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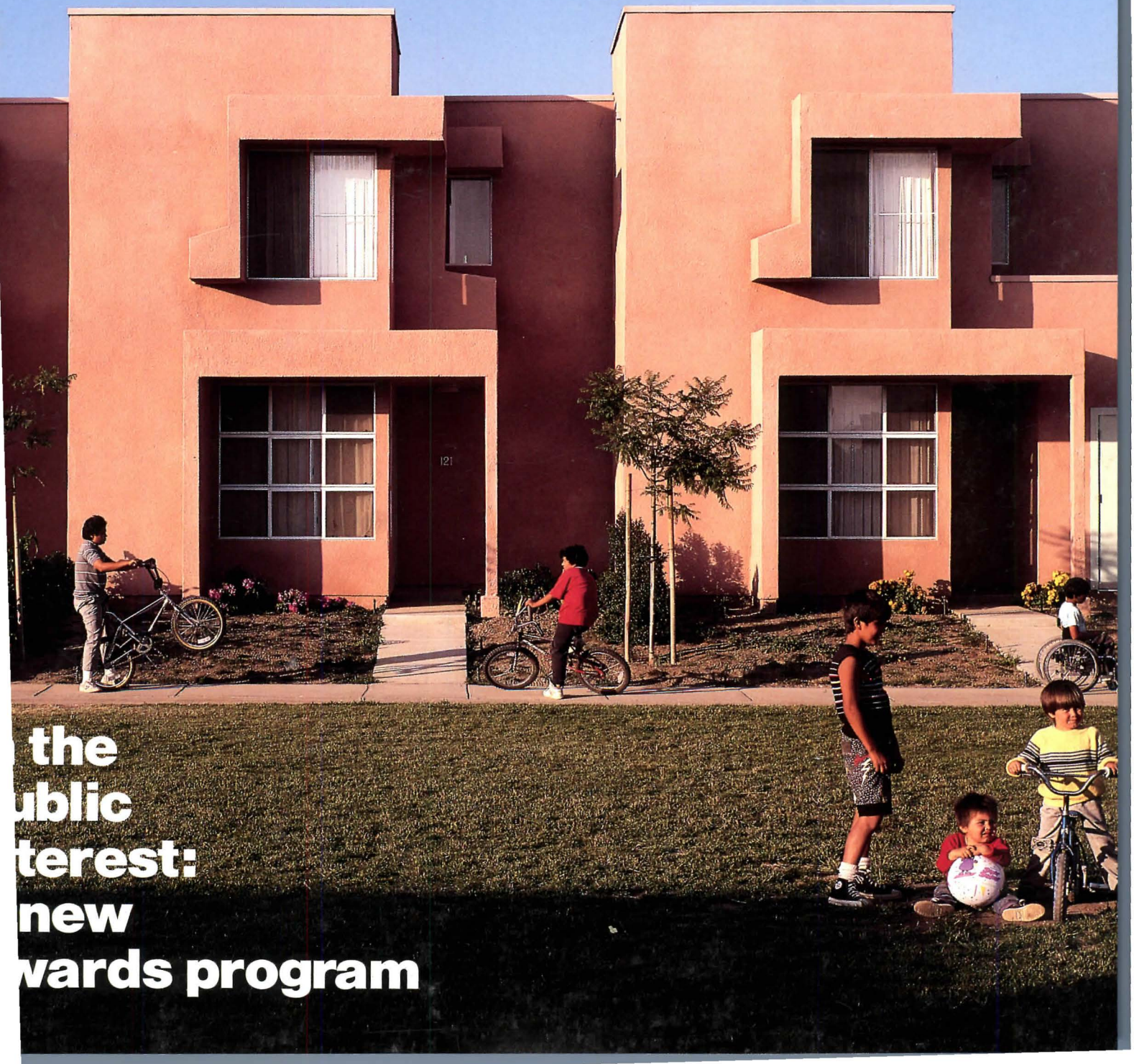

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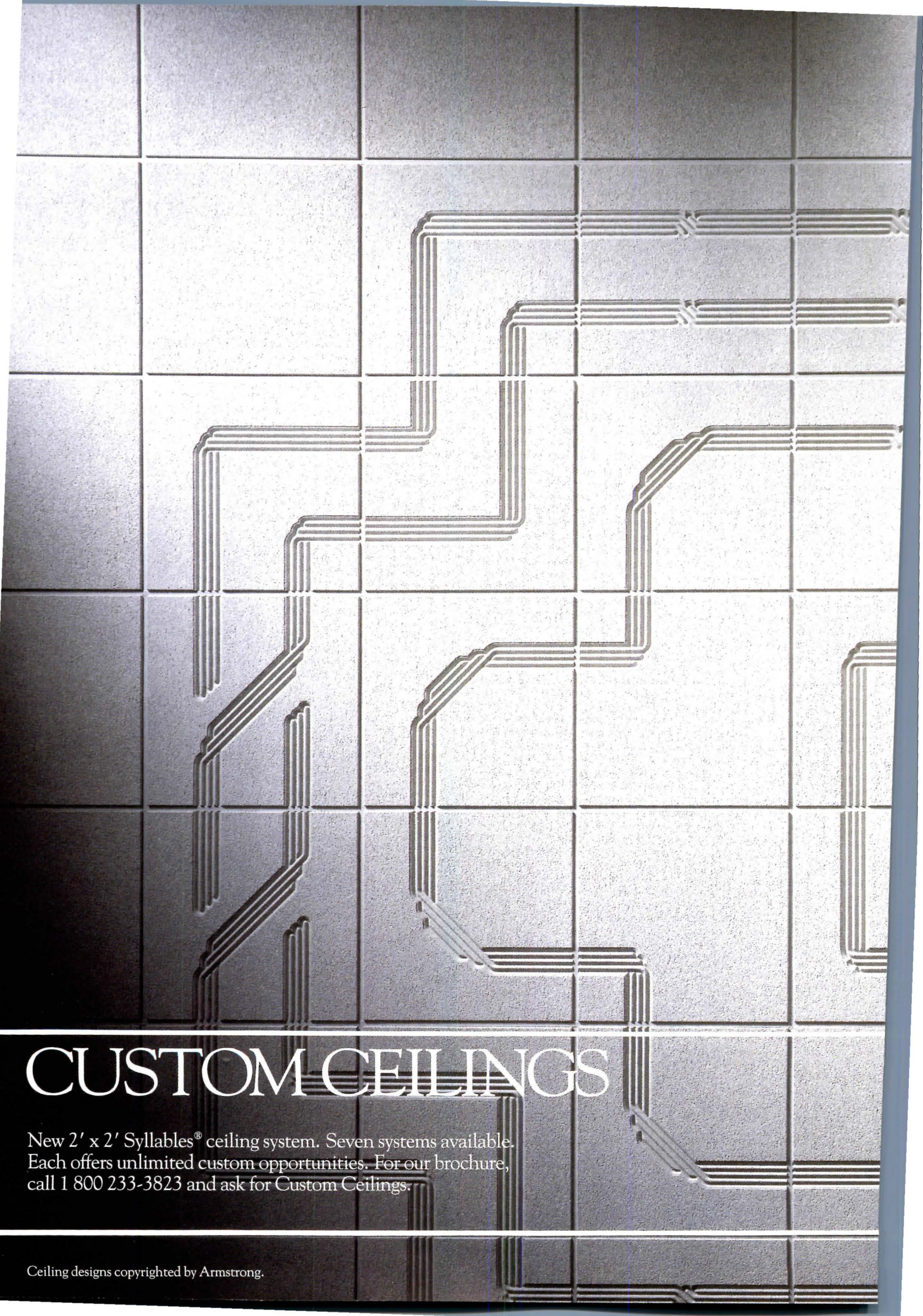
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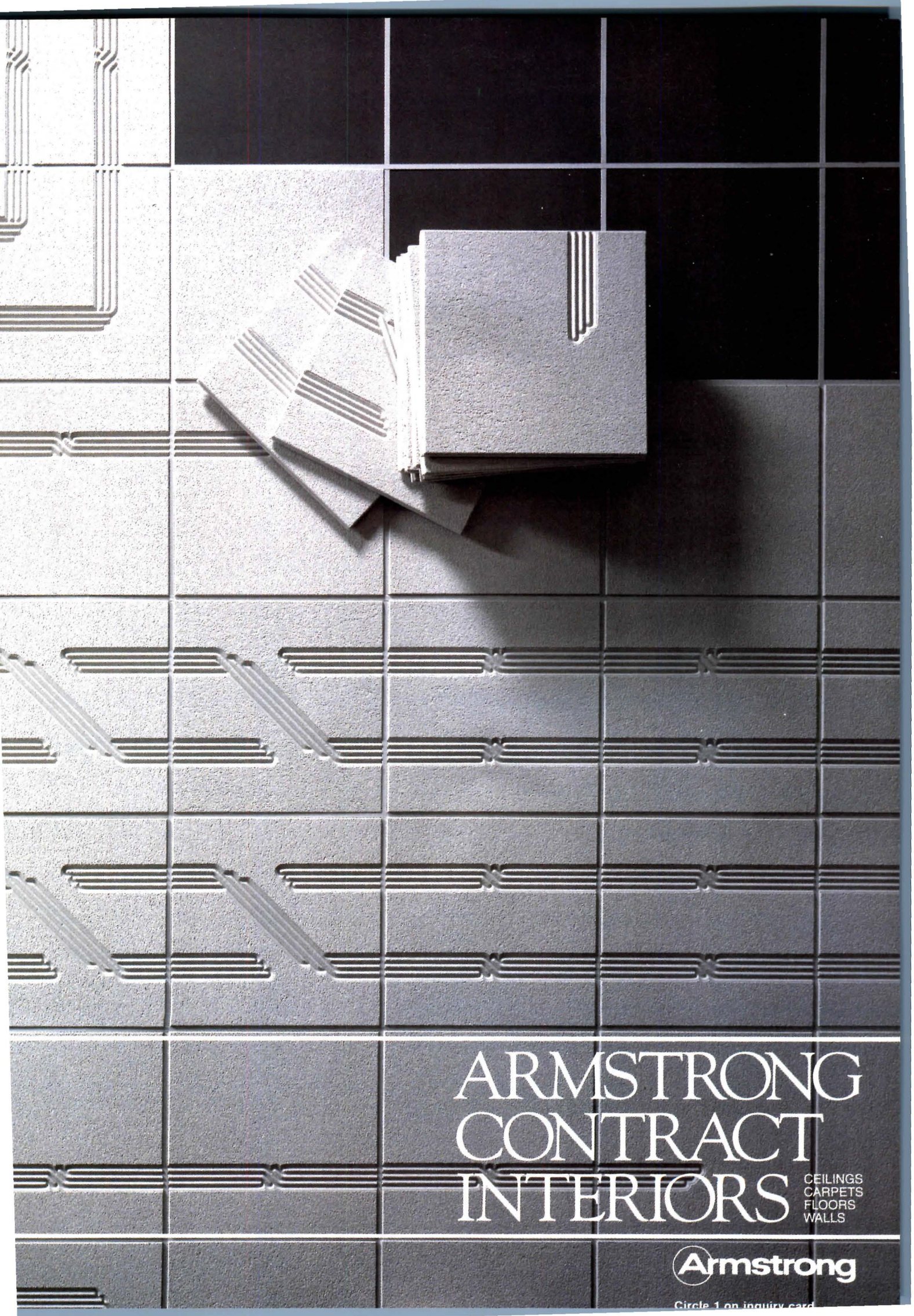


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Letters

On behalf of the Chicago Chapter AIA, thank you for your excellent article on design/build competitions for public buildings [ARCHITECTURAL RECORD, August 1988, pages 46-49].

As you know, we have been concerned about the design/build competition process as it applied to the Chicago Public Library ever since we were informed by the city that it intended to pursue this method of procuring design services. We tried to improve the process in a minor way, but did not succeed in swaying the City of Chicago to make the fundamental changes we felt were important to assure a high-quality project.

Your article raises extremely important and timely issues, which demand further discussion by the profession. We hope your message will get through to the government agencies that now seem to favor such design/build competitions.

Frank E. Heitzman, AIA
President
Chicago Chapter, American Institute of Architects
Chicago

Congratulations on your editorial in the August 1988 issue of ARCHITECTURAL RECORD [page 9]. The basis of the reciprocity dispute between California and the National Council of Architectural Registration Boards has always been mystifying to me. It was not necessary to have a Ph. D. in political science to predict that California's decision to go it alone would ultimately cause boycotts and split the NCARB or cause the California Board of Architectural Examiners to return to the national fold.

All of us who like to think that we are involved in the rational practice of our profession applaud these peace talks. Again, congratulations on a fine and well-tuned editorial.

Earl R. Flansburgh, FAIA
Boston

Thanks for your intelligent and unbiased editorial on "Saving the national reciprocity system." Bad communication caused the problem and, one hopes, good communication has solved it.

Walter T. Carry, AIA
Cooper Carry & Associates, Inc., Architects
Atlanta

Regarding the use of "Free-lance employees—" [RECORD, May 1988, page 35] within an architectural firm, several questions must be answered favorably by organization principals *before* temporary professionals/technicians are recruited.

(1) Can we effectively communicate our corporate and project philosophies and objectives to someone unfamiliar with our internal operations?

(2) Can we make the commitment needed to ensure that the free-lancer receives the direction, support, and resources to complete his/her tasks according to specification and corporate policy, and within budget constraints?

(3) Can we provide the proper environment to (a) enable the free-lancer to function effectively and (b) enhance the experience mutually for both him and our regular staff?

(4) Can we give up our privacy to someone who may or may not follow and respect the same rules of confidentiality and principles of business ethics that all internal personnel adhere to?

The decision to bring a free-lancer into the organization can create exciting opportunities for everyone in the firm. And with a deep commitment from the leaders, the experience of employing a skilled, energetic, and flexible temporary worker can add renewed interest in the company's endeavors both great and small, paid and voluntary.

Sandra K. Stepler
Consultant
Valparaiso, Indiana

Calendar

Through January 8
"Six Mementos for the Next Millenium," in which the works of Franklin D. Israel Design Associates inaugurate the museum's *Architecture Tomorrow* series; at the Walker Art Center, Minneapolis.

Through January 8
"Erich Mendelsohn: Architectural Drawings," from the Berlin Kunstbibliothek SMPK; at the Cooper-Hewitt Museum, New York City.

November 14-16
"Light and Color for Human Performance," a seminar sponsored by the American Society of Interior Designers and others, and conducted by Georgia Institute of Technology; in Atlanta. For information: Education Extension, Georgia Institute of Technology, Atlanta, Ga. 30332-0385 (404/894-2547).

November 30 to December 3
Vermont Granite Symposium, sessions for design professionals sponsored by the University of Vermont, the state Economic Development Department, and Barre Granite Association; in Stowe and Barre, Vt. For information: Vermont Granite Symposium, Vermont Travel and Information Service, Brookfield, Vt. 05036 (802/276-3120).

December 6-8
1988 AEC Expo, The Show and Conference for Architects and Engineers, focused on computing and management; at the Javits Convention Center, New York City. For information: Expoconsul International, Inc., 3 Independence Way, Princeton, N. J. 08540 (609/987-9400).

December 7-9
Interiors Conference and Exposition for Historic Buildings, sponsored by the National Park Service, the American Society of Interior Designers, the General Services Administration, and others; in Philadelphia. For information: Interiors Conference, P. O. Box 27080, Washington, D. C. 10003 (202/343-9578).

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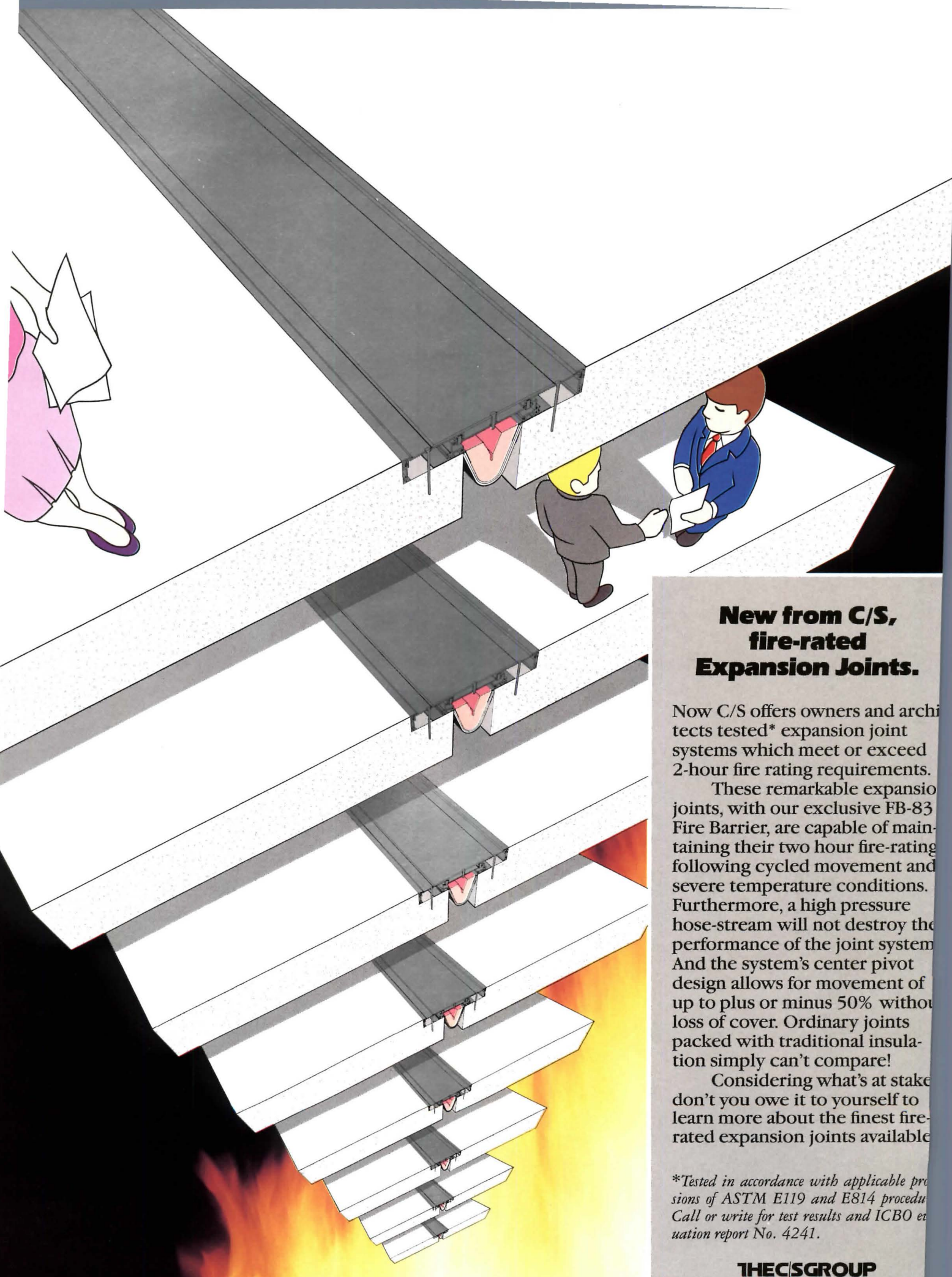

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John V. Mutlow Architects
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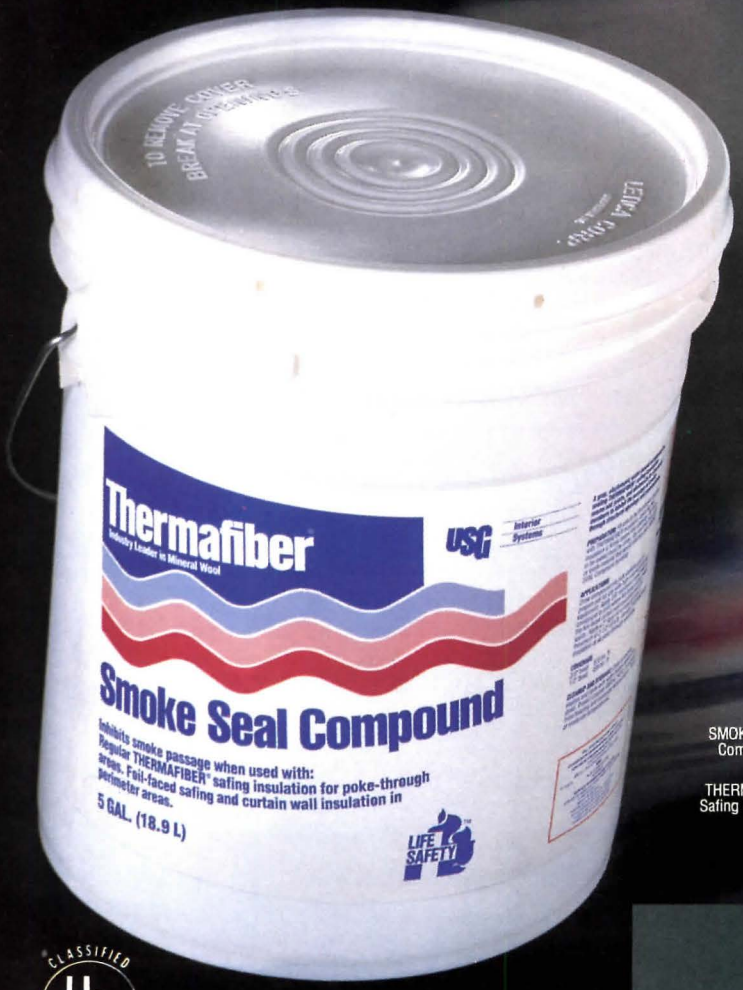

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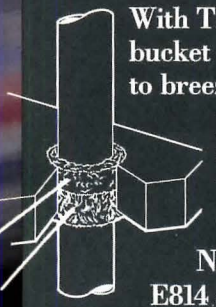

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Serving the larger public

In the last eight years the construction of subsidized housing, the acquisition and development of recreational open space, and the extension and rehabilitation of all forms of government-owned infrastructure such as roads, bridges, harbors, airports, and the buildings that go with them, have come to a virtual halt, federal funds having been cut to almost zero. This has meant—and continues to mean—that commissions typically sought by and available to architects consist almost exclusively of custom-designed houses, market-rate and luxury housing, and commercial, industrial, cultural, or institutional buildings. Such projects are shaped to some degree by legislated public concerns, conforming, for example, to zoning and land-use regulations, local preservation laws, and building codes.

There is more to the idea of "publicness" in architecture, however, than conforming to regulations. The public nature of architecture is an intangible quality rarely experienced in the recently built sectors of our cities, but its presence or absence remains the most important criterion by which civic buildings, plazas, parks, and open space should be judged. Just as importantly, it is the force that drives successful design for our neglected public: the poor, the homeless, the handicapped, the addicted, and the terminally ill. Unfortunately, both grand and humane conceptions of the role of architecture continue to lose ground in our increasingly privatized world.

To help put public sensibility back into the foreground of architectural thought, discussion, and accomplishment, RECORD has launched an annual awards program, IN THE PUBLIC INTEREST. Each year we will select a category of construction that serves the public sector and extend an open invitation for entries. For our start, we chose affordable, appropriate housing, premiated eleven projects, and made them the subject of this issue. As Paul Sachner, editor-in-charge of this year's program, points out in his introductory essay (pages 82-85), we were pleased and excited by the high quality of the submissions. In spite of all the constraints that combine to defeat such efforts—low budgets, low fees, bureaucratic red tape, internecine warfare within multi-leveled client-user groups, etc. —good and skillful architects, motivated in large part by idealism (Sachner calls them heroes), are continuing to do imaginative, inventive, yet practical work in behalf of our poorest and most disadvantaged citizens. *Mildred F. Schmertz*

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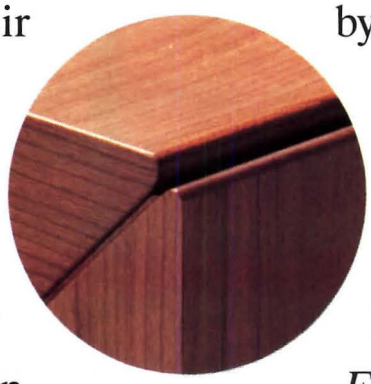

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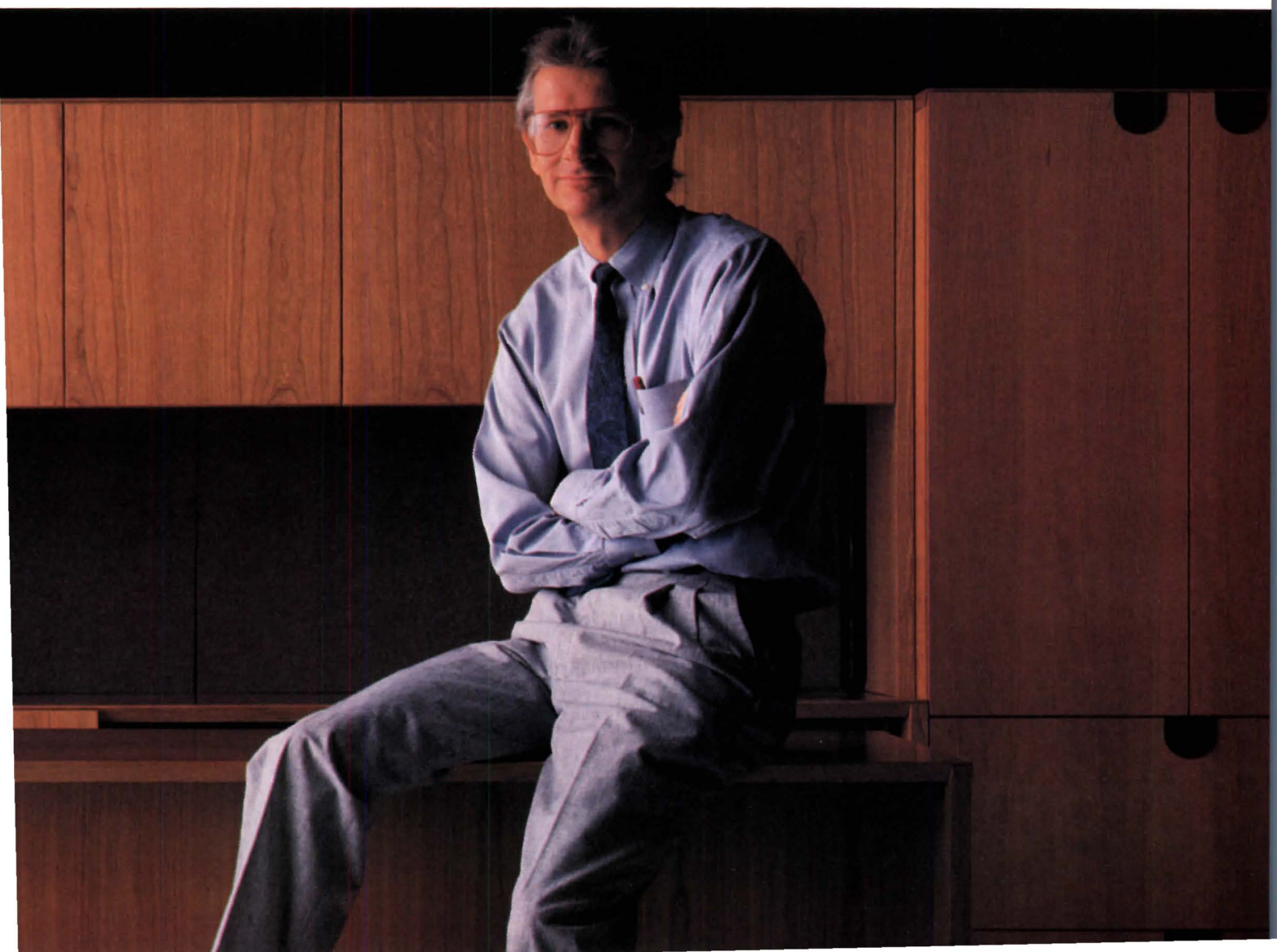

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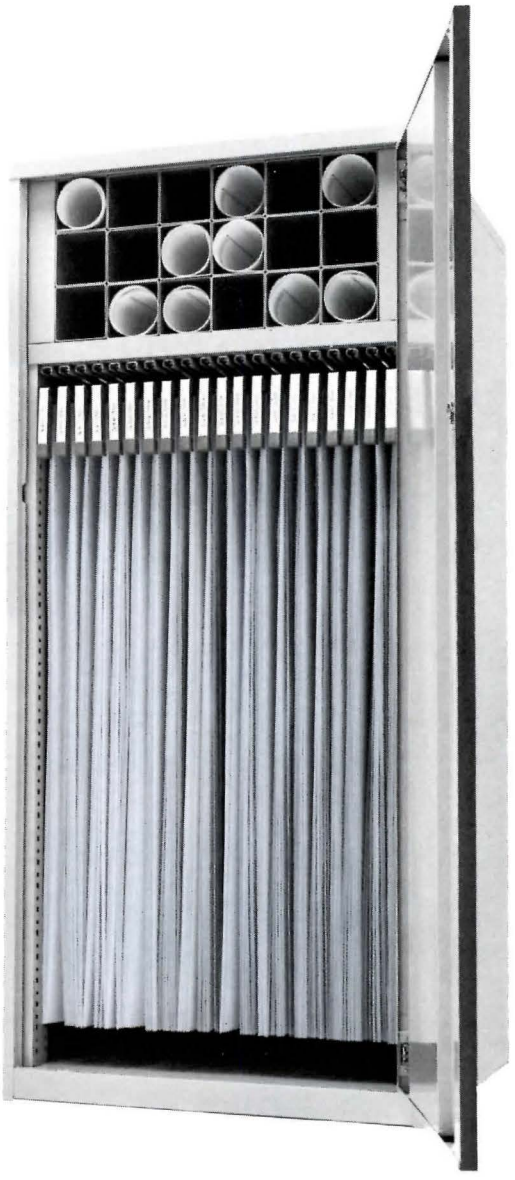

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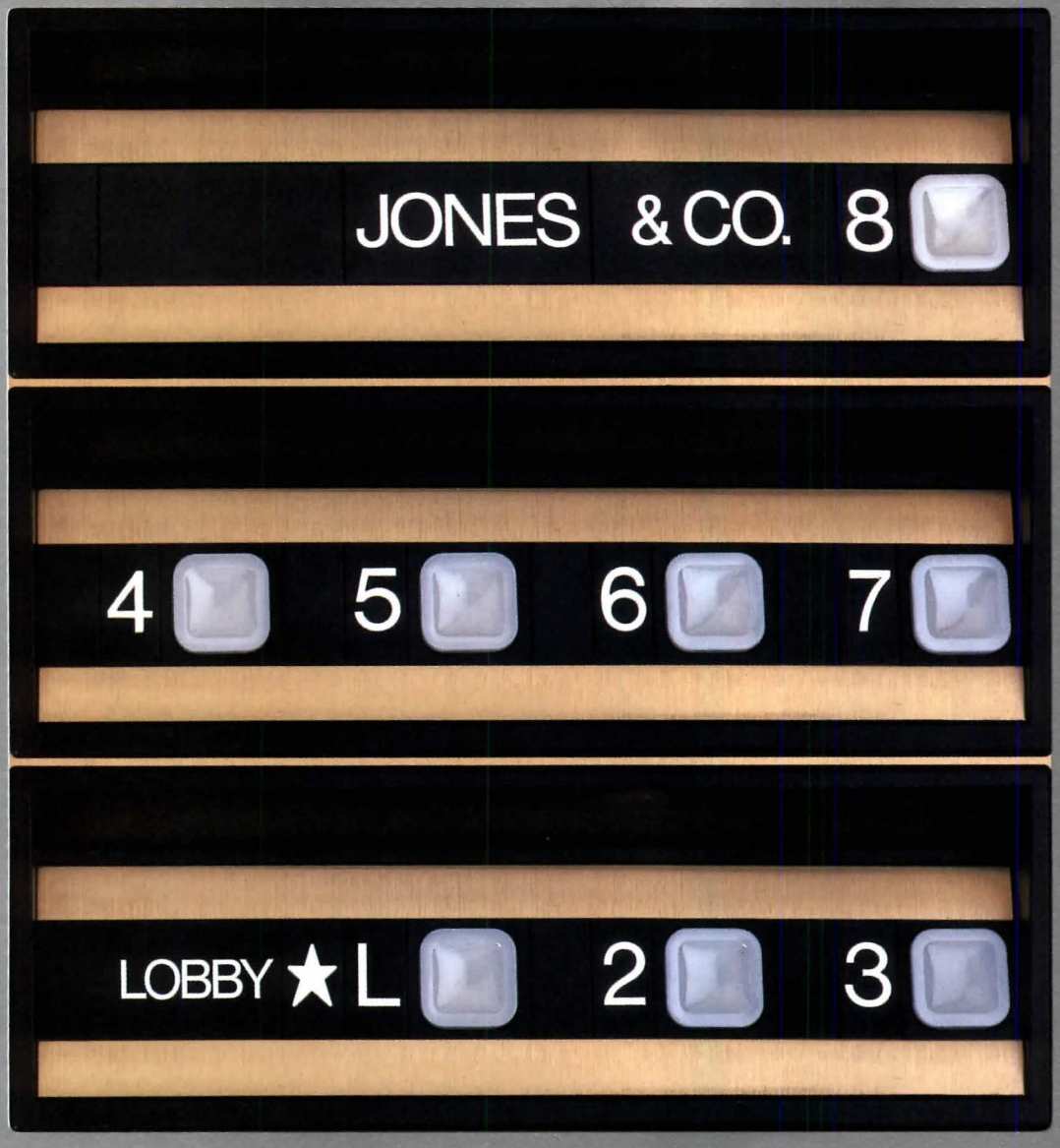

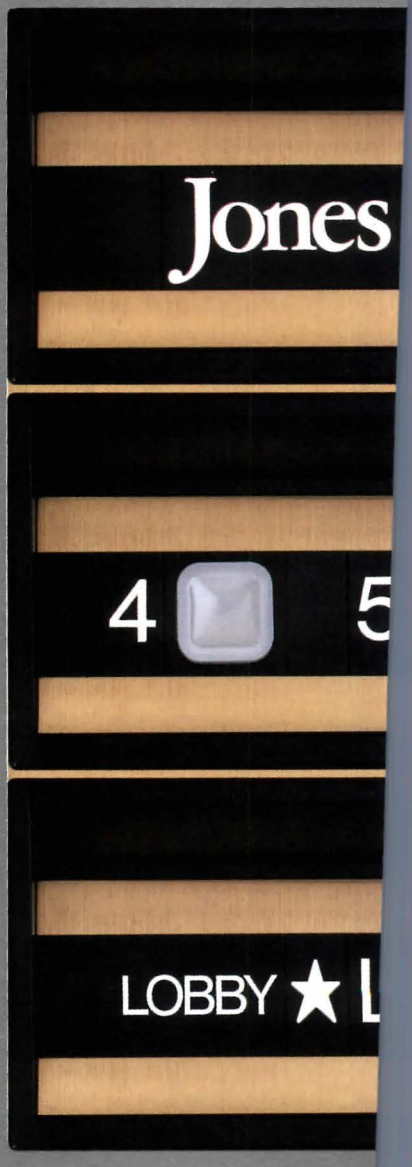

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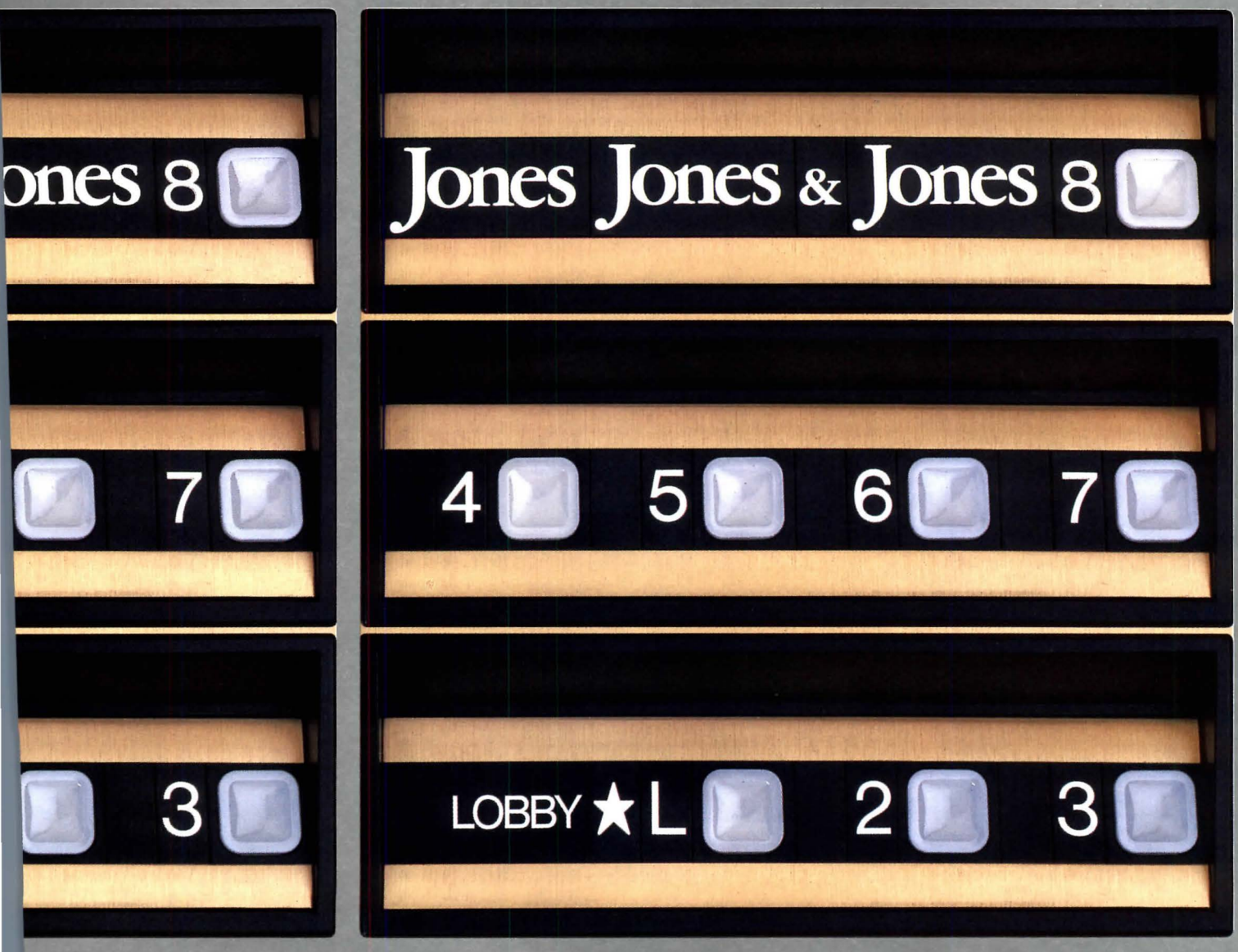

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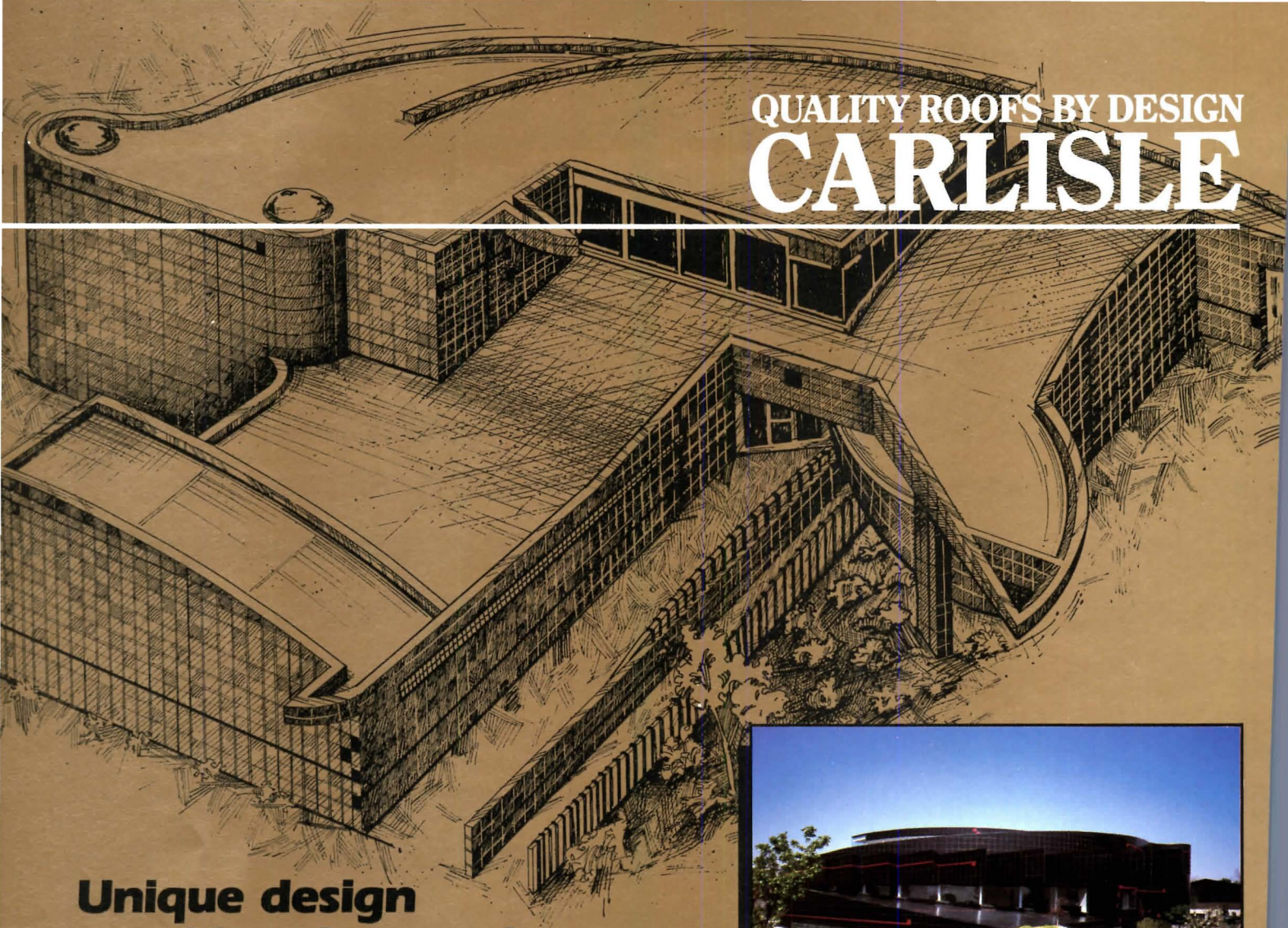

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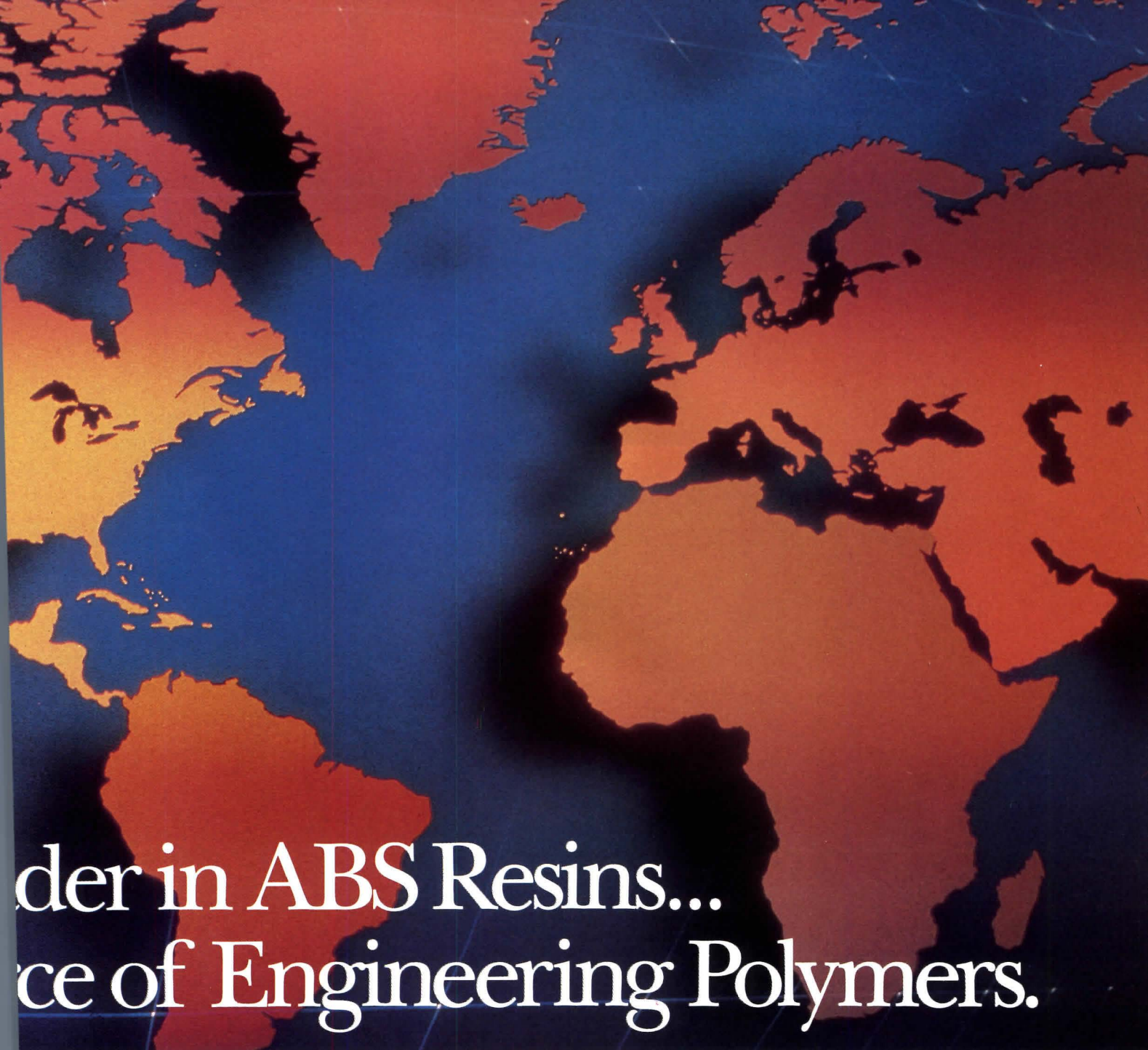

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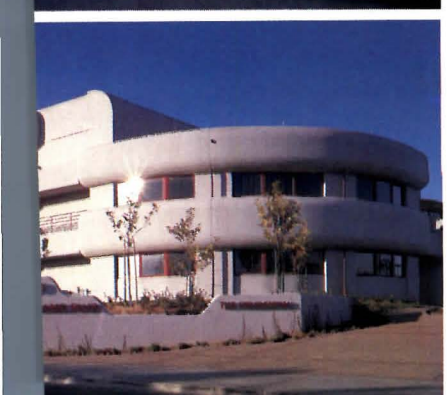

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The architect said that playfulness had been left out of today's architecture.

And from the beginning, Pella's custom color was the logical choice for carrying out the design.

Needless to say, this 70,000 square foot office building stands out in a neighborhood of predictably severe granite and glass offices. Williams Center features rounded corners, the playful juxtaposition of unusual shapes, and a dashing color scheme of red and white. You can't miss it.

In fact, the main entrance is easily recognized. It's under what appears to be a giant red metal water slide. Inside, however, the mood changes. Visitors and tenants reach their offices after passing through a charming courtyard with waterfall, meandering pool, lush vegetation, waterside seating, and contemporary sculpture.

The building's shape is the logical outgrowth of a desire to give all tenants a sense of place, regardless of how much or how little space they have. Small tenants aren't stuck with just a carved out portion of a rectangle. Here, tenants can even choose spaces with higher ceilings, or two-story spaces.

About those red windows.

It actually started with the red metal roof. Pella's custom color department scientifically matched the roof manufacturer's color, and applied it to the windows and trim. And, to be sure that the doors matched perfectly, even supplied the paint for the metal door manufacturer.

Pella's custom color capabilities are unlimited. You may choose the most unusual color in the known world, and putting it on a Pella Window will just be typically Pella. Plus, it's a super tough enamel finish that resists cracking, fading, chipping, and all sorts of plagues due to exposure. Yet, for all this protection on the outside, all you see on the inside is solid wood, ready to stain or paint.

The Pella Type E Slimshade.® For the sake of appearances and energy savings.

All windows feature the insulating efficiency of the Pella Double Glazing System with adjustable Type E Slimshade® blinds between the panes of glass. This gives an attractive, consistent appearance to windows from the outside, and the convenience of built-in blinds from the inside.

For the owner, it also means low maintenance because the blinds are protected from dust and damage by the removable inner glass panel.

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For more information on Pella products for commercial projects, contact your local Pella distributor. Look for Pella in the Yellow Pages under "Windows," call Sweet's BUYLINE, or see Sweet's General Building File. Or simply return this coupon.

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Finding fabrics for awnings and other fabricated items hasn't been easy. Because any materials that have met commercial fire codes have been stiff, shiny and even plastic looking.

But with Sunbrella Firesist, you can have the look and feel of canvas you've wanted. Because our fabric hasn't been coated with chemicals or laminated with glossy resins. And it isn't made out of vinyl, either. Instead, it's actually woven from self-extinguishing fibers. What's more, these fibers are made of color-pigmented modacrylic. Which means they provide rich, saturated hues. Hues that are locked in so they can't be faded or washed out.

Even better, Sunbrella Firesist won't crack, peel, harden, mildew or rot. And it's highly soil resistant, too. In fact, we're so sure it'll live up to these promises, it comes with a 5-year limited warranty. And it has yet another advantage: It's highly breathable, making it very energy efficient.

Of course, Sunbrella Firesist also meets the toughest codes like the requirements of the National Fire Protection Association and the California Fire Marshal's test. Which means you can put it up just about anywhere.

So find out about our wide selection of solids and patterns. Contact your local fabricator or Glen Raven Mills, Inc., Glen Raven, NC 27215, 919/227-6211.

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BMA

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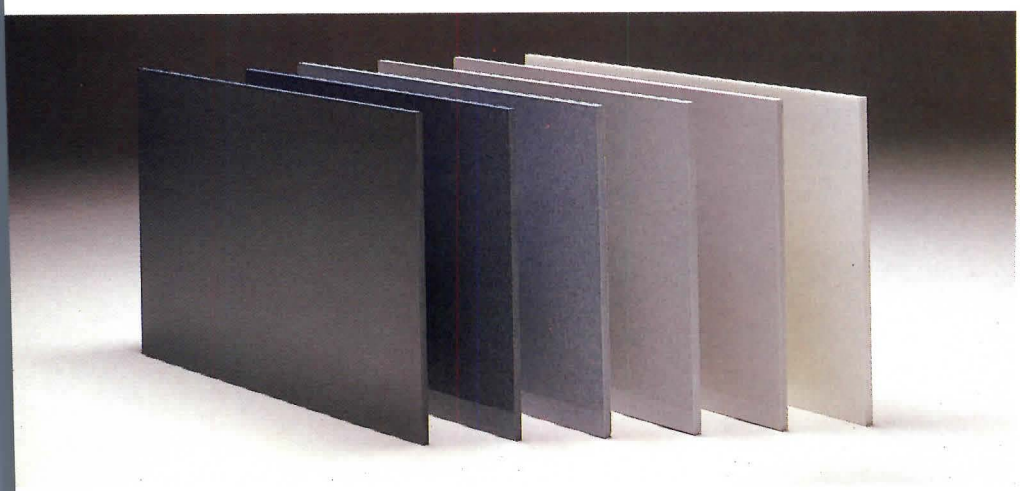

When the marble outer walls of the BMA Tower were replaced with Neopariés, the benefits were immediately obvious – superior strength, greater resistance to weathering and a warm, lustrous appearance.
Neopariés is a unique building material produced by a special glass crystallization technique which gives the glass a soft, marble-like texture and appearance.
Neopariés is light in weight, installs easily and requires little maintenance to keep its beautiful luster.
Find out why both exterior and interior architects are praising this new material. Call or write today for more information about Neopariés, the building material for modern buildings.

- **Superior weatherability and durability**
Neopariés is superior to marble and granite in resistance to acid and alkali. It will not deform or discolor, and it maintains its strength and original sheen under all environmental conditions.
- **Zero water absorption rate**
Neopariés has a zero water absorption rate, so it can never be damaged by moisture or freezing. Rust, mortar lye and other stains won't seep in and can be easily wiped away.
- **Warm, natural luster**
Neopariés is produced by a special crystallizing method which forms fine needle-shaped crystals in the glass. These crystals delicately reflect incident light, giving Neopariés a soft, warm, marble-like appearance.
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Neopariés has three times the bending strength of natural stone and no joints, so building plates can be 30% thinner or lighter than natural stone materials.
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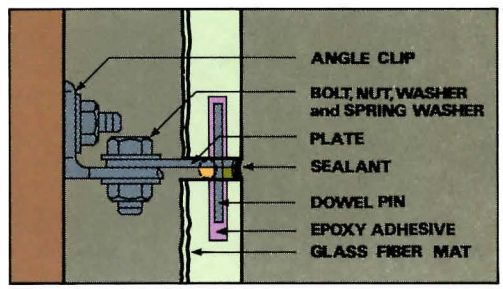
- **Available in a variety of colors**
Neopariés is available in 19 colors to match any design or color scheme.



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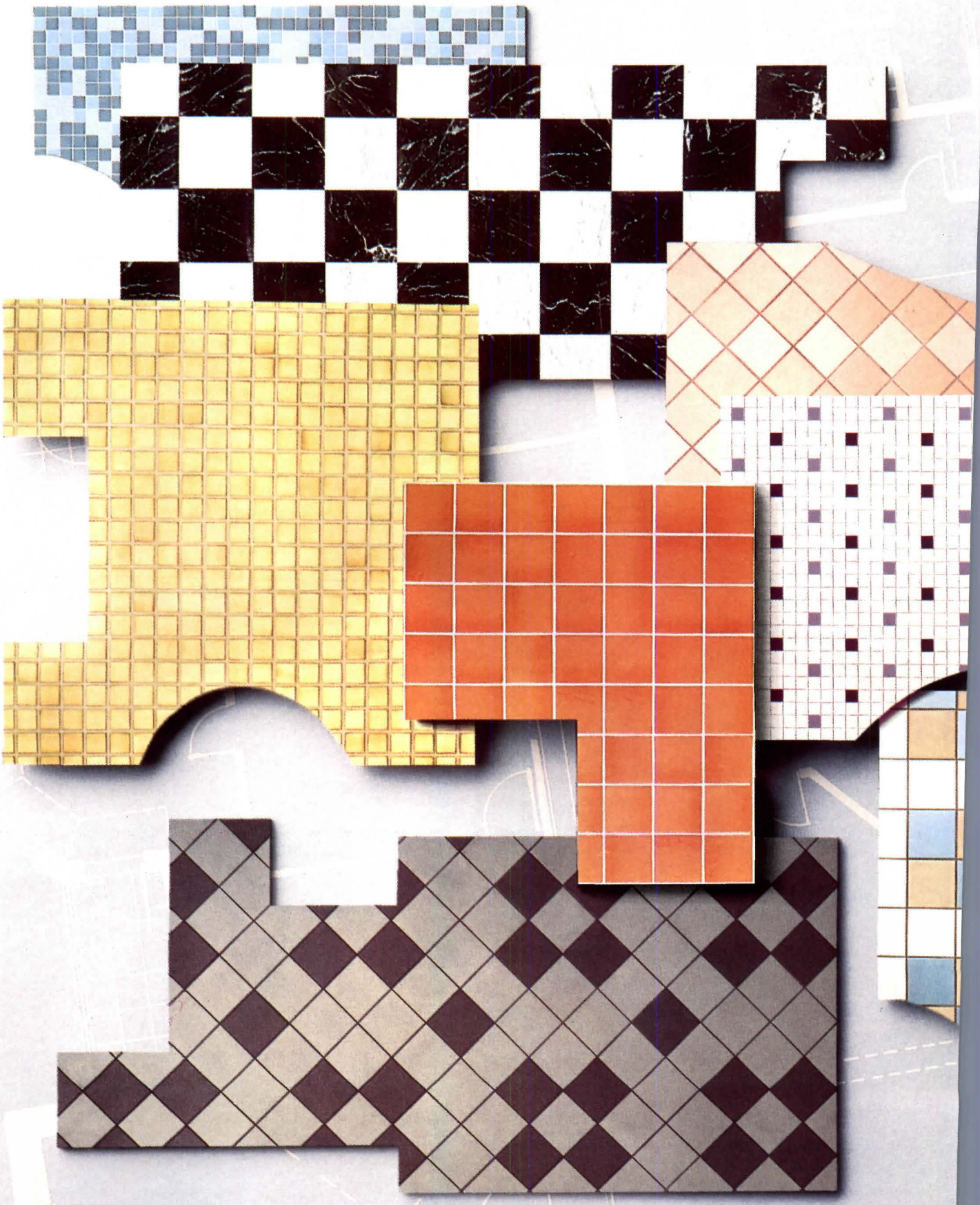

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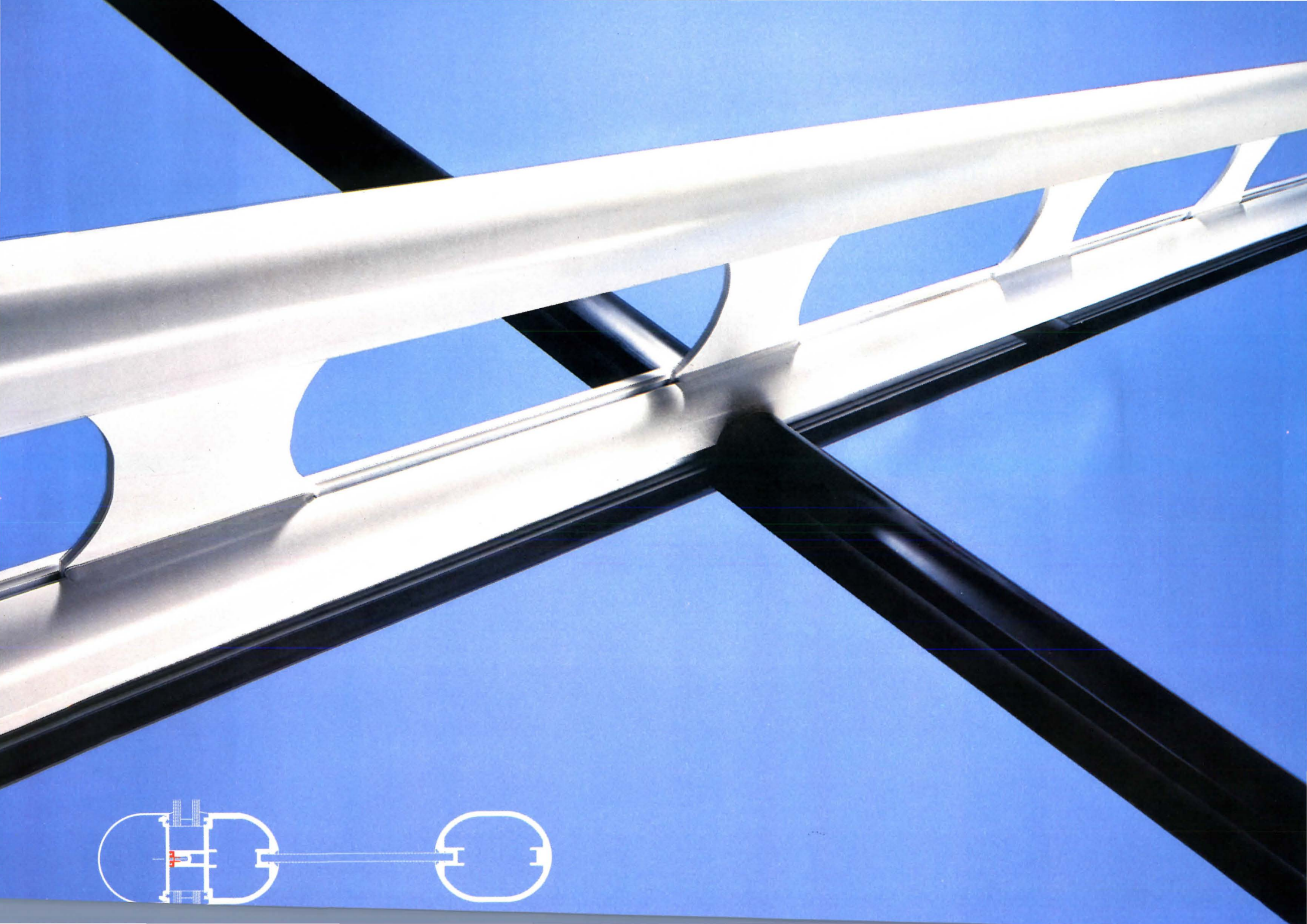
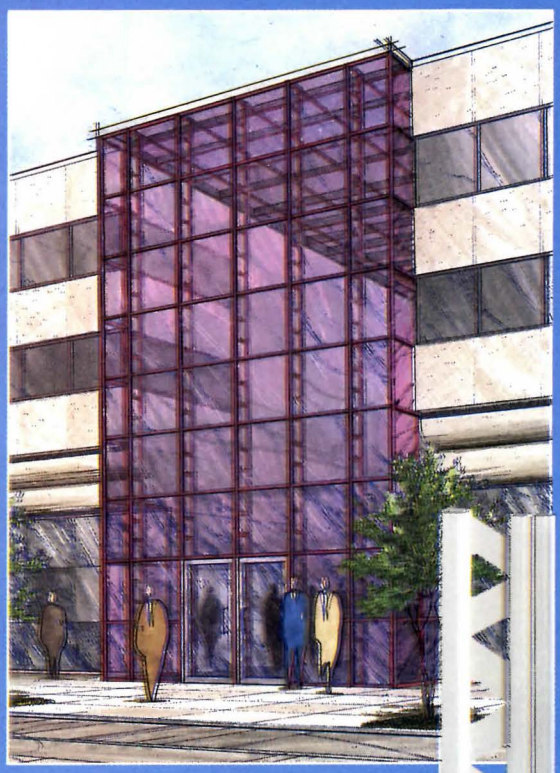


TRUSSWALL

THE·SHAPES·OF THINGS·TO·COME

Trusswall from Kawneer introduces the rounded look to the high span entrance. Trusswall spans the clear story entrance area with the structural strength and the desirable aesthetic appeal of the rounded mullion. Formed by circular extruded aluminum chords connected by a separating web that adds stability, strength, and variety, Trusswall becomes a real design alternative.



There are two sides to every story.

On the outside, Trusswall presents a number of faces. One is the innovative circular cover for the sculpted look. Another is the more austere approach, silicone glazing, for an uninterrupted line. And the rectangular cover presents a third more traditional light.

On the inside, Trusswall offers a customization limited only to the imagination. The two-piece construction allows the exterior finish to mix or mate with the building exterior while the interior chords can complement the interior attitudes. The color palette of Fluropon® finishes suggests even more design alternatives.

With four web options to choose from, design flexibility increases. The choices are offered. The choices are yours.

But while the design options offer flexibility, the integrity of the structure remains inflexible. A thermal break, and the flexibility of either ¼" or 1" glass attest to Trusswall being ready and willing to take on nature's harshest elements.

Trusswall. Further evidence of Kawneer's commitment to space.

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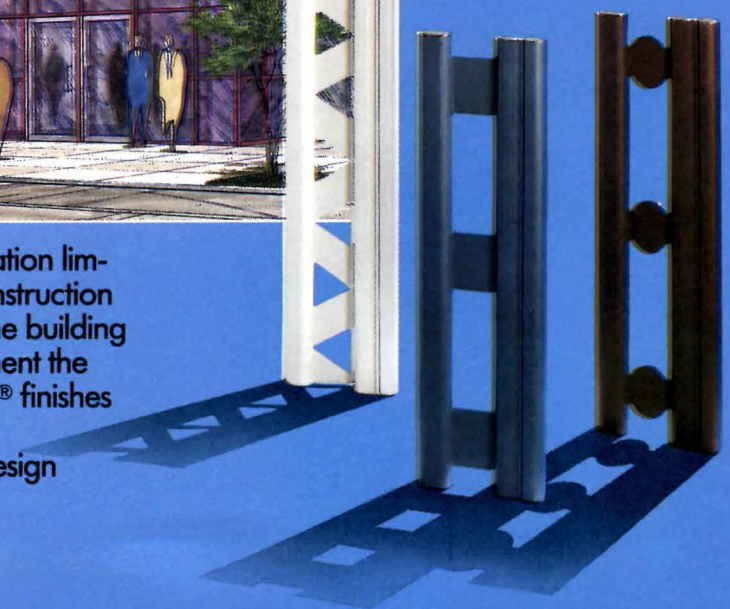
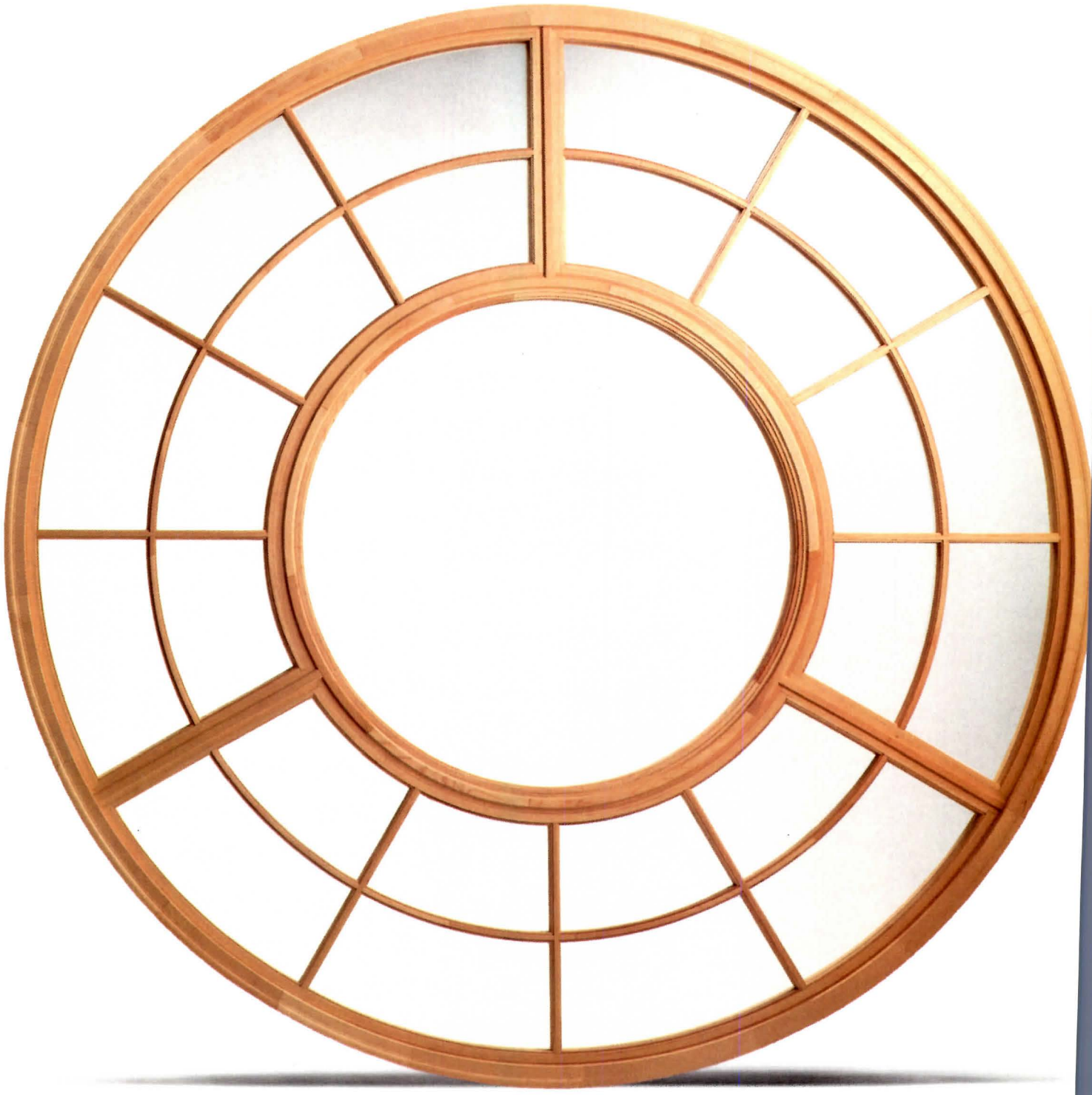


For product information on Trusswall contact:
Kawneer Company, Inc. Department C
Technology Park—Atlanta 555 Guthridge Court Norcross, GA 30092



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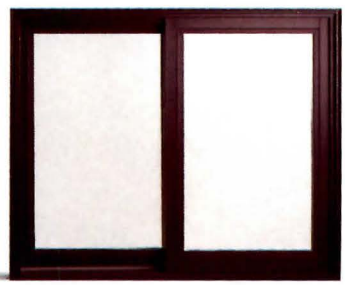

AND BUDGETS THAT DO.

ergy-efficient options, you'll have provided that homeowner with an investment that will stand him in good ad for years to come.

So whether you're involved in projects that will be splashed across the pages of *House Beautiful*, excitedly shared between friends over coffee, specify Marvin windows. Just because you have to think with r wallet sometimes, it doesn't mean your imagination has to take a back seat.

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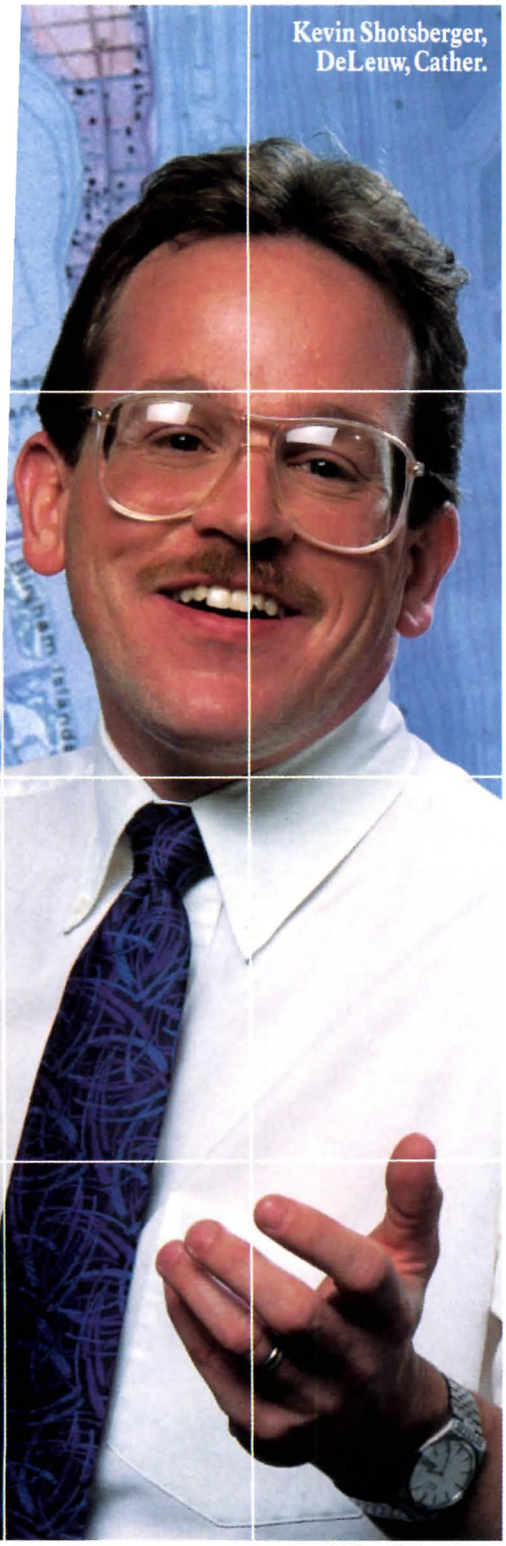

Multi-Page Enlargement

When your business concerns reach from Lake Michigan to the South China Sea, you need a copier with far reaching capabilities.

So when Kevin Shotsberger was asked to find a new color copier for the engineering firm of DeLeuw, Cather & Company, the Canon Color Laser Copier was the obvious choice.

"We've used other color copiers in the past," says Kevin. "But the quality just was never there. Now we can make single color prints of artist's renderings or use the slide projector and multi-page enlargement to make room-length presentation boards."

Turn-around time is equally important with the complexity of the presentations DeLeuw, Cather prepares. Work that once required outside sources can now be done entirely in-house. And at a fraction of the cost.

"To do this kind of work on the outside would be positively prohibitive," Kevin explains.

"We can merge documentation photos with text, or use color conversion to highlight or even change the color for greater emphasis—with the Color Laser Copier we can do overnight what used to take days. Add that to the cost savings we can pass along and everyone comes out a winner."

For a company with interests as widespread as DeLeuw, Cather, the Color Laser Copier makes a world of difference.

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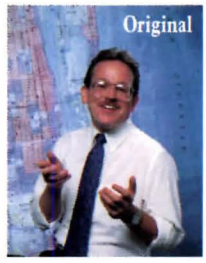
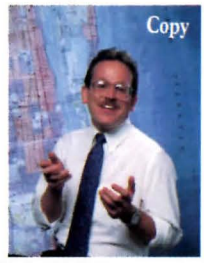
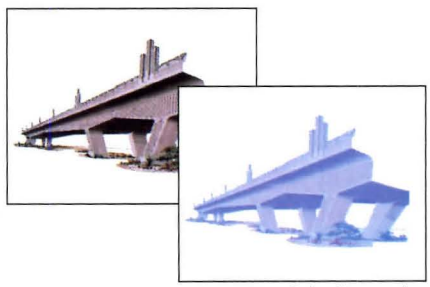
COLOR LASER COPIER



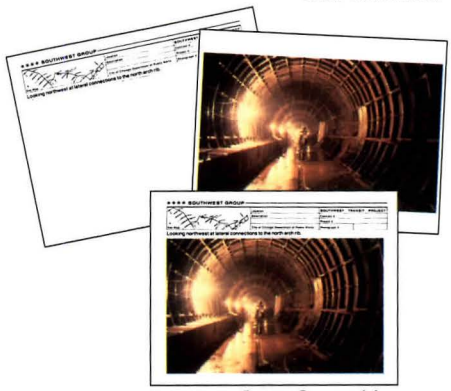


Digital Full-Color Copies

Color Copies From Slides



Color Conversion



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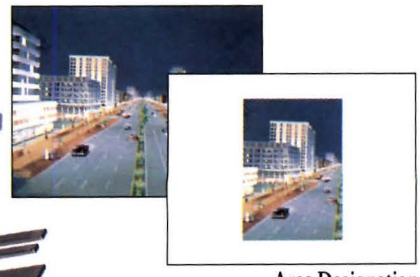

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ally, vinyl siding for people o hate vinyl siding.

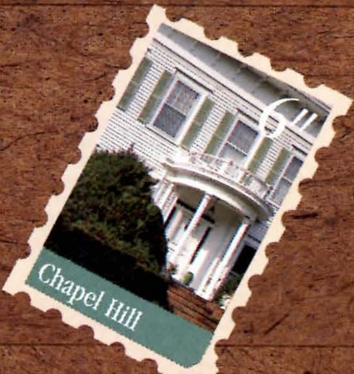
RESTORATION COLLECTION®

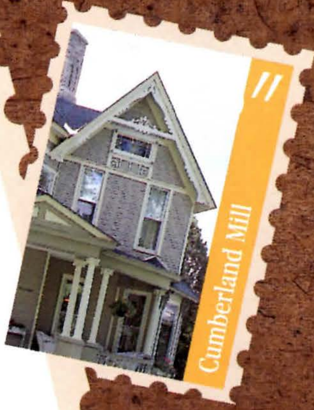
Some readers will see the words "vinyl siding" and turn the page. Their loss. In our view, the news that Restoration® premium vinyl siding is now available in five distinctive styles and profiles is pretty heady stuff.

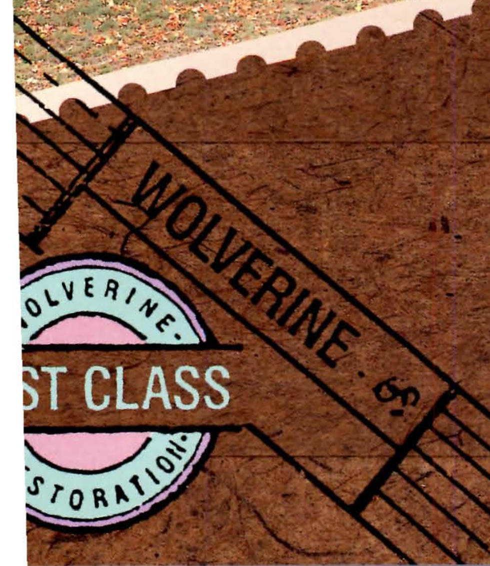
Still, it would all be academic if the siding choices in the new Restoration Collection® didn't complement your project in the first place. They do. Because each new selection features the satin-smooth, low-gloss finish perfected by Wolverine back in 1983. In fact, it's the same "no fake wood grain" finish, in heritage-inspired profiles, that's made Restoration the non-wood siding of choice—even with Historical Commissions.

If that fact alone doesn't make you want to run out and side something, at least keep us in mind. Because now when you want the best-looking vinyl siding there is, you get to choose among 3″ clapboard, rolled edge, 3″ or 4½″ Dutch Lap, or even 6″ beaded styles. They're all in the Restoration Collection. All premium vinyl. All from Wolverine.

So if you'd like more information and rather not use a stamp to get it, call toll-free: **1-800-521-9020.**







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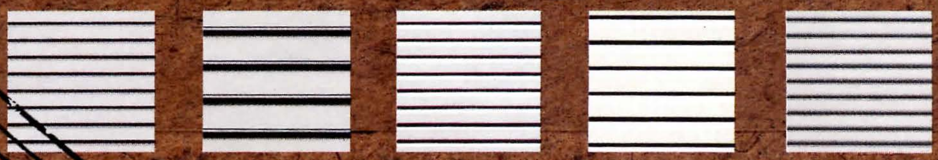

Cambridge 3″ Clapboard | Chapel Hill 6″ Beaded | Cumberland Mill 3″ Dutch Lap | Stockbridge 4½″ Dutch Lap | Monterey 3″ Rolled Edge

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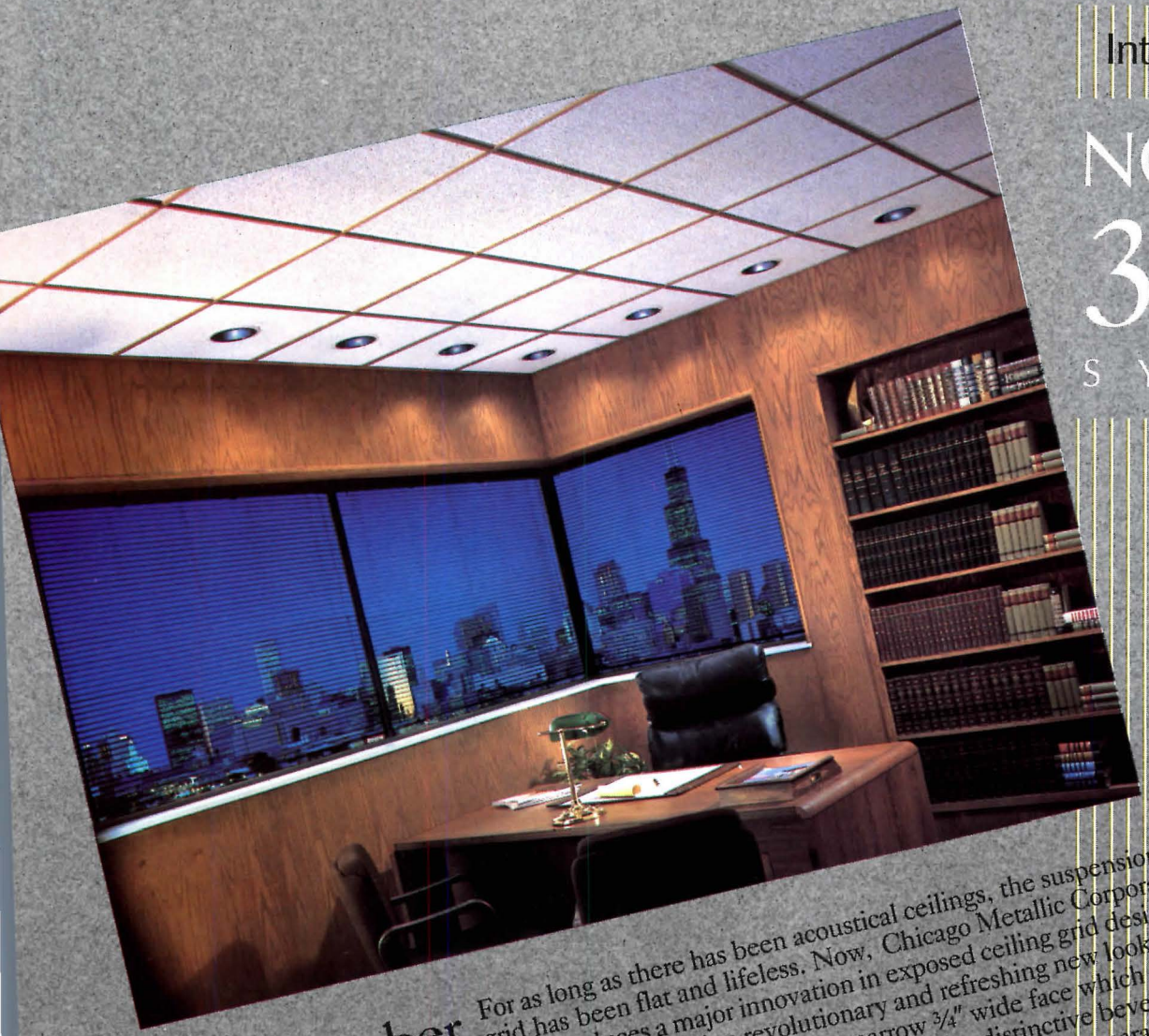

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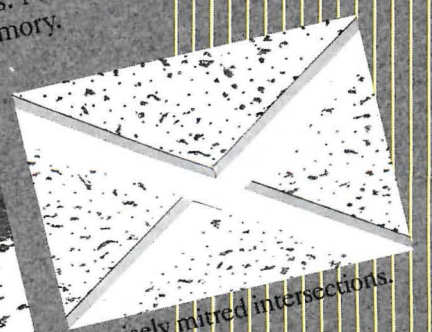
For as long as there has been acoustical ceilings, the suspension grid has been flat and lifeless. Now, Chicago Metallic Corporation introduces a major innovation in exposed ceiling grid design ...Novara 3900. It is a revolutionary and refreshing new look in ceilings. Novara 3900 features a narrow 3/4" wide face which extends 3/16" below the ceiling plane and has a distinctive bevel on each side, creating a unique three dimensional appearance. Mitred intersections and a custom wall molding help create a geometric picture frame effect that incorporates shadow lines, contrast and texture into the overall ceiling design. Novara is available in over 100 designer colors and reflective finishes, including laminated wood veneers. Novara 3900...it will make flat grid nothing more than a memory.

3/4" wide face with beveled edges.



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More controversy over new AIA General Conditions

Last March, RECORD published an article by attorney Carl Sapers (pages 36-38) which pointed to possible problems created for architects in the 1987 AIA General Conditions. Now a legal-profession newsletter, *The Professional Liability Perspective*, has published an article outlining many of the same problems, specifically as they affect architects' liability: the redefinition of "work" to possibly include on-site safety (Section 1.1.3), the possibility that architects and engineers may assume responsibility for means and methods of construction (3.3.1 and 4.2.7), the obligation of architects to give information to subcontractors and material suppliers on payments made to the contractor for their portion of the work (9.6.3 and 5), and the duty of architects to make judgments on disputes between the owner and contractor over PCBs or asbestos (10.1.2).

AIAS announces new officers

The student arm of the AIA, AIAS, which meets this month in Chicago during Thanksgiving week, is now headed by president Matthew Gilbertson (photo), a graduate student at the University of Minnesota. Other officers are vice president Irene Tyson, Mississippi State University, and directors Doug Bailey, Montana State University; Peter Franks, University of Cincinnati; and Thom Burns, Rhode Island School of Design. As president, Gilbertson proposes to "represent students in dialogue with the profession and the public." He serves on the AIA board and is the publisher of *CRIT*, the AIA student journal. The Thanksgiving meeting, Forum '88, will be chaired by Ken Colliander, University of Illinois. For information, write Gilbertson at the AIAS, 1735 New York Ave., N. W., Washington, D. C. 20006.

Can't agree on an arbitrator? Pay a judge

According to Duke University's Private Adjudication Center, one way to get disputing parties to solve the major problem in binding arbitration—agreeing on an arbitrator—is to hire a person who would seem eminently qualified, a judge (usually retired). In recognition of the increasing popularity of the practice, enabling legislation has been enacted in California, New York, Oregon, Washington, Nebraska, and Rhode Island. References to appropriate individuals can be sought from organizations that administer dispute resolutions or, if the case is filed in court, from that judge.

Know better what a structural engineer does

The Coalition of American Structural Engineers is completing a set of guidelines that defines the role of the structural engineer in the construction process. Though the text will clearly state that the guidelines cannot be used to establish legal responsibilities or a standard of care, the engineers hope to clarify just what services can be expected from them by clients and architects, although contracts will continue to prevail. The most obvious by-product: to prevent some misconceptions of standard practice and to point out services that might be added to or deleted from the basic ones.

Counter to the prevailing tide, a big firm decentralizes

While most large architectural firms are developing management structures that resemble the giant commercial corporations, one firm offers managers facing this prospect another idea. 3D/International currently provides architecture, engineering, and project-management services on some $2-billion worth of construction worldwide. And that, its managers think, is more than one firm should do. Accordingly, they have formed four new subsidiaries in the last 18 months alone, bringing the total to seven. Some of these, such as the most recent, the architectural firm of Hoover & Furr, have been split off the existing company. Others, including architects and interior designers Baker-3D/I, McClelland Management Services, and architects and engineers 3D/I Hong Kong, have been formed by a combination of splitting, partnerships, and acquisitions.

"We believe the future of the design and construction industry lies in specialized groups which are capable of quickly integrating into large, multi-disciplinary teams when the project demands," says chairman J. Victor Neuhaus III.

Decentralization is a pet subject of president Charles Thomsen (photo). "There's nothing wrong with the pyramid concept of management," he asserts. It has a very specific purpose in industry, the military, and government. But it is inappropriate for organizations that deliver creativity, so it must be balanced with collaboration—while management often shifts into the role of support.

Where did Thomsen get these ideas? Many of the large brainpower organizations in Houston, like 3D/I, did well during the oil boom, he says. Centralization seemed to work well. But when the bust came, many companies were forced to develop new strategies to survive. They might have recognized that diversification into new geographic areas and services was the answer, but few took it as far as 3D/I.

Each semiautonomous division is responsible for, as Thomsen puts it, "their top and bottom lines." Each maintains its own clients, operations, and—perhaps most important when offices literally extend around the world—culture appropriate to its market. The hierarchical pyramid is still there, admits Thomsen—but to surface only when the network becomes tangled.

Charles K. Hoyt

"For this building, selection of the roofing manufacturer was as important as the roofing."

Adi Mistri, AIA
J. N. Pease Associates
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Construction economy outlook: A soft foot on the brakes now may mean a quicker return to full speed

By acting in the summer of 1988 rather than waiting until after the election, the Fed has improved the odds on guiding the economy through a period of inflation/recession stress with little worse than a needed cooling down.

By George A. Christie

Key indicators of the construction market are sending conflicting signals—a sign that the industry is in the midst of reversing direction. The value of building-materials shipments, with an assist from strengthening export demand, holds a comfortable 7-percent lead over 1987. Expenditures for construction put in place, the measure of domestic construction projects being brought to completion, has lost the momentum of five years of expansion, but still remains even with last year's spending. Contracting for new construction, on the other hand, declined 3 percent during the first eight months of 1988. This leading indicator of future construction activity and building-products demand reached its peak in the final quarter of 1987, fell sharply in this year's opening months, and then stabilized through the summer, as if wondering which way to go next.

The state of the construction market at the end of 1988 can be described as: one quarter in decline, another quarter in limbo, and the remaining half in jeopardy.

The portion in recession is, of course, the overdeveloped commercial-building sector (offices, apartments, etc.), which soared to unsupportable heights during the mid-1980s. Square footage of newly started construction has since declined by 40 percent, but high vacancy rates persist.

The portion in limbo is public-works construction. As one of the "hostages" of the deficit-reduction mandate, federally funded construction projects are barely managing to hold even with last year's level of contracting.

The portion in jeopardy is the interest-rate-sensitive part of the building market—principally, but not exclusively, single-family housing and institutional buildings. Rising mortgage and bond rates pose a threat in the near future to at least half of all construction activity.

Some things old and some things new will make the difference between a slowdown and recession

In 1989, several aspects of the economic, social, and political conditions that are shaping this year's construction markets will not change greatly. Year-to-year movements in the demographics of the marketplace are barely perceptible. What you see in the way of demographic support in 1988 is what you get in 1989. The constraints of deficit reduction are already built into the federal budget for fiscal year 1989. For practical purposes, federal construction programs for development of the infrastructure will remain "capped" as they were in 1988. Finally, the glut of vacant offices and apartments will still be there, and will require further reduction of new-construction starts to speed their absorption.

Some things about 1989 will be different. The certainty of a new president offers the possibility of different political priorities. Interest rates will move up, down, or both. The safe bet is that they will not stay the same. There is also a strong case for a different economic environment in 1989. With the Federal Reserve applying monetary restraint to keep inflation under control, the choices concerning the strength of economic activity next year are narrowed to two: slowdown or recession. A few assumptions about these changes are the stuff that forecasts are made of.

Concerning the presidential contest, it is assumed that, if the electorate has voted its pocketbook (not issues; not personalities), George Bush will have been elected. This outcome implies an extension of current priorities, especially in the choices between military vs. domestic programs. The constraints of a pledge not to raise taxes and the mandate for deficit reduction leave little room for new initiatives, however. Bush's role: caretaker of the Reagan Revolution.

Economic slowdown, but not recession, rests on the assumption that the Fed will be successful in its attempt to contain inflationary pressures without resorting to monetary overkill. Even though past experience with "fine-tuning" leaves a lot to be desired, it is expected that, in 1989, real GNP growth will be reduced to about 2 percent (roughly half its 1988 rate), and inflation will be held at its current 5 percent. The trade-off, of course, is higher interest rates. The risk is having to endure both high interest rates and recession.

Although the consequences of credit restraint are unpleasant for housing and other interest-rate-sensitive types of construction, it would be hard to fault the Fed for doing what it must do. Demand-pull inflation typically occurs at the peak of the business cycle as the economy's capacity to produce fails to keep pace with demand, and prices are bid up. In 1988, a surge of export demand has accelerated the process. Conventional strategy for dealing with demand-pull inflation is straightforward enough: restrain demand by raising the cost of credit, giving productive capacity a chance to catch up.

By acting in the summer of 1988 rather than waiting until after the election, the Fed has improved the odds on guiding the economy through a period of inflation/recession stress with little worse than a needed cooling down. Delay might have required a harder application of the monetary brakes early in 1989, with greater likelihood of recession.

It is expected that the strategy that is already in effect will lift the conventional mortgage rate to 12 percent by mid-1989. It is further assumed that the Fed will relax its restraint during the second half of next year as inflationary pressures subside, and that mortgages will settle back to 10 percent in 1990.

It is hard to escape the conclusion that in 1989, a temporary (but necessary) dose of monetary restraint will be compounding other problems which have already turned construction contracting down. One object of this forecast of 1989 construction activity is to assess the severity of the cyclical decline that is already almost a year in progress.

A short-term forecast of single-family housing starts usually began, and often ended, with a forecast of mortgage rates

For the past few years, however, this technique would have led to unfulfilled expectations.

As academics are fond of saying, "Other things being equal," a 1-percent change in the mortgage rate should lead to a change—in the opposite direction—of approximately 100,000 single-family housing starts. This relationship, with minor refinements, would have kept the housing forecaster out of trouble from the late 1970s to the mid 1980s—a period that spanned a wide range of interest rates and building activity. Somewhere around the middle of this decade, however, other things ceased being equal.

Beginning with 1986, a forecast of single-family-house building that was based on the pre-existing relationship with mortgage rates would have *over* estimated demand by an average of 150,000 to 200,000 units per year during the second

Continued on page 39

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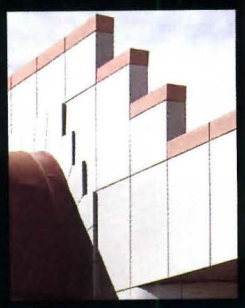

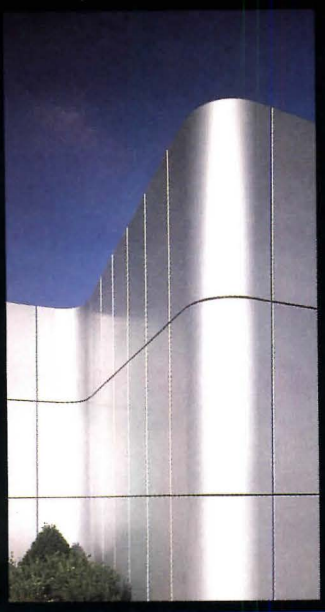

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Construction economy outlook continued from page 37

1989 National Estimates
Dodge Construction Potentials

Nonresidential Building	1988 Preliminary	1989 Forecast	Percent Change 1989/88
Floor Area (millions of square feet)			
Office Buildings	235	190	−19
Stores and Other Commercial	545	420	−23
Manufacturing Buildings	155	175	+13
Total Commercial and Mfg.	935	785	−16
Educational	123	117	− 5
Hospital and Health	70	68	− 3
Other Nonresidential Buildings	152	140	− 8
Total Institutional and Other	345	325	− 6
Total Nonresidential Building	1,280	1,110	−13
Contract Value (millions of $)			
Office Buildings	$21,050	$17,750	−16
Stores and Other Commercial	23,025	18,900	−18
Manufacturing Buildings	8,225	9,600	+17
Total Commercial and Mfg.	$52,300	$46,250	−12
Educational	$12,300	$12,425	+ 1
Hospital and Health	7,775	7,750	—
Other Nonresidential Buildings	14,450	14,175	− 2
Total Institutional and Other	$34,525	$34,350	− 1
Total Nonresidential Building	$86,825	$80,600	− 7
Residential Building			
Dwelling Units (thousands of units*)			
One Family Houses	975	900	− 8
Multifamily Housing (*F.W. Dodge basis)	440	425	− 3
Total Housekeeping Residential	1,415	1,325	− 6
Floor Area (millions of square feet)			
One Family Houses	1,629	1,488	− 9
Multifamily Housing	453	430	− 5
Nonhousekeeping Residential	78	72	− 8
Total Residential Building	2,160	1,990	− 8
Contract Value (millions of $)			
One Family Houses	$ 88,350	$ 85,025	− 4
Multifamily Housing	21,900	21,775	− 1
Nonhousekeeping Residential	6,725	6,650	− 1
Total Residential Building	$116,975	$113,450	− 3
Nonbuilding Construction			
Contract Value (millions of $)			
Transportation Construction	$ 24,200	$ 24,675	+ 2
Environmental Construction	18,200	18,200	—
Total Public Works	$ 42,400	$ 42,875	+ 1
Utilities	$ 3,500	$ 3,700	+ 6
Total Nonbuilding Construction	$ 45,900	$ 46,575	+ 1
All Construction			
Contract Value (millions of $)			
Total Construction	$249,700	$240,625	− 4
Dodge Index (1982 = 100)	159	153	

If, as expected mortgage rates recede in 1990, single-family building can be expected to rebound to better than one-million units.

half of the 1980s. This is not to say that the cost of credit isn't still a major factor. It is, and no housing model is complete without it. But quite obviously, something else has been influencing the housing market lately. Why has the volume of single-family-house building been consistently and significantly below expectations under the relatively favorable credit conditions of the past several years? Let us round up the usual suspects.

Affordability doesn't seem to be the culprit. Affordability, which concerns the combined costs of owning a home (amortization of the mortgage, real-estate taxes, maintenance and repair, etc.) in relation to family income has become *less* of a burden—26 percent of income in 1987 vs. 37 percent in 1982. Neither have changes in *lending terms* been a constraint on demand. If anything, recognition of the combined resources of two-income families and the widespread use of adjustable-rate mortgages have made it easier to buy a home. The steadily diminishing rate of *household formation* is having a negative impact on total housing demand, but a closer look at the age composition of the population (fastest growth in the 30-to-50 cohort; shrinkage of the 15-to-30 group) reveals that its threat is mainly to the apartment market. In the meantime, demographic support for owner-occupied housing is expanding. Nor is the shortfall explained by a recent change in *public policy* toward housing. HUD has not been an active participant in the new-housing market since very early in the decade. Still another explanation is the *displacement* of single-family housing demand by condominiums (a variation on the affordability theme). This might explain the altered relationship between traditional single-family housing starts and mortgage rates in the past few years, except for the fact that, instead of expanding to displace single-family houses, starts of multifamily units (condos and apartments) declined by more than 40 percent since 1985. And that just about exhausts the list of recent structural changes in the national housing market.

Regional data reveal some developments that are buried within the national aggregates. Until the mid 1980s, *all* regions exhibited a similar and consistent relationship between housing demand and mortgage rates. And in several regions—the Northeast, the Southeast, and the West—that relationship still holds. But in two other regions—the North Central and the South Central—the relationship began to go awry at mid decade. As mortgage rates declined, housing activity failed to respond the way it did in the other areas.

One does not have to look far to find the cause. The oil depression and the trade deficit, both with their roots in the mid 1980s, bore selectively on the South Central and the North Central regions. Above-average unemployment and weak housing demand (at any level of mortgage rates) are but two of the symptoms of these regional recessions.

Lacking the full participation of these areas, this year's total of single-family housing starts is heading for a disappointing 975,000 units (F. W. Dodge basis). In 1989, when mortgage rates rise temporarily, single-family building will sag further to a total of 900,000 units as adverse credit conditions inhibit construction in this year's still viable markets.

If, as expected, mortgage rates recede in 1990, one-family building can be expected to rebound to better than one-million units. Just how far above

Continued on page 41

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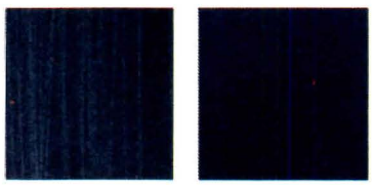

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Construction economy outlook continued from page 39

1989 Regional Estimates

Dodge Construction Potentials

Construction Contract Value (millions of dollars)

South Atlantic DE, DC, FL, GA, MD, NC, SC, VA, WV	1988 Preliminary	1989 Forecast	Percent Change 1989/88
Nonresidential Building			
Commercial and Manufacturing	$12,375	$10,225	–17
Institutional and Other	7,100	7,125	—
Total	$19,475	$17,350	–11
Nonbuilding Construction	$ 7,875	$ 7,825	– 1
Residential Building			
One Family Houses	$22,075	$21,150	– 4
Multifamily and Nhskpg.	7,550	7,500	– 1
Total	$29,625	$28,650	– 3
Total Construction	$56,975	$53,825	– 6

South Central AL, AR, KY, LA, MS, OK, TN, TX	1988 Preliminary	1989 Forecast	Percent Change 1989/88
Nonresidential Building			
Commercial and Manufacturing	$ 5,400	$ 5,200	– 4
Institutional and Other	5,475	5,325	– 3
Total	$10,875	$10,525	– 3
Nonbuilding Construction	$ 8,700	$ 8,750	+ 1
Residential Building			
One Family Houses	$ 9,725	$ 9,700	—
Multifamily and Nhskpg.	1,400	1,375	– 2
Total	$11,125	$11,075	—
Total Construction	$30,700	$30,350	– 1

West AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY	1988 Preliminary	1989 Forecast	Percent Change 1989/88
Nonresidential Building			
Commercial and Manufacturing	$11,700	$10,175	–13
Institutional and Other	7,375	7,725	+ 5
Total	$19,075	$17,900	– 6
Nonbuilding Construction	$10,100	$ 9,875	– 2
Residential Building			
One Family Houses	$24,700	$24,175	– 2
Multifamily and Nhskpg.	8,100	8,450	+ 4
Total	$32,800	$32,625	– 1
Total Construction	$61,975	$60,400	– 3

As retail-construction contracting tracks homebuilding through the next year or two, the normal lag between these two markets will cause them to go separate ways at some point.

one million depends on the revival of the economies of the Central regions.

As goes housing, so goes retail building

Progression from house building to the demand for retail facilities is a natural one, since the need for shopping centers and related warehousing capacity is derived largely from residential development. The simple logic of this proposition is borne out by the statistics of contracting for stores and commercial warehouses.

The linkage between single-family housing and retail building involves allowance for a brief lag. Since the early 1980s, each 1,000 single-family housing starts has been accompanied—over a period of several quarters—by 230,000 square feet of new retail space. In turn, each 1,000 square feet of newly built stores required approximately 900 square feet of warehousing backup. These relationships represent the *average* experience of the 1980s, with year-to-year variance as the leads and lags expanded and contracted.

During the mid 1980s, contracting for retail building was stimulated beyond its normal relationship with housing by the special incentives made available through then-prevailing tax laws. Building soared to a peak of just over 500-million square feet in 1985, perhaps 10 percent more than the level of house building might normally have justified. The subsequent decline to this year's 440-million square feet has, consequently, been greater than the relatively gentle slide of house building would have prompted.

As retail-construction contracting tracks houses through the next year or two, the normal lag between these two markets will cause them to go separate ways at some point. In 1989, as rising mortgage rates restrict the demand for new single-family houses to 900,000 units, retail building—still mildly overbuilt relative to housing—will shrink by 20 percent. In 1990, as lower mortgage rates enable a recovery of house construction, the lagging retail-building market will continue to decline—by another 5 to 10 percent. It won't be until 1991 that the 1990 recovery of housing starts will turn retail building around.

Institutional building will feel downward pressures less

After a long dry spell, the unique demographics of the institutional-building market have finally coincided with a period of workable interest rates. The result: reversal of the declining trend of building that began in the early 1970s and extended all the way into the early 1980s, and several years (1985 to the present) of strong recovery.

Demand for institutional buildings is generated by needs created at the extremes of the population's age spectrum—the "under 15s" and the "over 65s." With both these age groups now growing faster than the population as a whole (though not as fast as the 30s to 50s), most of the current action is concentrated among elementary schools and nursing homes. Another category, prisons, has been expanding rapidly, proving that sociology as well as demographics is a factor in the institutional building market.

Institutional buildings are provided mostly by state and local governments, which means that tax-exempt bonds are a favored source of funding. It is a fairly safe generalization to say that since demographic/sociological trends change only *very slowly, the needs* they create for schools, health-care facilities, and other institutional buildings will be met when the

Continued on page 43

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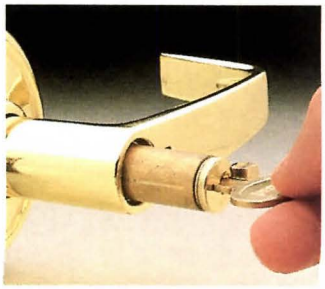

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Construction economy outlook continued from page 41

Although the demographic base of the institutional building market will remain firmly in place in the years immediately ahead, the volume of new construction is not likely to maintain its recent strong pace.

1989 Regional Estimates

Dodge Construction Potentials

Construction Contract Value (millions of dollars)

Northeast CT, ME, MA, NH, NJ, NY, PA, RI, VT	1988 Preliminary	1989 Forecast	Percent Change 1989/88
Nonresidential Building			
Commercial and Manufacturing	$10,625	$ 9,250	−13
Institutional and Other	6,925	6,400	− 8
Total	$17,550	$15,650	−11
Nonbuilding Construction	$ 9,250	$ 9,800	+ 6
Residential Building			
One Family Houses	$15,450	$14,200	− 8
Multifamily and Nhskpg.	6,400	6,150	− 4
Total	$21,850	$20,350	− 7
Total Construction	$48,650	$45,800	− 6

North Central IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI	1988 Preliminary	1989 Forecast	Percent Change 1989/88
Nonresidential Building			
Commercial and Manufacturing	$12,200	$11,400	− 7
Institutional and Other	7,650	7,775	+ 2
Total	$19,850	$19,175	− 3
Nonbuilding Construction	$ 9,975	$10,325	+ 4
Residential Building			
One Family Houses	$16,400	$15,800	− 4
Multifamily and Nhskpg.	5,175	4,950	− 4
Total	$21,575	$20,750	− 4
Total Construction	$51,400	$50,250	− 2

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bond market is cooperative—and postponed when it isn't.

The 1980s offer examples of both situations. During the early part of the decade, double-digit interest rates got in the way of market potential. Despite strengthening demographic support, contracting declined. Once rates came down, institutional building came forth. In the middle years of the decade, with similar demographics, contracting for institutional buildings was 25 percent stronger than during the early period.

Although the demographic base of the institutional building market will remain firmly in place in the years immediately ahead, the volume of new construction is not likely to maintain its recent strong pace. After three years of making up for the below-normal rate of building during the high-interest-rate era, the backlog of deferred demand appears to be satisfied. (This change could explain 1988's setback of 5 percent in institutional square footage.) In 1989, when bond rates will be higher, contracting will be further inhibited by perhaps another 5 percent as institutional building needs are postponed.

The changing composition of institutional building—more elementary schools and nursing homes; fewer colleges and hospitals—has been having a profound effect on average building cost in the 1980s. For the past five years (1982-87), institutional-building cost per square foot has risen at a rate of only 2 percent per year. This compares with an average of 12 percent per year during the previous five-year period.

A tight lid on growth for public-works construction

A five-year splurge of contracting for public-works construction lifted annual contract value from $26 billion in 1982 to $42 billion in 1987. This extraordinary 10-percent annual rate of expansion ended abruptly in 1988 when priorities changed. Under the constraints of deficit reduction and the New Federalism, it won't get much better in 1989.

Without a general tax increase, the mandate for deficit reduction translates into a freeze on funding for most federal programs. The New Federalism (which encourages local self-determination) put the public-works ball in the court of state and local governments. This change from "top down" to "bottom up" responsibility for the development of the nation's infrastructure will be keeping a tight lid on growth for the next several years.

• *Transportation construction*

The biggest single factor behind the strong growth of public-works construction during the mid 1980s was the Surface Transportation Assistance Act of 1982 with its 5¢-per-gallon fuel tax. The subsequent 1987 STAA sustained federal funding for highway, bridge, and mass-transit construction at its current high level, but added no new resources.

Under the terms of the latest highway program, federal allocations to the states are subject to a ceiling of $12.4 billion per fiscal year. Along with an additional billion dollars of "exempt" programs, DOT spending authority is approximately $13.4 billion annually. In both fiscal 1988 and 1989, however, actual disbursements ("obligations") by the federal government are being held slightly below that level in the interest of meeting the deficit targets. These constraints leave room for an increase of no more than 2 percent in fiscal 1989 over the reduced 1988 federal disbursements for surface transportation, holding next year's funding about

Continued on page 45

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Construction economy outlook continued from page 43

Surveys of business capital-spending intentions confirm that industry has upgraded expansion plans from single-digit to double-digit magnitude.

where it was in 1987.

Rail and other mass transit, which also depend upon the Surface Transportation Assistance Act for major funding, are bound by the same budgetary limitations as highway construction. Airport development, however, draws on a separate federal trust fund, and appears to be enjoying a higher priority than surface transportation. Federal obligations for airport-construction subsidies have been raised by nearly 10 percent to $1.4 billion for fiscal 1989.

• *Environmental construction*
Federal funds will be at least as scarce for environmental construction (water resources, waste-treatment plants, etc.) as they will be for transportation construction in 1989, with one variation. The time has come to begin making the transition from direct EPA construction grants for financing sewage-treatment facilities to state revolving-loan funds.

In 1989, EPA construction grants will not only be reduced, but states will be required to use half their shrinking federal allocations to set up revolving-loan funds for future sewage-treatment-plant construction. Moreover, states will be expected to supplement the federal government's capitalization with a 20-percent contribution to the loan funds. With federal grants reduced by half and with less-appealing loans as an alternative, it is estimated that 1989's sewer/waste-treatment construction contracting will decline temporarily.

Water-resource development (Corps of Engineers; BUREC) will also fail to achieve potential 1989. The constraints of deficit reduction mean that, despite a large backlog of newly authorized projects, no new ones will be started next year. The freeze on new projects will hold 1989 contracting for various stages of ongoing dam, reservoir, and river/harbor construction close to its 1988 level.

Contracting for water supply and transmission, a derivative of general building activity, reached its peak in 1988 and can be expected to decline by 1 percent in 1989 as the building cycle ebbs.

Another exception to the generally repressive circumstances for publicly financed construction in 1989 is work related to hazardous-waste disposal. With the backing of EPA's Superfund, this category of work, currently at an annual level of $500 million, will be showing sustained growth.

• *Total public-works construction*
For the indefinite future, the rapid growth of public works during the middle years of the 1980s must yield to other priorities. In 1989, as in 1988, the value of construction contracting for infrastructure projects will hold its current $43-billion level, but there is no support for more than a nominal increase.

Industrial construction is one of the few types of building that has a "plus sign" in front of it for 1989, and there's good cause
The export-driven manufacturing sector of the economy is rapidly approaching the limits of its capacity.

A rising rate of capacity utilization is the sure-fire indicator of a need for additional manufacturing space, and the range between 80 and 85 percent of capacity in use is particularly critical. When capacity utilization falls below 80 percent, capital-spending decisions focus on productivity. That means machinery, not buildings. Above 80 percent the emphasis shifts to construction.

Throughout the mid 1980s, when office building was booming, industrial activity remained depressed as long as the hard dollar invited the substitution of imported goods for domestically made products. With capacity utilization below 80 percent, annual contracting for manufacturing buildings averaged a sluggish $8 billion. In 1987, the softening dollar reversed the tide of international trade, and as U. S. industrial production rose to the occasion, capacity utilization crossed the 80 percent threshold. By 1988, the utilization rate approached 84 percent, and bottlenecks led to rising costs.

Industry is notoriously slow to respond to its need for expansion. If this were not the case, industrial construction would be booming in 1988, but it isn't. Typically, business capital spending lags economic activity, and industrial construction is no exception. This suggests that most of the expected response to the 1988 capacity squeeze is yet to come—in 1989.

Not surprisingly, McGraw-Hill's surveys of business capital-spending intentions confirm that industry has upgraded expansion plans from single-digit to double-digit magnitude. Significantly, manufacturers are putting 30 percent of their investment outlays into plant expansion, up 5 percentage points from a year earlier. Heading the list of big spenders: paper and pulp, iron and steel, chemicals, instruments, and food processing.

As contracting for manufacturing buildings continues to strengthen through the remainder of 1988, the value of next year's newly started factories and warehouses is forecast to top $9.5 billion, a gain of better than 15 percent. As is sometimes the case, however, next year's additions to plant capacity may turn out to be poorly timed. If productive capability is growing rapidly when the Fed's anti-inflationary restraint is putting the brakes on economic activity, capacity utilization will fall. The collision of these events could lead to a stretchout of the manufacturing sector's ambitious expansion plans.

The "tax shelter" group, mainly offices, apartments, and hotels, has gone from boom to bust since the mid 1980s
The near future offers more problems than potentials for this trio of building types. The reason: not interest rates, but vacancy rates.

The boom period for tax-shelter building began with the Economic Recovery Tax Act (ERTA), which offered accelerated depreciation on commercial buildings as an incentive to help speed the economy's recovery from its early-1980s recession. It ended with the 1986 Tax Reform Act, which not only rescinded the fast write-off, but disallowed "passive losses" as an offset to other income. Suddenly, real-estate investment was brought back to reality.

During the four-year boom period (1983 to 1986), enough offices, apartments, and hotels were built to satisfy the normal requirements of five years and a bit more. At the 1985 peak, the combined square footage of building reached the extraordinary total of 1.25 billion—roughly half again the 800- to 850-million square feet the market is capable of absorbing, even in a good year.

Vacancies soared, of course, and, upon losing the artificial support of tax write-offs, construction plunged to its current (1988) rate of 750-million square feet.

Even though contracting for new construction of offices, apartments, and hotels has shrunk to only 60 percent of its 1985 peak rate, vacancies have just recently begun to recede. A match-up of current

Continued on page 46

Construction economy outlook continued from page 45

average vacancy rates against levels that are associated with a market in reasonable equilibrium gives an indication of the lack of near-term potential for recovery.

National vacancy rates

	Peak	Now	Workable
Offices	21%	19%	10%
Apartments	8	7+	5
Hotels	35	35	25

In order to restore balance to these distorted construction markets, contracting for new buildings at volumes below their absorption rates is inevitable. The adjustment to the tax-shelter boom appears closest at hand for apartments, and farthest for offices. Having already plummeted from more than 800-million square feet in 1985 to its current 450-million square feet (a drop of nearly 50 percent over three years), the further downside risk for apartments is relatively small. The bottom to the decline of multifamily building should be reached in 1989 in the range of 400 to 450 million square feet, although little or no improvement can be expected in 1990.

The office-building adjustment has a longer way to go. In defiance of persistently high vacancy rates, contracting for offices still remains close to its (theoretical) 250-million square feet of current demand—an inconsistency that can only be rationalized on a regional basis. However, those regions that were latecomers to the 1980s office boom (e.g., the Northeast and the North Central) have recently begun to weaken. With office building now declining throughout the nation, an accelerated reduction of close to 20 percent (to 190-million square feet) is likely during next year's economic slowdown. Bottom will be reached at about 175-million square feet in 1990. As in the case of apartments, subsequent recovery will be inhibited by lingering oversupply and weak demographic support.

The remaining category in this group offers a contrast between commercial and resort hotels. The larger (by far) commercial hotel market is tracking the decline of office building. Developers of resort hotels, on the other hand, are planning for expansion. On balance, a net decline of between 5 and 10 percent is indicated for total square footage of new hotel/motel building in 1989.

Collectively, the overbuilt "tax shelter" group is perhaps another two years from stabilizing. In 1989, a further decline of between 5 and 10 percent is in order for this $50-billion-per-year building market.

1989: like 1988 with higher interest rates

High vacancy rates and rising interest rates in private-sector building markets, along with a tight lid on public-construction programs, leave little opportunity to reverse the current decline of construction contracting in 1989. Instead, the value of newly started construction is on its way to a secondary setback of approximately the same magnitude as 1988's decline. An overall reduction of 4 percent (–7 percent for nonresidential building, –3 percent for housing, and +1 percent for nonbuilding construction) will leave next year's total construction-contracting value at $240.6 billion, less than the 1988 total by about $10 billion.

The letdown will be gentle. Comparison of the current decline of construction contracting with previous cyclical reversals turns up some differences worth noting. After adjustment for inflation (which is necessary to make comparisons with other cycles), it becomes apparent that the recent peak of construction contracting was reached in 1986, not in 1987. With the decline already in its second year, one further setback (in 1989) adds up to a cumulative peak-to-trough shrinkage, in constant dollars, of an estimated 16 percent. By recent standards, this would be an unusually soft landing from a four-year ascent. By contrast, the early-1970s building cycle concluded with a 26-percent letdown (1974-75), and the one that followed (1979-82) ended with a decline of 33 percent.

Why should the conclusion to the mid-1980s building cycle be only half as exciting as the two that proceeded it? Nonresidential building is *not* the answer. The average decline from the last two cyclical peaks for the total of commercial, industrial, and institutional building was 20 percent. This one—owing to the overstimulation of commercial building in the mid 1980s—is heading for a 25 percent peak-to-trough comedown.

In the more volatile housing sector, where the norm for cyclical decline is more like 50 percent, the constant-dollar value of residential building will be falling by only half that much this time around. Measured in dwelling units, housing starts will be bottoming out in 1989 at 1.3 million, compared with 1.1 million in 1982 and in 1975.

Although the demographics of the housing market are no longer as supportive as they once were, today's credit conditions—even in a period of tightening—are not as confining. In the mid 1970s, disintermediation was the issue (no loans at any rate of interest); in the early 1980s it was extreme monetary restraint (18-percent mortgage money, if you wanted it). In the current downturn, the housing sector, for all its shortcomings (affordability, overbuilding, etc.) is helping to minimize the construction market's inherent tendency toward cyclicality.

The next recovery

With publicly financed construction under constraint for the foreseeable future, getting the construction industry's recent slide turned around will depend upon lower interest rates to support a better volume of house building, and the continued absorption of surplus offices to revive commercial building. One of those two conditions—falling interest rates—should be available by the end of 1989, but the vacancy problem is apt to persist for a year or more beyond that. This suggests that a recovery of construction activity could take hold in 1990 with a rebound of the housing market, and then pick up reinforcement in 1991 as equilibrium is restored to nonresidential building.

Less construction contracting doesn't always mean less building

Construction contracting is the leading indicator of two other important measures of the status of the construction sector: work in progress, and manufacturers' shipments of materials.

To derive estimates of expenditures for work in progress from construction-contract value, it is necessary to supplement the contracting data with values for types of construction that are not covered by contracting data (e.g., additions and alterations to single-family houses; any other projects valued at less than $50,000), *and* apply the appropriate lead time for various categories of construction (short for houses, longer for nonresidential projects, longest for public-works construction).

The value of shipments of construction materials must take into account variations in the mix of construction as well as changes in inventories and exports.

As might be expected, construction contracting is a good deal more volatile than work in progress. This year's 3-percent decline of contracting is causing a barely perceptible (less than 1 percent) reduction of work in progress. In 1989, a further 4-percent decline of newly started construction will lead to a shrinkage of between 2 and 3 percent in the value of construction put in place.

The worst that usually happens to the value of building-materials shipments during periods of declining construction activity is to hold approximately even with the previous year's level. This is what took place in 1970, 1975, and 1980. The only departure from that pattern in 1982 was a very special case. In 1989, it is most likely that the value of manufacturers' shipments of building products will remain steady at the current (record) $202-billion level, and then resume its average 3- to 4-percent rate of expansion in 1990.

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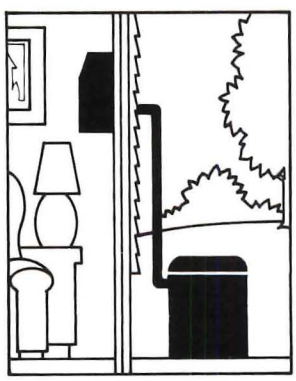

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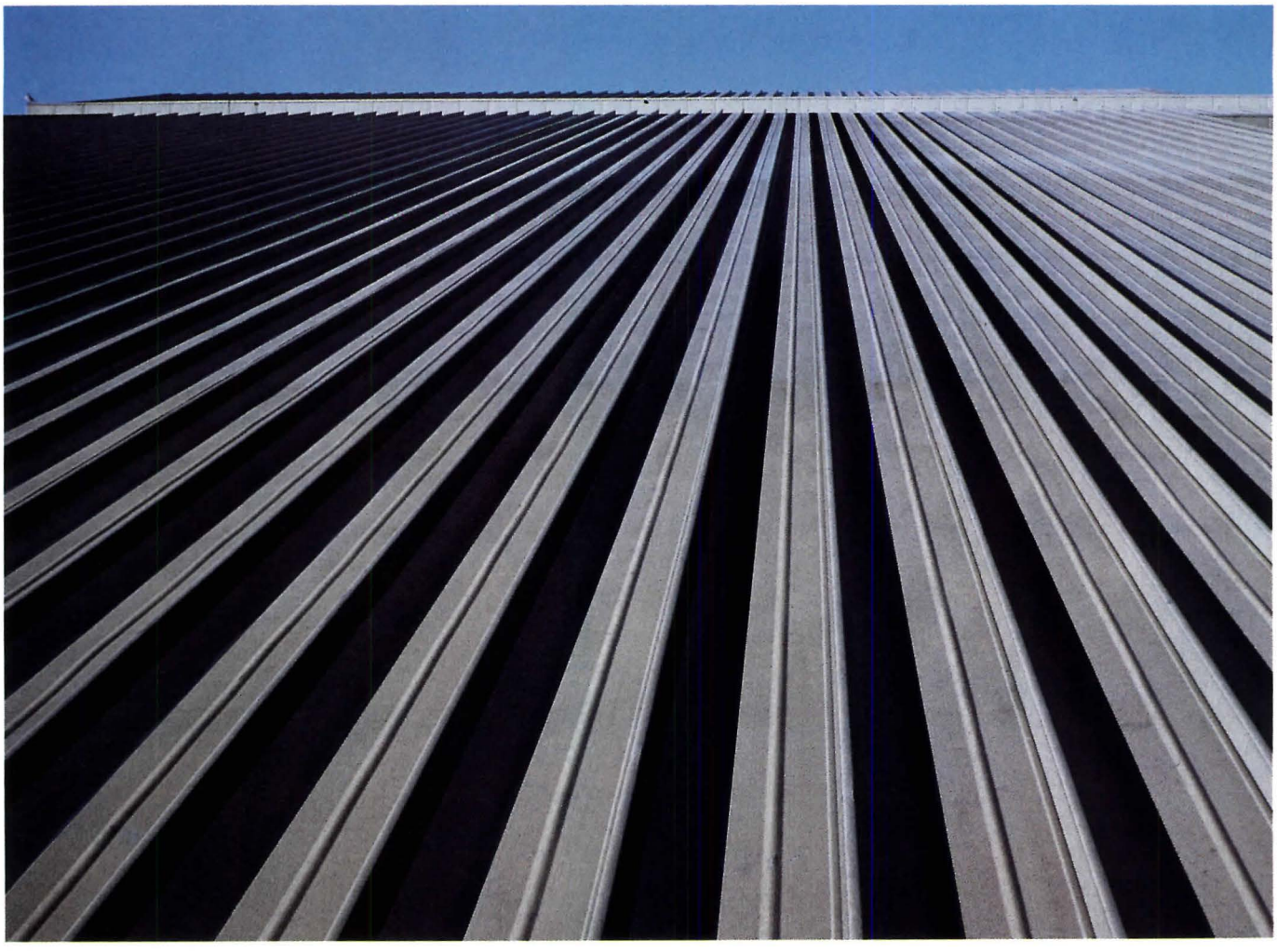

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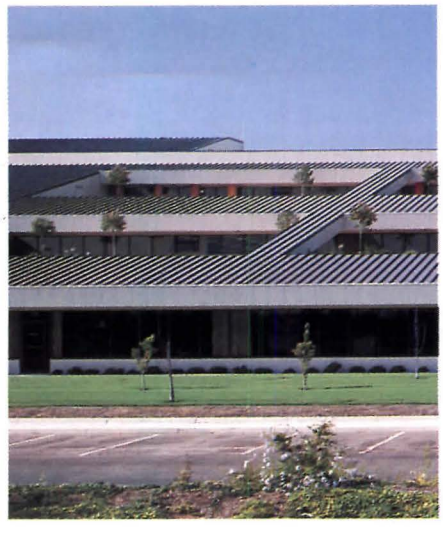

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The edifice's new clothes: Temporary transformations in Chicago and Paris

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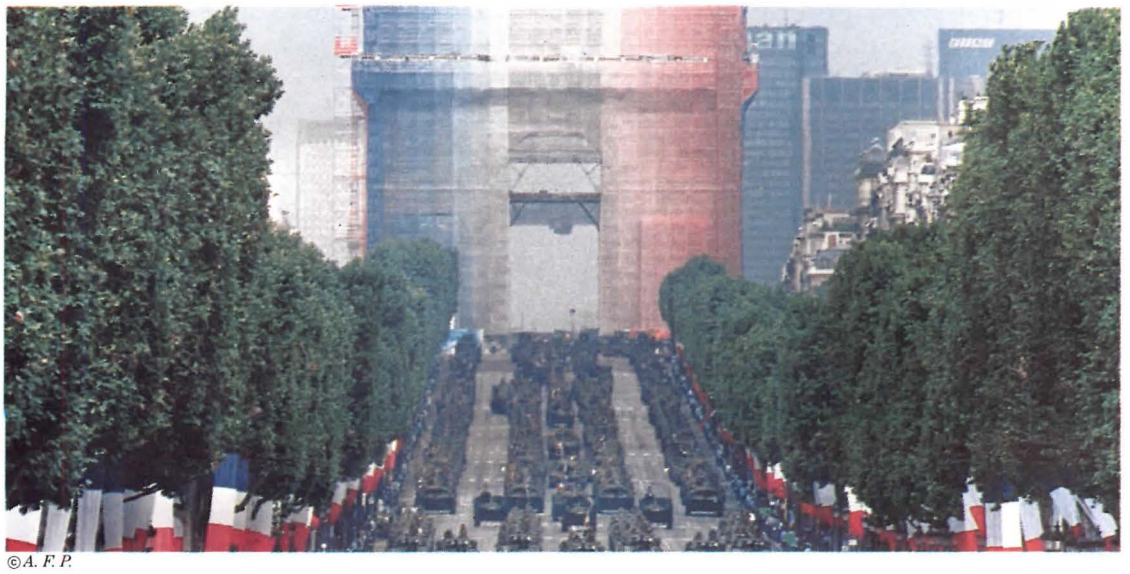
Though wrapping buildings has long been a trademark of Christo's, two other artists have lately found their own way to reinterpret architecture (at least temporarily) using fabric. In honor of "Convergence '88," a meeting of textile artists last summer, the headquarters of the *Chicago Sun-Times*, a low-slung 1957 design of Naess and Murphy, was bedecked in cotton strips tie-dyed in the Japanese Shibori method by artist Maya Romanoff (above). Restrained at top and bottom, the 120-ft-long panels were strung together with elastic cords so that the whole series would react kinetically to passing breezes. Sunlight played on the building through and between the fabric panels, which were held away from the facade by a retaining wall along the Chicago River. Romanoff saw the piece as a metamorphosis of the Miesian aluminum-and-glass elevation, a "yielding" architecture that "moved with nature's grace." The subtle color gradation in *Bess's Sunrise* (named after the artist's mother) was the result of dyeing individual panels as many as 28 times.

In Paris, the workshop of Catherine Feff specializes in monumental paintings on walls, on banners celebrating exhibitions, and on tarpaulins covering scaffolding at construction sites. Renovations at the Arc de Triomphe provided the artist with her latest opportunity: the painting of a scrim covering falsework at the 16-story-high monument. Normally a figurative painter, Feff turned here to abstractly patriotic shadings (achieved with four tons of paint on 27,000 sq ft of polyethylene netting). Underneath her *Tricolor*, cleaning and restoration are readying the arch for the bicentennial of the French Revolution, in 1989.



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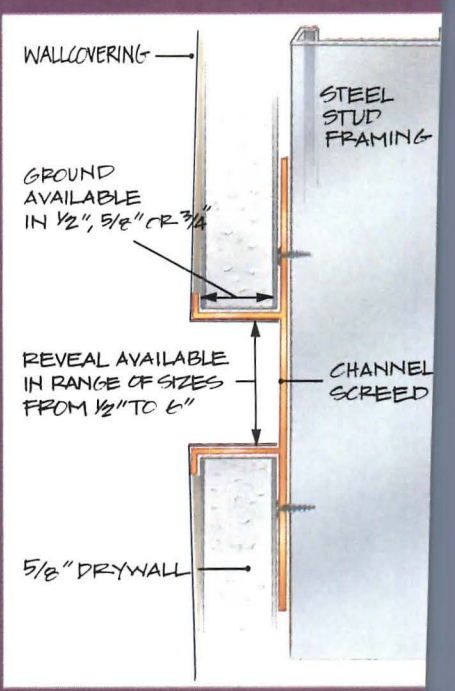

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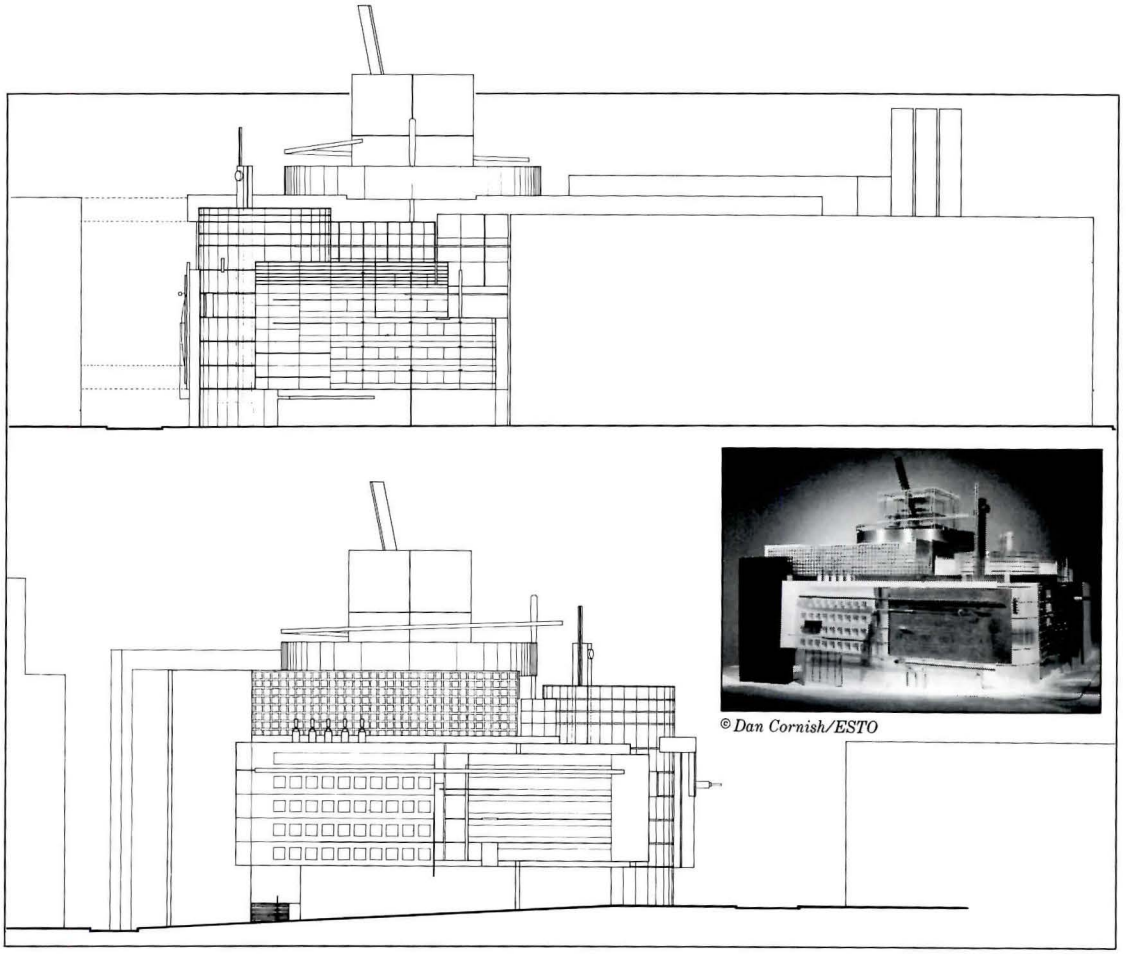
Back to neighborhood basics

A missionary fervor was evident in remarks by participants in the symposium "City and Suburb," held September 16 and 17 at the University of Michigan. The city component went essentially unmentioned in Ann Arbor as panelists Leon Krier, Andres Duany, Ian McHarg, and Robert Davis focused instead on the Traditional Neighborhood Development (TND) as the land-development planning device of the future. Krier, as self-proclaimed polemicist, led off with a familiar but nonetheless compelling plea for the restoration of an urbanism of streets and squares. Since drawing up the master plan of Seaside, Fla. (*the* model for subsequent TNDs, and the site of a Krier-designed house now being constructed), Andres Duany and Elizabeth Plater-Zyberk have planned over a dozen communities. As prophet of the movement, Duany foresees the inevitable triumph of TNDs over land-wasting planned unit developments, shopping centers, and office parks. Ian McHarg applauded the borrowing of innately ecological local building traditions (along the lines of his well-in-print *Design with Nature* 1969), which have now been encoded in TND covenants. Robert Davis, the developer of Seaside, spoke of his travels through the South in search of art such a "cracker vernacular." According to the panelists, successful elements of these plans are becoming clear: a walkable district (or series of districts) of one-quarter-mile radius; a mix of residential, neighborhood-commercial, and office or light-industrial uses; narrow streets to slow the speed of vehicles and improve the pedestrian environment; segregation of green spaces and civic structures to create a specific community identity; and—unlike hermetic pod developments—divers linkages to adjacent communities. *J. S. R.*

U. S.-designed newspaper headquarters in Norway



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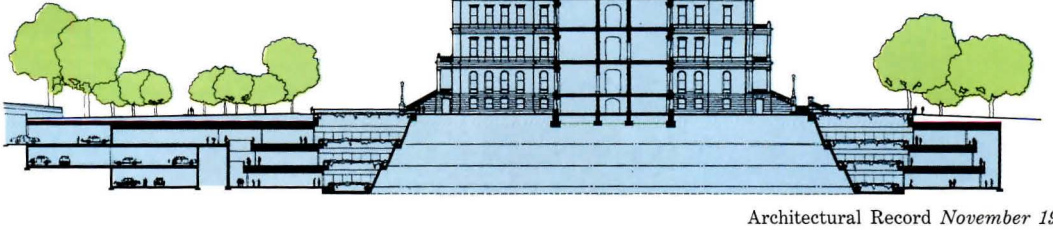
Peter Pran, design principal at Ellerbe Becket, describes his competition-winning design for the Schibsted Gruppen in Oslo as "expressive of movement and complexity"—appropriate imagery for Norway's two largest newspapers, *Aftenposten* and *Verdens Gang*, which will be housed in the new structure. The copper, glass, concrete, and stone elements of the Apotekergata Street side (model and bottom drawing) express varied functions within. The adjacent glass-and-steel facade (elevation top) extends the Modernist proportions of the existing newspaper building. These varied treatments meet at a curved corner entrance, which leads diagonally to a cylindrical light court at the center of the block. A cubical space, suspended within the drum above the ninth floor, houses an employee cafeteria.

Michigan master plan saves views and landscape

Restoration of the 1878 capitol in Lansing, Mich., by architect Richard C. Frank (original architect Elijah Myers) necessitated removal of floors installed in 20-ft-high historic rooms. To receive the displaced functions and return offices scattered in various nearby buildings to the capitol, Gunnar Birkerts has proposed a 400,000-sq-ft skylit underground addition as part of a preservation master plan. The elliptical new construction will surround the existing legislative structure with office space and furnish parking for up to 600 vehicles. The $163-million project will be constructed in phases as funds allow.



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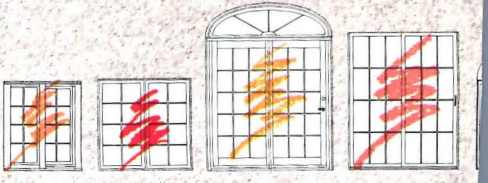

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News briefs

The University of California at San Diego has approved the establishment of a new school of architecture. The curriculum will include undergraduate study leading to a liberal arts degree, a master's degree and doctoral program, and continuing education for practicing professionals. A research component will emphasize architectural technology, computer-aided design, investigation of facilities for the homeless, and analysis of problematic patterns in urban communities similar to those faced by the San Diego-Tijuana, Mexico, urban complex. The school will begin accepting students in 1991.

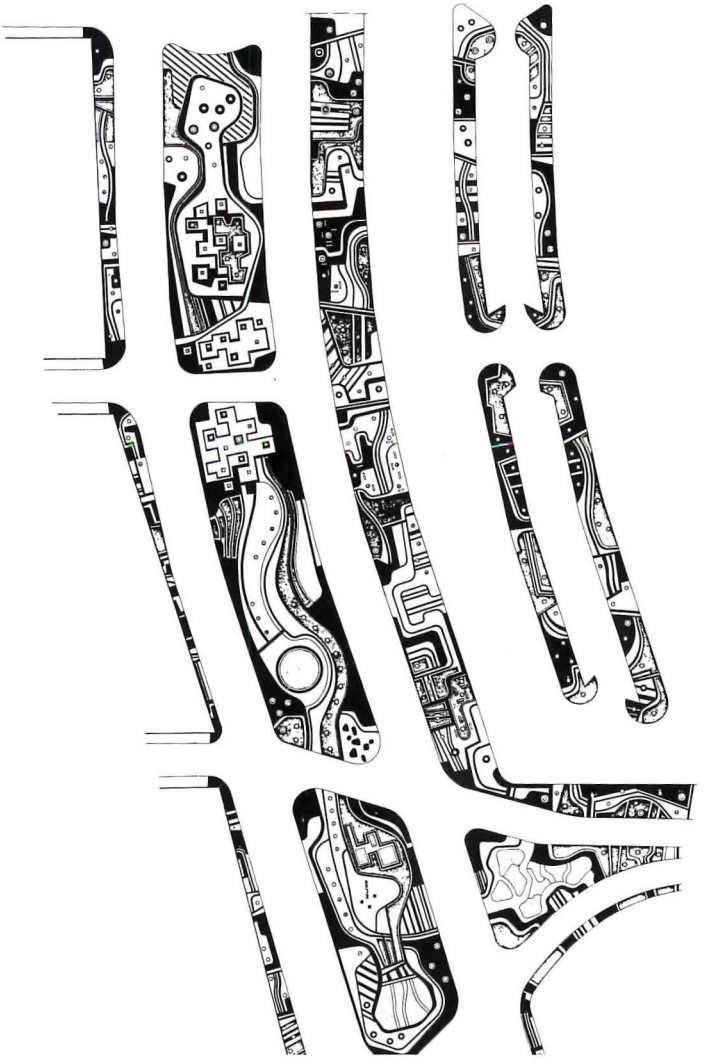
Hans Hollein, of Vienna, has received the Haas International Award, which honors foreign alumni of the University of California.

Hassan Fathy, the Egyptian architect, artist, and poet, has donated his entire collection of drawings and writings to the Aga Khan Trust for Culture, which will use them as the nucleus of a new Hassan Fathy Centre for Vernacular Architecture.

Mario Botta has been approved to design the new home of San Francisco's Museum of Modern Art [RECORD, October 1988, page]. Now housed in cramped quarters in the city's historic civic center, the new structure, to open in 1993, will enclose between 150,000-170,000 sq ft.

The Crystal Dome and Tower, the centerpiece of a new 200,000-sq ft reflective-glass-clad shopping mall in Ankara, Turkey, is a geodesic dome containing a revolving restaurant and discothèque that will rise 360 ft above the city. Designed by Turkish architect A. Cengip Buluc with Wendel R. Starnet, model of Starnet Structures in the U. S., it is symbolic, according to promoters, of Turkey as a new international shopping center, emulating such cities as Korea.

The street is his canvas

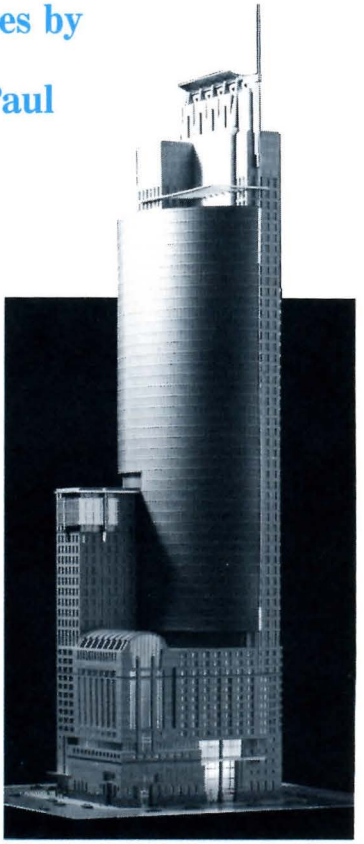


A 1.6-mile stretch of downtown Miami's Biscayne Boulevard will be transformed into a sinuous tapestry of trees, paving bricks, and flowers in a recently approved proposal by Brazilian artist and self-trained landscape architect and botanist Roberto Burle Marx. As part of rebuilding the street, sidewalks will be widened and replaced, and palm-lined median strips, benches, and light standards will be added. The patterns of brown (black areas on plan left), red (mottled areas), and beige paving tiles are said to be influenced by such wide-ranging sources as pre-Columbian art and early Portuguese pottery, and carry on themes developed previously by Marx at esplanades in Ipanema and Copacabana, Brazil. Pending completion of public and private funding, the scheme will be linked to two parks that stretch from the street to the bay, one of which is being redesigned by sculptor Isamu Noguchi.

Headquarters structures by Kohn Pedersen Fox in Cleveland and St. Paul

Ameritrust Center, Cleveland (1); St. Paul Companies Headquarters Addition (2, 3)

Two recent projects by Kohn Pedersen Fox respond to unique settings. The Ameritrust Center, in Cleveland, houses a 484-room hotel in its buff-granite base, which matches the massing of buildings on landmark Public Square. A reflective-glass tower encloses more than one million sq ft of office space. In the St. Paul Companies headquarters addition, a domed employee cafeteria looks out on a landscaped forecourt at the apex of a wedge-shaped site. A 17-story tower and nine-story slab, which act as a backdrop, are connected by a bridge to the company's existing center.



1 *Mort Tucker*

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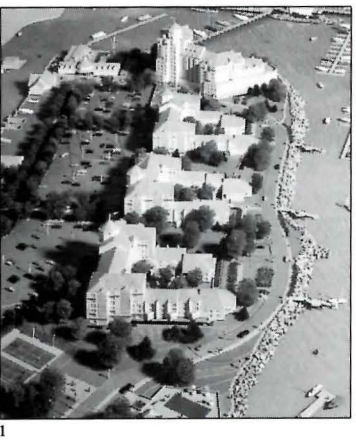

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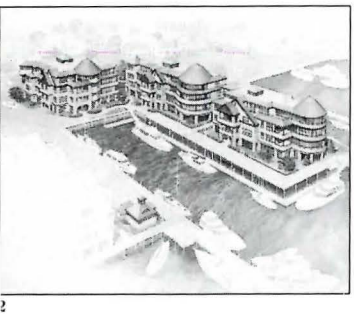

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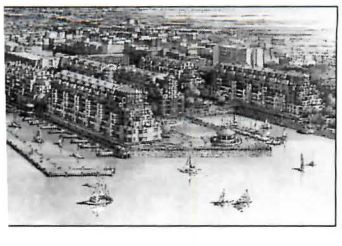


Four multifamily housing projects:

New London Mills (1), in Connecticut, offers clusters of town houses that range from two to seven stories and surround courtyards along the waterfront of Long Island Sound. Included in the development, designed by Beyer Blinder Belle, are a yacht club, a marina, and a retail town center. The most prominent spot on the site will be occupied by a 14-story residential tower. Occupancy will begin in 1992.

Brown & Howard Wharf (2), a reconstructed pier on Narragansett Bay in Newport, R. I., evokes the area's Shingle Style roots in its massing, patterned siding, and brick base. Architect Bergmeyer Associates will convert existing structures for commercial space and a sailing school. When completed in the spring of 1989, yacht moorage will be available to all residents.

931 Massachussetts Avenue (3) is a 13-story condominium under construction near Harvard Square in Cambridge, Mass. Bruner/Cott & Associates (see also pages 100-103) responded to a vibrant context in the slim massing of the tower (four units per floor) and in the traditional detailing of gray brick, six-over-six metal windows, and precast concrete trim. The 54-unit building includes covered parking; it will be finished by year's end.

Clippership Wharf (4), a cluster of 350 luxury condominiums, will offer panoramic views from East Boston across the harbor to the city skyline. Childs Bertman Tseckares & Casendino is the architect of the seven brick-clad structures (one of which will house residents of low-to-moderate income). Consistent with regional guidelines, public access to the waterfront is provided; a ferry terminal is also planned.

6 rms, riv vu, gdn w/artwk

Lynn Moser photos

Works in the 911 Contemporary Arts gallery's "Homes for Art" exhibition in Seattle expressed ambivalence about America's detached-single-family-residence culture in various ways. Reactions ranged from the statically indeterminate (*A Sculpture Restrains Expanding Walls*, top left, by Beliz Brother) to the structurally expressive (*An Entrapping Bamboo Billboard*—in an Asian neighborhood—top right, by Alan Lande), to the overtly symbolic (*Landscape of Buried TV Sets*, by Susan Galligan and David Loseno).

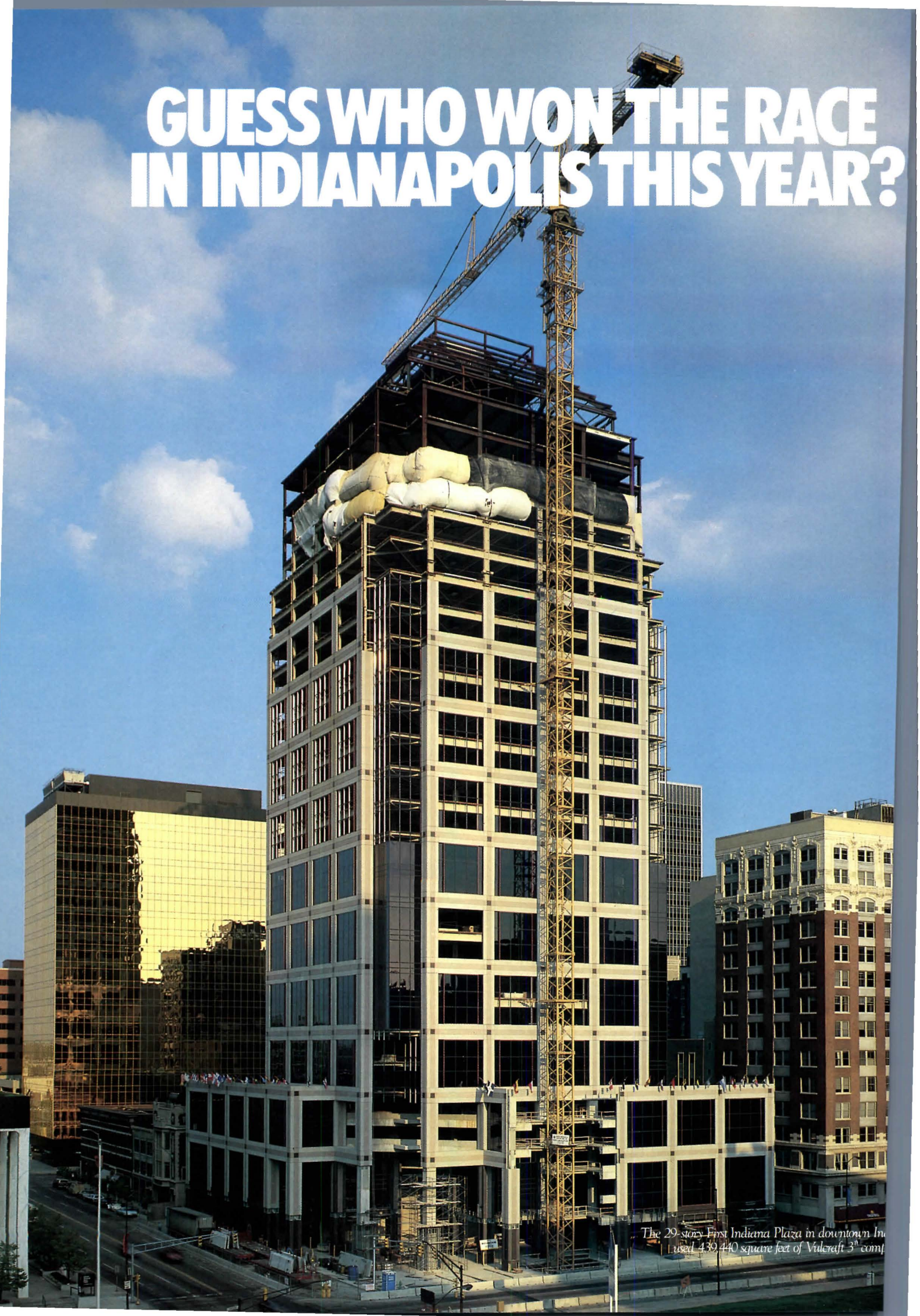
Competition calendar

•The Korean War Veterans Memorial Advisory Board has announced a single-stage national design competition for a memorial to honor Korean War veterans. Written expressions of interest should be submitted by December 16 to the Korean War Veterans Memorial Design Competition, P. O. Box 17045, Baltimore, Md. 21203-7045.

•Designs are being sought for 100 units of affordable elderly housing in the city of Colton, Calif. The first-stage deadline is December 20. Contact Brian S. Oulman (714/370-5052).

•Two student competitions: "A Riverboat Center on the Mississippi River" (registration closes February 15, 1989) and "A Cultural Exchange Center for Beijing, China" (registration closes April 30, 1989). Information for both is available from AIAS, 1735 New York Avenue, N. W., Suite 710, Washington, D. C. 20006.

GUESS WHO WON THE RACE IN INDIANAPOLIS THIS YEAR?



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te conditions put the 29-story First Indiana Plaza project five eeks behind schedule. So the contractors and engineers found emselves in a race against time. But it was a race they won, anks in large part to Vulcraft composite deck. That's because mposite deck is a lot easier to t down than poured-in-place ncrete, which requires the in- llation and later removal of mbersome forms.

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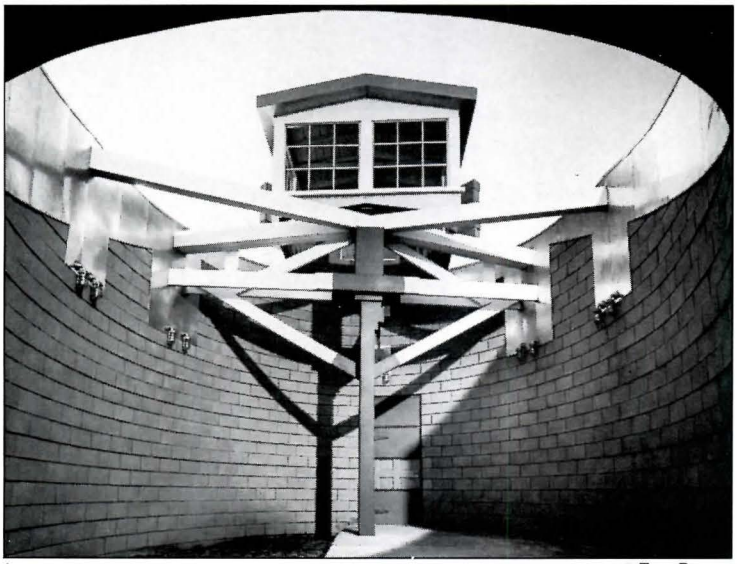
Design awards/competitions: California Council/ AIA 1988 Design Awards

A record 307 entries were winnowed by three judges in this year's California Council awards program. Four projects received Honor Awards, nine Merit Awards, and one, The Bear Valley Visitors Center at Point Reyes, Calif. (not shown), by the firm of Volkman Stockwell, received the council's first People in Architecture Award. Although work located in such diverse places as Hong Kong, West Berlin, and Holland was premiated, only one residence in this house-proud state was



1 ©Tom Bonner

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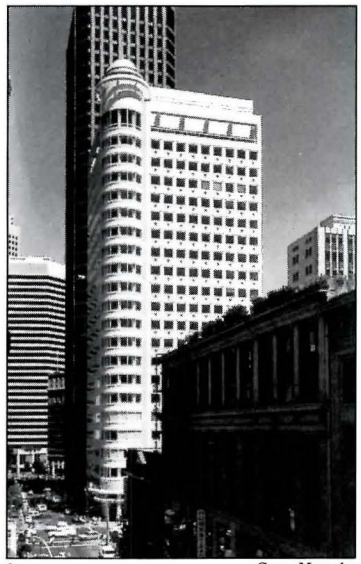
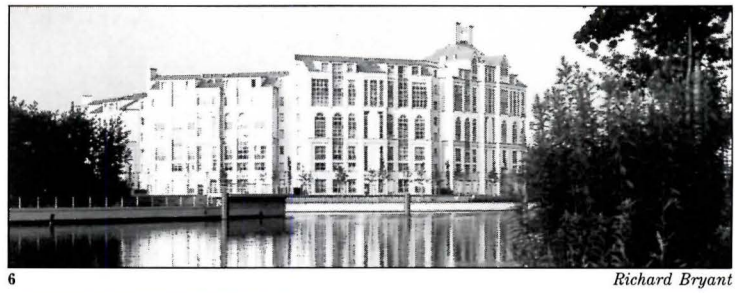
5 ©Tom Bonner

2 Dennis Anderson



3 Greg Murphy



6 Richard Bryant

7 John Durant

1. 8522 National Boulevard, Culver City, Calif.; Eric Owen Moss, Architect [RECORD, April 1988, pages 90-97]; Merit Award. Five separate structures totaling 60,000 sq ft ("the most mundane circumstances," according to the awards panel) were unified by the use of simple industrial-building devices—a metal canopy, heavy-timber trusswork—to become "almost pure art . . . a lively, exhilarating space."

2. Glickman Residence, San Francisco; Backen Arrigoni & Ross, Architect; Merit Award. Architectural screening devices permit ample light to penetrate this four-story, 2,575-sq-ft city home while maintaining the owner's privacy. The jury called the bay-windowed front "a witty gesture for the city street."

3. 88 Kearny Street, San Francisco; Skidmore, Owings & Merrill, Architect; Merit Award. A new office building which incorporates a landmark 1907 terra-cotta-clad structure, the project was commended for its "restraint in overall form."

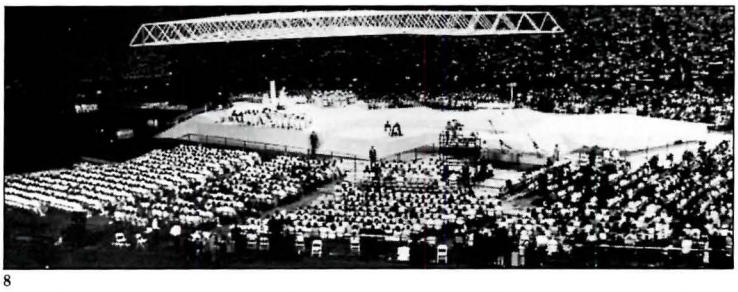
4. Archilla Clothing Store, Santa Monica, Calif.; William Adams, Architect; Merit Award. Both "high style," in its use of angular ramps and "old-world" in the patina of its material palette, this showcase for men's clothing was designed with a "sure artistic hand."

5. Kate Mantilini Restaurant, Beverly Hills; Morphosis, Architect; Merit Award. Among other manipulations of a former bank, a sculpture, dangling from the ceiling in this "personal vision," suggests the workings of a clock. The jury commented: "This is a late-20th-century version of the 1930s Los Angeles supper club."

6. Tegel Harbor Housing, Berlin, West Germany; Moore Ruble Yudell Architects; Honor Award. Part of Berlin's famous IBA program, this 170-unit apartment complex encloses courtyards and focuses views outward to the harbor. The panel praised the tiny layouts (required by codes) as "simple yet sculptural . . . . The architect was able to give individual character to the units and not compromise the overall strength of the design."

7. The Scripps Clinic at Carmel Mountain Ranch, San Diego; Austin Hansen Fehlman Group, Architect; Merit Award. The interplay of forms in this 87,000-sq-ft medical complex was accomplished with tilt-up concrete panel technology. The entrance colonnade leads to a

selected by the jury, which comprised Elizabeth Ericson, of Shepley Bulfinch Richardson and Abbott, in Boston; Robert Frasca, of Zimmer Gunsul Frasca Partnership, in Portland, Ore.; and E. Fay Jones, of Fay Jones and Maurice Jennings Architects, in Fayetteville, Ark.



8

9 *Lincoln Potter*

0 *©ESTO*

kylit atrium, the focus of clinic vings. Jury accolades: "human n scale . . . a unique sense of pace extremely hard to achieve n medical facilities."

. Environment for a Papal Mass; Bissell Architects; Merit ward. A temporary but "very ramatic setting" was created in ıe Los Angeles Coliseum for .5,000 communicants by the ıspension of a 6,000-sq-ft space ame from cranes, and the tension of a multitiered atform (to hold an altar) into e field-level seating area.

The American Club, Hong ong; William Turnbull sociates, Architect; Honor Award. Focused on a formal dining room, the massing of octagonal and rectangular forms composes a distinctive silhouette on a hillside site overlooking Tai Tam Bay. The concrete structure makes use of "native wood and an indigenous palette of colors to create a handsome atmosphere."

10. Shell Central Headquarters, The Hague, Holland; Skidmore, Owings & Merrill, Architect; Honor Award. An addition to an existing structure, the 300,000-sq-ft brick office block steps up from four to eight stories in a continuation of the residential scale of its historic neighborhood. The jury noted that "the building connects to the place that it is in," and appreciated its "extraordinary craftsmanship."

11 *Marvin Rand*

12 *Stephenson*

13 *©Timothy Hursley, The Arkansas Office*

11. Sunset multiuse complex, West Hollywood; Architectural Collective; Merit Award. Above underground parking are two stories of office space with terraces; the upper floors are occupied by loftlike residences. Finding the project "playful," the jury also praised the concrete-framed structure as "an intriguing solution to housing."

12. Golden Gateway Commons, San Francisco; Fisher-Friedman Associates, Architect; Merit Award. An urban redevelopment, 155 condominium units rise above a podium containing office space and parking. With its landscaped courtyards and terraces, the project won recognition for its "volumes, vistas, and a small scale that is hard to achieve in a large city."

13. Carousel Park at the Santa Monica Pier; Moore Ruble Yudell/Campbell & Campbell, Architects; Honor Award. Improvements surrounding the historic carousel included a playground, boardwalk-style retail space, and a new wheelchair-accessible entrance plaza. The project was applauded as "a delightful urban stage."

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Life on the edge: Toward a new suburbia

Nobody really likes *the contemporary suburb, asserts Daniel Solomon, but architects can do more than share the blame for this much-maligned type of development—they can help lead the way to reshaping it. Solomon's own projects on individual sites have been documented earlier in* RECORD *[August 1988, pages 100-107]; here he describes plans for entire California communities—in San Jose, Pasadena, and San Francisco—to make places that are truly "civilized, urbane, and communal."*

By Daniel Solomon

As one drives through the great Central Valley of California, or east from Phoenix, or south from Los Angeles through the vast settlements in the non-town *counties* of Orange, Riverside, and San Bernardino, there is no question that, despite the efforts of planners, architects, developers, traffic engineers, and building officials, no one *likes* living in the places they are building. And as community after community elects anti-growth officials and enacts no-growth legislation—with California again in the vanguard—the utter lack of design leadership in the making of these places becomes more obvious and more acute.

Notwithstanding greenbelts and buffer zones, atriumed shopping malls and picturesque jogging paths, the suburban landscape, though now our predominant urban form, increasingly confounds us with its problems. Sprawling development voraciously consumes land (in many parts of California there is simply no longer countryside nor are there distinct towns), consumes gasoline, water, air, and the ozone layer, and requires a huge infrastructure (the imported golf-course landscape of suburbia is energy-intensive and non-self-sustaining—turn off the switch and it goes away). More than ever, hours of vacuous motorized torture are required to get from one place to the next, and suburbia is built in such large homogenized chunks that it discriminates against everyone who is not part of a "target market." Worst of all, this new, sanitized, antiurban world is a place of diminished experience and diminished insight. It is significant that the word for the urmature of public space in traditional cities is frequently coupled with a word to describe intelligence, as in the adjectival "street-smart." There is no comparable form of suburban wisdom—mall-smart? cul-de-sac smart?

If one asks any of the city-making experts why they chose to make the place the way they did, their response echoes the familiar cry of bureaucrats caught red-handed: "I didn't do it. All I did was my little job, but I don't control the system." Architects are the most vigorous defenders of their own nonculpability. Architects did not build this town, they say, it was the developers, the bankers, the traffic engineers; it was the distribution of goods, lending policy, the electronics industry, the accumulation of capital . . . .

Whoever would have thought that the tiny wars fought at faculty meetings would leave the American landscape in such smoldering environmental ruin? A generation ago, a new age of specialization befell academia, and the long-term effects of this process of atomizaton are now visible everywhere. City planners scurried into the heady realm of public policy, and left physical planning to the thick-fingered working lads. Smart landscape architects headed into forestry and habitat management, with the slow ones left mindlessly applying the Zipatone of a vacant post-Olmstedian pastoralism to any and every design task. Architects joined in an ever more hermetic stylistic fratricide, of interest to no one but themselves, and the new American townscape emerged as fractured and disjointed as the disciplines involved in its construction.

It was during this time that the legacy of Clarence Stein and Henry Wright—in the form of traffic on arterials, and houses on curving cul-de-sacs—found its way into the FHA Minimum Property Standards that controlled the GI Bill-financed explosion of suburbia after World War II. In a dramatic and essentially unexamined departure from centuries of urban form-making, these standards imposed a pattern of enclaves as opposed to continuous urban fabric. Houses in these privacy-obsessed subdivisions were shaped directly or indirectly by Frank Lloyd Wright's Usonian house, which took its definitive form in the Jacobs house of 1937. Wright's ideal residence opens every room to a private garden, and welcomes the automobile into the heart of the plan, using it as a buffer between house and street. Richard Neutra reinterpreted the Usonian house in California, which, in turn, was knocked off by developers like Joseph Eichler in the form of huge subdivisions. The antiurban values of these houses were then disseminated by powerful shelter magazines such as *Sunset* and *House & Garden.*

The sensual embrace of the Usonian house did not survive as a part of the American scene, but the essential elements of its plan—each space open to a private "wilderness," the garage a blank visage to the public street—are still standard builder offerings. By 1960, the conventionality of the banal house in the amorphous

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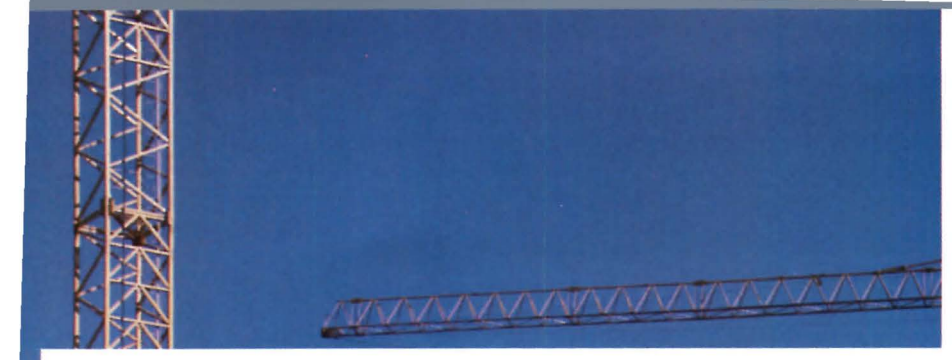
aniel Solomon heads his vn architectural firm in in Francisco.



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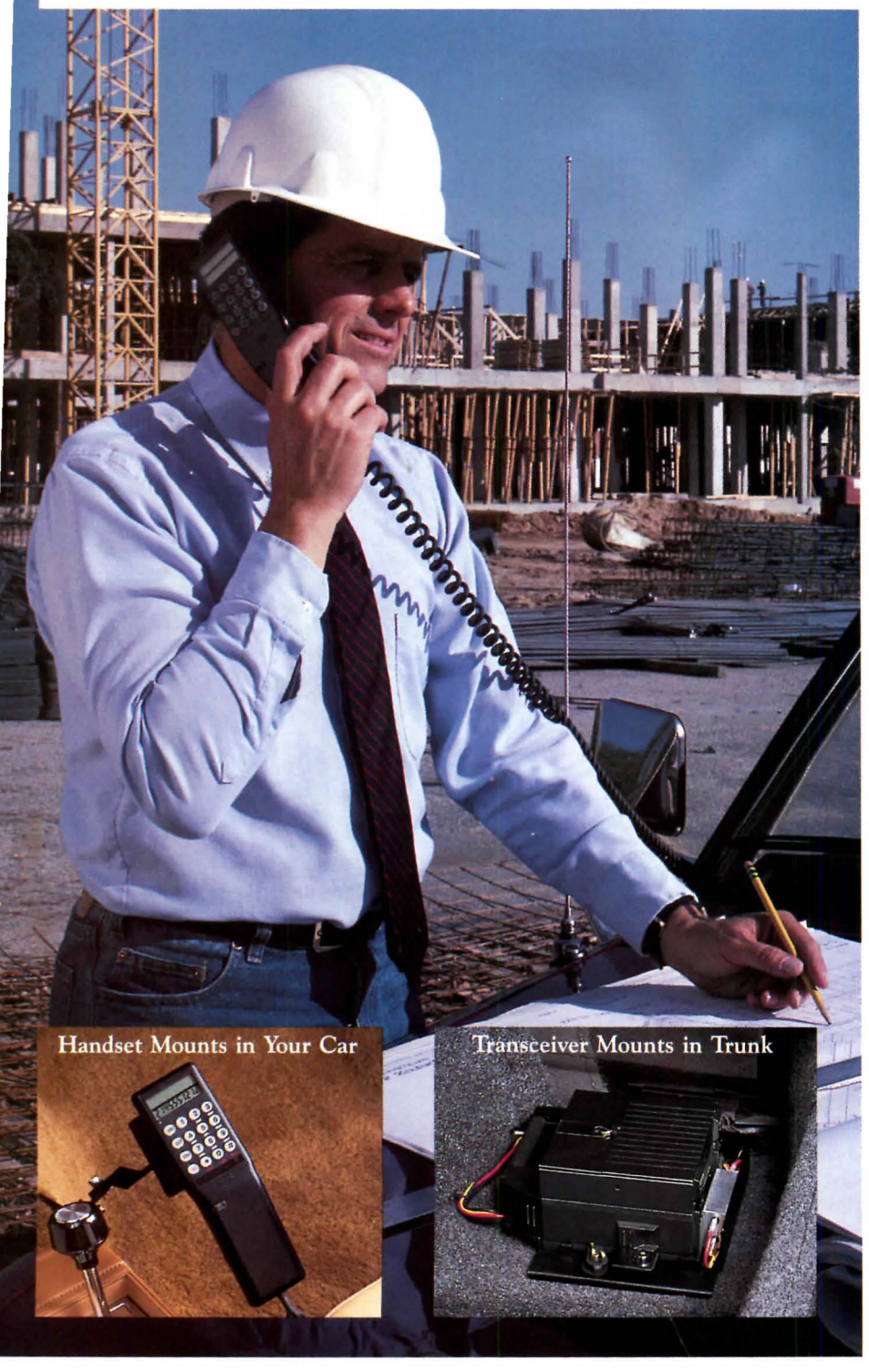

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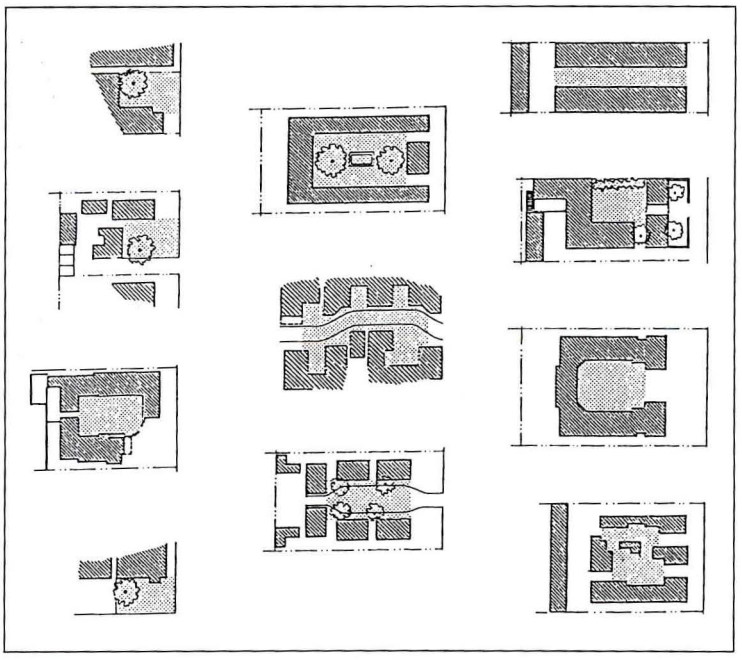
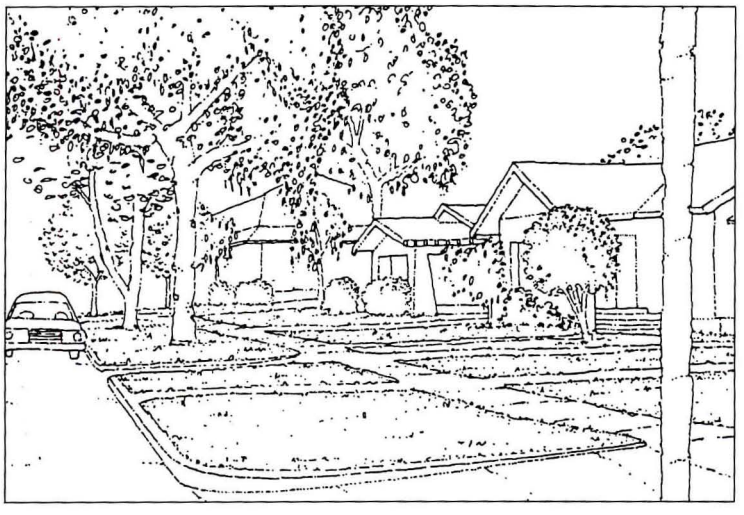
In Pasadena, the garden—enclosed by buildings or by low walls and trellises—is seen as an architectural element that unifies disparate building types. Green spaces of designated proportions (lightly shaded areas, top) are required under a proposed ordinance. The informal yet perceptible street enclosure visible in a row of Pasadena bungalows (bottom) is the model for new guidelines in that city and in San Jose.





subdivision was being heavily criticized. Architects argued that setback requirements wasted land and created mindless rows of identical houses. Thus, the Planned Unit Development was introduced, in which architects were free to push dwellings into little clusters, to consolidate gardens and parking areas, and to place tastefully landscaped walls around the assemblage, severing them utterly from any notion of urban continuity. The lost identification with the city was replaced by the '60s landscape of metaphor, in which places of genuine character were *evoked* (rather than built) by marketing and by architectural shorthand: Mariner's Cove, Tonga Gardens, Briar Heath. With the advent of environmentalism, the making of cities was placed in the hands of "experts": environmental planners, civil engineers, zoning lawyers. Unfortunately, the ways in which the activities of people are laced together and the subtlety with which buildings shape public spaces in real towns was not part of the language of those wielding the multicolored felt-tipped markers.

In spite of all this scientific expertise, increasing control over development continues to be bought by citizens, even in today's antitax, antiregulatory environment. Design review is seen by many communities as the next step. Since this typically deals with the profile of window trim or with shades of driftwood stain, there is nothing to mediate between the scale of land-use jobs and the relative correctness of a wooden roof angle. The whole legacy of urban life has fallen into a giant chasm.

The full and unedited range of human experience encountered by street-smart urbanites, while it includes failure, tragedy, folly, and evil, also opens a liberating range of living, working, and social possibilities. The predictable and edited world of the shopping mall, the office park canteen, and the condo rec room relates to traditional urban life as a kind of sad Club Med—an antidote to civilization.

But if one becomes a scholar of planning ordinances, which, in their turgid language summarize successive generations of academic debate, schism, and polemic, one can see the process—perhaps twisted—by which architectural and planning rhetoric is translated into the built world. It is evident that architects and planners, collectively, are not passive victims of circumstance, but can instead be the *creators* of circumstance.

Architects can bring a planning language to urbanizing suburbs that describes some of the ordinary things about towns that people like, and then use that language to bridge the gulf between the vagaries of land-use planning and the minutiae of design review. In four recent projects in California, our firm has taken planning beyond arid terms like Dwelling Units Per Acre, Floor-Area Ratio, Permitted Use, and Required Open Space, to develop the properties of towns that make them civilized, urbane, and communal.

San Jose adopted a planned-development ordinance in 1965 and more than doubled its population in the ensuing 20 years. In 1985, the City Council concluded that the outcome of this experiment was profoundly flawed and initiated the writing of new residential-design standards. The ordinance written by our firm was passed in November 1986. While *Toward Community: Residential Design Guidelines for the City of San Jose, California* retains the PD as the basic unit of urban structure, it does significantly change site-planning principles and building typologies so that they are more like those of the older gridiron town. In the process, every phrase and comma of the 65-page document was reviewed and debated by San Jose's development community. Builders would not allow guidelines that caused significant loss of density, increased the cost of construction, or affected housing marketability. The ordinance met their concerns, but changed the way PDs work in significant ways: walls around projects are discouraged, except along freeways or primary highways and, where allowed, must be integrated with buildings and must provide transparent breaks for views to common areas and gardens. Street widths are narrowed and setbacks are reduced (though less than we originally proposed) to slow traffic to a small-town pace. Units are encouraged to have a frontal orientation to the street and to enter directly from it. Site plans with continuous perimeter parking drives are not permitted. Pedestrian walkways are required in parking lots to break them into bays and must relate to building entrances and articulations. A new type of entry drive is created which has

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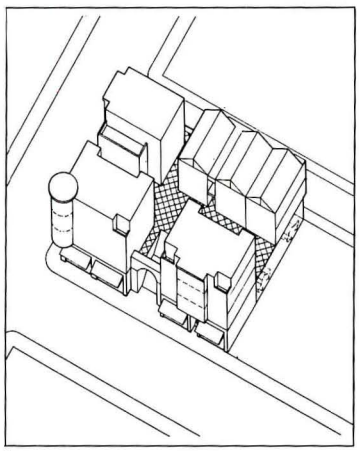
Prototype housing in the Mission Bay Plan adapts traditional elements of San Francisco building to modern requirements. Housing surmounts retail in the Neighborhood Commercial Corner (1) and the Neighborhood Commercial/ Housing Half-block (4); units in the Two-level Podium Mid-rise Block (2) are reached by generously scaled stairs; the Combined 3- and 4-story Block (3) surrounds a small park.



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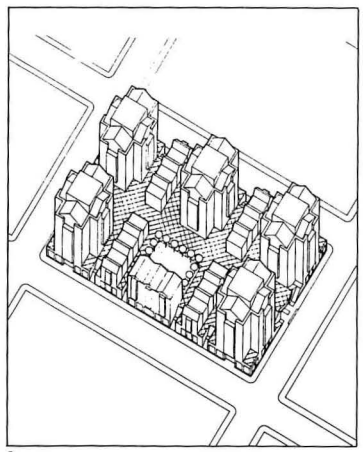

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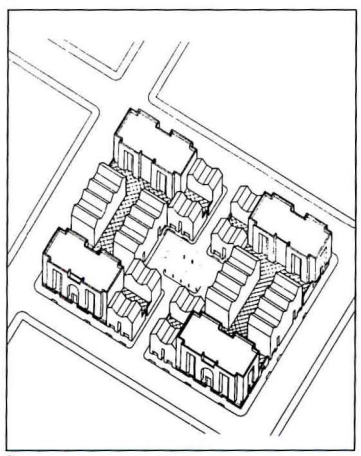

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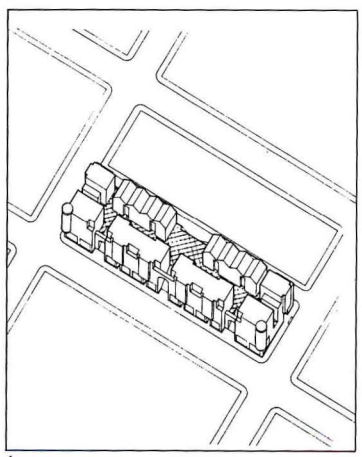

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the characteristics of gridiron streets so that the parking lots are not the main public areas of projects. Standards for building articulations and embellishments are established. Grading standards prohibit terracing hillsides into flat pads. Building typologies are revised so that curb cuts and garages no longer dominate the street.

Pasadena has a beautiful and consistent block-and-lot gridiron structure with many examples of distinguished high-density housing. In recent years this fabric has been damaged by the widespread production of a building type known locally as a "six-pack," which consists of a single or double row of party-wall townhouses turned perpendicular to the street, its blank side facing the public way. Typically the full width of the drive opens off the street and parking is semidepressed, offsetting the structure from a traditional relationship to the neighborhood. The units are entered from a tiny, usually grim, sliver of side yard. Our guidelines, *A City of Gardens: Pasadena Design Ordinance for Multi-Family Housing* (a collaboration with Christopher Alexander and Phoebe Wall), do away with the six-pack pattern, and elevate the residential garden—the most important element of Pasadena's heritage—to a morphological status equal to that of parking layout and unit design. It was necessary for us to design hundreds of case-study site plans to show that changes proposed could be achieved without unacceptable density or cost consequences. Compromises were struck on relatively less important issues such as side-and-back requirements in the rear portion of lots and the proximity of parked cars to units, but the document shows that historic court and garden typologies can be reconstituted with modern densities and parking ratios.

Obsolete railroad land will be transformed into a 200-acre mixed-use development in a new plan for Mission Bay in San Francisco, the product of a large multidisciplinary team—led by the firms EDAW and ELS—that is working for the City of San Francisco and with the Santa Fe Pacific railroad's own consultants. The Solomon office participated in creation of the overall plan, but specifically developed block patterns, building typologies, and design guidelines for approximately 7,700 units of new housing on 90 acres. The Housing Design Plan will prevent an onslaught of suburban PD-type development, and guide construction of new residential fabric based upon an adaptation of San Francisco's originally platted grid of 25-foot lots, yet include the high parking ratios, unit security requirements, and construction efficiency demanded by large housing developers. Entrances and architectural articulations are required to punctuate the 25-foot grid, and a three-foot band between the building line and the public sidewalk—called an encroachment zone—permits, or even requires, a variety of architectural or landscape features. High densities are accomplished through a rethinking of the same device that gives 19th-century San Francisco much of its flavor: the small midblock alley. In the plan it allows the perimeter of blocks to increase and ensures that streetscapes will not be faced by blank walls of garage doors.

Work, commerce, and dwelling in suburbia are typically separate and linked only by automobile. Zoning, financing, and development conventions have evolved to perpetuate that separation. It is the architect Peter Calthorpe, a teaching colleague, whose eloquence about the plight of suburbia has inspired more comprehensive thinking than could be promulgated in the tightly constrained planning projects discussed above; he has forged a collaboration of faculty and students at three universities. Graduate students at the University of California in Berkeley have been assigned a scheme, called Pedestrian Pocket, that combines suburban office buildings, a convenience shopping center, and a residential development as they were in a traditional town on a site of about 90 acres. The automobile is accommodated as easily—and in the same numbers—as conventional suburban prototypes, but the design is intended to liberate people from total dependence upon it for all of their activities. The pedestrian-pocket type would be erected by typical suburban developers and financed by the usual suburban lenders. It would be built along a light-rail system, and as the system is extended, parking adjacent to office buildings would be reduced. The Pedestrian Pocket would grow to a finite size, limited to the one-quarter-mile radius that can reasonably be walked from the transit stop. Its edges would be fixed in perpetuity by a combination of agricultural zoning and the transfer of development rights.

The ideas embodied in these projects represent a collective view held by enough people (realized in a different form in Seaside, Florida, for example) that changes are likely to be brought about. It is the hope of these planners that projects with a new, simple, and subtle language can emerge that adapt the heritage of the American town to the colossal growth of suburbia.

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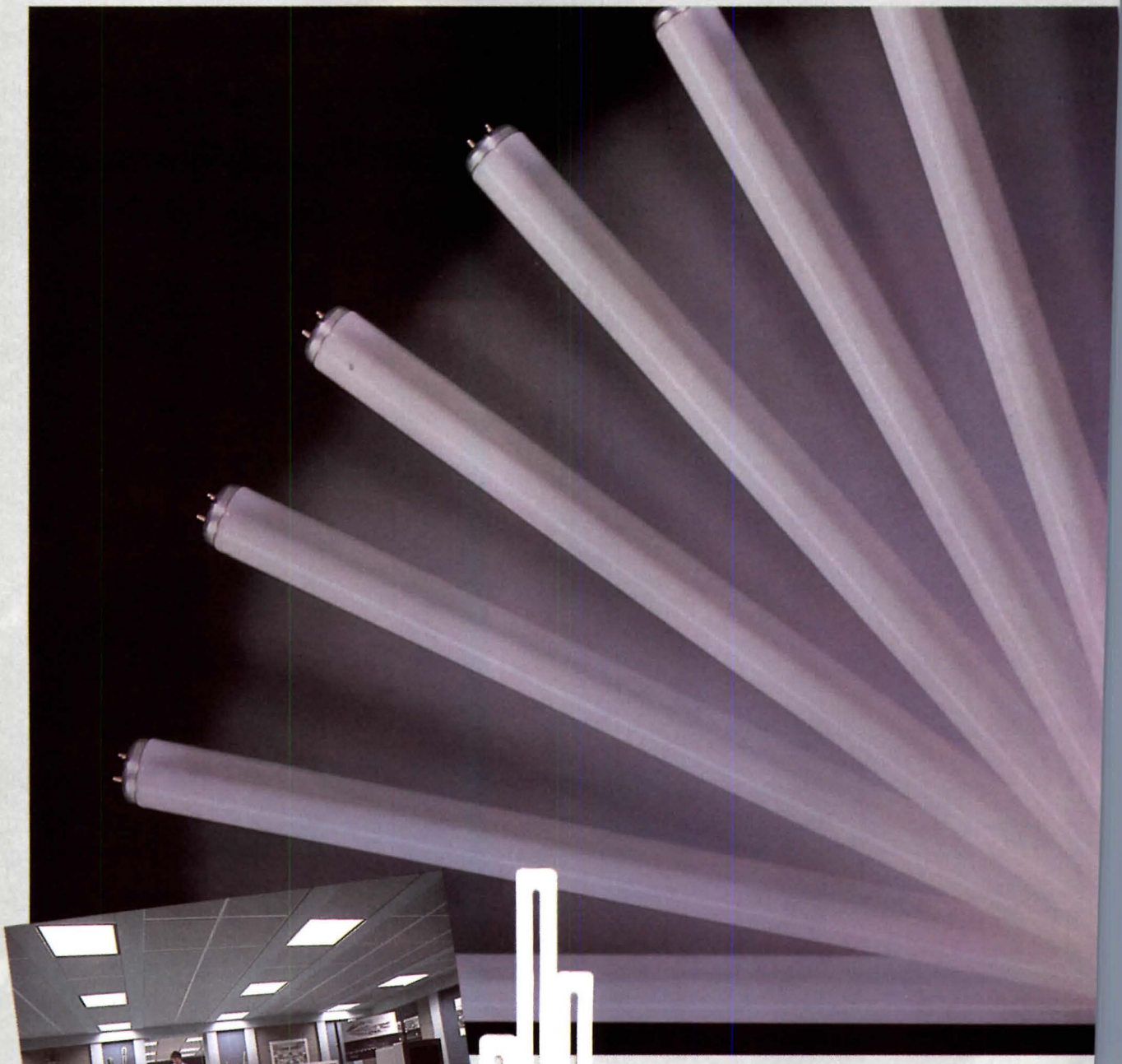

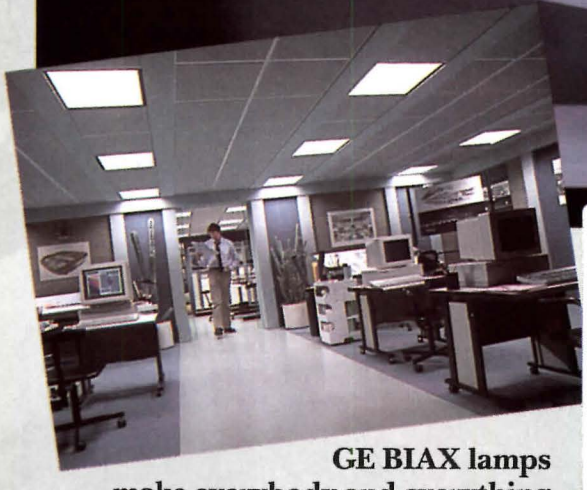

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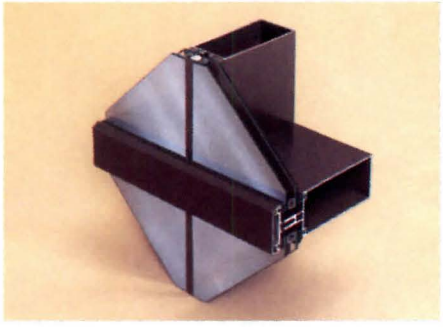

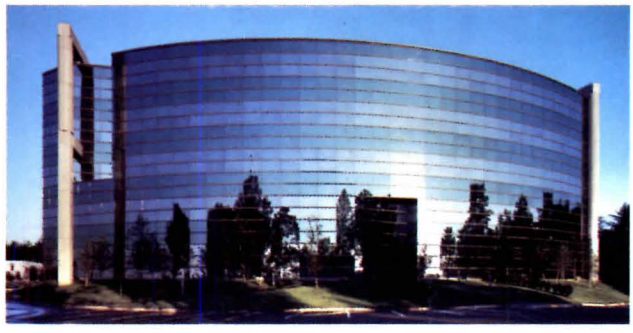

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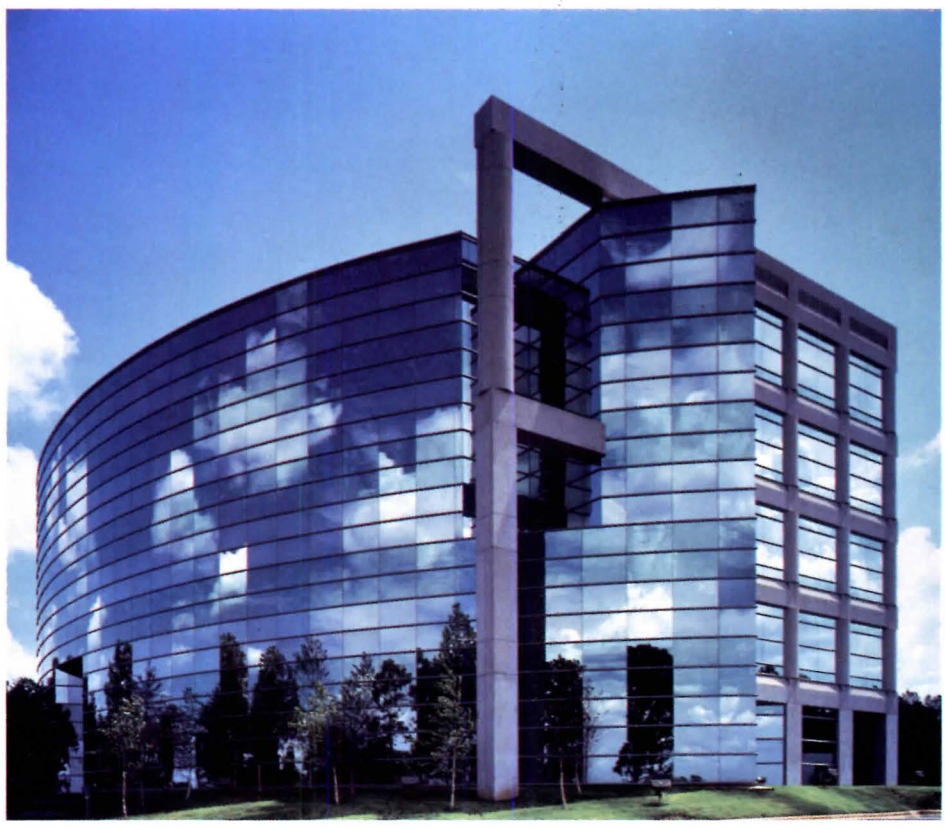

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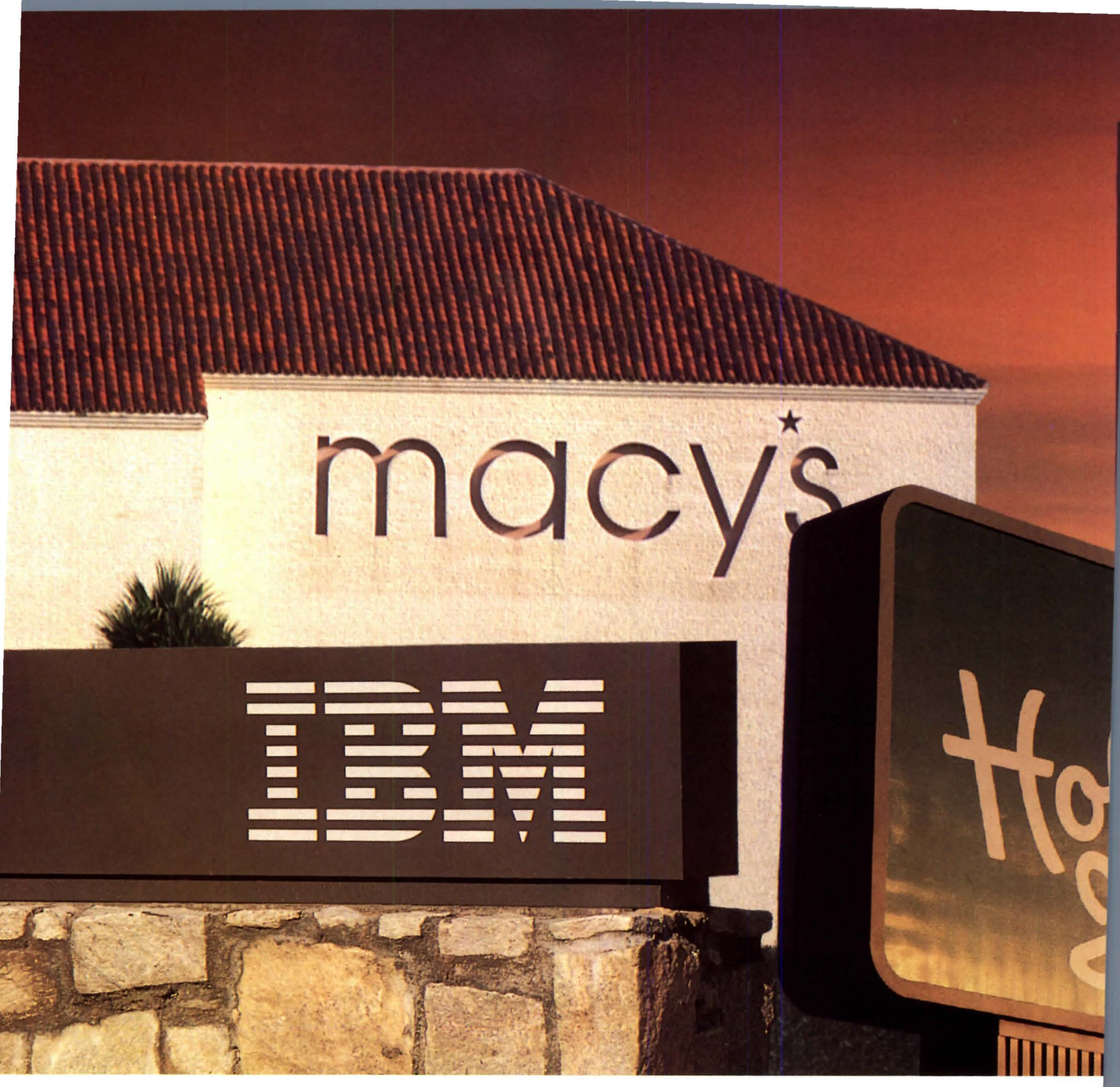

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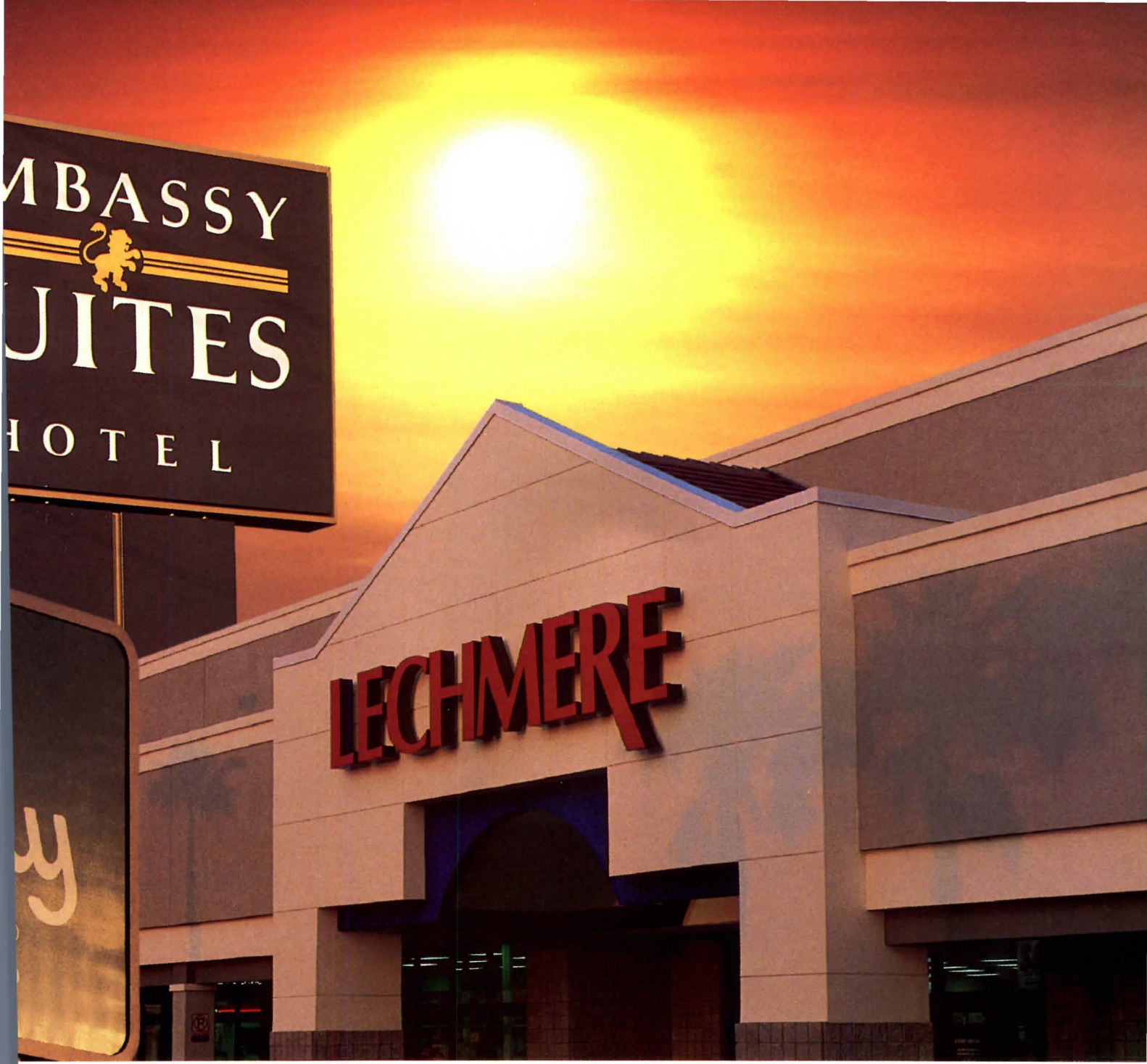

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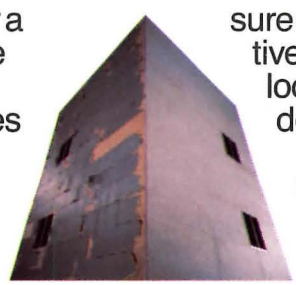

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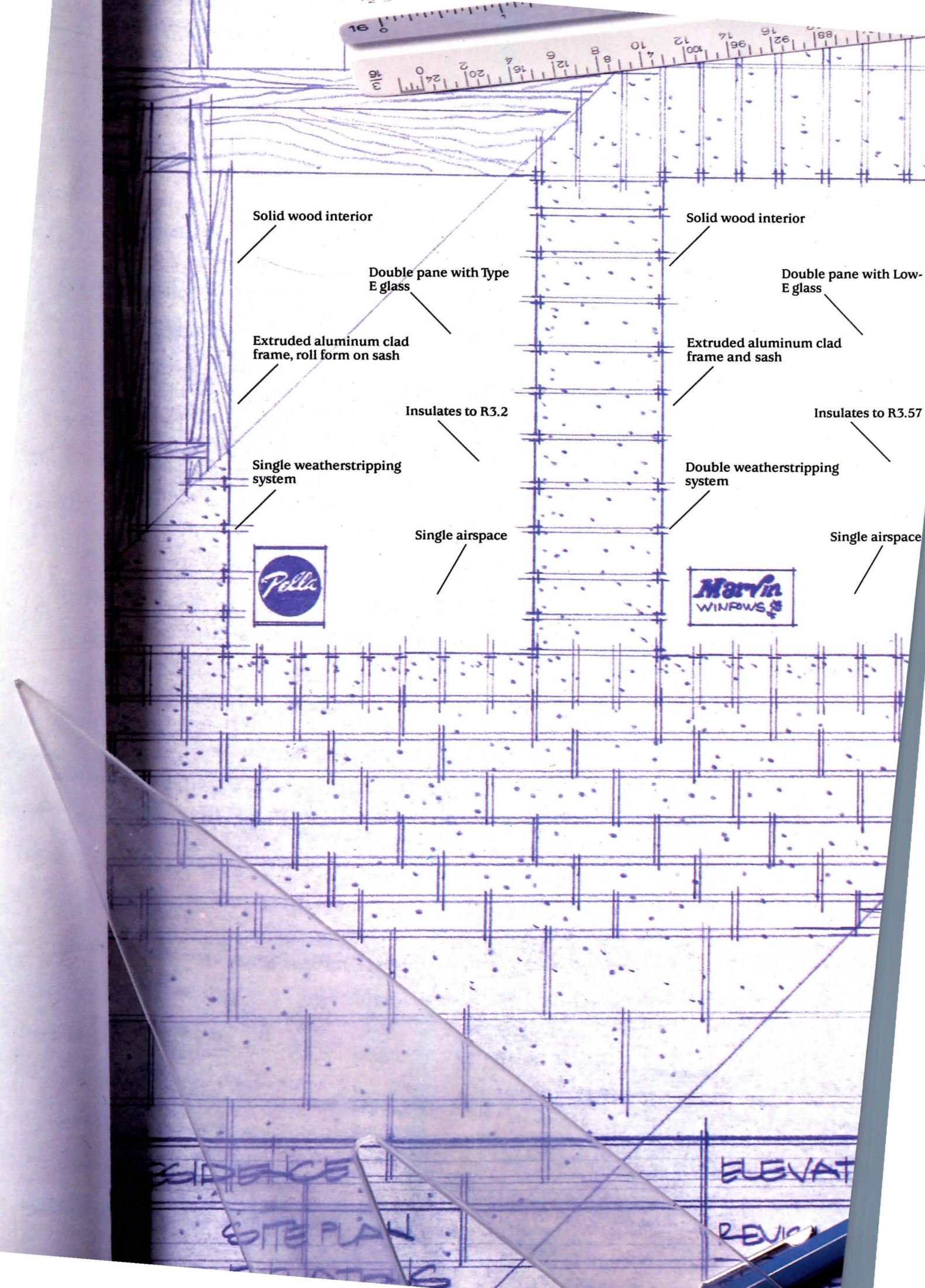
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In the Public Interest

Jean M. Smith

Washington Elms Housing, Cambridge, Massachusetts

The editors of RECORD *announce the results of* IN THE PUBLIC INTEREST, *an annual awards program aimed at recognizing excellence in the design of architecture that serves a public outside the usual circle of commercial and institutional clients. Each year we intend to select a different building type and solicit entries in that category from architects, private developers, government agencies, public/private development consortiums, and community design centers for projects completed over the past three years. The building type for 1988 is housing, and we are pleased to present on pages 86-123 the 11 premiated projects, selected by an editorial jury comprising Mildred Schmertz, Carolyn De Witt Koenig, Douglas Brenner, Deborah Dietsch, Margaret Gaskie, and Paul Sachner.*

Heroes in our own backyard

A pictorial sample of runners-up in the awards program, opposite and on page 84, exemplifies the caliber and variety of entries received.

For the editors involved in planning RECORD's first-year awards program honoring the architects and clients of specialized housing, the issue of affordable, appropriate shelter is a part of everyday life. Over the past two decades, those of us living in New York have observed seemingly stable middle-class neighborhoods in many parts of the city disappear, as the opposing forces of gentrification and building abandonment have conspired to create an incongruous metropolitan juxtaposition of dazzling wealth and utter devastation. We have watched well-intentioned but hopelessly grim public housing projects built during the years following World War II deteriorate into drug-infected urban landscapes far meaner than the tenement-lined streets they replaced. We've been puzzled by a convoluted system of municipal controls and market forces that entitle a landlord to an unrealistically low rent for one apartment while permitting him to charge exorbitant rates on a similar "decontrolled" unit down the hall. In the suburbs we have seen once-affordable "starter" homes soar beyond the means of even prosperous two-income families, and found examples of elderly people driven from familiar neighborhoods by the unavailability of inexpensive housing. And throughout the country we've been unhappy witnesses to the problem of homelessness, a growing crisis that a group of scientists meeting this past September in Washington, D. C., called "an outrage, a national scandal . . . an inexcusable disgrace [that] must be eliminated."

A few telling statistics underscore the state of housing in the United States today:

- Each year some 2.5 million Americans are displaced by redevelopment, rent hikes, housing abandonment, and condominium conversion.
- Various sources estimate that on any given day, there are between 250,000 and 400,000 homeless people in the country. The National Coalition for the Homeless, an advocacy group, claims an annual figure approaching three million.
- In California, where the median price of a single-family house has risen to $167,000, only 25 percent of the population can afford to purchase a home. As a result businesses in the Golden State are having difficulty recruiting entry-level workers.
- During the Reagan administration, federal spending on housing declined from $30 billion in 1981 to $7 billion last year. In 1987 only 23,000 units of new government-sponsored housing were built, compared with around 100,000 annually during the late 1970s. The cornerstone of Washington's current policy is a voucher program of rent subsidy—"The issue of housing in the U. S. is affordability, not availability," claims HUD's assistant secretary for public housing, James Baugh—and yet, according to a *Business Week* study, insufficient federal funding means that only four million out of 10 million eligible households receive voucher assistance.

Amid these dreary figures, however, there have also been clear indications that local government, private nonprofit organizations, and public/private development consortiums are attempting to fill the gap created by Washington's gradual withdrawal from bricks-and-mortar funding of the subsidized housing business. New York City, to name a highly visible example, has embarked on the most ambitious municipal housing program in the country, a $4.2-billion, 10-year megaplan that will raise the annual output of new or renovated units from a current level of 4,000 units to over 15,000 units per annum. Many new projects undertaken by various municipalities involve creative financing—low-interest government-supported loans, for instance, or profits from market-rate units helping to underwrite lower-income dwellings—and a surprising number work under the assumption that new housing is most socially responsible when it includes a mix of people from several income brackets. Although the notion of scatter-site subsidized housing has met with resistance in some communities—the protracted battle in Yonkers, New York, is the most notorious, but by no means only, example—other localities have been more successful integrating low-income residents into upper-bracket neighborhoods. In wealthy Montgomery County, Maryland, for example, one of the largest scatter-site housing programs in the country requires builders to set aside 12 percent of units in residential developments for families with low and moderate incomes, at rents or mortgages they can afford. San Francisco and Richmond, Virginia, have similar programs. In Newark, New Jersey, a local community group called La Casa de Don Pedro has built Prospect Gardens, a seven-unit condominium whose low per-unit prices of $37,500 to $53,400 were made possible by the use of Mount Laurel regional contribution agreement funds, which are allocated by prosperous suburban towns for low-income housing not necessarily sited in the better-off communities.

In a surprising number of instances, architects have become direct partners with government agencies and nonprofit groups to encourage the construction of low- and moderate-income housing. The Indianapolis chapter of the AIA, for example, recently cosponsored an affordable-housing design competition with the city's Housing Strategy Task Force. The city will use the results to produce infill housing on 22 vacant midtown blocks. More significantly, perhaps, the national AIA in September celebrated the completion of a pilot project—the renovation of the McAdoo Hotel in Shreveport into housing for 45 homeless people—in its Search for Shelter program, a national homeless-housing initiative that seeks to coordinate efforts in over 30 cities among local architects, bankers, developers, builders, and housing agencies.

Projects like these gave us cause to suspect that 1960s-style social consciousness among architects was not dead—or even dormant—but instead was laboring quietly in the fashion-conscious, intensely privatized milieu of the 1980s. The time seemed right to publicize the efforts of those humane and enlightened people, both architects and clients, involved in the construction of nonprofit, limited-profit, or otherwise special-focus housing; the best way to accomplish this aim, we felt, was not to solicit unbuilt proposals—those brainstorms often amount to little more than intellectual heat lightning—but to single out completed buildings of proven substance in a broad variety of residential types, ranging from new and renovated low-income public housing subsidized mixed-income complexes, and housing for the elderly, t shelters for the homeless, housing for the physically and mentally disabled, and residential alcohol- and drug-treatment centers.

Despite having enthusiastically endorsed the *concept* of a design-awards program that would focus its first installment on housing, some of our editorial jurors were a bit apprehensive. We really weren't sure what existed "out there," and even though plenty of architects telephoned to inquire about the new program the May 1 entry deadline approached without a flood of submissi folders pouring into our offices. (We forgot, of course, that architects procrastinate as much as anyone else, and what began as a trickle of submissions during March and April ended up as a torrent of Federal Express packages on May 2.) But more than t

Runners-up:
1. Housing for the elderly: St. Luke's Village, Gladstone-Peapack, N. J.; Michael Burns, Architect
2. Emergency shelter for the homeless: Federal City Shelter, Washington, D. C.; Conrad Levenson, Architect
3. Housing for the elderly: Villa Vasona, Los Gatos, Calif.; Fisher-Friedman Associates, Architects
4. Single-room occupancy residence: Moravian House, New York City; Pratt Institute Center for Community and Environmental Development and Peter Woll Architects
5. Low-income public housing: Commonwealth Development, Brighton, Mass.; Tise Architects
6. Subsidized artists' housing: Claflin School, Newton, Mass.; Moore Heder, Architects
7. Mixed-income housing: Pickleweed Apartments, Mill Valley, Calif.; Hooper Olmsted & Hrovat, Architects
8. Housing for the elderly: Evanston Elderly Housing, Cincinnati, Ohio; Glaser Associates, Architects
9. Shelter for the mentally ill homeless: The El Rey, Seattle, Wash.; ARC Architects

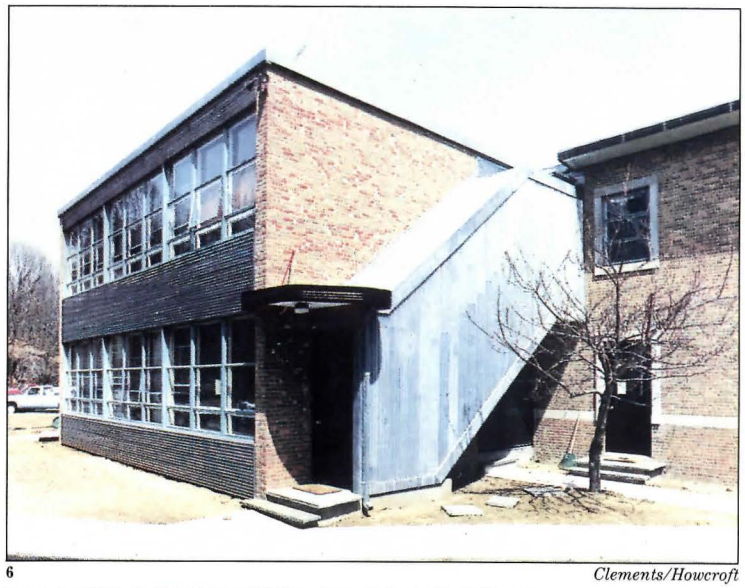
1 *Vince Babak*

2 *Roger Torda*

Photo/Stephenson

Brian Rose

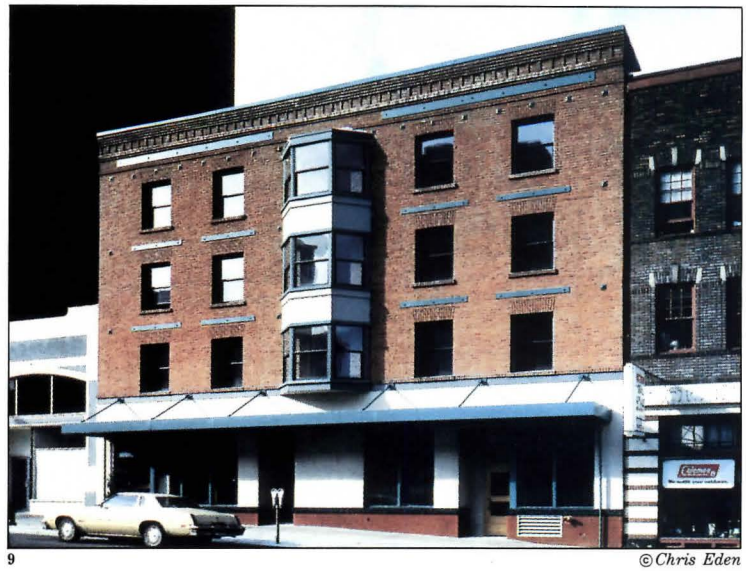
5 *©Nick Wheeler*



6 *Clements/Howcroft*

7 *Gerald Ratto*

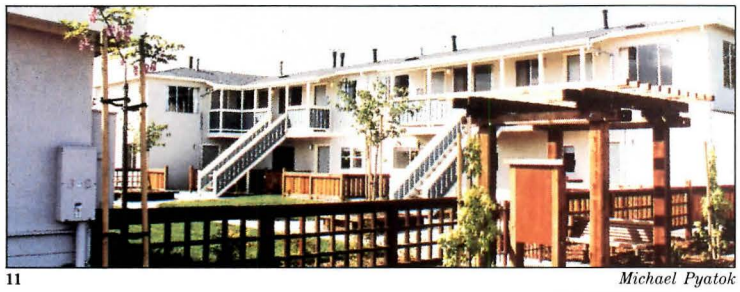
8 *Ron Forth*



9 *©Chris Eden*

10. Low-income public housing: Pence Place, Columbus, Ind.; Gwathmey Siegel & Associates, Architects
11. Low-income public/private housing: Gateway Commons, Menlo Park, Calif.; Y. H. Lee, Michael Pyatok, and William Olin, Architects
12. Housing for the physically disabled: Arrowhead Vista, San Bernardino, Calif.; Ruhnau McGavin Ruhnau/ Associates, Architects
13. Mixed-income housing: Underhill Gardens, Brooklyn, N. Y.; Geoffrey Freeman Associates, Architects
14. Children's shelter: New England Home for Little Wanderers-Macomber Children's Residence, Boston, Mass.; Sunset Street Associates, Architects
15. Housing for the elderly: Castillo Homes, Santa Barbara, Calif.; L. Dennis Thompson, Architect
16. Union-sponsored housing: Andrew Square Rowhouses, Boston, Mass.; William Rawn Associates, Architects
17. Housing for the homeless: H. E. L. P. I, Brooklyn, N. Y.; Alexander Cooper + Partners, Architects

10 ©Sadin-Schnair



11 Michael Pyatok

12 Wayne Thom

13 Mel Adelglass

14 ©D. K. Smith

15 ©Paul Sha

16 ©Steve Rosent

17 John P

number of submissions (103 entries eventually arrived from all parts of the country), we wondered about architectural quality. In the past RECORD has written about projects grand and humble, and the magazine has consistently adhered to the notion that a tight budget by no means precludes good design. All the same, we were keenly aware of the bland and at times downright oppressive design of postwar housing projects in our own backyard. We also knew, of course, that architecture and city planning have changed dramatically since these towers-in-a-park were erected during the 1950s and '60s; the question was, have architects practicing today been able to respond creatively to those changes within the restrictions imposed by inevitably limited fiscal resources?

In the end, there was little cause for worry. As the group of non-premiated entries shown on pages 83 and 84 illustrates, while there may be less new subsidized housing being erected today than 30 years ago, what *is* being built seems much more responsive to context and program. (The word that kept cropping up during the jury's deliberations was *appropriate.*) Especially in the area of low-income public housing, it is gratifying to report that architecture of the street is back, and that the emphasis has shifted from big blockbusting projects to smaller-scaled, almost self-effacing, work that fits comfortably into its surroundings (see photos 5, 10, and 11 for three examples). Affordable housing for the elderly has undergone a similar transformation: the generic hotel-like towers of the 1960s and '70s are now joined by pleasingly domestic low-rise complexes—frequently organized around communal open space—whose architecture more often than not reflects the distinctive character of a region's residential vernacular (photos 1, 3, and 15). The same might be said of the diverse new breed of mixed- or subsidized middle-income housing, which can take the form of a California garden-apartment complex (7), renovated New York City tenements (13), or a block of tawny-brick Boston row houses (16).

Sensitivity to context, scale, and human needs characterized many of the submissions, but nowhere were these tendencies more evident, or more welcome, than in the group of entries that might be called "specialized housing"—shelters for the homeless, single-room-occupancy hotels, residential drug- and alcohol-treatment centers, and housing for the physically and mentally disabled. Here, architects seemed intent on integrating *institutional* requirements like counseling services, medical facilities, employment offices, and continuing-education programs into a *residential* environment acceptable not only to inhabitants but also to members of the surrounding community. Some of these projects—a new 202-unit shelter for homeless families in Brooklyn (7), for example, or a similar facility for single homeless men and women carved out of a former office building in Washington, D. C. —are heartening prototypical efforts by a society struggling to shelter people who, each night, simply have nowhere to go. Others accommodate people with more specific needs—abused or neglected children in Massachusetts (14), physically handicapped adults in California (12), and mentally ill homeless men and women in Seattle (9), to name three examples.

Singling out individual buildings in such a well-intentioned body of work proved challenging; it was also enormously gratifying. In addition to supplying the required architectural plans and photographs, many of the submission folders arrived brimming with clippings from local newspapers and testimonial letters written by everyone from proud U. S. congressmen to grateful tenants. Reflecting on his 21-month stay at Creative Living, a housing complex for severely handicapped adults in Columbus, Ohio (pages 110-113), R. Dennis Smurr wrote that the facility was "a special caring environment designed to help someone like myself learn how to live more independently than I ever thought possible. And, thank God, it continues to serve the needs of others who have had their lives drastically altered by catastrophic physical injury or illness." Another letter, from Richard Cherry, executive vice president of the New York Urban Coalition, describes Underhill Gardens (photo 13 opposite), a mixed-income project created by the gut rehab of five Brooklyn tenements. "With 40 apartments now fully rehabilitated and occupied," Cherry writes, "our vision is fulfilled. The drug dealers, broken glass, and abandoned cars are gone. [The architect's] design reinforced our social goals . . . and an efficient use of space helped bring the project in at budget, [which is] critical to keeping rents and maintenance charges affordable." In a thank-you note to architect Cecil Baker following the dedication of Diamond Park, a low-income housing development for the handicapped in Philadelphia (pages 116-119), Christine Washington of the Advocate Community Development Corporation calls the architect's work "a gem," adding that "neighbors and merchants are thankful and proud."

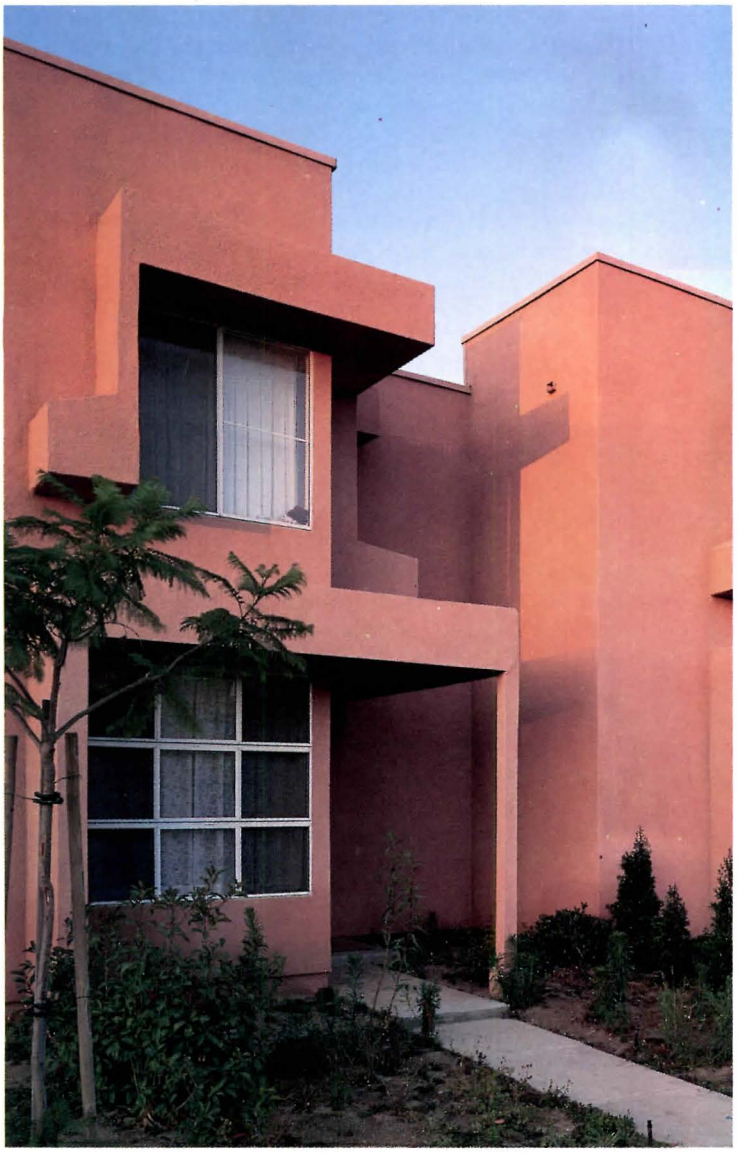
They should be. Diamond Park, like the 10 other projects featured on the following pages, exemplifies the broad range of social goals and design skills we had hoped to uncover when we initiated IN THE PUBLIC INTEREST. The group is deliberately a mixed bag, ranging in geography, typology, and architectural mode from Cabrillo Village, an adobe-style housing development for farmworkers near Ventura, California (cover and pages 86-89), to the recent renovation of Washington Elms, a 1940s-vintage public housing project in Cambridge, Massachusetts (pages 100-103). In the area of housing for the homeless, we premiated an ambitious 450-person shelter in downtown San Diego (pages 94-97) and a group of wooden huts erected in Atlanta on an ad-hoc basis by a group of architects called the Mad Housers (pages 98-99). Two complexes for the elderly—Lincoln Towers, in Secaucus, New Jersey (pages 114-115), and Robert Shaw Village, in Austin, Texas (pages 120-123)—are physically quite different, but in each case, the architect successfully dealt with the dilemma of privacy versus community that all designers of this particular housing type face. In the area of mixed-income housing, Tent City, in Boston, is a new national model for cities attempting to deal with the double-edged issue of gentrification (pages 90-93). And finally, the hard work of Asian Neighborhood Design in San Francisco earned this community design center two awards—one for Coming Home Hospice (pages 104-107), the first building of its type in the nation designed primarily for people with AIDS, and a second for the Women's Alcoholism Center (pages 108-109), a residential treatment facility that addresses the impact of addiction on both mother and child.

Above all else, perhaps, the architects of these buildings share an ability to close the gap between common sense and ingenuity, to keep their eyes on the exigencies of a client's fiscal bottom line without losing sight of their own idealistic vision. These architects inhabit the realm of the possible, yet their accomplishment, in terms of solving problems and encouraging human values, verges on the heroic. If that sounds improbable in today's society, we invite you to turn the page and judge for yourself.

Paul M. Sachner

Low-income housing:
Cabrillo Village
Saticoy, California
John V. Mutlow Architects

Migrants no more

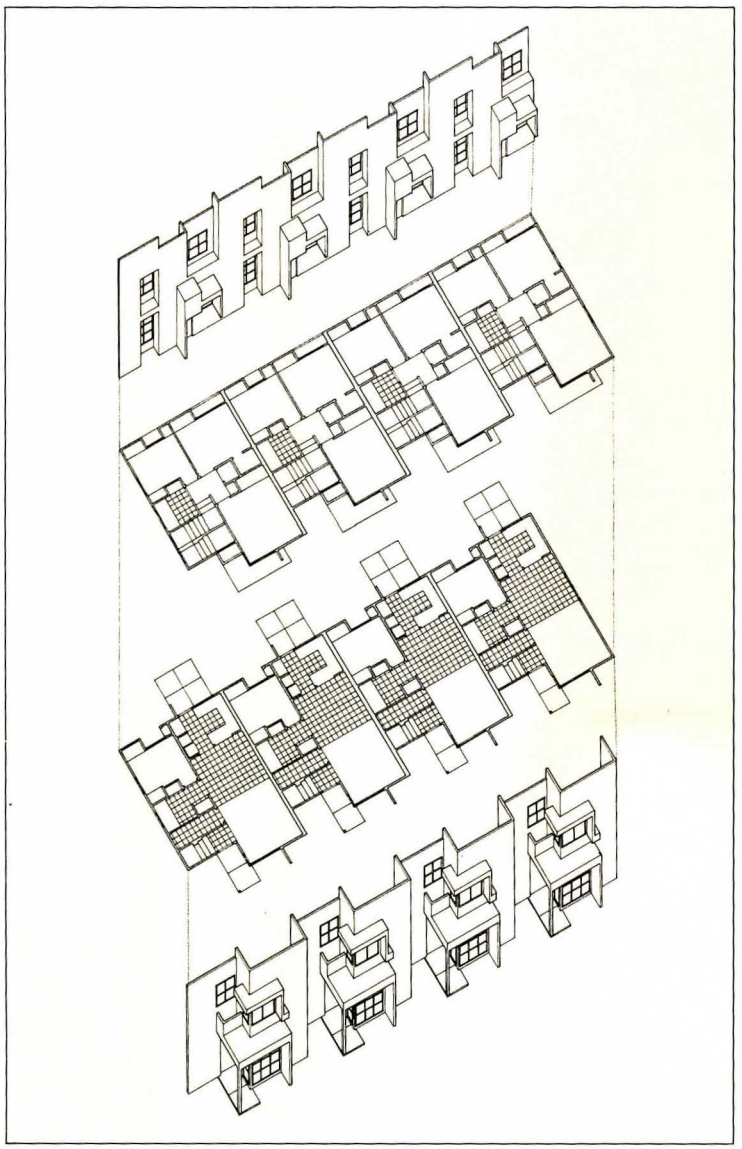


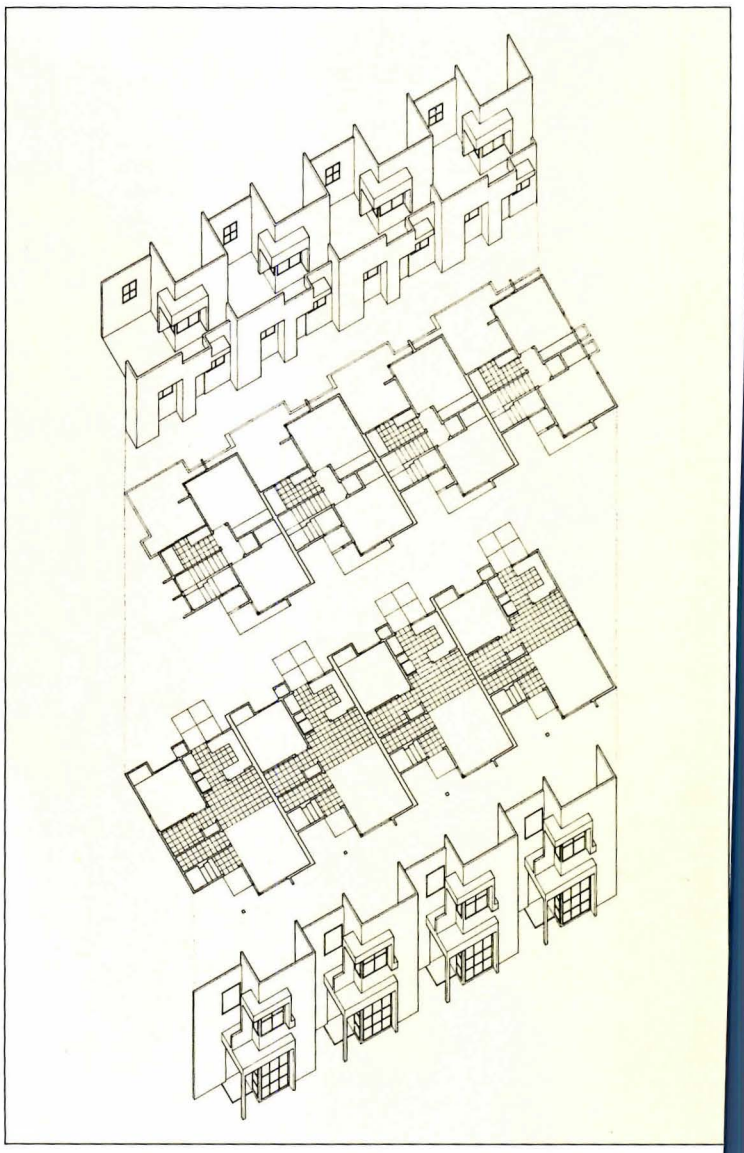
Sunshades and overhangs articulate the boxlike massing of Cabrillo Village's most recently completed housing (above and opposite). The stepped configuration of the row houses terminates at the southeastern edge in an angled block of four-bedroom units that connects the central green to a soccer field (opposite and site plan).

Cabrillo Village represents a significant victory in the continuing struggle of native Mexican farm workers to establish a permanent place in southern California. The original settlement, built in 1937 as a camp for migrant laborers, consisted of 100 cabins located on an 18-acre floodplain of the Santa Clara River near Ventura. In 1975, after being notified by the state that the 480-square-foot houses violated health and safety regulations, the lemon growers decided to demolish, rather than upgrade, the uninsulated barracks. However, their attempts to evict the farm workers, including offers of $500 to cover each family's relocation costs, met with organized resistance. A year earlier, the workers had waged a successful strike with the assistance of the United Farm Workers Union, whose leader, Cesar Chavez, urged them to buy their own property. And by May 1976, after the growers began bulldozing the vacated houses (some tenants had decided to take the $500 and move), the newly formed Cabrillo Cooperative Housing Corporation had raised enough funds to purchase the remaining 82 units. The farm workers then set about establishing their self-sufficiency by building a church, school, grocery store, butcher shop, ceramic tile factory, and administrative offices (site plan, top right). In 1977, the cooperative commissioned the Los Angeles-based team of Barrio Planners and John Mutlow to renovate the existing board-and-batten cabins and create 35 new single-family units on the southwestern portion of the site (plan, bottom right). Mutlow, whose experience in designing low-cost housing includes nine projects for the Pico Union Neighborhood Council, an advocacy group for a Hispanic district of downtown Los Angeles, drew upon indigenous prototypes by clustering L-shaped structures around courtyards and incorporating references to vernacular Southwestern architecture.

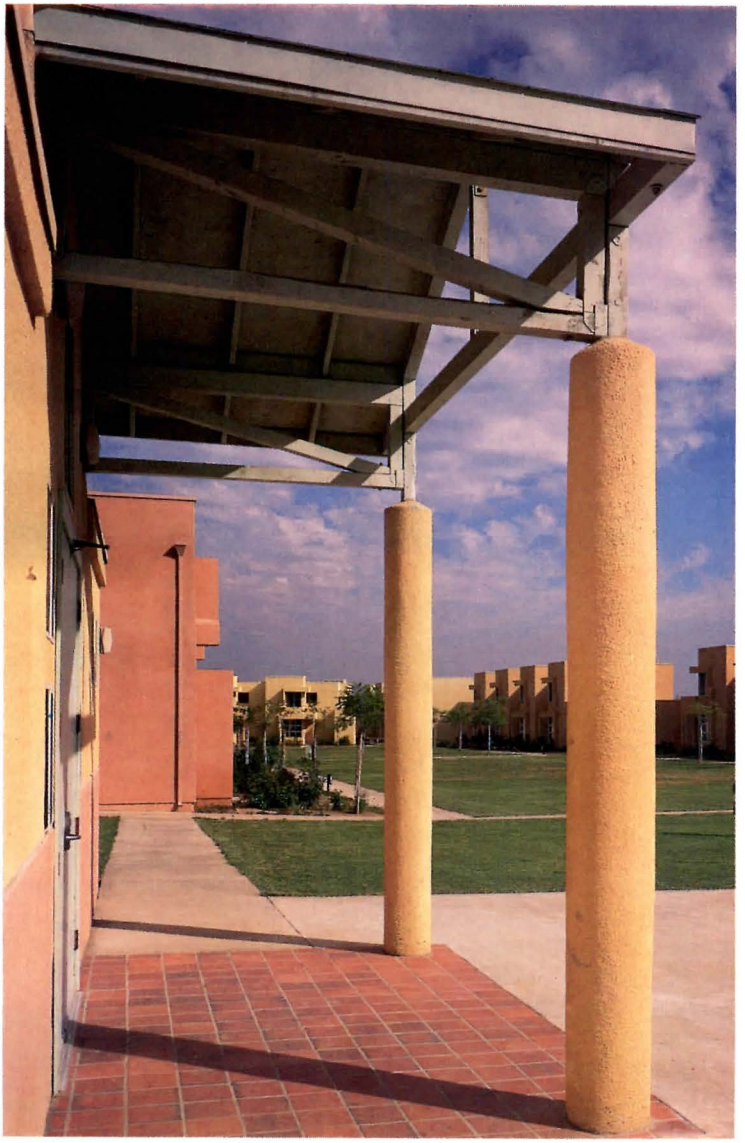
His latest design for Cabrillo Village, a complex of 39 residential units that has been occupied since 1986, reflects this sensitivity to regional traditions overlaid with further refinements. "We wanted to extend the first phase of housing," Mutlow explains, "but the Farmers Home Administration thought it looked too expensive, like middle-income housing, even though it was built well within the budget." Instead of repeating the form of the earlier quadriplexes, he reinterpreted their balance of public and private spaces by grouping two-, three-, and four-bedroom row houses around a common green and flanking them with private front and back gardens. The enclave steps back to create a forced perspective—reinforced by subtle color variations to distinguish each unit type—that fans out toward the mountains to the northwest. (The housing was to have extended in this direction, but the adjacent parcel will be converted into a baseball diamond.) At the northern edge, the architect connected the new complex to the rest of the village by providing a community center for meetings and family celebrations. Despite numerous design restrictions imposed by the FmHA, Mutlow managed to vary the two-story stuccoed terraces with flat roofs, overhangs, and sunshades—elements that evoke Dutch social housing of the 1920s as much as the more regionally relevant precedent of adobe construction. Now engaged in a similar project for the farm worke of nearby Rancho Sespe, the architect remains adamant that low-cost housing need not be synonomous with low-style design. Given what Mutlow has accomplished for $33 per square foot at Cabrillo Village, even the most budget-conscious bureaucrat would have to agree. *Deborah K. Dietsch*

In 1975, the farm workers of Cabrillo Village banded together to form their own housing cooperative. The group's latest development is an enclave of row houses designed by a Los Angeles architect who surmounted the limitations of low-cost housing with respect for local heritage.





In response to a design preference survey conducted by the architect, the row houses of Cabrillo Village are arranged simply on two levels. The ground floors of the three- and four-bedroom units are almost identical (axonometric drawings), with a living/dining area, kitchen, and a bedroom at the rear. The upper floors are designed so that a roof deck is transformed into another bedroom for the largest unit type. The two-bedroom units (not shown) are narrower, with a second floor similar to the three-bedroom model. Several one-story units are also provided for the handicapped. Although the front elevations of all the units are uniformly designed with changes in paint color the only indicator of different plan types, the rear elevations shift to reflect organizational variety. In contrast to the flat-roofed housing, the community center at the northern corner of the site (opposite) is crowned by a truss-supported gabled roof and portico. This building's 3,200-square-foot central space (opposite, bottom left) is used by the cooperative for meetings and rented out to residents for private celebrations.



Cabrillo Village
Saticoy, California
Owner:
Cabrillo Cooperative Housing Corporation
Development management:
Cabrillo Economic Development Corporation
Architect:
John V. Mutlow Architects—John V. Mutlow, project designer; John V. Mutlow, John Teel, project team
Engineers:
Ronald L. Rogahn (structural); Roy Dehbibi (mechanical); Zachary Vorgias (electrical); Robert Forrey (landscape)
General contractor:
McGall Contractors

From tents to town houses

On a central Boston site where housing activists once pitched tents, a new neighborhood houses tenants of assorted ages, races, and conditions.

Although the residents of the original Tent City had to fold their tents 20 years ago, they did not silently steal away. They organized themselves as the nonprofit Tent City Corporation and persisted in their quest for affordable housing until they got the 269-unit complex seen here.

In 1968, we were just beginning to hear some terms that quickly became fighting words—words like *urban renewal, gentrification,* and *displacement.* Boston's South End is a rich and complex neighborhood that embraces a multi-ethnic, multi-racial, multi-income population. Architecturally, a standard building type characterizes the neighborhood: four- or five-story Victorian brick buildings with bay windows, some of them private houses, most of them containing flats. But about 20 years ago the city perceived some of them as decrepit and past salvation, and it started to condemn and demolish them as the first step in urban renewal. At the same time, the affluent middle class elsewhere in the city perceived the buildings as spacious, charming, and much nicer than most modern urban housing, and they began to gentrify. Both activities displaced earlier residents, who got sore.

In a parking lot on this very site, a community of about 100 protesters set up temporary shelters, and though the settlement only existed over one weekend in April 1968, it earned the nickname "tent city" from the local newspapers. Tent City supporters made sure that the name became a permanent honor, not an ephemeral put-down.

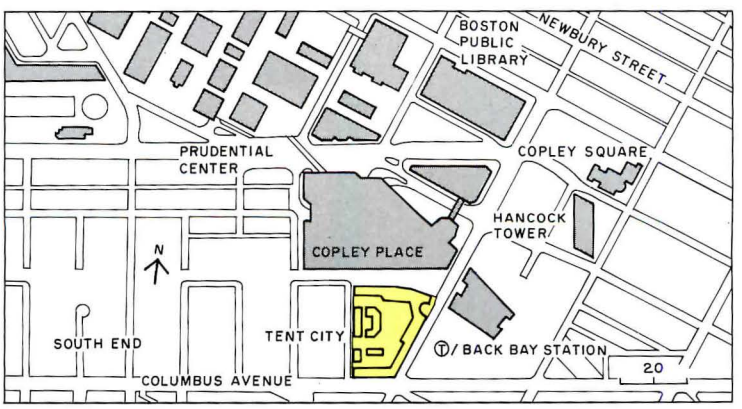
However determined that affordable housing in the South End must be more than a dream, the Tent City activists were otherwise ordinary men and women who had never had to deal with even the rudiments of real-estate development. They therefore retained the services of Greater Boston Community Development, Inc. This firm started life some 25 years ago as a nonprofit developer of housing in the South End, but rather soon it saw that it had accumulated a useful body of financial, legal, tax, and political information. Now serving as a consultant to nonprofit housing developers, it helped the Tent City people assemble the necessary land and locate sources of money. The latter included various governmental funds—city, state, and federal—that were established for just this purpose but whose existence is known only vaguely, if at all, to most of us; the consultant not only knew of the funds but knew how to take advantage of them and understood the art of writing applications.

Another essential actor was the Urban Investment Development Corporation, owner of Copley Place and once of this site. UIDC seriously wanted parking space for Copley Place, but the city rejected plans for a large garage. Instead, the city and UIDC struck a compromise by which the developer kept these underground rights, which it used for a two-level garage, but swapped surface and air rights for another site given by the city, upon which the developer will build a luxury condominium.

In order to ensure a constant source of income, Tent City Corporation's rental policy for its apartments and town-house duplexes is designed for tenants of mixed income—25 percent of the units are reserved for the poor, the rents subsidized by state and federal governments; 50 percent of the units are assigned to people of moderate income, who are required to pay 30 percent of their income for rent, the remainder of the cost to be met with recycled UDAG funds from the development of Copley Place; and 25 percent of the units are rented at market rates. Should market-rate tenants tend to feel resentful of this arrangement, they have only to reflect on the reasonableness of the rents at this choice location—across the street from the Back Bay Station, across the Southeast Corridor pedestrian parkway from Copley Place with its prestigious shops and offices, and within easy walking distance of various mass-transit stations.

So far in this narrative, architects and architecture have played little apparent part. But one can see that architects Goody, Clancy & Associates not only succeeded in clothing their client's desires in convincing South End style, but also in giving them a well-defined, self-contained neighborhood. Bay windows, tile ornament, mansard roofs, and one hexagonal tower enliven the brick exteriors. Moreover, to add contextual verisimilitude, the architects varied color, composition, and ornament slightly from section to section. Most important, perhaps, is the site plan, which makes of Tent City a coherent enclave at one corner of the South End and which gives it its own semiprivate street, Yarmouth Place, wrapping three sides of a cluster of town houses.

One is not surprised to learn that all units were rented as soon as they became available. *Grace Anderson*



Though Tent City is clearly of the 1980s, its town houses (directly below and bottom right) effectively evoke the Victorian residences of Boston's South End. The mixed-income residences combine four-story town houses with a midrise apartment tower, the latter mediating the residential scale of the South End and the high-rise scale of Copley Place (directly below) and the Hancock Building (bottom right). The curving facade, following the railroad tracks below, borders the Southeast Corridor pedestrian parkway.

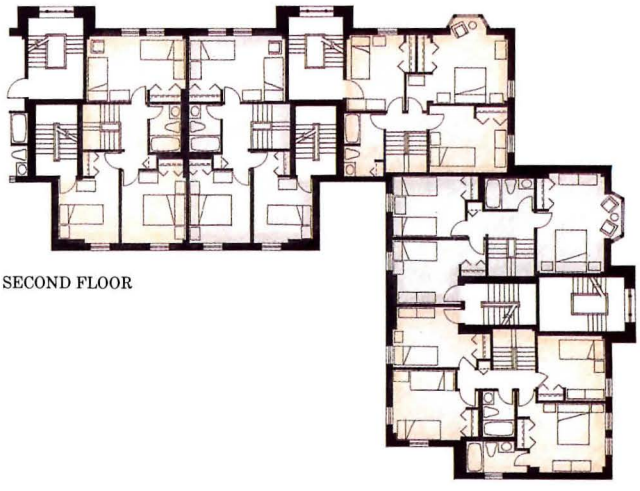
Mixed-income housing:
Tent City
Boston
Goody, Clancy & Associates, Inc., Architects

Tent City's landscaped courtyards afford benches for languid adults and play space for energetic children. The tower has a markedly important entrance on Dartmouth Street, a major thoroughfare, and the forecourt offers access to the parking

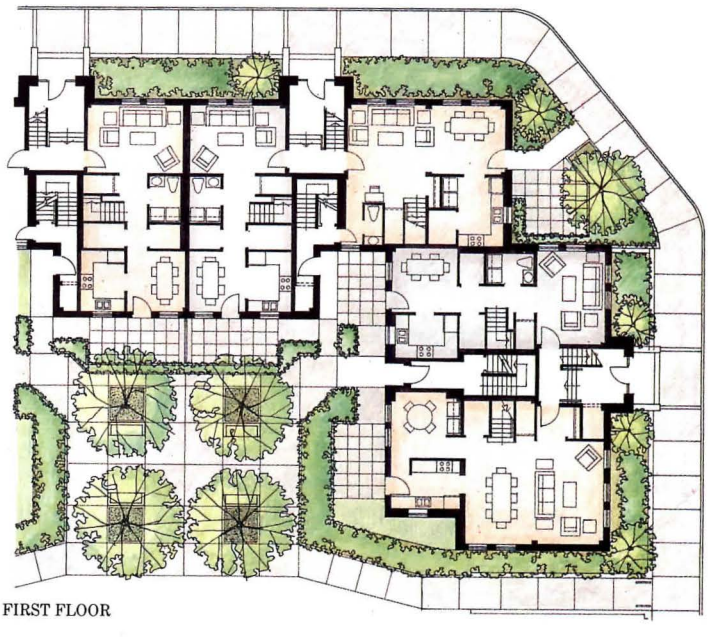
garage on one side and to a large store on the other. The curved wing houses a daycare center with adjacent playground, as well as a community meeting room and management offices. While the tower contains conventional single-level flats, the town houses contain family-sized duplexes. The houses face either city streets or semiprivate Yarmouth Place; each has both a front and a back door (plans opposite), the doors serving four units in each house. Along one side of Tent City, the Southeast Corridor threads its way between the South End and the Back Bay to Fenway three-quarters of a mile away.

The lobby of the apartment tower (directly below) fills more uses than the typical apartment lobby. In addition to tenants, it receives children and parents going to the daycare center, office visitors, and resident pedestrians taking a shortcut to Yarmouth Place.

Moreover, the balconies overhanging the space serve as routes to the laundry and as social spaces with tables and chairs. The lower floors of the houses on Columbus Avenue get dropped living rooms because of changes in ground level (two photos at bottom).



SECOND FLOOR



FIRST FLOOR

Tent City
Boston
Owners:
Tent City Corporation (housing); Urban Investment Development Corporation (garage)
Architect:
Goody, Clancy & Associates, Inc.—John M. Clancy, principal-in-charge; Paul H. Dudek, senior associate; Geoffrey Wooding, William H. Masterson, Donna L. Harris, project team
Engineers:
Zaldastani Associates, Inc. (structural); C. A. Crowley Engineering, Inc. (mechanical); Verne G. Orman Associates, Inc. (electrical); Haley & Aldrich (geotechnical)
Consultants:
The Halvorson Co., Inc. (landscape); Falk Associates (specifications and cost); Cavanaugh-Tocci Associates (acoustical); Greater Boston Community Development, Inc. (development consultant to the owner)
General contractor:
Turner Construction Company

Mission accomplished

Cited by numerous organizations as a model for housing the homeless, a San Diego shelter combines a hotel-like atmosphere with practical social services to promote dignity and respect.

You enter the Mission Style building under a picturesque bell tower through an arched doorway, which leads into a softly lit lobby. After registering, you follow a skylit corridor to your room, whose door is unlocked by a key card. Once inside, you are greeted by cool ocean breezes wafting through open casements, which provide either tranquil courtyard views or dramatic skyline panoramas .... Though it sounds like a blurb from a luxury hotel brochure, this prose in fact describes the country's most comprehensive shelter for the homeless.

Even before opening its doors a year ago, the St. Vincent De Paul/Joan Kroc Center in San Diego began attracting national media coverage. From TV shows like *60 Minutes* to articles in *Reader's Digest* and RECORD [June 1986, page 139], reports on the project cited its ambitious goal of permanently breaking the cycle of homelessness within an attractive building that challenged the depressing, dormitory arrangements of the typical shelter. In addition to offering temporary residential accommodations, the center promised to incorporate on-site facilities for a broad range of social and health services—from job-placement offices to a medical clinic—and both the construction and operation of the freestanding, block-long structure were to be financed entirely through private donations, without a single government "hand-out." Not surprisingly, when San Diego's Catholic Diocese first proposed the shelter in 1982, many were skeptical that such an ambitious feat could be—or should be—accomplished in behalf of the urban poor. But Father Joseph Carroll, whom Bishop Leo T. Maher appointed to lead the project, is no ordinary fund-raiser. Feisty, quick-witted, and energetic, he quickly began to search for a striking architectural image that would draw public attention. Hearing of his plan, a young architecture student, Marc Bucon, suggested to Carroll that he construct an authentic mission based on historical precedents, and enlisted the services of a San Diego architectural firm, Krommenhoek, McKeown & Associates, to help realize his concept. A specific design was developed by architect Fred A. De Santo, who subsequently took charge of its realization and started his own firm in the process. Father Carroll, armed with a perspective sketch of the Mission Style building, began soliciting community and national support, which slowly grew over the next several years but lagged behind the increasing scope of the building and escalating costs of construction. Finally, this campaign caught the attention of McDonald's hamburger heiress and philanthropist Joan Kroc, who generously donated $3.5 million in 1985, enabling the shelter and its underground parking garage to be completed (at a total cost of $11.7 million).

Opened August 31, 1987, the St. Vincent De Paul/Joan Kroc Center lives up to all the publicity that has surrounded it since its inception. The three-story mission occupies a full city block between 15th Street and Imperial Avenue, in a rundown area of downtown San Diego, and its stuccoed volumes are well-proportioned, carefully detailed, and spotlessly maintained. "If you give somebody a home worth taking caring of, they'll respect it," asserts assistant director Harvey Mandel, who, in conducting a tour of the facility, points out a conspicuous lack of graffiti. The center's residents are *not* down-and-out drifters, drug addicts, or chronic alcoholics, he explains, but the "motivated homeless," whose average stay at the center is a month rather than overnight. "They are predominantly families who have run into a crisis, lost their jobs, or suffered an illness and are referred to us by social service and community agencies," Mandel adds. The center accommodates up to 350 residents in two types of housing: emergency shelter on the second floor for short-term stays of up to one month, and transitional housing on the third floor for families who are allowed to reside there for as long as 18 months (a six- to nine-month sojourn is more typical, according to Mandel). Both levels consist of private rooms arranged on either side of 12-foot-high corridors. On the ground floor, a spacious dining hall serves the residents plus 1,500 more of the city's estimated 3,000 homeless, and a drop-in medical clinic provides health care ranging from pediatrics to ophthalmology. Down the hall from the reception lobby, an interdenominational chapel, sculpted to resemble Le Corbusier's church at Ronchamp, ministers to spiritual needs, while a children's playroom, meeting and TV rooms, a library, and laundromat meet ordinary daily requirements. These rooms face a courtyard at the center of the building, a cloistered retreat for residents that offers recreational space away from the street. On the second floor, an employment counseling office is equipped with telephones (and soon, computers) for job searches. For staff and volunteers, amenities such as private conference rooms, offices, and a parking garage help prevent "burn-out" from the stress of social work.

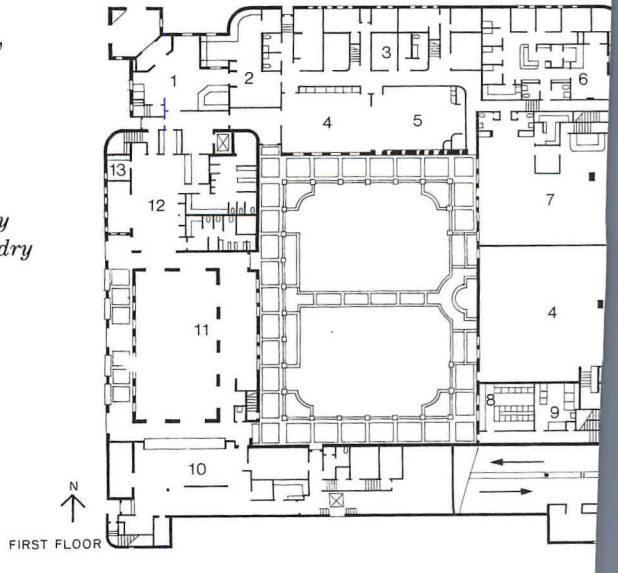
The unusual multifunctional character of the shelter is complemented by spacious interiors that have been furnished with donated furniture, carpet tiles, and acoustical ceilings to create a noninstitutional setting. De Santo extended the Southwestern vernacular of the exterior inside with carefully rendered details, such as precast concrete columns, moldings, and quatrefoil window surrounds, and exposed timber beams. The architect's most unusual achievement, however, is utilizing the Mission Style elements to reduce utility and maintenance costs. The "bell tower" above the entrance, for example, captures prevailing winds from the west and channels fresh air through second- and third-floor corridors, which act as ducts. Hot air is then drawn out through a venturi and exhausted from the east-facing tower. De Santo augmented this natural ventilation system with a cogeneration and waste-heat recovery cycle, thermal storage, passive solar features, extensive daylighting, and a computerized management system to coordinate the energy-saving devices.

As an innovative prototype, St. Vincent's is continually visited by shelter sponsors, government officials, and community groups who are attempting to build similar structures in cities as different as Orlando, Salt Lake City, Charlotte, and Bakersfield. The project has also won international awards from organizations such as the Building and Social Housing Foundation, based in Leicestershire, England, as well as the California Energy Commission. Meanwhile, plans are under way to expand the shelter's services into an adjacent warehouse, which will be renovated into a 25,000-square-foot overnight facility by De Santo, who is also designing housing for Los Angeles's skid row. A more immediate challenge confronting St. Vincent's, however, is finding enough funds to support its $2-million operating costs and a growing roster of activities. "It's easier to raise money to build a building than to run it," says Mandel, who considers St. Vincent's only one of many possible solutions to the epidemic of homelessness which continues to cripple a diverse population of men, women, and children—people often not unlike ourselves. After all, he reports, the first person to register at St. Vincent's was an unemployed architect. *Deborah K. Dietsch*

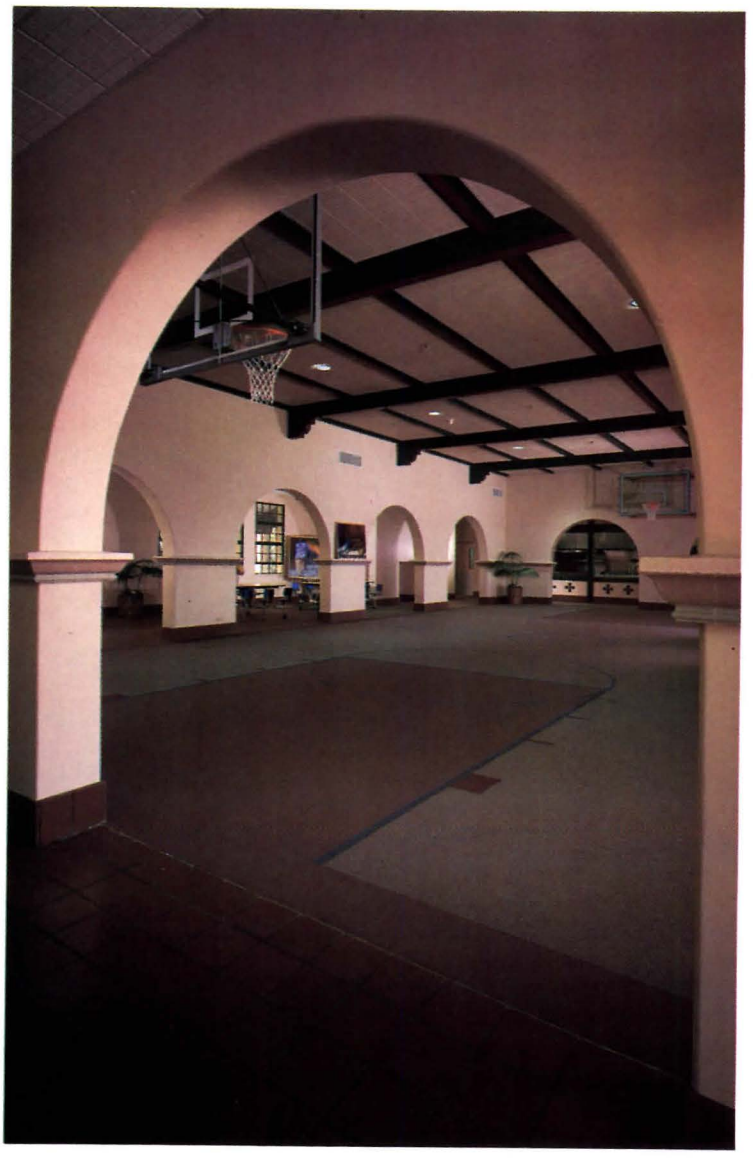
Shelter for the homeless:
St. Vincent De Paul/
Joan Kroc Center
San Diego, California
F.A.D. Architecture &
Planning, Architects

San Diego's St. Vincent De Paul/Joan Kroc Center is literally designed as a mission for the homeless. On the ground floor, a series of public spaces surround a cloister (below), enclosing a contemplative environment away from the street. They include a chapel with stained-glass windows designed by a local artisan (opposite top left) and an arcaded hall (opposite right) that doubles as a gymnasium and cafeteria/ dining room, capable of serving meals to 350 residents and 1,500 of the city's street population. The upper two floors of the shelter are divided into private rooms for temporary one-month stays and transitional housing for periods of up to 18 months. Furnishings include bunk beds for families (opposite bottom left).

1. *Lobby*
2. *Waiting/interview*
3. *Staff offices*
4. *Multiuse*
5. *Chapel*
6. *Clinic*
7. *Schoolroom*
8. *Residents' laundry*
9. *Commercial laundry*
10. *Kitchen*
11. *Dining*
12. *Day use*
13. *Barbershop*



St. Vincent De Paul/ Joan Kroc Center
San Diego, California
Owner:
Catholic Diocese of San Diego
Architect:
F.A.D. Architecture & Planning—Fred A. De Santo, principal-in-charge; James J. Holmberg, III, project architect; Susan L. Crook, job captain; Jana Jenkins, Ann C. Holmberg, interior designers
Associated architect:
Krommenhoek, McKeown & Associates
Engineers:
Burkett & Wong (structural); D. G. Gardner Company (mechanical); M. L. Electrical Systems (electrical)
Consultants:
F.A.D. Architecture & Planning, Verle Williams & Associates (energy); Con-Tech Inc. (security); Gillespie DeLorenzo & Associates (landscape)
General contractor:
KVAAS Construction Co.



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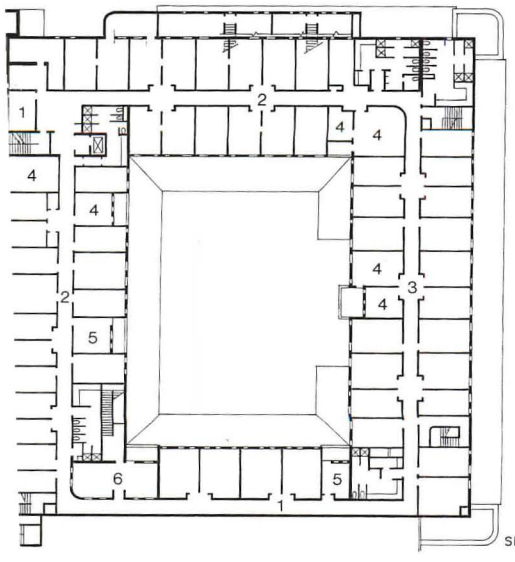


SECOND FLOOR

1. *Staff offices*
2. *Families*
3. *Single men*
4. *TV room/lounge*
5. *Library*
6. *Resource center*

Guerilla welfare

A group of young professionals in Atlanta choose to spend their weekends with unlikely companions, the homeless. Building huts for their less fortunate neighbors, these "Mad Housers" have made part-time philanthropy a full-time preoccupation.

During the week, they are scattered around Atlanta in design studios, law offices, accounting firms, or even in business school; but come the weekend, they band together as the Mad Housers to build huts for the city's homeless. Every other Saturday morning these up-and-coming professionals assemble with the down-and-out at the Majestic Food Shop, purveyor of "the best cheap breakfast in town." From there, they car-pool to donated warehouse space in Billy Bob's Bargain Basement, where they refashion salvaged lumber into walls, floors, and roofs. The only catch to this model of philanthropy is that the culmination of the unlikely group's efforts is on the wrong side of the law. The various components of the huts are erected on vacant parcels of government-owned or private property—acts of trespassing that, for the most part, city officials have chosen to ignore. In fact, even before national media attention surrounded the Mad Housers (and their house-raising ritual reminiscent of Colonial American settlers protectively shielded by public support), local law-enforcers gave unofficial endorsement to the group's unorthodox actions by looking the other way as members converged on pre-selected sites, attempting to top-off huts in less than their record time of 17 minutes. Their "guerilla welfare" has even received the measured praise of Atlanta's mayor, Andrew Young, who recently referred to the group's semicovert operations as "the kind of civil disobedience of which I approve."

The building materials that the Mad Housers use in their fight to shelter some of the city's estimated 10,000 homeless are principally financed out of the builders' own pockets. Their united front belies the members' political heterogeneity; the group includes Democrats, Republicans, Socialists, and self-styled Libertarians, all of whom hold equally diverse opinions on exactly how government should respond to the plight of the homeless. "The only thing we can all agree on is that we should build the huts," confesses Mad Houser/architecture student Bailey Pope. Although the 6- by 8-foot huts provide the barest essentials of shelter and privacy, they are also, according to the Mad Housers, the first step on the road to social integration. Once residency is established, group members point out, the occupants are more likely to get jobs, and, in some cases, be eligible for Social Security benefits. To be sure, the Mad Housers have lofty aspirations—"The dignity of a man who owns a house, albeit minimal and illegal, over a man who sleeps on the ground . . . or the legitimizing effect of sleeping in a structure rather than stealing a nap on a park bench all contribute to the individual, helping him to improve his own circumstances," wrote Cabell Heyward in the Starter Kit distributed to out-of-towners interested in forming a Mad Houser chapter of their own. And yet they are refreshingly down-to-earth when questioned about their own motives for participating: "It's fun," says member Amy Phillips. Such secular sincerity often surprises the street-wise beneficiaries of their good will. After observing the group construct a hut for a friend, a homeless man named Walter arranged for the Mad Housers to build one for him. "What church are you with?" he asked member Susan Nicholson, anticipating his own required attendance at future group prayer meetings. "We're not with a church," Nicholson explained. "Wow!" was Walter's only reply.

Although the Mad Housers may lack the backing of a formally recognized political or religious organization, the group has developed a definite method to its madness. Formulated in 1987 by Mike Connor as a result of research for his master's thesis at the Georgia Institute of Technology College of Architecture, standard operating procedures guide the group's dozen architecturally trained "principals" and assorted amateur volunteers. Typically, they initiate contact with potential "clients" by visiting soup kitchens and social work agencies; increasingly, past clients make referrals. In consultation with their client, the Mad Housers then select a site, which must satisfy several criteria—it must be secluded, near a food supply and labor pool, and convenient to public transportation. Once client and site are determined, the members assemble materials according to availability. (In a pinch, the Mad Housers have hired themselves out to do demolition work in order to get whatever lumber they disassemble in lieu of payment.) The standard building kit includes 1/2-inch-thick plywood boards and 2-by-4 framing for the walls, floors, and ceilings; mesh screen and polyethylene film for windows; and cinder blocks to raise the structure off damp ground (drawings opposite). Although the majority of the approximately 40 huts built to date have shed-type roofs, the group's architects have also created a gable version, which they find a more potent symbol of home. But unlike typical architectural commissions, the work of the Mad Housers doesn't stop once construction is complete: a subgroup of Mad Housers, the Aftercare Committee, periodically visits with past clients to see how they, and their huts, are faring.

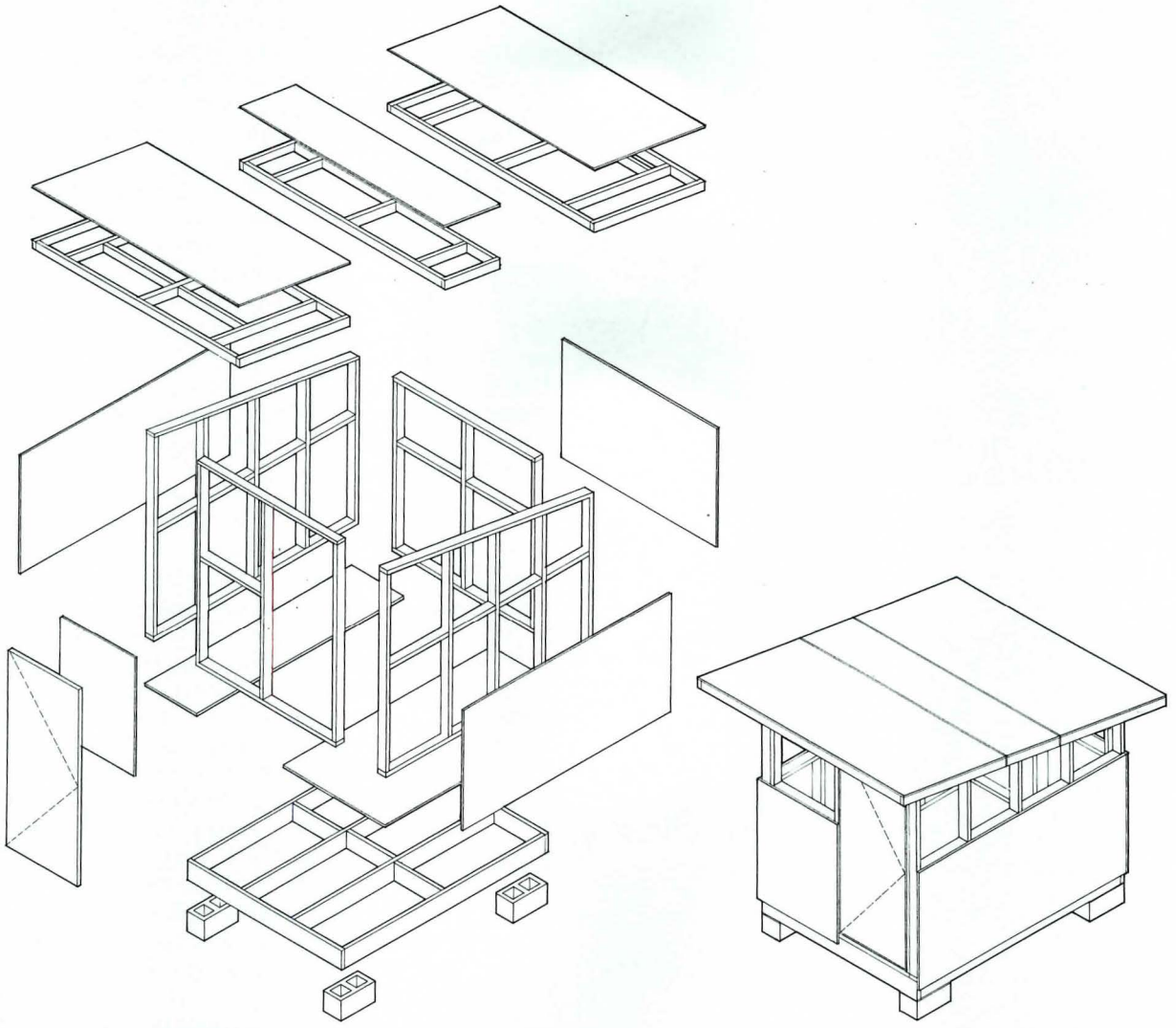
The Mad Housers' generosity with time and resources is all the more impressive since they initiated their project with no expectations of public recognition. Satisfying individual longings for a place of one's own was motivation enough. Initially secretive about their activities and identities, the Mad Housers decided to go public on television programs such as ABC's *20/20* when they realized that national exposure might benefit their homeless clients. This coverage not only rallied previously complacent politicians and private citizens to their cause, but also resulted in financial and material donations. Publicity reached a fever pitch last summer during the 1988 Democratic Convention, when the host city of Atlanta was in the spotlight. To honor the occasion, the group built a red-white-and-blue hut, stenciled with patriotic phrases, in the Omni Center's parking lot (opposite, top left). In defending their methods to conventioneers during their own less heavily attended gathering, members repeated what has become something of a Mad Houser motto: "It's a question of morality rather than legality."

Catch phrases aside, the group is undeniably hindered by its breach of the law. Immediately prior to the convention, Atlanta's Department of Transportation saw fit to dismantle several huts, supposedly at the request of the Secret Service, in order to "secure" certain areas adjacent to the Omni. Such technically legitimate interference of city agencies only highlights the temporary nature of the Mad Housers' solution. Mike Connor is realistic about the long-term accomplishments of his group: "It is only a stop-gap measure," he admits. But, as he and his colleagues see it, the proliferation ("to the point of saturation") such structures in Atlanta and (with the founding of similar organizations in San Francisco and Portland, Oregon, each equipped with its own Mad Houser Starter Kit) around the country, will finally force the federal government and the private sector to devise more permanent housing alternatives for the nation's almost 3 million homeless. *Karen D. Stein*

©*Dennis O'Kain photos*

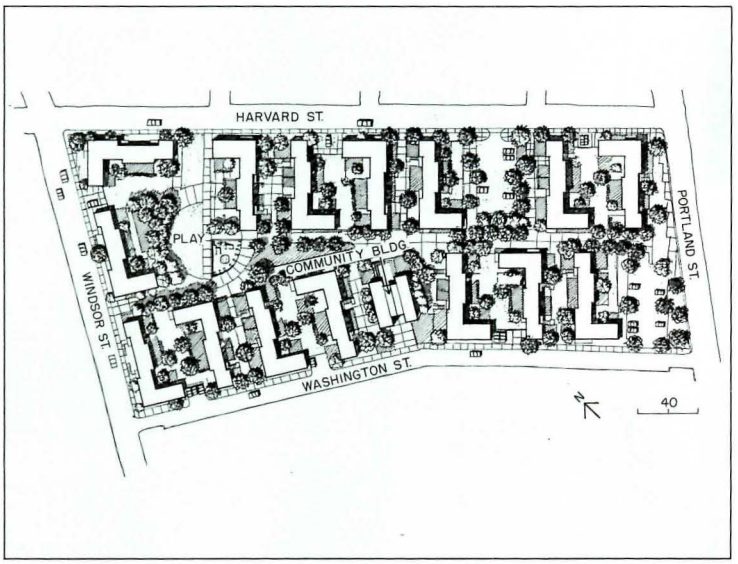
Shelter for the homeless:
Wood huts
Atlanta, Georgia
The Mad Housers, Architects/Builders

Project team:
Mad Housers—Mike Connor, founder; Brian Finkel and Frank Stevens, co-founders; David Brown, Lyle Green, Leslie Hare, Cabell Hayward, Brian Nicholson, Bailey Pope, Clark Tefft, architects/builders; numerous volunteers



Public housing rehabilitation:
Washington Elms Housing
Cambridge, Massachusetts
Bruner/Cott & Associates, Inc.,
Architects

Making it work



Built in 1943 by the Cambridge Housing Authority, Washington Elms is one of the oldest public housing projects in the United States. By the late 1970s, it was crime-ridden and in serious disrepair, a social and visual blight upon its upscale neighbors. Occupying a 7.4-acre site two blocks from MIT, eight from Harvard, and too close for comfort to Polaroid, Boston Properties, and Technology Square, it could not be allowed to decay any further. When rehab design began in 1980, 80 percent of the apartments had already been boarded up, tenants having been evicted for nonpayment of rent, lease violations, and crime. Eligible low-income applicants were refusing placement there.

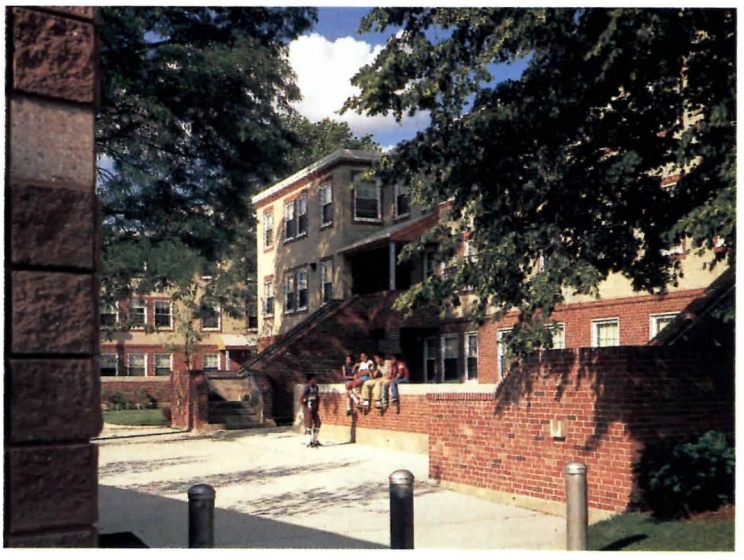
Washington Elms was in bad physical shape partly through vandalism, but also because of inadequate public maintenance. Until the 1960s, rents in public housing were set by operating costs, while debt service was handled by the federal government. During the '60s and '70s, however, tenants became poorer and poorer at the same time that maintenance costs were rising. Because rents no longer covered operating costs, Congress amended the housing legislation to require that tenants pay 25 percent of their net income for rent (an amount subsequently adjusted to 30 percent of gross income). Of course, such measures merely created a shortfall, because base incomes were too low. A subsidy became necessary, but the funds made available were insufficient, and so much maintenance had to be deferred that buildings began to fall apart. A rehab of Washington Elms became feasible only in the late '70s, when Congress launched the Comprehensive Improvement Assistance Program for a nationwide modernization program of public housing. Under the aegis of that program, the Cambridge Housing Authority awarded a $10.5-million contract to Bruner/Cott, a 40-person firm that receives 25 percent of its fees from public-sector housing. (Leland Cott's Peace Corps experience in Colombia, where he served between earning architectural degrees from Pratt and Harvard, and his command of Spanish impressed the CHA as key assets, since many Washington Elms tenants are Hispanic.)

Two fundamental imperatives shaped the remodeling. The first was the need to transform interior public areas such as entryways, corridors, and stairs—all of which had become a dangerous no-man's land—into private space within the apartments, along with reassigning a generous portion of common outdoor space (pre-rehab photo top left) into common yards accessible only to the apartments that border them (site plan and photos opposite bottom). The second imperative was to reduce densities. Older public housing is too compact by today's standards, with room sizes so mean that the apartments require redesign from scratch. Three buildings that had deteriorated beyond repair were demolished to provide open space and additional on-site parking. As a result of these changes, there are now 23 units per acre at Washington Elms instead of the original 44, or a reduction from 324 units of housing to 175.

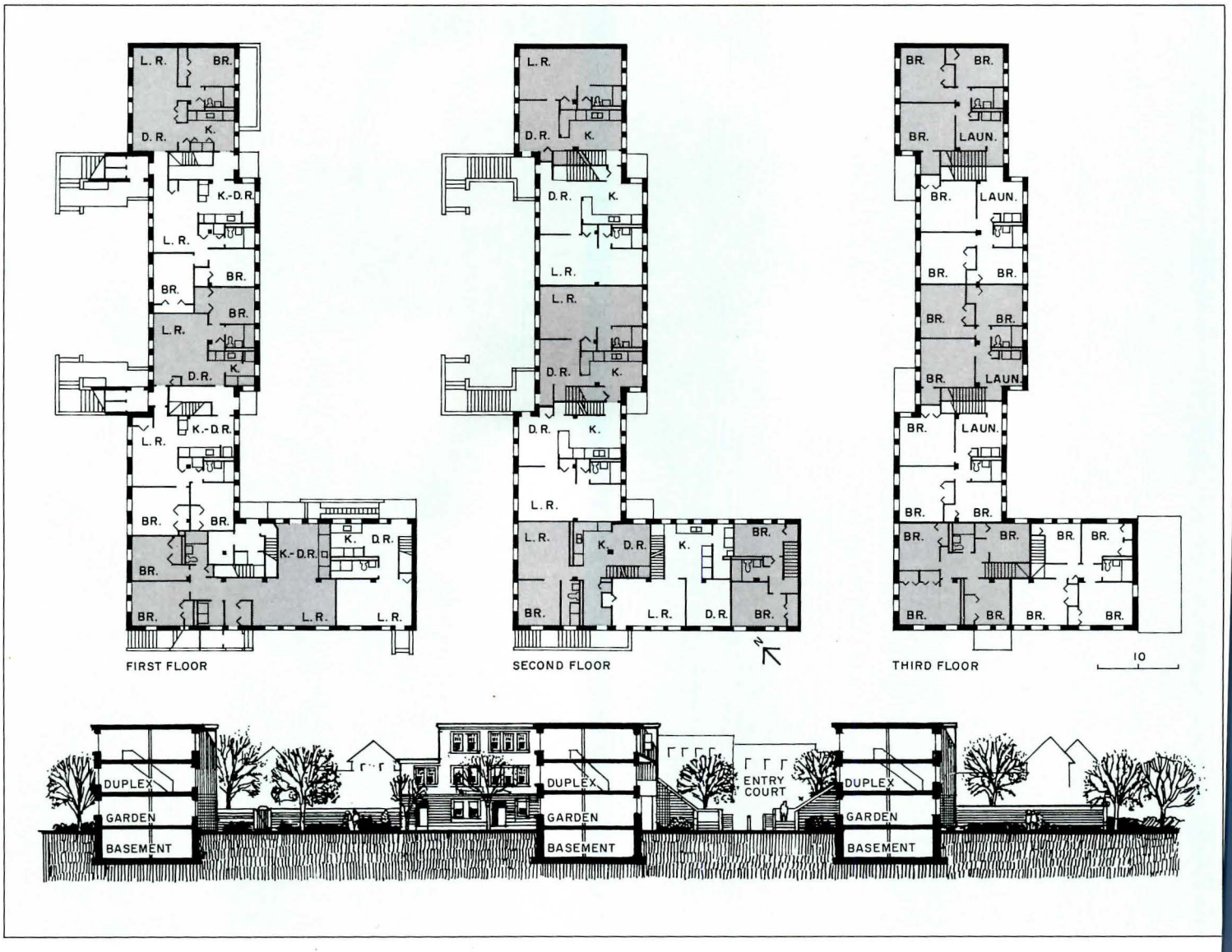
RECORD's award to Washington Elms comes late in the series of honors it has received. We are not the first to recognize that this rehabilitation solves many of the problems that gave public housing a bad name, and has much to teach anyone who tries to address them. CHA's executive director Daniel Wuenschel kindly assures us, however, that we should not feel remiss: "I cherish your late award more than all the others, because if Washington Elms still looks good four years after opening day, it makes all our efforts count." *Mildred F. Schmertz*

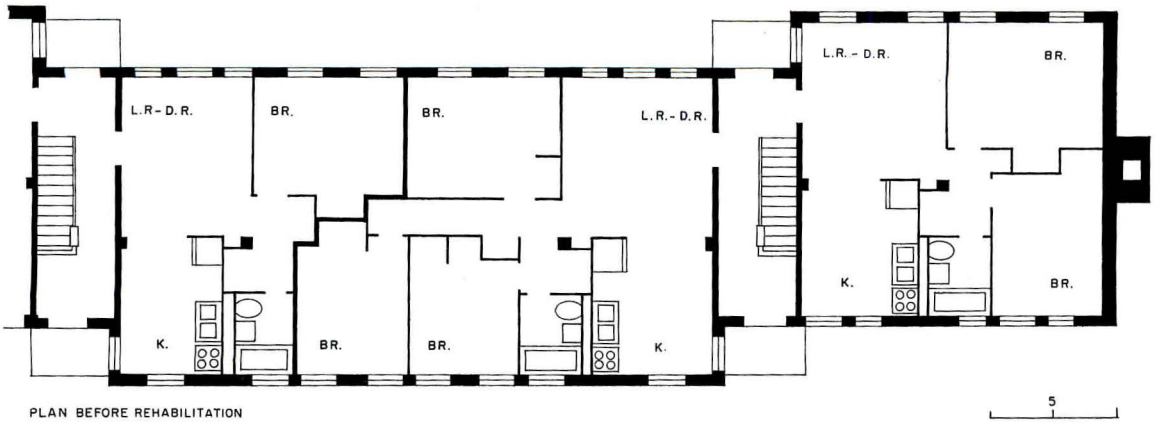
Public housing, in spite of the unfair rap it receives, is a good investment for the country. What is wrong with it can be fixed, as the successfully rehabbed Washington Elms, once the most troubled project in Cambridge, effectively demonstrates.

Jean M. Smith photos



Apartment layouts before the upgrade (bottom) were cramped and poorly planned. Bruner/Cott's rehab reduced the density of the development by creating larger apartments, either as floor-through units or as duplexes. Public stair halls became private staircases offering a more secure environment, and interior public circulation areas were converted to private dwelling-unit space (plans and sections below). A new community building (opposite) provides meeting facilities, office space for the Cambridge Housing Authority and tenants' representatives, a community kitchen, and facilities to house a Head Start program.





Washington Elms Housing
Cambridge, Massachusetts
Owner:
Cambridge Housing Authority
Architects:
Bruner/Cott & Associates, Inc.—Leland D. Cott, principal-in-charge, Eric Pfeufer, associate, Bruce Flenniken; Arnold J. Jacobsen & Associates, Inc., architectural consultant to Washington Elms Tenant Council
Engineers:
Rene Mugnier, Inc. (structural); Panitsas/Zade Associates (mechanical); Bay Design Group (electrical)
Landscape architect:
Michael Weinmayer
General contractor:
Peabody Construction Co.

Residential hospice:
Coming Home Hospice
San Francisco
Asian Neighborhood Design,
Architects

A place of passage

©*Mark Citret photos*

Coming Home Hospice is part of an ecclesiastical complex along Diamond Street, erected between 1906 and 1926, that includes the parish church, rectory, school, and convent of Most Holy Redeemer Church (top photo opposite). In recent years the area surrounding the church has evolved into San Francisco's largest gay neighborhood, and Most Holy Redeemer today welcomes a lively mix of younger gay and older, mainly Irish-American, parishioners. The round-arched second-story windows of the erstwhile convent chapel now frame delicate leaded casements designed by local artists Dan Scanell and Gary Van Velsor to harmonize with the stylized dove motif of the windows' original stained-glass tympanums (above).

The modern concept of hospice care dates back to the late 19th century, when an associate of Florence Nightingale opened a home for the terminally ill in Dublin. Based on the belief that it is possible to ease the difficult journey from life into death by exchanging pain and isolation for peace and acceptance, hospice programs have evolved over the past century into a worldwide movement (there are 1,679 programs in the United States alone) that allows people to face death outside the clinical atmosphere of a hospital, most frequently in the patient's home through visiting-nurse programs but sometimes in inpatient facilities. Hospices usually comprise interdisciplinary teams of licensed vocational nurses, social workers, home health aides, and volunteers, working under the supervision of a physician. Each team member's overriding goal is not to prolong life but to enhance it by tending to the material and spiritual needs of patients, their families, and friends. Although hospices, like hospitals, rely on pain-killing drugs to ease physical suffering, their therapeutic regimen also includes countless hours of "hand-holding" to help assuage a patient's emotional anguish. In a recent *Time* magazine interview, Dame Cicely Saunders, the much-honored English physician who founded St. Christopher's hospice in London 21 years ago, noted that hospice environments "allow patients to speak for themselves, to suggest what we ought to do to give them safe conduct."

Nowhere is the need for hospice care more acute today than in San Francisco, a city whose beauty belies the grim fact that it is one of two epicenters, along with New York, of the current AIDS epidemic. The impact of AIDS has been especially severe among San Francisco's sizeable gay population, but if there is a bright side to the dark statistics that continue to document the rising toll of deaths and new cases of people infected with the AIDS virus, it is the increasingly unified efforts among leaders of the gay community, heads of the city's municipal government, and concerned members of the general public to overcome the plague of fear, indifference, and misunderstanding that so many victims of the disease have endured in less enlightened places.

Coming Home Hospice is perhaps the most tangible—and poignant—symbol to date of this cooperation. Located just off Castro Street in the heart of San Francisco's most visible gay neighborhood, Coming Home is the nation's first hospice designed primarily to serve AIDS patients. The 15-bed facility, open since March of last year, offers 24-hour-a-day care by licensed vocational nurses who work in three eight-hour shifts. The hospice has no live-in staff, though a registered nurse and a social worker are present during the day. At least 10 of the hospice's beds are reserved for AIDS patients; the remainder are occupied by mostly older cancer patients. The average length of stay at Coming Home is 28 days and, to be admitted, one must have a physician's prognosis of six months or less before the disease runs its course, reside in San Francisco or San Mateo county, and be in need of home care. The cost of a stay—$40 a day and downward—is determined by a patient's financial means, and most pay between $7 and $25. Like all hospices, Coming Home has no medical facilities, but its staff will do everything in its power to ensure that the patients' final days are as painless as possible. "If a patient is having trouble breathing," explains the hospice's facilities manager, Linda Edelstein, "we will supply oxygen to make him more comfortable, but we don't have respirators or any other life-extending equipment."

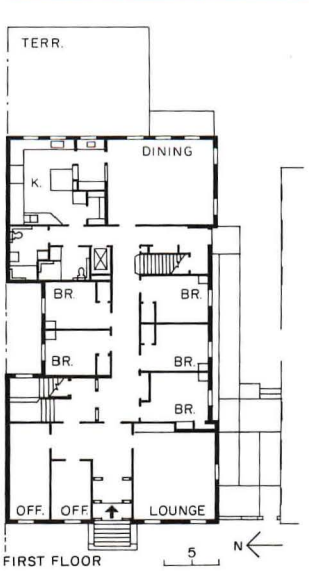
The domestic environment of San Francisco's Coming Home Hospice helps people with AIDS and their families confront the physical and psychological ordeal of impending death.

Coming Home is the result of a remarkable collaboration among three Bay Area organizations: the Visiting Nurses and Hospice of San Francisco, which in 1985 recognized that AIDS patients often had no place to go as the disease consumed their physical and financial resources; the Catholic Archdiocese of San Francisco, which agreed to give the hospice a 15-year lease on the unoccupied former convent of Most Holy Redeemer Church; and Asian Neighborhood Design (A.N.D.), a nonprofit group of architects, planners, and community organizers that applied its past experience in housing rehab and renovation to oversee conversion of the convent into a 7,000-square-foot residential hospice facility.

In selecting A.N.D. as its architect, the hospice based its decision partly on the recommendation of Libby Denebeim, a well-known member of San Francisco's school board and co-chair of a capital campaign that raised over $860,000 for Coming Home's renovation. As a board member of the Women's Alcoholism Center, whose new home was designed by A.N.D. in 1986 (see pages 108-109), Denebeim had witnessed the community design center's ability to carry out controversial projects and function within a group decision-making process. A.N.D.'s experience in coordinating ideas and facilitating consensus proved especially critical for the hospice project. "There was a massive response from the gay and design communities in terms of money, materials, and opinions," recalls R. Thomas Jones, A.N.D.'s director of architecture. "Everyone wanted a say in the design, and everyone wanted it to be perfect. As architects, we had to temper some people's images of the facility as a grand hotel with the realities of everyday life in a hospice."

Jones and project designer Lindsey Jang also had to bridge the gap between a hospice's official status as an institution and its practical need for interiors that are as comfortably domestic as possible. For its part, the convent was in reasonably sound repair, and the nine-by-twelve cubicles that had once accommodated two nuns apiece proved ideally adaptable as single-patient rooms. To meet code requirements for a hospice, the architects installed new heating and sprinkler systems, an elevator, and accessible bathrooms, and completely remodeled the convent's outmoded kitchen. They left the austerely classical exterior intact, save for the construction of a landscaped redwood sundeck off the basement (bottom right) and the addition of an unobtrusive entrance ramp along the building's south flank, separating the hospice from a private school next door (right in top photo opposite). The school's close proximity raised a particularly difficult issue. "We always spoke of the building in life-affirming terms," says Jones, "but we were also aware that the sight of bodies being taken down the ramp might be traumatic for the schoolchildren." A high latticework screen erected between the two buildings solved this dilemma.

Time and again during the course of construction, the architects were reminded of the urgency of their mission, as several people active in the project themselves succumbed to AIDS, while others bravely volunteered their services, knowing that their lives, too, would be cut short. In the end, however, the emotional stress was clearly worth it. "Working on the hospice was one of the most rewarding professional experiences I've ever had," says Lindsey Jang. "So often today architecture is about corporate image and the bottom line; Coming Home reminded me that it can also be about caring." *Paul M. Sachner*



Coming Home's deliberately eclectic interiors include (below, clockwise from upper left) a vaulted lounge that occupies the former convent chapel, a second-floor corridor, a typical patient room, the main dining room, the kitchen and pantry, and a basement library and lounge. Staff can monitor patient needs through call-button annunciator panels, one of which is located in the entrance foyer (opposite). Over 100 volunteers assisted in the building's renovation, and members of the Design Showroom Association of San Francisco donated most of the hospice furnishings (the Association designated Coming Home as its annual charity for 1986). Other businesses contributed track lighting, ceramic tile, vinyl flooring, kitchen equipment, television sets, and VCRs, while Bay Area artists, working through a local foundation called Art for Healing, donated paintings and photographs for public rooms, hallways, and stairwells. Bedrooms, which retain sinks, closets, and radiators from the original convent, are sparely embellished to allow occupants

to create their own décor. (Most have responded by covering the walls with cards and letters from loved ones.) The architects specified warm shades of beige and pink throughout the facility, and illumination is kept dim in response to many patients' sensitivity to light.

Coming Home Hospice
San Francisco
Owner:
Hospice of San Francisco—a joint venture of the Visiting Nurses Association of San Francisco and the Pacific Presbyterian Medical Center
Architect:
Asian Neighborhood Design—R. Thomas Jones, project architect; Lindsey Jang, project designer; Steven M. Suzuki, job captain
Engineer:
Uno Veideman (structural)
Consultants:
Berens Kaminsky (volunteer coordinator); Andrew Belschner and Gary Hutton (interior design); Edward A. Nicolaus III and Mike Immel (landscape architecture)
General contractors:
Samson Construction Company (phase I); Van der Sterre Construction (phase II)

Residential alcohol-treatment facility:
Women's Alcoholism Center
San Francisco
Asian Neighborhood Design, Architects

A home for healing

©*Mark Citret photos*

Women's Alcoholism Center
San Francisco
Architect:
Asian Neighborhood Design—R. Thomas Jones, director of architecture; Harry Wong Leong, project architect; Lily Pai Soo Hoo, project manager
Engineers:
Kwan & Associates (structural); S & J Engineers (mechanical); Pete O. Lapid & Associates (electrical)
Consultant:
Jeffrey Miller (landscape)
General contractors:
Gonzalez Construction; PFW Associates; Landmark Building & Engineering

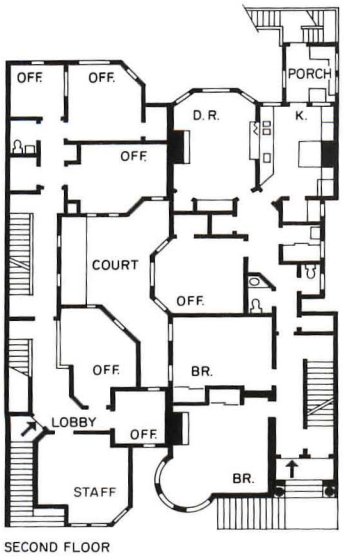
Alcohol abuse affects more people in the United States than any other form of drug addiction. Although alcoholism cuts across all economic, ethnic, and geographic barriers, no population is more vulnerable to the feelings of low self-esteem and isolation that so often feed this disease than single mothers struggling to raise children in poor inner-city neighborhoods. Recognizing that reality 10 years ago, a group of recovered alcoholics in San Francisco founded the Women's Alcoholism Center, an outpatient clinic located in the city's Mission District. W.A.C.'s underlying goals then, as now, were not only to address the specific problems of addicted women but also to break the intergenerational cycle of alcoholism by including children in treatment. In 1983, the Center's staff decided to take its successful day program a step further by developing the then-radical concept of a residential facility where women and their children could live together in a sober, structured setting. Far too often, the organization's founders had witnessed, women determined to recover from alcoholism were forced to release their children to institutional or foster care and hope to be reunited later. W.A.C., by contrast, offers a more humane alternative—a comprehensive treatment program whose intention, according to director Rhonda Ceccato, is "to encourage abstinence as a way of life while maintaining family unity."

In 1984, W.A.C. turned to Asian Neighborhood Design (see page 104) for assistance in planning a new facility that would consolidate its day and residential programs into a single complex comprising separate but related buildings. Besides its role as project architect, A.N.D. helped W.A.C. obtain a conditional-use permit from the city and investigate public and private funding sources. Together, A.N.D. and the Center combed San Francisco for potential sites until they came up with a three-story bow-fronted row house on a double-width lot on Bryant Street (right in photo opposite). The architects converted the existing structure into a comfortable residence for 21 women and children, and designed a stylistically compatible 3,400-square-foot building next door—the Lee Woodward Counseling Center (left in photo opposite)—that houses W.A.C.'s offices, child-care facilities, and individual and group-therapy rooms. The two buildings are joined by an interior courtyard (top left) that maximizes natural light in both structures and provides a sheltered entry (bottom left) to ground-floor community rooms (Alcoholics Anonymous holds public meetings at the Center four times a week).

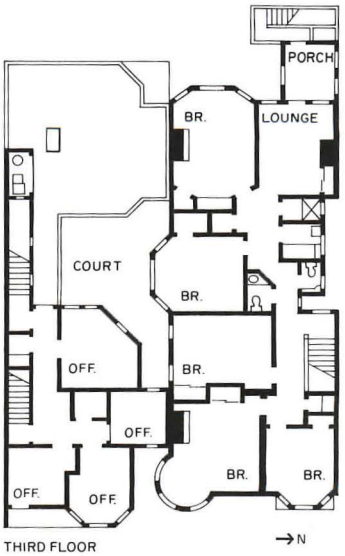
W.A.C.'s clients reside at the Center for periods ranging from six months to one year and, depending on income, pay between $400 and $600 a month for rent, food, and treatment (nearly all residents receive public assistance). During the first six months, residents spend at least four hours a day in individual counseling and group therapy; the rest of the time is occupied by household chores, including food shopping and preparing two meals a day. After six months, therapy continues, but on a reduced schedule that allows the women one or two days off a week for outside job training. Beyond all else, perhaps, the Center simplifies its clients' lives by giving them the physical resources and emotional support they need to carry out even the most prosaic everyday task. "A lot of real life-changing work gets done at the house just in the course of the women being with their children, cooking meals, and talking late at night with the house manager," observes W.A.C.'s president, Mary Pat Power. "For the families living here," she adds, "the house itself helps them heal." *P. M. S.*

Living together in a dignified atmosphere of mutual support and respect, low-income alcoholic mothers and their children wage the battle against liquor dependency 24 hours a day, one day at a time.

ND FLOOR



SECOND FLOOR



THIRD FLOOR

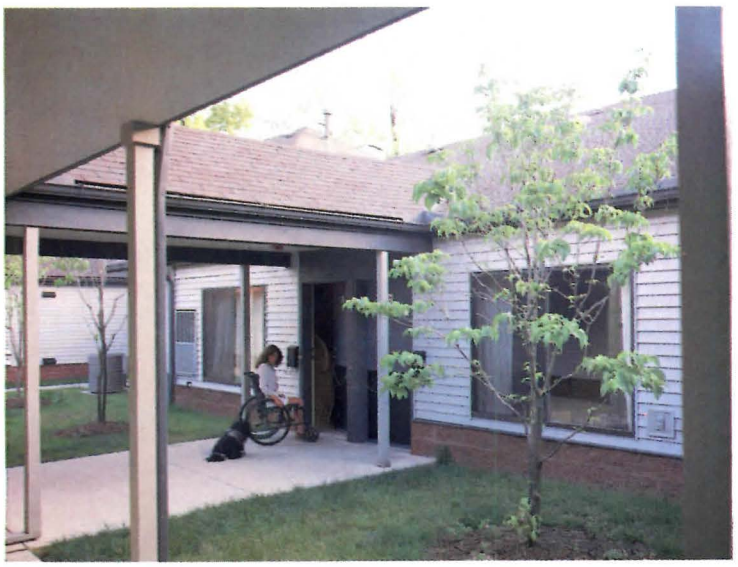
A "graduate" of Creative Living, Charles H. Snow, III, summed up its mission in a letter to RECORD: *"[This] is housing for the handicapped designed not to look like housing for the handicapped. More importantly, it allows people with handicaps not to live handicapped lives."*

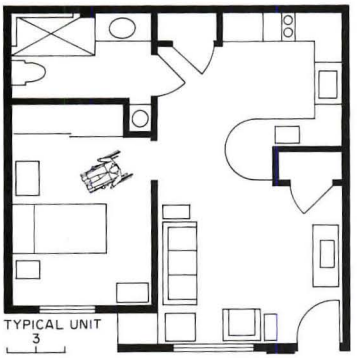
On their own–together

Housing for the disabled:
Creative Living II
Columbus, Ohio
Schooley Caldwell Associates, Architects

Over the past two decades, America has come a long way toward lowering legal and practical barriers for the disabled, though not nearly far enough to warrant complacent self-congratulation. The many obstacles that remain loom especially large for young quadriplegics, whose loss of most or all use of their limbs too often traps them in a homebound dependency or institutionalized isolation that wastes the unimpaired intelligence, talent, and drive they would eagerly put to use as autonomous adults. Back in the late 1960s, recognition of the need for an environment where severe physical handicaps would not preclude an independent, productive life inspired community leaders in Columbus, Ohio, to establish an apartment complex for quadriplegics, Creative Living I (completed in 1974). Innovative for its time—and still a rarity—this venture abolished ranks of hospital-style wards along double-loaded corridors in favor of self-contained, one-bedroom flats, each with its own entrance off a common courtyard. The success of such housing relied on several key factors: proximity to the educational, medical, and recreational facilities—and transportation network—of Ohio State University and other places of learning; varied employment opportunities in greater Columbus; the presence of a centrally stationed staff assistant on 24-hour intercom call; a ready supply of neighbors, mostly students, whom Creative Living residents could hire individually for part-time help with morning and evening routines, hygiene, and meals; and, of course, a layout accessible throughout to people in electric wheelchairs.

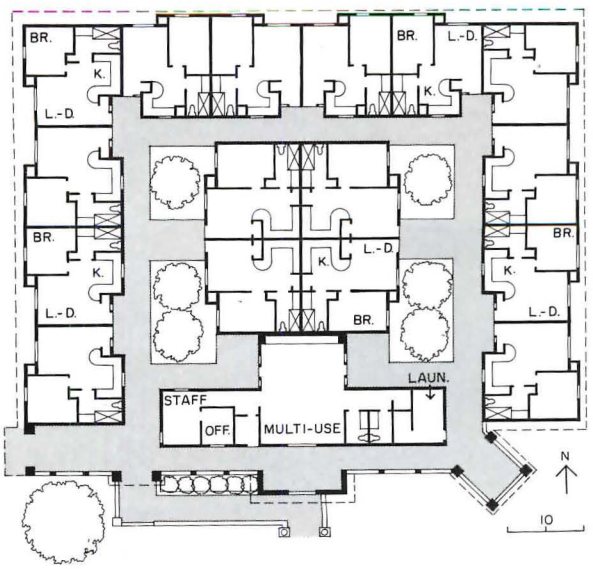
Extraordinary demand for the 18 original apartments spurred development of the 16-unit Creative Living II, now in its third year of operation, only a few blocks away. The availability of a forerunner to analyze, as well as general advances in the study of barrier-free design—to which the architects of the later facility, Schooley Caldwell Associates, and Ohio State University personnel had already made significant contributions—allowed for genuine improvements. At the same time, however, specific conditions posed new constraints. The site, generously leased by Ohio State at a fee of $1 per year, was a tight fit for the assigned 10,400-square-foot program area, and its location in an official historic district posed the added challenge of composing an exterior congenial to high-style Victorian surroundings on a low budget ($64.37 per square foot, all inclusive). Funding consisted of a $633,600 construction loan generated through HUD's Program 202, which is primarily geared to housing the elderly; $200,000 in grants from the Columbus and Yassenoff foundations; and hundreds of private donations. Schooley Caldwell convinced federal authorities that exceptional—by normal HUD standards—amenities such as microwave ovens, side-by-side refrigerators-freezers, and oversize bathrooms and storage spaces were in fact necessities, given the logistics of life for a busy single person in a wheelchair (for details see page 112). The architects were also ingenious in their use of basic building volumes and inexpensive materials (contrasting concrete blocks articulate the street facade) to evoke the presence of one all-embracing family house: a welcome symbol for residents, connecting as it does the private domains of their own apartments with the shared public areas of sheltered outdoor passages, a laundromat, a front porch, and a multiuse lounge just inside the main entrance. By the same token, simple but imposing parapets, pillars, and hipped roofs combine to suggest a dignified Prairie Style structure, comfortably at home in a neighborhood of solid citizens. *Douglas Brenner*

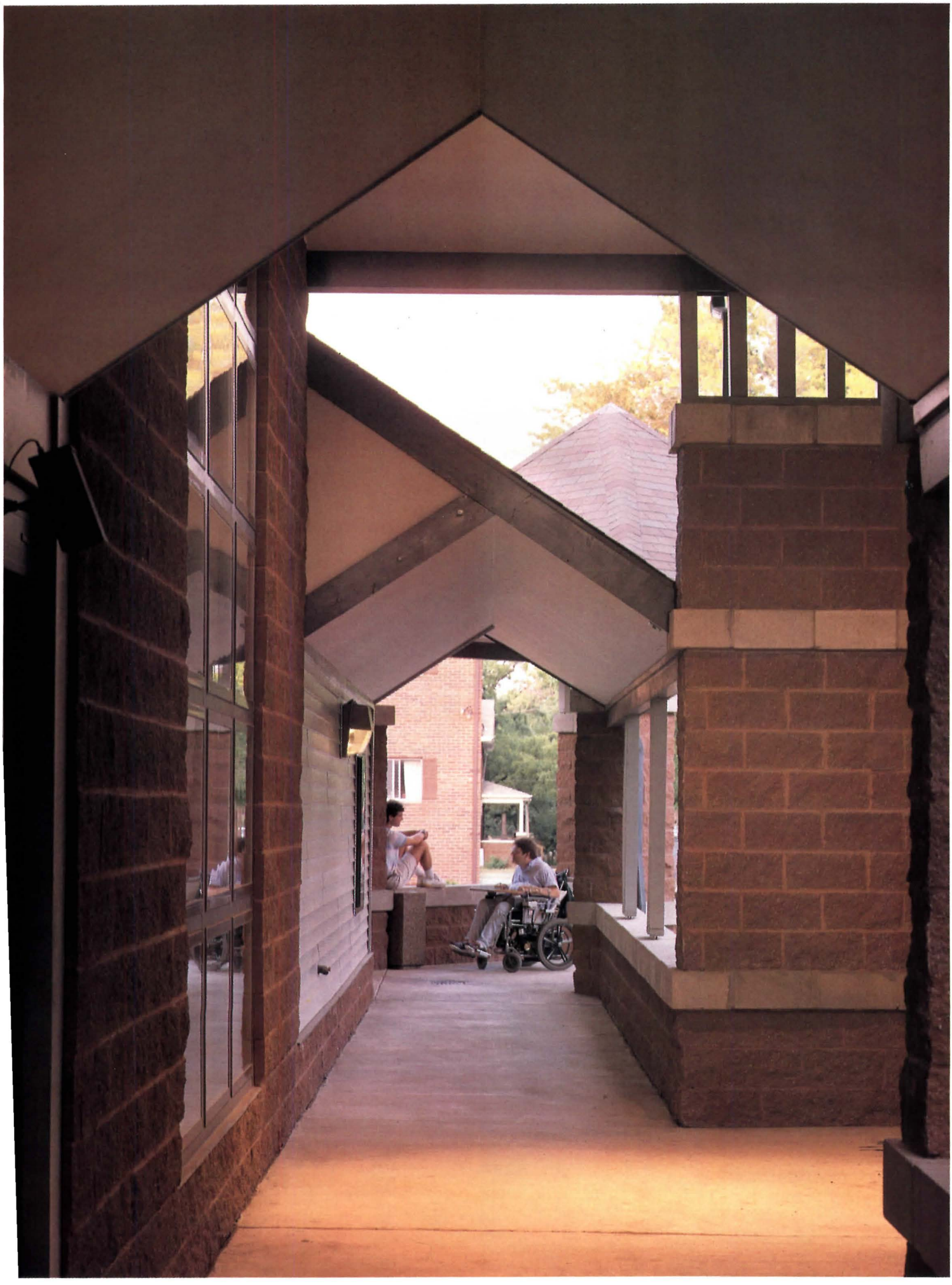




Three variants on a basic 520-square-foot apartment layout (above) enabled maximum site use without sacrificing individual outdoor entrances, a multi-use lounge (top left photo), or a front porch (opposite). Openings, sill heights, cabinetry, and appliances take into account the full range of electric wheelchair sizes and turning radii, accessibility from a seated position, and jutting knees and toes. Surprisingly high cupboards above kitchen counters (bottom left) were installed at residents' request: they need the space for household provisions, which personal attendants can bring down as needed. Special requirements include room to park a spare wheelchair close to an outlet for battery recharging, outsize bathroom chests for medical supplies, lever faucets, and flexible shower heads next to sinks for attendant-aided shampoos. Bathroom doors are a courtesy to guests, but residents unanimously rejected bedroom doors as hindrances. Otherwise, décor reflects individual taste, since flats are let unfurnished.

Creative Living II
Columbus, Ohio
Owner:
Creative Living Housing Corporation
Architect:
Schooley Caldwell Associates—John P. Schooley, Robert D. Loversidge, Jr., principals; Thomas R. Matheny, project manager; Robert L. Bates, Jr., designer; Thomas F. Schifer, project architect
Engineers:
SCA—Mark A. Taylor (mechanical); William R. Laughery (electrical); Kabil Associates—Shashi P. Savla (structural)
Landscape architect:
SCA—Brian P. Kinzelman, Gregory P. Leffel
Interiors:
SCA—Barbara J. Schooley
General contractor:
Lincoln Construction, Inc.

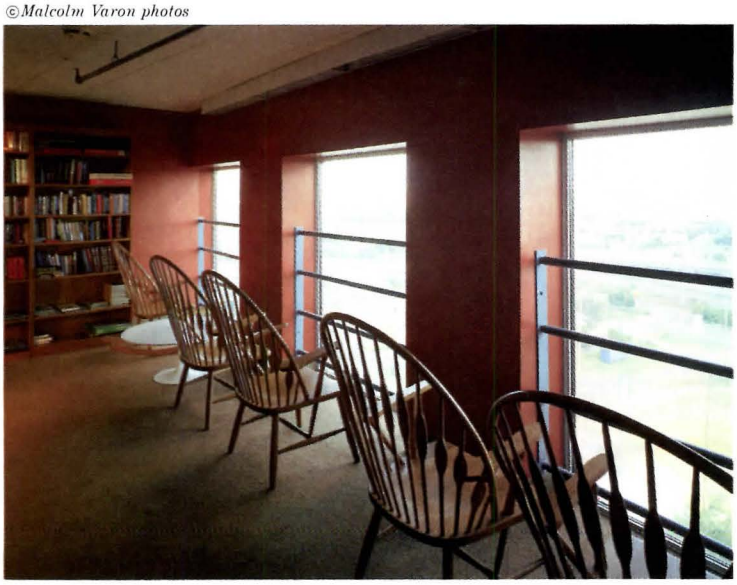




Housing for the elderly:
Lincoln Towers
Secaucus, New Jersey
Arthur Lubetz Associates,
Architects

High spirits

©*Malcolm Varon photos*

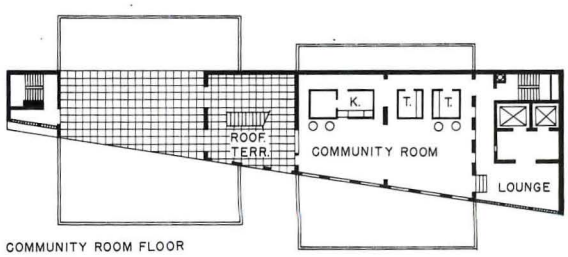


Lincoln Towers
Secaucus, New Jersey
Owner:
Secaucus Housing Authority
Architect:
Arthur Lubetz Associates—Arthur Lubetz, principal-in-charge; Richard Miller, project manager
Consultant:
Gensert, Bretnell, Bobel (structure)
General contractor:
Massarro Corporation

Motorists whizzing past it on Route 3 or the New Jersey Turnpike can hardly miss Lincoln Towers' just-shy-of-primary colors and bold vertical massing, but few would readily identify the building as housing for the elderly—and public housing at that. Rejecting the condescending stereotype equating "old" with "fogy," architect Arthur Lubetz also spurned traditionalism in favor of an energetically sculptural form that would celebrate the project's prominent site in the bustling urban corridor west of New York City and convey a contagious vitality.

The games with geometry, scale, and color, however, are not played merely for their own sake. To encourage interaction among residents, for example, the 100 one-bedroom units (including 10 lower-floor units for the handicapped) are divided between the two offset square towers, each floor pairing four-apartment social groupings around clustered entries. The vivid red wedge thrust through the yellow-beige stuccoed high-rise blocks expands these compact twin "neighborhoods" to such shared spaces as a central sitting room with adjacent laundry facilities, and a small lookout lounge off the elevator lobby. (Blue-sheathed elevator and stair shafts define vertical circulation routes, and a deep-gray "wainscot" wraps the towers' bases in an illusory screen that becomes real at the building's offset.) Similarly, spaces reserved for individual and small-group activities are concentrated in well-trafficked ground-floor areas. The most prominent common spaces, however—a community dining room with adjoining library/lounge (photos top and bottom left) and rooftop deck—occupy a penthouse social center that exploits the tower's spectacular views of the Manhattan skyline. Throughout, the straightforward linear plan combines with an interior reprise of the exterior's color code and shifts in material to provide consistent cues for orientation within the building.

Lubetz's emphasis on a symbolic linkage with the distant city—urbanity at a remove—prompted a building profile somewhat higher than that dictated by a limited site, but the towers are also heightened visually by such devices as the double-tiered punched windows in individual apartments (photo middle left). In contrast to the panoramas revealed by the public spaces' wide apertures, these smaller openings frame scenic vignettes that shift as the occupant sits or stands or changes vantage. *Margaret Gaskie*



A suburban apartment tower for the low-income elderly draws on lively color and bold geometry to evoke a sprightly urban image that challenges the timid traditionalist clichés of aging.

Housing for the disabled:
Diamond Park
Philadelphia
Cecil Baker & Associates,
Architect

Declaration of independence

©*Tom Bernard photos*

Though its North Philadelphia environs have experienced considerable abandonment, the vicinity of Diamond Park has seen relatively little demolition (most of the vacant lots that do exist have been turned into gardens). The project comprises two separate buildings that nonetheless extend the finely grained scale of the street in their respective sites. For budgetary reasons the structures are three-story slabs, but the row-house rhythm of adjacent buildings is evoked in corbelled-brick cornices, a glazed-face-block water table, and brick-shrouded downspouts (above and opposite top). Glazed-face-block stripes and precast-concrete lintels and projected sills echo the street's historic verticality.

From her soft-spoken demeanor, it is not easy to discern whether Christine Washington found the process of husbanding 48 units of rent-subsidized housing through the federal and city bureaucracy too exhausting to relive ("I don't know how I should expound upon that"), or whether she simply hesitates to bore her interviewer. It is, however, community-based groups like Christine Washington's Advocate Community Development Corporation that are widely seen as the crucial ingredient in government-assisted housing these days, and Mrs. Washington, her neighborhood, the city of Philadelphia, and the U. S. Department of Housing and Urban Development are all justly proud of the two new brick structures, called Diamond Park. Nonetheless, the actuality of the completed project is nearly subsumed in the memory of the participants by the struggle to bring it to fruition.

Though many buildings on Diamond Street and nearby Susquehanna and Broad are now abandoned, sober brownstones and exuberant wrought-copper-trimmed brick row houses remain as emblems of the industry-based wealth that came to North Philadelphia in the last two decades of the 19th century. With the city's later painful transition away from a manufacturing economy, the neighborhood's fortunes slid slowly yet inexorably downward, until the Reverend and Mrs. Paul Washington, shepherds of an increasingly poor flock in the area, saw the quality of its extant housing as a basis for renewal. The parish formed the Advocate Community Development Corporation in 1970, beginning with the construction of 15 new government-assisted houses, and has since built or gut-renovated dozens of residences on surrounding streets. In all, ACDC has returned over 200 units to the neighborhood housing stock.

In 1978, at the request of officials at Inglis House, a residence for the disabled, ACDC agreed to develop a project for the handicapped. To that end, with backing from the Episcopal diocese and a board drawn from the community, ACDC spearheaded an effort that formed the Partnership for Urban Development. Armed with the partnership's expertise (and the seed money it raised), as well as a committee of 22 advisors, two housing consultants, and a lawyer knowledgeable in the ways of bureaucracy, a proposal was submitted. It took five attempts over the same number of years, however, before HUD funded the project. How did ACDC finally do it? "The architect documented *everything*," responds Washington. "It was so well grounded that HUD had to accept it. And we stayed on our knees a lot." HUD holds the 40-year mortgage under its 202 program. As is typical for such developments, Section 8 subsidies bridge the gap between a fixed percentage of each resident's income paid as rent and the fair-market rent established by HUD for the region. To stretch its funds, the agency required the city to make both on- and off-site improvements using block-grant funds.

Architect Cecil Baker found the government inflexible on many issues. "The client wanted a project that was 100-percent accessible to the handicapped, and this was the first of a series of items that flew in the face of HUD regulations." Among other elements of the design requiring negotiation were the mix of studio, one-bedroom, and two-bedroom units; the issue of whether handicapped persons would choose to live in the Diamond Park neighborhood; and compliance with historic-district regulations. Leonard J. McCuen, one of the HUD architects who worked on Diamond Park, explains: "This is a very competitive program, and

The first entirely wheelchair-accessible housing built under HUD's 202 program, Diamond Park has been called a "minor miracle" for incorporating low-cost assisted housing into a beleaguered but historically significant neighborhood.

Located on small city blocks typical of Philadelphia, the structures face streets at front and rear. The front facade, along a relatively wide thoroughfare, looks out on a playing field (above and opposite). The rear, adjoined by row houses facing a narrow street, forms a courtyard in which the main entrance is flanked on the left by a garden (tree-shaded but still awaiting some minor construction before being developed by the residents) and on the right by a small parking area. Security concerns and plan economies required a single wheelchair-accessible entrance on the rear facade, although front-facing fire exit stairs (opposite) recall 19th-century stoops.

Though less tidy than a conventional design, the open plan of the units offers flexibility as well as accessibility. One resident, for example, has opted for a dining table in a traditional arrangement (top), while another has placed a smaller table in the kitchen (bottom), enlarging the sitting area to accommodate visits from an extended family. A partition supporting mailboxes in the lobby (opposite) encourages neighborliness by diverting residents through the adjacent, as yet underfurnished, common rooms.

our review process is comprehensive. Each project is analyzed for conceptual design, real-estate valuation, and compliance with fair-housing requirements. We look at whether the sponsor can demonstrate the ability to develop and then run the project." Christine Washington is a little more sanguine than Baker—she has been through it more often: "The process is the process. It's very costly, and that is the most frustrating thing, because while you wait for answers the [project] cost escalates."

In Baker's approach to the design, the $50-per-square-foot budget was uppermost in his mind. The massing of the structures is identical, the smaller of the two sites governing the dimensions. Each is a simple rectangle ("no fancy shapes," says Baker) which, with neighboring buildings, forms a tree-shaded open space in the rear, the location of the entrance. The rhythm and scale of nearby row houses is evoked by simple gestures in ochre-brick detailing. Within, a small lobby opens onto generous common rooms (see plan opposite); the apartments are located along straight, double-loaded corridors.

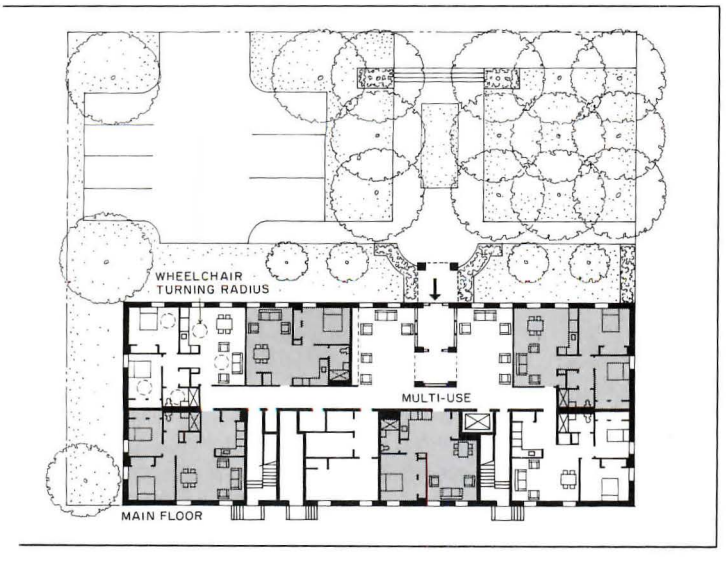
The 202 program was originally set up to support independent, fixed-income elderly persons. ACDC's scheme broke ground in proposing independent living for the *non*elderly handicapped. The advisors to ACDC further suggested pairing individuals with complementary disabilities: a blind person without a hearing impairment, for example, could help out a deaf but sighted person, and vice versa. "HUD cost-containment policies are such that property standards established as minimums are now considered maximums," Baker observes. "The Minimum Property Standard said that the master bedroom had to be a given size but would not allow additional bedrooms to be as large. This meant that we have had to ask unrelated people [sharing one unit] to choose." (HUD relented slightly on the mix of apartments, allowing more two-bedroom units, but would not change its room size standards.) Accommodating the turning radius of wheelchairs without exceeding HUD regulations became the single greatest obstacle for the architect, however, and caused a rethinking of apartment-layout conventions. In such small spaces, Baker might have tucked the kitchen into a galley, its outside walls forming a corridor separating the more public living room from the bedrooms and bath. But by drawing together kitchens and living areas, he has instead fashioned easily navigated kitchens-cum-corridors (plan, and photos left). The openness of the design is a boon to residents, who have reinterpreted the functional plans to suit their own needs, giving the apartments a personal stamp in ways that a richer or more definitively architectural approach might have precluded. The tenants are the first to declare that this sense of independence and control over their own lives—a freedom the unimpaired population takes for granted—is profoundly important.

Fully occupied, with a lengthy waiting list, Diamond Park is unquestionably a success, and not just in bricks and mortar. HUD has reviewed its procedures and, all parties agree, is now more flexible. "We're going after all-handicapped-accessible projects," asserts McCuen. Like many housing advocates, he foresees even greater dependence on community groups as sponsors. But the length of the process and the difficulty of staying motivated and organized throughout is still a major stumbling block.
Baker would work again with ACDC but has turned down commissions from other groups. "We were afraid they didn't hav what it takes." *James S. Russell*

Diamond Park
Philadelphia, Pennsylvania
Architect:
Cecil Baker & Associates—Cecil Baker, partner-in-charge; James Wolters, project architect; Kate Cleveland, William Cheeseman, staff

Engineers:
Snyder Hoffman Associates, (mechanical/electrical); O'Donnell & Naccarato, (structural)

Consultants:
Donald J. Reape, Urban Partners, (housing consultants)
General contractor:
Fletcher & Sons



Housing for the elderly:
Robert Shaw ECHO Village
Austin, Texas
Tom Hatch Architects

A gentle echo

In addition to the five cottages arrayed along a central commons, Robert Shaw Village for the elderly includes a larger (550-square-foot) two-bedroom house (center left in photo opposite) for a live-in manager who maintains the property and assists the householders. To give it identity, the manager's residence is oriented to the street and one of the site's peripheral off-street parking areas, but links back to the village green with a rear porch and laundry room shared by all residents. A "gateway," gazebo, and common garden complete the complex.

In Austin, as in many other expanding communities (as recently as 1984, Austin was the fastest-growing city in the country), successive spurts of suburban growth have leapfrogged over the long-settled residential areas around the central business district. Predictably, the ensuing drain of people and money has opened these areas to decline; less predictably, their present, mostly low-income, mostly minority, residents now have mixed feelings about reversing the spiral. As architect Tom Hatch, whose client roster includes several such neighborhoods, observes, "They want to fix things up—but not too much."

The issue is no less than the inner-city neighborhoods' survival as havens of affordable housing, which is increasingly threatened by the same proximity to downtown that once contributed to their neglect. In addition to pressure from commercial interests eying close-in sites for development, the communities are resisting the blandishments of gentrification, which could boost housing costs—particularly for rental units—well beyond the reach of current occupants. And the Blackland area, home of the vest-pocket village for the elderly shown here, also faces inroads from the bordering University of Texas, whose pursuit of space for expansion is swallowing up houses and land by the block.

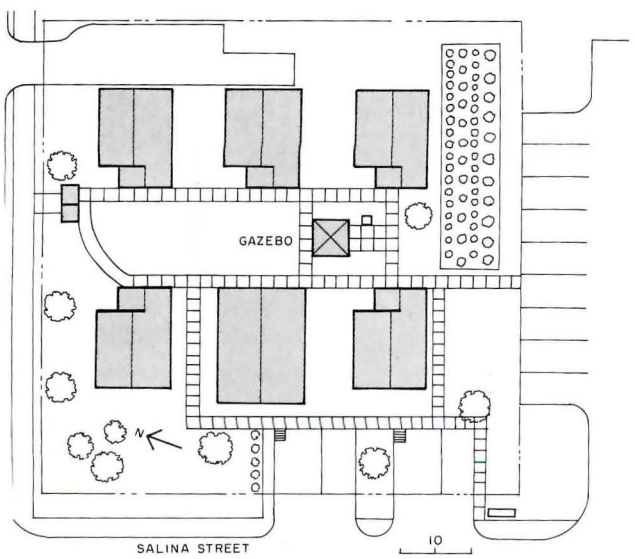
With funds coming to hand in trickles rather than a reliable flow, Blackland and other inner-city neighborhoods have found the most promising route to controlled revitalization to be infill development of new or renovated single-family detached housing, owned and managed by the community itself through a nonprofit corporation. In pursuing it, they have been abetted not only by Tom Hatch's firm, which has worked with them for the past five years, but also by Henneberger, Paup + Associates, who, having helped organize the neighborhood development corporations, continue to serve as consultants and developers.

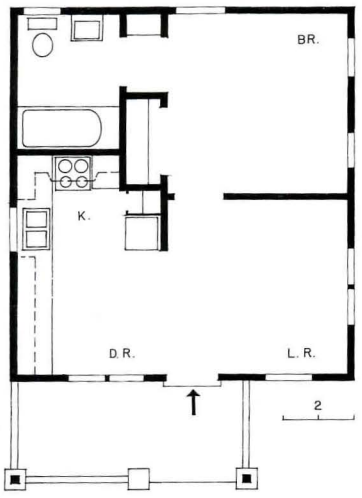
Perhaps the most telling sign of the residents' hands-on participation is the glove-fit between housing and setting. Not only do the client/users insist on compatability with existing dwellings, they hold firm ideas about which precedents should be honored: no "slave-quarters" board-and-batten siding or metal roofs, thank you. In Tom Hatch's sympathetic hands, client conservatism and minimal budgets have translated for the most part to a decorous '30s-bungalow style—"friendly and easy," he says, "with just a bit of edge to it"—so unassuming it takes a second glance to sort the new houses from the old.

Robert Shaw Village, which Hatch describes as the littlest PUD in Texas, exemplifies both the decorum and the timelessness. The enclave is based on the ECHO (Elder Cottage Housing Opportunity) model of compact, energy-efficient residences for old people, usually placed behind or beside an existing single-family house. Here, five one-bedroom, 440-square-foot cottages, plus a two-bedroom house for a resident manager, are instead grouped together on a single corner parcel, but they offer residents a comparable balance between the privacy and independence of living in one's own separate house and the companionship and sense of security of having watchful neighbors nearby.

In true village fashion, the tidy cottages face one another across a common green, their ample front porches providing householders an easy half step between solitude and sociability. Introduced by a freestanding gate that doubles as a mailbox shelter, the central courtyard also boasts a gazebo with adjacent barbecue pit, which has become the village social center, and a shared vegetable garden. *M. F. G.*

A vest-pocket village of tiny cottages in a subtle update of the neighborhood's favored bungalow style houses an "extended family" of old people with fitting dignity and decorum.





Familiar forms and materials —trim white teardrop siding, green gabled roofs, pier-cornered front porches—root the new cottages in the old neighborhood, despite a tautness of detail that betrays their present-day provenance. Constructed on-grade for easier handicapped access, the compact but efficient houses offer their elderly residents such amenities as air cooling, wheelchair-accessible baths, and generous storage, in addition to the shared common spaces, at a cost low enough to allow rents of only $100 a month.

Robert Shaw ECHO Village
Austin, Texas
Owner:
Blackland Neighborhood Development Corporation
Architect:
Tom Hatch Architects—Tom Hatch, partner-in-charge; Pat Cornelison, project architect
Consultant:
Henneberger, Paup + Associates
General contractor:
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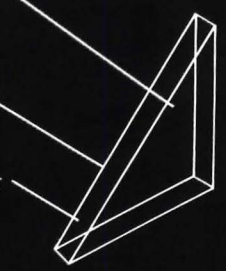

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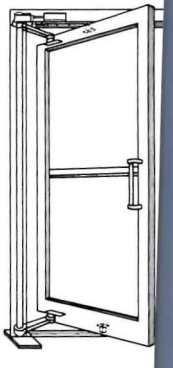

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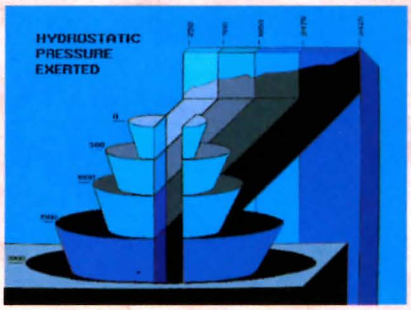

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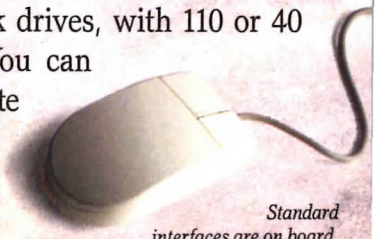

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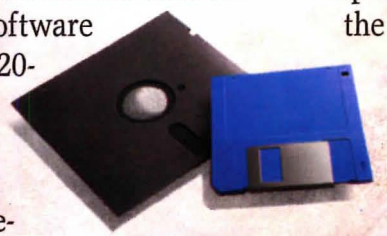

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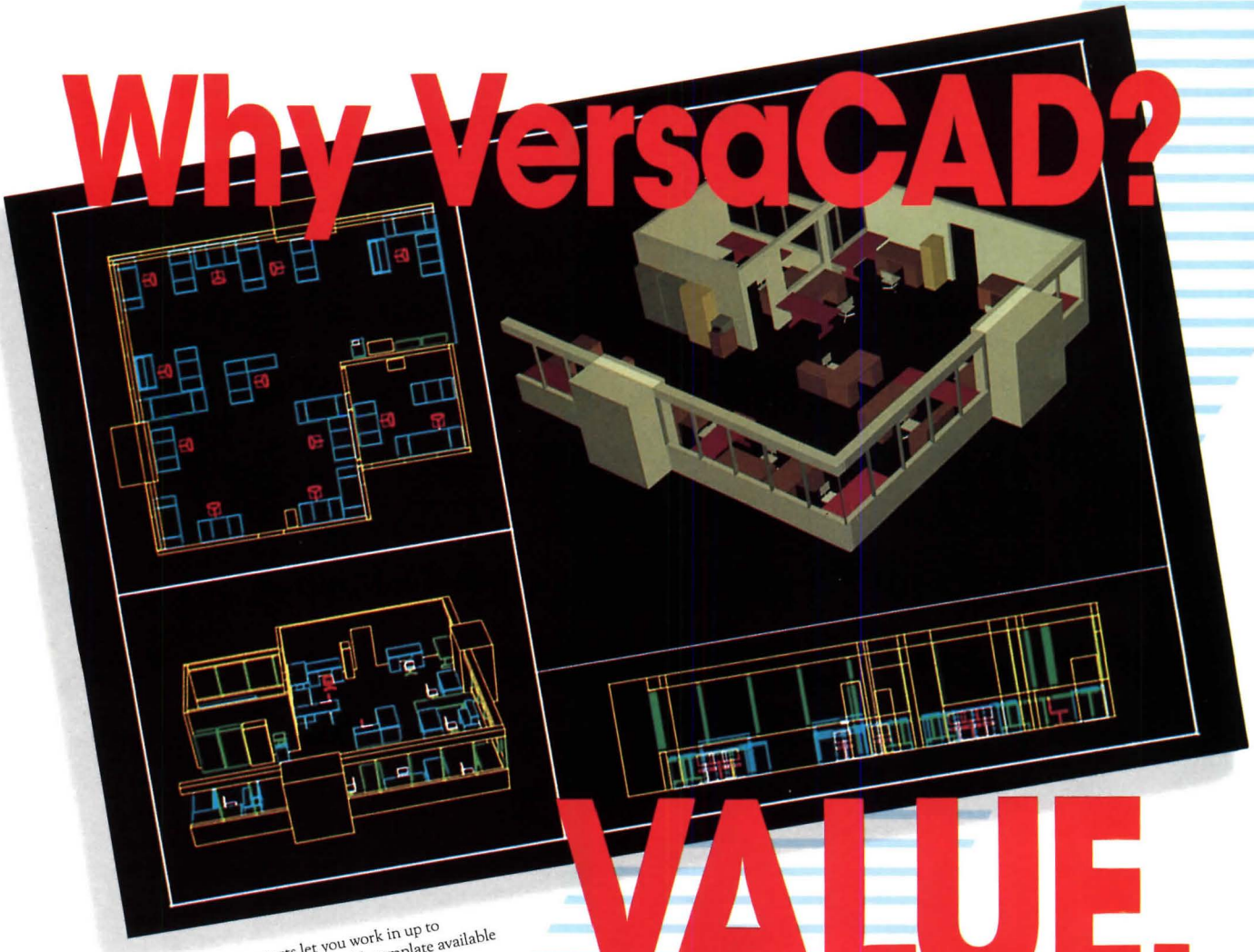

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Software reviews for architects

By Steven S. Ross

Drawbase 105

Versatile 2-D/3-D layer-based CADD software with excellent database facilities, a good command language that allows easy customizing by users, and a wealth of on-screen drawing tools. Drawbase runs successfully on computers as small as the old IBM XT and compatibles, but requires a digitizing tablet to routinely access its multitude of commands. A versatile shading program is built-in (although 3-D shading and shading with hidden-line removal is a $495 extra). Views in 3-D are 1-, 2-, and 3-point perspective, orthographic, and axonometric. Drawbase is capable of true 3-D. That is, changing something in the 2-D view will automatically change the 3-D. It will also update the underlying database. And users can walk around (or through) a 3-D view.

Equipment required: IBM XT, AT, PS/2 or compatible; also runs on the HP VECTRA (a near-compatible), 640K, PC-DOS or MS-DOS 3.1 or higher, hard disk, coprocessor chip (8087, 80287, 80387), 12- by 18-inch digitizing tablet (strongly recommended; a 12 by 12 will not work) or Logitech C7 mouse, parallel port (for security device). The program files take up about 5 megabytes on disk, and drawing files (with their associated databases) can run 100 kilobytes or more, each. That means a 20 megabyte disk is about the minimum.

Accepts input directly from Calcomp, Numonics, or GTCO E-size digitizers as well, even with a tablet also installed. Handles CGA, PGC, VGA, IBM VGA 8514A, Image Manager 1024, Vertcom H16 or M16, Artist 10, Epper, Imagraph, or Hercules monochrome graphics boards.

Graphics output can be to plotters similar to the Calcomp 1043 (960 or PCI format), Houston Instruments DMP-42, or any Hewlett-Packard (HPGL) system. Data can be picked up directly by most word-processing software, or printed through an HP laser printer or any printer using Epson/IBM control codes.

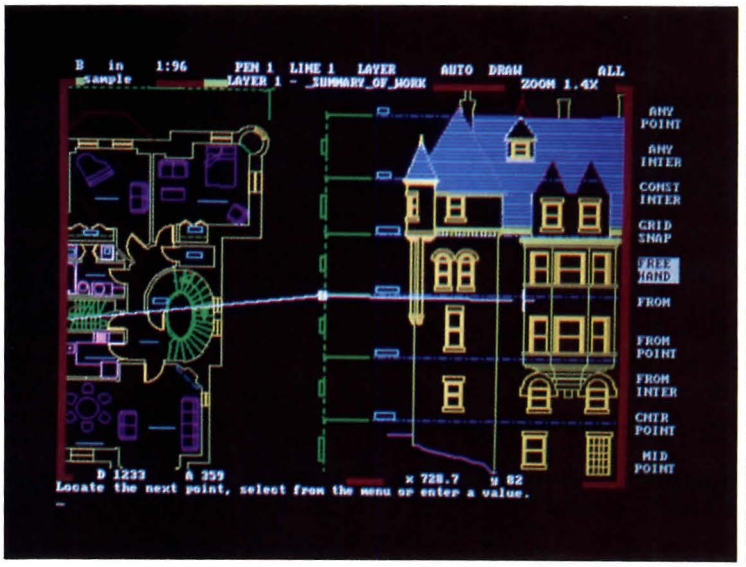
Vendor: SKOK Systems, Inc., 222 Third St., Cambridge, Mass. 02142. 617/868-6003, 800/CAL-SKOK. Prices (including 30 days service): 2-D, $1,995; 2-D and 3-D, $2,995; 2-D and database, $3,995; 2-D, 3-D, and database, $4,995. Service contract, $50 per month. Drawbase SHADE, $495.

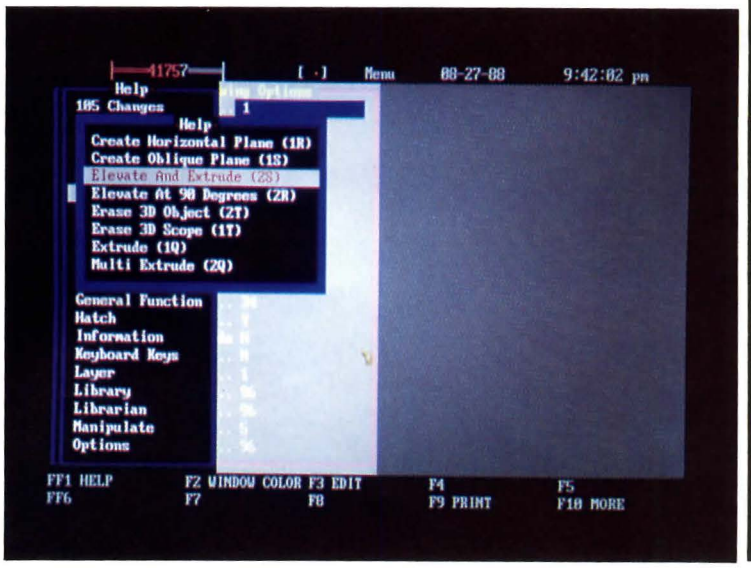
Summary

Manual: Good command reference manual, fair tutorial (an improved version was due as this issue went to press), inadequate installation instructions (see below). Some useful information on the command language and on equipment configurations is included only in text files that must be printed out by the user. Little guidance on using 3-D commands.

Ease of use: Good for so versatile a package. A large digitizing tablet (and the supplied overlay) is all but mandatory, however. There is an on-screen menu system (invoked with the ALT-F9 key combination), but it is cumbersome and not at all intuitive. The PAN command is within Zoom controls, for instance, and the Librarian commands refer to storing and saving the main drawings, not the libraries of standard symbols. Frequently used command sequences can be programmed into the function keys to get around the menu. Hitting the F1 key brings up the help system's directory. The system is not context-sensitive (that is, it does not sense what one might need help about), but is fairly easy to move around in.

Top: The command line at the bottom of the screen is best for entering coordinates. Use the menu or the digitizer for commands. Bottom: On-line help is voluminous. Sub-menu will bring forth several hundred words of text.





Most commands that take a long time to execute can take place in the background while executing common commands such as pans, zooms, and area calculations. There are lots of nice touches, like automatic cleanup of wall intersections—including nonperpendicular walls. Even the hatching updates properly when objects are stretched.

Error-trapping: Good. It is difficult to lose a drawing. In fact, Drawbase automatically backs up the files of a drawing into a temporary file *before* one can start working on it. This essentially guarantees there will be room for the day's work when it is saved back to disk. It is fairly easy to move backward, "undoing" unwanted changes to drawings. (The command is EraseLastElement; repeating it removes the elements in the reverse order in which they were placed.) Error messages are cryptic, but intelligible if the reference manual has been read. The five files that make up each drawing can be collapsed into one for merging into other drawings.

The underlying database updates automatically as the drawing evolves. As with most

Continued on page 137

Mr. Ross is a prominent computer consultant and a regular contributor to RECORD.

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Tasks Per Project (Max)	1,560	1,560	Unlimited
Mainframe Link	Yes	Yes	Yes
Calendars	Yes	Yes	Yes
Export/Import (Partial or All)	Yes[1]	Yes	Yes
Multi-Project Resource Pooling		Yes	Yes
Built-In Graphics Output		Yes	Yes
Networking		Yes	Yes[2]
Plotter Support		Yes	Yes
Multitasking			Yes

[1] Exporting only [2] When LAN Mgr. is available

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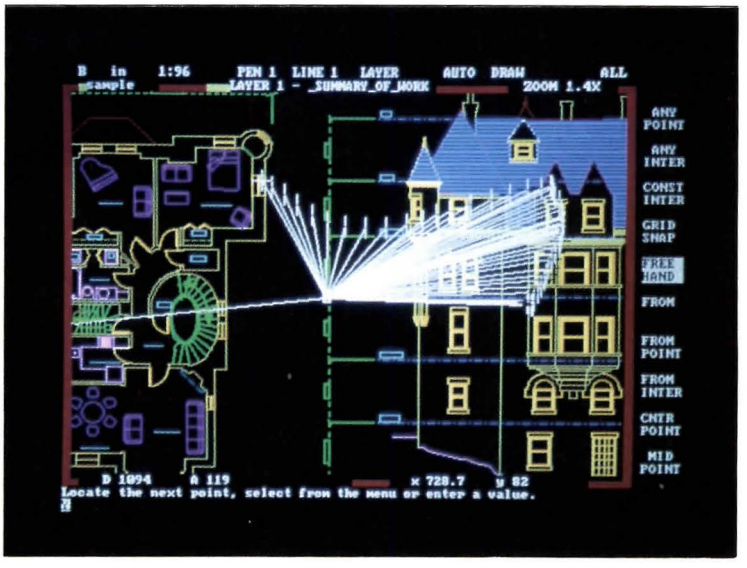
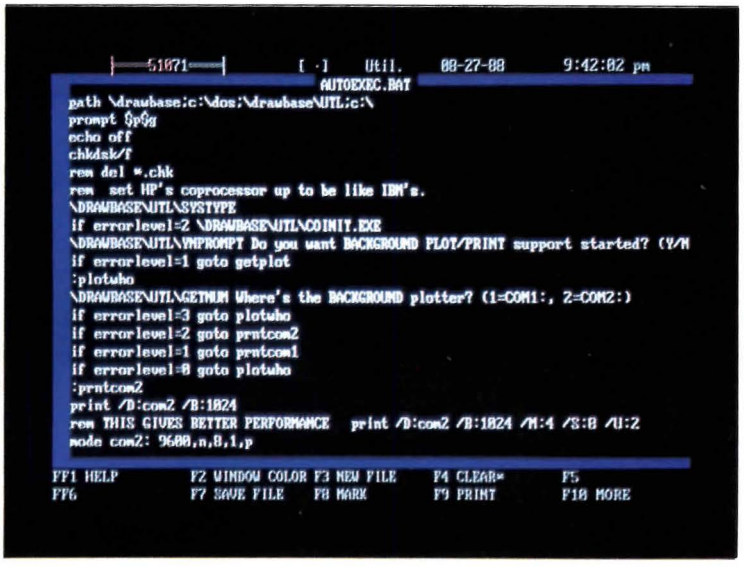
Software reviews continued from page 135

Top: Cursor traces create an annoying clutter on Paradise EGA display, staying on the screen until the user specifies a redraw, usually with the DISPLAY ALL command. Bottom: "Editor" option opens the door to a powerful database function. Here, the editor option is being used to change the AUTOEXEC.BAT file created by Drawbase during installation.





CADD software for personal computers, however, changing data types or lengths of allowable descriptions in the database can cause problems. Estimate a price (for a window type, for instance) as a whole number integer value, and then change the data type to reflect a dollars-and-cents amount. The software may be unable to calculate the total cost by multiplying the number of windows by the price.

An object or group of objects can be moved from one layer to another with a single command. The software checks to make sure that objects only exist on one layer at a time, preserving the integrity of the underlying database. Reports can be derived from any databases on the disk—even those associated with separate drawings that may not be active (or updated to reflect changes). But users savvy enough to do that are probably savvy enough to do it right.

Drawbase Version 105 is a competent package for producing drawings, and an excellent one for associating data with those drawings. Need to work on something at home or at a client's office? Want to use a low, cheap machine for training, or in an emergency? Take your drawing files and the Drawbase security lock with you, and you can run the software on an IBM PC/XT clone with hard disk, mouse, and Hercules monochrome graphics—a mere $1,300 to $1,500 worth of equipment.

Worried about compatibility with more widely used software, such as AutoCAD and VersaCAD? Drawbase has an excellent module for converting files to and from the DXF standard. The conversion preserves much of the underlying database—the list of items in the drawing—in a useful, structured format. To take advantage of all of the versatility, however, an architect's office will have to develop its own programming expertise, or have such expertise on call. Part of the reason is that the community of third-party developers for Drawbase, among architects, is small. Also, Drawbase lends itself to special situations. It can accept or produce raw data in mainframe formats such as comma-separated values, for instance (that is, with data points separated by commas instead of spaces or tabs). The number of people who use such capabilities is not large, but for those in an office that needs such data because they're working with an engineering group or because scheduling information is voluminous, Drawbase may be particularly attractive.

Another example: the six supplied fonts are adequate for most purposes. But for those who want different ones, edit them with the font editor that's included.

The expertise a user needs starts with the installation. Earlier versions of Drawbase had to be installed on drive C. This version is advertised as being installable on any drive. It is, but it can't be installed by following the manual. When we tried to install Drawbase on a 40-megabyte drive partitioned as a small C drive (holding DOS) and a large D drive (holding everything else), Drawbase correctly located its program files on drive D.

Drawbase placed its own CONFIG.SYS file on drive C, replacing (and renaming) the original CONFIG.SYS file that contained the special instructions allowing DOS to recognize the D drive in the first place. If the computer had been rebooted at that point, the user would have had some difficulty putting everything back together. The installation program should have merely added its instructions to the existing CONFIG.SYS file. The Drawbase CONFIG.SYS file activates the software that makes a mouse or tablet work. It placed that software in a subdirectory of drive D, but assumed it was on C as well. The mouse, therefore, did not work until we manually rewrote the CONFIG file.

The installation program also wrote a new AUTOEXEC.BAT file, which it was supposed to use in place of the existing one. But instead of placing the file in the root directory of drive C, Drawbase put the new AUTOEXEC file in its own subdirectory on drive D. Users could start Drawbase by going to drive D, changing directories to the Drawbase subdirectory, typing AUTOEXEC, then typing DRAWBASE. But that could have all been included in a file called DB.BAT that the installation program creates, but that bypasses the AUTOEXEC file on drive D. Get it? Easy for one thoroughly familiar with DOS. Impenetrable, if not, although the extra twist of handling both the CONFIG and the AUTOEXEC file wrong—but wrong in different ways—may be unique.

Drawbase puts drawings up on the screen—even a simple Hercules or EGA screen—quickly. There is also provision

Continued on page 139

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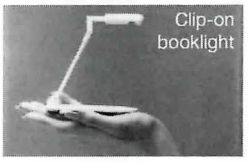

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Software reviews continued from page 137

Drawbase is a competent package for producing drawings, and an excellent one for associating data with these drawings.

for many dual-screen arrangements, with the drawing on one screen and the underlying data on another. That turned out to be particularly important when we used the software with a Paradise AutoSwitch EGA card; screens quickly got cluttered with cursor movements and other extraneous material. The Paradise card is not one of those certified as working with Drawbase. Either it or Drawbase is nonstandard enough to cause the problem.

The DISPLAY ALL command redraws the whole screen. Various other Display options can be used to reduce redraw time even more, by forcing a redraw only of a section or specific layer. Redraw commands are used often enough that a function-key combination such as CTRL-F10 should be assigned to one or two of them.

Drawbase has a particularly easy system for creating forms (data sheets) for attaching attributes to drawings. Simply select the Form Window command, then select the Add New Form option. At this point, Drawbase's architectural pedigree shows, a form can be attached to an entire space, a door, a room, or a building. Type SPACES to describe the form, and accept the message to "append attribute" to the drawing by hitting the INS (insert) key. Next, select the kinds of attributes wanted from long list—area, perimeter, lighting, doors, windows, project name, and so forth—or add to the list.

Up to 50 attributes can be visually connected to any object in the drawing. The list can be any length; 200 didn't slow Drawbase down. Technical support says it begins to get sluggish at 500. There can be up to 1,000 lists in a drawing, and up to 32,767 database records. Attributes can be transferred to other software, such as Lotus 1-2-3. SKOK, for instance, has experimented with moving data from Drawbase into Paradox, a standard database package. Paradox could, in turn, be used to write a facilities management program, or other applications. The database can also be edited globally (to change a labor cost, for instance) from inside the drawing (Drawbase has its own word processor built in) or outside.

Handling of units and tolerances is intuitive. Users set a tolerance for any measure. Dual units can be attached to a drawing—metric and English, for instance, with drawings up to about 17,000 units wide. A drawing can be dimensioned in inches, then redimensioned in millimeters with all displayed dimensions and tolerances recalculated automatically.

Nine types of lines can appear on screen, offering different widths and dash patterns. Thus, drawings can be set up for plotting fairly close to the way they appear on the computer. Users can assign an on-screen color to a given pen in a plotter carousel, too. Color (not only hue, but also saturation) can be changed in a 3-D model even after it has been shaded—a great time-saver. Any view (shaded or wireframe) can be saved as a "slide." Slides can be played back in groups for presentations, with automatic intervals or outright pauses between views.

There are four standard hatch patterns, including one that simulates brick. Users can create their own patterns by writing command macros. The macros, in turn, can be attached to a single command key or to a single "button" (area on the digitizing tablet). Macros can also be combined into entire programs.

Stepping Out II

A screen-extender program for the Macintosh, ideal for presentations. It allows users to zoom a section of an original drawing to 16 times the original on-screen size, or reduce a drawing to one-fourth original size. The effect is one of seeing the original screen greatly enlarged, through a "window" or magnifying glass consisting of the physical Mac screen. This "window" can be moved over any part of the original screen. *Equipment required:* Macintosh Plus, SE, or II, System 4.1 or higher, Finder 5.5 or higher. Works with Multifinder. Because the software stores the screen image in memory, zooming to really huge screens requires huge amounts of RAM. Doubling the virtual screen size requires roughly an extra 200K for a monochrome image. Does not work with large 24-bit color monitors for the Mac II. Does not work with common screen-saver programs such as AutoBlack (which dims the screen after a short period of non-use, to keep the phosphors from burning out).
Vendor: Berkeley System Design, Inc., 1700 Shattuck Ave., Berkeley, Calif. 94709. 415/540-5536. $95.

Summary
Manual: Concise and to the point.
Ease-of-use: Flawless. It is easy to install (transfer the Stepping Out II icon to your system folder), easy to invoke (at any point in your presentation, go to the apple on the menu bar, choose the Control Panel, and move to the Stepping Out II icon). It is easy to change screen sizes (bring up the menu and choose one of seven preset sizes, or create a new size of your own).
Error-trapping: The only warning that memory is running short is that screen-scrolling slows down. Because Stepping Out II works only in RAM, it cannot change or damage disk files containing drawings. Sometimes, the original software (such as VersaCAD) can't be used to change screen size while Stepping Out II is engaged. Setting the control panel to automatically engage Stepping Out II before starting VersaCAD did not work—it froze the system with no warning. Start VersaCAD, then invoke Stepping Out II.

Say you're making a presentation to a client who has a Macintosh, and your designs were done on a Macintosh. But to play your designs back, the client needs a hard disk to hold your CADD software. And the drawings, with their underlying data, are huge and sluggish on the screen. What to do?

Convert the drawing files to a PICT format, and play them back to the client with a simple program such as MacDraft. Use Stepping Out II to zoom in on specific details.

You can even make changes on the screen and save the new art. Sections along the screen edge can remain normal size and fixed, leaving menu tools available for use. The menu bar at the top of the screen always stays normal size.

Or perhaps you are designing a poster or other large-page text output with a word processing program. Use Stepping Out II to reduce the image so all of it fits onto the screen at once, to check the layout. The reduction allowable is to 25 percent of original size on a monochrome monitor, 50 percent on a color monitor.

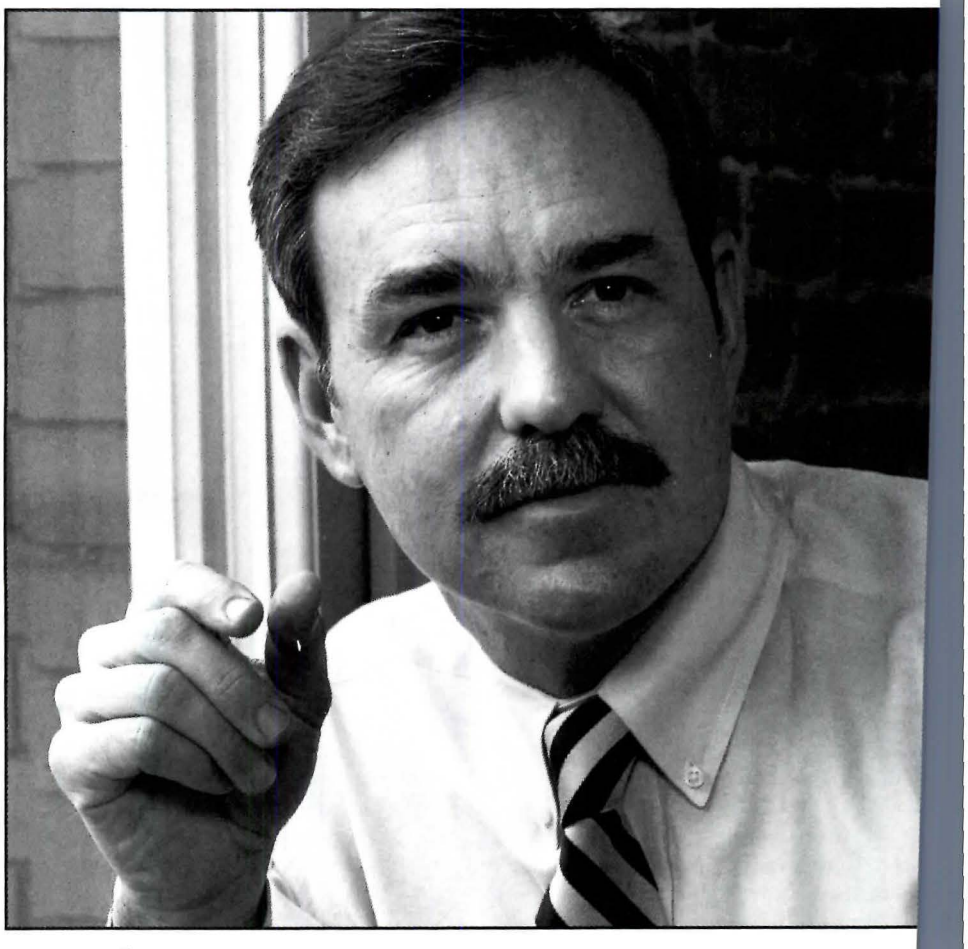
Apple never standardized add-on big screens for the Plus and SE, so not all of them work with Stepping Out II.

"The DPIC education program has caused us to do continuing education, at the most basic contract level, that we probably wouldn't have gotten around to doing as a whole group. There may have been a person here or there that would have been enthusiastic about it, but their premium credit program requires all partners and technical staff to participate and take the exams. So, without the program, I think it would have been unlikely we would have gotten 100% participation. But because it is required, we do get it. In fact, we are considering making the DPIC tests, including reading the book, a requirement for all staff.

I can't imagine anybody not participating in the educational program, because of the cost savings aspect of it. I mean, let alone the fact that it can help your practice.

I think we've saved on the order of $30,000 over two or three years. We've found DPIC's premiums, with and without the education program, to be generally competitive, so we do regard it as a savings.

You might find another carrier that could provide the same insurance for that net amount. But I think DPIC has been conscientious, in not saying, 'OK, we'll lower our price and forget about the educational program', and I think that speaks well for them."



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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New products: New York Design Shows

Design New York/Designer's Saturday/Fall Market—by any name, it happened October 5 through 8. We illustrate some of the more notable products introduced at these events.

1. Separate tables
In 1985, Howe Furniture commissioned engineer/designer Niels Diffrient to examine both the form and function of its folding tables, widely used in corporate, institutional, and hospitality interiors. The result: a reinvention of this type of table, according to Howe, with improvements that added neither cost nor complexity. The new push-button folding mechanism locks the legs either upright or folded against the table top. Plastic base end caps reflect the detail of the table corners; top options pictured include oak veneer with a solid wood edge and laminate with a polyurethane cushion edge. Howe Furniture Corp., Trumbull, Conn.
Circle 300 on reader service card

2. Supporting cast
Herman Miller expanded the Ethospace system with work and coat cabinets designed by Geoff Hollington and Jean Beirise. Ranging from 38 to 70 in. high, the slab-sided units may be freestanding or structurally attached to partial-height system panels. When framed, they work as return walls, lowering the cost of a workstation. Herman Miller, Inc., Zeeland, Mich.
Circle 301 on reader service card

3. Perfect posture
Part of Unifor's inaugural collection at the IDCNY was Aldo Rossi's Milano Chair for Molteni. The light-scaled chair, available in walnut and red or black lacquer, has curved back splines that pass through the seat slats. Unifor Inc., Long Island City, N. Y.
Circle 302 on reader service card

4. Dual purpose
This suspended version of the Mikado low-voltage light acts as both sculpture and lighting fixture. Rods with MR16 bulbs may be placed like Pick-Up-Sticks at any position between powered aluminum extrusions connected to a remote transformer. Design: F. A. Porsche. Artemide Litech, Farmingdale, N. Y.
Circle 303 on reader service card

5. Power to the desk
The Quest office system is based on the desk, not the panel: gable-end supports and structural metal raceways fit together to form a freestanding unit, which in turn carries acoustical privacy screens and snap-on finished modular components. Quest was designed by James Hayward. Kinetics, Rexdale, Ont.
Circle 304 on reader service card

6. Scaled down
Less monumental than the manufacturer's Onda seating, the Ondina Series by De Pas, D'Urbino, and Lomazzi uses a continuously curved tubular stainless-steel frame to hold seat and back cushions. International Contract Furnishings, Inc., New York City.
Circle 305 on reader service card

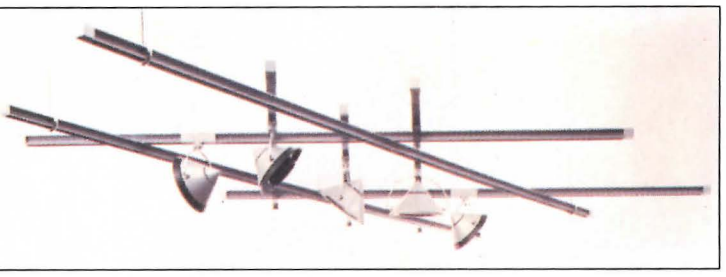
7. Contemporary wood
Calvin Morgan based the design of the Acanthus chair and tables on the geometric configuration of a circle meeting a square. The simple shapes, in either cherry or walnut, can be stained to match all Stow & Davis finish colors. Stow & Davis, Kentwood, Mich.
Circle 306 on reader service card

8. Objet d'art
Part of a numbered, limited-edition accessory collection from Gunlocke, Terrance Hunt's Spring Table has black, splatter-painted springs that appear to pass through a bird's-eye-maple top. A black leather-wrapped pyramid seems to balance the table like a seesaw. The Gunlocke Co., Wayland, N. Y.
Circle 307 on reader service card
More products on page 145


1


2

For more information, circle item numbers on Reader Service Card



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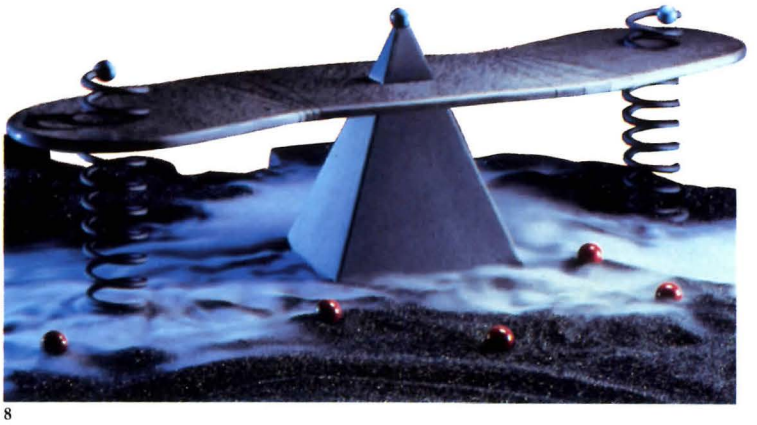

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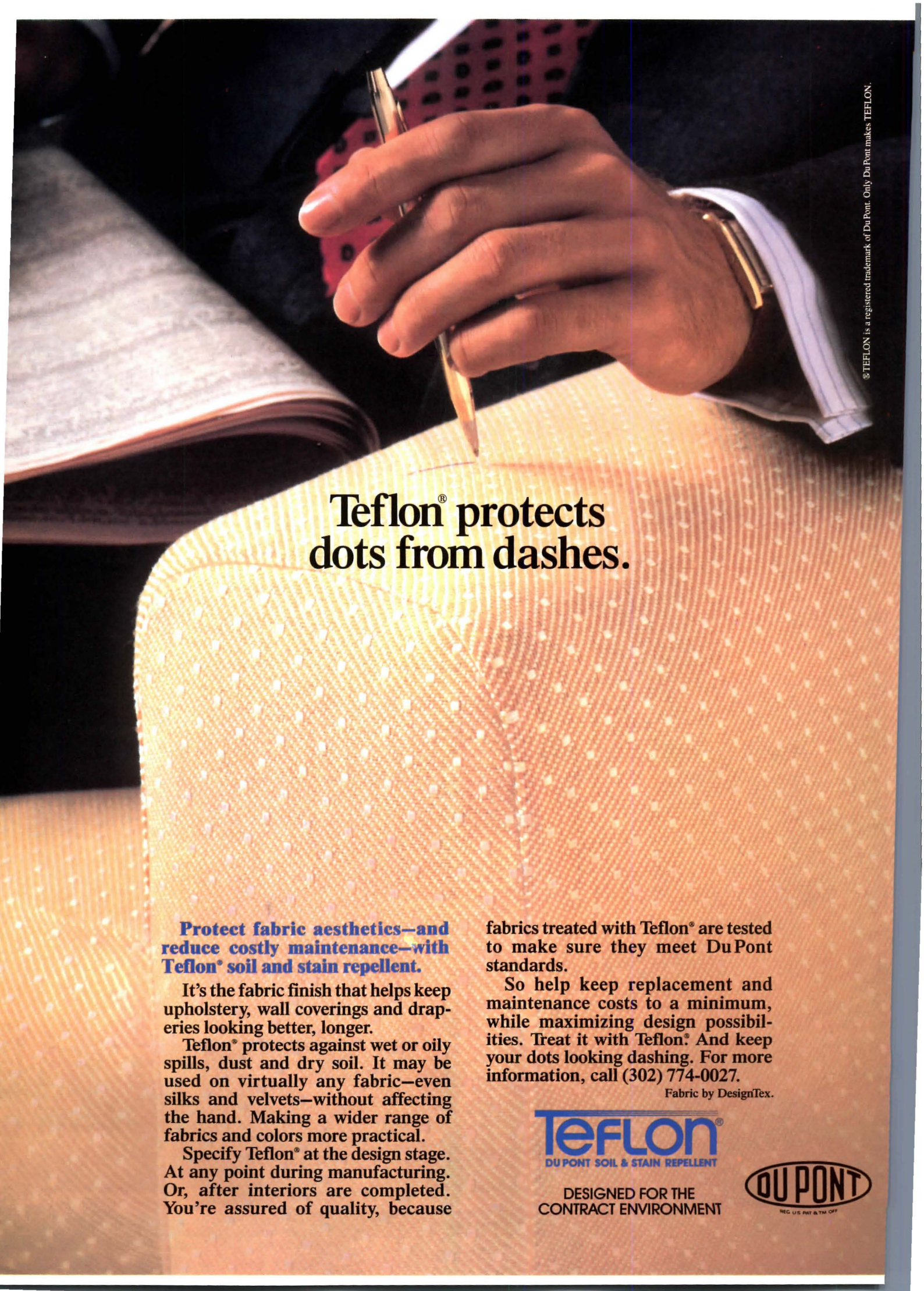

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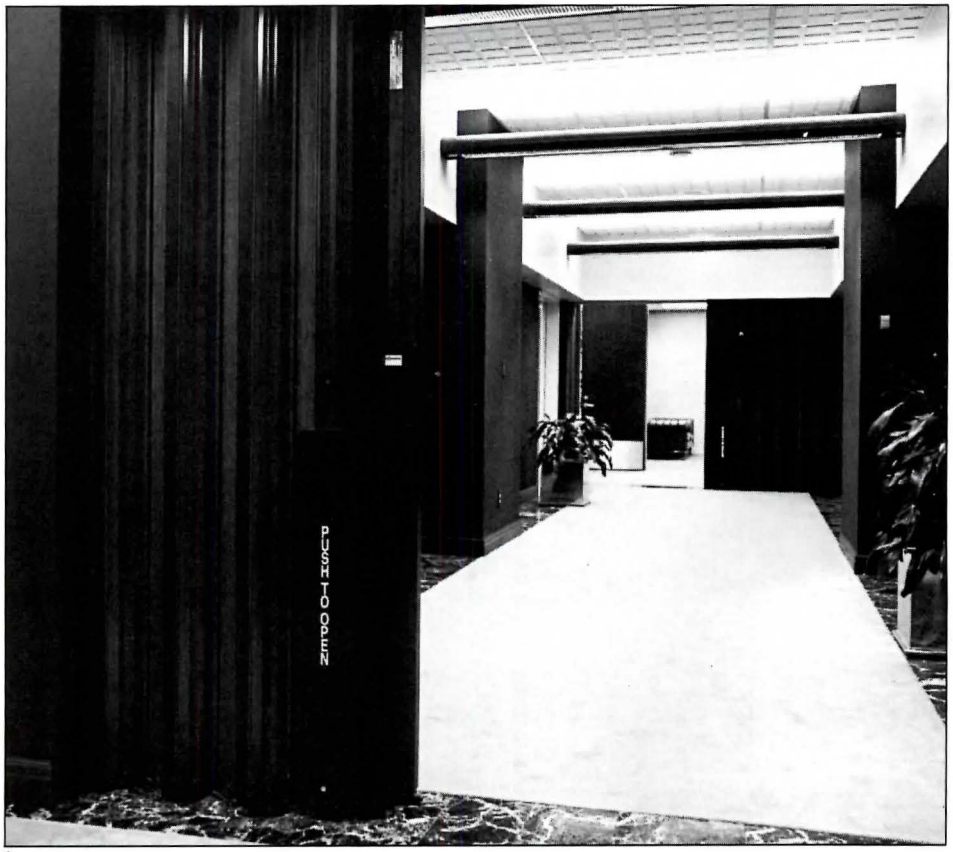

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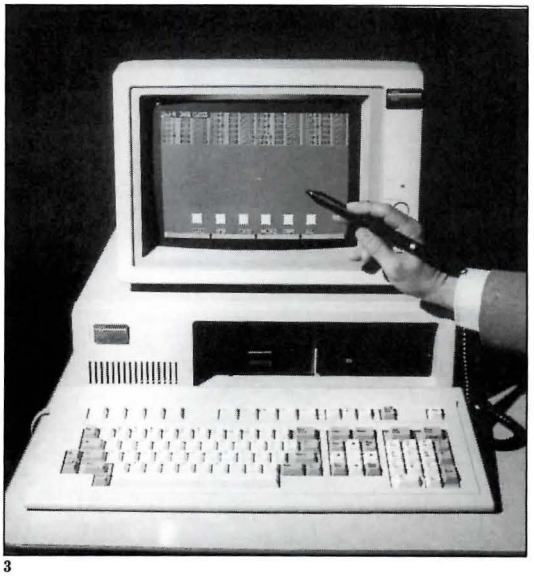

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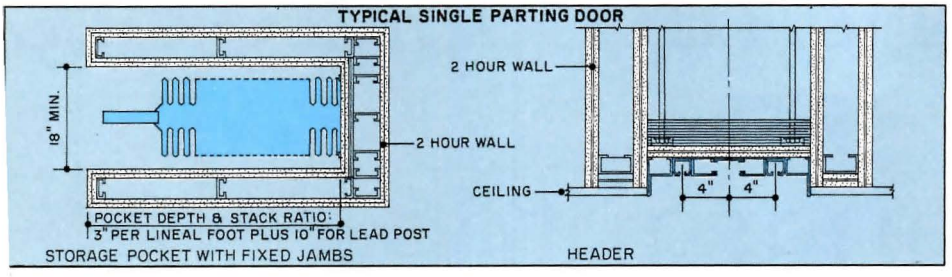


Accordion-type fire doors

New central-station computer-control equipment and recent NFPA, BOCA, and other code revisions have extended the application of double-panel steel folding doors as area- and occupancy-separation fire doors. The FireGuard horizontal sliding fire door has been approved by the Council of American Building Officials for use in place of side-hinged swinging doors as elevator-lobby separation in high-rise buildings (1). Installation of folding fire doors can reduce the amount of loop corridor space needed to provide protected access to the two fire exits required by code on each tenant floor. They can also convert some atrium spaces into vertical openings, meeting the required fire separation between adjacent spaces without sprinklers. FireGuard doors provide wide-span separation of mixed-use occupancies, with no practical limitation as to the length of the folding partition, according to UL evaluation of the door.

Doors fold compactly in wall pockets (2), with a stack ratio of 3 in. per linear ft for the 1 1/2-hour door. Made with hinged, insulated steel panels suspended on ball-bearing rollers, the FireGuard hangs from parallel tracks. Doors can adapt to curves with a minimum radius of 10 ft.

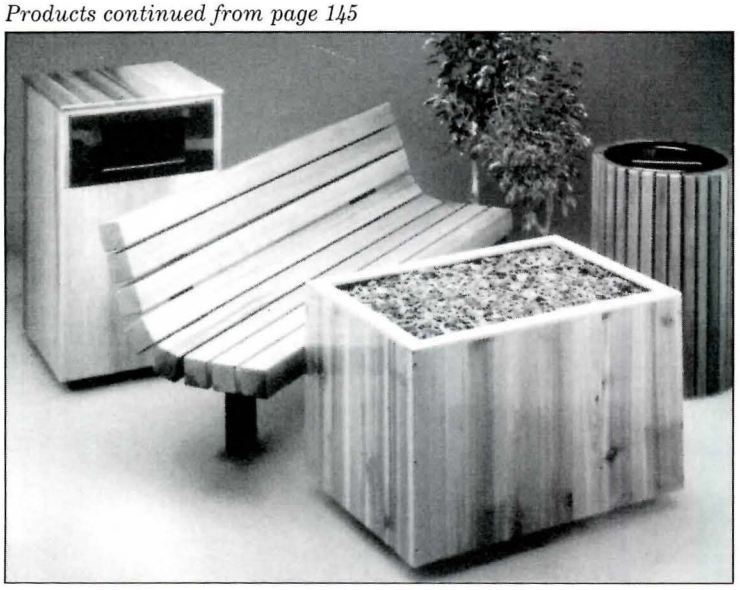
A central-control computer shows the position and operating status of each door in the system, as well as the condition of all back-up DC batteries (3). Office building personnel can electromagnetically lock these doors at night to prevent the loss of heated air from tenant spaces through elevator shafts, and to upgrade the security of the elevator lobbies. Off-hours workers need a key to enter, signaling the central unit that the door is open. But any hazard that activates the fire/smoke alarm instantly releases the electronic lock, permitting manual use of the panic hardware.

Vertical hardware requires only a slight bump—3 lb of pressure—to open the power-operated door (4). The Life Safety standards of NFPA 101, as well as the major building codes, now permit use of the FireGuard as a smoke barrier and horizontal exit in health-care facilities, as well as an exit from space when the rated occupancy is under 50. Won-Door Corp., Salt Lake City.

Circle 308 on reader service card

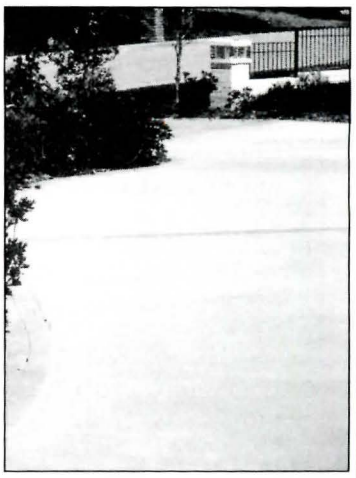
More products on page 146

Products continued from page 145

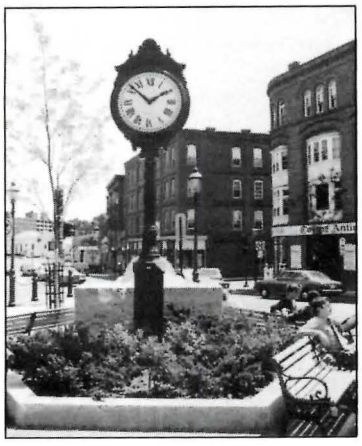


Site furnishings
Fibremart Designs, a line of wood and fiberglass benches, trash receptacles, tables, chairs, and planters suitable for most heavy-use public areas, offers a new surface finish for all fiberglass components. The orange-peel texture, similar to that used on refrigerator doors, is said to help hide the dirt and smudges of constant use. Kadee Industries, Inc., Solon, Ohio.
Circle 309 on reader service card

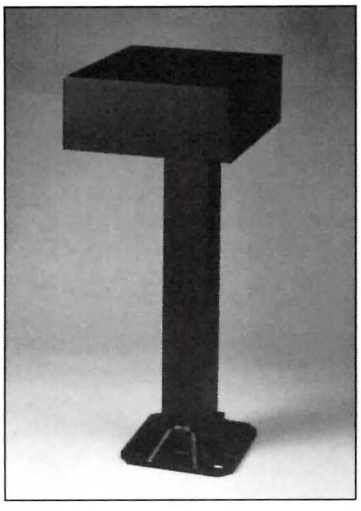
Playground equipment
A new item from Landscape Structures/Mexico Forge, this child-powered backhoe is made of vandal-resistant cast aluminum and galvanized steel. The SuperScoop, which rotates 360 degrees on maintenance-free bearings, is part of a full line of park and recreation equipment. Landscape Structures/Mexico Forge, Delano, Minn.
Circle 310 on reader service card



Concrete resurfacer
A spall-resistant, water-mix cement topping, Ardex A-300 is said to resurface any damaged or uneven exterior concrete driveway, patio, etc., in one pour. Applied with a spreader in a layer of from 1/8- to 1/2-in. thick, the concrete is ready for foot traffic in four hours, and may be driven on after 36 hours. Ardex, Inc., Coraopolis, Pa.
Circle 311 on reader service card



Post clock
A replica of the E. Howard post clock, the Good Old Days clock is cast of aluminum from the original molds. The translucent two-face clock dial is back-lit by fluorescent lamps. Crystals may be shatterproof glass or unbreakable polycarbonate; standard case and post finish is blue-black enamel. Electric Time Co., Inc., Medfield, Mass.
Circle 312 on reader service card

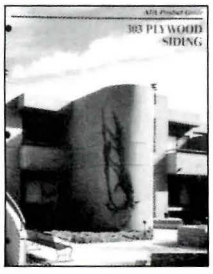


Landscape lighting
The Castellan downlight, a new linear style, is set on a 4-in.-sq post at heights of from 36 to 42 in. The luminaire has an easy-access hinged aluminum housing, and a precisely controlled, low-level beam spread from mercury vapor, metal halide, or high-pressure sodium lamps. Guth Lighting, St. Louis, Mo.
Circle 313 on reader service card

Access floor
New construction methods are said to have improved the lifetime service performance of SolidFeel II access floor panels for general offices and computer rooms. Features include four-way support structures, internal beams, continuous steel draw corners, and a cementitious fill. Panels may be ordered bare for carpet tile, or with integral trim. USG Interiors, Inc., Linthicum Heights, Md.
Circle 314 on reader service card
More products on page 151

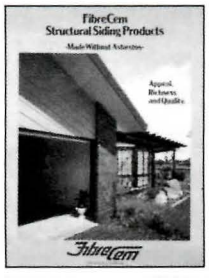
Product literature

For more information, circle item numbers on Reader Service Card



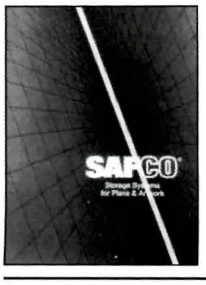
Plywood siding
A 22-page color brochure illustrates all patterns and textures offered in 303 Plywood Siding, and includes finishing, refinishing, and maintenance tips. American Plywood Assn., Tacoma, Wash.
Circle 400 on reader service card

Ornamental fencing
Picket fences and gates, made of polyester-coated aluminum and galvanized steel for commercial, industrial, and residential sites, are shown in a 4-page specification catalog. Anchor Fence, Inc., Baltimore.
Circle 401 on reader service card

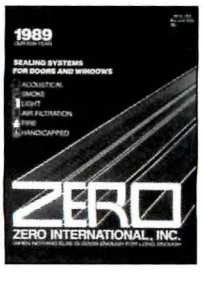


Cementitious siding
An 8-page brochure describes a new line of fiber-reinforced, nonasbestos cement siding, said to be particularly suitable for structural and decorative use in coastal environments. FibreCem Corp., Charlotte, N. C.
Circle 402 on reader service card

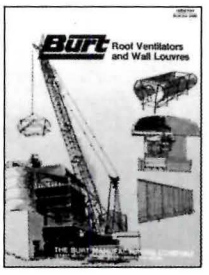
Brick sculpture
Waterwalls, intaglio murals, and three-dimensional sculptures made of brick are illustrated in an 8-page color booklet. Brick Institute of America, Reston, Va.
Circle 403 on reader service card



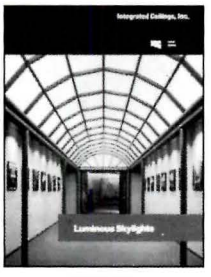
Graphics art storage
An expanded series of office storage systems for plans and artwork is described in a full-line catalog. Safco Products Co., New Hope, Minn.
Circle 404 on reader service card



Door and window seals
A 28-page architectural catalog covers rated systems for stopping the filtration of light, smoke, fire, air, and sound, including Z door seals that meet new NFPA 12-A standards. Zero International, Bronx, N. Y.
Circle 405 on reader service card



Ventilators and louvers
A 12-page technical bulletin explains design and construction features of ridge ventilators, wall louvers, and automatic heat and smoke ventilators. The Burt Mfg. Co., Akron, Ohio.
Circle 406 on reader service card



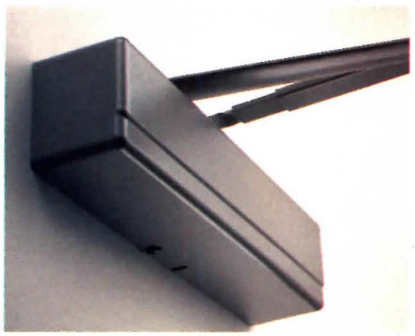
Light-diffusing skylights
Six different lightweight, aluminum-grid Luminous Skylights are shown in a 12-page color brochure, including the snap-together Trim-Beam System. Integrated Ceilings, Riverside, Calif.
Circle 407 on reader service card

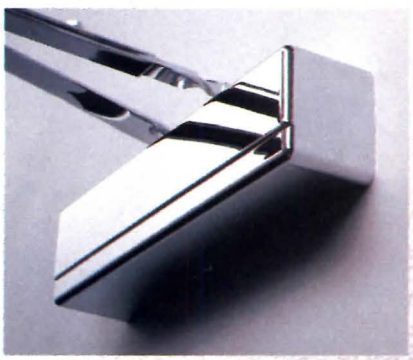
Structural-slab access flooring
An 8-page brochure explains how structurally reinforced S-Floor modules provide stability, comfort, and noise control in raised-flooring applications. Innocrete Systems, Inc., Cranford, N. J.
Circle 408 on reader service card

Ergonomic seating
A booklet shows the Cyborg chair in use by air-traffic controllers, funds traders, and general office workers, stressing the chair's contribution to productivity. Rudd International Corp., Washington, D. C.
Circle 409 on reader service card

Wood casegoods
One of a series of selection guides to office furniture, a color folder highlights dimensional an design details of conference tables, credenzas, desks, and storage units. CorryHiebert Corp., Irving, Tex.
Circle 410 on reader service card

Safety railing
Saftron balcony, stair, and safet railing, made of laminated vinyl in a number of colors and styles such as bamboo and wood grain are illustrated on-site in an 8-page brochure. Saftron Inc., Miami.
Circle 411 on reader service card





Elements of style. Hardware classics by Sargent.

Choose a design that's always right. Demand door closers engineered to perform and endure. Specify Sargent and get elements of style that include a century-long record of craftsmanship, service and on-time delivery.

For enduring qualities in door closers, locks and exit devices, choose the complete Sargent line. And get classic architectural hardware.

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Sargent, New Haven, Connecticut 06511
Sargent of Canada Ltd.

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TOP LEVEL INTELLIGENCE.

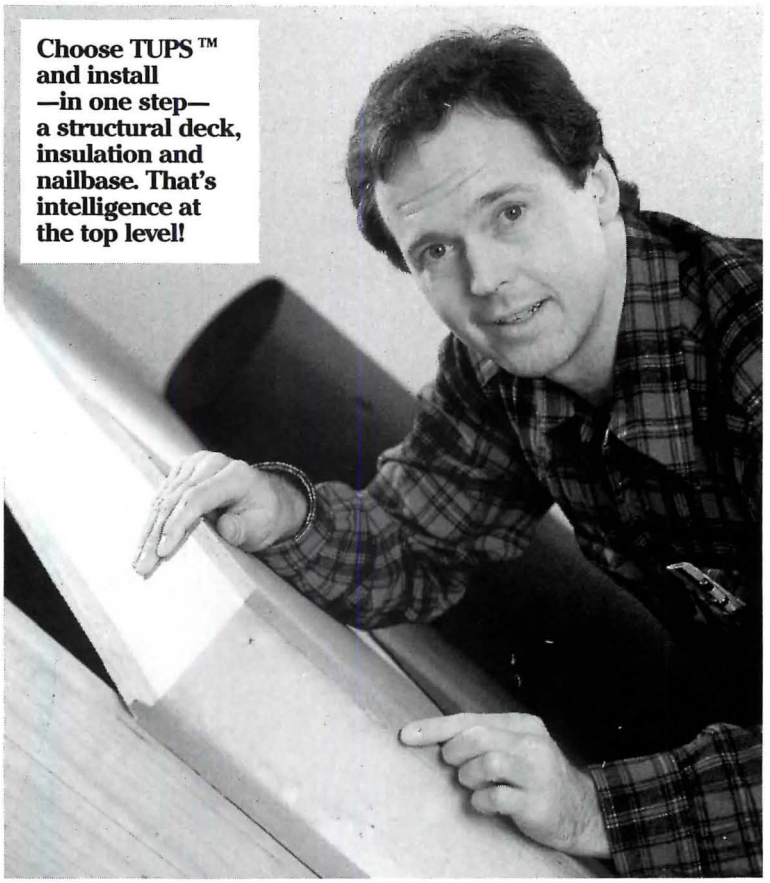
Build R/26 structural roof systems in one step with TUPS™: the smarter, faster way to build.

Smart architects have discovered an intelligent way to stay on top of current demands for higher energy ratings *and* lower costs.

They go to the very *top* and choose a structural, insulating roof system panel that can save energy, reduce cost, eliminate labor-intensive steps and cut time.

They choose TUPS.

Only TUPS features a load bearing, stress skin panel integrating structural Homasote 440 Boards with an insulating core of rigid polyisocyanurate foam.



Choose TUPS ™ and install —in one step— a structural deck, insulation and nailbase. That's intelligence at the top level!

In just one step, you can install an interior ceiling ready for paint or other finish. And an energy efficient layer of insulation. Plus a structural nailbase ready for shingles, slate, tile, BUR or single-ply membrane roofing system.

Panels sizes, nominal 4' x 8', 10' and 12' with T & G Long Edges	Nominal Thickness 4"	5"
R-FACTOR AGED	19.2	25.48
R-FACTOR SYSTEM*	20.43	26.71
Lbs. per sq. ft.	4.2	4.4
Foam Thickness (nominal)	2½"	3½"

*Includes air film and asphalt shingles.

All with one-step TUPS roofing panels. That's intelligence at the top level.

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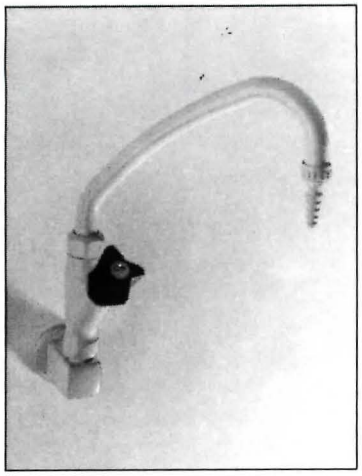
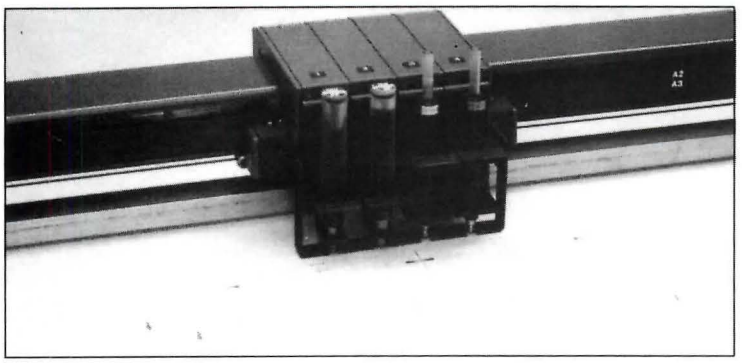
Circle 62 on inquiry card

Products continued from page 147

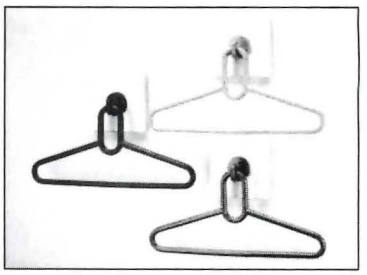


Laboratory fixtures
A new product line for this manufacturer, fixtures by Broen of Denmark come in a chemical-resistant white finish accented by handles color-coded for 10 different laboratory services: cold, hot, and distilled water; oxygen; nitrogen; etc. The faucet's nonrising spindle prevents the formation of calcium deposits. Fisher Scientific, Pittsburgh.
Circle 315 on reader service card

Air-tight clean-room door
Part of a new line of doors for pharmaceutical plants, hospitals, and research laboratories, the Ultra Clean 221 is made of noncorrosive, scratch-resistant stainless steel, fiberglass, or ABS plastic. A continuous air infiltration seal, set on all four sides of the electrical-pneumatic sliding door with no exposed fasteners, resists out-gassing to form an airtight closure. Horton Automatics, Corpus Christi, Tex.
Circle 316 on reader service card



Pencil plotter
A pencil adapter for the RY-5214 D-size plotter is said to offer an inexpensive and quick means of producing check plots of CAD drawings. The unit holds two each of 0.3mm and 0.5mm pencils; pressure is controlled either manually or by program. RDK Inc., Austin, Tex.
Circle 317 on reader service card



Garment hangers
Colormatch series hooks and hangers may be ordered in any combination of black, blue, gray, brown, beige, and red laminates and molded plastic fittings. Vogel Peterson, Elmhurst, Ill.
Circle 318 on reader service card
More products on page 171

ALPOLIC

The Lightweight, Rigid, Bendable Composite Material.

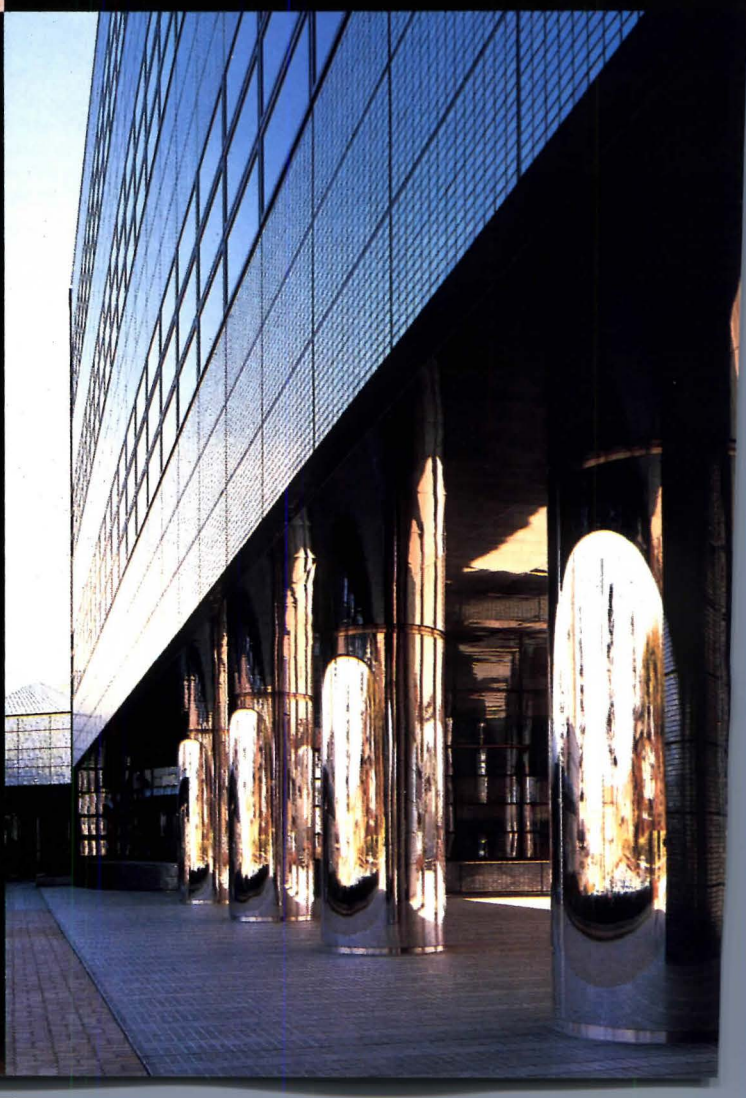
ALPOLIC combines beauty with superior flatness and easy workability. Used for exterior sheathing, display panels, sign boards, and other applications, it resists weather and corrosion. Used for interior applications such as displays, it will enhance the beauty of your designs.

ALPOLIC is available in silver, light bronze, dark bronze, gold and black anodized and painted in a range of colors.

A-LOOK EX

The Lightweight, Flexible, Unbreakable Mirror For Exterior Use And Where Humidity Is High.

Indoors and Outdoors, A-LOOK EX supplies the reflective beauty of a mirror. You can bend it, cut it and hang it. It's ideal for store fronts, eaves, entrance areas and signs as well as for any variety of indoor applications including spas, bathrooms and other areas subject to humidity. The fluoride resin surface of A-LOOK EX provides outstanding weatherability and resistance to humidity.



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Manufacturer sources

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

Pages 90-93
Tent City, Boston
Goody, Clancy & Associates, Inc., Architects
Brick: Boren; U. S. Brick; Endicott; Elgin Butler. Shingles: Supradur. EDPM roofing: Firestone. Gutters: Benchmark. Entrance: Built-Rite. Windows: Graham Architectural. Glazing: Solar Seal. Door hardware: Sargent. Partitions: Modernfold. Vinyl flooring: Armstrong. Exterior lighting: Bega. Interior lighting: Lightolier.

Pages 94-97
St. Vincent dePaul/ Joan Kroc Center
F.A.D. Architecture & Planning
Built-up roofing: Manville. Doors, windows, security screens: Torrance Steel Window. Exit devices: Rixson. Controls and locksets: Schlage. Paints: Sherwin Williams. Ceiling tile: Armstrong. Ceramic and quarry tile: American Olean. Cementitious flooring: Gyp-Crete. Carpeting: Interface. Basketball hoop: Medart.

Pages 100-103
Washington Elms Housing
Bruner/Cott & Associates, Inc., Architects
Brick: South Eastern. Wood siding: Weyerhauser. Membrane roofing: Carlisle. Shingles: GAF. Skylights: Kalwall. Rolling doors: Overhead Door. Partitions: Modernfold. Paints: Benjamin Moore. Sprinklers: Grinnell.

Pages 104-107
Coming Home Hospice
Asian Neighborhood Design, Architects
Wood doors: Alwood. Locksets: Schlage. Closers: Norton Door Controls. Cabinet hardware: Blum. Paints and stains: Sinn-Edwards; Fuller O'Brien. Laminates: Nevamar. Tile: American Olean; I.A.C.; Gail. Vinyl flooring: Armstrong. Carpet: Bentley Mills. Bathtubs: Kohler. Kitchen sinks: Elkay. Indoor lighting: Halo; Lightolier; Juno. Intercom: Auth Electric.

Pages 108-109
Women's Alcoholism Center
Asian Neighborhood Design, Architects
Metal doors: Amweld Building Products. Wood doors: Artesia. Windows: Bonelli Window Systems. Glazing: Libbey-Owens-Ford. Locksets: Schlage. Hinges: Hager. Closers: Norton Door Controls. Paints and stains: Fuller O'Brien; Martin Senour. Laminates: Formica. Floor and wall tile: Gail International. Vinyl flooring: Armstrong. Carpet: Bentley Mills.

Pages 110-114
Creative Living II
Schooley Caldwell Associates, Architects
Vinyl siding: Wolverine Technologies. Truss roof: Automated Building Components. Shingles: Georgia-Pacific. Metal doors: Currier. Windows: Pennco. Through-wall AC: Magic Chef.

Pages 116-119
Diamond Park
Cecil Baker & Associates, Architects
Brick: Glen-Gery. Entrances: Kawneer. Wood doors: Weyerhauser. Windows: Capitol Industries. Locksets: Kwikset. Closers: Stanley. Textured ceilings: Gold Bond. Paints: Finnaren & Haley. Epoxy floor surface: Dec-O-Tex. Vinyl flooring: Azrock Industries.

Pages 120-123
Robert Shaw Echo Village
Tom Hatch Architects
Shingles: General Products. Entrances: Challenge Door. Windows: Alenco. Paints: Kelly-Moore.

Trial by fire.

When the Edmonton Law Courts wanted a fire-retardant panel for their expansion project, the decision was in favor of Duraflake® FR. The Class I fire-rated particleboard that's gone through trial after trial.

It has a UL flame spread rating of 20. And a smoke developed rating of 25. Plus it's stable and won't bleed chemicals. Important requirements when laminating fine veneers such as the teak used in Edmonton's courtrooms.

You can order Duraflake FR cut-to-size, or in four- or five-foot wide panels of standard length. Four-foot wide panels are also available up to 18 feet in length. It's even available as a high-pressure laminate panel called DuraDesign® FR, for use in casegoods and furniture.

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Incandescent, HID and Fluorescent. Cooper Lighting is the single source that offers a virtually limitless choice of lighting products. The choice for Yankee Stadium, the choice for millions of homes, and the choice for your next project.

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COOPER LIGHTING

THE SINGLE LIGHT SOURCE

COOPER INDUSTRIES

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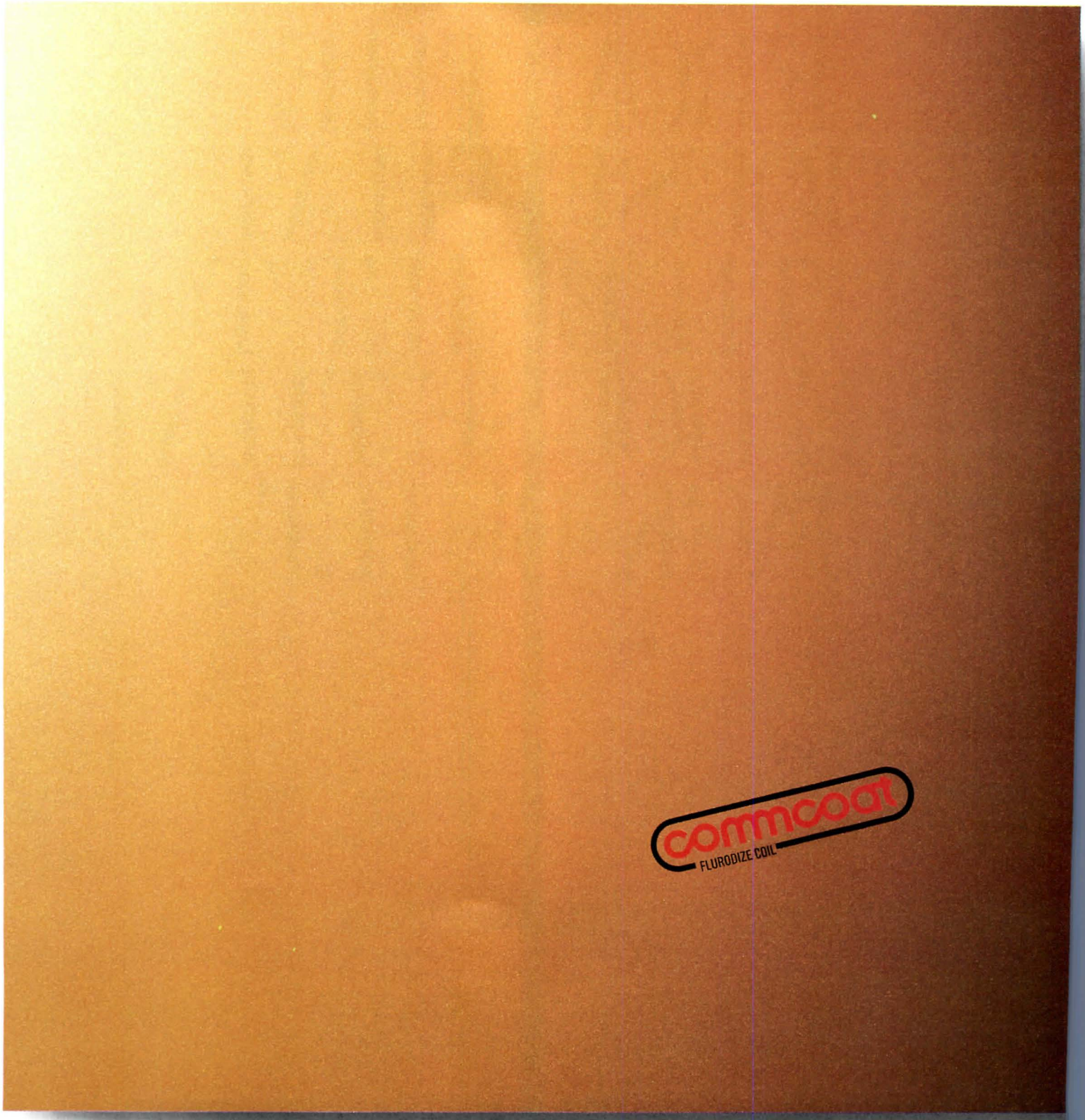
The new surface anodized can't match.



What you see here is a brand new building material. Commcoat™ Flurodize® Coil.

The remarkable finish is made by bonding a Flurodize coating to our finest aluminum substrate, right in our rolling mill.

Commcoat looks a lot like anodized aluminum. Only better. And it comes in seven exciting colors. (Extrusions, too.)

For a price no higher than anodized.

But the difference is, Commcoat Flurodize Coil keeps on looking good year after year. With far less weathering, fading or staining than anodized.

Nor does its color vary from panel to panel. Or crack when sharply bent.

To get your hands on some, call any of these distributors: Petersen Aluminum Corporation, Wrisco Industries or Idéal Métal Inc. Laminated panels are produced by Alucobond Technologies.

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September 22, 1988

Dear Mr. Manufacturer:

In all sectors of the economy the processes of handling information are undergoing significant developments. The Royal Architectural Institute of Canada and Sweet's Catalogue Services are committed to being at the forefront to any such changes in the construction industry. With this in mind, we are currently developing a joint research project to identify such changes so that we might be a part of them and help direct their development.

Sweet's Canadian Construction Catalogue File continues to serve as one of the foundation stones of the information base of any architectural practice. It is an important source for the selection and specification of details in our ongoing work.

Together we hope to shape the future development of this important resource to meet the needs of our changing industry. We will be pleased to share with you the results of our joint research once complete.

Yours sincerely,

THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA

Alfred C. Roberts, FRAIC
President

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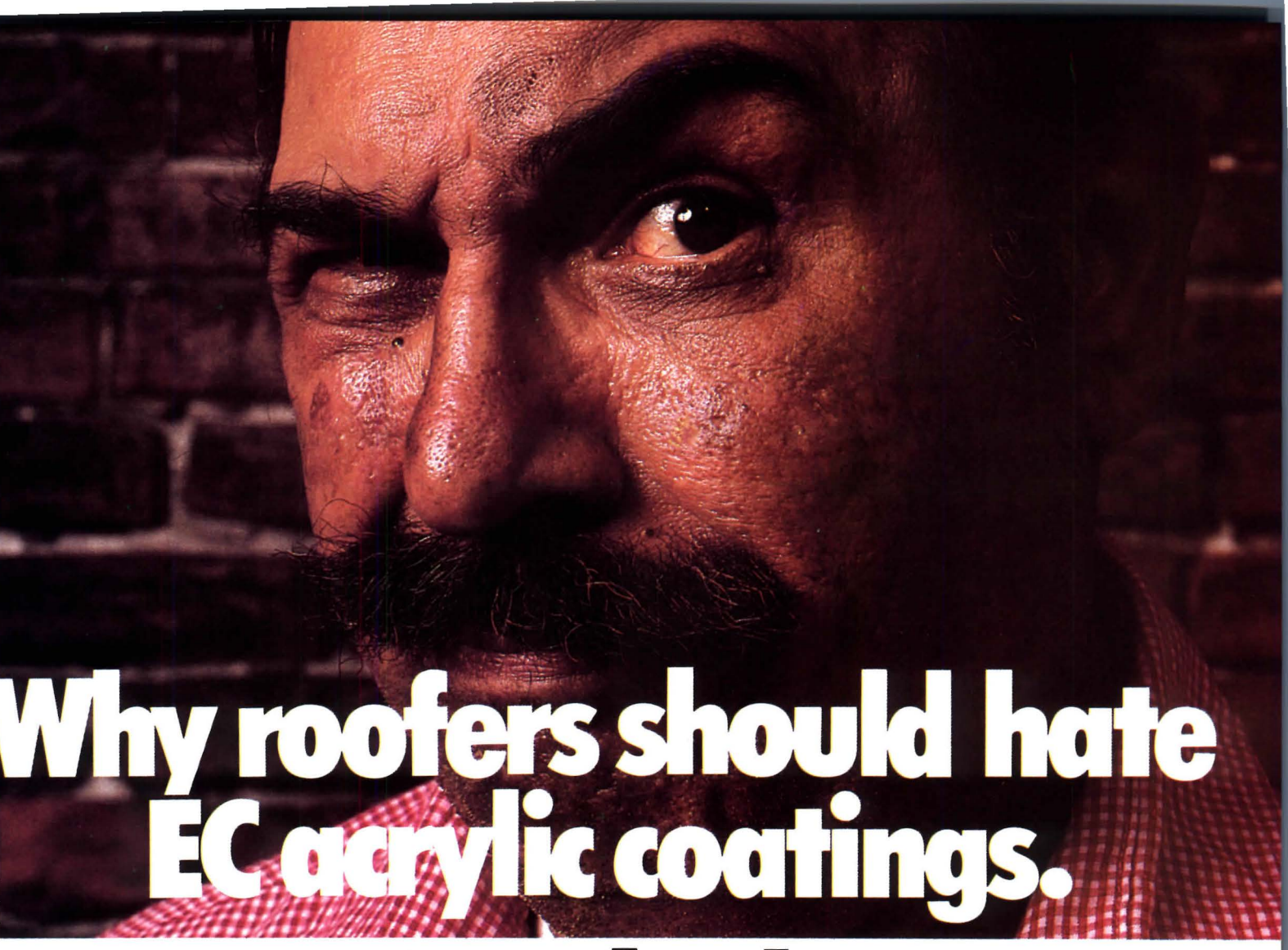


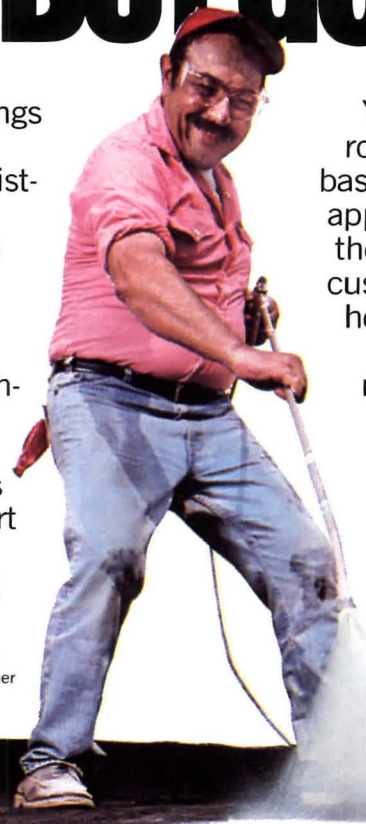
Why roofers should hate EC acrylic coatings.

But don't.

Considering all the ways coatings made with Rhoplex® EC acrylics protect and prolong the life of existing roofs, you would think that roofers would want nothing to do with them.

After all, EC acrylics help building owners eliminate the need for costly, continuous patching by providing years of easy maintenance. They withstand UV degradation that deteriorates asphalt roofs. Plus, they resist dirt pickup, so the white coating retains its reflectivity for increased energy savings.

C acrylics are only a raw material in roof coatings. Successful erformance of final roof coating products depends upon proper ırmulation, manufacture and application.



Yet, for all the years they help postpone roof repairs, roofers actually like EC acrylic-based coatings. Why? For one, they're easy to apply — they just spray or roll on. For another, they help keep customers happy. And a satisfied customer is going to remember a roofer who helped him cut his maintenance costs.

So the next time you're faced with roof repairs, do yourself and your roofer a favor. Finish the job with coatings made with EC acrylics from Rohm and Haas. To learn more, contact your contractor. Or call ROOFMASTICS at 800-858-3814.

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FINISH THE JOB WITH AN EC ACRYLIC.

Check local building codes or proper authorities before applying any roofing system. Rhoplex is a registered trademark of Rohm and Haas Company.

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NEVER LET ANYONE SAY YOU CHOSE A MARVIN DOOR JUST FOR ITS LOOKS.

Of course, we could understand if you did.

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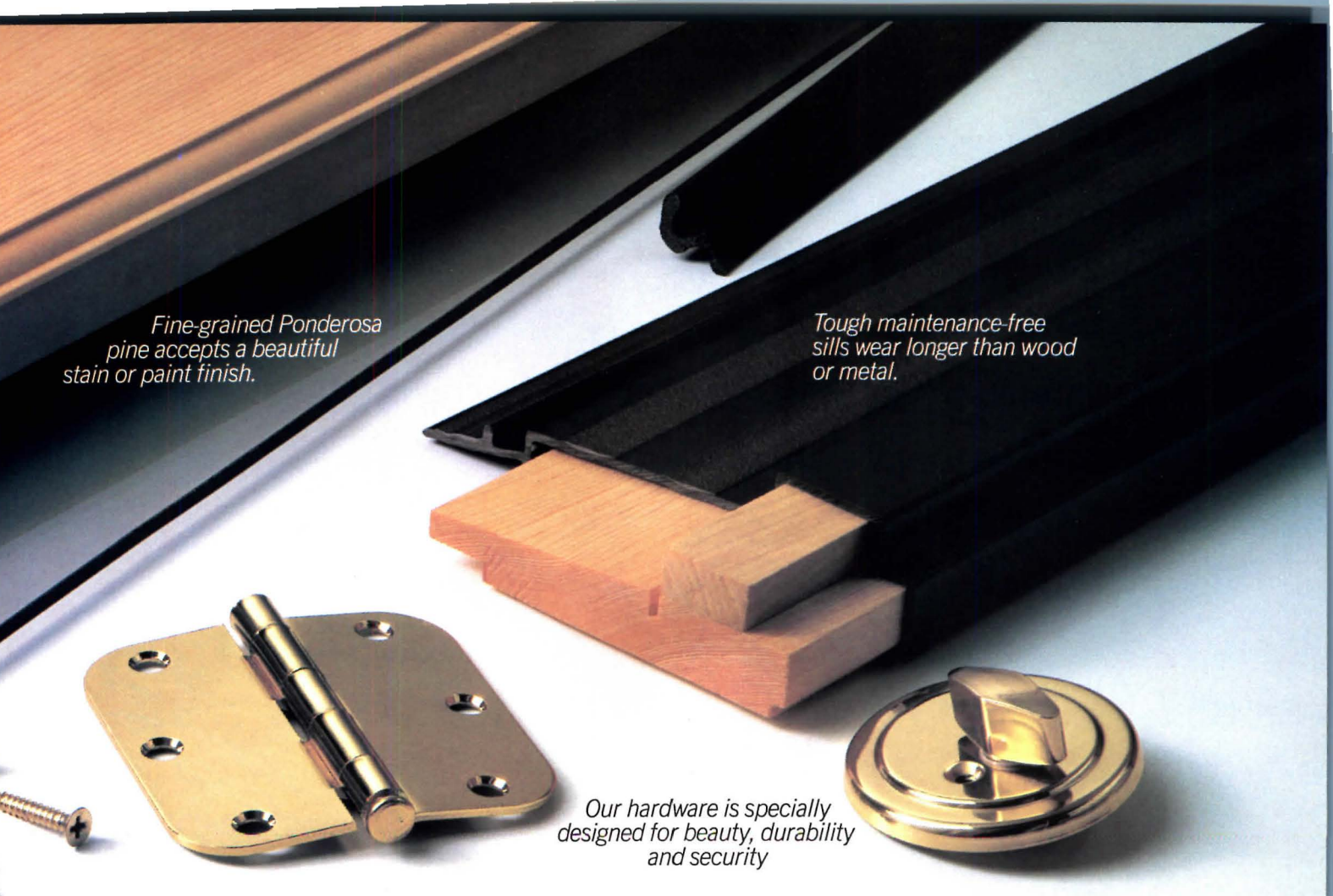
But this ad isn't about how great our doors look, it's about how great our doors perform.

DOORS BUILT EVERY BIT AS GOOD AS MARVIN WINDOWS.

You're no doubt familiar with Marvin Windows, some of the most finely crafted products in America today. Our doors are quickly building that same reputation. That's because we believe, first and foremost, a door should perform. And perform for years to come.

So we start with the highest grade of materials, employ the most advanced techniques in design and



engineering, and then add the best finishing touches we know of. For example, we fashion all frames, stiles, rails and muntin bars from fine-grained Ponderosa pine. The wood is deep-treated with a PILT solution for longlasting protection against rot and decay. Then each piece is designed and cut by hand to interlock perfectly with the piece next to it.

Our sills are made from an indestructible, scuff-resistant, space-age material that has 1400 times the insulating value of aluminum.

Maintenance-free Marv-A-Gard aluminum cladding provides a tough exterior, and, when combined with our solid wood doors, virtually eliminates denting and other damage.

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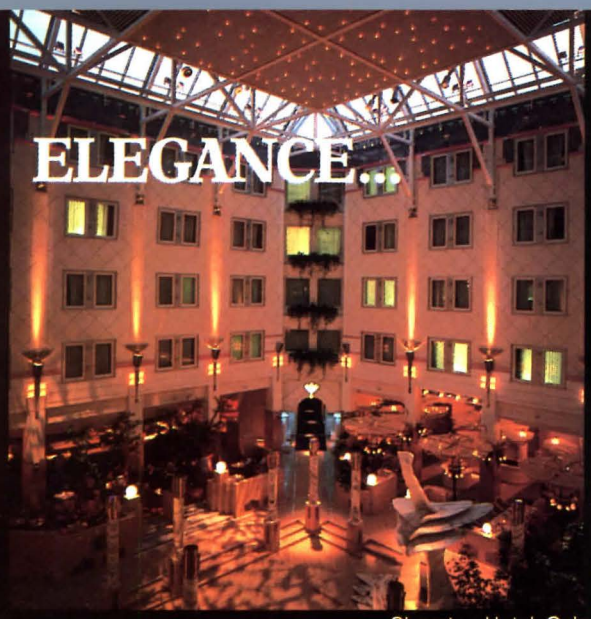
WHAT'S BEHIND OUR DOORS HELPS KEEP US IN FRONT.

Behind every Marvin Door is a list of services that helps it practically sell itself. We provide the fastest delivery in the industry, no matter what style of door you order, or what options you choose. And the highest level of technical and design support is available right from your local distributor, as well as back-up service that assures your customer that everything will work perfectly.

So perhaps recommending Marvin Doors purely on the basis of their looks is not a bad idea. After all, we all know beauty is more than skin deep.

To learn more about Marvin Doors, call toll-free **1-800-346-5128** (in MN, 1-800-552-1167, in Canada, 1-800-263-6161), or write Marvin Doors, Warroad, MN 56763.

MARVIN DOORS



Sheraton Hotel, Oslo

Architect: F. S. Platou

Architect: SOM

Clark Building, Bethesda, MD

Consafe Floatels

Architect: Götaverken

DORMA door closers have been field-proven around the world in applications varying from sharp architectural styling to severe environments requiring excellent durability. But this is not the only reason why DORMA has been the fastest growing door control manufacturer in North America in the 1980s. Our reputation is based upon our superior...

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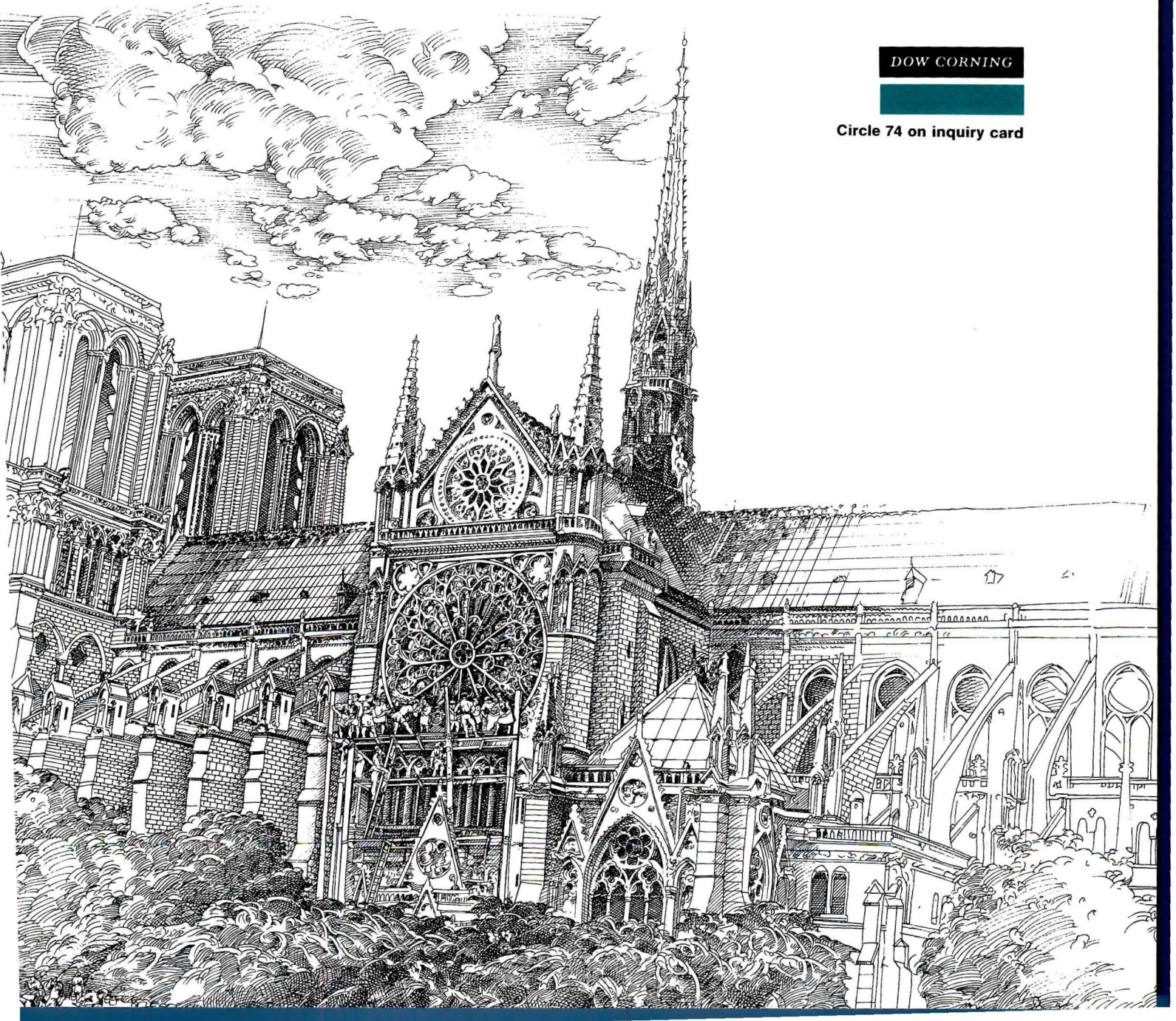

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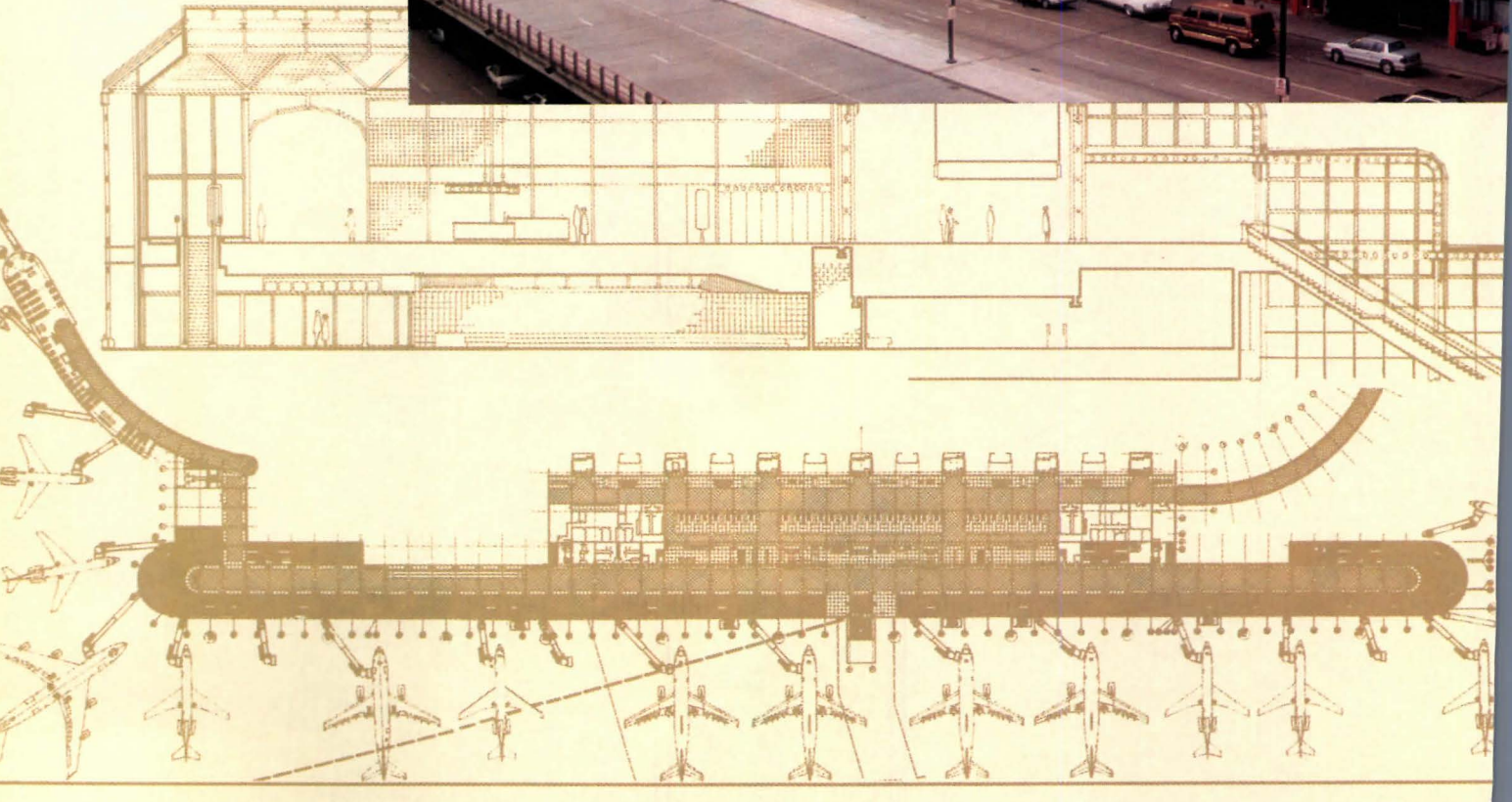

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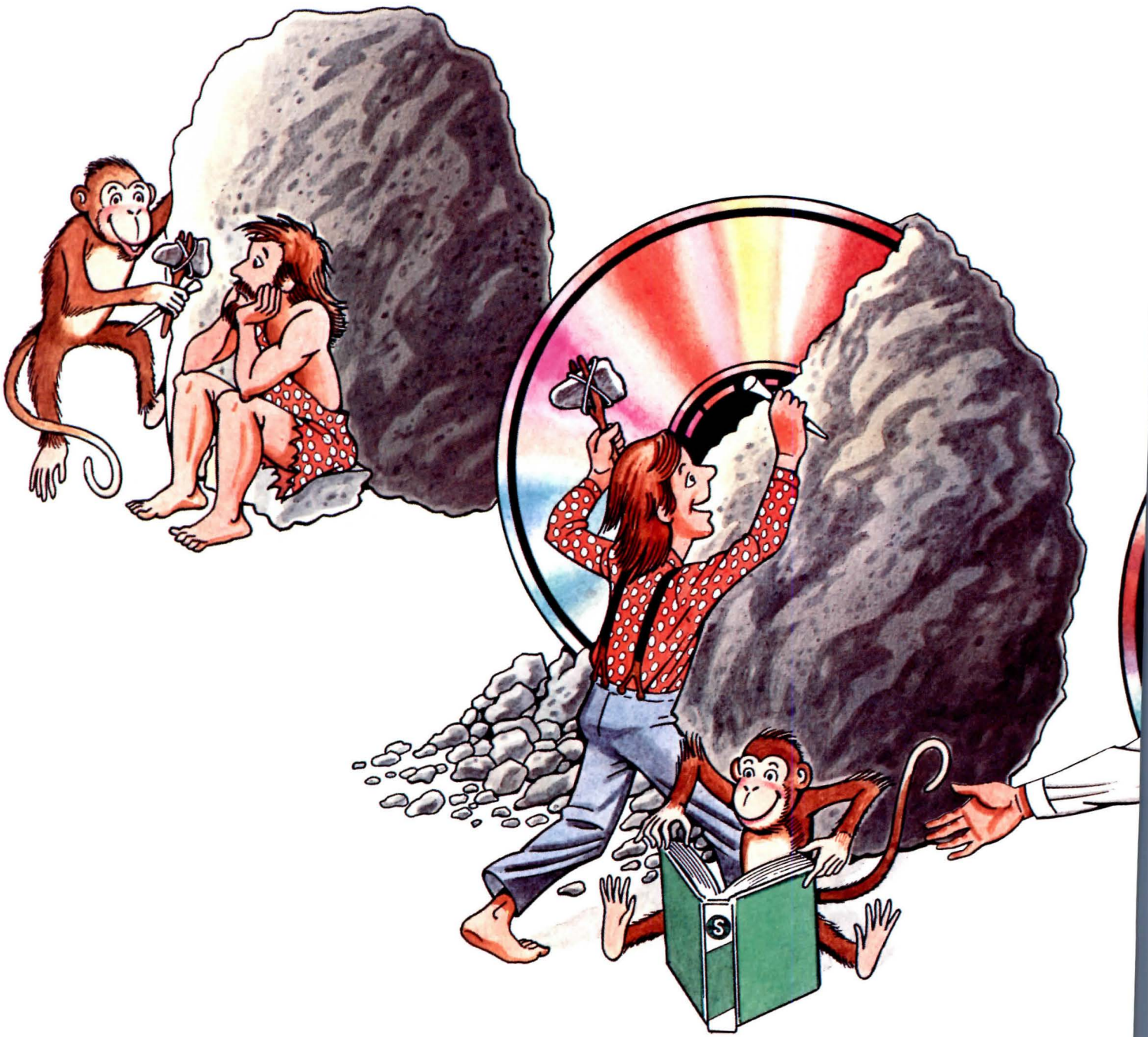

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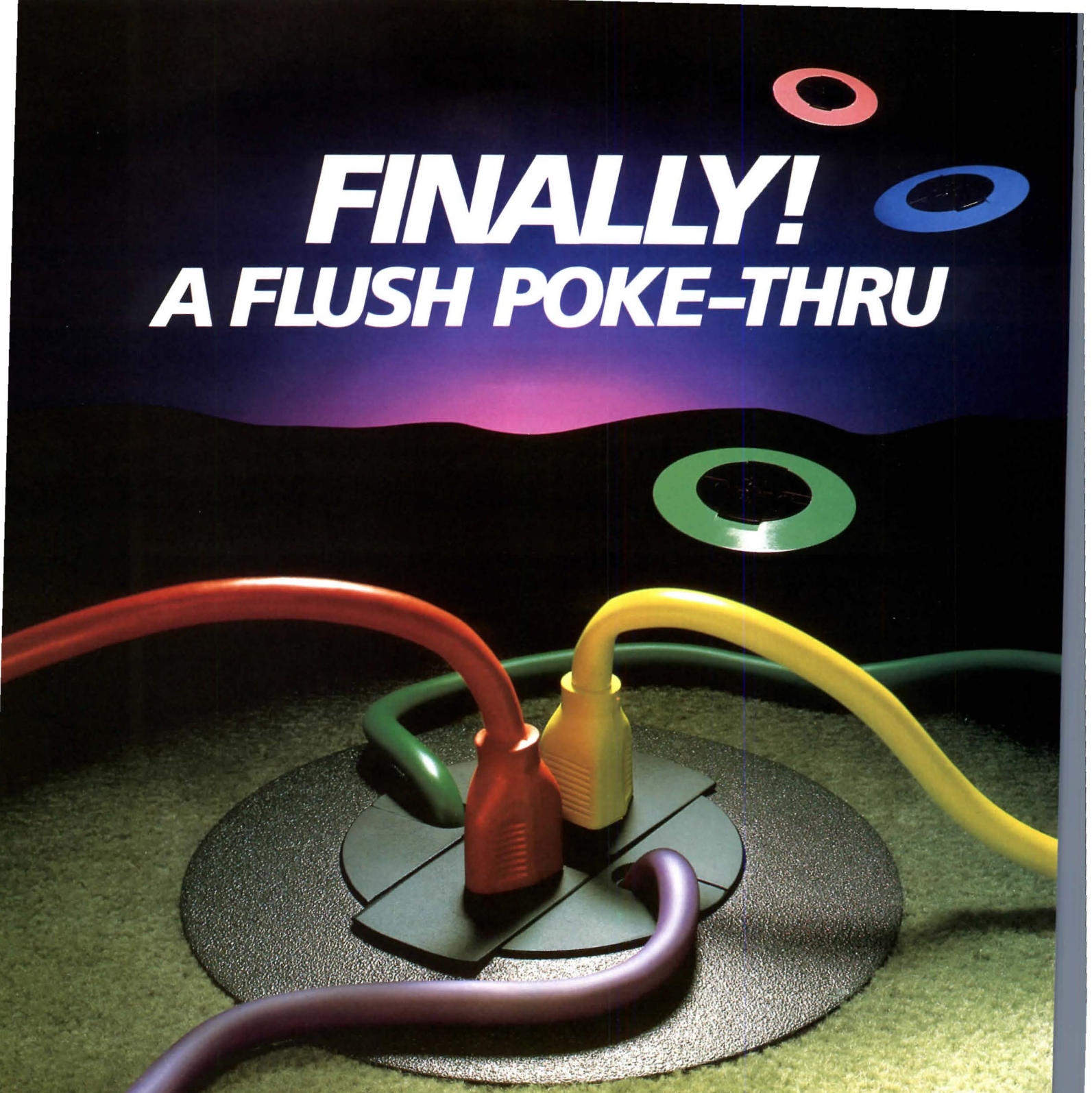

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Continued from page 151

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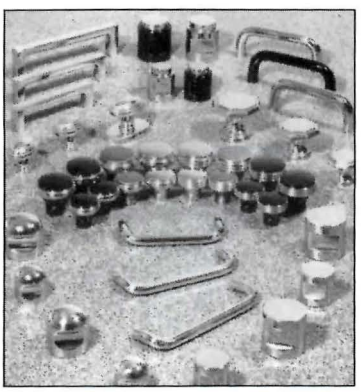

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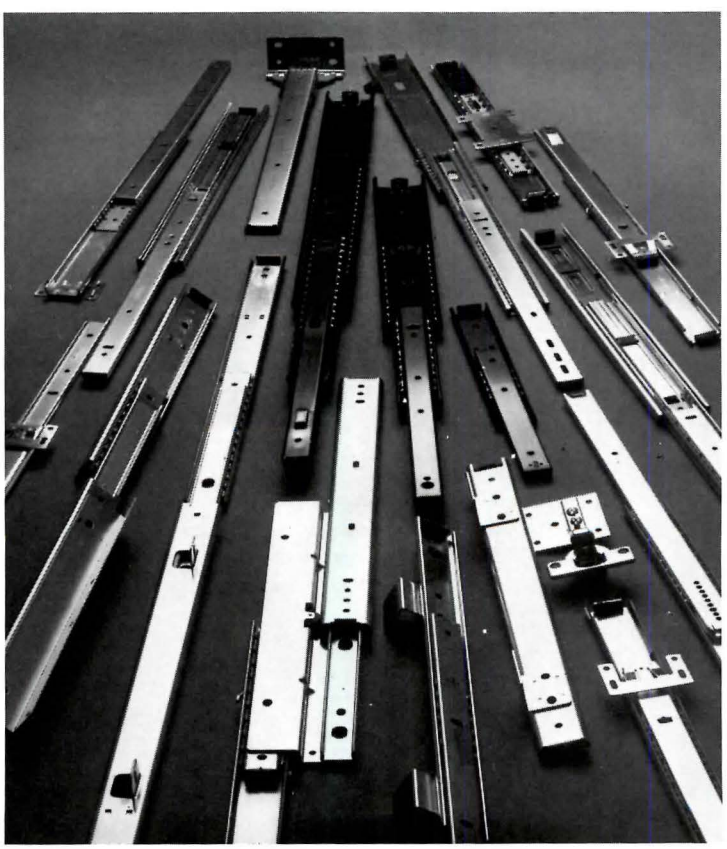

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2. Date of filing—September 14, 1988.

3. Frequency of Issue—Monthly with additional issues in April and September. Number of issues published annually: 14.
Annual subscription price: $39.00.

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

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

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

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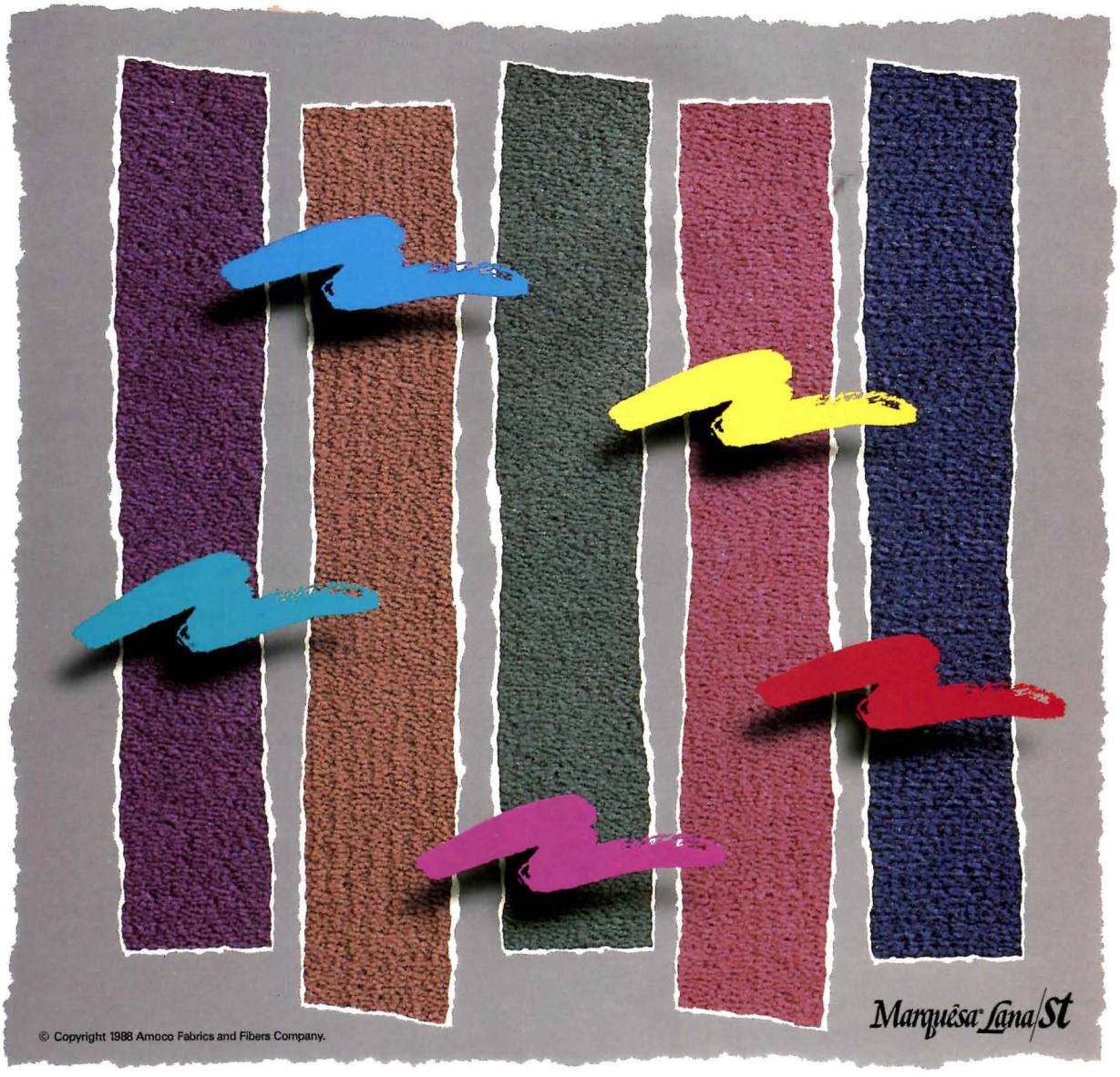

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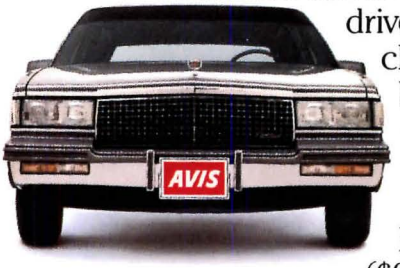
Pontiac Grand Prix
$39
per day

Pontiac Bonneville
$41
per day



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The flame-like shapes pictured here form the roof structure for a multi-story electric power pavilion at the Tsukuba Expo. After dark, floodlights with rotating color create a vibrant effect of flickering flames. By day, the roof structure remains a striking eye-catching design, though quite different from its nighttime appearance. The white translucent fabric reduces daylight lighting requirements and conserves energy.

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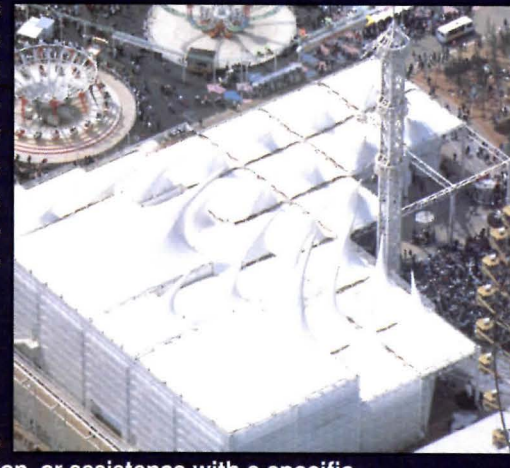

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Planning a Laundry? Free File Tells How. Milnor's laundry planning file explains why efficient laundries can save your clients money. It also includes case histories, space requirements, equipment specs, plus laundry planning questionnaires. It's free from *Pellerin Milnor Corporation, P.O. Box 400, Kenner, LA 70063. Phone 504-467-9591, Ext. 227.*

Circle 96 on inquiry card

Balco 1989 Floor Grids and Mats Catalog. Balco's new 1989 catalog features the company's complete line of roll-up mats and floor grids including the new AirTron floor mat with exclusive air cushion design. Floor systems are available in carpet, vinyl and abrasive finishes for recessed or surfaced applications. *Balco Inc., 2626 South Sheridan, P.O.Box 13249, Wichita, KS 67217. Phone 316-945-9328.*

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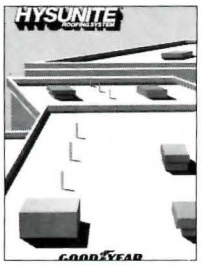

Goodyear's Hysunitetm™ (Hypalon®) Roofing System resists UV, wind, weather, air pollution, fire and structural movement. Heat-sealed, leak-proof seams; energy-efficient white surface. Brochure includes specs/installation info. *The Goodyear Tire & Rubber Company, Roofing Systems, 1144 E. Market St., Akron, OH 44316; Jim Bidlack-216-796-9373.*

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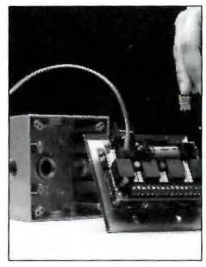

Easy To Install Security Access Control. The new, updated Schlage Electronics 9025 Proximity access control system is here! Ideal for new and remodeled small office buildings or parks. Regulates 1 or 2 doors and operates over twisted pair wiring. Controls up to 2600 Cardholders. Modular architecture means system is easier to install. *Schlage Electronics 5452 Betsy Ross Dr., Santa Clara, CA 95054. Phone 408-727-5170.*

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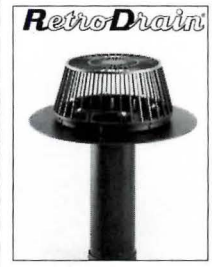

Solve Roof Drain Problems with RetroDrain. RetroDrain allows you to replace a broken existing drain entirely from the roof top. No access is required to the building's interior and installation is completed in minutes. Interior ceilings are not damaged and work inside the building is not disruptive. An easy cost effective method of replacing roof drains. *Uflow Inc., Box 1470, Buffalo, NY 14240. Phone 716-854-1521.*

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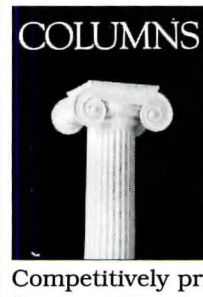

Architectural columns crafted in Ponderosa pine. Shipped direct from our factory to your job site. Sizes from 6" to 30" diameter and a full range of capital styles. Competitively priced. Worthington, the premier name in columns. *Worthington Group, Ltd., P.O. Box 53101, Atlanta, GA 30355. Phone 404-872-1608.*

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N.T.B. Fastening Systems Inc. N.T.B. Fastening Systems is a manufacturer of non-penetrating, non-corrosive fasteners for structural cement fiber and lightweight concrete roof decks. Also available is our new line of fasteners for metal, reinforced plastic fiberglass and wood roof decks. *N.T.B. Fastening Systems Inc., 788 Western Ave., Mosinee , WI 54455. Phone 715-693-4545.*

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Attention To Details. Special attention to details mean exceptional value, quality and satisfaction. *VELUX* offers you pages of information and ideas in our color brochure that can be used in building and remodeling plans. The more you know about *VELUX* roof windows and skylights, the better you can compare. *VELUX-AMERICA INC. 450 Old Brickyard Rd. P.O. Box 3208, Greenwood, SC 29648. Phone 803-223-3149. FREE.*

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Sternberg Lighted Bollard. One of a complete line of bollards/coordinating posts, authentic post base design, deep fluted 5" dia. shaft, heavy wall castings with .750 floor, inside anchor bolts, one piece construction and Alzac reflector. The 4201-LB scales 17"x42" variable hgt. White acrylic recessed lens, mercury vapor, high pressure sodium, metal halide and PL. Specializing in historic, ornamental posts/fixtures. *Sternberg Lanterns Inc. 5801 N. Tripp, Chicago, IL 60646. 312-252-8200.*

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Plaster in a Roll.™ A gypsum-impregnated, flexible wall covering, is manufactured specifically for concealing cracks, patches, holes, and other wall problems. It is suitable as a replacement for conventional plaster and is widely used in schools and hospitals. Flexi-Wall® Plaster in a Roll adheres to tile, cement block, glass, wood and plaster. GSA contract #GS-07F-17572, also under HUD contract. Flexi-Wall Systems, Inc., Box 88, Liberty, SC 29657. 803-855-0500.

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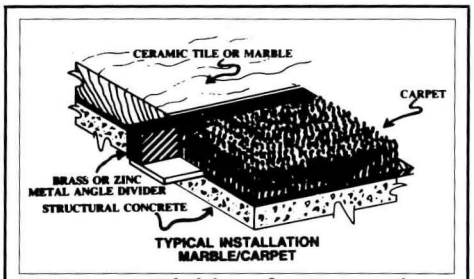

PTE Brass Dividers for Protection of Marble/Tile Edges—UPS to West Coast. Can be used with ceramic tile, marble and pavers to protect edges and provide attractive linear design when used with carpet, parquet and other types of flooring. For a sample or literature call 1-800-241-0681. *KLEIN CO., P.O. Box 80415, Atlanta, GA 30366.*

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Decorative Grilles in Color. Add a new dimension to your designs with these decorative grilles which can be used to make striking unusual effects. Choose from an array of custom colors to match or contrast existing grilles. Designers can also create numerous metal forms for interior or exterior applications. Write for catalog: *Register & Grille Mfg. Co. 202 Norman Avenue, Brooklyn, NY 11222. 718-383-9090.*

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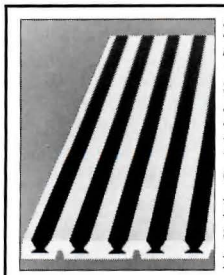

Zero's New Traction Tread™ Saddles and Nosings. Revolutionary design in which profiled aluminum saddle grooves are fitted with long-wearing, flush, rubber inserts. Superior traction, an even smooth surface and easy installation. For information, and a copy of Zero's 1989 catalog, contact : *Zero International, Inc., 415 Concord Ave., Bronx, NY 10455; Phone: 1-800-635-5335. FAX: 212-292-2243.*

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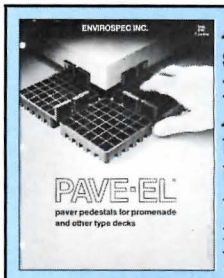

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END STAC SESSION:

7. When you have entered Inquiry Selection Numb the recording prompts next inquiry number," call by entering:

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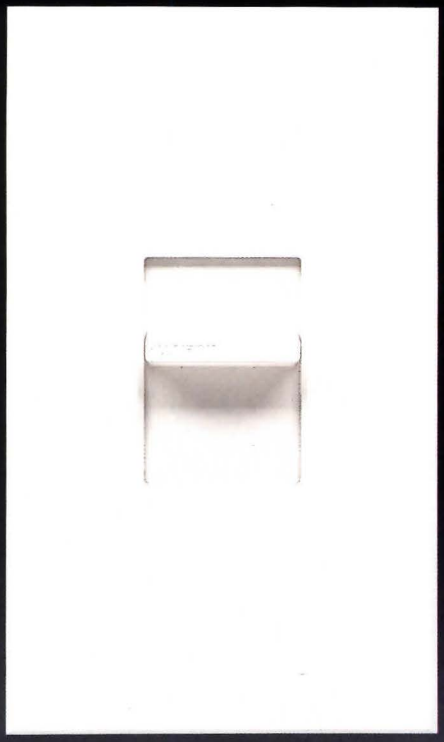
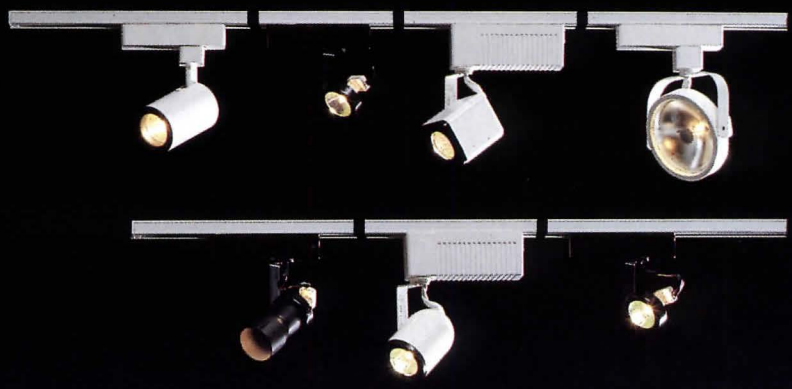
If you are a subscriber and need assistance, call 212/512-3442. If yo a subscriber, fill out the subscription card in this issue, or call Arch Record Subscription Services at 914/628-0821.

NEW!

Lutron dims ELECTRONIC Low Voltage lighting





NEW Sol-Lo™ Technology. . . (Solid-State Low Voltage)

Lutron introduces ***Sol-Lo*** dimming technology, the only dimmer technology expressly developed for electronic (solid-state) transformer low voltage lighting.

In response to the need to control electronic low voltage lighting, Lutron developed special **Sol-Lo** dimming circuitry after an extensive engineering research and development program.

Sol-Lo technology is now available in these Lutron products:

Specification Grade

Nova T☆, NTELV-300 300W capacity (UL)

Nova, NELV-450 450W capacity (UL)

Designer Style

Skylark, SELV-300P & SELV-303P 300W capacity (UL)

Quiet Dimming of Electronic Low Voltage Fixtures

All Lutron **Sol-Lo** technology dimmers feature:

- Advanced circuitry for quiet dimming—without annoying transformer or lamp buzz.*
- Overload protection, voltage compensation and short circuit protection.
- Soft-start—helps extend lamp life.

Call the Lutron toll-free **Hotline** for a free *Guide to Dimming Low Voltage Lighting* (describes dimming ELECTRONIC and MAGNETIC low voltage lighting).

For help with applications, systems layout or installation call the ***Lutron Hotline*** toll-free:
(800) 523-9466 (800) 222-4509 (Pennsylvania)
(215) 282-3800 (Outside U.S.A.)

*Typical fixture is inaudible in a quiet room of 27dBA at a distance of 3 feet.

LUTRON®

Lutron Electronics Co., Inc.
205 Suter Rd.
Coopersburg, PA 18036 U.S.A.

CALL TOLL-FREE FOR LUTRON DISTRIBUTORS IN YOUR AREA STOCKING THIS PRODUCT.

Circle 117 on inquiry card

At first glance, it's difficult to imagine how these six different buildings are related. But if you take a closer look at their histories, you'll find they all share a common theme: the washrooms in all six buildings have been refitted with Sloan flushometers.

True, these buildings don't look old enough to need major plumbing repairs. But the fact is, the original flushometers that were installed just didn't hold up. Even after repeated servicing, they continued to malfunction. They didn't shut off properly. They leaked at the stops. In some cases, they even flooded the washrooms. In short, they weren't Sloan flushometers.

Unlike substitutes, Sloan flushometers offer proven, reliable service. With built-in quality at an affordable price. That's why today more buildings are equipped with Sloan flushometers than with any other brand.

Only Sloan's rugged, tamper-proof design can assure the quiet, dependable operation so critical in buildings like these. Plus, Sloan flushometers are built to last for years with only minimal, routine maintenance—an important consideration for specifiers who value time and money.

The next time you consider specifying a substitute, think about these six buildings. Then specify Sloan. The first time.

Another six reasons to specify Sloan...

the first time.

1. Valley Forge Park Place, King of Prussia, PA **2.** Virginia Mason Hospital, Seattle, WA **3.** Swedish Hospital, Seattle, WA **4.** Heartthrob Cafe, Orland Park, IL **5.** Spruance Hall, Embry Riddle University, Daytona Beach, FL **6.** Foster Plaza Building No. 6, Pittsburgh, PA

SLOAN VALVE COMPANY
10500 Seymour Avenue, Franklin Park, IL 60131
A Tradition of Quality and Pride

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