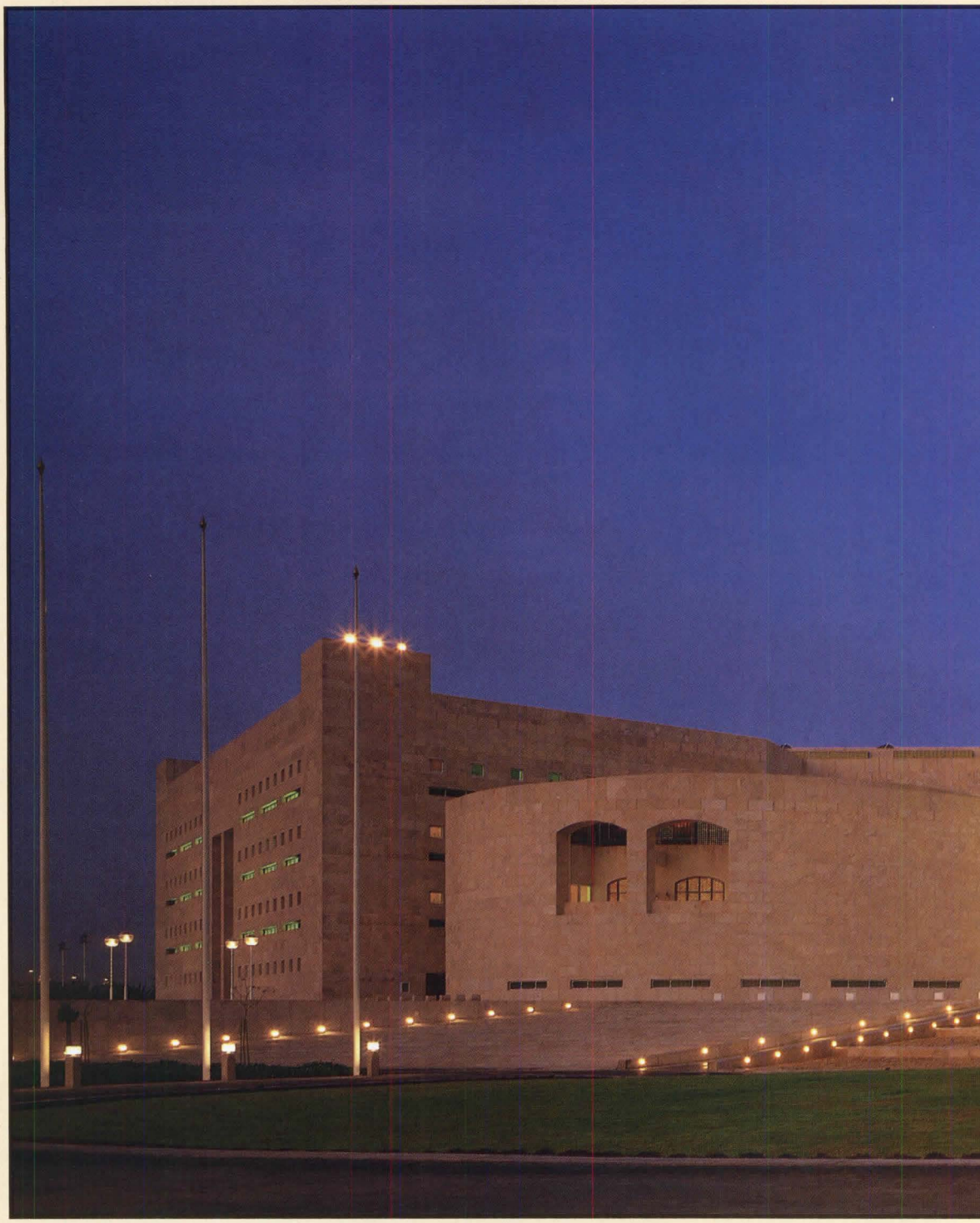
The new Ministry of Foreign Affairs, like the Diplomatic Club, was also born of an international design competition, this one held in the late 1970s. Renzo Piano, Ricardo Bofill, Arata Isozaki, and Kenzo Tange participated, among others, but the commission was given to Danish architect Henning Larsen. This building, like the Diplomatic Club, also participates in a very sophisticated, abstracted synthesis of local architectural form. But where the Club looks to the desert models of stone and tent structures, the Ministry takes inspiration from the massing, organization, detailing, and decoration of traditional Islamic urban architecture.

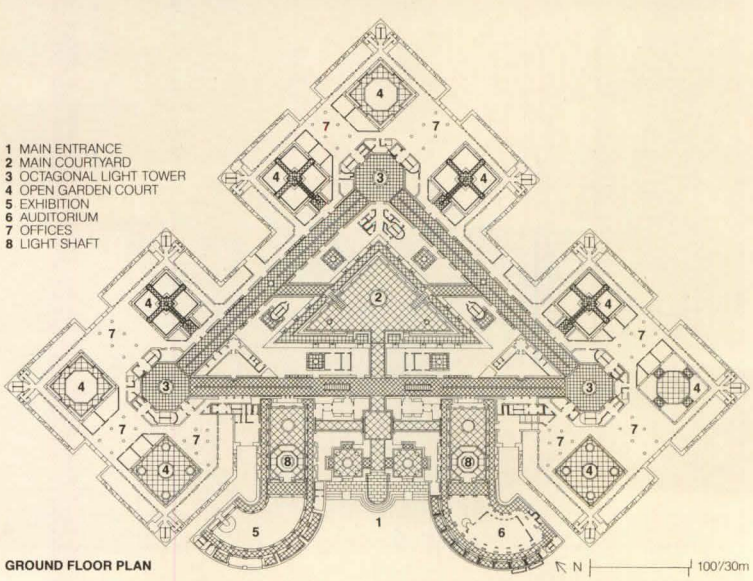
The Ministry is in a new section of Riyadh that was begun in the 1950s and is being constructed along the lines of modern western urban planning principles. Consequently, unlike the close-knit, tightly packed buildings of the traditional Arab community, it is a freestanding structure surrounded by broad boulevards. Its uniqueness is intensified by its elevation on a parking podium. Nevertheless, even with such conditions, the architect was able to realize a building that is intensely Arabic in all of its most important aspects.

Like all Arab urban structures, the exterior is severe, with almost no openings or decoration. In this case, the severity is reinforced by the building's size: it contains almost one million square feet of space; and from the front one sees a building almost 800 feet wide. Within these vast dimensions, however, Larsen has created what is not a normal building at all, but virtually an entire Islamic city, occupied by over 1000 daily inhabitants.

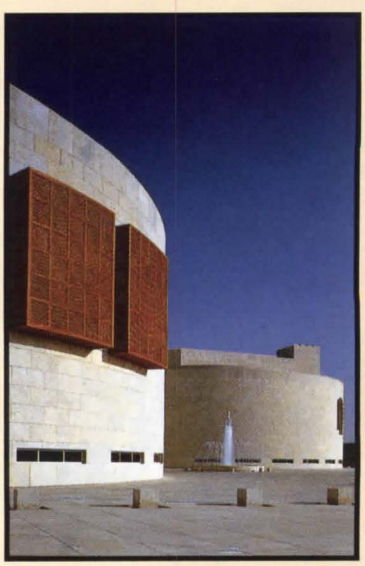
The outer walls of the building are of cast-in-place hollow cavity construction faced with Carrara marble to form a heavy barrier against temperature variations. Beyond this barren, almost fortresslike enclosure, the interior offers an environment of quiet repose where the gentle splash of fountains is often the only sound heard in the cool courtyards.

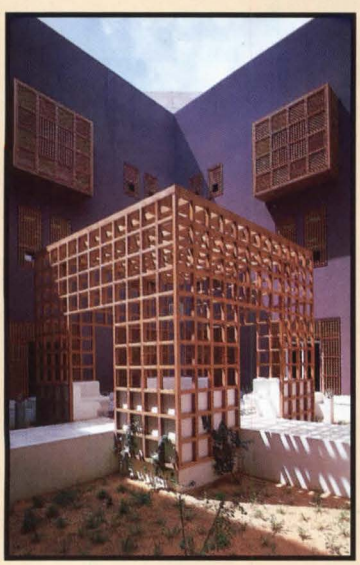
The building parti is basically a square, where one corner has been severed to create space for a massive, monumental entry. Beyond this, the plan turns into a triangular organization where, at its first encounter, the sides of the triangle form the major circulation routes, as "streets" (or souks) that terminate in three octagonal light towers. Surrounding these, in the three outermost quadrants of the building, are the office spaces. Interspersed between them are three open interior courtyards, each articulated with a different type of Persian garden. Windows facing the courtyards, as is common in Muslim architecture where both privacy and the free passage of air are desired, are covered with the traditional wooden grille.

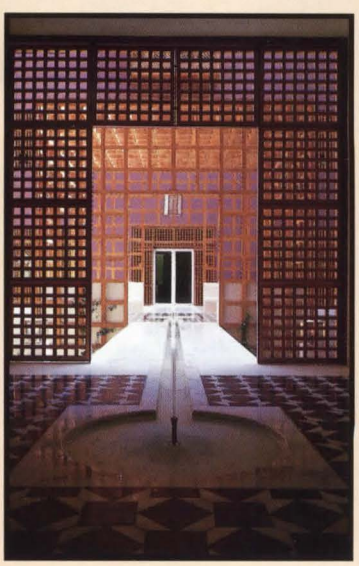


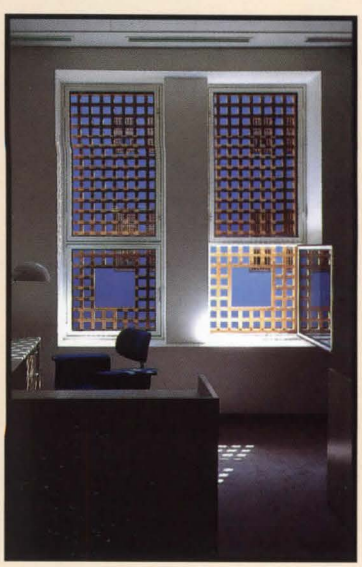


GROUND FLOOR PLAN









Ministry of Foreign Affairs

Contained within the perimeters of the main circulation spine, but congruent to it, is the central atrium, a soaring space that rises through the full height of the building. Although not a vast space compared to the Portman-type atrium, the volume is made to seem enormous through the use of underscaled openings and windows, and through the blank whiteness of the simple gypsum-board walls.

Suspended, almost literally, above the atrium is its ceiling, which gives the distinct impression of floating above the space. Except for a few horizontal braces, the white triangular plane is entirely surrounded by an unseen natural light trough that sends an even flow of daylight down through the space. Like the smaller courtyard gardens in the outer quadrants of this vast structure, this atrium is not made for wandering about or strolling through. It, and they, are primarily places of repose and contemplation. They are, as is traditional in all Arabic urban architecture, places where one can get away from the hectic activity of the outside world. In Riyadh, where some of the most unfortunate principles of modern western urban planning have now become realized, such places are needed more than ever.

David Morton ■

Project: *Ministry of Foreign Affairs, Riyadh, Saudi Arabia.*
Architect: *Henning Larsen, Copenhagen, Denmark.*
Client: *The Ministry of Foreign Affairs, Kingdom of Saudi Arabia.*
Site: *flat 326,000 sq ft.*
Program: *offices, meeting rooms, and lounges totaling 915,000 sq ft on four levels for 1000 civil servants.*
Structural system: *prefabricated columns and beams; exterior walls of reinforced concrete.*
Major materials: *cast-in-place concrete; marble-clad exterior; stuccoed courtyards; marble and composite floors; gypsum board interior walls; suspended gypsum board and acoustic plaster ceilings.*
Mechanical system: *fully air conditioned.*
Consultants: *Brian Clouston & Partners, landscape; M. Folmer Andersen A/S, structural, mechanical.*
Costs: *not available.*
Photos: *Richard Bryant.*

P/A Seventh Annual International Furniture Competition

The five winners of this year's competition reflect designers' seemingly chronic struggle to reconcile art and technology, and the jury's constant search for furniture that goes beyond the conceptual work of art, or the one-off, handcrafted artifact.

"Actually, we haven't picked anything that is furniture." Thus juror Michael Kalil sums up in a single sentence the general design climate of this year's P/A International Furniture Competition. Out of a field of 720 entries from 16 countries, the jury saw fit to premiate only five. And of those five, none received awards: three were given citations and two got honorable mentions.

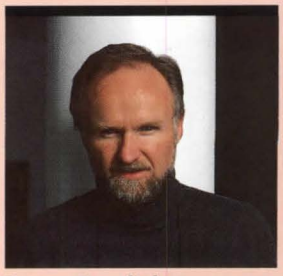
Lest we paint too gloomy a picture of this year's entries, it must be said that the jurors admired the wit and delicacy of the designs they did single out. They also noted a strong consciousness of materials among the entries (even if no breakthroughs were made in new applications), and that there were significantly more submissions in the lighting category than in previous years, with an encouragingly higher level of quality as well. But much as they liked the pieces they chose, the jurors regretted that what seemed the best of the lot were "art pieces" rather than production-oriented designs.

The jury also lamented an alarming ignorance of design history, a fault that produced a high number of plainly derivative (and plainly unwittingly so) entries. They were equally chagrined at a general unwillingness to address technological issues; many designers submitted ironic one-liners on technology rather than resourceful suggestions on how to incorporate it into the objects that are so much a part of our immediate surroundings.

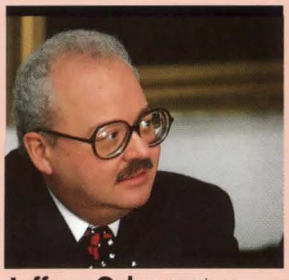
Presentation was another issue that raised discussion (and hackles). The jury found relatively few entries that offered cogent visual or verbal explanations of the ideas they contained; the winning submissions had articulate presentations that quickly communicated the essence of their designs.

As was the case in past years, the overwhelming majority of submissions was for chairs and tables, reminding us once again that few architects or designers actually understand the real issues involved in designing these objects; it isn't as easy as it looks. The jury found time and time again that the most eloquent submissions were those that offered some kind of commentary on design, rather than real innovation.

But that brings up a larger, ever-present question: Can we expect innovation to be an annual event, with a new crop of ideas springing up like corn in a field? Obviously not, agreed the jurors. They did, however, suggest a solution, which they describe at the end of the general comments (next page). This year, by overwhelming popular demand, we are also presenting 14 of the submissions that did not win. These designs, while not premiated by the jury, offer valuable insights into the issues that currently fascinate designers and architects. They invite the inevitable question: Isn't it time to ponder a few new issues? Technology, innovation, and the world at large will continue to evolve, with or without the help of the design professions. And even if they can't always lead the pack, they have got to stay in the running. *Pilar Viladas* ■

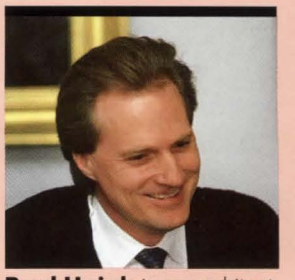


Bruce Burdick is a principal of The Burdick Group, a San Francisco firm which deals in industrial, interior, and exhibition design.



Jeffrey Osborne is a design consultant based in New York.

Eva Jiricna, an architect and furniture designer, is a partner in Jiricna Kerr Associates, London.



Paul Haigh is an architect and furniture designer, and a partner in the New York firm of Haigh Space, Ltd.

Michael Kalil is a New York-based interior and product designer who is currently at work on space station interiors for NASA.

Photos: Keri Pickett

1987

General comments

Burdick: We've seen a number of things on the edges [of innovation] but a number of opportunities have been lost. We always come prepared to choose from wonderful things.

Jiricna: One reason that we were forced to decide on [so few] entries is that there was really nothing strong enough.

Burdick: Two things come through very strongly. The majority of the solutions are driven by fashion, to an amazing extent. The other is a lack of intellectual context for their solutions. This says a lot about education. The most sophisticated resolution of a design problem finally squeezes form, function, and pleasure together in such a way that you don't separate them.

Jiricna: What is interesting is that most of these entries cannot really present their ideas. You really have to look at them and dig out the essence. So we got stuck in the finals on things that were reasonably acceptable in terms of presentation, as well as the ideas behind them.

Haigh: Two of the boards have only one photograph on them. If the idea is explicit in the object, then you don't need any more. Many entries, in fact, suffered from being overintellectualized.

Burdick: But I don't think anything was discarded on the basis of presentation.

Jiricna: I don't think so. Someone with a strong idea is usually capable of presenting it in a way that hits you. . . . But if someone doesn't know how to present the idea, you can't look at it.

Burdick: There is a sense of material in all these presentations. One of the things about products of our time is that there aren't any new materials to be explored; the new ones are too expensive.

Jiricna: I would actually disagree with that. There are millions of materials that haven't been explored and people just don't look for them. In a competition like this, you would expect people to come up with an idea that says, "If I had the chance, I would do such and such."

Haigh: Much of the teaching today has to do with composition or metaphor, unlike 25 years ago, when all of the ideas were based on materials or technique. We have moved completely away from that, because the culture has become disillusioned.

Kalil: Actually, we haven't picked anything that is furniture. To me, the screen is more of a musical instrument.

Osborne: When you look at the different categories, everyone is using old materials to try to get new forms. The fact is that the highest level of what we saw was the metaphorical object.

Burdick: Part of this is because, in the main, architects don't have a strong sense of materials and the way they can be used. Then you fall back to a formal game. And from a formal point, that quickly takes you to fashion, and then the form is resolved within the current fashion. In which case these pieces are reasonably fashionable because we are in this period of reconsidering. But they do ask larger questions, even though they may not be able to answer them. . . . One thing that comes across loud and clear is that the schools are not teaching design history. Maybe 80 percent of the entries are repeats of existing designs. They're designing in a vacuum.

Haigh: What's frightening is that they haven't even discovered the history of the chair.

Kalil: But they're also not asking the larger question of the chair, which is that of sitting. They take it to a certain place and stop. Similarly, everything I've seen in the table category has nothing to do with the surface of the table, only with the base. The top is just "glued" onto it. The thing that seems to be missing is the ability to realize that the person designing the object has to use it also. The person's hand isn't involved in the object, which is designed for mass production. It's not designed for the idea of sitting in after that. We've shifted our egos into technology and say that it represents humanity.

Jiricna: And not a single attempt to use technology. People try to reject it instead, with no attempt to humanize it. In the 1930s, they tried to use the new techniques the best ways they could.

Kalil: In the 1930s we were celebrating the technologies and materials that were there for us to work with. We are now frightened of them.

Osborne: The whole idea of architects designing furniture is an idea based on what used to be. If I'm an architect in this time, I should do furniture too, so I can put my stamp on something other than architecture.

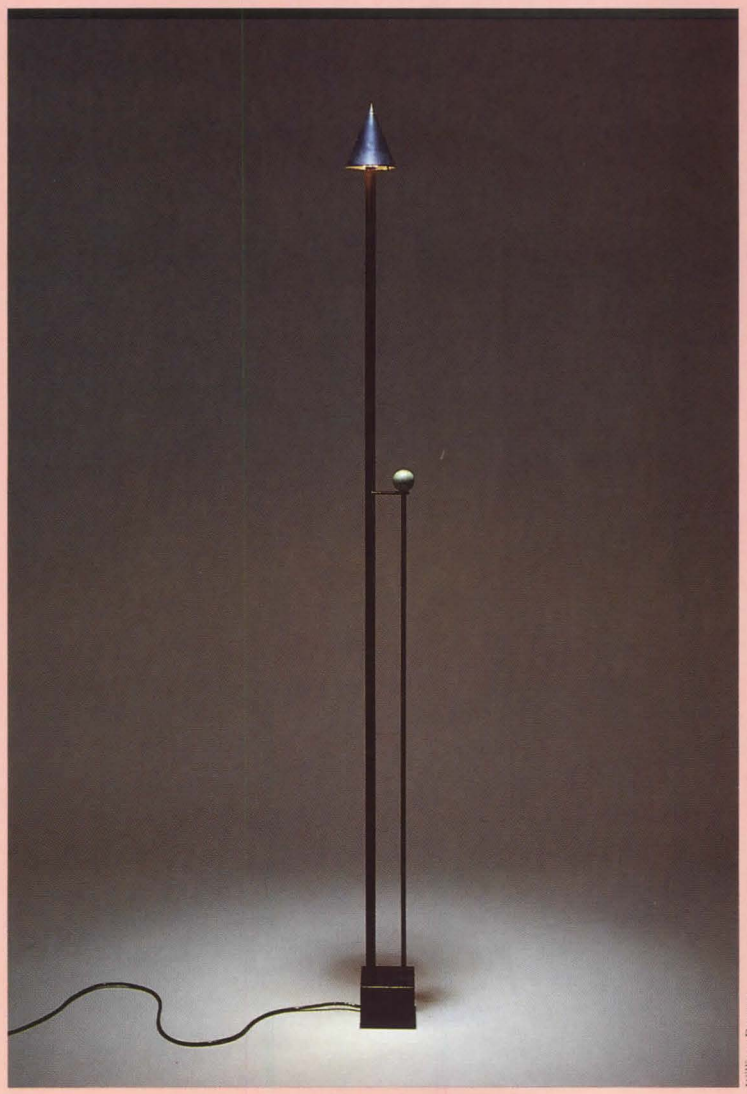
Jiricna: But most of the time, architects get involved with furniture design not because they want to, but because they cannot find the product that will go with the image they have designed. . . . But then it goes further and someone puts it in production and it becomes a standard product. And then, of course, it doesn't function as such.

Burdick: We are selecting by default, but when you discuss this, how do you handle it? I just want to encourage people to enter the competition; it isn't an impossible dream.

Osborne: The question comes back to P/A that a lot of your works come from student projects and students don't have a sense of history or the people are naïve about product design. So you see work presented that we've already seen in production. How do you attract professionals to contribute? You should limit the discussion by taking two or three categories and asking people to come up with definitive solutions. Focus the competition; change the topic each year. You'll get stronger solutions. It wouldn't be an invited competition, just limited in focus. You have to get people to think through the same problem. Then you can compare the entries.

Burdick: And you would also obtain something from the signals you would be giving out about what is acceptable. These aren't accidents, they are responses to what's been published over the last x number of years.

Scot Laughton, Tom Deacon
Toronto, Ontario



William Deacon

Project: This floor lamp is 69½ inches tall, with a halogen bulb that is turned on and dimmed by the rotating sphere. The spun aluminum cone, steel tube, and formed sheet base are finished in matte black, powder-coated epoxy; the brass sphere is patinated and sealed with wax. The designers' intention was to create an object which, while respecting concerns for function and potential production, begins to evoke, through the juxtaposition of forms and materials, a number of images that evoke ritual, totems, and wizardry. The Anglo-Saxon *strala* means a ray of light, a javelin or spear.

Jury comments
Burdick: This is just pure, delicious sculpture, beautifully and simply resolved.
Haigh: It has symbolic content but also considers technology to strengthen it; and it at least attempts a synthesis of the two. The fact that the sphere is also a switch makes for a double reading, and makes it a far more interesting object visually and technologically. It's the only one of the winners that addresses both issues.
Kalil: For me it is a fantasy about moonlight, and about reflected light and dreams, not about "light bulbs." It also has a real delicacy.
Jiricna: It's a sensible thing, not pretentious, a very simple light fitting. It isn't innovative from a techological point of view, but it is a very pleasant object. The sphere is a beautiful object when the light hits it. The lamp is quite sensitive, done with a great deal of simplicity, modesty, and design skill.
Osborne: I really like its proportions, and it has a real formal elegance. Seeing a multitude of these would be nice. . . . But it's light as sculpture, not light as light.

CITATION

Light & Space Associates, Ltd.
New York

Photos: Renee Cooley

Project: A light source, consisting of a very used 13-inch diagonal television, a rabbit-ear antenna, two 30-gallon, three-ply, 1.01 mm white trash bags, and twist ties. A corner is cut off the trash bags to accommodate the television cord, and the twist ties are used to attach the bags to the antenna. The light source is operated by turning the television set on and off. The flicker rate is adjusted with the channel selector as follows: Rapid–MTV; Average–news; Slow–PBS. The designers' intention is to provide the company of fire for daydreams.

Jury comments

Osborne: It's really theater. You want to see it not only as a single piece, but as a multiple. Its comment on design is that it's "bagging it" in a literal sense.

Jiricna: The impressive thing is that it is, in a way, a joke, almost painfully related to everyday life. But it certainly can't be considered as a useful object. It's just a very sharp comment on the environment in which we're all living.

Haigh: This is typical of a non-design attitude current in design; it used to be called ad hocism. Its idea is to turn a dying industrial object into a cerebral object. These are "art" ideas rather than "design" ideas—a reaction against technology, rather than an attempt to synthesize technology and meaning, which many industrial objects have lost.

Kalil: This is rather dynamic. It's somewhere between product and art, and the t.v. actually belongs to a constantly changing visual system. It participates in the viewer's activities, it doesn't just sit there. It seems to belong to the hearth.

Burdick: When form does not follow function, can it be design? The more we look at this combination of found objects, the more we like it. It obliterates original functions and transforms them into a new use.

Paul Ludick
New York

Project: A two-panel screen of unfinished pine, with each panel measuring 72 inches high, 18 inches wide, and 1½ inches deep. Two panels hinged together form one unit (photo shows two units). The structure of the bottom portion is intended to contain the wood, while the top portion is unconstrained, so that the wood can move naturally.

Charles Nesbit

Jury comments

Kalil: It really belongs to sound, the opportunity for which is implied in the structure. But it also has a silence that I respect. It is also the one piece that everyone responded to totally. It has a very strong transparency. It is something that doesn't need a title or a name attached to it in order to be valid; it has a certain timelessness.

Burdick: It is a perfect combination of materials and function all coming together in one product. The act of screening is rarely done with such three-dimensional simplicity.

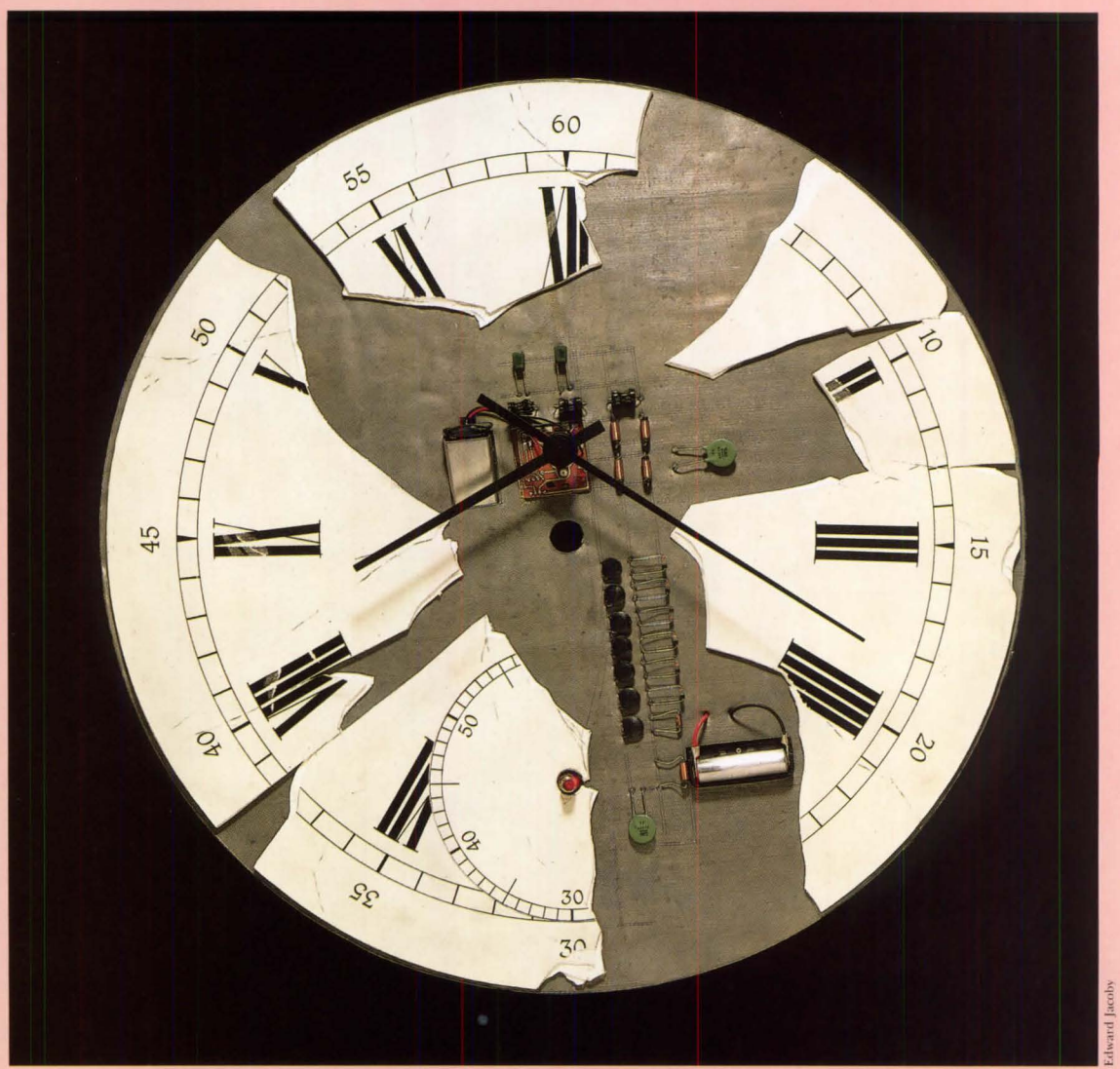
Jiricna: A screen is a useful object in any environment. There have been many designed, but this is designed with a tremendous amount of simplicity. It isn't quite up to the standards of an award winner, but it relates to the way that people move. It's a brilliant idea but I find the detailing lacking.

Osborne: It works as a single unit, but is even better when there are several. The design implies movement. It's a very sensual piece, and the combination of several at once could create an extremely sensual environment.

Haigh: It is elegant to a degree; it has a quality found in some of Harry Bertoia's sculpture. But its lower half is not as elegantly resolved as its upper half, which relies on the natural occurrences of materials in an elegant way. On a functional level, I don't think a bifold screen will work. Usually, you have several narrow panels for stability; two wide ones are potentially unstable.

HONORABLE MENTION

Sheila Kennedy
Boston, Mass.



Edward Jacoby

Project: Analog clock with quartz crystal mechanism. It measures 20 inches in diameter, is made of white-enameled iron, and runs on one nine-volt and one 1.5-volt battery. No domestic furnishing has changed more dramatically than the clock. Severed from its traditional mechanical movement, the clock face becomes arbitrary, dependent only on the dictates of fashion and public taste. These changes have raised questions that pertain to the entire field of industrial design. This project addresses the problem of form and its meaning over time, and questions the prevalence of nostalgia in contemporary design. It accommodates the economic and production demands of the quartz mechanism, yet recognizes that the circular clock face is no longer germane to the form of the clock. The overlap and crossing of these two contexts occurs on the face of the clock as well as from front to back, and speaks of the curious condition in which we find ourselves today.

Jury comments

Kalil: Maybe there are better examples of this idea, but this one seems to be looking at time not just from the point of view of changing technology, but it seems to imply a language shift, in the way we communicate about things. However, it did go back to the fact that hands turn in a circle, and that's where it fails. But it *implies* something else.

Osborne: It's very much an artifact. I like its scale, and the presence of digital and analog juxtaposed with the asymmetrical placement of the hands, breaking the old conception of time. This and the television are commentaries as much as they are designs.

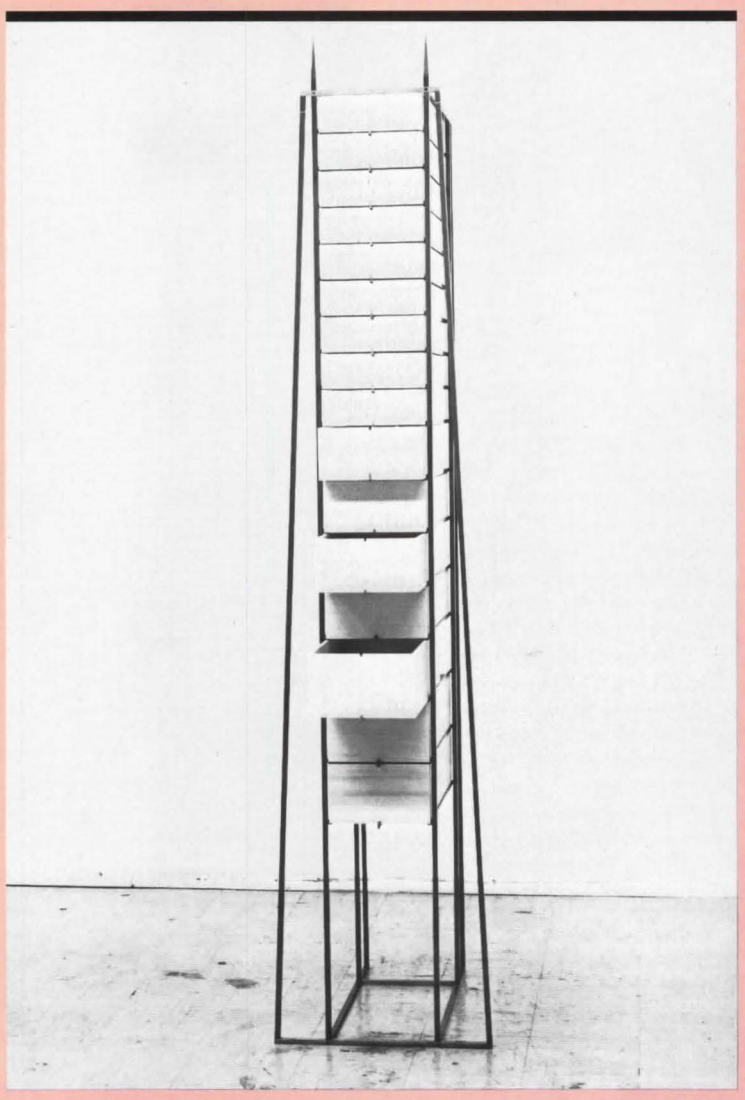
Jiricna: I actually like it. It's very nicely presented, with a great deal of design skill. One is always living in a period of time when new ideas are overlapping the old, but are still dependent on them, so we can't introduce digital clocks exclusively and are now living with both. But the idea of two different approaches is well presented.

Burdick: The clock tower at Cooper Union, where we are judging, made us aware of how much we would miss the "hands of time." This clock reveals and expresses technological change.

Haigh: I've seen this idea before, both in Franco Albini's 1936 radio, in which the works were contained in a clear box, and in Daniel Weil's 1982 *Morbid Clock*, which was contained in a plastic bag. This clock addresses two ways of reading time, which is a comment on technology. The digital clock is nonlineal; it destroys the sense of past or future, which puts it right into the Post-Modern discussion. But it's not a new discussion. It's elegantly done, and a nice object. That puts it in the same category as the television in the bag. It chooses not to comment on technology, and is very much a one-off, ad-hoc thing. While it's fun to have, it worries me, because if all we had were commentary objects, our culture wouldn't produce anything new.

Alexander Fischer
Zurich, Switzerland

Project: A drawer tower, 89.4 inches high, 26.6 inches deep, and 19.7 inches wide, with a structure of right-angled and square-section steel, and 16 fir drawers of the same length but different heights. The drawers are held by angle irons and can be moved back and forth without a locking device. Two steel struts—on the lateral axis in front, and the longitudinal axis in back—stiffen the structure. The drawers form small volumes that can be arranged in different rhythms within the structure.



Susana Bruell

Jury comments
Haigh: I like it as an object. It falls into the "domestic totem" category—casegoods moved away from the wall as an object to be approached from any side. It understands the idea of totem by the addition of the finials. I worry that the designer doesn't understand the idea of drawer-making, in that he doesn't address the side of the drawer in the sense of developing it decoratively. Maybe he didn't want to do that, but it was a missed opportunity.
Kalil: This is a funny piece. I respond to it, again, because of its delicacy. Its mass becomes weightless. It doesn't have a front, back, or side; it's totally three-dimensional. It could have been a very *heavy* piece, but instead it comes off as a sort of Giacommetti figure, with a sense of movement. It isn't just standing still.
Osborne: This is the least interesting to me. Charles Eames did this at another scale back in the 50s, and Shiro Kuramata made it a contemporary focal point [in his "swaying" chest of drawers]. I don't dislike it, but I don't love it. It's also hard to justify because it needs a certain amount of space in order to be seen as freestanding.
Jiricna: I don't really think it was done with a great deal of design skill. It's an idea that has been done before. I find it rather difficult to defend. It is an attempt to make an object, but there are similar designs that have already been done that are better in terms of detail and idea.
Burdick: This appeals to our love of small drawers, each containing special items that we all seem to have, but have no place to place.

Other entries in this year's competition proved to be as valuable as what did win, in providing insights into the current issues facing those who design furniture.

One of the questions most frequently asked about P/A's International Furniture Competition is, "Why don't you publish some of the other entries?" While it is impossible to show a substantial portion of this year's 715 other submissions, the 14 illustrated here seem to point, in an exemplary way, to a number of identifiable currents of thought in contemporary furniture design. Some of these designs were created for a specific client, while others are purely hypothetical explorations. What made them stand out for us, even if they were not premiated by the jury, was the skill with which they addressed the questions they raised—even if they didn't answer them.

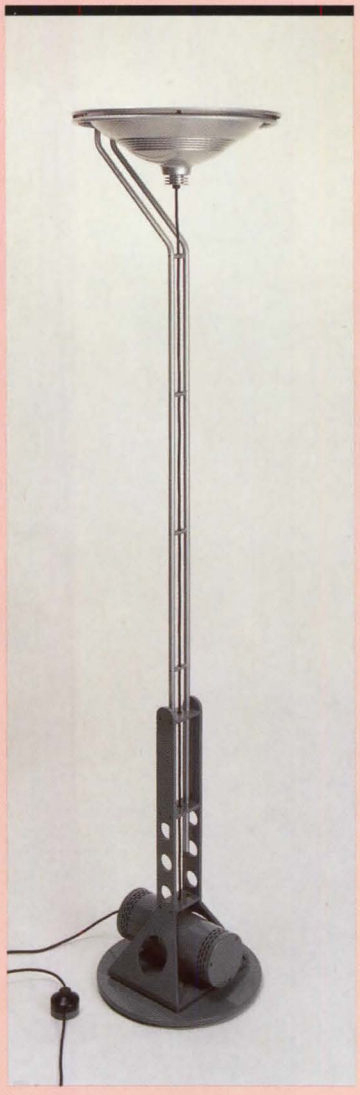
Quite a few of this year's entries displayed a concern for expressing structure, usually in metal. The form can evoke images of High Tech, as in Troughton McAsland Architects' standing lamp (1); it can comment on traditional forms, as in Radoslav Opacic and Anais Missakian's grandfather clock (3); or can create purely sculptural forms, as in Erick K. Williams's graceful black steel chair (4).

Two examples of the current tendency to romanticize the machine are found in a complex wood and metal arm lamp (5) by Johannes Marinus Knoops, a 1986 P/A Furniture Award winner, and in David Zelman's Hyperion suspended lamp (2), a rather otherworldly creation of steel and aluminum.

As in past years, the competition has seen quite a few elegant reinterpretations of existing design models. The sleek lacquer-finished desk system by Charles Pfister & Associates (6), the Art Moderne-inspired wood chairs and table (7) by Alan Wanzenberg and Bruce Bananto of Johnson, Wanzenberg & Associates, and Bruce Aaron Parker's beautifully detailed, Craftsman-inspired wood desk (8) are three of the most notable examples, while David J. Olson's update of the traditional "snowshoe" chair (9) examines the question in a lighter vein. This year there were, again, many entries that explored the issue of furniture as sculptural object. Richard Deutsch's slate table (10) is made of stone slabs that seem to balance almost impossibly on one another, while the wire-mesh-covered steel chair (11) by Cockrell Design explores sculptural tension in another manner.

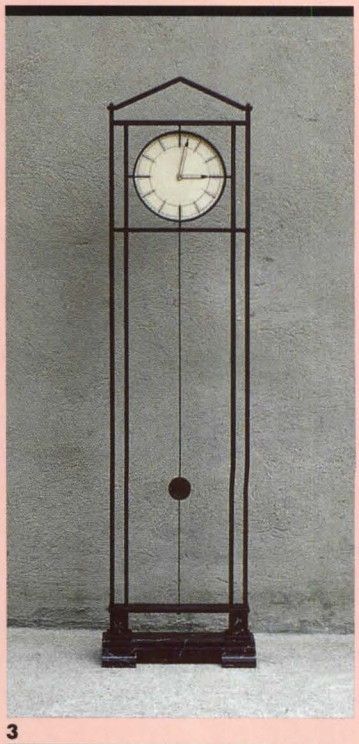
Finally, designers' interest in the creation of "commentary" furniture and designs created from "found objects" continues to be strong, as demonstrated in the "dog table" (13), by Lake/Flato Architects Inc., which transforms a piece of folk art into a six-legged table. The telephone stand by Martin Roy Mervel/SLAB (14) seems to have been a surveyor's tripod in its previous incarnation, and Michael Pinkus's improbable combination of Old Master reproductions into a chair (12) offers a wry comment on the idea of functional art.

As is the case with this year's winners, very few of these designs are intended for production; instead, most are one-off designs, reinforcing the jury's observation that the current state of furniture design has more to do with furniture as art than with furniture as product. ***Pilar Viladas*** ■



John Donat

1



Radoslav Opacic and Anais Missakian

3

Eric Williams

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Jon Jensen

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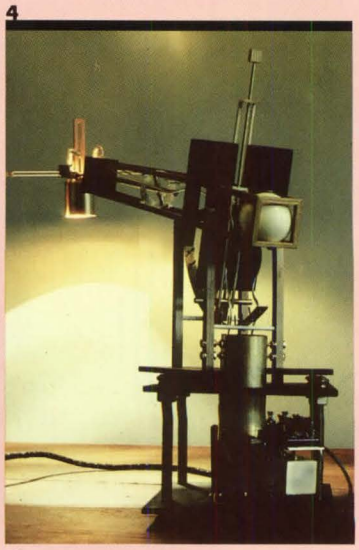

Johannes Marinus Knoops

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Frank Wing

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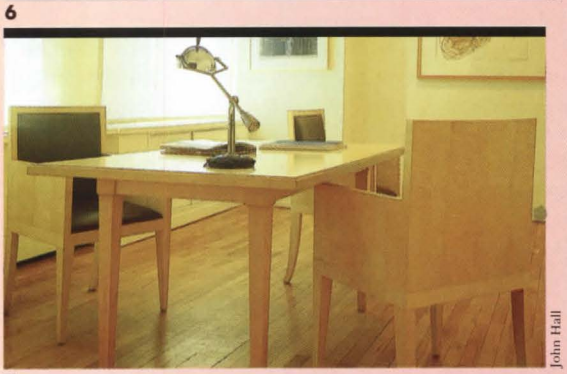

John Hall

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Tony Grant

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Michael Pinkus

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Scott Frances

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Keri Pickett

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David Rigg

11

Rick Kroninger

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Tom Bonner

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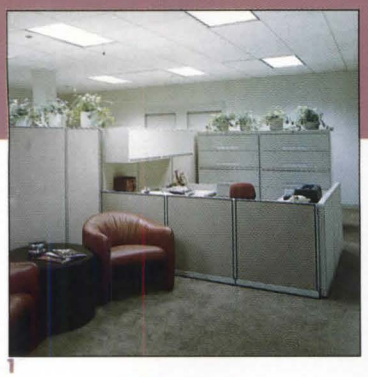

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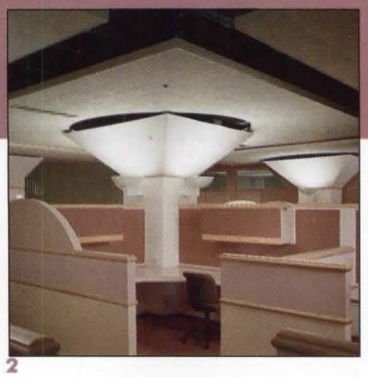
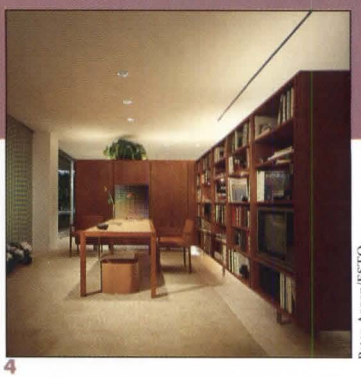


2

Hedrich-Blessing

3



Peter Aaron/ESTO

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Peter Aaron/ESTO

P/A Technics
Heads Up

Ample is the information about ceiling products. What's harder to find is information about their application in various building types: where to use certain ceilings and why.

CEILINGS rarely attract our attention unless they are somehow unusual or disfunctional. It's not hard to imagine an unusual ceiling, but what of one that doesn't work? What does that mean and how is the problem avoided?

A ceiling is obviously disfunctional if it falls down, usually the result of some flaw in its manufacture or installation. A more common and less obvious failure is the ceiling that doesn't meet people's needs, by being too costly, or too reverberant, or simply too hard to maintain. While architects have some say over both the selection and installation of ceilings, the former remains a prime responsibility and one that is more difficult than it may at first appear.

What makes ceiling selection so difficult is both the number of available options and the variety of possible applications. There are at least two dozen generic types of ceiling systems and well over two dozen different building types, each of which has its own ceiling requirements. The possible combinations quickly become unmanageable without some basis for evaluation.

One approach bases the evaluation of ceilings on five criteria: cost, aesthetics, acoustics, flexibility or accessibility, and durability or maintainability. The five criteria apply to almost every building, although their relationship and relative importance vary considerably among different types of buildings.

Such an approach has little prescriptive value; it will rarely narrow the options down to a single product. But it does help eliminate the inappropriate options and, perhaps more important, put the emphasis where it belongs: on evaluating the problem to be solved before any product is selected.

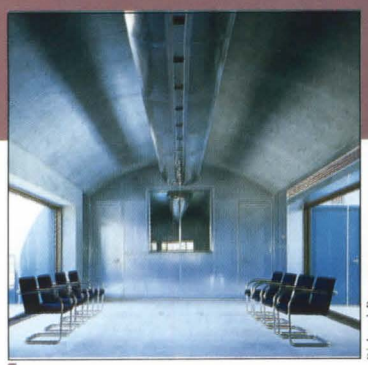
Offices

Among the criteria that dominate the selection of the typical office ceiling—cost, acoustics, and flexibility or accessibility—several conflicts exist. For example, the acoustical goals in open offices include both reducing the reverberation of sound within a space and the transmission of sound into adjacent spaces. Noise reduction in a space largely depends upon the use of absorptive ceiling and partition materials and the avoidance of hard surfaces, such as prismatic lenses on lighting fixtures, in locations that would bounce sound from one workstation to another. (The recommended noise reduction coefficient or NRC of office ceilings is .65 to .75.) Providing background noise (up to a noise criterion or NC of around 35 to 40) with masking sound from the HVAC system or a sound system also helps reduce the intelligibility of overhead conversations.

The least costly and most common ceiling solution in such cases is a suspended mineral fiber lay-in system. But a better option, argues

The most common ceiling for the general office remains mineral fiber acoustical tile laid in a 2' x 4' suspended grid (1). Its popularity rests on its low cost and the accessibility it gives to the plenum space, although its relatively high transmission of sound requires that some sort of sound barrier or masking system be installed in a plenum space for the adequate isolation of enclosed rooms. Concealed spline acoustical tiles offer a more monolithic appearance but less access to the plenum space, a problem overcome by Booth/Hansen & Associates in their placement of plenum openings among the clusters of acoustical tiles in the Chicago offices for Helene Curtis Industries (2).

Corporate meeting rooms require a more reverberant, acoustically isolated space than that of the typical office. In the meeting room for The Continental Corporation by Duffy Incorporated in New York City (3), a wood paneled ceiling provides the necessary sound reflection and resistance to sound transmission. The at-home office, such as that in the Powell apartment by Powell/Kleinschmidt Architects in Chicago (4), also allows the use of a more monolithic, reverberant ceiling of gypsum board because of the few services in the plenum and the few sources of distracting noise in most residences.



Richard Bryant

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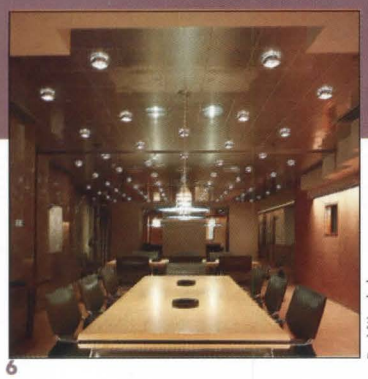

Paul Warchol

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Chas McGrath

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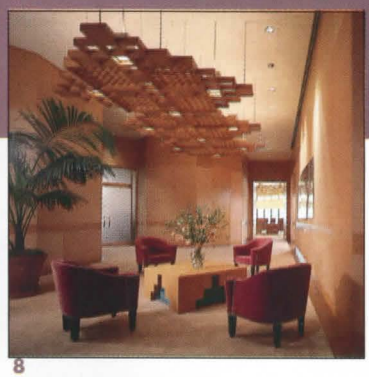

Peter Aaron/ESTO

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Mark Holden of Jaffe Acoustics, "is a fiberglass lay-in system, which has a higher NRC and is more acoustically transparent, letting more masking sound through from the plenum." The problem, notes Holden, is that fiberglass "can cost more than mineral fiber."

The acoustics of the typical office ceiling also can conflict with its flexibility and accessibility. Whatever suspended acoustical tile ceilings may achieve in the reduction of noise in a space, most offer little resistance to the transmission of sound from one enclosed space to another. Masking sound can alleviate the problem somewhat. But a more complete acoustical privacy comes only with the use of a ceiling material such as gypsum board, which has a higher sound transmission class (or STC) rating; the use of barriers such as quilted fiberglass batts in the plenum around every room; or the continuation of partitions up to the floor or roof deck above, with transfer silencers at all duct penetrations to reduce HVAC-borne sound. (An option that does little to reduce sound transmission, claim some acousticians, is the placement of fiberglass batts on top of the acoustical tile ceiling. "It only makes the plenum a lot less reverberant," observes Mark Holden.) Each of these efforts at reducing sound transmission among offices, though, results in higher costs and some reduction either in the accessibility of the ceiling plenum or the flexibility of office arrangements.

Aesthetics has become a more important factor in the selection of office ceilings in recent years. That is due, in part, to the competition for tenants in overbuilt office markets, where a slightly higher quality office standard can become a real incentive for the renting of space. But it also is due to a concerted effort among acoustical tile manufacturers to improve the appearance of their products. Where white fissured or perforated tiles used to dominate, there now exists a wide range of patterned, textured, and colored tiles from which to choose—at only a slight increase in cost. The change is a result of new manufacturing techniques that involve the casting, molding, and integral coloring of mineral fiber panels. It also is the result of an increasingly consolidated and mature acoustical tile industry seeking new marketing strategies. "The functional performance of acoustical ceilings has become well established," says Connie Petersen of USG. "The new challenge is in the area of aesthetics."

Ironically, as office ceilings have become more varied in appearance, their newfound role as a reflecting surface for the daylighting of buildings limits the colors and textures used. The whiter the color and smoother the surface of a ceiling, the more effective it is in reflecting natural light into a space and in reducing a building's dependence on artificial illumination.

The criteria for selecting ceilings change somewhat in the executive office. Acoustical privacy and a memorable image often become more important than in the general office, while the cost of the ceiling, the flexibility of room arrangements, and the accessibility to the plenum become less important. The result is considerably more freedom in the selection of ceiling systems. Plaster or gypsum board ceilings, with their resistance to sound transmission, provide the desired acoustical privacy and a monolithic appearance at a modest cost; the major drawback is their poor sound absorption capacity. With added sound absorption placed on the walls of a room, however, it becomes possible to reduce the reverberation in a room even with such reverberant ceilings. (The walls in smaller rooms also offer more surface area and sometimes a more effective place for acoustical treatment.)

Factors in ceiling selection

Building type	Open office	Executive office
Cost	Low to moderate	Moderate to high
Acoustics	Both noise reduction and low sound transmission very important	Low sound transmission very important
Aesthetics	Less important, except in public areas or highly competitive markets	Very important, monolithic or custom ceilings common
Flexibility Accessibility	Very important because of frequent plan rearrangements	Less important because of fewer room rearrangements
Durability Maintainability	Less important, in non-abusive office environment	Important, higher quality of materials common

In executive offices and board rooms, aesthetics and sound isolation are usually the most important factors in the selection of ceilings. The concrete barrel vault ceiling in the board room of the Museum of Contemporary Art in Los Angeles by Arata Isozaki & Associates (5), while poor in noise reduction, creates a stunning image, as well as a durable, easily maintained ceiling. If more sound absorption is desired, perforated metal tiles, such as those used by Rivkin/Weisman in their design for the offices of the Géneralé Bank in New York (6), offer one option. Sound penetrates the perforations in the surface of the tiles' reflective aluminum face and is absorbed by the tiles' porous backing material.

In a conference room for McKone & Company in Las Colinas, Texas, designed by Deborah Natsios of Natsios & Lee Associates (7), the ceiling consists of ¼-inch sheets of plywood faced with plastic laminate and held in compression by turnbuckles and yacht rigging, creating a sound reflective surface within a larger, less reverberant room that has a ceiling of acoustical tile. Another version of this double-ceiling idea is employed by Duffy Incorporated in the executive offices of the Continental Corporation in New York (8). There, a hanging wood baffle system conceals lighting fixtures and creates a more intimate scale, while a second, acoustical tile ceiling reduces sound reflections within the space.


Celotex/Hedrich-Blessing
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Steve Rosenthal
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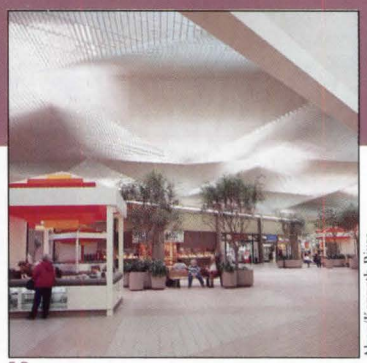
Alcan/Kenneth Rives
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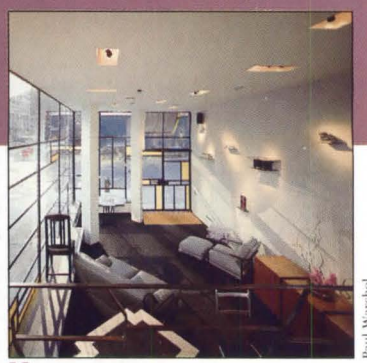
Paul Warchol
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Factors in ceiling selection		
Building Type	General retail	High end retail
Cost	Low to moderate	Moderate to high
Acoustics	Some noise reduction necessary	Some noise reduction necessary
Aesthetics	Less important, except in more upscale stores	Very important, as part of ambience
Flexibility Accessibility	Accessibility to plenum important	Less important because of few alterations to a given shop
Durability Maintainability	Important, greater exposure to impacts	Important, higher quality material common

Low-end retail operations, such as this Byerlys Supermarket in St. Louis Park, Minn. (9), frequently use lay-in acoustical tile ceilings because of the system's low cost and accessibility. The fact that such operations often have their ceilings installed before the building is enclosed requires their use of materials such as fiberglass or a humidity-resistant mineral fiber. An increasingly popular ceiling for retail buildings is an exposed (and usually sprinklered) metal deck, such as that used by Benjamin Thompson & Associates in the Fulton Market at South Street Seaport in New York (10). Noise reduction with such ceilings can be accomplished with sound-absorbing banners, panels attached to the roof surface, or insulation inserted in the perforated ribs of the deck itself.

Linear metal pan ceilings, and those of gypsum board or acoustical tile, have become common in shopping malls. These metal ceilings offer not only good sound absorption, durability, moisture resistance, and accessibility to the plenum, but a variety of colors and shapes, as seen in the Padre Staples Mall in Corpus Christi, Texas, by Architecture + (11).

The high end of the retail business, in shops such as that designed by Steven Holl for The Pace Collection in New York (12), usually aims at a customized appearance, for which there is almost no substitute for plaster or gypsum board ceilings. Such shops rarely have servicing or flexibility needs.

Other options put the sound absorption back on the ceiling. Concealed grid mineral fiber ceilings, for example, have a monolithic appearance and an absorptive surface. Perforated metal, fabric-wrapped, or wood-faced panels, and the various wood or metal baffle or slat systems available basically serve to hide a sound absorptive material such as fiberglass or wood fiber located just behind their surface. (Depending upon the sound transmission rating of the backing materials, such ceiling systems may require the use of full-height partitions or plenum barriers to insure acoustical privacy.)

Retail

Retail buildings have as varied a set of ceiling requirements as offices. At the low end of the retail business—among strip shopping centers and budget stores—cost, accessibility, and durability rank among the most important selection criteria. The first two factors, low cost and accessibility to the plenum, encourage the frequent use of exposed grid, mineral fiber ceilings. But the need for durability sometimes alters that choice. "Many low-end retail buildings," says Robert Spalding of Armstrong, "have their ceilings installed before they are closed in or fully heated—a high-humidity situation that can cause the standard mineral fiber panel to sag." Fiberglass acoustical tile and metal ceiling panels offer a greater resistance to humidity, although at a higher cost. A fairly recent innovation has been the development of a more moisture resistant mineral fiber panel, capable of withstanding relative humidities up to 85 percent.

While retailers have traditionally not placed much importance on the appearance of ceilings, preferring to put the visual emphasis on their merchandise, that has changed in recent years. "The trend in the retail market," notes Kenneth Walker of The Walker Group/CNI, "is toward the spending of more money for ceilings. Even budget stores have become more interested in creating an up-scale ambience and have realized that the ceiling offers the best opportunity for that." Patterned acoustical tile ceilings, for example, have become popular in such stores to define traffic patterns or delineate various departments. Also, since noise reduction is hardly a factor—"retailers often like a fairly reverberant space," notes Walker—the use of the exposed (and sprinklered) roof deck, with or without acoustical treatment, and metal tile or pan ceilings have become more common in stores.

The concourses in shopping malls present a somewhat different set of priorities for ceilings. Cost, durability, and accessibility remain important considerations, but the aesthetics of the ceiling becomes a much more important factor. In some cases, the ceiling materials such as mineral fiber or gypsum board serve as a neutral background to banners, signs, or lighting that create the image for a mall. In other cases, the ceiling itself becomes the focus. Fiberglass or reinforced gypsum moldings have become common as imitations of ornamental plaster; metal pan ceilings have become popular for the undulating shapes and reflective surfaces they offer; and metal or wood baffle systems have become more frequently used when greater accessibility or sound absorption is needed.

At the high end of the retail business, in the specialty shop or boutique, aesthetics seem to count for everything; the design and decor become a major form of advertising. The relative unimportance of other factors, though, is what allows that aesthetic freedom. Most shops have few services in their plenum that require accessibility. They often have too short a life to demand much flexibility or


Balthazar Korab

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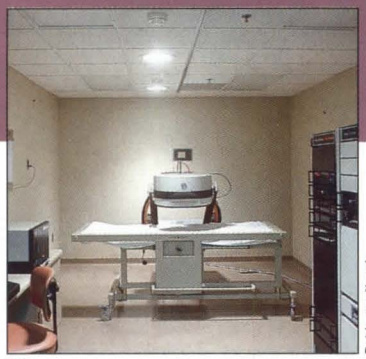
Balthazar Korab

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Peter Aaron/ESTO

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Paul Ferrino

16

even durability from their ceiling. And they usually demand a live space acoustically, allowing the use of any number of hard-surfaced ceiling materials.

Hospitals

Hospitals are about as complicated in their ceiling requirements as shops are simple. As in the typical office, hospitals face a conflict between acoustical privacy on one hand and the flexibility and accessibility of ceilings on the other. The large amount of mechanical and electrical equipment needed to service most rooms in a hospital makes easy access to the ceiling plenum mandatory, while the need to alter room arrangements quickly, especially on the diagnostic and treatment floors, makes a ceiling's flexibility equally important. Yet, acoustical privacy, particularly in examination and patient rooms, also is a priority, with recommended STC ratings as high as 50.

The solution in hospitals, unlike that in the typical office, is rarely a single ceiling system. Patient and exam rooms will often have plaster or gypsum board ceilings, since they have fewer servicing needs and undergo fewer rearrangements, or suspended acoustical tile ceilings with plenum barriers or partitions that run up to the floor or roof deck above.

Operating rooms and other spaces requiring strict cleanliness often have plastic-faced acoustical tile ceilings. "The plastics used," says Robert Spalding of Armstrong, "include vinyl, which is heavier and more durable, or Mylar, which is thinner and, more acoustically transparent, allowing more sound absorption." If an absolutely dust-free environment is required, the plastic facing can extend over the ceiling's lay-in grid, but, adds Spalding, "that has the drawback of limiting access to the ceiling plenum." In the kitchens, gypsum board, metal panel, or ceramic-bonded acoustical panels are other options.

Amidst all of these performance requirements for ceilings, aesthetics is often a secondary issue—unfortunate because the hospital, of any building type, has by far the largest number of people on their backs, staring at the ceiling. While the ceiling industry has paid increasing attention to the appearance of its products, much of that has focused on products for offices or retail operations. Certainly one challenge facing that industry as well as the design community is how to both improve and vary the appearance of high performance ceilings such as those required in hospitals.

Residential/Lodging

Gypsum board has become the dominant residential ceiling material for just reason. It is modest in cost, about equal to that of the high-end acoustical tile ceilings; has a good sound transmission rating, important in the close confines of most houses; and requires little maintenance, which is what most residential ceilings get. The drawbacks of a gypsum board ceiling—its reverberancy and rigidity—matter little in a building type with small rooms and few services in the ceiling plenum. Wood ceilings have most of the same pros and cons, except that their higher cost makes them accordingly less common.

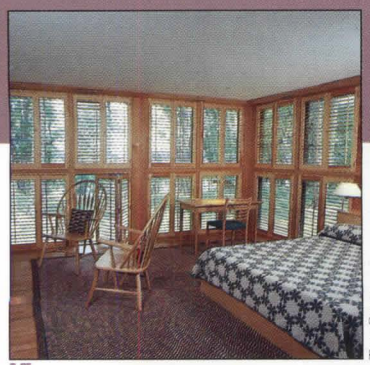
Perhaps the biggest change to come to the residential ceiling is its potential as an energy-conserving element. The installation of phase change materials above the ceiling allows it to serve as a heat sink, absorbing solar heat from daylight reflected onto its surface and reradiating that heat back into the space when temperatures drop. Phase change materials have hardly become regular household items. But their cost, efficiency, and reliability have improved to the point

Factors in ceiling selection

Building type	Hospitals	Hotels
Cost	Low to moderate	Low to moderate
Acoustics	Noise reduction and low sound transmission very important	Low sound transmission very important
Aesthetics	Important, although often not a priority	Very important, monolithic ceilings common
Flexibility Accessibility	Access to plenum very important	Less important, few room rearrangements except meeting rooms
Durability Maintainability	Moisture, bacteria and fungal resistance very important	Important, low maintenance materials desired

Hospitals, such as that designed by Albert Kahn & Associates for the University of Michigan (13, 14), have a range of ceiling requirements, from the acoustical isolation needs of patient rooms (13) to the dust- and germ-free conditions of diagnostic and surgical suites (14). The suspended acoustical ceiling remains the most common system in hospitals because of its flexibility, accessibility, and sound absorption, but the type of acoustical panels used varies from fiberglass to plastic-faced or ceramic-bonded mineral fiber, depending upon their location within the building. Perforated tile or linear metal ceilings also have been used with increasing frequency in hospitals, particularly in public spaces, because of the product's durability, sound absorption, and ease of cleaning.

Houses have far fewer ceiling requirements. Sound isolation of one room from another is probably the most important consideration in selecting residential ceilings, with a customized, monolithic appearance running a close second. Gypsum board (15), as used in the Powell apartment in Chicago by Powell/Kleinschmidt, or wood (16) as used in the Brooks-McLan house in Starksboro, Vt., by Turner Brooks are among the most common residential ceiling materials because of their high sound transmission class rating and their flexibility of form.


Tom Crane
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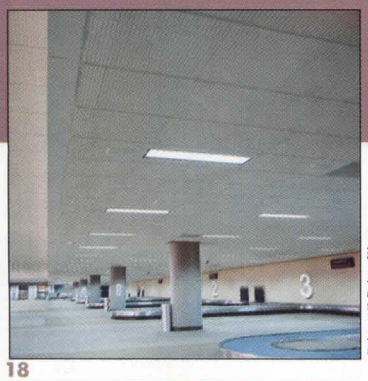
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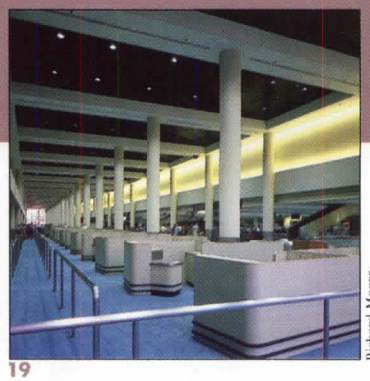
Richard Moore
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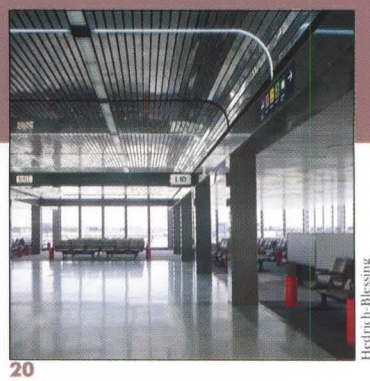

Hedrich-Blessing
20

Factors in ceiling selection		
Building type	Transportation terminals	Industrial buildings
Cost	Moderate	Low
Acoustics	Noise reduction very important	Noise reduction very important
Aesthetics	Very important, memorable image desired	Less important
Flexibility Accessibility	Very important, frequent rearrangements of operations	Very important, frequent rearrangements of operations
Durability Maintainability	Impact resistance very important	Chemical, moisture, and impact resistance very important

For hotels, acousticians recommend a floating floor and a gypsum board ceiling, such as that used in the Middleton Inn in Charleston, S.C., by Clark & Menefee (17), ideally mounted on resilient channels.

Mineral fiber ceilings offer a low-cost solution for airports. When patterned tiles are used, as in the new baggage claim area at the Ft. Lauderdale airport (18), they can direct passengers or define functional locations. Metal or wood grids or baffles offer another durable and highly flexible option, as shown in the arrivals area of LAX's international terminal by Pereira/Dworsky/Sinclair/Williams (19). But metal pan ceilings, such as the ceiling used in the new Delta concourse at O'Hare airport by Perkins & Will and Milton Page & Associates (20), have set the standard, offering durability, flexibility, and sound absorption.

In dust free factories such as in the microchip assembly area of Data IO in Redmond, Wash., by the NBBJ Group (21), suspended acoustical tiles, often plastic-faced, are frequently used. In buildings aimed at heavier industries, exposed metal decks, such as the speculative manufacturing plant in England designed by Richard Rogers (22), or concrete slabs are the norm. Sound-absorbing materials such as cellular glass or sintered aluminum, which are moisture, chemical, and impact resistant, can be attached directly to the ceiling's surface.

where they may indeed become quite common with the next significant rise in energy prices.

Hotel guest rooms present a very different set of ceiling requirements, with cost and acoustics as important and often conflicting factors. Many hotels use, as the ceilings in their guest rooms, the underside of the concrete floor slab, coated with a paint containing particles that supposedly increase the surface's sound absorption. Often less expensive than even an exposed grid mineral fiber ceiling, such a ceiling does hide the imperfections in the underside of the slab and presents a fairly durable, easily maintained surface. But it does little either to reduce the noise level in a room or, more important, to reduce the impact noise from the floor above.

The solutions to good acoustics in hotel rooms all seem to involve greater cost. Acousticians recommend either the installation of a floating floor or a heavily padded carpeting and/or the installation of a dropped gypsum board ceiling supported on resilient channels.

Transportation

Transportation buildings such as airport, train, or bus terminals suffer most from the noise and abuse of large numbers of people—hence, the durability and sound absorption of the ceilings become critical. In high-ceilinged spaces, sound absorption dominates. It's possible to use an acoustically reflective ceiling material such as gypsum board in such spaces if enough absorption exists in the walls, but in many cases, those surfaces are even more reflective than the ceiling. Sprayed-on acoustical plaster, whether cellulose, gypsum, or fiberglass-based, offers a very low-cost, sound-absorbent option for out-of-reach ceilings, but it makes the ceiling look fuzzy and can pose a maintenance problem since such materials tend to pick up dirt, expecially near air registers, and are not easily cleaned. Another low-cost material is wood fiber set in a cement binder. "While not as efficient acoustically as fiberglass," says Mark Holden, "it offers some of the cheapest sound absorption available." Other, more expensive sound absorbent ceilings used in such situations include concealed grid mineral fiber or metal pan systems.

In the concourses and waiting areas of terminals, though, metal ceilings—either perforated tiles or linear pans—have become ubiquitous. They offer considerable resistance to impact or vandalism, the ability to be used indoors and out, and the capacity for sound absorption when backed up with insulation. They also have an aesthetic not inappropriate to the transportation vehicles served by such buildings. While having unit costs two to three times that of mineral fiber panels, these metal ceiling systems have still captured a significant (and the fastest growing) segment of the ceiling industry.

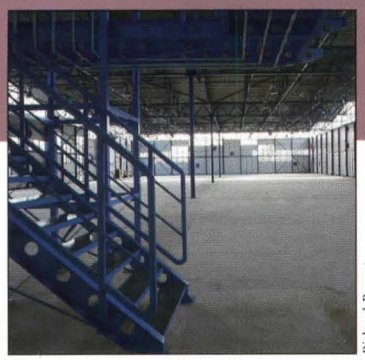
Industrial

In industrial buildings, unlike most other building types, the aesthetics of the ceiling counts for very little. Simply leaving the roof deck and all of the plenum's mechanical and electrical equipment exposed is the least costly and most common solution in most factories. But that is not always the best solution. In high-tech industries, for example, the creation of dust-free manufacturing areas requires an air-tight ceiling; metal or plastic-faced mineral fiber panel systems are among the ceilings most often used in such buildings.

Where machinery is used, the acoustics of an exposed roof deck can become intolerable. Some of the material used for industrial acoustics includes cellular glass or sintered aluminum panels, which

Dick Busher

21



Richard Bryant

22

trap sound energy in their open cell structures. Both materials offer considerable resistance to moisture, chemical, or ultraviolet attack, but have a limited size and are not particularly attractive. Open-cell foams also offer considerable sound absorption at a lower price, but their susceptibility to damage and combustion demands that they be located in out-of-reach and controlled locations.

The above materials are usually adhered to the surface of the roof deck. Another approach incorporates the sound absorption in the structural deck itself with wrapped fiberglass insulation in the perforated ribs of the metal deck ceiling or in the space between the ribs, covered by a perforated metal plate.

Selecting Ceilings

This by no means exhausts the possible combinations of building types or ceiling systems. Nor do the five criteria—cost, aesthetics, acoustics, flexibility, and durability—exhaust the measures against which various ceiling systems can be judged; market surveys, for example, indicate that the requirements of local building and fire codes and the reputations of specific manufacturers rank among the major factors that designers consider when selecting ceilings.

What the above exercise hopefully shows is the value of such an evaluative process. Many people, in and out of the ceiling industry, comment upon the wide range of constraints that ceilings must address; problems, they say, arise when ceiling materials or systems are selected without taking all of the relevant issues into account. The above evaluation, in most cases, must be followed by a finer grained evaluation, based upon the specific requirements of a space and its users. But a method such as this at least keeps the number of ceiling options to consider from going through the roof. ***Thomas Fisher*** ■

Acknowledgments

We would like to thank the following people for their contributions to this article: Mark Holden, Jaffe Acoustics; Kenneth Walker, The Walker Group/CNI; Walter Storm, Storm Marketing Research; Robert Spalding, Armstrong; Donald Carwile, Celotex; Connie Petersen, USG; W.E. Martin, Alcan; Karen Jones, Donn.

Further Reading

There are few general references on ceilings; the best is the chapter on ceilings in Sweet's Catalog's Selection Data volume. More specialized guides are available from various associations, such as the *Ceilings Systems Manual: Air Distribution and Lighting* (Technical Manual 10-A), published by the Association of Wall and Ceiling Industries International, 25 K Street NE, Suite 300, Washington, DC 20002. A good monthly magazine on the subject is *Walls and Ceilings*, 14006 Ventura Blvd., Sherman Oaks, CA 91423.

See Technics-Related Products and Literature, p. 130.

Background noise and sound absorption levels of ceilings

Type of room	NC Noise criteria (Background noise level)	NRC Noise reduction coefficient of ceilings
Open office	35-45	.65-.75
Semi-private office	30-35	.65-.75
Executive office	20-30	.65-.75
Conference room	25-30	.65-.75
Classroom	25	.65-.75
Stores	35-40	.65-.75
Hospitals	30	.65-.75
Shopping mall concourse	40-45	.65-.75
Rural bedroom	20	.45-.65
Suburban bedroom	25	.45-.65
Urban bedroom	30	.45-.65
Rural living room	25	.65-.75
Suburban living room	30	.65-.75
Urban living room	35	.65-.75
Hotel guest room	25-35	.45-.65
Transportation	40-45	.65-.75
Industrial shop	45-55	.75+

Typical noise levels		Typical NRC of materials	
Watch ticking	20	Concrete	.0
Quiet garden	30	1½" Gypsum board	.5
Quiet house	42	Plywood	.15
Quiet street	48	¾" Lay-in acoustical tile	.95
Private office	50	2" Lay-in wood fiber board	.65
Open office	60	1" Sprayed cellulose on concrete	.75
Normal conversation	62		

Sources: Concepts in architectural acoustics, M. David Egan, McGraw-Hill, NY, 1972. **Environmental acoustics,** Leslie L. Doelle, McGraw-Hill, NY, 1972.

Technics-Related Products

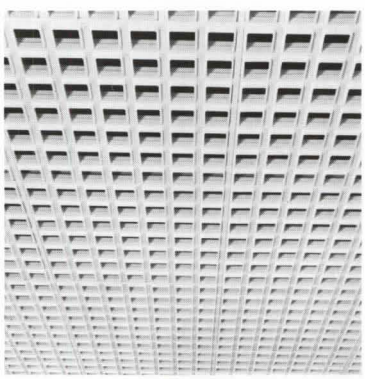
Apollo linear metal ceiling panels are one inch in depth, with rounded corners. Strength of the deeper panel allows longer spans with fewer splices. Splices are formed, rather than rolled, resulting in straighter, flatter joints. Panels are made of aluminum and steel in a wide range of colors and finishes. AEP Span.
Circle 250 on reader service card

Luminous Ceilings brochure offers architectural louvers in several materials and configurations, coffers, control room systems, wood or aluminum baffles, mirrored surfaces, grids, and decorative surfaces. The eight-page, four-color brochure illustrates installations and shows details of the various ceiling components. Norton Luminous Ceilings.
Circle 251 on reader service card

Geocoustic™ acoustical units consist of interconnecting glass cells that trap and absorb unwanted sound. The all-glass units are self-supporting, durable, nonabsorptive, and noncombustible. They are dimensionally stable in extreme temperature variations. Standard units are flat blocks that fit flush on mounting surfaces; Geocoustic II units with perforated faces are suitable for architectural, institutional, and educational use. Pittsburgh Corning Corp.
Circle 252 on reader service card

Linear Wood Ceilings CS300 are offered in a wide range of select hardwood and softwood paneling. A simple, fast attachment system allows economical installation and easy retrofit of existing ceilings. Panels can be installed with open joints for enhanced acoustical performance, or as a solid ceiling. All woods are available with a Class 1 fire rating. Forms + Surfaces.
Circle 253 on reader service card

The Fullspan™ Ceiling System uses tracks that can be cut, joined, twisted, or bent in almost any shape. They can be applied to ceiling or wall construction and curvilinear, three-dimensional shapes such as vaults, domes, coves, or arched ceilings. The track can be attached to almost any solid backing or furring system. It is compatible with many fabrics so long as they are of proper weight, without backing, and meet fire safety requirements. Architectural Fabric Systems, Inc.
Circle 254 on reader service card



Revisions A open-celled ceiling panel is made of high-density material molded into high-tech shapes. The 2′ x 2′ panel is easy and economical to install because it is designed for a conventional grid and suspension system. A major advantage is that it can be installed under an existing ceiling without decreasing the acoustical efficiency of the original ceiling or blocking heating, air conditioning, and light. Armstrong World Industries.
Circle 255 on reader service card

Silent Expressions™ custom-embossed, fabric-covered acoustical ceiling panels come in four standard design patterns or can be custom designed to individual specifications. Corporate logos, company names, trade names, or special designs can be produced as subtle embossed panels. Available in 2′ x 2′ panels, ⅞-inch thick, they are offered in a variety of plain, nonwoven fabrics with either recessed grid or rounded radius reveal-edge configurations. USG Acoustical Products Company.
Circle 256 on reader service card

Hytone™ mineral fiber lay-in ceiling panels have fine to bold textured patterns in a choice of configurations. Noise reduction coefficient ranges from .50–.60 to .70–.80, and light reflectance ranges from .77 to .84. They are manufactured from asbestos-free and urea-formaldehyde-free mineral fibers. Colors are reed, sage, balsa, and heather gray, as well as white, with other colors available on special order. The Celotex Corporation.
Circle 257 on reader service card

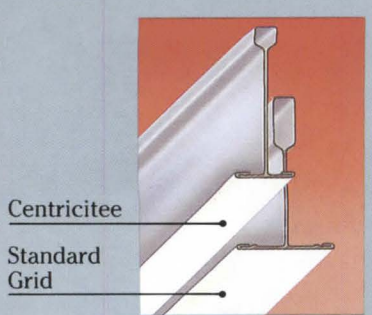
Panorama™ ceiling panel system uses standard grids for new construction and in-place grids for renovation projects. A four-page brochure includes architectural drawings and technical support specifications for this integrated commercial ceiling. Alcan Building Products.
Circle 258 on reader service card

Designer Ceiling Systems brochure offers ten ceiling systems. Product summaries give a description of features, and detailed close-up photos illustrate how components work. Featured systems in the 16-page brochure include narrow face grids, bold face modular systems, metal lay-in panels, and panel integrated lighting units. Chicago Metallic Corporation.
Circle 259 on reader service card

Trysil acoustical panels of wood offer a noise reduction coefficient range of 40 to 80 percent. They are available with three different spacings between grooves and in nine different natural wood veneers or paintable veneer. Hollow areas behind the grooves trap sound, reducing reverberation. The panels can be used on ceilings or walls. Bangkok Industries, Inc.
Circle 260 on reader service card

Fiberglass ceilings, formerly produced by Owens-Corning Fiberglas Corporation, are now being manufactured by Armstrong. Among the most popular are Nubby, Shasta, Stonebrooke, and Sculptured. Nubby features a woven cloth facing over a fiberglass substrate. Shasta features a textured vinyl facing. Stonebrooke and Sculptured are vinyl-faced, energy-saving ceilings. Armstrong World Industries.
Circle 261 on reader service card

You'll like the look, because there's less to like.

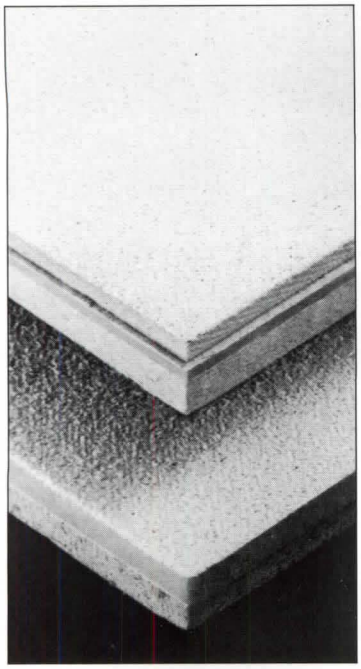


This is the Centricitee™ ceiling system. Grid so thin it virtually disappears. It's the only narrow faced, 2 hour fire-rated grid you can buy. So while there's a lot to like, there's also less to like.

DONN

Donn Corporation
Westlake, OH 44145

Circle **No. 343** on Reader Service Card

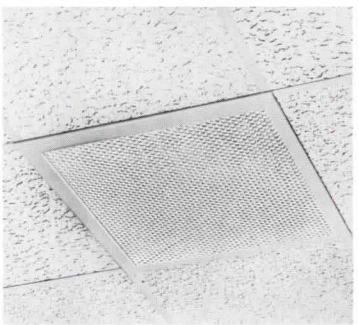


Fiberglass ceilings for commercial applications are designed for maximum acoustical control, with noise reduction coefficients of up to 1.00. Finishes include nubby fabric, washable vinyl, or custom fabrics. Options include large module sizes and routed or wrapped tegular edges. Capaul Corporation.
Circle 262 on reader service card

Donn® Paraline®, Celebration™, and Sculptures™ ceilings have been added to the Integrated Ceilings line. Paraline is a linear metal, fire-rated ceiling system available in two widths and more than 100 colors. Celebration 2′ x 2′ panels tailor individual spaces to specific visual performance and budget requirements. Sculptures offers a classic, three-dimensional embossed effect on dimensionally stable 2′ x 4′ panels. Integrated Ceilings, Inc.
Circle 263 on reader service card

Derako® suspended wood ceilings of all-natural woods install on a patented clip and rail suspension system. There are nine standard hard and soft woods, with a wide range of factory-applied stains, sealers, or color treatments. A four-page color brochure includes photos of installations, details of open or closed systems, and guides for designing ceilings of unusual shapes and contours. Rulon Company, Div. of CRF Industries, Inc.
Circle 264 on reader service card

Calme™ sintered aluminum products for indoor or outdoor use absorb sound and can be used for swimming pool walls and ceilings, tennis and racquetball courts, and in auditoriums. Acoustical properties can be changed depending on thickness of the product; changing the space or using fibrous materials between the product and the reflecting surface behind it; or using multiple sheets and air spaces. Childers Products Co.
Circle 265 on reader service card



The Refractive Grid® Controlens® reduces glare up to 70 percent by producing only half as much light as other troffer light-control devices in the glare zone of 60–90 degrees. It reduces VDU screen reflection and offers high viewing comfort. The Refractive Grid Controlens can be used in luminaires with a shallow configuration, saving inches of plenum space and minimizing plenum interference. Holophane.
Circle 266 on reader service card

Mark III, IV, and V ceilings can be furnished in panels up to 60″ x 66″, in rectangular or special modules. Panel finishes and materials include painted, vinyl coated, stainless steel, and aluminum in solid or perforated flat or rigidized sheets. They offer high acoustic performance. Industrial Acoustics Company.
Circle 267 on reader service card

Kemlite® Sanigrid® fiberglass reinforced plastic grid systems are unaffected by humidity, corrosive atmospheres, or temperature extremes. The smooth, white surface will not rust or corrode. It has heavy-duty classification, is USDA approved, and has a Class I fire rating. Kemlite Glasbord® ceiling panels used in the grid system provide a total ceiling surface that will not pit, peel, retain odors, or support mold. Dyrotech Industries, Inc.
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See Technics Feature, pp. 124–129.

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Circle **No. 402** on Reader Service Card

Trade Show Case

He designed it for trade shows after one of the biggest embarrassments in his career.

Spending $3,589 for a briefcase was ridiculous. "I lost sight of the costs."

By Joseph Sugarman

Cliff is a friend of mine who attends trade shows and conventions. One day, in the middle of a large crowd, while he was searching for a paper, the entire contents of his briefcase spilled all over the convention floor. "It was the most embarrassing moment of my business career," confided Cliff, "for at the same time, out fell my red underwear."

Determined not to let this happen again, Cliff decided to design a briefcase that he could take to trade shows and that was actually designed for trade shows. "I was going to design a custom case regardless of the cost."

EXECUTIVE TORTURE

Cliff designed a case with all Velcro fasteners so there's nothing to snap or unbuckle. He also designed it with the lightest yet strongest material he could find—420 denier nylon—material that could withstand torture and still look like new.

To carry the case, he made two provisions. One is a handle on the top of the case and the other is a strap attached to the sides. If you've ever wanted to use both hands to pick up a brochure at a booth or sign a credit card voucher at an airport, the shoulder strap lets you carry the briefcase over your shoulder with both hands free yet the strap is short enough to hang along the side.

The pockets were also designed very cleverly. First, Cliff designed a large brochure-sized pocket on the outside of the case. This way you can easily pick up brochures at a trade show, stuff them into the case's pocket—all without opening the case. This also comes in handy at an airport to hold your tickets—things you want to reach for easily.

TWO POCKETS

On the other side of the case are two pockets for convention programs, glasses or letter-sized documents or brochures. And finally on the inside, there are two compartments for holding your larger papers and documents—and large enough to hold one of those new lap-top computers. The flap that covers the top of the case also has a generous amount of Velcro so that regardless of how much or how little you have in the case you'll always be able to firmly close it and keep it closed.

And that's another point. The case expands up to 4 inches to fit its contents. More importantly, it also collapses automatically so your case never looks too big or too small for what you're carrying. And it's exceptionally light-weight—only 2 pounds 14 ounces compared to the typical 6 pound briefcase. The case measures 12" x 17."

Cliff carried his case with him to trade shows for months but he still wasn't satisfied. He refined it even further by putting a small Velcro tab on the outside pocket to give the case a better appearance while protecting the contents of the open flap and he installed a special inner compartment to hold three pens, his business cards and even a small calculator. Then he framed the entire case with rugged nylon piping—a great looking final touch.

ONLY $3,589

He finally had achieved perfection. Not only for his trade show activities but for his everyday travel and business use. And it only cost him $3,589. "I realize that's a ridiculous price to pay for a personal case but when I put my mind to something, I lose sight of the cost."

Cliff used his case for about 18 months before I met him. "A great looking case," I commented. "Where did you get it?"

Cliff told me the whole story. I was so impressed that I gave Cliff a royalty and sold the same case—not at the $3,589 that it cost Cliff but at only $69.95. I sold thousands. But I wasn't satisfied.

It was a real embarrassment for Cliff.

I found that so many people were falling in love with the concept that they wanted to use the case in place of their regular briefcase but found the 4 inch width too limiting. Many also wanted real leather instead of the artificial leather I was using. So I've designed three versions.

The first is the same one I've been offering for the past year that originally sold for $69.95 but I'm dropping the price to $49.95. The second is the version with some real leather in place of the artificial leather and an expanded 6 inch thickness for only $69.95 and the deluxe model is the full leather version for only $99.95—also with the expanded 6 inch thickness. And all versions now come in a beautiful gift box with a $200 price tag attached to the case.

CLIFF REALLY HAPPY

Order your JS&A Trade Show briefcase from me. Use it for a full month. If it doesn't replace what you currently use or if you're not completely satisfied, return the case and we'll send you a full refund. But I'm convinced that you'll really love the JS&A Trade Show briefcase for all your personal and business activities.

Cliff is quite happy now. He's making a pretty nice royalty on his case and he's really quite proud that he was the designer of what will become one of America's best selling executive briefcases. It has even changed his lifestyle. He no longer wears red underwear. Order your case at no obligation today.

To order, credit card holders call toll free and ask for product by number shown below or send a check plus $5 for delivery.

Black case (6504WT)	**$49.95**
Metallic Grey (6505WT)	**49.95**
Black 6" (6506WT)	**69.95**
Metallic Grey 6" (6507WT)	**69.95**
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Horizon is easy to install. It goes up as easily as any 3-tab shingle, which can save time and, ultimately, money. And because it is a one-piece shingle, Horizon provides greater protection in valleys than two-piece shingle construction. Its self-sealing adhesive strips are designed to give additional protection by sealing the entire roof using the sun's heat to form a weather-proof shield.

Horizon, with its laminated appearance, high-quality construction, ease of installation and lower cost, presents an outstanding design opportunity. It is a practical alternative to laminated shingles that can add value to your projects.

For more information, contact Horizon Marketing Manager, CertainTeed Corporation, Shelter Materials Group, 1-800-322-3060.

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HORIZON

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SOMEONE HAS TO BE FIRST

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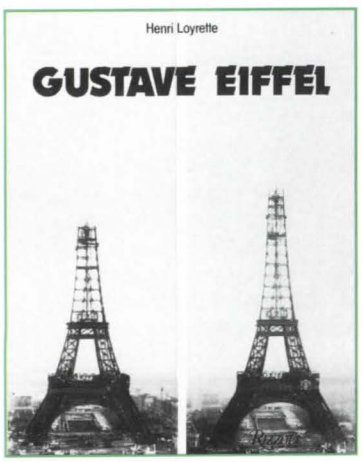
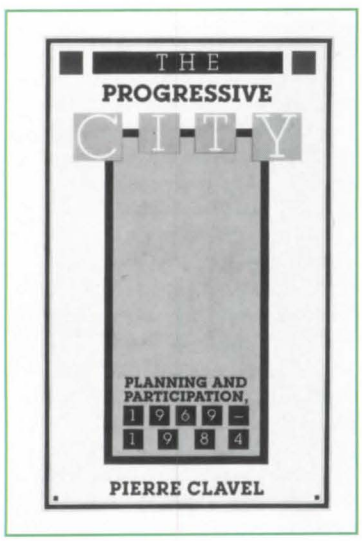
Circle No. 357 on Reader Service Card

Books

Gustave Eiffel *by Henri Loyrette, translated from the French by Rachel and Susan Gomme. New York, Rizzoli International Publications Inc., 1985. 223 pp., $35.00.*

The Progressive City: Planning and Participation, 1969–1984 *by Pierre Clavel. Rutgers University Press, New Brunswick, 1986, 262 pp. Paper $10, cloth $28.*





Eiffel's Oeuvre

The title of this excellent book about the great French engineer is somewhat misleading, since it is almost entirely devoted to the *work* of Gustave Eiffel and hardly at all to the man. However, within this self-imposed limitation, Henri Loyrette has produced a fascinating study of Eiffel's astonishing career. Lavishly illustrated with contemporary photographs, it is a well-written (and well-translated) study of some of the most important constructions of the 19th Century.

The rapid increase in urban populations caused by industrialization posed new architectural problems, for which new technology provided radical solutions. From the building of great new bridges required for railway expansion to strong yet light skeletons for the new monuments for the new world, metal was usurping the dominance of stone. The leader of this development was Gustave Eiffel.

The professional life and work of Eiffel is a metaphor for the 19th Century, with its unbounded optimism for the new technology, its ability to get things done, its indifference to the human costs incurred, and its support of the entrepreneur-businessman.

The idea that the means of support for the buildings and bridges should not be concealed but proudly revealed was first popularized, though not yet made acceptable, in England, by Paxton and the railway builders Fox and Henderson in the Crystal Palace of 1851. Eiffel followed this tradition, and his work affected many who came after him. His constructions achieved a kind of rough beauty simply by following the dictates of the material and its practical demands. Throughout his career he tackled more and more difficult projects, in each of which he developed original and creative techniques, many of which are still in use today.

His true genius was as an administrator, a businessman, and a leader of men. He opened his own firm in 1866. This was a time of social and political unrest in France, and several similar companies, in one of which he had been employed, had gone bankrupt. Nonetheless, his courage, his innovative ideas, his great organizational skills, his business acumen, and his ability to lead and inspire colleagues allowed him to become, in a period of 20 years, the most famous and successful iron-worker in Europe. He assembled around him a variety of talented engineers, designers and draftsmen, and by the time he, acting as a private individual, signed the contract for the famous tower with the City of Paris, he was one of the only men who had the resources and ability to tackle the construction. The Eiffel company lasted a hundred years.

Loyrette's book leads us through a detailed consideration of Eiffel's early work, which was to prepare him so well for his magnum opus. The variety and appropriateness of many of these early constructions is fascinating, from portable bridges to the skeleton for Bartholdi's Statue of Liberty; several, such as the Douro bridge and the Garabit viaduct, are masterpieces.

The Pest station in Budapest, one of his architectural works, is noteworthy for the way in which it combined metal and masonry, and foreshadows his later work in the open and unabashed statement of iron's industrial nature.

The Douro bridge on the rail line between Lisbon and Oporto is justly the most famous of Eiffel's many bridges. The difficulties, which were enormous, necessitated the construction of the largest clear span in the world at that time (160 meters). The solution was ingenious, producing an elegant and unusual bridge. Many of the plans are reproduced in the book, and there are a series of photographs of the two sides of the arch reaching out from either bank like two lovers reaching to touch across the gulf between them. So accurate was the design and so careful the construction that the two halves of the arch, cantilevered over 80 meters each, required a horizontal adjustment of less than one centimeter as they met. The form of the Douro bridge is an outstanding argument against the fears of the day, that metal constructions would only "spoil" the landscape. As a result of this prowess, he was awarded the contract for the Garabit viaduct; the French State engineers considered him to be the only contractor who could satisfactorily construct what was to be known as "le plus gigantesque travail du monde."

The Eiffel Tower is a reification of the 19th Century, and the contrast between it and the Classical architecture of the rest of central Paris enhances its importance and interest. Built for the Exhibition of 1889, it was to demonstrate to the world that the recent political unrest had not affected France's industrial ability. For over 40 years it was the tallest structure in the world.

The idea for a tall tower was not unique, and several other suggestions were circulating before the decision was made to hold a competition. Two of Eiffel's colleagues, acting on their own, drew up preliminary plans. Once Eiffel was convinced that the project was worth while he launched himself into it and had little difficulty in securing the contract over a variety of alternative proposals. Prefabricated to astonishing precision, it required so few on-site workmen that it almost appeared to grow from day to day without human intervention. There was only one death during its construction, and one incident of labor unrest, with which Eiffel dealt with a directness and cunning that seems somewhat brutal to our 20th Century sensibilities. Visitors flocked to ascend the tower, and its construction cost was recovered from the entrance fees.

Of course the tower initiated artistic controversy, which continues to this day. One of Eiffel's

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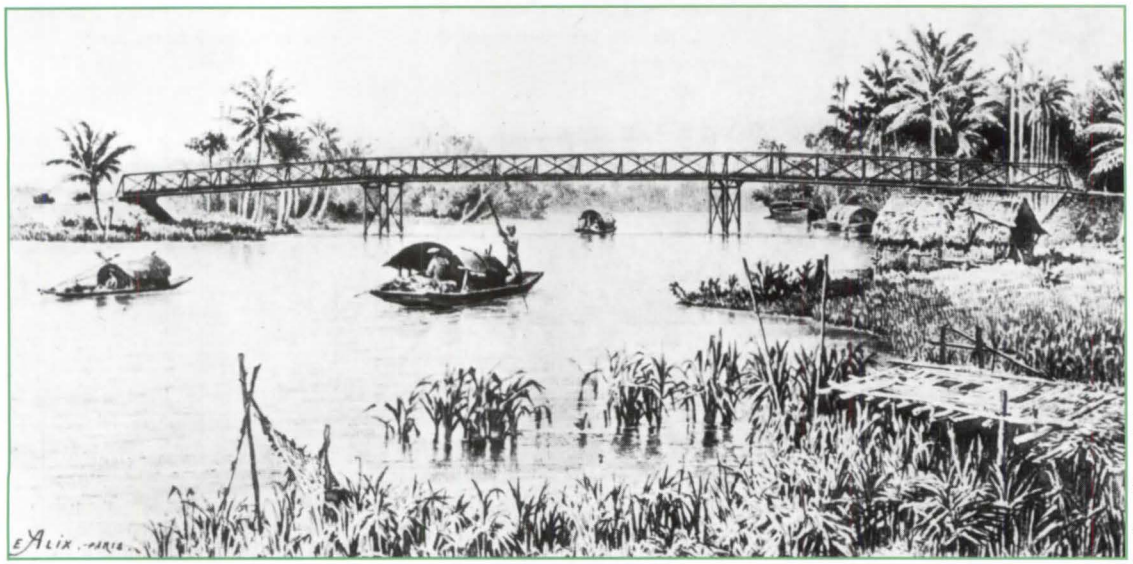

Jean-Loup Charmet, Paris

Bridge at Dong-Nhyen, near Phu-Tho (district of Saigon). From: Gustave Eiffel.

detractors was Charles Garnier, whose fierce defense of architectural tradition caused him to support the "Artists' Protest." One of the strongest points in the tower's defense, however, and one that allowed it to remain after the exhibition, was its utility as a scientific observatory. This debate—Art or Industry—foreshadowed similar controversies, such as that between Photography and Painting, which were brought into focus by advancing technology.

A third of the book is devoted to the construction of the tower and the controversy surrounding it. Included in the wealth of photographs are an astonishing series of 19, that represent one for each month of construction.

Although Eiffel remained active to within two years of his death at the age of 91, he never again tackled a work of such scale and importance. After the failure of the Panama Company, which had contracted with him to construct the canal, and three abortive projects (the Paris Metro, the underwater Channel bridge, and an observatory on Mont Blanc), he devoted his energies to an exploration of some of those scientific principles that had been the basis of his engineering. Among other achievements, he built a wind tunnel in which some of the earliest research on aerofoils and propellers was carried out.

The book has one shortcoming; readers who wish for details of Eiffel's life or times, the wellsprings of his creativity and huge success, or the personalities of his many collaborators will seach in vain. This is due in part to the very size and scale of Eiffel's achievements; just as the Eiffel Tower dominates the rest of his constructions, the monumentality of those constructions dwarfs their human creator. However, Loyrette has given in too easily to this problem. We put down this otherwise excellent book with the feeling that we know the work but not the man behind it. ***John Hix*** ■

The reviewer is a Toronto architect and author of The Glass House *(MIT Press).*

The Political City

Pierre Clavel wrote *The Progressive City*, case studies of Hartford, Cleveland, Santa Monica, Berkeley, and Burlington, Vermont, because he claims the press and his academic colleagues failed to tell how "progressive urban politics" succeeded in the 1970s and 1980s. "It was as if," writes Clavel, "some orthodox model comfortable to, say, the readers of *The New York Times* had to limit the way we see things, to protect us from the unexpected."

He smarts at elitist astigmatism on the part of the *Times* and many others. In 1978, while doing research during a coal strike in the West Virginia mountains, he saw poverty: people had pale complexions and dressed shabbily in towns that showed little public or private investment. Yet he felt national coverage of the strike stressed the miners' high salaries, neglecting their black lungs and dim futures.

Bourgeois reporters aren't Clavel's only gripe. Government officials also wear elitist blinders, he says. In West Virginia, for instance, they set up a relief office an inconvenient two hours from a flood-disaster site. According to a community organizer, a federal official justified its location far from the flood-devastated town because there was no Holiday Inn there. Clavel says these experiences and examples "typified for me the way our nation handles the efforts at social organization and innovation that tend to spring up in our communities."

Clavel, who teaches urban planning at Cornell University, attempts in his book "to correct this drift toward uniformity, this avoidance of the unexpected, and to encourage concepts tolerant of diversity." But we finish the book wondering what his five cities have in common, not to mention the relevance of Holiday Inns.

Clearly, local governments did change in Hartford, Cleveland, and Berkeley in the 1970s, and in Santa Monica and Burlington in the 1980s, shifting power to community-based leaders in city halls, council chambers, and city managers' offices. But these changes, he argues, had little to do with conventional notions of reform or socialist politics, without explaining how reformers differ from progressives. Rather, he speaks of a new urban populism, the beginnings of a movement toward innovation in other American cities.

And what happened politically in the 1970s and 1980s surely did differ from the strong-armed control of political potentates like Richard Daley in Chicago, Robert Wagner in New York City, and Jean Drapeau, Montreal's mayor of 29 years. Today few enjoy their autocratic styles and influence.

But are the experiences of Hartford, Cleveland, Santa Monica, Berkeley, and Burlington part of a broad changing of the guard, or vibrant, new alternatives? Clavel contends they are different. As politics moved to the right, progressive coalitions championed neighborhood power, the poor, and the working class against "suburban, absentee, and property-owning factions." Most important, they followed the ideals of American participatory democracy—of, for, and by the people—encouraging and organizing people first to fight city hall, and then to take it over.

His case studies document how progressive politics were put into action. Santa Monica and Berkeley passed rent control laws. Hartford negotiated for limited partnerships in new projects with developer concessions such as construction jobs and part-time employment for city residents. Cleveland successfully defeated a private takeover of its municipal power system. Berkeley sponsored housing cooperatives and collective social services, while Hartford began a community food system.

Yet Clavel gives little attention to the central role played by minorities, particularly blacks, in political life. In fact, he concedes his progressive coalitions and leaders suffered because they lacked minority support. He admits even though the influential Berkeley Citizen Action "sought to convince black voters that its programs were in the interests of blacks," blacks chose the Democratic organization because they believed it gave them more "immediate rewards of political participation."

But similar things seem to have occurred in other cities. Although Clavel believes Berkeley was unique in the 1970s, one wonders how it differs from Madison, Wisconsin's political experiences, where progressive politics bloomed during this time. Or San Francisco where George Moscone, Harvey Milk, and other reformers fought for community concerns and won.

Even New York City, sometimes considered too big to change much, was transformed during the 1970s in what Clavel would presumably call progressive directions. From the mid-1960s until the early 1970s, John Lindsay was mayor, first elected on a liberal Republican ticket in a town long dominated by a Democratic machine. As a popular reformer, he revamped city agencies, put aside civil service lists, and culled community support for projects. By the mid-1970s, charter revisions mandated neighborhood input for many city approval processes.

Clavel asserts that, although a "tempting" comparison, his cities' experiences differ from their often more ideological predecessors, too. In a para-

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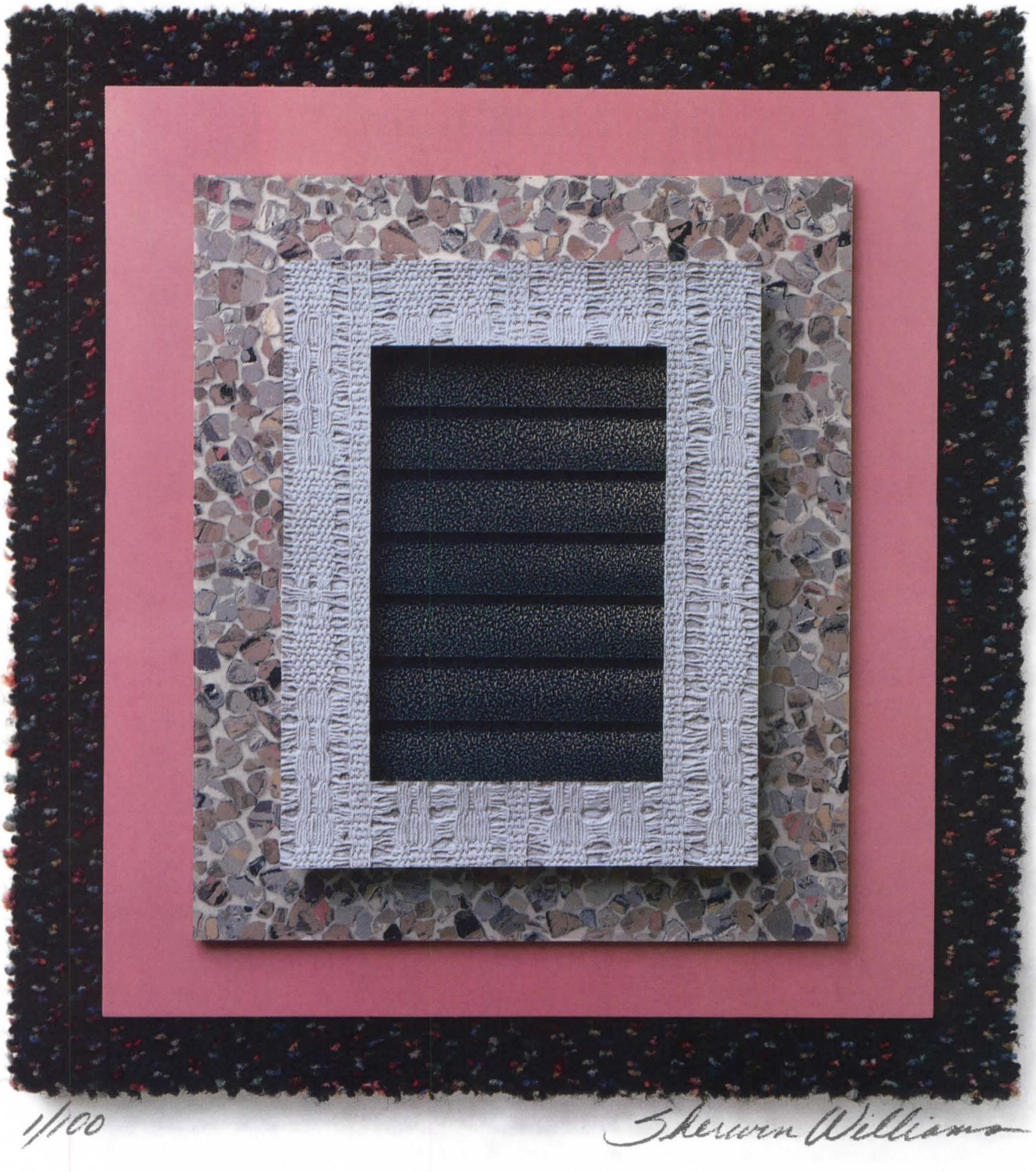

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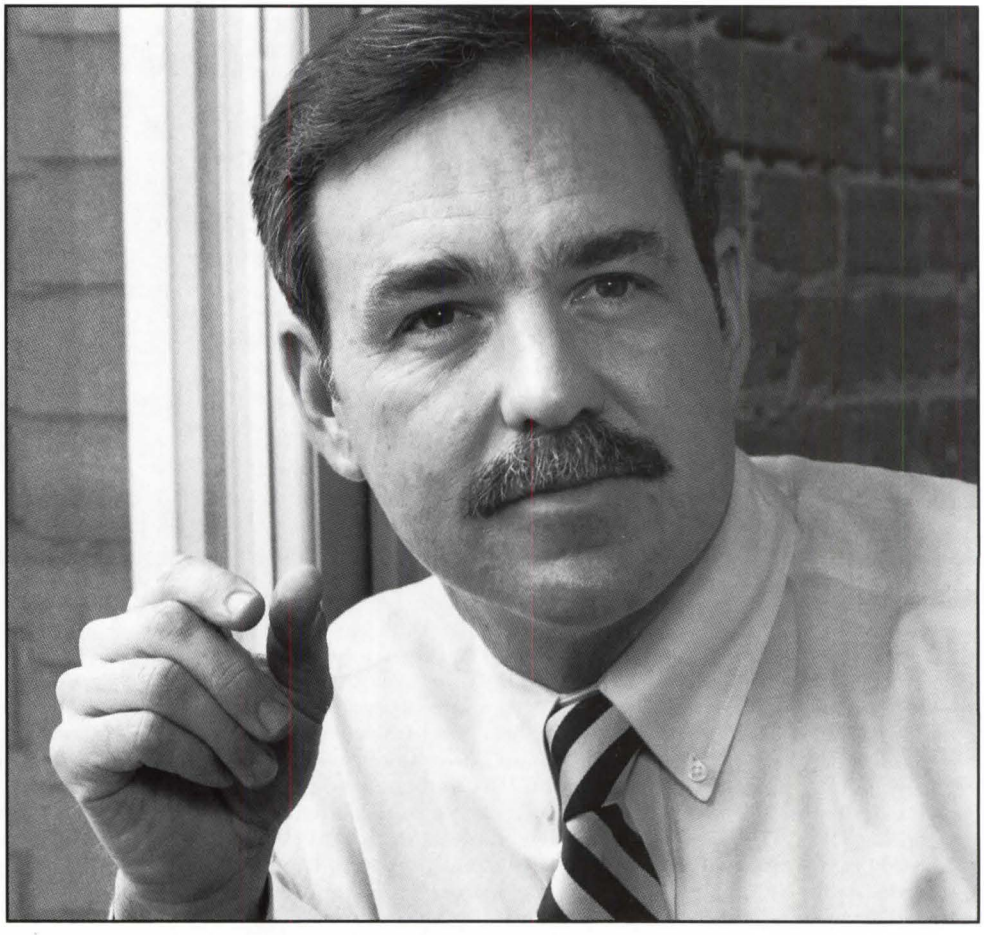

Jack Corgan is a principal of Corgan Associates Architects, a 65-person firm based in Dallas, Texas. He is also a former Assistant Professor of Architecture at Oklahoma State University. We value our relationship with his firm, and thank him for his willingness to talk to you about us.

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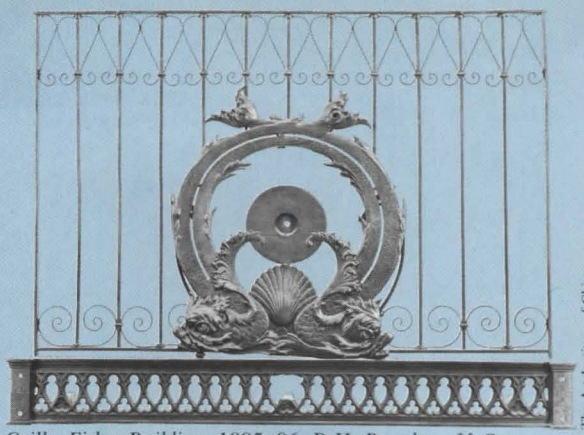


The Art Institute of Chicago

Grille, Fisher Building, 1895–96, D.H. Burnham & Co.

NEOCON 19, the international contract furnishings market and congress on environmental design, will take place Tuesday, June 9, through Friday, June 12, at the Merchandise Mart in Chicago. Among the many events scheduled, there are several seminars and workshops of interest to architects. Paul Goldberger will moderate a distinguished panel of internationally known architects in a symposium on Modernism, exploring the way in which current submovements contribute to the overall definition of contemporary design. Design for healthcare, emerging talent, and the future of design are other topics of interest.

Another architectural highlight is the Architects Luncheon on Friday, June 12, when the Chicago Architectural Award will be presented to Denise Scott Brown of Venturi, Rauch & Scott Brown; Harry Weese, Harry Weese & Associates; and Leon Krier.

As in past years, the showrooms in the Mart will be complemented by the displays of contract furniture manufacturers from outside the United States in the NEOCON International Pavilion at the Expocenter/Chicago, across the street from the Mart. New this year at NEOCON, the Environmental Planning Exposition at the Expocenter/Chicago will display technologies and services, other than furnishings, that complement the interior designs. The Institute of Business Designers will hold its Third Annual National Conference, "The Business of Design," on Tuesday, June 9, at the Holiday Inn Mart Plaza.

Chicago's museums and galleries offer a number of architecture- and design-related exhibits. "Architecture and the City," a history of Chicago's architecture, is part of The Museum of Science and Industry's permanent collection. The Art Institute of Chicago opens "Fragments of Chicago's Past," a permanent collection of architectural ornaments from Chicago's buildings. Also the Graham Foundation for Advanced Studies in the Fine Arts presents "The Work of Harwell Hamilton Harris."

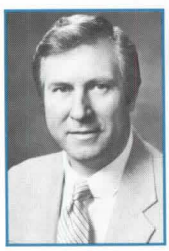
Please consult the following guide for details of time and place for seminars and workshops.

Seminars and Workshops

Tuesday, June 9

8:30 A.M. Workshop
"Design on the Runway: Contract Installations as Design Statements." Ronald Van Gelderen, Chairman, Carpet & Rug Institute; Harry Milli, President, Certified Floorcovering Service; Vice Chairman, Commercial Floorcovering Association.

10:30 A.M. Workshop
"Survival of the Fittest: How Dealers Expand Services for New Profitability." Larry Evans, President, Rucker-Fuller Co.; James Miller, Chairman of the Board, Miller Business Systems; Ralph Perers, American Business Interiors, President, Contract Furnishings Council.

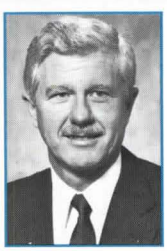

R. van Gelderen

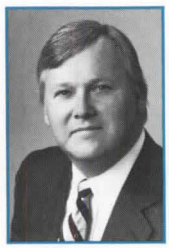

Ralph Perers

10:30 A.M. Workshop
"Color and Human Behavior: New Findings for More Positive Response." Barbara Schirmeister, ASID, Color Association of the U.S.; Antonio Torrice, 1985 Human Environment Award Winner; Beverly Thome, designer; Fran Wilson, ASID, Moderator.

2:30 P.M. Workshop
"The Dealer Designer." Melanie Plumer, Richard Plumer Interiors; James Goodson, Architect; Don Hayes, Carson Business Interiors; Lauren Hoye, BKM; Steve Gathings, Bodines Inc., incoming President, Contract Furnishings Council.


B. Schirmeister


Thomas Wollner


Adrian Smith


Michael Vanderbyl

4:00 P.M. Seminar
"Leading Edge Technology: Processes and Materials that will Shape the Future." Richard Hess, Research Manager, Technical Planning, E.I. DuPont de Nemours & Co.; Thomas Wollner, Vice President, Research and Development, Industrial and Consumer Sector, 3M.

4:00 P.M. Seminar
"Emerging Voices: The Young, the Bright and the Talented Minds in American Design." Katherine McCoy, Industrial Designer, Cranbrook Academy of Art; Adrian Smith, Architect, Partner, Skidmore, Owings & Merrill; Michael Vanderbyl, graphic designer; Kevin Walz, furniture designer.

Wednesday, June 10

8:30 A.M. Keynote Address
"The High-Flex Society: Meeting Economic Challenge." Pat Choate, Director, Office of Policy and Analysis, TRW, Inc.


Pat Choate


Dan Sachar

10:30 A.M. Workshop
"Design in Search of Productivity: Coping with the Complexities of the Electronic Office." Dan Sachar, Vice Chairman, Environetics International, Inc.

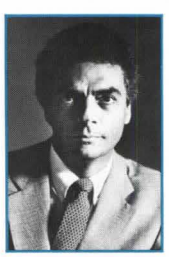
2:30 P.M. Workshop
"Fee Negotiation: The Fine Art of Profitability." Frank Stasiowski, editor, *Professional Services Management Journal.*

2:30 P.M Workshop
"American Express Corporate Headquarters at Battery Park: A Case Study in Design and Facility Management." Richard Carlson, Architect, Partner in charge of interior design, Swanke Hayden Connell Architects; Richard Macauley, Manager of Facilities Planning, Shearson Lehman Bros.


Frank Stasiowski


Richard Carlson

4:30 P.M. Seminar
"Design Directions: New Corporate and Commercial Interiors." Francisco Kripacz, Designer, Arthur Erickson Architects; James Terrell, Partner, Hambrecht-Terrell Interiors; Gary Whitney, President, The Whitney Group.


Gary Whitney


Donald J. Hackl

4:30 P.M. Seminar
"Architecture + Utopia: Visions for the Post-Industrial Society." Massimo Scolari, Architect. Abdel Wahed El-Wakil, Architect; Donald J. Hackl, President, American Institute of Architects, Chicago Chapter, Moderator.

Thursday, June 11

8:30 A.M. Seminar
"The Continuing Revolution in Lighting: Compact Illumination." Dan Thomas, Manager of Commercial Engineering, GTE Lighting Products; Terry McGowan, Manager of Application Engineering, General Electric.

8:30 A.M. Seminar
"The Corporate Facility: Options and Issues that Affect the Planning Process." John J. Dues, Director Corporate Real Estate, The Mead Corporation; Edward Lewis, Corporate Director of Real Estate, Motorola; William Agnello, Vice President, Real Estate and Facilities Planning, Baxter Travenol Laboratories, Inc.; Joseph E. Healey, President, Industrial Development Research Council and Senior Project Manager, AMOCO Corp.; Edward J. Carr, First Vice President, Industrial Development Research Council and Vice President, Asset Management, Baxter Travenol Laboratories, Inc.


Dan Thomas

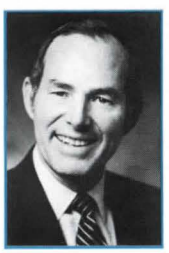

Terry McGowan

10:30 A.M. Workshop
"Drawing Design and Data Management: The 3-D's of Computer-Aided Design for Space Planning." E. Lee Kennedy, Architect and CAD Consultant.


John J. Dues


E. Lee Kennedy

10:30 A.M. Workshop
"How Dealers Meet the Marketing Challenge: Setting Your Firm Apart from the Crowd." A. John Dodson, Sr., President, Color Art Inc.; James Dailey, President, Dailey's Office Productivity Center; Don Griesdorn, President, BKM Total Office Today; James L. Newman, President, JLN Furniture Systems, Inc.


A. John Dodson


Terence Golden

Noon Luncheon
Holiday Inn, Mart Plaza. "A New Agenda at the GSA: Design and the Bottom Line." Terence Golden, Administrator, General Services Administration. Chairpersons: David Cotts, President, International Facility Management Association, Chief, Building Maintenance and Repair, The World Bank; Joseph E. Healey, President, Industrial Development and Research Council and Senior Project Manager, AMOCO Corp. See Noon Luncheon, Friday June 12, for ticket information.


John Busby


F. Kellog Smith

2:30 P.M. Workshop
"Health Care Today: Form Follows Function and Demand." John Busby, Partner, Jova/Daniels/Busby; Robert Douglas, Facility Planner/Architect, Robert Douglas Associates; R. Timothy Stack, President and CEO, The Southside Hospital, Pittsburgh.

2:30 P.M. Workshop
"Illuminating Behavior: How Light Shapes Response." Frances Kellogg Smith: ASID/CSI, author.


W. F.E. Preiser


Hans Hollein

4:30 P.M. Seminar
"Post Occupancy Evaluation: Its Vital Role in Facilities Design." Steven Parshall, Vice President, CRS Sirrine, Houston; Wolfgang F.E. Preiser, Ph.D, Past Chairman, Committees on Improving Practices in Programming and Post-Occupancy Evaluation in the Building Process, Building Research Board, National Academy of Science.

4:30 P.M. Seminar
"The Dream of A City: International Design Directions." Denise Scott Brown, Principal, Venturi, Rauch & Scott Brown; Robert A.M. Stern, Architect; Charles Vandenhove, Architect; Hans Hollein, Architect; L.A.L. Rolland, President, Royal Institute of British Architects, Moderator.

Friday, June 12

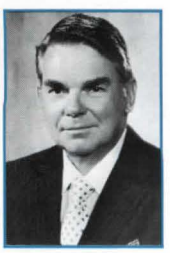
8:30 A.M. Seminar
"The Design-Made Object: International Expression." Takenobu Igarashi, Graphic Designer and Artist; Jack Lenor Larsen, Designer; Tobia Scarpa, Architect and Industrial Designer; Dakota Jackson, Furniture Designer; Joy E. Adcock, FASID, President, American Society of Interior Designers, Chairperson.


Dakota Jackson


Joy E. Adcock

10:30 A.M. Workshop
"British Design Comes of Age; New Marketing and Business Strategies." Rodney Fitch, Designer; Keith Grant, Director, The Design Council, London; D. Roger Hurley, Partner HLM, Treasurer, British Institute of Interior Designers, presentor.

10:30 A.M. Workshop
"Drama and Ambience: Retail and Restaurant as The New Entertainment." Lawrence Israel, Chairman, WalkerGroup/CNI; Ken Pollard, Project Architect, Gensler and Associates Architects.


Lawrence Israel

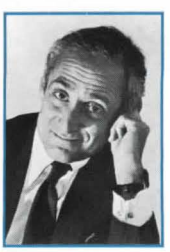

Leon Krier

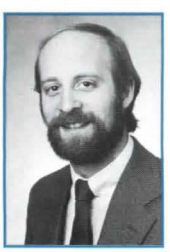
Noon Luncheon
Holiday Inn, Mart Plaza. Chicago Architecture Awards Presentation. Denise Scott Brown, Venturi, Rauch & Scott Brown; Harry Weese, Harry Weese & Associates; Leon Krier, Architect. Paul Goldberger, Architecture Critic of *The New York Times* will give the keynote speech. Tickets necessary and can be purchased in advance from the Communications Dept., Merchandise Mart, or at NEOCON.


C. Vandenhove

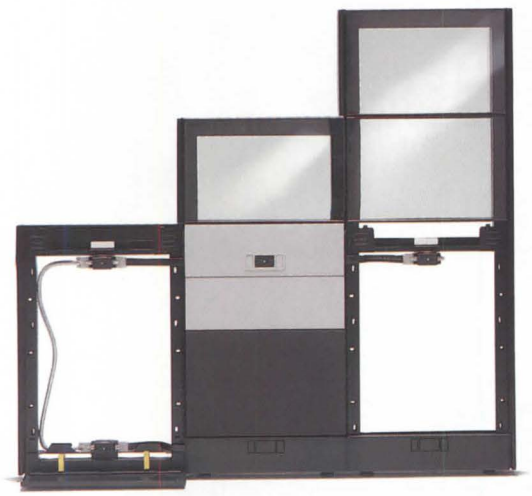

Tobia Scarpa

2:00 P.M. Seminar
"The Symposium on Modern Architecture IV; The Search for Definition." Denise Scott Brown, Philadelphia; Hans Hollein, Vienna; Leon Krier, London; Charles Vandenhove, Brussels; Tobia Scarpa, Milan; Adrian Smith, Chicago; Robert A.M. Stern, New York; Massimo Scolari, Venice and Milan; Abdel Wahed El-Wakil, Cairo and London. Paul Goldberger, Architecture Critic, *The New York Times*, Moderator.


Robert A.M. Stern


Paul Goldberger

The Beauty of Ethospace



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Those tiles are the Ethospace skin. You choose it from colors and patterns in vinyl or fabric, and from various wood finishes. And the tiles needn't be the same on both sides of an Ethospace wall.

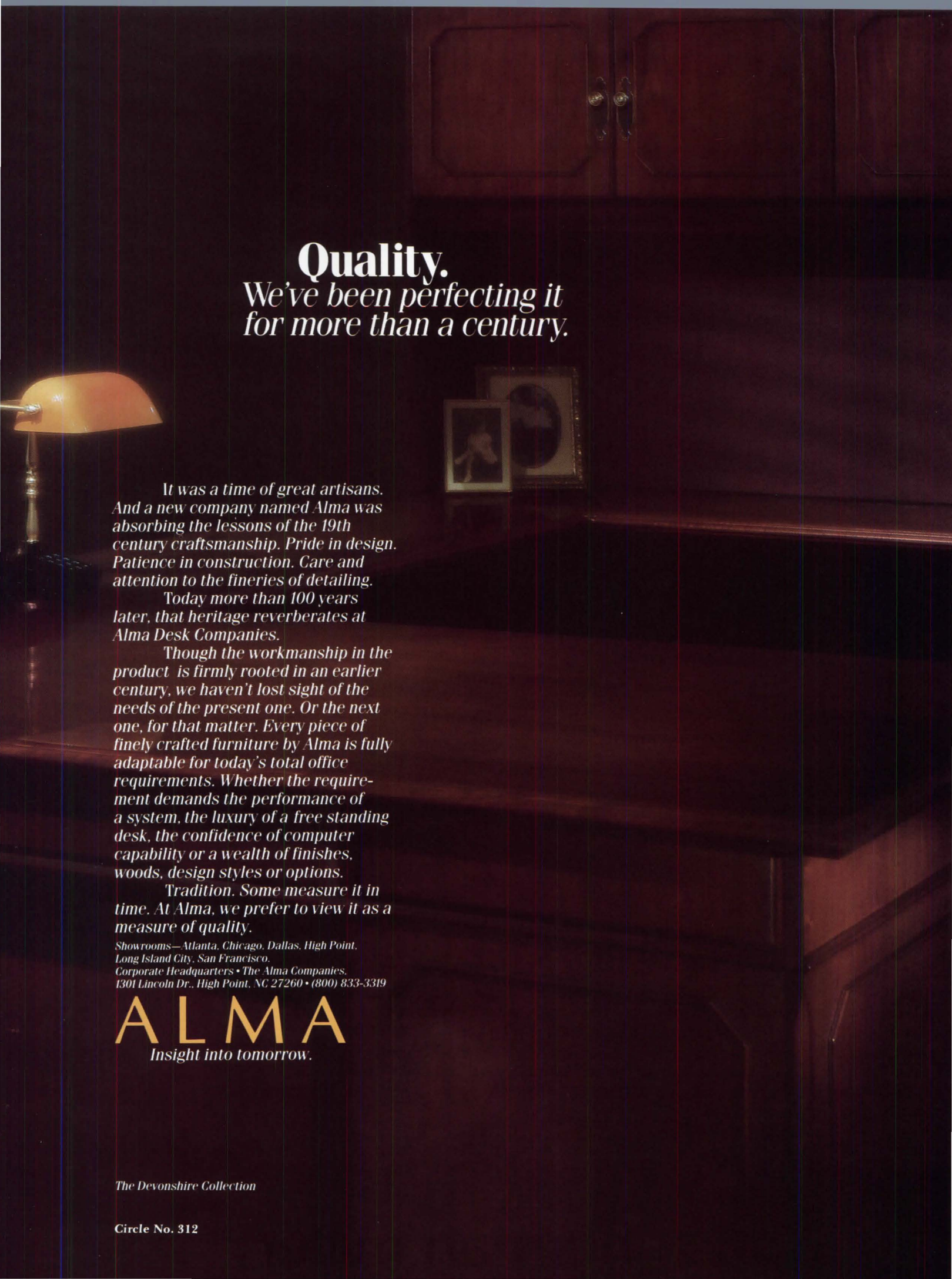
But the beauty of Ethospace is not just how the tiles look but what they do. A rail

Ethospace is nice. People like it for that. Ethospace is lovely. People love it for that. But the real beauty of Ethospace is what it lets you do and what it lets us do for you. People specify it for that. **To learn more, call 1-800-851-1196.**

tile holds tools for organizing paper, for storage and display. An adjustable shelf tile adds horizontal surface. A picture frame tile displays art and photographs. A marker tile provides a vertical writing surface. A radiant heat tile generates warmth where the user is cold, and – economically – only there. An acoustical tile improves the acoustics precisely where needed, and only there. A beltline wire management tile puts wires, cables and outlets at work-surface height. Open tiles improve air circulation and allow paper and equipment to be passed between offices. Window tiles let the light in (and the user's vision out).

Face tiles, shelf tiles, display tiles. Tiles that hold tools and tiles that *are* tools. Unlike panel systems, Ethospace never requires that one surface (like a tackboard) wastefully cover up another surface (like the panel that the tackboard has to be attached to). This is because Ethospace tiles don't go on the wall. They are the wall. That's the beauty of Ethospace.

herman miller



Quality.
We've been perfecting it for more than a century.

It was a time of great artisans. And a new company named Alma was absorbing the lessons of the 19th century craftsmanship. Pride in design. Patience in construction. Care and attention to the fineries of detailing.

Today more than 100 years later, that heritage reverberates at Alma Desk Companies.

Though the workmanship in the product is firmly rooted in an earlier century, we haven't lost sight of the needs of the present one. Or the next one, for that matter. Every piece of finely crafted furniture by Alma is fully adaptable for today's total office requirements. Whether the requirement demands the performance of a system, the luxury of a free standing desk, the confidence of computer capability or a wealth of finishes, woods, design styles or options.

Tradition. Some measure it in time. At Alma, we prefer to view it as a measure of quality.

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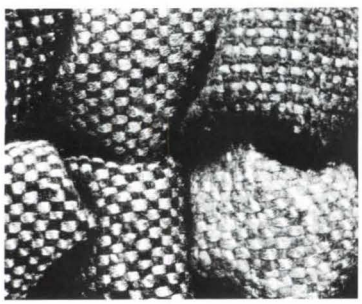
ALMA

Insight into tomorrow.

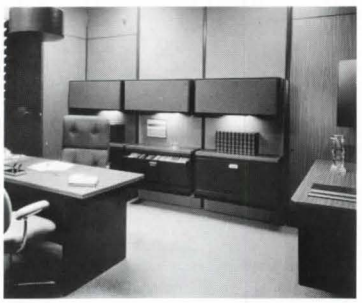
The Devonshire Collection

Circle No. 312

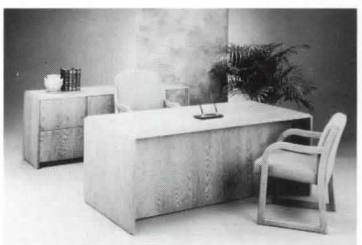
Products



Adam James Textiles
Laura Deublet Mercurio styled Ballad and Folksong, part of the new Pastoral Collection of wool and silk upholstery fabrics for executive office seating. Each is available in 15 colorways.
Circle 102 on reader service card



Adanlock
In-office offices consist of ceiling-high walls, ceilings, floors, lighting, work surfaces, seating and integral storage units. A choice of ceilings can accommodate direct, ambient, or task lighting.
Circle 103 on reader service card

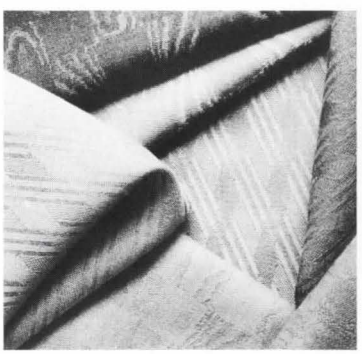


Adden Furniture
A contemporary beveled top design distinguishes the Beveled Desk series. All surfaces are select plane-sliced, red oak veneers with solid red oak edges. The companion High Back Executive Chair and Pull-Up Chair offer contoured back support.
Circle 104 on reader service card

Allsteel
Bühk 100 Seating, designed by Peter Bühk, provides fingertip controls for tilt-tension, tilt-lock and seat height adjustment. Bühk 100, constructed of aluminum, is offered in six metallic finishes.
Circle 105 on reader service card

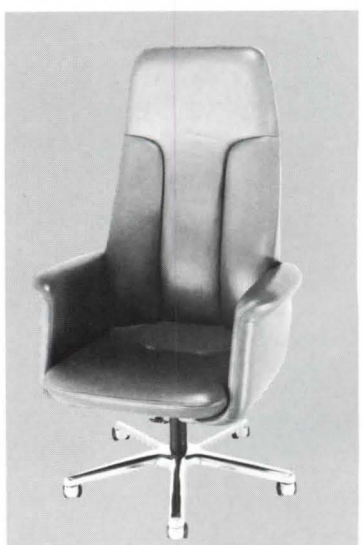
Alma
The Chancellor side armchair, also available in a swivel version, is offered in solid walnut, oak, or new high gloss black, burgundy, sangaree, teal, and gunmetal finishes.
Circle 106 on reader service card

American Seating
New and expanded fabric and finish options highlight a host of aesthetic refinements for System R, an open office furniture system.
Circle 107 on reader service card



Arc Com
Classica & Moire are two patterns of wool upholstery fabrics for executive management areas. Each is available in 15 colorways.
Circle 108 on reader service card

Armstrong
Classic White and Classic Black join the Excelon Imperial Texture line of vinyl composition tiles. The through-grained patterns combine with uniform dispersions of color and texture for a range of applications.
Circle 109 on reader service card



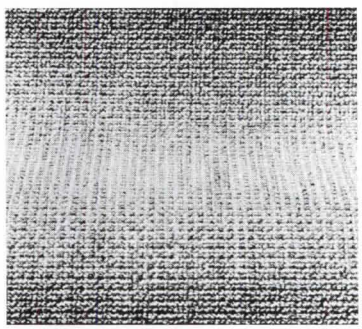
Arconas
Designed by Conrad Marini, the Conrad Collection of ergonomically designed chairs offers forward tilt and position locking standard features on the high and medium series, which includes full arm chairs.
Circle 110 on reader service card

Artemide
The base of this fully adjustable task lamp is black die-cast metal alloy. The lamp is polished aluminum. The Tolomeo table is by Michele De Lucchi and Giancarlo Fassina.
Circle 111 on reader service card

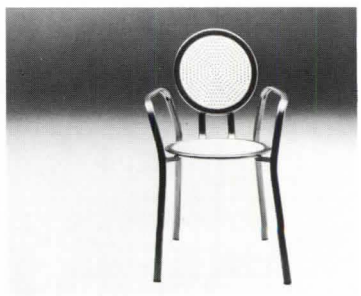
Atelier International
The Diva wall sconce, designed by Ezio Didone, consists of two semi-circular frosted glass plates that produce dual reflected and diffused lighting effects.
Circle 112 on reader service card

Azrock
Two new patterns, Century Marble in luxury vinyl tile, and Classic Granite in vinyl composition floor tile, will be introduced at NEOCON. Century Marble is offered in four colors and Classic Granite may be specified in white, coral, or gray.
Circle 113 on reader service card

Baker
Executive office NEOCON introductions will include this chair, by French designer Pierre Paulin.
Circle 114 on reader service card



Gretchen Bellinger
Streetcar™, ideal for high traffic upholstery applications, joins a growing collection of quality pile fabrics. Colors include neutrals, blanch, stella, and desire.
Circle 115 on reader service card

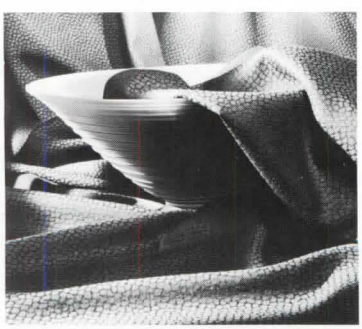


Beylerian
The Halo series chair offers enameled color finishes, scratch-resistant coatings, and upholstered inserts. Designers can complement the chair with Halo Series stools and tables.
Circle 116 on reader service card

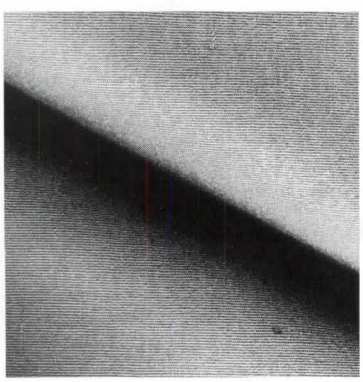
André Bon
Embossing gives Super Velours upholstery velvet additional depth and texture. The fabric is 55 inches wide and 100 percent Chlorofibre.
Circle 117 on reader service card

Borroughs
Unimetrics office systems offer a wide variety of freestanding work surface sizes with vertical storage units, pedestal drawer systems, and effective task lighting.
Circle 118 on reader service card

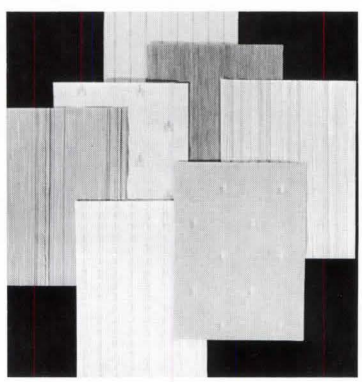
Brickel
The Bankers™ Series now includes the original conference chair designed by Ward Bennett, a low-arm side chair, lounge chair, swivel chair, sofa and the new high-arm side chair. The Bankers™ Series is hand carved from American white ash, hand-sanded and offered in a variety of finishes.
Circle 119 on reader service card



Brayton
Flagstone, an English cloth woven to create a dimensional impression, is composed of 100 percent worsted wool. Designers may choose from nine colorways including wineberry, teal, lapis, and rosewood.
Circle 120 on reader service card



Brunschwig & Fils
The Constellations program features six functional contract fabrics. URSA is a versatile, solid color wool ottoman offered in 15 colors.
Circle 121 on reader service card



L.E. Carpenter
New from Vicrtex is this selection of 65 unique natural fiber woven and warp lay wallcoverings. A range of contemporary colors is offered.
Circle 122 on reader service card

Charvoz
Network II seating, offered with or without arms, contains the latest ergonomic technology within its enclosed underseat. The base finish is a new smoke black matte.
Circle 123 on reader service card

Progressions+ Freestanding Casegoods.

New expectations about design, craftsmanship and the needs of people and the way they work.

Designed by Nicola Balderi.

A higher expectation.

RoseJohnson

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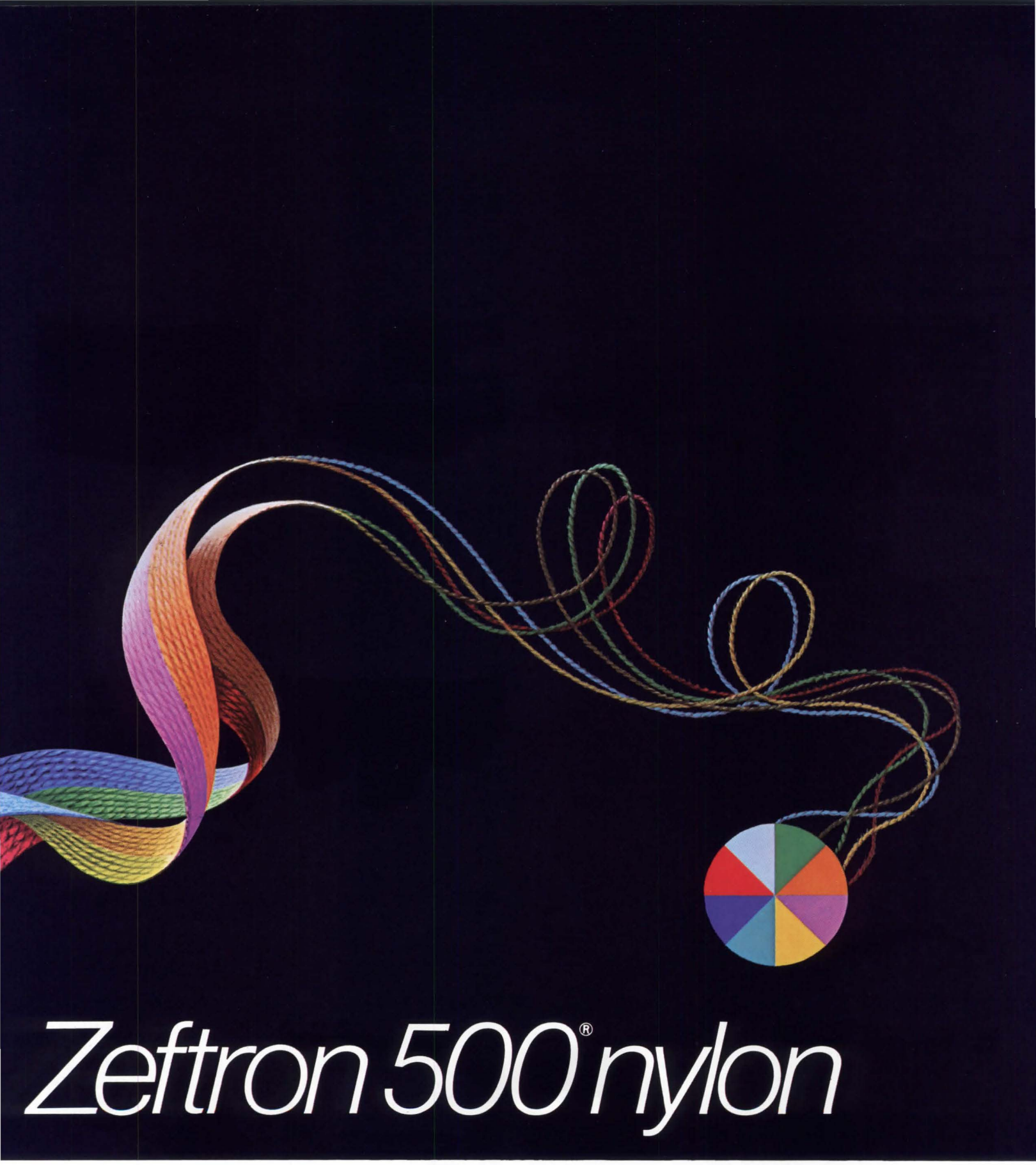
Circle **No. 386** on Reader Service Card

The fiber with authority? (Associated Space Design relied on Zeftron 500® nylon.) High-performance fiber for an energy efficient office complex? Associated Space Design put down versatile carpet tiles and matching broadloom with Zeftron 500 nylon because it met toughest specifications for color

Zeftron 500® is a registered trademark owned by BASF Corporation.



consistency and performance. Zeftron 500 nylon tiles are solution dyed for long-lasting color. Dye lots are limitless. Tiles can be easily interchanged and replaced. Zeftron 500 nylon keeps Tennessee Valley Authority running very smoothly. Fibers for every way of life.

BASF Corporation
Fibers Division

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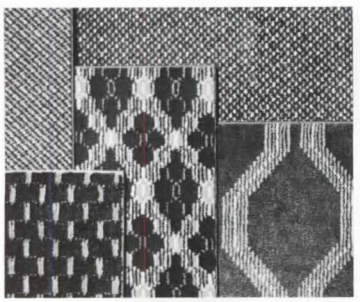
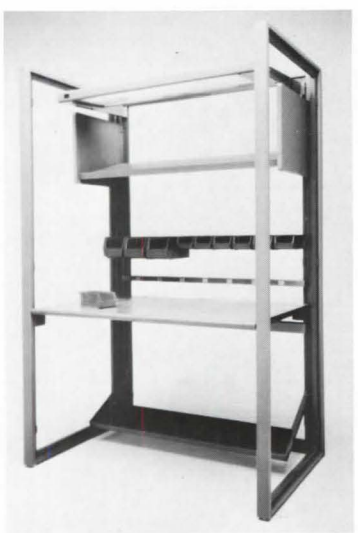


Collins & Aikman
Five new patterns ranging from small-scale pin dots to large geometric shapes join the Colonnade contract broadloom collection. Each pattern comes in six colorways as well as custom colors.
Circle 124 on reader service card

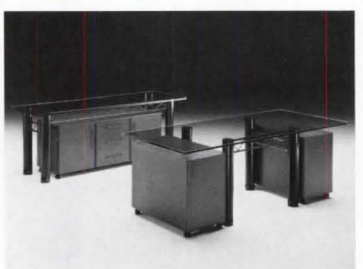
Condi
Richmond Series seating includes high- and low-back classic bentwood chairs designed for comfort. A choice of spindle or fully upholstered back is offered.
Circle 125 on reader service card

CorryHiebert
The Altair Series, in three basic models, has lumbar support, knee-tilt and auto-height controls for the executive. The Cygnus Series, in open or closed arm models, has a contoured frame in a variety of woods.
Circle 126 on reader service card

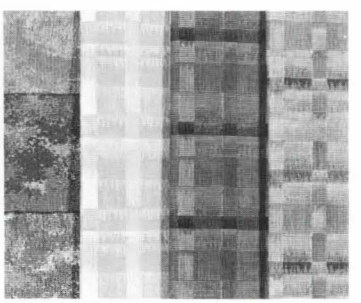
Cumberland
Trio conference tables are offered with round, rectangular, racetrack oval, and boat-shaped wood tops in a choice of woods and finishes. Bases are black steel with red stretchers or chrome steel with black stretchers.
Circle 127 on reader service card



Cramer
The Tech Space panel system consists of a group of steel-frame panels upon which modular components, such as drawers or shelving, may be attached. Panels are available in six heights and seven widths, and feature a laminated surface or an open frame.
Circle 128 on reader service card

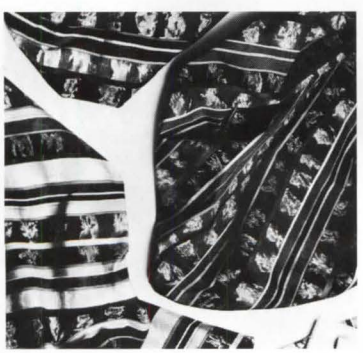


Davis
The Zipp Desk and Credenza accompany the Zipp Conference Table. Supported by cylindrical, pivoting legs, glass tops "float" above the pedestals. Desk and credenza tops are offered in three variations.
Circle 129 on reader service card



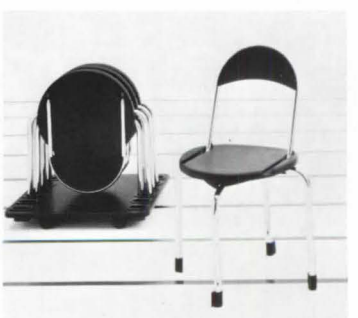
DesignTex
Cumulus and Stratus join the expanding jacquard tapestry collection. Ten colorways are available for Cumulus, while Stratus offers eight different colors. Both are 51 inches wide.
Circle 130 on reader service card

Domore
The Neo7 office system, designed by Don Albinson, allows for easy reconfiguration and features work-surface-level outlets, patented pull-out work sufaces, varied conference table shapes, and new matte black/charcoal finishes with gray glass.
Circle 131 on reader service card



Donghia
The Graniti collection of textural wallcoverings, produced through a technique comparable to air brushing, is offered in a palette of 12 faux finishes.
Circle 132 on reader service card

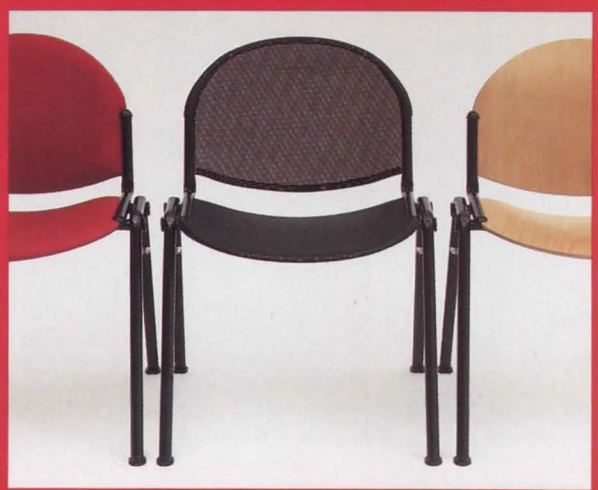
EOC
The 1820 Series sofa collection, available in 60- or 84-inch lengths, adapts well to individual and multiple groupings. It is constructed of a hardwood interior frame with reversible zippered cushions.
Circle 133 on reader service card



Fixtures Furniture
The Clack folding chair's exclusive design permits the back frame to slot into special grooves in the seat, which in turn folds down on the legs. The steel frame is finished in black epoxy or optional bright chrome.
Circle 134 on reader service card

50 new chairs
from Fixtures!

delos™ office, conference, visitor & lounge chairs

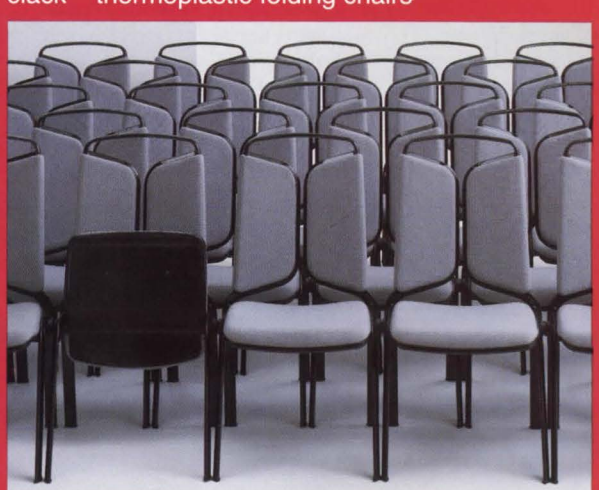


rondo™ stack & gang side, arm & tablet chairs

bravo™ thermoplastic stack chairs

clack™ thermoplastic folding chairs

signa™ ergonomic office seating



rhombus™ stack-gang chairs

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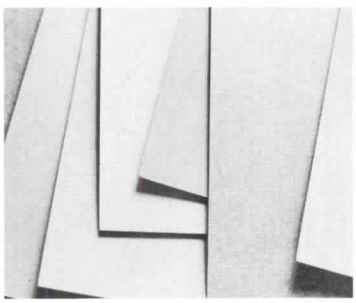
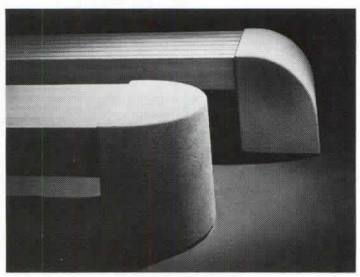
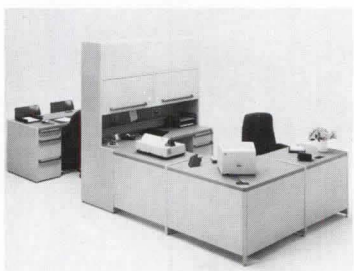


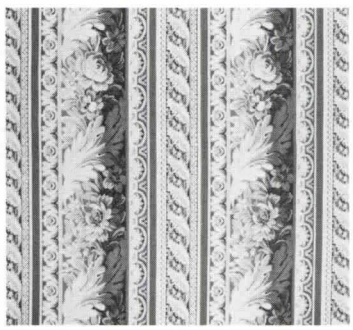
Formica
Papercraft, designed by Alessandro De Gregori, is part of the new collection of high-pressure laminates. Designers may select haze, vicuna, heather, or antique white in matte and polished finishes.
Circle 135 on reader service card



Forms + Surfaces
The Great Benches Series of wood bench slabs and several new concrete elements, with four new concrete colors, is offered in a selection of VX wood surfaces for interiors, or in solid wood assemblies for exterior applications.
Circle 136 on reader service card

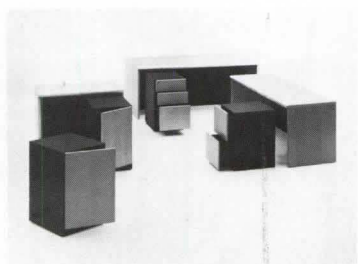


GF Furniture Systems
Major product enhancements and additions to the Stratum Desk and Storage System, designed by Charles Schreiner and Travis Randolph, will be introduced at NEOCON.
Circle 137 on reader service card

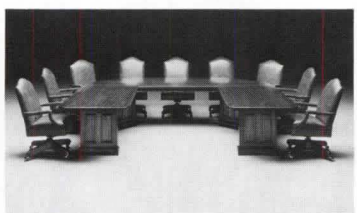


Greeff
Angelique, a 100 percent cotton fabric, is from a collection of tapestries taken from European mills' archives. Angelique may be selected in Old Rose or Indigo.
Circle 138 on reader service card

Gunlocke
GEVA, a new concept in management desks and casegoods, combines the beauty and solidarity of fine wood casegoods with the modularity and changeability of panel systems.
Circle 139 on reader service card



Habitat
The design of the Intracase casegood system from the Intrex division is based on interchangable pedestals that fit into desk, return, or credenza "envelopes." Mahogany and oak finishes are offered as well as three hi-gloss color finishes.
Circle 140 on reader service card



Harden
Traditional Custom Conference Tables are constructed of solid cherry hardwoods. Two base styles, cherry panel with raised panel detailing and cherry pedestal with four Queen Anne legs, are available. Custom-sized tops may be ordered in seven standard and "U" or "L" shapes.
Circle 141 on reader service card

Hardwood House
The Hanover Guest Chair from the European Design Collection can be specified in a variety of new colors and fabrics now offered.
Circle 142 on reader service card

Harter
The Wallaby Collection of office seating groups, by Edward Alexander and Peter Robinson, offers models including high-back with closed arms or a medium-back, armless, cantilevered guest chair.
Circle 143 on reader service card

Haskell
Canterbury seating is available in high-back and regular-back executive swivels as well as guest chairs with or without arms in a choice of two base designs. Upholstery options include brown or black leather or wool/viscose fabric in a choice of 41 colors.
Circle 144 on reader service card

Hastings Tile & Il Bagno
Oblo vanity, designed in Italy, is equipped with washbasin and faucet, accessory shelves, towel bars, mirror, adjustable spotlight and built-in switch and socket. Oblo is made of high-gloss lacquered wood in three striking color combinations.
Circle 145 on reader service card

Marquésa® Lana

Still...a step ahead

Color...Marquesa Lana is a step ahead of the competititon.

Marquesa Lana offers color coordinated carpet yarns that are perfect for your office or home. Marquesa Lana is colorfast, stain-resistant, and durable.
For color that is beautiful and elegant, the choice is Marquésa® Lana Still...a step ahead.

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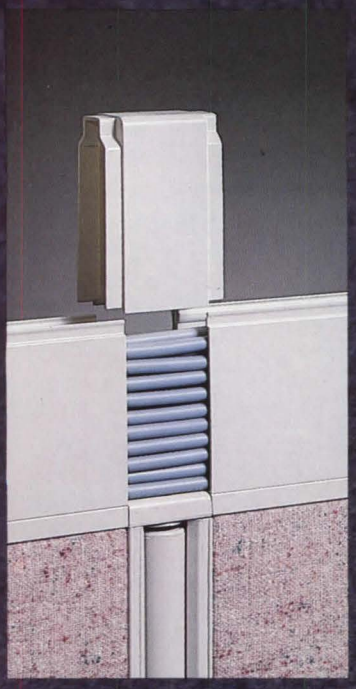
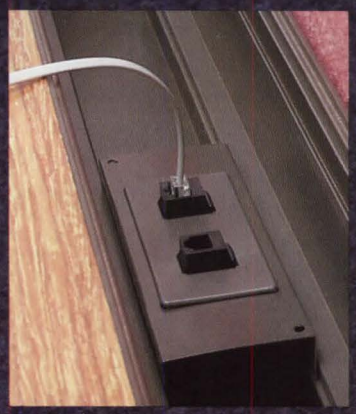
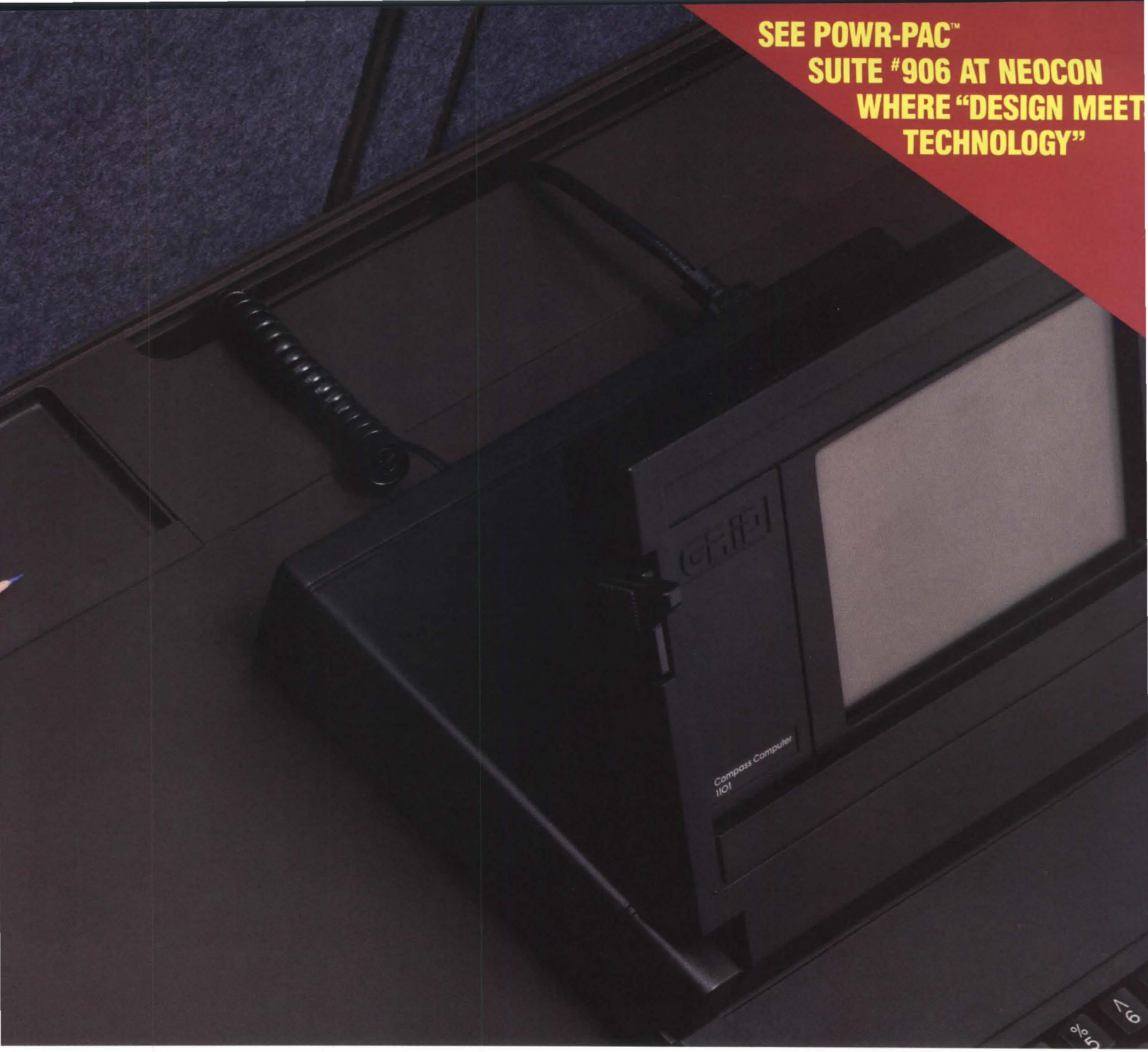




Top: A special adapter for Comm-Pak voice and data outlets snaps into any Powr-Pac knockout location.

Left: Data-Trak's vertical cable manager. Used for routing cables to Powr-Pac or the bottom raceway.

Data-Trak: A highly efficient method of isolating low-voltage communications and data cables in a top raceway to prohibit any electrical interference from baseboard power. Complies with stringent government requirements for the separation of communications and electrical cables.



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ɔmpany that understands tech-
ɔgy on every level. A company
ı the knowledge to develop a
ıle management system which
udes top raceway, baseboard
l most importantly work surface
abilities.

Vestinghouse we believe a
designed cable management
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ductivity as well as office power.
t's why we developed Powr-Pac.™
ay to provide electricity, route
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Powr-Pac attaches directly to the back of the work surface, placing power and communications lines within easy reach of employes. Lines can be fed from top or bottom raceway channels. Work surfaces remain clean and uncluttered for maximum utility. And with connections at the surface, computer hardware and telephones can be rearranged quickly and easily.

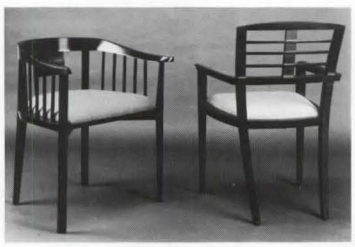
Powr-Pac is the latest addition to Wes-Group... the comprehensive range of integrated, yet interdependent subsystems from the total quality leader. Westinghouse. More than 100 years of delivering quality you can be sure of. Let us help you take control. Write Westinghouse Furniture Systems, 4300 36th Street, S.E., Grand Rapids, Michigan 49508, or call 1-800-445-5045.

Westinghouse
Furniture Systems

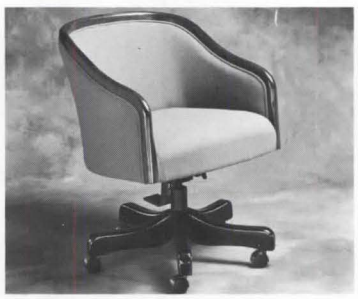
Circle **No. 401**

You can be sure . . . if it's Westinghouse

Haworth
Composed of geometric glazed and fabric-covered panels, fanlights, and single and French doors, Architectural Elements™ for the open plan office are available with a choice of two electrical systems.
Circle 146 on reader service card



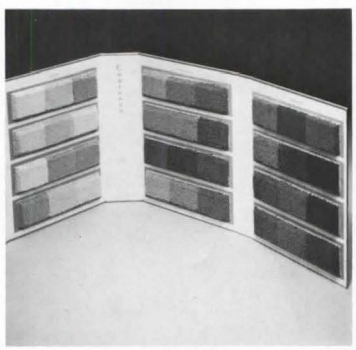
Helikon
New MGC Chairs, the Vienna and the Tao, are available in mahogany, oak, walnut, and cherry finishes. The Vienna Chair is composed of a hardwood frame with curved arms. Tao, with radiused arms and tapered legs, offers upholstered or wood back options.
Circle 147 on reader service card



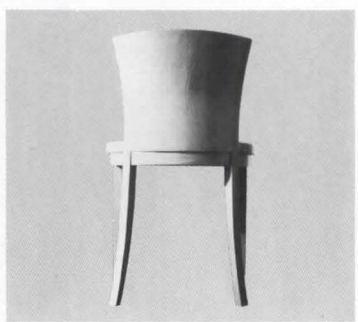
Hesco
New for NEOCON is a seating line that includes a tilt/swivel and a side chair. Specifiers may choose from several upholstery fabrics and a range of standard finishes for the exposed wood.
Circle 148 on reader service card

Hickory Business Furniture
The solid cherry Lafayette Chair is available in HBF hand-rubbed lacquered finishes for the contemporary corporate environment.
Circle 149 on reader service card

Howe
A mahogany wood veneer has been added to the Cherner Collection of tables. Designed by Norman Cherner, the tables are available in light and dark oak wood veneers, as well as in seven standard colors of plastic laminate tops.
Circle 151 on reader service card



ICI Fibers
Tactesse combines the look and feel of a natural fiber with the soil resistance, durability, and resilience of a synthetic fiber.
Circle 152 on reader service card



ICF
Tod Williams designed The Tavern Chair to combine classic grace with modern abstraction. It is crafted of solid oak in bleached, ebonized, or natural finishes.
Circle 153 on reader service card

iil
Selected Editions is a comprehensive collection of office furniture including desks, chairs, and workwalls offered in a select range of woods, colors, metals, fabrics, and leathers.
Circle 154 on reader service card

Interna Designs
New to the line of contract chairs, Normal is constructed of steel and bentwood. Both materials are offered in several colors and stains.
Circle 155 on reader service card

JG
The Springbok seating series, designed by John Behringer, consists of a task stool and operator's version. All are offered with or without arms and are fully adjustable.
Circle 156 on reader service card

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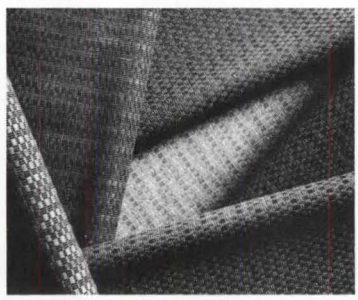
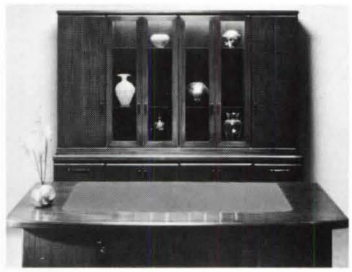
Lee Jofa
The Hampstead sofa, for executive suite seating, is available in 5-, 6-, and 7-foot sofa lengths and has a matching armchair in standard and continental seat heights.
Circle 157 on reader service card

Katzenbach & Warren
The Flowering Tree wallcovering from the Golden Age of Williamsburg® Collection has a repeating pattern of peonies, roses, tulips, and poppies.
Circle 158 on reader service card

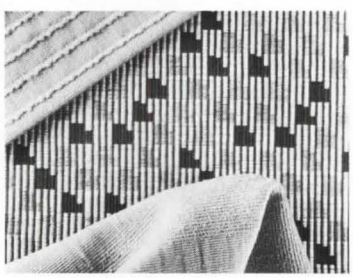


KCR
Ravenna, a 54-inch jacquard weave creating mosaic patterns, offers specifiers six standard colorways as well as custom colors. A range of fabric and texture choices is also available.
Circle 159 on reader service card

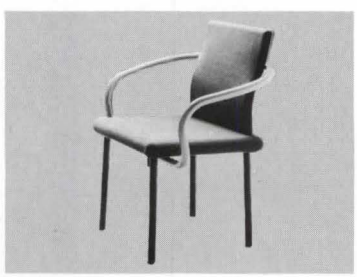


Kimball
The Laureate contract furniture collection features extensive options including a variety of pedestals for desks and choice of kneespace and storage credenzas. Mahogany veneer or formal mahogany finish may be specified.
Circle 160 on reader service card

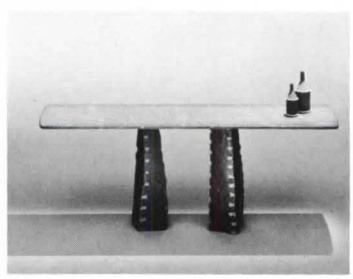
Kinetics
Designed by Paolo Favaretto with Giancarlo Bisaglia, the Neon chair is constructed of a cantilevered frame, in chrome or 24 kinkote colors, and molded structural urethane back and seat finished in kinkote or black.
Circle 161 on reader service card



Kirk-Brummel
Princeton, Davos, and Choate represent a new contract line of woven fabrics. Princeton and Choate, both 51 inches wide, are available in eight colorways. Davos, available in four colorways, is 55 inches wide.
Circle 162 on reader service card

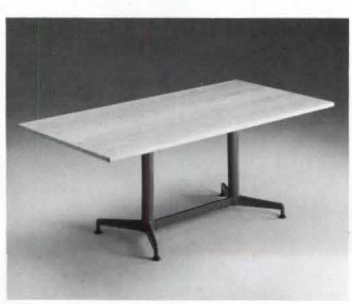


Knoll
The Mandarin side chair, designed by Sottsass Associati, changes character through a range of finishes and upholstery. The legs are black matte tubular steel. Optional arms are rattan with two wood finishes, or tubular steel with glossy paint.
Circle 200 on reader service card



Koch + Lowy
The Mageia Table Collection comprises unusual tables of stone and slate, available in many styles and shapes, and in most cases, for immediate delivery.
Circle 201 on reader service card

Boris Kroll
New for NEOCON is a collection of inherently flameproof panel fabrics offered in four styles and 124 colorways. All of the fabrics can be used for direct glue application on walls or panels.
Circle 202 on reader service card



Krueger
Hardwood veneers and plastic laminate or resin surfaces with wood, vinyl, or resin edge treatments are among the new system of table tops designed to be integrated with existing table base designs.
Circle 203 on reader service card

Kusch
Simon Desanta engineered a unique stretching system for the Desanta Chair; the seat elongates when the occupant leans back, to provide complete comfort. It is available with or without arms.
Circle 204 on reader service card

Jack Lenor Larsen
The Associate's Chair, designed by Paul Tuttle, may be selected as an armchair or side chair. Both are available in black-on-black and are crafted of lineal natural beech legs with a textured seat and back.
Circle 205 on reader service card

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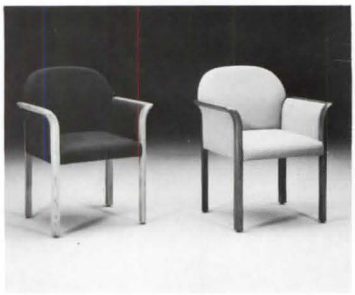
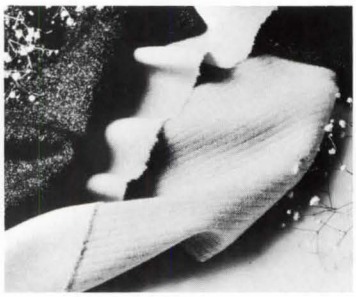
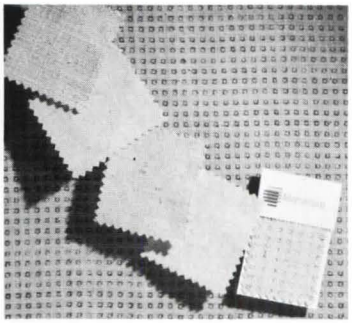


Lehigh-Leopold
Rondo seating is available as an upholstered side panel closed chair or an open-arm version that stacks four high. Many fabrics and finishes may be selected.
Circle 206 on reader service card



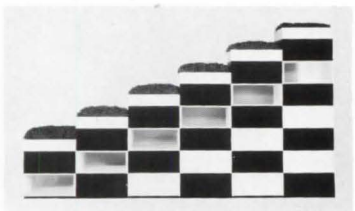
J.M. Lynne
Cocoon Cloth is the new spun-silk collection of wallcoverings and upholstery fabrics. Plain and classic Bedford cord weaves, which make up the collection, are each available in 15 colorways.
Circle 207 on reader service card

Madison Systems
Jerome Caruso designed leather-upholstered Software seating with a special tilt-swivel mechanism and articulated shell for a dual-action, self-adjusting seat.
Circle 208 on reader service card

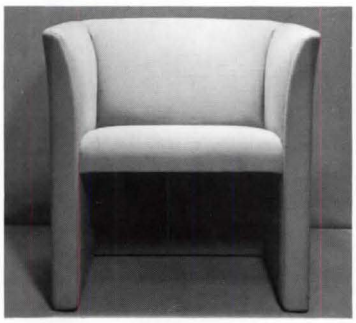


Maharam
Panel/Systems Fabrics and Woven Surfaces compose a new collection of polyester blend COM fabrics consisting of eight patterns and 96 colorways in a 66-inch width.
Circle 209 on reader service card

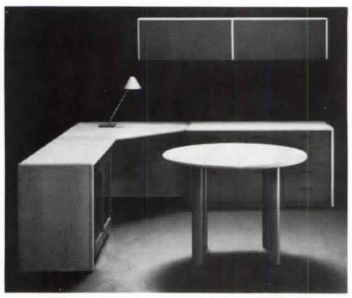
Marden
Designed by Dick Tremulis, this new line of upholstered seating features curved design detailing. Variations of the Lounge Chair include a two-seater sofa.
Circle 210 on reader service card



Meridian
The File Cube/Space Divider meets filing and storage needs through a range of interchangeable lateral files and storage components. Pass-through units allow visual contact between spaces. Constructed of heavy-gauge steel, all exterior surfaces are available in 37 baked-enamel colors.
Circle 211 on reader service card



Metropolitan
Designed by Brian Kane, the 710 Chair and Loveseat can be used in front of a desk, in a lobby area, or as perimeter seating. Optional casters add to the group's versatility.
Circle 212 on reader service card



Modern Mode
Conventional casegoods combine with flexible components to create the Tek 3 system. Hardwood finishes with a selection of ModeColor accents change Tek 3's character from fanciful to formal.
Circle 213 on reader service card

Herman Miller
A new desk group designed by Tom Newhouse includes pedestal desks, linking desks, stand-up desks, credenzas, and a variety of storage elements for use as freestanding furniture with systems environments, in enclosed offices, or as stand-alone pieces.
Circle 214 on reader service card

Monel
The Barrel chair, from the Carina side/arm chair series designed by Bert Lieber, is hand-crafted of solid wood. The removable seat pad may be covered with Monel fabric, leather, or COM.
Circle 215 on reader service card

Mueller
Made of anigre veneers with solid maple edge and base details and highlighted with antique brass hardware, Century Series casegoods will be available in a broad selection of finishes and lacquers.
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And Artec is in pieces.

that offer you the most options, call Artec. ▪ And when you need to create an entire office—from executive to reception areas—mixing casegoods and office systems, call Kimball or Artec. Because everything from Kimball works with everything from Artec. ▪ At Kimball International, we may have reorganized Kimball and Artec slightly. But we didn't alienate them from one another. ▪ In fact, they'll both be at Neocon, Space 825, with some great new introductions.

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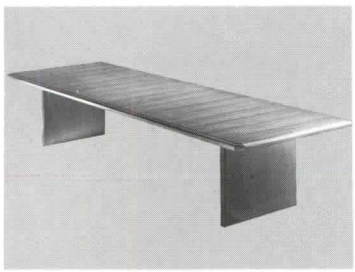
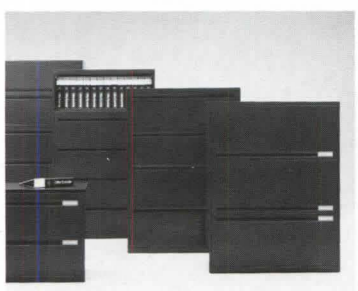


Myrtle Desk
Alpha is a full line of director's tables offered in three sizes with standard mahogany tops and panel bases.
Circle 217 on reader service card

Nemschoff
This all-upholstered, 826 Series group of chairs, sofas, and settees features Flip-Loc construction, allowing on-site renewal. Cushions, arms, and rails can be replaced or re-covered in minutes.
Circle 218 on reader service card

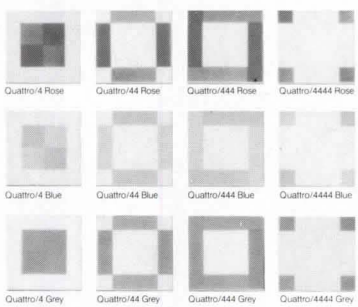
Normbau
Nylon lever handles make up the injection molded tubular nylon builder's hardware systems. The handles are offered in 15 fade- and scratch-resistant colors.
Circle 219 on reader service card

Nucraft
The Executive Series computer furniture line features Chippendale styling, in walnut wood and wood veneer, with locking casters or wood bases. Forty different models meet a variety of custom computer needs.
Circle 220 on reader service card

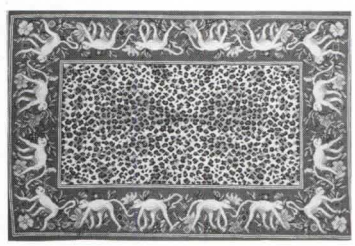


Office Specialty
Storage Centers™ Lateral Files can be customized to house all combinations of shelves and drawers. A total of 41 case heights are available including the new 10½-inch and 13½-inch sizes.
Circle 221 on reader service card

Pace Collection
G. Faleschini designed The Elite executive office group, consisting of a desk, a credenza, a bar, a wall system, and seating. Every component is covered with saddle leather.
Circle 222 on reader service card

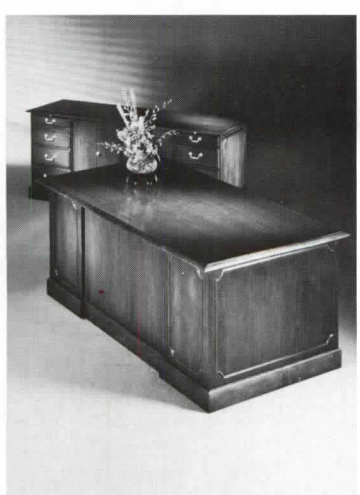


Partek Tile
Quattro Tile, designed by Lena Anderson, is dry-pressed and glazed to achieve a glossy finish for long life and easy cleaning, for a range of residential and commercial wall applications.
Circle 223 on reader service card

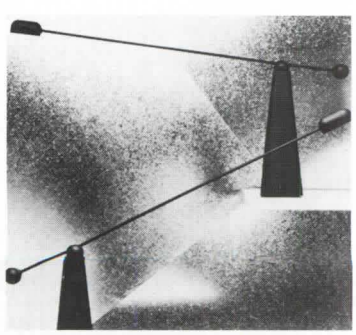


Patterson, Flynn & Martin
Custom woven to size and color, the Monkey Border wool rug with leopard center field is part of the new collection of animal-inspired rugs. The border is a hand-knotted Savonnerie weave.
Circle 224 on reader service card

PCI/Tandem
The 1100 series includes high- and low-back Tilt/Rotary chairs, side and armchairs, and a secretarial and task chair. Exposed wood frames are available in oak, walnut, or mahogany in seven finish options.
Circle 225 on reader service card



R-Way
Double and single pedestal desks, open and closed credenzas, executive and secretarial desk returns, and lateral file cabinets make up the LaFayette collection of office furniture. Featured accessories include mitered corners, solid hardwood bases, and brass grommets.
Circle 226 on reader service card



Ron Rezek
The Orbis dual-intensity halogen task lamp is constructed of a stainless steel and brass arm and heavy-walled cast aluminum black base. The arm is offered in flat black, or flat black with red enamel.
Circle 227 on reader service card

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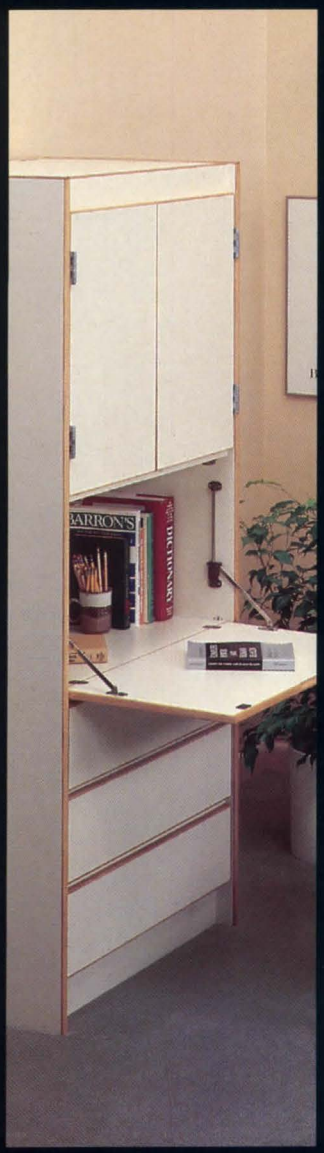

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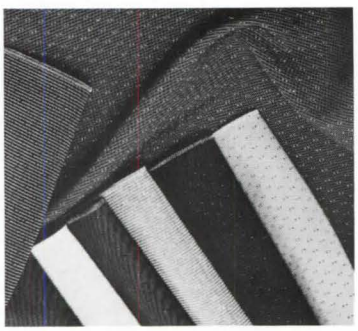
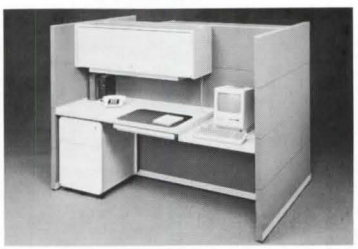
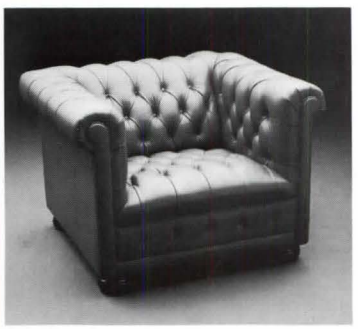


Ben Rose
Limelight, a rib-woven, woolen upholstery fabric, a reflective Metlon yarn, is 54 inches wide and available in twelve colorways, with custom colors in sufficient yardage.
Circle 228 on reader service card

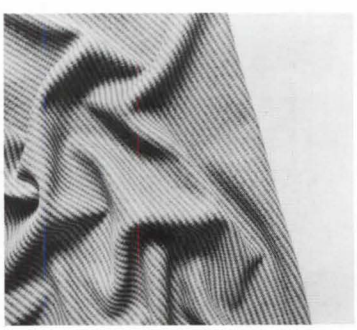


Samsonite
New add-on and shared workstations for the prepackaged 28-Minute Office workstations are available in task and information-processing configurations, and four designer colors. The new stations feature the same panel assembly system as the basic units.
Circle 229 on reader service card

Scalamandré
Vendure, from the Gobelin collection of upholstery fabric and wallcoverings, is 100 percent cotton cloth woven in France. One striking colorway combining browns, burgundy, and teal is offered.
Circle 230 on reader service card



Schafer Bros.
The Chesterfield *9049-30* lounge chair features balanced diamond button tufting, a choice of welting or brass nailhead trim, and finished bun feet or sculptured pedestal feet.
Circle 231 on reader service card



Schumacher
The Alpha Series includes Alpha Dot in 12 colorways, and Alpha Diagonal, available in 11 colorways. Both fabrics are 100 percent woven wool and 55 inches wide.
Circle 232 on reader service card

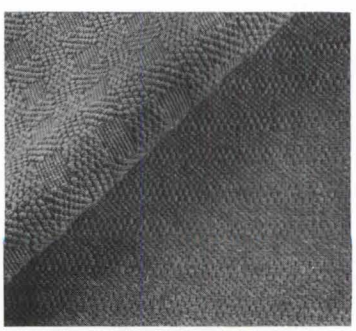
Shaw/Walker
Volante seating may be selected in either spinlift manual or pneumatic height adjustments with swivel and swivel/tilt options.
Circle 233 on reader service card

Shelby Williams
Contemporary can be classic, as shown in the No. 1960 model armchair constructed of a foam-padded seat and back.
Circle 234 on reader service card

Spacesaver
High density, mobile storage/filing S-Line Systems are available in a push-button-controlled, electric-powered design, and a compact mechanical-assist model with glass partitions separating it from the office work area.
Circle 235 on reader service card

Smokador
The Wall Clock, designed by Ole Mathiesen, is battery operated with Swiss quartz movement and hand-formed matte black aluminum frame in three diameters.
Circle 236 on reader service card

Karl Springer
The kidney-shaped desk, finished in goatskin, is available through designers, architects, and specifiers in custom finishes.
Circle 237 on reader service card



Stark Carpet
Olten and Sarnen carpet lines feature a heathered yarn blend in two Wilton weaves: herringbone and basketweave. Multiple stock colorways may be specified; both carpets are 100 percent wool.
Circle 238 on reader service card

Solutions

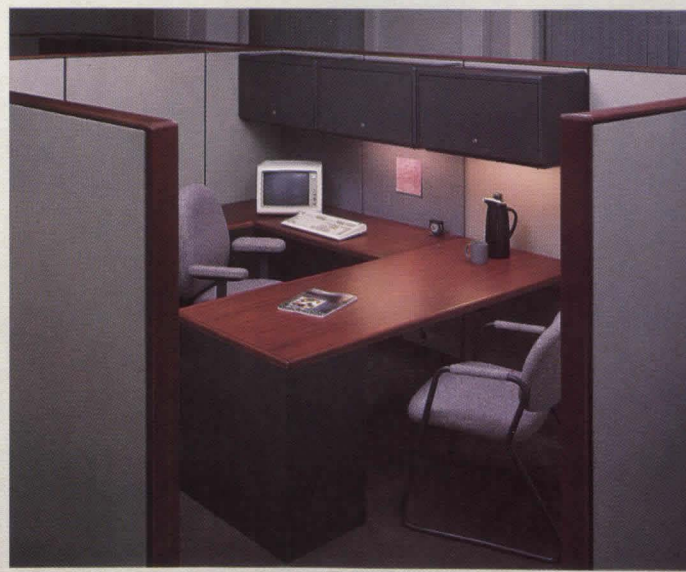
SHAW|WALKER

Power to the people of Virginia

When companies need special solutions, Shaw-Walker's there ...with ingenuity, know-how and a commitment to doing whatever it takes.

Take Virginia Power's new Technical Center in Richmond. This busy public utility has tremendous data requirements, resulting in a larger-than-usual density of computer cabling — all of which has to run through their panel system. Because of our unique 3½-inch-wide panel, Shaw-Walker was able to accommodate all electrical and telecommunications cabling in a *customized double raceway* that provided over 21 square inches of usable space. And because Virginia Power's computers required an isolated circuit, we developed a special circuit harness. The double raceway was tested and approved by Underwriter's Laboratory, in plenty of time for the new building's opening.

Shaw-Walker did everything it could to help Virginia Power serve its people better. We'll do the same for your company; just call and find out how. 1-800-345-9404.

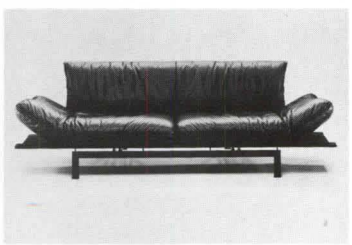


Typical Tempo 3 Radius workstation

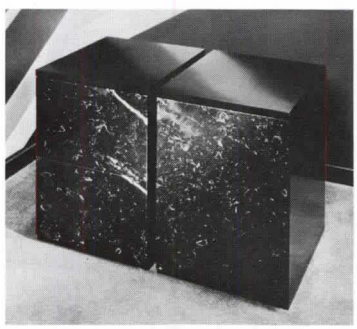
See us at NEOCON 19, Suite 868, The Merchandise Mart

Circle **No. 395** on Reader Service Card

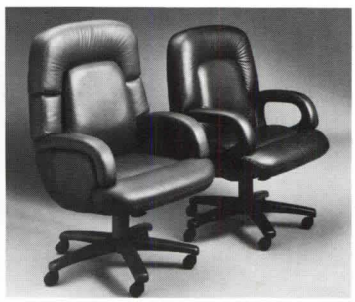
Steelcase
Sensor is the next generation of high-performance ergonomic seating. Designed by Wolfgang Muller-Deisig, Sensor is offered in five new fabrics and over 40 colors.
Circle 239 on reader service card



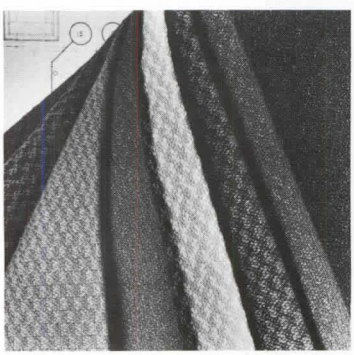
Stendig
Mirabile, designed by Reto Frigg for DeSede of Switzerland, is a two-seat sofa with seat cushions that can be raised to become armrests, or rotated 90 degrees to form a chaise longue.
Circle 240 on reader service card



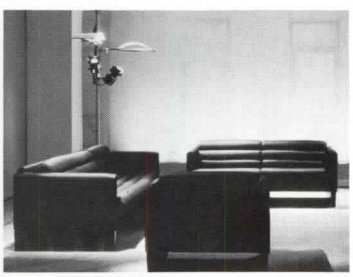
Storwal
Imported marble, exotic wood, and laminates will be featured along with a new color palette revised by designer Jackson Boren.
Circle 241 on reader service card



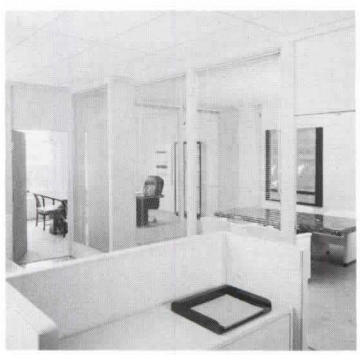
Stow & Davis
Both high- and low-back models of Breton executive ergonomic seating are hand-upholstered and offered in a range of 28 European leathers. Specifiers may choose from three base treatments.
Circle 242 on reader service card



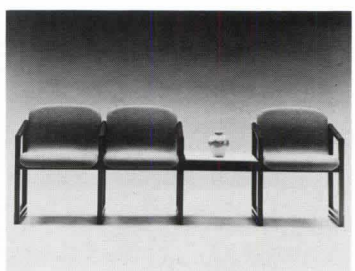
Stroheim & Romann
Garrison, from the new line of contract fabrics, is offered in 10 colorways, is 54 inches wide, and is woven from textured tweeds.
Circle 243 on reader service card



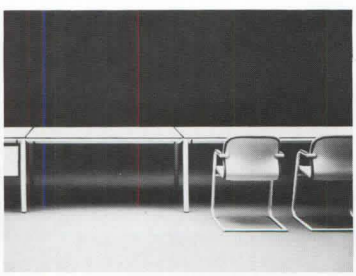
SunarHauserman
Architect Robert Kleinschmidt designed this modular Lounge Seating Collection, which includes a single chair and ottoman, and two-, three-, and four-seater sofas.
Circle 244 on reader service card



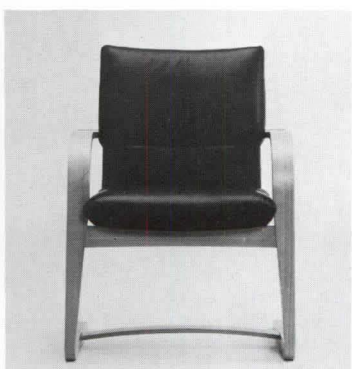
Trendway
Floor-to-ceiling movable walls are designed to integrate with existing lines of open office panels and furniture components.
Circle 245 on reader service card



Tuohy
Daniel Cramer's Cedilla Program is a component-based design constructed of hardwood frames, crossrails, seating units, and tables that can be combined in multiple assemblies. Chair frames are available with or without arms.
Circle 246 on reader service card



Vecta
The new group of modular tables provides rectangular, triangular, square, trapezoidal, and hexagonal shapes with four shapes of connecting tops. All tops are offered in veneer and laminate finishes with base finishes in polished aluminum or thermoset colors.
Circle 247 on reader service card



Vitra
The Wooden Cantilever Chair, refined by Mario Bellini, incorporates a structure that varies as strength and flexibility are required.
Circle 248 on reader service card

Westinghouse
Soma Seating, designed with Charles W. Pelly, compensates for the worker's every move. Height, tilt, tension, and locking or free-float adjustments are easily controlled on each of the 19 models available.
Circle 249 on reader service card

Allied-Signal Inc.
Allied Fibers
1411 Broadway
New York, NY 10018

Allied Signal

Circle No. 315 on Reader Service Card

Introducing Cordura® for upholstery. Made tough to survive the corporate jungle.

Contract upholstery will never be the same, now that Du Pont brings CORDURA* to the office. CORDURA nylon has proved itself tough enough for backpacks and luggage, durable enough for hunting gear and boots.

It exceeds the standard Wyzenbeek Double Rub Abrasion Test by such a wide margin that an even more stringent Wyzenbeek Test had to be developed (see results at right).

And CORDURA is a soft touch indoors. We've given it a luxurious hand, a satisfying touch and a smart look that make the most of fabrics for contemporary or classic furniture.

More stringent modified Wyzenbeek Abrasion Test.

Polypropylene failed at 164 double rubs.

Spun nylon failed at 445 double rubs.

CORDURA hardly affected after 445 double rubs. Failed at 1,464.

Fabrics of CORDURA nylon are available in a whole range of colors, styles and weaves. In 1000/280 denier, or newer 2000/560 with an even softer surface.

For good looks with strong character, ask about CORDURA. Contact Du Pont at (215) 855-7765, and let us give you samples, specifications and names of suppliers.

CORDURA. The survivor.

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Circle No. 345

*Registered trademark of the Du Pont Company for its air-textured, high-tenacity nylon fiber. Du Pont makes fiber, not fabric.

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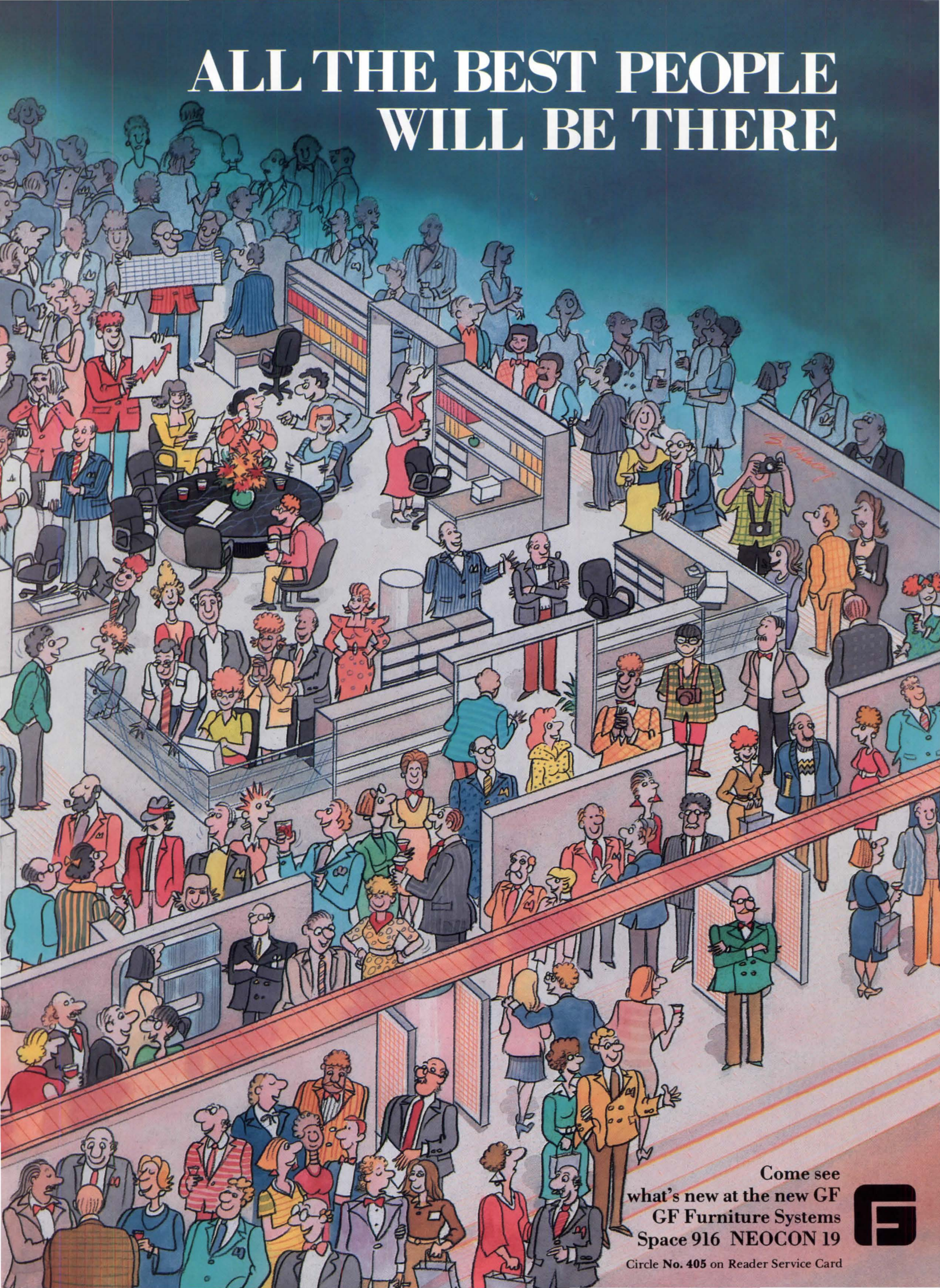


Come see what's new at the new GF
GF Furniture Systems
Space 916 NEOCON 19

Circle **No. 405** on Reader Service Card

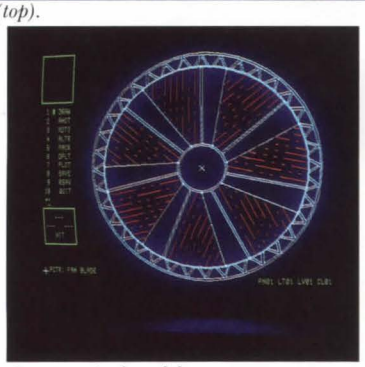
New Products and Literature

Seaming trowel (above) and flashing plate (top).

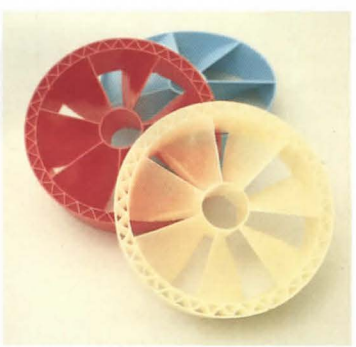
Roofing Electrically

The use of modified bitumen roofing grew faster than that of any other single-ply system last year. The material's success, though, has been clouded by its torch application, which has led to a number of fires in buildings, especially around flashings and other joints. Promising relief from both the fire hazard and liability is a recently introduced set of electrically heated handtools designed for the installation of modified bitumen roofing. The tools provide a more easily regulated and less concentrated heat than torches. Nickel-plated to resist the build-up of bitumen, the handtools consist of a seaming trowel, a flashing plate, and a dual-handled parapet tool, all of which are connected by cables to a solid-state control unit and storage box. The tools were developed for use with most brands of modified bitumen roofing. MWELD.

Circle 100 on reader service card



Computerized model.

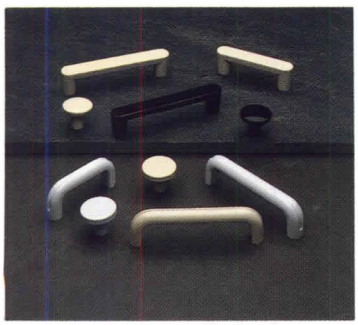


Acrylic model.

Model-building Electronically

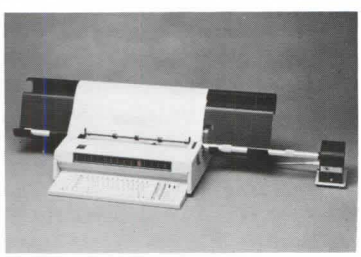
A combination of computer graphics, lasers, and radiation chemistry now enables architects to create, in minutes, highly detailed, three-dimensional acrylic models of buildings. Called "stereolithography," the system uses a computer graphics terminal to operate a laser aimed at a vat of light-sensitive acrylic resin. As a three-dimensional model of a building is sectioned in the computer, each section profile is transferred via the laser to the surface of the acrylic, a thin layer of which cures wherever the light beam strikes. A computer-controlled platform within the vat then descends the thickness of one section and the process continues until a three-dimensional model of a building is formed. The system is capable of creating a model to a level of detail that includes the placement of furniture and equipment within spaces. 3D Systems, Inc.

Circle 101 on reader service card



ELAN™ knobs and pulls are offered in several contemporary colors for 32mm production cabinets as well as for traditional hole spacing. The selection is made from high-strength ABS engineered plastic in gloss finish colors of red, black, brown, almond, and white or a combination of colors using stripes and inserts. The 32mm grouping colors are black, almond, and white. Amerock Corporation.
Circle 269 on reader service card

Duette Commercial, a flame-resistant version of the Duette soft fabric shade, features a permanent flame-resistance treatment that meets high safety standards. It is an effective energy-saving insulator against heat transfer because of its air-trapping honeycomb construction. Hunter Douglas, Inc.
Circle 270 on reader service card



***The Open End* Typewriter** uses memory printing units, particularly the IBM Wheelwriters® and Quietwriters®. Features include 31K memory, editing capabilities, automatic functions, lift-off correction, many type styles, and ease and speed of operation. All functions are controlled from the regular keyboard. The print is letter quality. Diagram Corporation.
Circle 271 on reader service card

Versatrac™ interior aluminum framing systems can be used in new construction, remodeling, and retrofit installations. They are easily demountable and are engineered for fast, trouble-free installation and disassembly for future remodeling to accommodate changing needs of modular office plans. VT Industries, Inc.
Circle 447 on reader service card

Entrance Accessibility catalog provides general information on designing entrances accessible to the handicapped and information on handicapped-related door control products. The catalog includes minimum clear-width opening requirements, reduced opening force calculations, conditions that affect door closing function, and special building codes. The 16-page catalog covers product features and details, suggested specifications, drawings, and application photos. LCN Closers.
Circle 272 on reader service card

Round Top Windows are offered in wood and clad wood in 32 standard sizes for double-hung and casement windows and elliptical transom windows. The Clad Round Top exterior finish is virtually maintenance-free. The wood Round Top accepts stain, varnish, or paint, as well as factory-applied Polycron prefinish that needs little maintenance. Marvin Windows.
Circle 273 on reader service card

Commercial & Residential Tiles, 1987 edition, incorporates the company's newest designs. Product specifications, style variations, measurements, installment configurations, color samples, and other details are included. Villeroy & Boch.
Circle 274 on reader service card

Stains and finishes for hardwood floors are featured in a new four-page catalog. It includes product information and specifications, four-color photographs, and a chart recommending various top coats depending on flooring and location. Gillespie/Klean-Strip.
Circle 275 on reader service card

The Custom Office for executive and home office installations has wraparound storage and custom cabinetry available in a variety of styles and finishes. The system is available in 12 styles and 13 wood finishes: Mahogany, Black Oak (shown in Alpha Series), Teak, Walnut, Rosewood, Cherrywood, or gray, ivory, and white lacquer. Planum, Inc.
Circle 276 on reader service card

Custom-designed cabinetry has face frames, doors, and drawer fronts of solid cherry. There is a choice of hardware and hand-rubbed finishes. Two door designs are available: Legacy, with raised cathedral-paneled wall units and rectangular-paneled base units; and Brentwood, with both wall and base units having raised rectangular panels. Decora, Beatrice Companies, Inc.
Circle 448 on reader service card

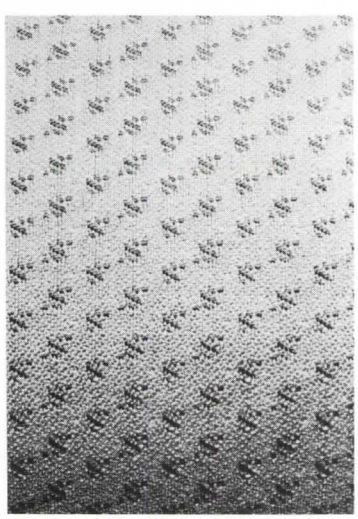
Custom masonry is shown in color in several installations in an eight-page brochure. Buildings shown range from restaurants and banks to apartments and churches. Drawings show the various face configurations of the blocks, which are available in 4-, 8-, and 12-inch depths. Featherlite.
Circle 277 on reader service card

Loading Dock Safety Guide, prepared with technical assistance from the National Safety Council, outlines procedures for establishing a loading dock safety program. Topics covered in the 32-page brochure include vehicle restraining, dock levelers and plates, dock and traffic doors, dock seals and shelters, dock bumpers, trailer lifting, and lighting. Rite-Hite Corporation.
Circle 278 on reader service card

Metal building components catalog covers factory-insulated systems, field-assembled and insulated systems, exterior profiles, curved profiles, and structural members. A color chart shows several coatings available. The 16-page brochure illustrates and describes the components and provides load span data where applicable. Moncrief-Lenoir Manufacturing Co.
Circle 279 on reader service card

A low-voltage lighting control system for residential applications switches lights on and off and allows full-range dimming from any number of different locations. Switching and dimming for fluorescent and low-voltage loads are also available. The switch stations are available in a range of finishes, including chrome, brass, bronze, copper, or prime coat. A single gang wall station can provide up to nine points of control. LiteTouch.
Circle 449 on reader service card

Plastrglas is a combination of specially formulated high strength gypsum cement and glass fiber reinforcement. It is used in conjunction with drywall, conventional plaster systems, or for ceiling material. It is a high density product with comparatively high tensile strength that is sprayed into molds to meet shape requirements. It is used in schools, hospitals, offices, auditoriums, museums, banks, and similar areas—in new construction, restorations, remodeling, and renovations. Plastrglas.
Circle 280 on reader service card



Topridge™ 100 percent wool jacquard weave for medium to heavy upholstery applications is custom woven in Switzerland. Colors are camel with blue, red, and green; medium gray with dark gray, red, and yellow; and dark gray with light gray, red, and blue. The fabric is 51 inches wide. Gretchen Bellinger.
Circle 420 on reader service card

Tiger Tough Roof System comprises Technibase base sheet, Technigum modified bitumen membrane, and Thermocote premium white acrylic roof coating. The system qualifies for extended warranty periods that cover labor and material for 15 years. Technicote Corporation.
Circle 421 on reader service card

(continued on page 194)

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CONTRACT VINYL WALLCOVERING

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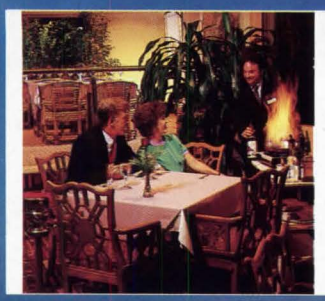
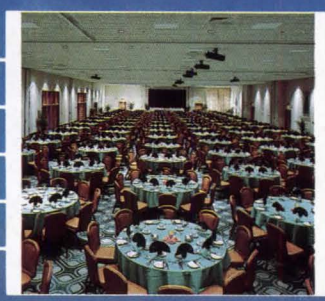
THE INTIMATE RESORT





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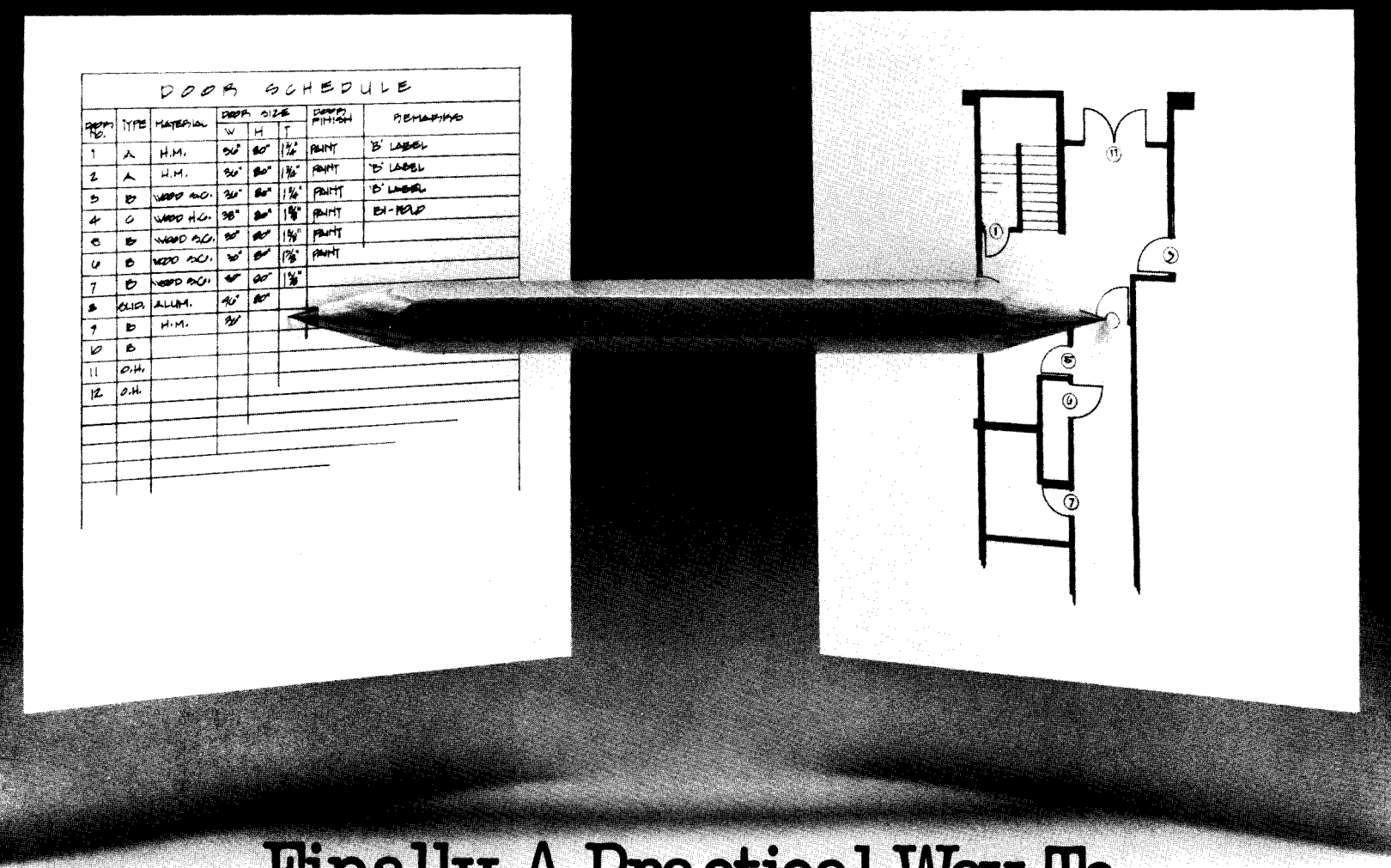

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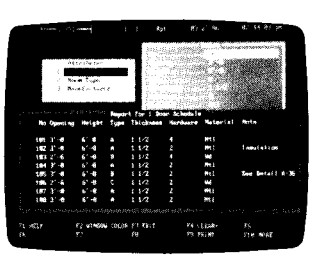
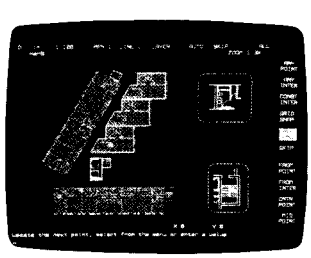


The data management screen, responding to changes in graphics, provides current reports, calculations, and system information...



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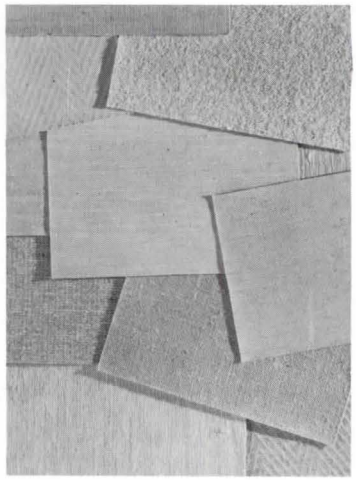
30H Series locksets offer improved security. A patented roller bearing knob mechanism (arrow) allows improved knob action through lower and consistent torque value. The case is heavy gauge steel, and solid machined cylinder rings are tension spring mounted. Knob hubs and locking mechanisms are heavy steel. Optional high security cylinder on 36H/37H series complies with ANSI 156.13. Best Lock Corporation.
Circle 422 on reader service card

Luce Selection catalog offers 20 pages of halogen and incandescent lighting. There are floor lamps, wall sconces, pendants, and table lamps. Several Italian designers are represented. VeArt International, Inc.
Circle 423 on reader service card

Model 6802 retail traffic doors, described in a two-page color brochure, have nonrise hardware to eliminate unsightly gaps often found around these doors. The brochure explains features and operations of the doors and hinges, and provides specifications and color options. Frommelt Industries, Inc.
Circle 435 on reader service card

Colored compression seals made from EPDM polymer-based thermorubber are ideal for large, uniform façade joints that require color matching. They are available in beige, gray, white, red, blue, and black. Emseal Joint Systems, Ltd.
Circle 428 on reader service card



Linen Classics wallcovering collection is offered in natural colorations typical of Belgian linens and a spectrum of pastels. All 78 patterns are Class A fire rated, paper-backed to insure against distortion of the fabric face during installation, and Scotchgard® finished for protection against staining and soiling. Vicrtex Wallcoverings.
Circle 431 on reader service card

Real Brick Perma-Panel can be installed by semiskilled workers, typically 2½ times faster than conventional brick masonry. EPS foam backer provides an R-factor of 3.2, seven times that of 4-inch brick, says the manufacturer. The panels weigh only 6 pounds per square foot and require neither footings nor steel angles for support. The fired clay units are said to exceed ASTM C-216 standard for severe weather grade brick. U.S. Brick.
Circle 433 on reader service card

Corian Sierra offers a textured stone look, available initially in two colors: Sierra Dusk, a light gray, and Sierra Midnight, a dramatic dark gray. Available by mid-1987, Sierra will be marketed in ½- and ¾-inch sheets for use on horizontal surfaces such as countertops, slab vanity tops, and window sills. Sheets ¼-inch thick will be available for vertical surfaces, including shower walls, tub surrounds, and wallcoverings. Du Pont Company.
Circle 430 on reader service card

Spherical door pulls HG 130 Series are made from 1¼-inch diameter tubing. Finishes include brass, bronze, and stainless steel. Hiawatha, Inc.
Circle 432 on reader service card
(continued on page 196)

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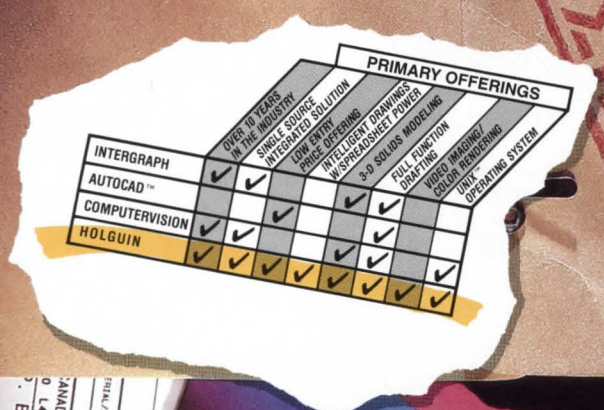

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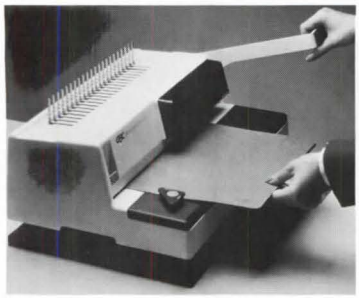

Image-Maker 2000, a complete punching and plastic binding system, allows quick and efficient conversion of loose papers into professional-looking reports, catalogs, handbooks, presentation flipcharts, and other documents. It punches, then binds documents up to 12 inches long in one simple operation. Binding capacity is 425 sheets. Among supplies for Image-Maker 2000 are report covers and color-coordinated plastic bindings in a wide range of colors, textures, and sizes. General Binding Corp.
Circle 437 on reader service card

Midway and Rockport are vinyl wallcoverings for restaurants, corporate dining facilities, hotels, and other hospitality installations. Midway has 22 patterns in 153 colorways; Rockport has 21 patterns in 145 colorways. Most styles are available in 54-inch widths, and all are Class A flame rated, highly durable, and washable. J.M. Lynne Company.
Circle 438 on reader service card

Alpia Excellence filing systems hold up to 2900 3-mil-thick D-size drawings in just 7.2 square feet of floor space. An exclusive identification method allows the user to locate and remove a drawing laterally quickly and to refile it in its correct place just as quickly. Alpia, Inc.
Circle 439 on reader service card

Monogram built-in appliances are intended for the high-end, professional custom kitchen remodeling market. The new line includes a built-in, counter-depth refrigerator 42 inches wide, a double-wall oven, induction and solid-disk cooktops, a dishwasher, and a pair of microwave ovens. Refrigerators and microwaves will be available in the first and second quarters of 1987, other items in the third quarter. General Electric Co.
Circle 440 on reader service card

Exterior insulation and finish systems manual provides a description of types of EIFS available. The ten-page manual discusses quality assurance practices and materials, all phases of installation, and application of reinforcement coatings. The technical manual costs $12 each for 1–5 manuals for members; $20 each for 1–5 manuals for nonmembers of The Association of Wall and Ceiling Industries. Copies can be ordered from the association at 15 K Street, NE, Washington, D.C. 20002.

Fiber-Con glass fiber reinforced concrete panels are produced from a matrix of Portland cement, fine aggregate, and special alkali-resistant glass fibers. Typical applications are interior or exterior fascia and accent panels. The line is available in eight standard panel designs. Lake Manufacturing Company.
Circle 441 on reader service card

Perforated Metals handbook describes a wide range of perforated metals for industrial, architectural, and ornamental applications. Among architectural uses are ceilings, dividers, grilles, and acoustical surfaces. Illustrations show the variety of perforations available. National Perforating Corporation.
Circle 442 on reader service card

Amofoam®-SB extruded polystyrene insulation is lightly scored on 16- and 24-inch centers for simplified on-site application. It is available in 4′ x 8′ boards and in 1-, 1½-, and 2-inch thicknesses. The insulation is recommended for foundation, perimeter, and cavity wall installations in commercial construction projects. Amoco Foam Products Co.
Circle 443 on reader service card
(continued on page 198)

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The Designer's Element

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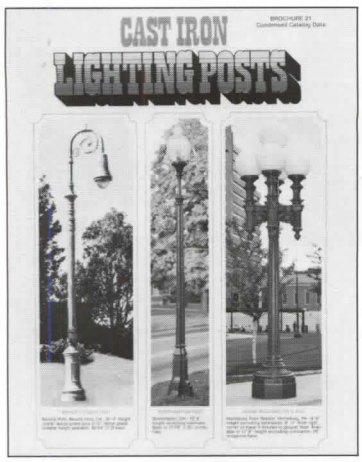

Ornamental lighting posts of heavy-duty cast iron in 20 different styles are illustrated and described in a full-color, four-page folder. The posts are shown installed in parks and squares, malls, college campuses, historic sites, and esplanades. In many cases, posts take their name and style from a historic person or place. Light sources include incandescent, mercury vapor, metal halide, or high-pressure sodium. Spring City Electrical Manufacturing Company.
Circle 444 on reader service card

The Coriandoli Series of faucets and fittings is offered in black, beige, blue, and polished gold in addition to the existing color line of white, red, yellow, and polished chrome. There are 23 color combinations possible as standard finishes. Watercolors.
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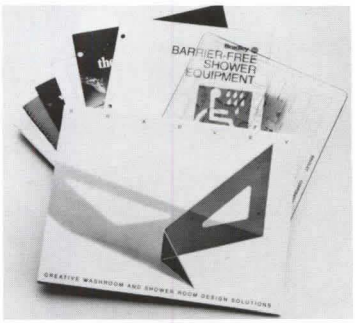

Washroom/shower room design kit contains over 90 pages of practical planning aids and design ideas for all types of high-usage washrooms and shower rooms. Included is a design template in ⅛- and ¼-inch scales and problem solving design solutions, including barrier-free accessibility, efficient traffic flow, water/energy conservation, and user satisfaction. Bradley Corp.
Circle 446 on reader service card

Building Materials

Major materials suppliers for buildings that are featured this month as they were furnished to P/A by the architects.

The Menil Collection, Houston, Texas (p. 87). *Architects: Piano & Fitzgerald, Houston.* Cast-in-place concrete foundations. Ductile iron trusses: North American Foundry (Ft. Smith, Ark.). Ferrocement leaves: Ferrocement Laminates (Leeds, Eng.). Windows: Binswanger. Skylights: Lord & Burnham. Entrance doors: Ellison Bronze Co. Interior doors: Pearland Industries (metal), Versi-Craft (wood). Marble aggregate paving: Parker Bros. Stained pine flooring: Gilson Stanley. Wood floor grilles: Versi-Craft. Acoustical ceilings: Armstrong. Coal tar built-up roofing: Koppers. Waterproofing/sealants: Tremco, Dow Corning. Exterior stain: Cabots. Interior latex paint: PPG. Hinges: Hager. Locksets: Corbin. Door closers: Rixson. Panic exits: Von Duprin. Kitchen eqt.: Whirlpool, Thermador, Sub-Zero. Security/detection/fire: Johnson Controls, Pyrotronics. Elevator, hydraulic: Otis. Track lighting: Edison Price. Recessed lighting: Lightolier. Exterior lighting (buried): Kim. Plumbing fixtures: American Standard. Washroom accessories: Bobrick. Water fountains: Halsey Taylor. Sprinklers: Reliable. Heating system: Sellers. Air-conditioning systems: Trane. Environmental control/energy management system: Honeywell. Custom architectural woodwork and cabinets: Versi-Craft. Office furniture/files: GF.

Crosby Arboretum Interpretive Center, Picayune, Miss. (p. 104). *Architects: Fay Jones and Maurice Jennings, Architects, Fayetteville, Ark.* Pine frame: Richton Tie & Treatment. Brick paving: Boral Brick. Wood shingles: Inland Shake and Shingle. Natural cypress stain: Benjamin Moore. Benches: Lynn Bruge Construction Co. (Fay Jones and Maurice Jennings, design). Steel stanchion handrail with ropes: Great Southern Metals (Fay Jones and Maurice Jennings, design). Electric distribution box: Crouse-Hinds. Breakers: Square D.

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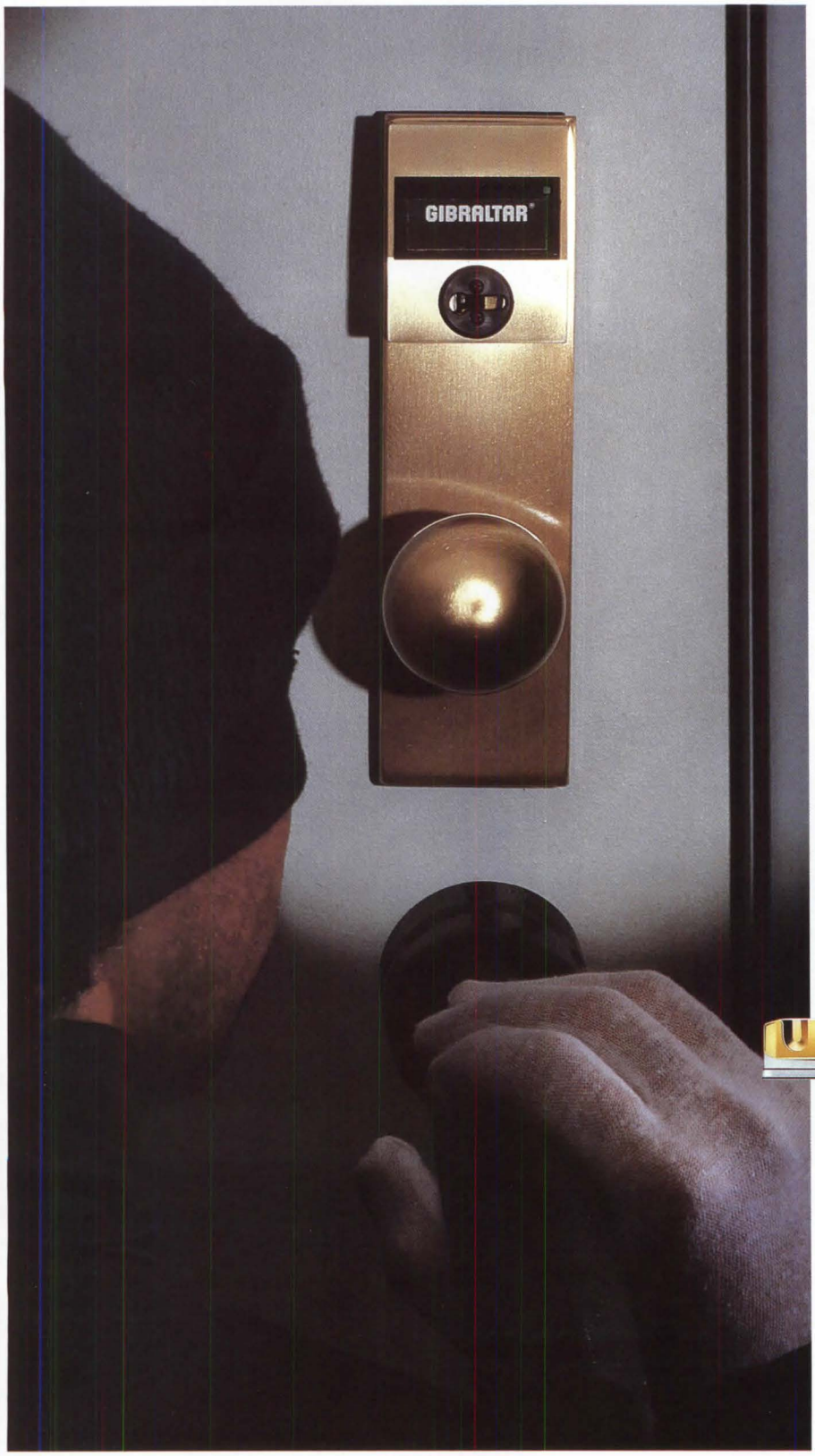

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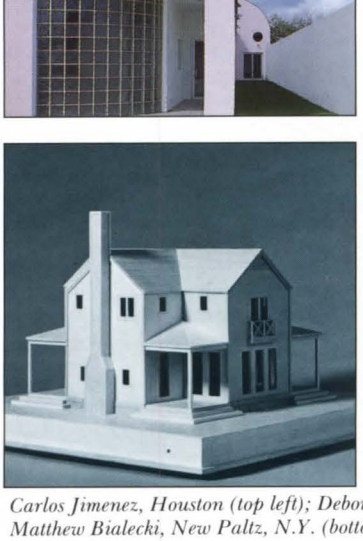

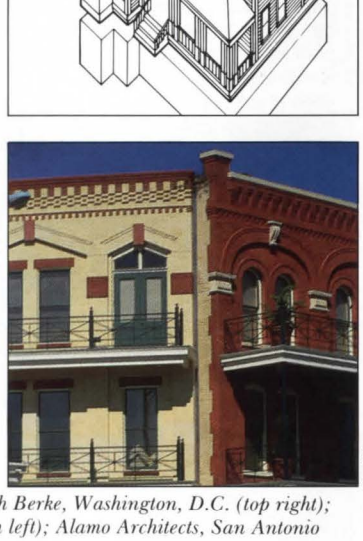

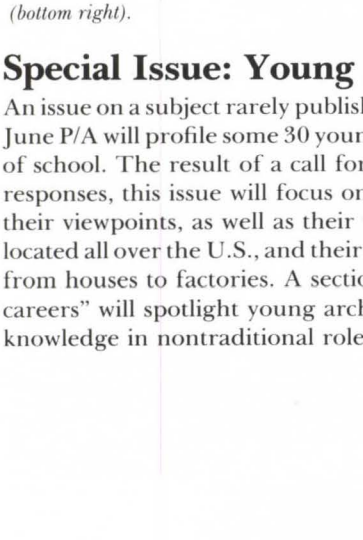

Paul Hester

Carlos Jimenez, Houston (top left); Deborah Berke, Washington, D.C. (top right); Matthew Bialecki, New Paltz, N.Y. (bottom left); Alamo Architects, San Antonio (bottom right).

Special Issue: Young Architects

An issue on a subject rarely published in the architecture press, the June P/A will profile some 30 young architects, ten years or less out of school. The result of a call for entries that drew nearly 350 responses, this issue will focus on the people, their practices, and their viewpoints, as well as their work. The architects featured are located all over the U.S., and their works selected for this issue range from houses to factories. A section of the issue on "alternative careers" will spotlight young architects applying their professional knowledge in nontraditional roles.

P/A Technics: Plastic Laminates

The material and fabrication, as well as the design and application of high-pressure decorative laminates is both described and illustrated.

Future Issues

The July P/A will be a Special Issue all about Paris and what is happening there right now. A P/A Technics feature will examine architectural uses of steel.

P/A Job Mart

Situations Open

Two tenure track positions are anticipated in the Civil Engineering Technology Department at the College of Technology at Alfred. The openings are to be filled in September 1987 at the instructor/assistant professor rank in the Associate Degree Programs of Architectural and Construction Engineering Technology. **Position 1** requirements include a Masters degree in architecture or related field, professional experience and the ability to become licensed within a reasonable time. Duties include teaching in the areas of architectural graphics/design, construction estimating and construction materials and methods. **Position 2** requirements include a Masters degree in Civil Engineering or related field, construction experience and the ability to become licensed within a reasonable time. Duties include teaching in the areas of construction estimating, mechanical systems, construction graphics/detailing, and materials testing. Apply with resume and three professional references to: **Ronald Nichols, Chairman, Civil Engineering Technology, College of Technology at Alfred,** Alfred, NY 14802. The positions will remain open until filled.

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(continued on page 204)

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(continued from page 202)

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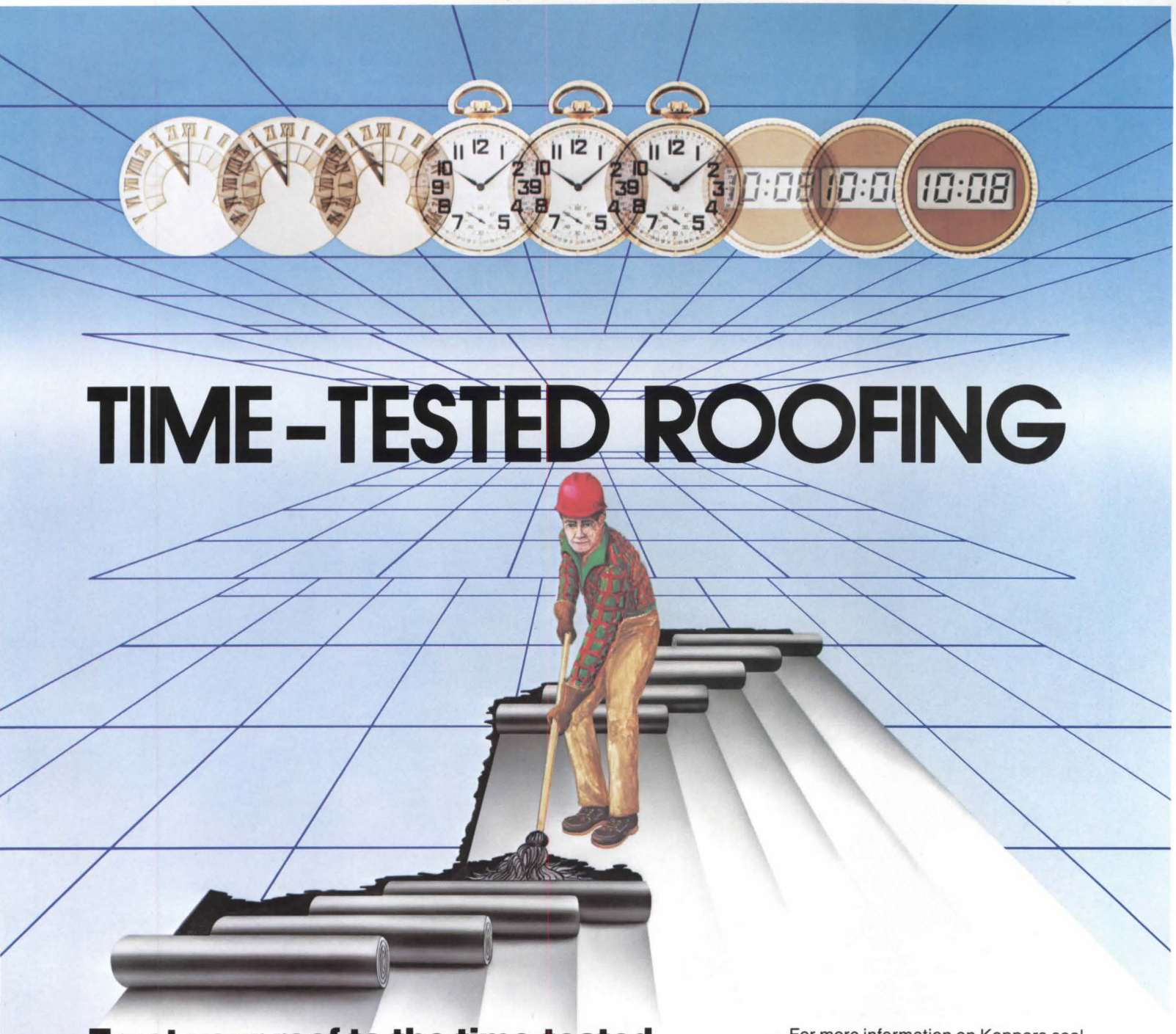

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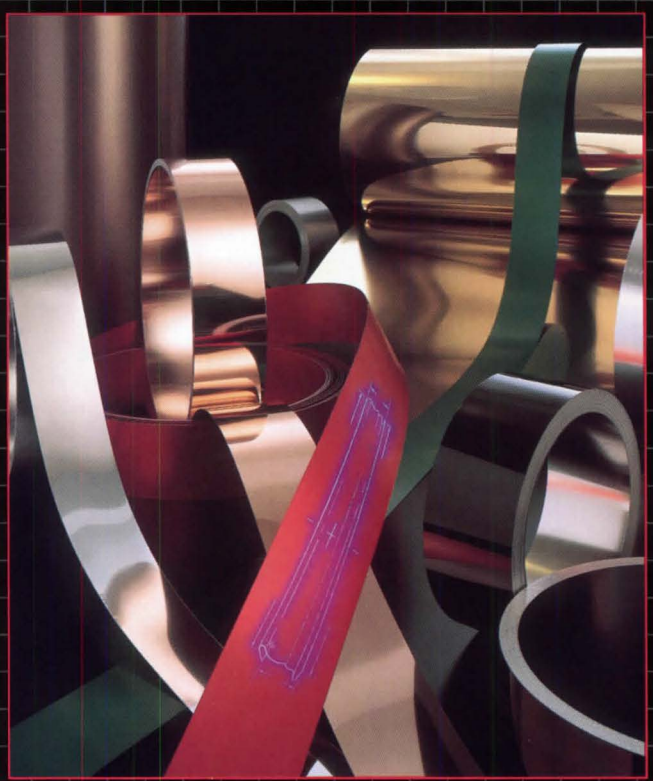

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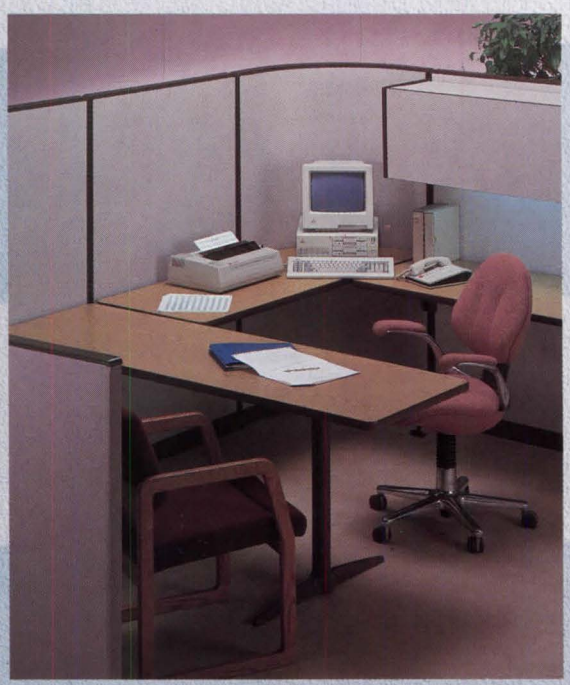

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For retail interiors, other high traffic public areas, as well as residential use, specify Kentile Rustic Clay. Play to win with quality. See your Kentile representative now.

KENTILE® FASHIONS in FLOORS

Kentile Floors Inc., Brooklyn, N.Y. 11215

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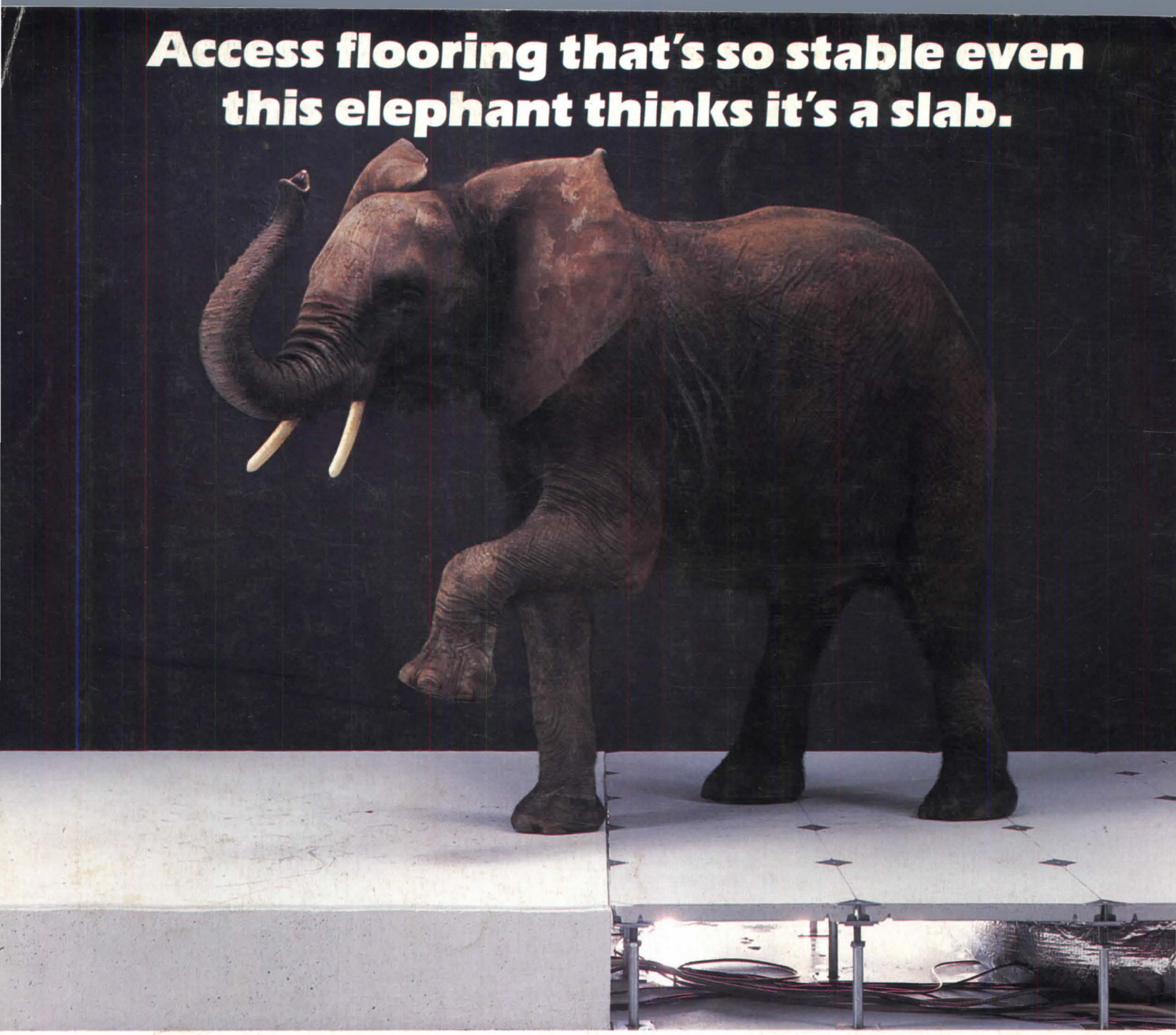
Access flooring that's so stable even this elephant thinks it's a slab.



Concrete Slab **S-Floor**

Actually, we're not sure just what Daisy the elephant in our picture thinks. But, we do know that elephants are very careful about where they'll put their considerable weight. And, we weren't the least bit surprised to see Daisy standing just as comfortably on S-Floor, as on the slab adjacent to it. That's because amazing S-Floor *feels* just like a concrete slab.

The secret of S-Floor's immense *strength* is its two-foot square steel-grid reinforced panels of Innocrete, the tough space age silicate compound that's the strong silent type—like concrete but a lot lighter. Its *stability* is the result of an ingenious system of integration that eliminates ordinary access floor "wobble."

Strength, stability and wobble-free performance are just some of the features that make S-Floor uniquely qualified to stand up—not only to normal office floor loads, but to particularly menacing rolling loads as well. So if you want a *strong, wobble-free* access floor, call Innocrete Systems, Inc. at 1-800-225-2153.

Some manufacturers are filling their metal panels with concrete But only S-Floor is solid Innocrete with engineered reinforcement all the way through. Play safe. Specify S-Floor, the access floor developed exclusively for offices.

S-FLOOR™

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