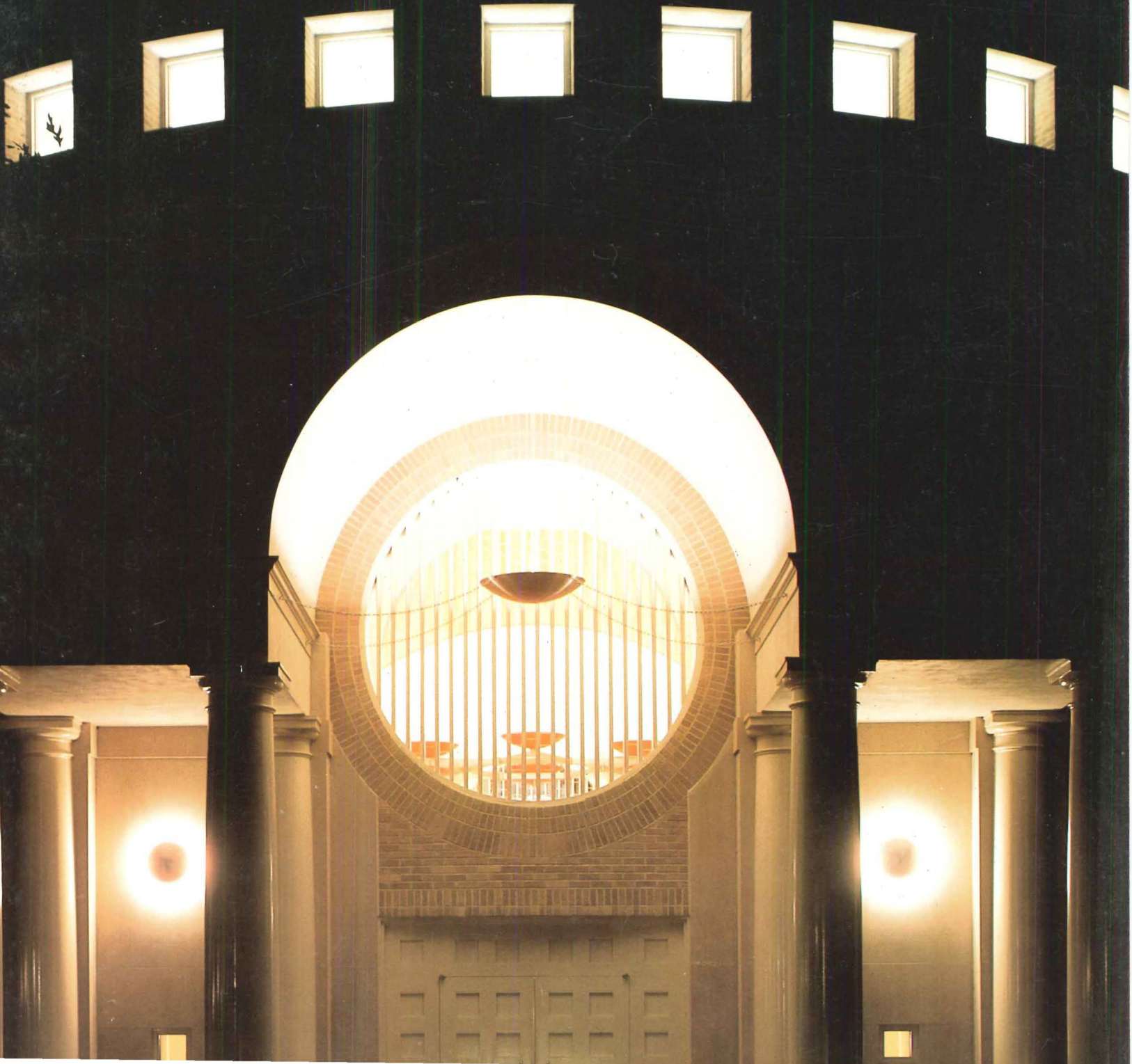


ARCHITECTURAL RECORD

Business Design Engineering
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June 1983



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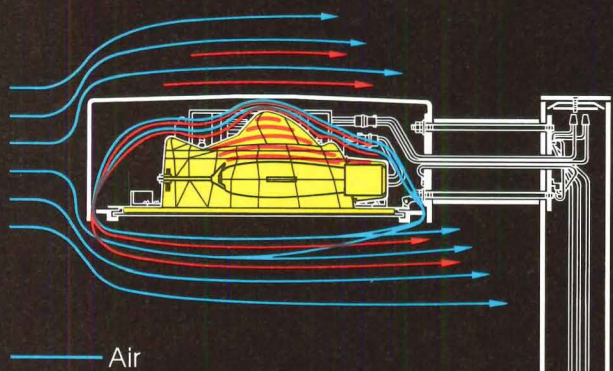


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A New Standard of Outdoor Lighting Technology.

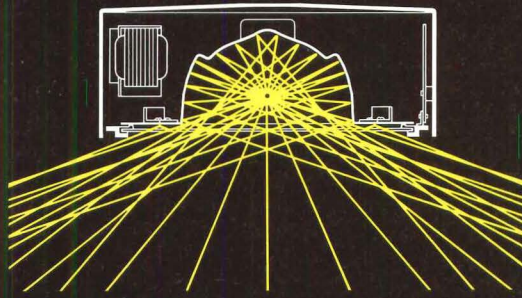
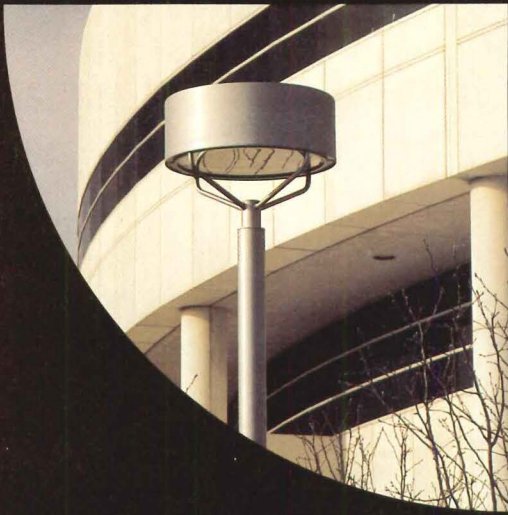
Make no mistake about it. What you see in this ad is not just another fixture shape. It is outdoor lighting redefined. It is the standard for future imitations. Our new curvilinear luminaires combine functional aesthetics with unmatched performance and lifetime construction. Kim's decade of experience in high performance lighting has resulted in revolutionary refinements. Formed by a classic circle, our meticulously sealed optical chamber is allowed to FLOAT within a heavy gauge one-piece housing. External air flow induces internal air circulation that cools critical electrical components far below their failure point. These reduced temperatures maximize longevity and lessen long-term maintenance costs. Round is also aerodynamic, and echoes the softer edges and flowing details of current architecture. With a drag coefficient 70% less than a square housing, the curvilinear luminaires take reduced pole sizes.



- Air
- Heat
- Light

Diagram of external and internal air flow.
Mere 5 m.p.h. breeze produces 40°F. to 50°F.
temperature drop on internal components.





Light Patterns



Asymmetric or Square



A New Standard of Lighting Performance.

Starting with Kim's proven optical systems, slight adjustments in lamp-reflector-lens geometry were made, substantially increasing light efficiency. These improvements in light output occur at high angles, thereby increasing pole spacing and overall installation efficacy. All this is accomplished while rigidly maintaining our discipline of sharp cutoff. The high degree of glare control with these luminaires translates into good visibility and seeing comfort.

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Simple, economical installation was designed into these luminaires from the start. All components are modular, quickly snapping in place to save labor time and expense. These same features ensure rapid service when lift-truck use is a consideration. In addition, modular design adapts to future technology, so no Kim fixture need ever become obsolete as more efficient lamps evolve.

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Complete photometric data and pole spacing charts are available for these two new fixtures. Every fixture/lamp combination has been tested by an independent laboratory before publication. In our on-going commitment to design professionals, an in-house computer is used to provide detailed and accurate information. Layout suggestions or point-by-point printouts may be requested. Because translucent vellum is used for printouts to scale, they can be placed directly on plot plans to instantly define light levels over the entire project.

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KIM LIGHTING

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KIDDE

Noting that the Summa Corporation Office Building in Las Vegas [ARCHITECTURAL RECORD, Design awards/competitions, February 1983, pages 60-61] features a brightly painted mechanical system, you quote the jury's characterization of the design "as an excellent example of the strength and liveliness that can emerge from the language of high technology."

How utterly simplistic to comment that the mechanical systems were painted blue, green, yellow and red and that that translates to high technology. If that were all that was necessary, we could have saved many hours designing the mechanical system as an integral element within the spaces and simply suggested to our client, Archisystems, that they paint the ducts yellow.

It takes a lot more than paint to make an exposed duct system work esthetically as well as functionally within a building.

I have great respect for the architectural profession; that the architectural profession overlooks the contribution of consultants occasionally rankles. *Melvin Bilow*
S B & A Consulting Engineers
Burbank, California

Reading the editorial in your August 1982 issue ["Direction '80s: the AIA reshapes its role and places some tough new responsibilities"] together with the letters re RECORD's graphic design suggests to me that we all should settle for Vitruvius's definition: commodity, firmness and delight. In this way we could hold firmly to our convictions, and who could say we were not right?

In any case, it does seem less murky than "emphasis toward the substance of design excellence." Okay?

William B. McCormick, FAIA
San Francisco

Corrections

Re: Crediting for R. J. Reynolds Tobacco Company Restoration/Renovation, Winston-Salem, North Carolina [RECORD, January 1983, pages 98-101].

At our initial meeting with you on October 20, 1982, and on our later submission of additional supporting prints and background information on October 22, 1982 (with concurrent crediting submissions), our office was proceeding on a national crediting format which placed our firm as lead, with the firm of Hammill-Walter as associate architects.

As confirmed in the letter from Mrs. Betsy Annese of R. J.

Reynolds Public Relations [RECORD, April 1983, page 4], the original contracting of the job was on a basis which suggested a separation between architecture and interior design; however, the project evolved into a different sharing of roles, which appropriately should be reflected in the crediting.

Lloyd Walter, of Hammill-Walter Architects in Winston-Salem, and I have agreed to such a uniform crediting and met with Mrs. Annese on March 11, 1983, to confirm our agreement as follows:

Croxton Collaborative/
Hammill-Walter Associated
Architects.

Our differences of opinion on the issue are fully resolved and we (R. J. Reynolds, Hammill-Walter and Croxton Collaborative) request that the crediting be noted as described above in an upcoming issue.

Randolph R. Croxton, AIA
Director
Croxton Collaborative
New York City

Credit should have gone to Henry Robert Kann, Consultant Architectural Product Designer, in RECORD's New Products report on the *Omni-Lav* (March 1983, page 136).

The members of a team that designed an entry receiving honorable mention in the Harvard Architecture Review competition for a gate, whose names were incorrectly given in RECORD's report (April 1983, page 91), were Joseph DePace, Vinay Kapoor and Shirley Fujikawa.

The photographs of Rocky Mountain Energy Corporation shown on page 129 of RECORD's April 1983 issue should have been credited to ©Andrew Kramer.

Through June 30

Design: The Problem Comes First, an exhibition of Danish products; at the American Institute of Architects, 1735 New York Ave., N. W., Washington, D. C.

June 12-17

Aspen Design Conference, Aspen, Colo.

June 18-23

28th Annual ACSA Teachers Seminar, "Architectural Values and World Issues: The Challenge for Architectural Education," sponsored by the Association of Collegiate Schools of Architecture; at Cranbrook Academy, Bloomfield Hills, Mich.

For information: Gary P. Haney, ACSA, 1735 New York Ave., N. W., Washington, D. C. 20006 (202/785-2324).

June 24-26

27th Annual Convention and Exhibit, The Construction Specifications Institute; at Kansas City, Mo. For information: E. M. Dutchak, 601 Madison St., Alexandria, Va. 22314 (703/684-0300).

June 27-28

"Reusing Old Buildings: Preservation Law and the Development Process," a conference sponsored by The Conservation Foundation, The National Trust for Historic Preservation, and the American Bar Association's section on Urban, State and Local Government Law; at the Fairmont Hotel, San Francisco. For information: Conference Coordinator, The Conservation Foundation, 1717 Massachusetts Ave., N. W., Washington, D. C. 20036 (202/797-4300).

July 5 to August 12

The Summer Architecture Academy, designed to give high-school students and college undergraduates an overview of architecture, urban design and landscape architecture; at the University of Oregon, Eugene. For information: The Summer Architecture Academy, School of Architecture and Allied Arts, University of Oregon, Eugene, Ore. 97403 (503/686-2475).

July 15-16

San Francisco Forum on Architectural Issues, "The Spirit of Place"; at San Francisco. For information: American Collegiate Schools of Architecture, San Francisco Forum, 1735 New York Ave., N. W., Washington, D. C. (202/785-2324).

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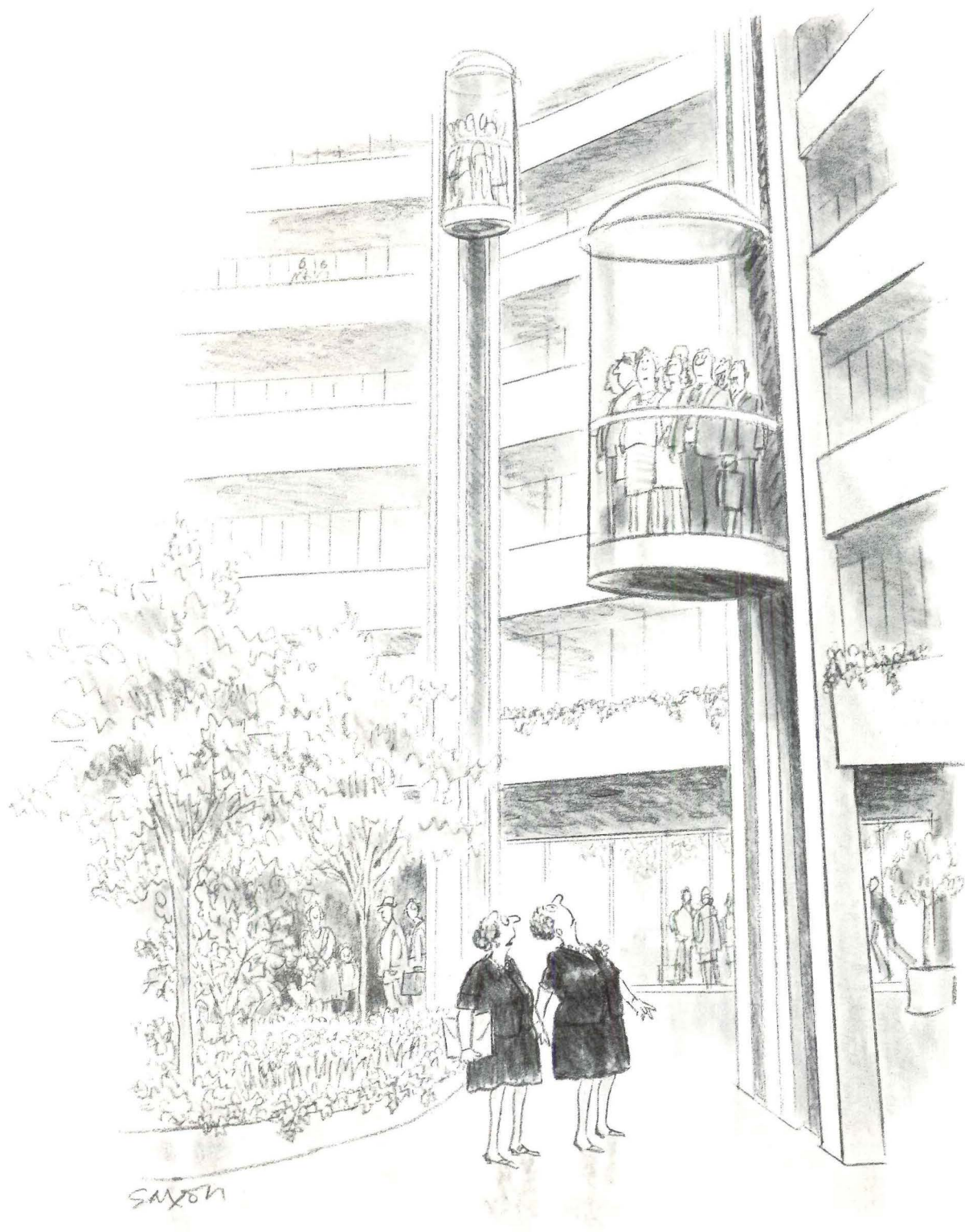
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A little anniversary, a little more evolution

It was (and I cannot believe how fast the time has passed) just a year since we introduced the redesign and restructuring of RECORD. The design and format concepts have clearly been accepted by readers—the initial flood of high praise and high dudgeon has now settled down to a steady and thoughtful stream of “I really think it works.” We editors (with a single unreconstructed exception) find it really works for us—layout sessions go well, and we’ve found we have plenty of flexibility to create whatever visual image will best support what we have to say. (Which is of course, what it’s all about. The most important element of magazine design is never graphic art for graphic art’s sake, but design to improve communication with the reader.)

Perhaps more important, though probably not as visible, was the restructuring that resulted from our thinking about the redesign. Readership research makes clear that our decision to increase the number of pages devoted to our Business section in the front of the book was a good one (even I am getting really interested in computers). Ditto the decision to increase our coverage every month of architectural engineering.

And those successes helped persuade us that it was time to evolve a bit more. Well underway are plans to increase our editorial coverage in two other important areas: architectural education and architecture abroad.

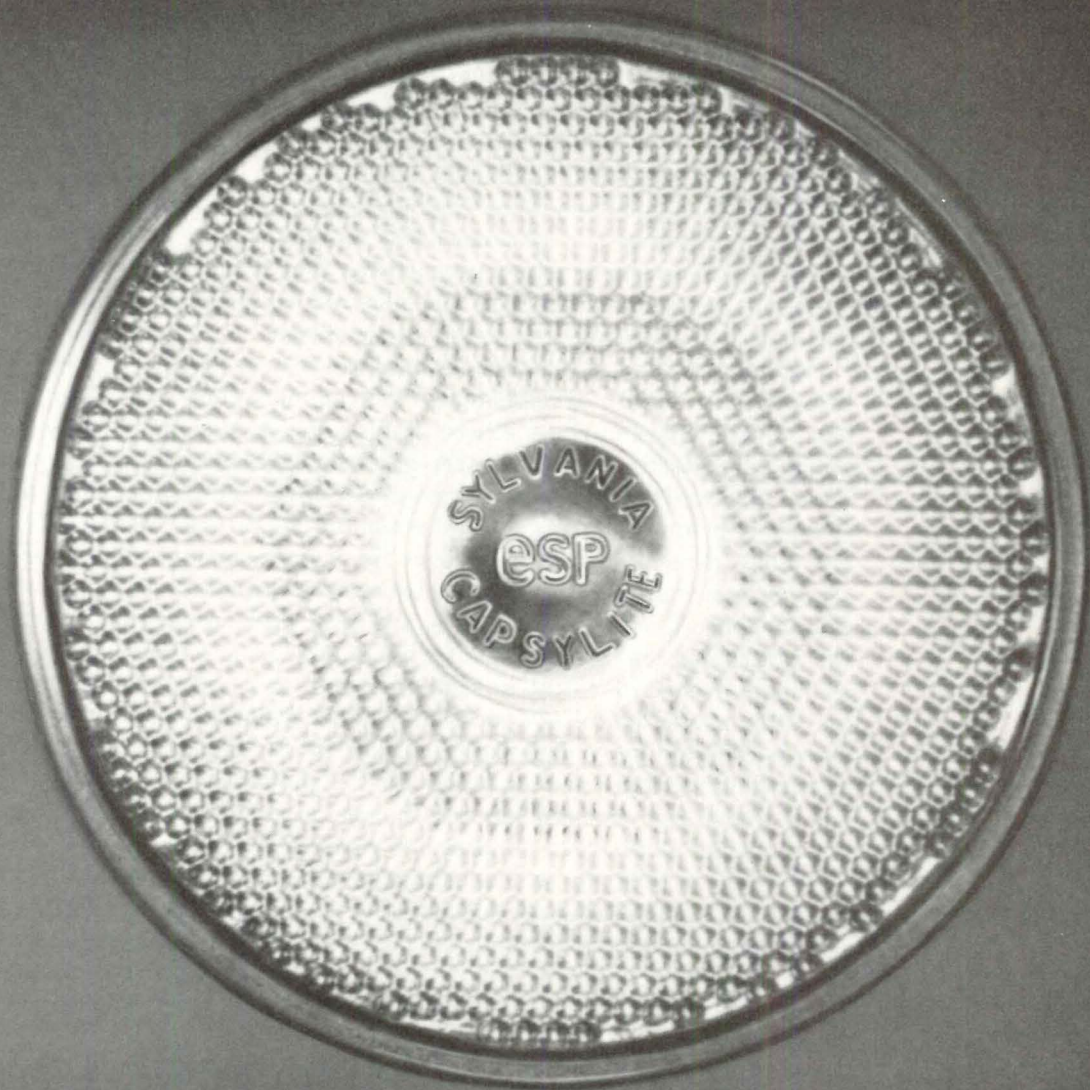
Neither subject is, of course, new ground for us. I have long been particularly interested in “intern development,” written more than a bit about it on this page, and been disappointed in the snaillike progress towards accepted goals and methods for getting architectural students through “the dark ages” between graduation and licensing. We’ve also written about the development of the national exam, public education, and (via survey) student attitudes and plans for the future. What’s different, however, is that we’re now developing a plan to cover the many facets of architectural education on a regular, continuing basis—maybe not every month, but close to it—including a major Round Table, a number of surveys, and both staff-written and contributed articles. We’ll be researching and talking about what we see as an enormous variation in the content and emphasis of education in schools across the country—and whether that makes sense and why; about the clearly perceived quality differences among the schools; about the additional training so desperately needed by any young graduate during internship—and about whether that training really can be (should be) structured; about the licensing exam; and about the need for, and the best structure for, continuing education.

On foreign work: Over the past five years (that wonderful computer I’ve just discovered how to talk to tells me) we have devoted 454 editorial pages to 121 buildings in 43 foreign countries, an increasing percentage of them (over the years) designed by foreign architects. In 1983 for example, we have or will have published Hans Hollein, Mario Botta, Arata Isozaki, Aldo Rossi, Charles Correa, Fumihiko Maki, and Carlos Riar. We have long had a substantial foreign circulation and our foreign readership is growing at an accelerated pace.

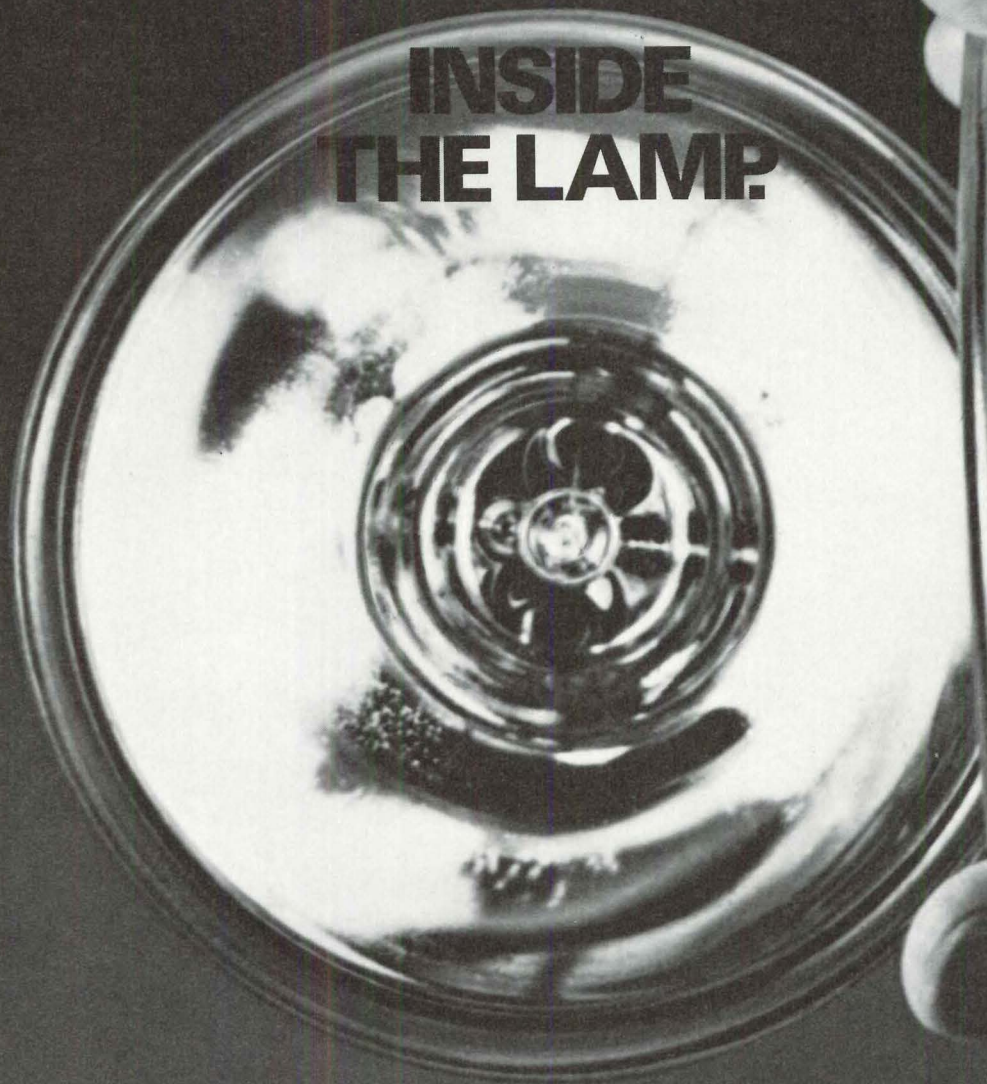
Again: What’s new, then? Our commitment to enlarge our coverage of foreign architects and architecture on a structured basis, including (hooray!) more foreign travel for the staff—on the obvious basis that our American readers are as interested in the important work and design thinking overseas as those foreign readers are in what’s going on in the United States.

Mind you, this new editorial coverage will be added coverage—nothing that we are doing now will be changed. We’ve budgeted the added pages to do it. And we’d welcome your comments and suggestions as our planning and thinking evolve. *Walter Wagner*

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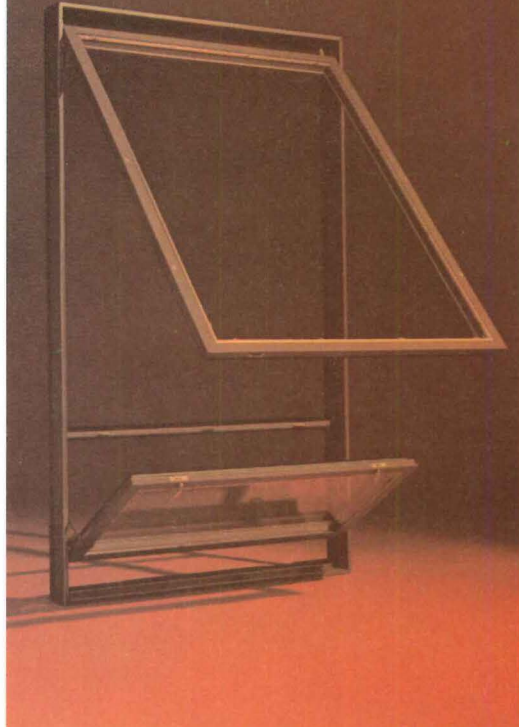
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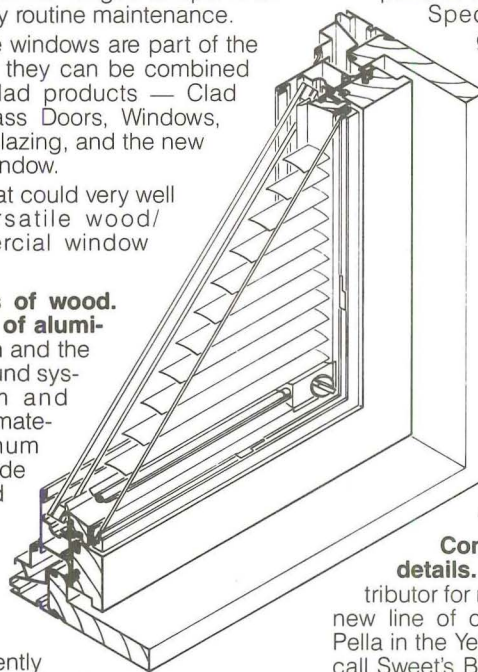
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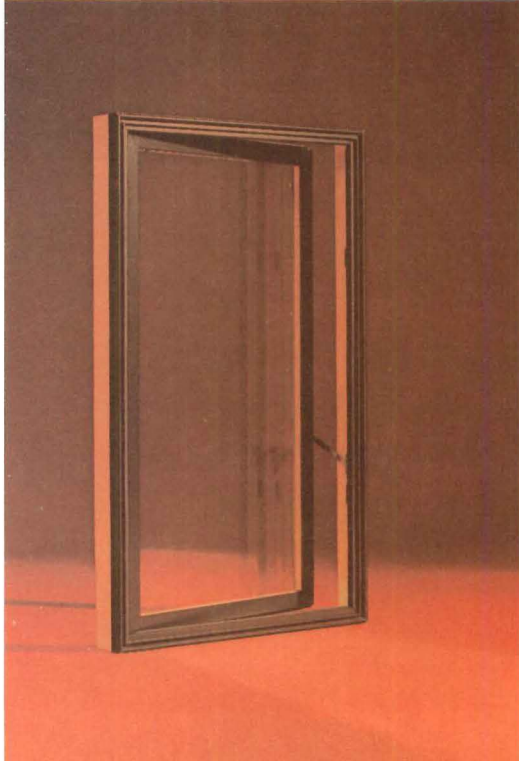
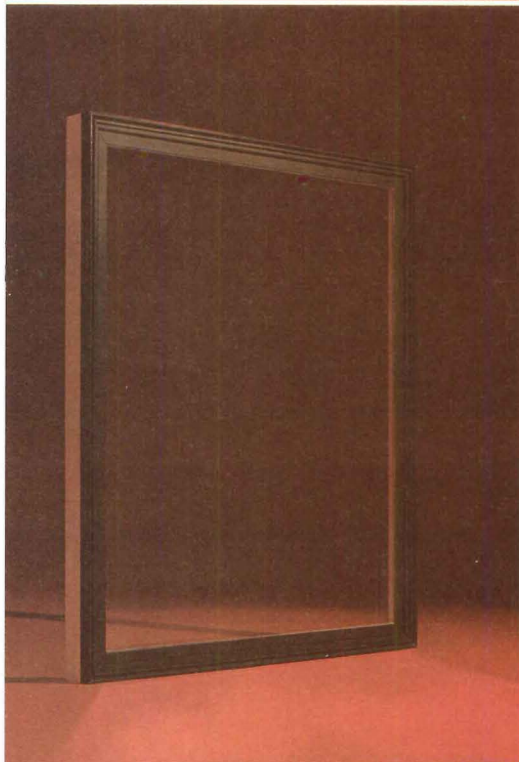


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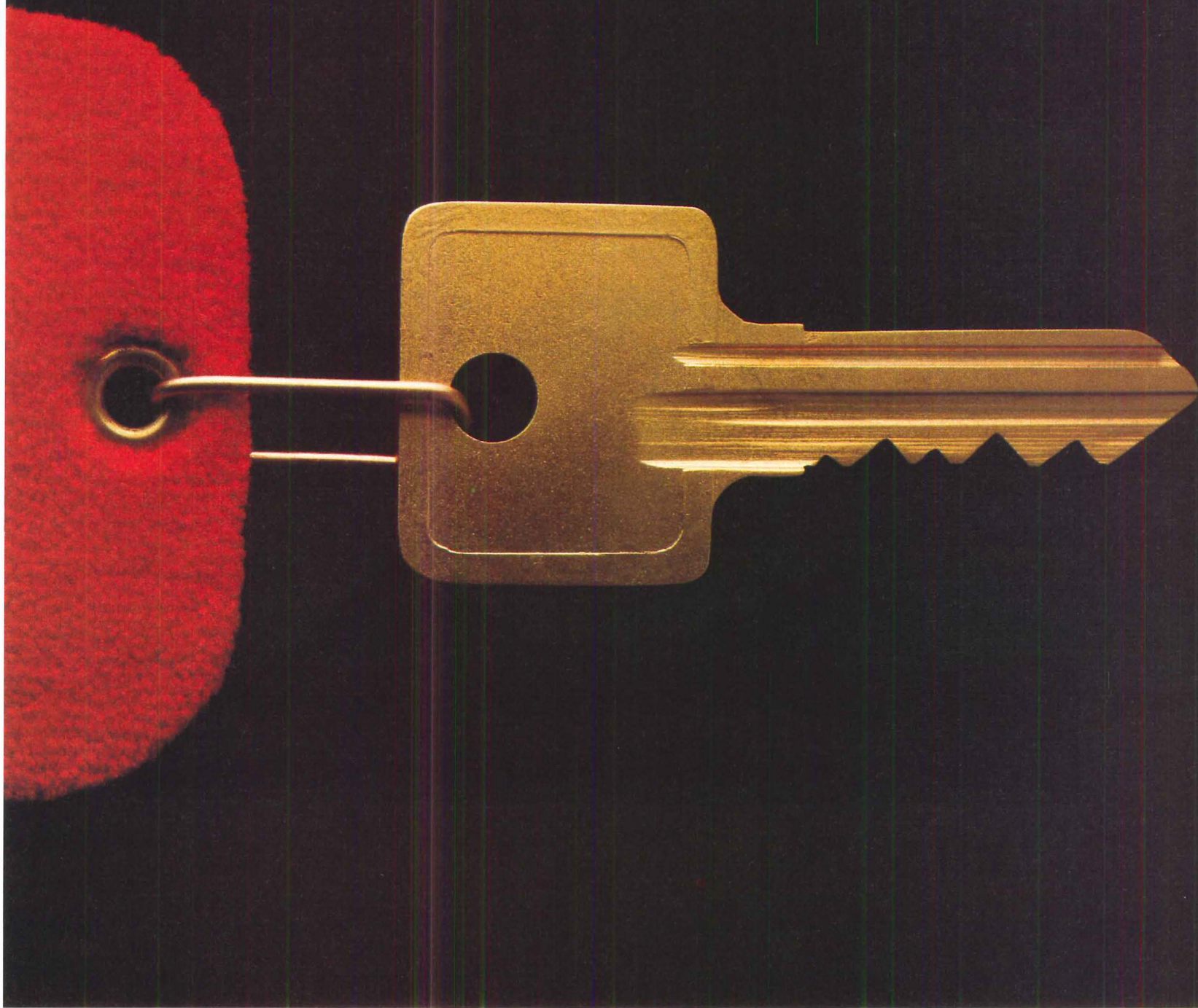


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CNA Insurance and Victor O. Schinnerer & Company, Inc. certainly qualify as experts in professional liability protection for architects and engineers. We invented it!

In 1957, CNA and Schinnerer joined forces with The American Institute of Architects and the National Society of Professional Engineers/PEPP to create a first: professional liability insurance designed specifically for architects and engineers. The CNA/Schinnerer insurance program has grown into the largest in the industry today, covering design professionals worldwide. People keep turning to us because we're the experts.

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& Company, Inc.

Outstanding claim service is one reason. Our program provides a nationwide network of claim specialists who work closely with you. These claim professionals resolve nearly half of all claims filed – without reaching litigation. When claims do go to litigation, several hundred law firms specializing in architects and engineers liability have counsel ready to serve you.

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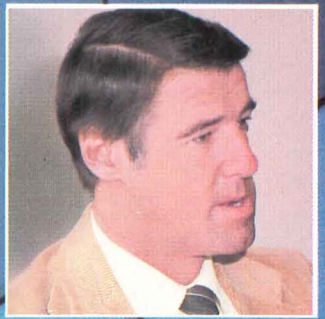
Georgia Marble®...Versatility Backed by Performance



*Decatur Federal Savings & Loan Assn. Building, Atlanta, Ga.
 Architect: Thompson, Hancock & Witt Associates, Atlanta, Ga.
 Stone Setter: Williams Tile & Terrazzo Co., Smyrna, Ga.*

Whether the designer considers Georgia Marble® for a project reflecting today's styles, or to express a classical interpretation, he knows his selection is backed by performance. Performance expressed not only by the Georgia Marble®, but also expressed by the experience and reliability of the professionals representing The Georgia Marble Company.

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Mr. Roger Morrow
Vice President, Administration
Milwaukee Insurance
Milwaukee, WI

The image shows a large, three-dimensional sign for Milwaukee Insurance. The sign is mounted on a light-colored concrete wall. It features a red logo on the left consisting of three slanted parallel bars and a circle. To the right of the logo, the words "MILWAUKEE" and "INSURANCE" are written in large, bold, black, sans-serif capital letters. The sign is set against a background of a modern building with a glass facade and a concrete structure.

**MILWAUKEE
INSURANCE**

Why did Milwaukee Insurance select the VERSA-TRAK® undercarpet wiring from Thomas & Betts?

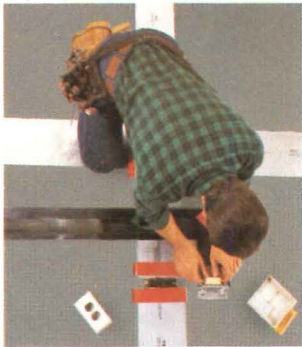
“For the grounding system, and because it’s engineered for fast, easy moves.”

The VERSA-TRAK® system puts time on your side. When Milwaukee Insurance of Milwaukee, Wisconsin decided to remodel their old facility and add 65,000 sq. ft. of new space, they were presented an opportunity to modernize their wiring system for flexibility while reducing installation costs better than 40%.

Like so many firms, Milwaukee Insurance makes regular moves and rearrange-

ments (about every 3 months). It's important to minimize activities that can disrupt office routines and interfere with office productivity.

That's why they chose the VERSA-TRAK® system for power and data. Moves are quick, foolproof and easy; primarily due to T&B's patented cable. It includes a welded interconnection between the ground shield and ground conductor (every 27"). As the cable is cut, when removing and relocating new pedestals and receptacles, the next weld in the VERSA-TRAK® system provides an automatic continuous ground to the service



panel. Not so with other systems. They require manual reconnection of the metallic ground shield for each move. Thus, the VERSA-TRAK® system is more efficient. Regrounding is eliminated. Time is saved. Office disruptions are minimized. Human error is averted.

VERSA-TRAK® data cable.

Field installable in minutes. Interfacing terminals with host computers couldn't be easier. VERSA-TRAK® data cable installs in minutes... with no special tools. Just an ordinary pair of scissors cuts the cable from the lightweight reels. Most other cable is precut, increasing the chance for error, waste and delivery downtime delays.

VERSA-TRAK® data cable allows you to install terminals at any point in your office with no interface problems.

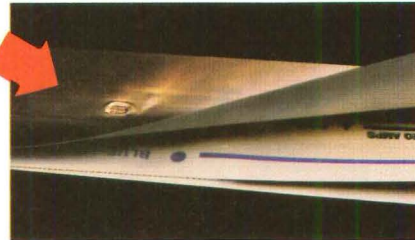
Like money in the bank. Since the VERSA-TRAK® system is a complete system that installs under modular carpet squares, directly on top of structural floors, it's a totally efficient system eliminat-

ing most of the costly restrictions typical of new construction and renovations: no poke-thru's, power poles, overhead raceways or hard-to-reach underfloor ducts. Milwaukee Insur-

ance saved over \$368,000 in labor and material costs... monies they agreed were better utilized elsewhere.

Three systems from one source.

The VERSA-TRAK® system is actually three totally complete undercarpet wiring systems: power, telephone and data. If your needs are for one system or all three, you can be assured of top quality product performance and technical aid—all from one source—Thomas & Betts.



Supported by nationwide product specialists.

For more information, contact your local VERSA-TRAK® system distributor or T&B product specialists. They're ready to assist you every step of the way. Call or write Thomas & Betts Corporation, 920 Route 202, Raritan, NJ 08869; (201) 685-1600.

The VERSA-TRAK® system. Engineered performance.

T&B
CONSTRUCTION & INDUSTRIAL DIVISION

Circle 10 on inquiry card

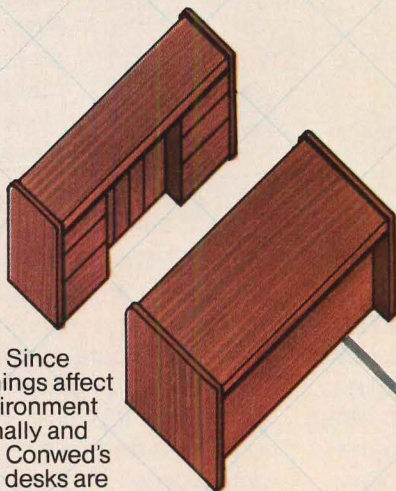
INTÉRICS

The science of creating environments that work SM

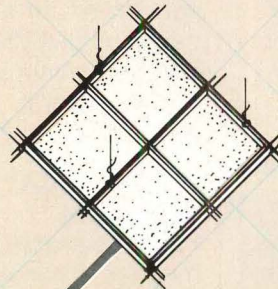
In the past decade, the traditional office environment has undergone fundamental changes.

Inherent in these changes has been the growing realization that the physical environment of an office has a dramatic effect on the productivity and satisfaction of the people in that office.

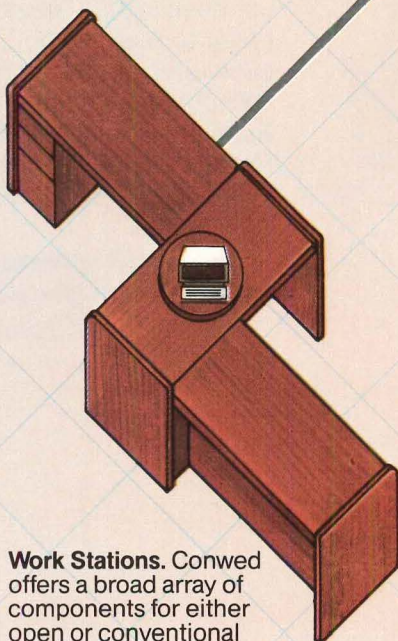
Today, Conwed is uniquely positioned with the industry's most comprehensive range of products and services to



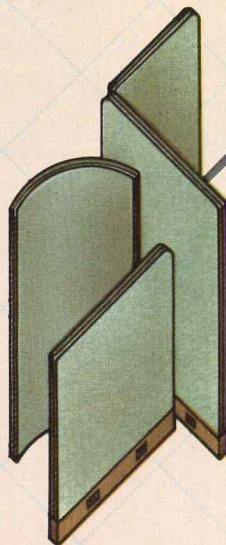
Wood Desks. Since office furnishings affect the work environment both functionally and aesthetically, Conwed's natural wood desks are designed with an eye towards both.



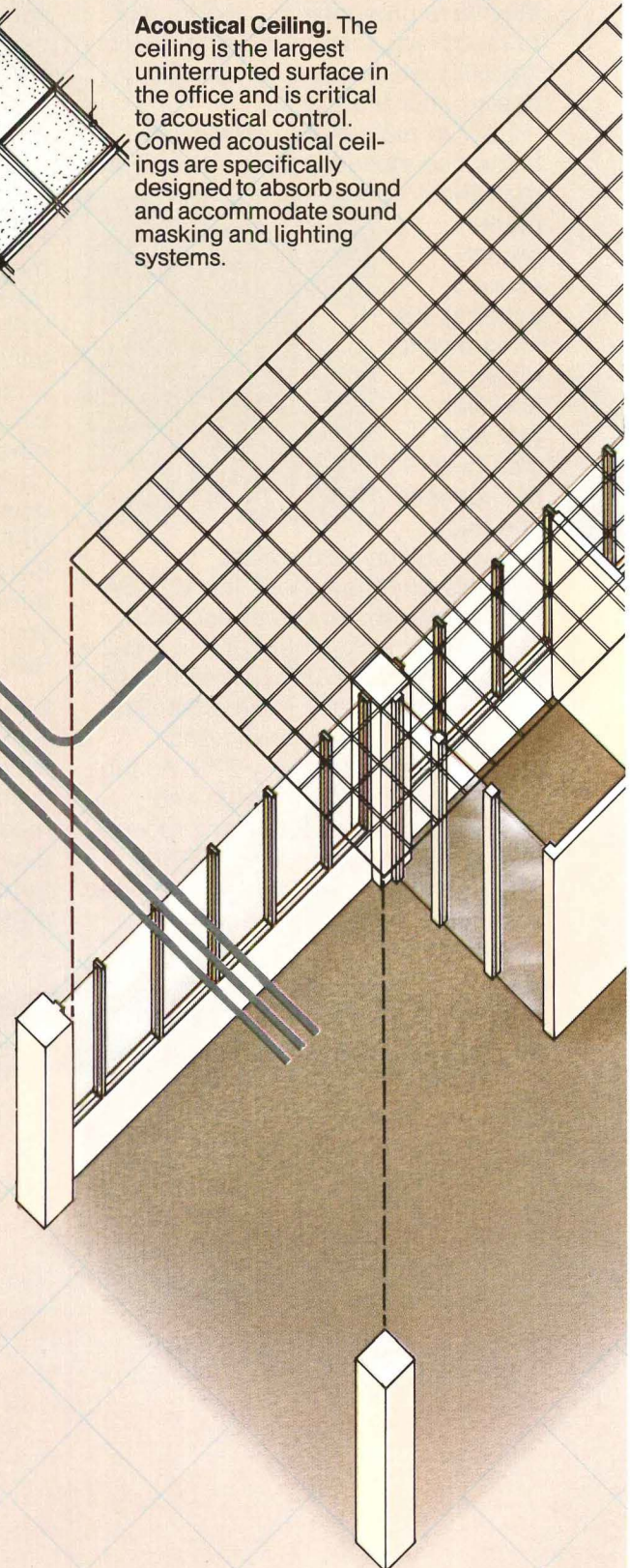
Acoustical Ceiling. The ceiling is the largest uninterrupted surface in the office and is critical to acoustical control. Conwed acoustical ceilings are specifically designed to absorb sound and accommodate sound masking and lighting systems.



Work Stations. Conwed offers a broad array of components for either open or conventional offices. You can choose from freestanding desks or complete work station systems.



Acoustical Panels. Conwed acoustical panels work with Conwed ceilings to reduce noise levels so workers will be less distracted and more productive. These panels are also available with electrified bases to provide wire management and power distribution.



maximize the efficiency and effectiveness of the workplace. Utilizing our technical expertise and experience we have developed a consistent, unified approach which yields predictable performance in the office.

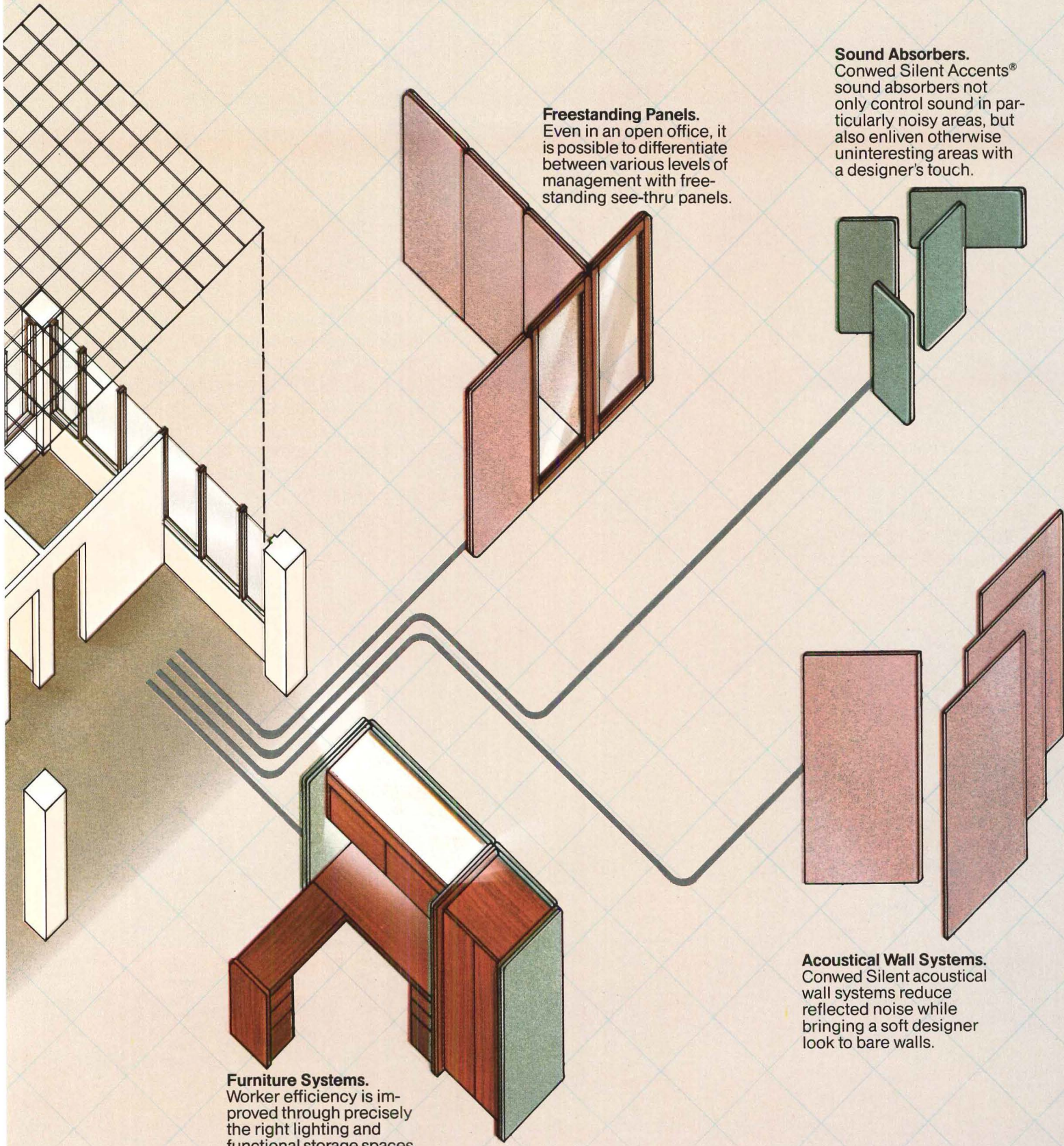
We call this approach **Intérics**: The science of creating environments that work.

Through the principles of Intérics, Conwed can significantly improve the

productivity, cost effectiveness and physical appearance of a company's workplace. Each component of the office is selected for its impact on organizational interaction, acoustics, illumination, aesthetics and return on investment. From ceiling tiles to wall panels, from office furniture to task lighting, every element is considered for its effect on the total environment.

To learn how Conwed can put the

science of Intérics to work for you, contact Conwed Corporation for the representative nearest you. Write Conwed Interior Products Division, P.O. Box 43237, St. Paul, MN 55164. Or call (612) 221-1177. You can see the wide array of Conwed products, including new finishes, colors and fabrics at the Conwed showroom (Suite 929, Merchandise Mart) at NEOCON **CONWED** 15.



Freestanding Panels. Even in an open office, it is possible to differentiate between various levels of management with freestanding see-thru panels.

Sound Absorbers. Conwed Silent Accents® sound absorbers not only control sound in particularly noisy areas, but also enliven otherwise uninteresting areas with a designer's touch.

Furniture Systems. Worker efficiency is improved through precisely the right lighting and functional storage spaces built into Conwed furniture systems.

Acoustical Wall Systems. Conwed Silent acoustical wall systems reduce reflected noise while bringing a soft designer look to bare walls.

Circle 11 on inquiry card

EPDM/Firestone

The name to write for the roof that's right.

EPDM/FIRESTONE

A lasting design begins with a single stroke of the pencil. And so does a lasting, dependable, single-ply roofing system.

The word EPDM/Firestone on your design's spec sheet means more than a type and source.

EPDM/Firestone means membrane materials that are the result of more than twenty years' of research and performance testing throughout the world.

EPDM/Firestone means roof systems conceived and engineered to resist long-term environmental exposure.

EPDM/Firestone means three separate roofing systems with the flexibility to conform to the designer's concept.

EPDM/Firestone means economy of installation and economy of operating costs throughout the roof's life-cycle.

But perhaps most importantly, EPDM/Firestone means a complete system which stands behind your roofing system. From top technical assistance to manufacturing capability to a comprehensive warranty program,* EPDM/Firestone means a roofing system that's right for your job.

Ask for our comprehensive technical manual. It contains complete information about how EPDM/Firestone is the right specification for your roof. Just write

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Division of The Firestone Tire & Rubber Company

The name to write
for the roof that's right.

*Five, ten, and fifteen-year warranties available.

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DRYVIT.® HOW THE TRUST WAS EARNED.

We believe in quality.

When we introduced the concept of an exterior insulation and finish system to the United States in 1969, we had to prove the System could perform better than traditional materials.

And so our commitment to stringent testing and quality control was born.

We began with a proven formula for our Finish coat and cementitious adhesive.

We know there is no substitute for the performance level of a 100% pure acrylic co-polymer product.

Valuable properties such as flexibility, fade-resistance, alkali-stability, moisture-resistance and wet adhesion are lost when substitutes are added.

And add to this, our special impact system, Panzer® Mesh, and you have all the ingredients for a building that will live up to the high standard you set.



We offer technical support in the field and at the planning stage.

Design assistance is available from our technical staff.

And for fast local assistance, our distributors are nearby and always available.

You can trust the Dryvit Difference to come through when you need it.

Demanding fire and structural testing goes beyond code minimums.

The Dryvit System is recognized by all three model code agencies: ICBO, BOCA, SBCCI.

We've subjected our System further, to Full Scale Fire Tests with 1500 and 1250 pound fire sources as well as the Factory Mutual Corner Test.

Positive and negative wind load testing has been conducted on full scale wall assemblies in accordance with ASTM E330 procedures.

Dryvit performs even under demanding conditions.



Dryvit retrofit gives office building a fashionable Art Deco facade.

5500 Yale Street, Englewood, Colorado, was a precast concrete eyesore before architects Ginsler and Associates designed this retrofit. Taking advantage of

Dryvit's design flexibility and the expertise of the applicator, they were able to incorporate aesthetic relief. Bands of 1½" x 7" Dryvit Insulation Board create flowing lines, adding drama to the balconies.



Face-saving retrofit adds insulation to St. Paul's Housing for the Elderly.

Detroit, Michigan, winters had taken their toll of this 12-story uninsulated building.

Smith Associates, Inc., the architects, chose Dryvit Outsulation to solve their problems. In addition to adding needed insulation, the Dryvit retrofit provided an attractive weather-resistant surface. Occupants now enjoy a better level of comfort while the building's appearance upgrades the entire area.

Gardner Student Center serves as entrance gate to the University of Akron, Ohio.

Believe it or not, a road goes through this building. Karl R. Roher & Associates, architects, turned to Dryvit to accomplish the archways and soffits their design required. Dryvit's impact system, employing Panzer® Mesh, was used in high traffic areas. Also gained: a cost-effective, energy-efficient building that blends beautifully with the campus.

Over 40,000 buildings stand as proof of our performance.

Over 30 years of Dryvit experience in this country and Europe offer peace of mind to the developer and architect specifying Dryvit.

Call or write for information.

DRYVIT SYSTEM, INC.

One Energy Way, P.O. Box 1014
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Plant Locations: West Warwick, RI; Tulsa, OK;
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Look for Dryvit in the General Building File of Sweets Catalog under Section 7.13/DR

dryvit

OUTSULATION

Trust Our Proven Performance.
It's the Dryvit Difference.

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Wasco's new architectural minimized Midway's

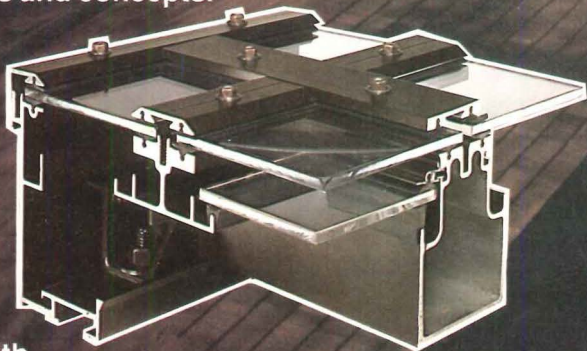
Spectacular skylighting systems are not new to Midway Motor Lodge. And yet, every time a new Lodge is constructed, Midway is faced with a monumental decision.

Who will provide state-of-the-art technology, combined with a proven track record for engineering quality and installation know-how...at the right price.

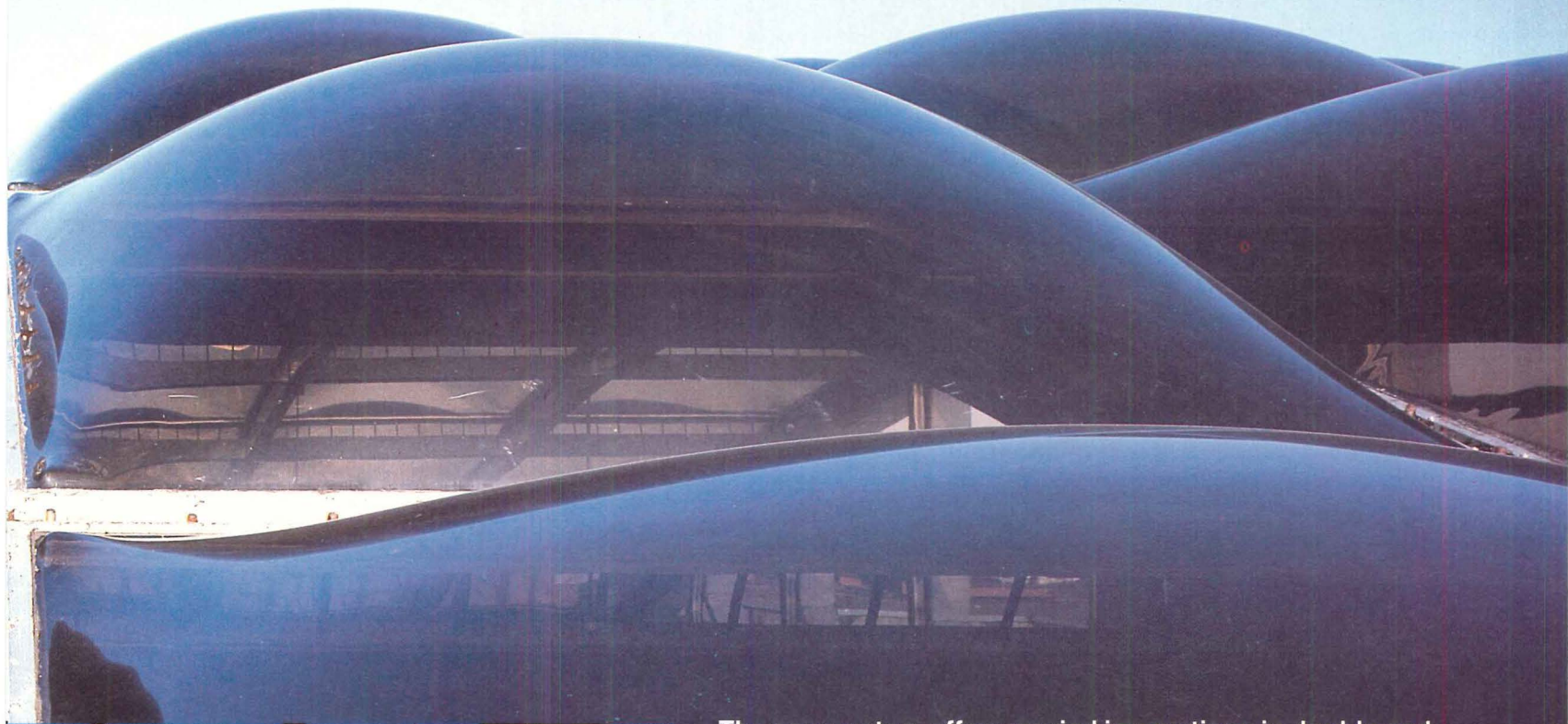
Wasco's dramatically different tubular architectural skylighting system met Midway's sophisticated specifications for the new Lodge in Indianapolis.

The long-established leader in commercial skylighting systems and the innovator of most skylighting technology, Wasco has been minimizing skylighting decisions since 1935. This newest innovation clearly advances the state-of-the-art to a level that will transform many of your custom skylighting designs and concepts.

It's an extruded aluminum, tubular system that is aesthetically clean, uncluttered by butterfly wings or other unsightly projections. It is designed to be fully compatible with glass and with flat or formed plastic.



skylight system monumental decision



The new system offers myriad innovations in double and triple glazing, screening, fracture retention, snap engaged retainers, sealing and dry gasketing against the elements. Its integral, inconspicuous condensation gutters all but eliminate condensate problems and—with the Wasco (Patent Pending) "X Clip"—actually help support transverse framing members.

With Wasco's unique technology, rafters can be spaced up to 54" apart and straight lean-to spans can reach 25 feet and beyond. Arches can span up to 50 feet, with special cast aluminum supports providing dependable load resistance.

Wasco architectural skylighting system components are factory fabricated and knocked down to maximum sub-assemblies for economical shipping and field assembly, providing unparalleled ease and economy in erection and performance in service.

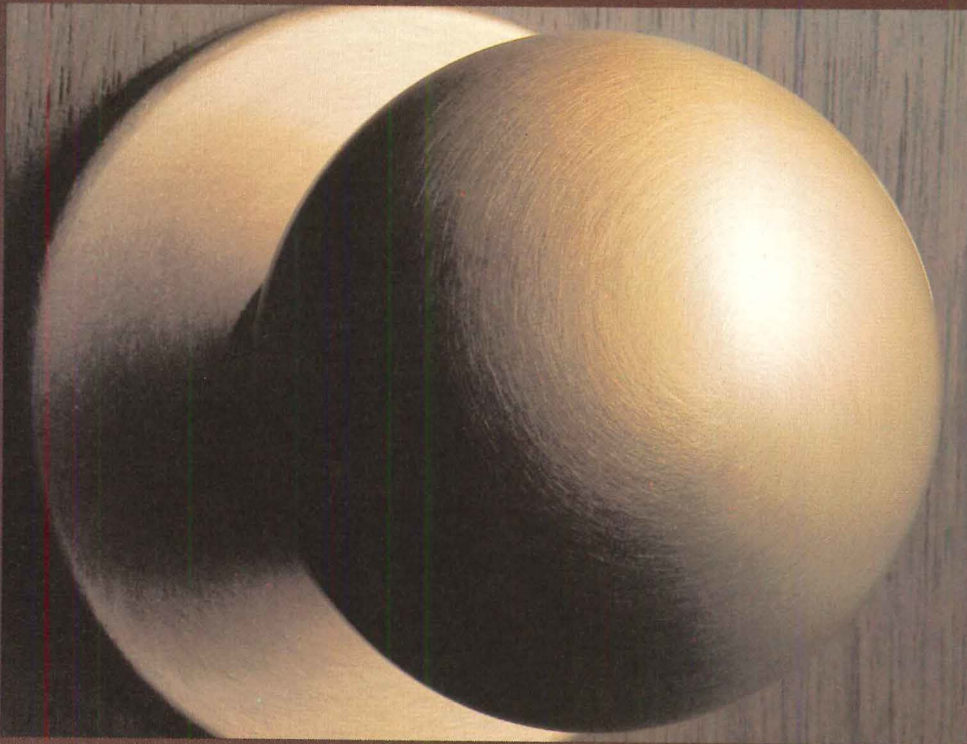
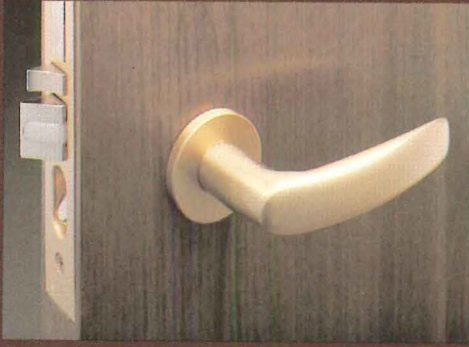
Call your local Wasco representative as shown on your current Sweets Catalog or call directly to Sweets Buy-Line 1-800-447-1982.



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INDUSTRY LEADERS IN SKYLIGHTING,
SMOKE AND HEAT VENTING

P.O. BOX 351 / SANFORD, MAINE 04073 / TEL: 207-324-8060

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7700 Line • 8100 Line

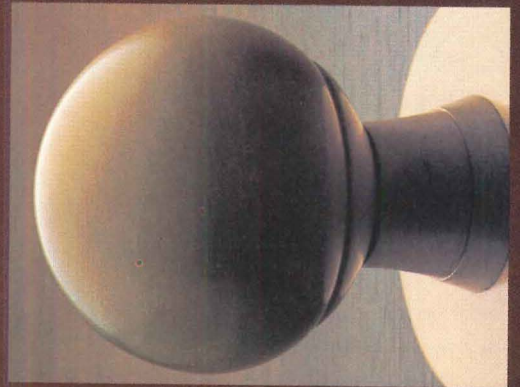


**At Sargent,
attention to design
comes naturally.**

Beauty joins form and function in nature to create perfection. So it is with Sargent, where designers work closely with craftsmen to please the eye and provide the protection, performance and durability you demand.

Proof: Sargent Mortise Locks enhance both the design and security of any door. Small wonder they've been the first choice of generations of architects (and specifiers) for aesthetics and peace-of-mind.

Look to Sargent, where attention to design is second nature.



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Division of Kidde Inc.

KIDDE

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A.D.

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Company _____ Phone _____

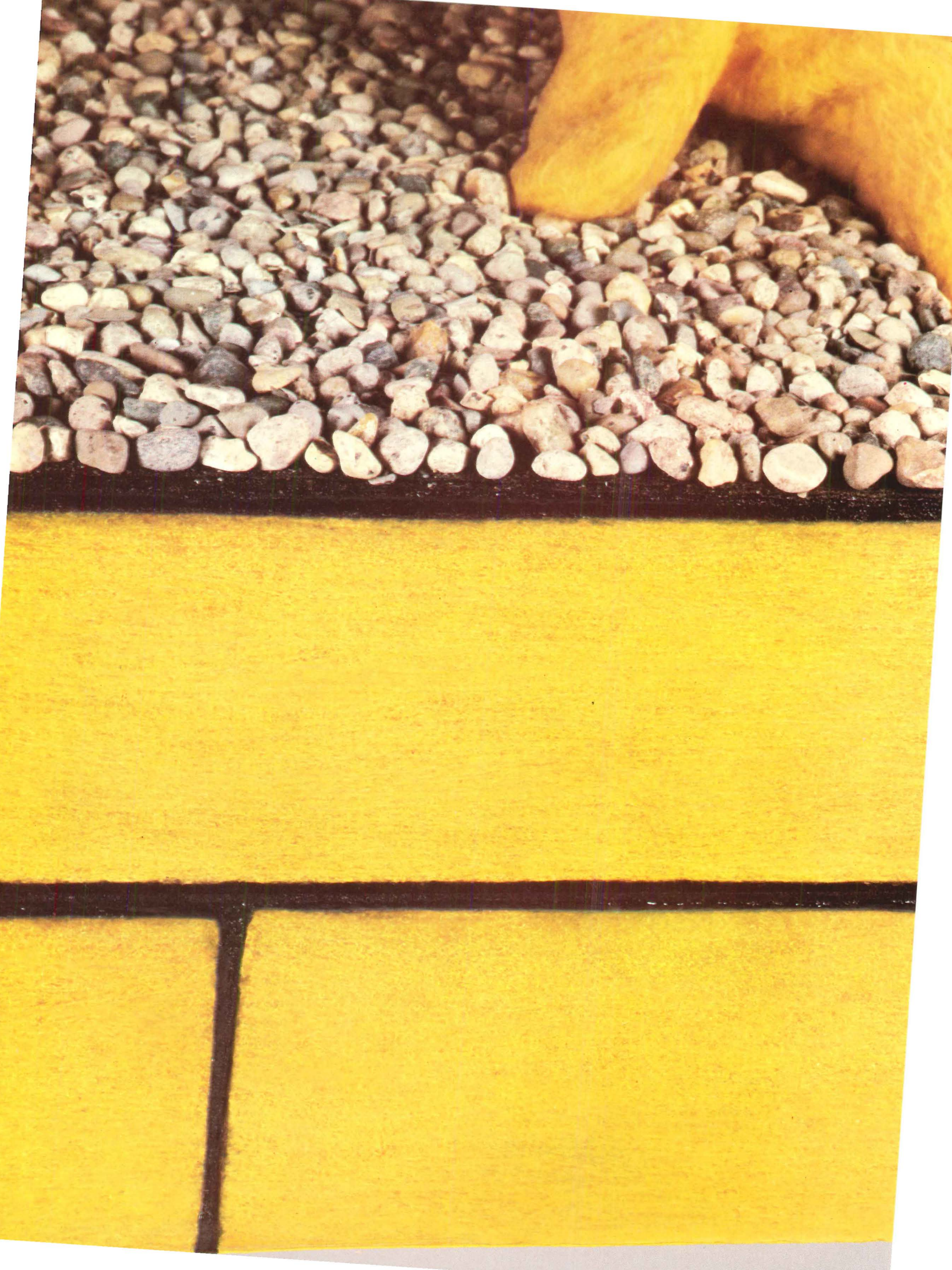
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City _____ State _____ Zip _____

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120 Old Post Road, Rye, New York 10580

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WARI-63



THE REST OF YOUR BUILDING SHOULD BE BUILT THIS WELL.

A roof's primary mission is to preserve a building's weatherproof integrity. No other component is called upon to withstand such torturing extremes. Roof temperature variations of over 100 degrees in a single day, high winds, ice and snow can take a terrible toll.

Yet, when writing specifications, the roof is often the one area that receives the least scrutiny.

OUT OF SIGHT SHOULDN'T BE OUT OF MIND

Because the cost of premature failure can be astronomical, the roof requires perhaps even more attention than the more visible parts of the building.

That's why Owens-Corning has invested over 40 years in developing the highest quality roofing materials available.

At our research and technical center in Granville, Ohio, experimental roof systems, asphalts and roofing insulations are continuously developed. All to ensure that Owens-Corning products are the state-of-the-art.

From this came Perma Ply-R® roofing felt, the most durable ever made. With the highest tensile strength, best tear resistance and unequalled proven performance. Over six billion square feet installed in 18 years.

From our exhaustive research also came the best foundation for any roof. In addition to a full thermal range, Owens-Corning's Fiberglas® and FURI® roof insulations provide excellent dimensional stability, resilience and ventability.



CERTIFIED ROOFING CONTRACTORS

But even the best roofing products are only as good as the way they're put down. Owens-Corning Certified Roofing Contractors are a select group of proven professionals who have met the industry's most stringent standards for roofing and business performance—our own.

And when a Certified Contractor installs one of our roofs, you know it will stand up. Because we'll stand behind it. With the industry's best guaranties. Up to 20 years.

The best products, contractors and guaranties. Now that the roof is this well built, you only have to worry about what's underneath it.

For more information, call L. Diller at (800) 537-3476. In Ohio, (419) 248-5511. Or write B.K.U. Meeks, Owens-Corning Fiberglas Corp., Fiberglas Tower, Toledo, Ohio 43659.



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FIBERGLAS**
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WINDOWS THAT DEMONSTRATE YOUR SENSE OF DESIGN. NOT MERELY WHAT'S AVAILABLE.

If you're tired of trying to fit windows that are rectangular into spaces that aren't, you should know about Marvin Windows.

MARVIN OFFERS SOME NEW ANGLES ON ARCHITECTURAL DESIGN.

Many of them can be seen in The Charter at Beaver Creek, Colorado.

In addition to casements and double hungs, Marvin offers triangles, trapezoids, octagons, arched tops and more. In fact, no other brand of quality wood windows makes so many shapes and sizes.

Marvin Windows are even available with true divided lites. So you can order windows in exactly the style you need to maintain the

integrity of your design.

Yet Marvin Windows cost no more than any of the other major brands of wood windows.

**BEAUTIFUL WINDOWS.
BEAUTIFULLY PUT TOGETHER.**

The sash, casings and jambs of all Marvin Windows are made of fine-grained Ponderosa pine.



This wood was chosen for its insulating properties and the way in which it accepts a stain and varnish or paint finish.

A Marvin Window not only begins with a high quality wood, there's more of it in a Marvin than in most other wood windows. (For example, our casement has 20 percent more wood in the sash and 22 percent more in the frame than our leading competitor's.) And all exterior wood is deep-treated to protect against rot and decay.

OUR WINDOWS OFFER ATTRACTIVE ENERGY SAVINGS, TOO.

We began offering triple glazing over 20 years ago. And double glazing long before that. Either one offers significant energy savings in summer, as well as winter.

What's more, Marvin Windows are carefully weather-stripped to eliminate drafts and further reduce heating and cooling costs.

MARV-A-GARD ELIMINATES WINDOW PAINS.

Marv-A-Gard is our exclusive maintenance-free exterior available on many styles of Marvin Windows.

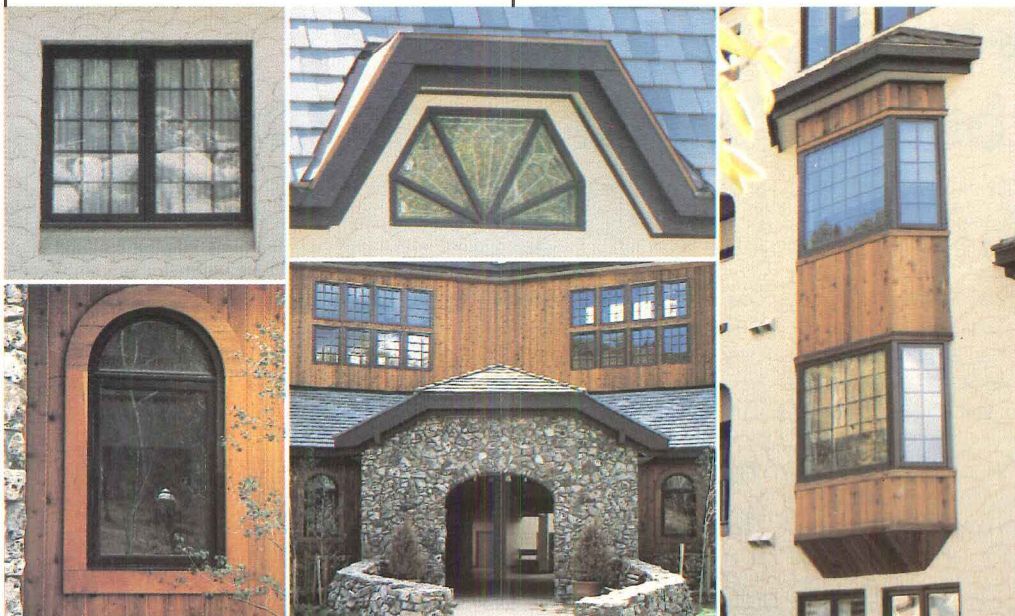
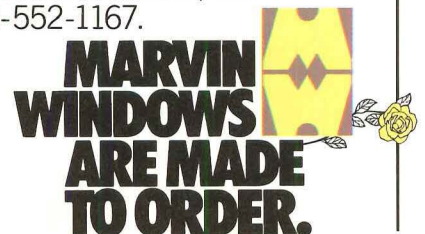
It's a precision-fit clad exterior that has a specially cured polyester finish that resists rain, hail and blazing sun.

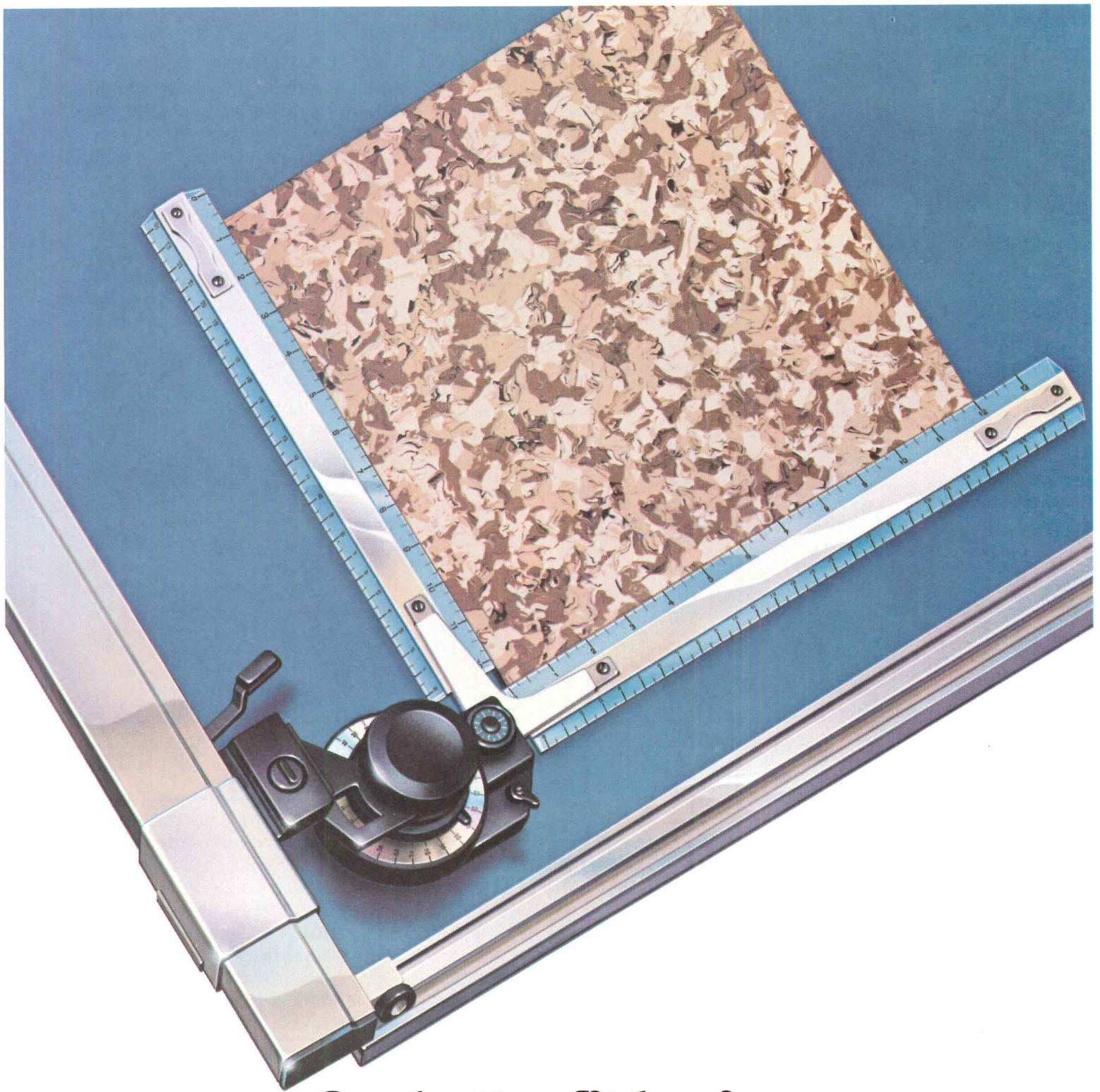
So you can offer your clients a window that's maintenance-free outside and beautiful wood inside.

MARVIN WINDOWS ARE ALWAYS THERE WHEN YOU NEED THEM.

Even though our windows are made to order, we can deliver most shapes and sizes within 10 days from the time we receive your order.

For more information, consult Sweet's General Bldg. File No. 8.16 MAR. Or for a free catalog, write Marvin Windows, Warroad, MN 56763 or call 1-800-346-5128 toll-free. In Minnesota, call 1-800-552-1167.





Our better fit begins with our better fitness program.

You can't get a better fit with any other tile! VPI solid vinyl tile is Micro-squared,[™] a VPI exclusive that gives you tighter-fitting floors with fewer visible seams.

Vertical edges are cut perpendicular to the surface, too. And gauge is precision controlled to eliminate high edges and assure a smooth, continuous surface. No other tile manufacturer goes to such lengths to make sure you get the very best flooring results.

And VPI solid vinyl tile shows its quality year after year. It keeps its good looks under hard use, and even abuse. It resists indentations, and

shrugs off most common chemical spills. Its resiliency makes it easy on the legs. And it stays attractive with routine washing and spray buffing.

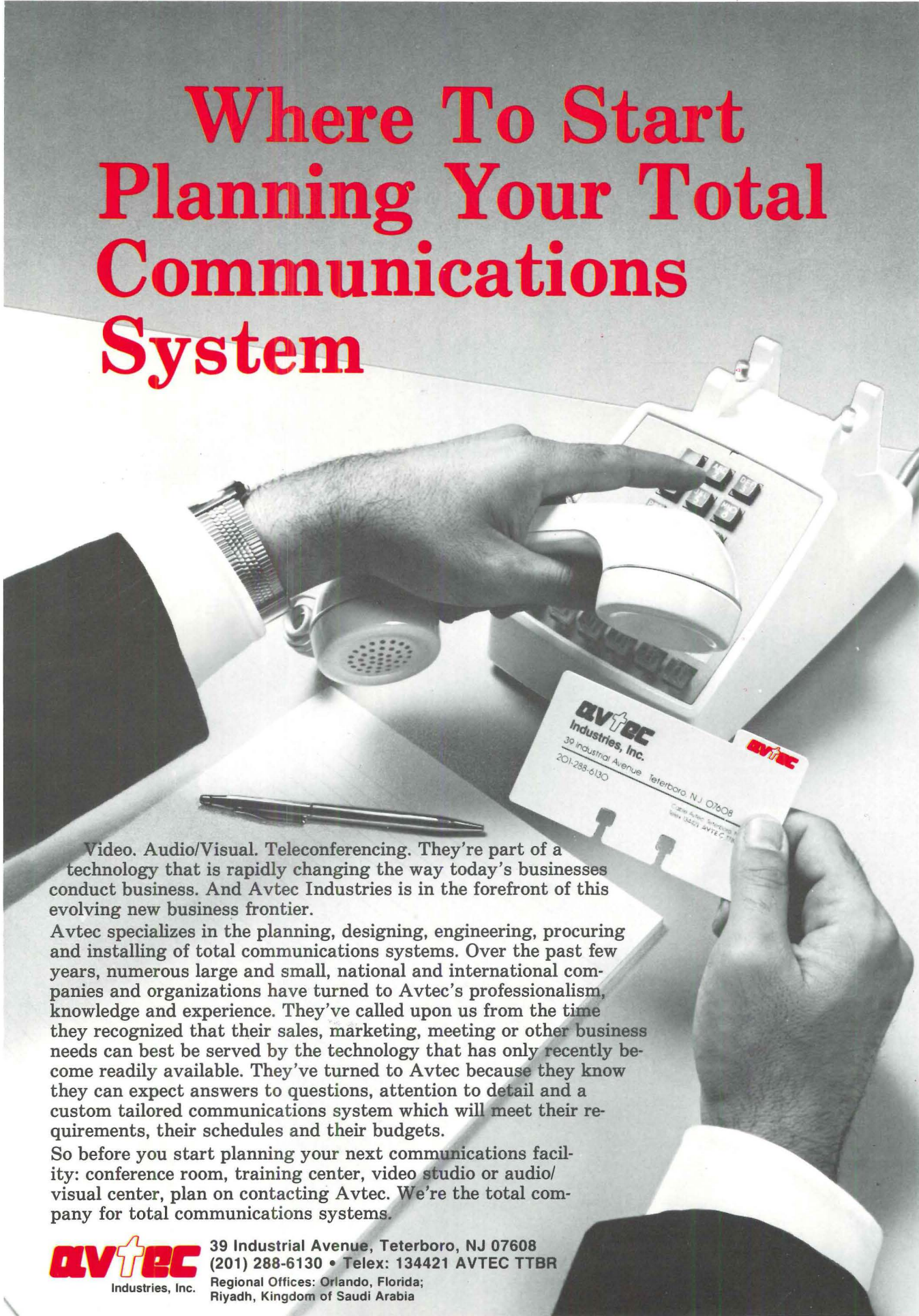
VPI solid vinyl tile. Micro-squared to fit, manufactured to keep looking fit. Available in 12" x 12" tiles and a variety of handsome colors and patterns. For information write VPI, 3123 South 9th Street, P.O. Box 451, Sheboygan, WI 53081. Or call 414-458-4664.

2101

VPI FLOOR PRODUCTS

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Where To Start Planning Your Total Communications System



Video. Audio/Visual. Teleconferencing. They're part of a technology that is rapidly changing the way today's businesses conduct business. And Avtec Industries is in the forefront of this evolving new business frontier.

Avtec specializes in the planning, designing, engineering, procuring and installing of total communications systems. Over the past few years, numerous large and small, national and international companies and organizations have turned to Avtec's professionalism, knowledge and experience. They've called upon us from the time they recognized that their sales, marketing, meeting or other business needs can best be served by the technology that has only recently become readily available. They've turned to Avtec because they know they can expect answers to questions, attention to detail and a custom tailored communications system which will meet their requirements, their schedules and their budgets.

So before you start planning your next communications facility: conference room, training center, video studio or audio/visual center, plan on contacting Avtec. We're the total company for total communications systems.

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**Who's the new architect
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error-free,
who's easy to work with,
who works with color,
who's yours for \$75,000?**

**Aycad,TM
that's
who.**



AYDIN CONTROLS introduces AYCADC, a full size, computer-aided drafting system with three dimensional capability.

AYCADC can significantly increase your productivity with the best price/performance ratio available.

To an accuracy of at least a 1000th of an inch, changes can be made using a minimum of time, and details can be easily recalled for placement on a drawing at the desired scale.

AYCADC is especially designed to function in the professional office environment of Archi-

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All this for \$75,000.00 makes AYCADC unique— for further details as to how AYCADC can increase your office productivity, please contact:

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Aydin  Controls
Command Performance in Color Graphics

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The computer that architects plan on.

JOB NO.

DATE

SCALE

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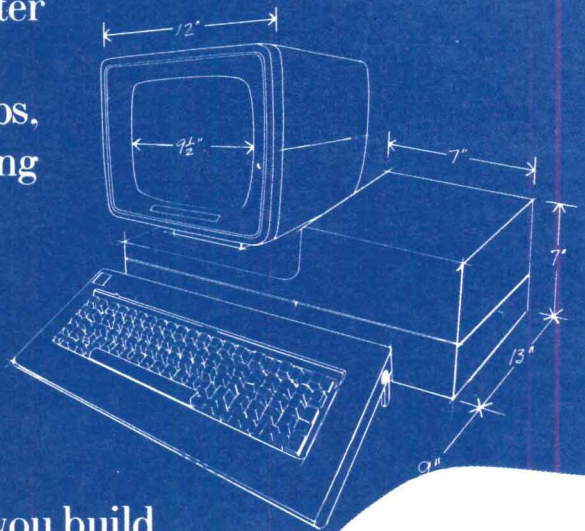
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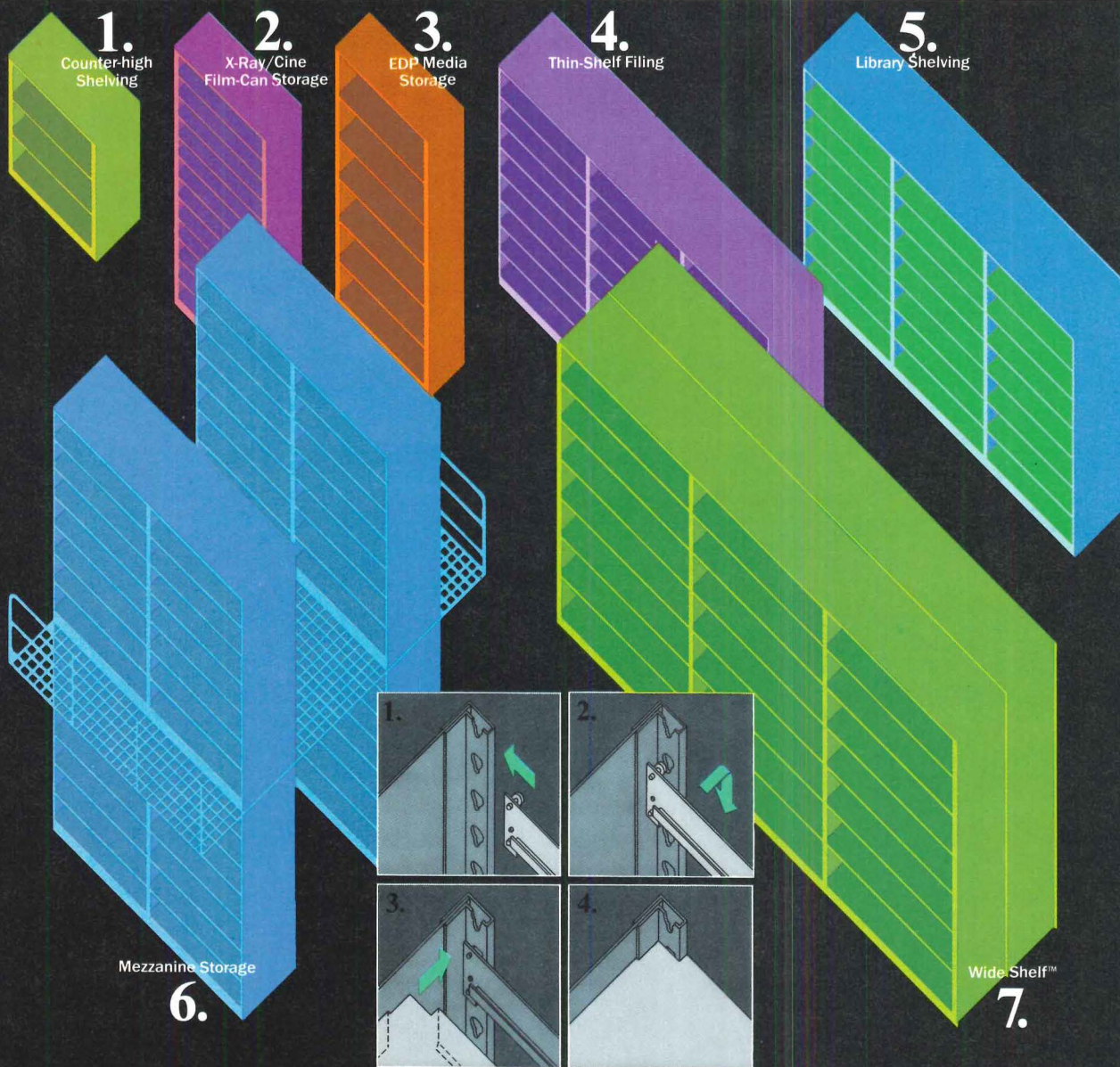
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Engineers urge clear national energy policy

The American Association of Engineering Societies has released a position paper stating that government has failed to provide a comprehensive policy that would encourage badly needed alternate sources for energy, and urging that it do so. The paper places strong emphasis on the development of coal and synthetic liquids, as well as exploration for new sources of coal and gas, incentives to encourage oil extraction from shale and tar sands, and nuclear and solar sources.

At the same time, the AIA is urging Congress to restore funds to the Department of Energy for its conservation and solar research programs.

Design commissions from the new jobs bill?

The \$4.6-billion jobs bill signed before Easter by President Reagan (see May News, page 35) is likely to generate between \$5 million and \$10 million in architectural work, most of it in historic preservation. The bill includes a total of \$25 million for historic preservation, and there should also be some architectural work in the \$60 million allotted to the Justice Department for prison renovation. As a rule of thumb, architectural work in rehabilitation and renovation accounts for between 10 to 20 per cent of total expenditures.

Peter Hoffmann, World News, Washington, D.C.

The infrastructure issue: Congress just can't seem to decide

Infrastructure, a 14-letter buzzword that has become increasingly popular in Washington since last fall, includes highways, bridges, sewage disposal and other systems needed to service buildings and the economy. Some 30 bills are floating around both houses of Congress to provide various types of Federal aid for infrastructure repair, and the issue is churning up hearings, press conferences and other compulsive activities.

But a number of Congress watchers think any meaningful infrastructure legislation that would somehow come to grips with the at-least \$3-trillion worth of deteriorating public works littering the national landscape has a long way to go—possibly until the next session of Congress. Part of the delay will be due to opposition by an administration that is loath to spend ever more money in hard times that would add to already huge budget overruns. Part of it may also be due to confusion and even indifference in Congress, and to the fact that there are no strong signs of any coalition being established to keep interest going.

"The issue is so large, so amorphous, it's hard to get a handle on," observes one building-industry lobbyist. "Everybody is still feeling his way." Another notes: "There is still a lack of knowledge of the infrastructure issue in the entire Congress." One key Senate staffer describes the interest of many of his committee members as "lukewarm."

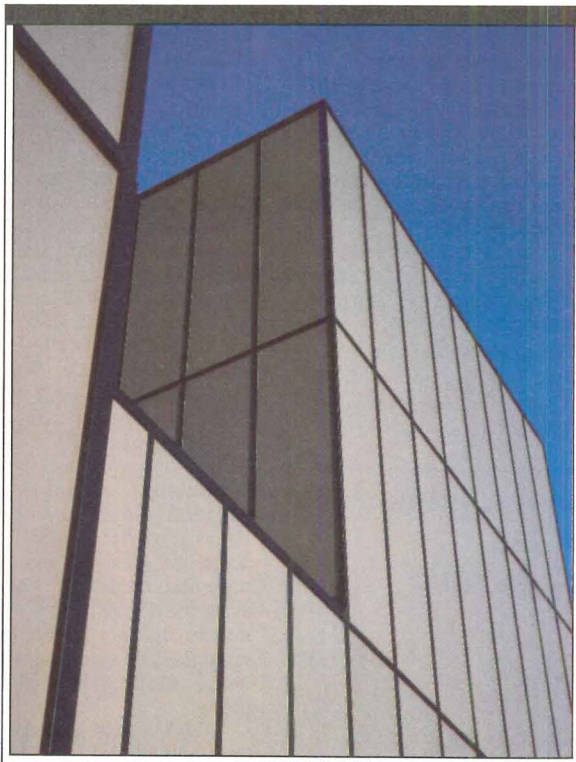
Symptomatic of the early haste to draft legislation is the need to clean up language in some of the bills now before Congress. "There's the question of whether the bills that are being drafted now will work," says an aide at the American Institute of Architects. The need for knowledge and language guidance was obliquely acknowledged by Senator Jennings Randolph from West Virginia in mid-April hearings on three infrastructure bills, including one co-sponsored by Randolph, in the Senate Environment and Public Works committee. Randolph said in his opening statement that the three-day hearings—unusually long for that committee—were called to obtain expert opinion "on possible improvement in this legislation."

In addition to Randolph's bill co-sponsored by committee chairman Robert T. Stafford from Vermont, the committee

was looking at a bill authorizing a national public-works inventory sponsored by Senator Daniel J. Moynihan from New York and a bill setting up state infrastructure banks introduced by Senator Pete V. Domenici of New Mexico.

David Olan Meeker, executive vice president of the American Institute of Architects, criticized both the Stafford-Randolph and Domenici bills as being too restrictive in requiring matching contributions by state and local governments. "Both," Meeker told the committee, "may inhibit the use of the infrastructure programs by the communities with the greatest need and thereby undermine the effectiveness and value of any Federal infrastructure assistance."

While welcoming the principal recommendation in both bills that states should have control over infrastructure projects, Meeker said the AIA is concerned "that neither bill provides for adequate involvement of local governments in the development of state infrastructure improvement programs." Meeker also urged that public buildings such as schools and libraries be specifically included in any infrastructure legislation. The Stafford-Randolph bill would place most responsibility for administering infrastructure programs to the Army Corps of Engineers. Meeker said that while the corps has strong organizational capabilities, a complex national program of this nature would best be administered by Federal agencies "more clearly attuned to the needs and concerns of states and localities, such as a national interagency council consisting of several cabinet members." *Peter Hoffmann, World News, Washington, D.C.*



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Management: Coping with insured liability claims

This second article by managers from the CNA Insurance Companies tells why insurance-claim handling requires savvy—and how to get it

By Michael Silchuck and Michael Karson

The first article on design professionals' liability insurance from CNA told what to look for in a policy, how to tailor a policy to your needs and where to get help if you get stuck in your research (see RECORD January, 1983, pages 35 and 37). This second article tells what happens if you get hit with a claim: what your chances are of successful settlement and what you and your insurance company should do to help it along. While some of the procedures and expected results here may vary with the specific company, and all should be checked out with your actual insurer, most are typical. CNA is a leading underwriter of architects' and engineers' liability insurance. The company and its managing agent, Victor O. Schinnerer, have the commendation of the national AIA, and point to a 25-year history in the field. C.K.H.

Your professional liability insurance policy is, simply stated, a contract between you and your insurance company that promises that the insurer will protect you and your firm in the event of a claim. The policy should have been drafted to provide an exact description of what is and is not covered, as well as a delineation of your obligations as the insured and the insurance company's responsibilities.

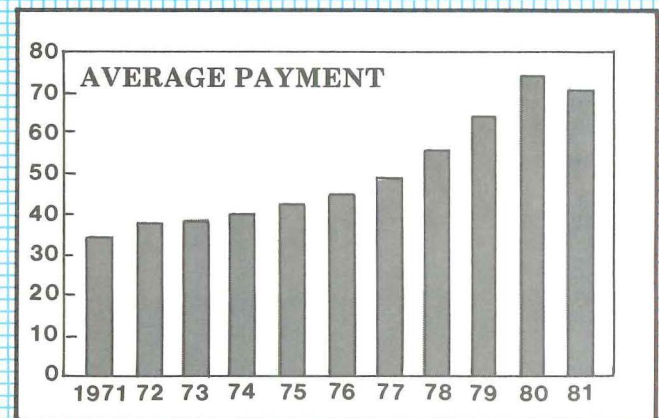
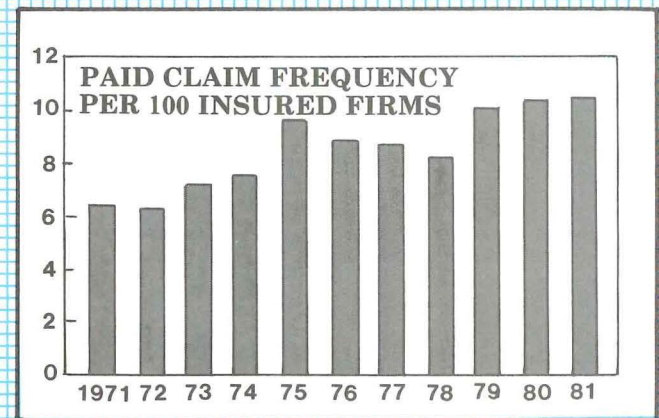
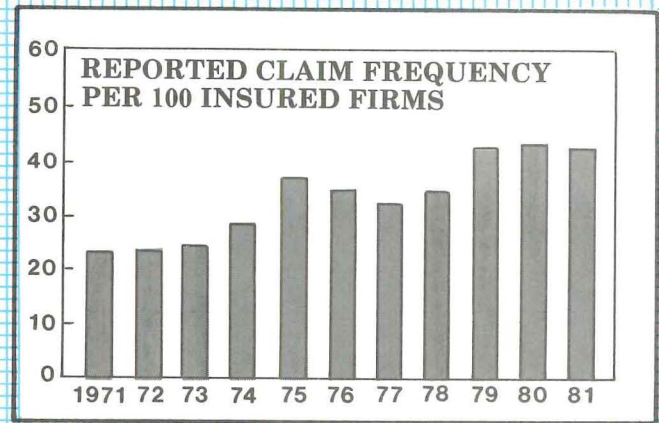
The statistics illustrate the problems and your chances of successful settlement

No matter how effectively or how carefully you perform your services as a design professional, there's almost a one-in-two statistical probability that at some time you will be involved in a claim.

The two key statistical areas of claims and their impact on your professional liability insurance premium rates are frequency (number) and severity (costs). The top chart traces the frequency of claims made against architects and engineers, and reported by firms insured in the CNA/Schinnerer program. It indicates the industry trend in architects' and engineers' insurance claims.

The chart shows that in 1971, architects' and engineers' claim frequency was 23.6 per 100 insured firms. In 1960 (not shown on the chart), this figure was 12.5 per 100 firms. With minor exception, the figure has risen rather steadily to 43.5 claims per 100 insured firms in 1981—nearly double the level of 10 years ago

Continued on page 53



The reasons for rising insurance costs—and the growing severity of the design professionals' problem—can be seen in the charts. The number of claims filed, the number of claims judged against the professional, and the size of the awards, are all rising at a rapid rate.

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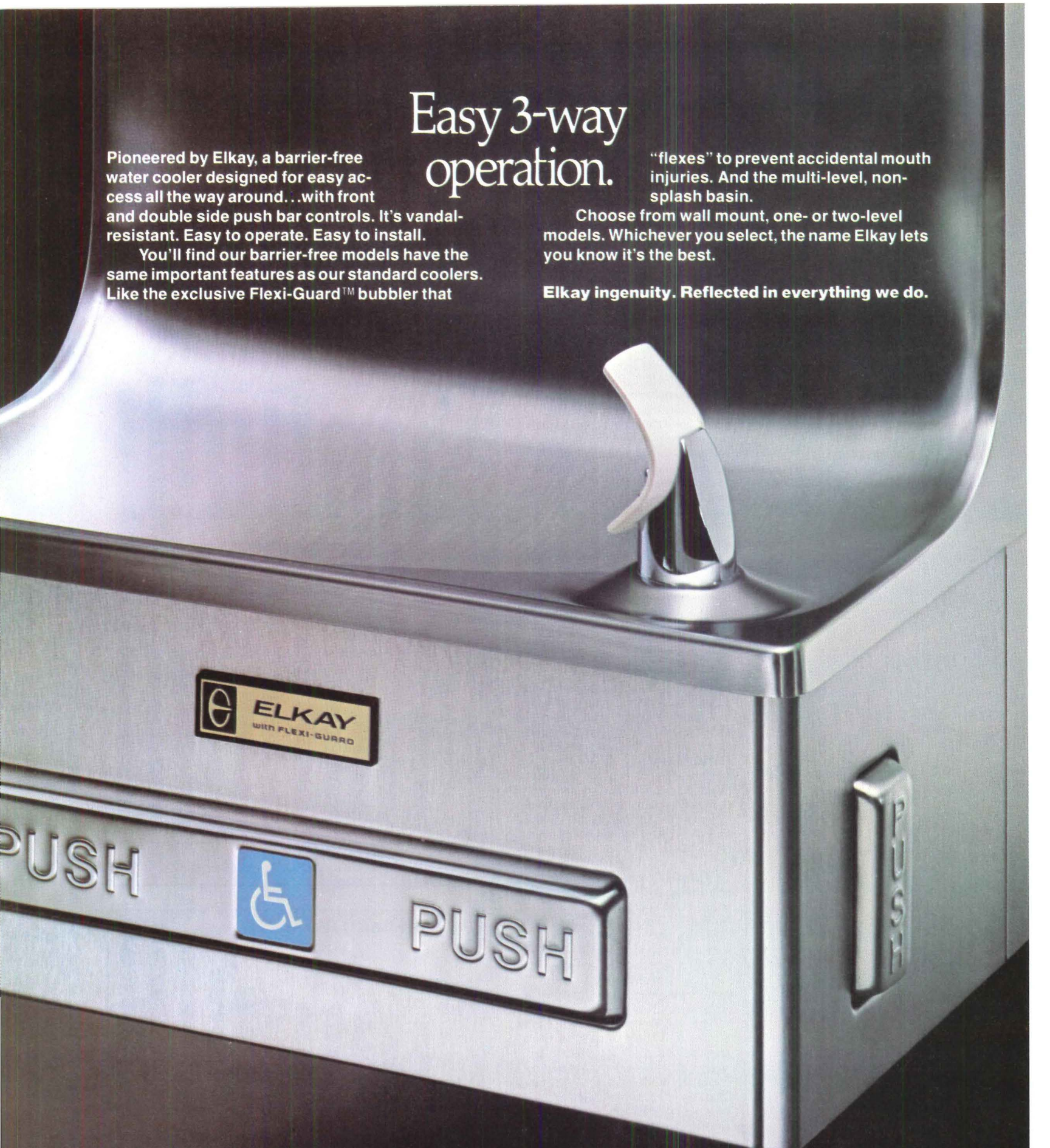
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Economics: The rise and fall of the high-rise

Designers of high-rise buildings should understand severe cyclical fluctuations and their relation to the economy

By John Morawetz

Only months after the high-rise building market peaked in 1981, it turned down with great vigor. Office buildings, the largest component of high-rise buildings, are also the most speculative, and vacancy rates in these began to soar—exceeding 10 per cent even in “developing” cities like Houston and Denver. The financing for new projects rapidly dried up.

Some projects that were ready to proceed were scratched, such as an \$80-million twin-tower office project by Helmsley-Spear and Phoenix Mutual Life Insurance Company and a \$250-million monolith of Aetna Life & Casualty Company. This list and its effects on architects grew with time.

Why are all high-rises hit so hard in a downturn?

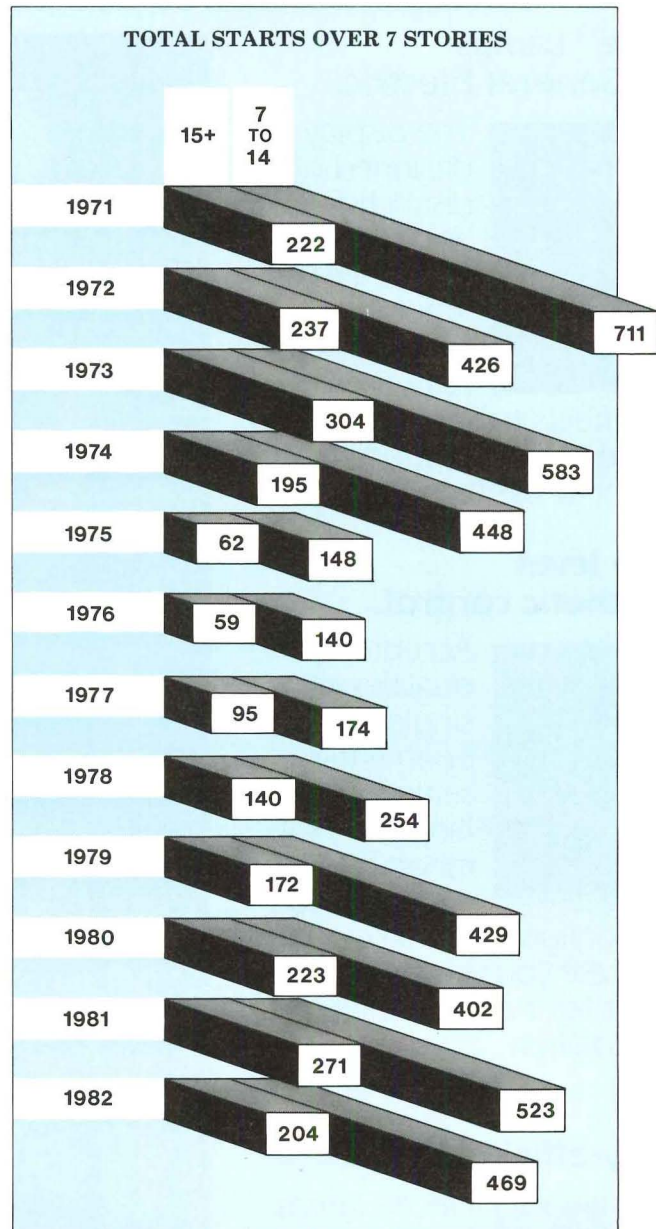
The construction industry as a whole is more subject to cyclical fluctuations than the vast majority of industries, but within this complex field some types of structures are more dependent upon the business climate than others. High-rise (seven stories and over) building activity of all types is perhaps most dependent upon economic conditions, possibly equaled only by industrial construction.

In the diagram, right, the number of high-rise buildings that were started during the last dozen years are plotted, differentiating between those seven-to-14, and 15-and-more stories. It clearly shows that the trend pattern between the two groups is very much alike, and that—as might be expected—there are more seven-to-14-story buildings than taller ones over the long stretch: about twice as many—a fact not lost on the industry for gearless elevators.

The statistics point out some unexpected twists

The graph overleaf, bottom, relates the number of high-rise buildings to the floor area of all buildings except houses, both reduced to a common index. A number of deductions may be made:

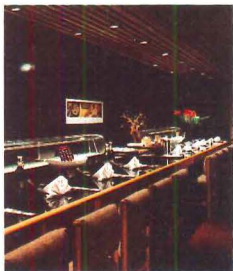
1. The most recent peak of all building starts (1979) was about 20 per cent below the previous one (1973). There appears to be a downward trend, often camouflaged by inflation, when the value rather than the floor area of new buildings is plotted.
2. The cycle effect on the number of all high-rises (and hence commissions for their design) is substantially more severe. In real numbers, we experienced a catastrophic slide from 933 new



The diagram above shows the severe ups and downs in the number of high-rise buildings built—a graphic illustration of the volatile nature of design services in this field. Without understanding both this and the information on the relationship of high-rise buildings started to the floor area of all structures (except housing) shown in the diagram and chart on the following page, a design professional is in a difficult position to know where he stands.

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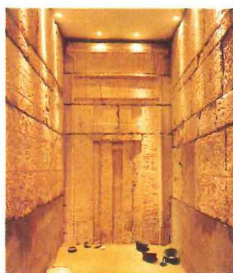
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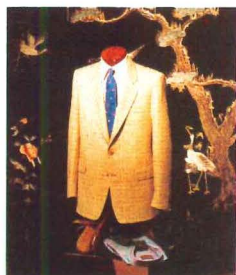


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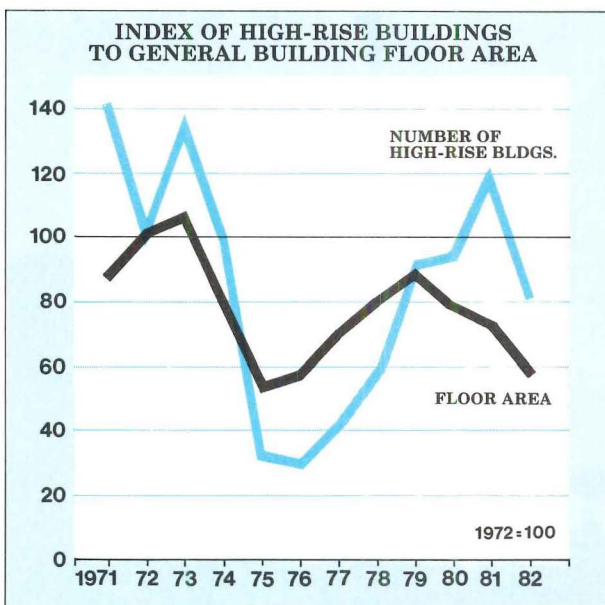
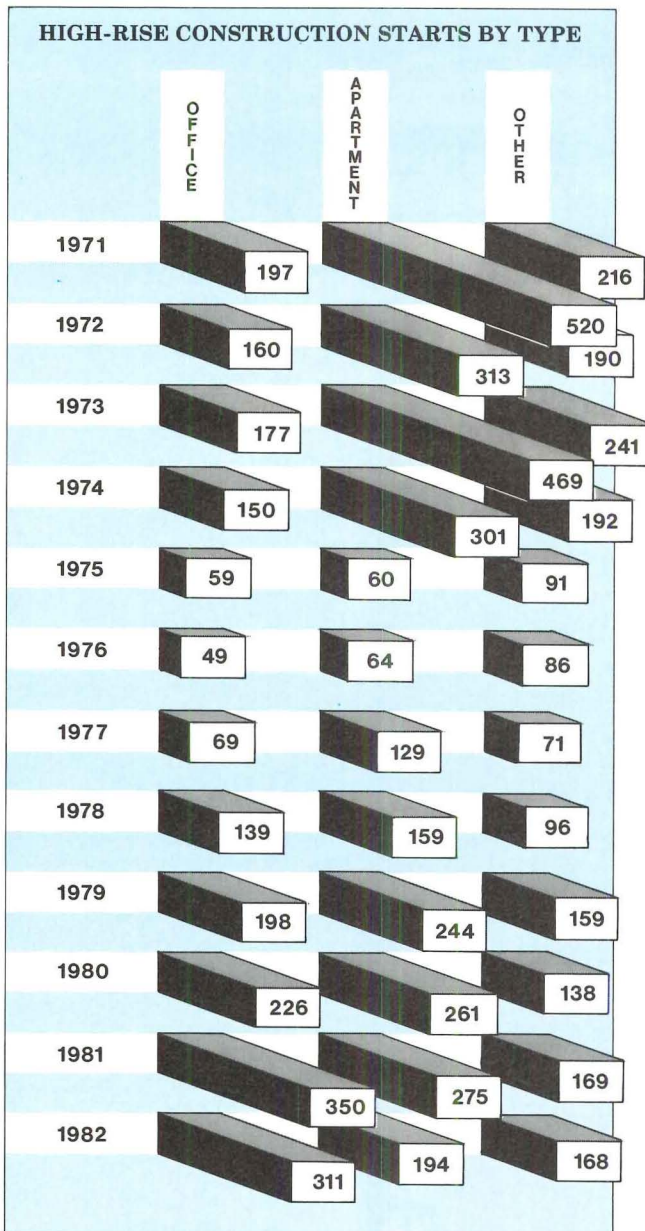
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The diagram at top shows the fluctuations in number of high-rise buildings by type. It also shows that apartments are the most severely affected by these fluctuations. The graph at bottom relates the general level of construction by total floor area to the number of high-rise buildings built in a specific year.



high-rise buildings started in 1971 to only 199 at the trough of 1976, a 79 per cent drop. The next peak was reached in 1981, with 794 buildings, 15 per cent less than in the previous peak. We have been a long time in the general building recession just ending, and a new trough for high-rises has not been reached (see *Update*, RECORD April 1983, page 37). If the downward trend of maximum peaks continues, the coming trough also may be expected to produce lows 15 per cent below that of 1976. This would mean a slide from 794 tall buildings in 1981 to a mere 169 if this happens.

3. Comparing the floor areas in the two peak high-rise years of 1971 and 1981 produces a much better picture for at least the health of the building type. The total floor area in those buildings broke all records and was 47 per cent greater in 1981. Further analysis reveals that the floor area of the seven-to-14-story buildings has increased to an average of 211,000 square feet in 1981 from only 131,000 in 1971, or by 61 per cent, while 15-story-and-over buildings now hover around 400,000 square feet.

4. Perhaps most important to understanding when commissions may be expected, the high-rise cycle tends to lag the general building cycle by a period of between one and two years (although the 1973 lag was shorter). The usual lag is because of the long lead time consumed in the difficulties of land accumulation, the granting of permits, design, bidding, etc. New high-rise projects are still getting started in increasing numbers well after other construction categories have begun their cyclical declines.

5. Office buildings and apartment buildings account for two thirds to three quarters of all high-rise buildings, as defined here. In 1981, in terms of floor area, high-rise offices and apartments accounted for 40 per cent and 12 per cent, respectively, of the total new floor area of those two building categories. This is substantial enough a share to have an effect on the category totals.

6. The cyclical fluctuations of the high-rise apartment buildings are much more severe than even those of the office or other types of tall buildings. The top diagram shows that picture.

There are a few bright spots

If one did not understand lead time, one might conclude from the foregoing analysis that the

owners of high-rise buildings are oblivious of economic conditions when they schedule their activities. When the economy, and especially the construction industry, began to suffer in 1980 and 1981, why were these high-rise building plans not abandoned or at least put in abeyance, to be dusted off when times improved instead of producing high start levels in 1981 and 1982?

The long lead time assures that some high-rise work is around in recessions. The downturn of this construction lasts three to five years, and is preceded by a business cycle upturn. The construction process of those buildings takes two to four years, and those buildings that continue to get started well into the economic downturn get to be completed during the early years of the general economic recovery. At that time, business has reason to expand and to require additional space. Better economic conditions and a more optimistic outlook likewise improve the apartment rental market.

Not many tall buildings stand empty for long. Things fall into place. Everyone involved, nevertheless, suffers from the cyclical impact. And—since this type of construction is obviously highly concentrated geographically—it causes local upsets.

Two thirds of all high-rise buildings are erected in 33 metropolitan areas. In recent years Chicago, New York, Houston, and Miami have been on top of that list.

The concentration within states is similar. The top nine states have been accounting for 60 per cent of all high-rise buildings. In descending order they are: Florida, Texas, California, New York, Illinois, Michigan, Virginia, New Jersey, and Pennsylvania.

The construction-related professions, businesses and trades pay a price for the severe cyclical nature of this segment, through less than a superficial examination of building-start trends would suggest. There is nothing to indicate that these conditions will be remedied in the foreseeable future.

Mr. Morawetz is product-planning manager for statistical services in the F.W. Dodge Division of McGraw-Hill Information Systems Company and former chairman of the Economics Department at Mitchel College of Long Island University.

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Marketing: What are the aggressive firms doing to get their share of design work? An important survey report...

By Ernest Burden

In late March, some 200 people—architects and engineers along with a scattering of marketing experts from design promotion firms and the press—met in Denver at the invitation of Barbara Beck Lord, of Lord Communications, to review the results of a major survey she conducted on the promotion strategies that design firms are using successfully. Now established as an annual event, the survey and explanation conference is co-sponsored by Lord Communications, Inc., the A/E Marketing Journal and—this year for the first time—Ernest Burden, publisher of The Presentation Advisor and the author of this report.

This year, twice as many firms as last year (160) were polled to give an even broader view of what is meaningful in this rapidly growing field. (See REVEALED February, 1983, page 47, for a summary of last year's findings.)

This year's conference was moderated by Weld Coxe, who said: "This conference has had a unique function over the last four years in helping design professionals understand and creatively address the use of promotion in the marketing of professional services. It has been a remarkable advancement in a very few years." C.K.H.

The general conclusions...

The survey showed an increase of 30 per cent in the number of small firms reporting ongoing promotion programs and a more careful targeting on specific geographic locations by all firms with programs tailored for localized markets.

The survey also showed an increase in the number of firms reporting a marketing budget distinct from budgets for promotion or indirect marketing items. For the most part, existing marketing budgets were reduced (or not increased) from the previous year. Firms reported more pressure to justify both marketing and promotion costs with direct results.

In addition, freezes on hiring marketing and other overhead personnel resulted in an increase in the number of firms using outside services to help with their promotion programs. The percentage of such use by all firms reporting was 22 for ad agencies, 29 for public-relations firms and 38 for graphics consultants.

Mailing continues to be the most popular form of promotion for design firms, with 80 per cent having active programs and from 300 to 1,200 names on their lists. Last year, there was about equal activity in general image-building and special-target mailings. This year, there were many more targeted programs designed to develop leads in specific markets in an effort to get more direct returns on marketing dollars.

Many firms had positive things to say about their efforts to get published in various magazines, in some cases attributing particular contracts to feature articles about their projects. Forty-six per cent had active programs to get published. There was no significant increase in magazine advertising by all architectural and engineering firms over last year, but a marked increase in advertising by firms of one to 25 persons.

A surprise was the number of firms advertising on radio or television. The most popular form of television advertising was to sponsor programs on public broadcasting.

Lord presented a sampling of more than 18 firms' promotional programs.

Direct mail is still most popular. What's new? More emphasis on targeting

Architects and engineers Lockwood, Andrews & Newman, Inc., a 600-person firm in Houston, uses special-market

brochures, both mailed and carried by marketing personnel on visits to potential clients. The firm recently revamped its quarterly newsletter to focus on a single facet of its service, rather than on a variety of current projects. The firm says that this allows it to hit the hot markets while they are hot.

MJK, Architects, engineers and planners in Lansing, Michigan, sent a mailing to 700 prospects in what the firm refers to as the "4-R" market: retrofit, renovation, rehabilitation and restoration. A letter outlined MJK's services and asked the reader to complete an enclosed research questionnaire. The firm had almost 10 per cent response from prospects interested in its services, which it followed up with visits. Total cost of the mailing: about \$400.

Last year, engineers Syska & Hennessy sent folders with loose pages as a newsletter, which meant clients could receive a customized package. This year, reversing the general trend, Syska & Hennessy's new version combines reports from all divisions in one printed piece. The firm's *Technicalletter* has been published as "a service to the building industry" since 1949, and is now mailed to prospective clients with a cover letter.

ADD Inc., an architectural firm in Boston, has done mailings designed to be especially effective in catching the reader's eye in recent years. For example, the firm sent no Christmas card in 1982, but on Valentine's Day 1983, 500 clients and prospects received a heart-shaped card with the message "Be Ours." This mailing generated a great many calls and letters the following week.

The architectural firm of Anshen and Allen created an ambitious brochure to celebrate its forty-second year of practice. Each page of the brochure was printed separately so that extra copies could be used as covers on customized qualifications packages. The brochure, mailed to a list of 1,000, was produced by the firm with an outside graphic designer, and it cost approximately \$40,000.

Gerald Li of Clark Tribble Harris & Li, an architectural firm in Charlotte, spoke at the conference and explained how his firm used special brochures extensively in the development of new business in the office-building field. Personal visits and calls to prospects are followed up by one or more brochures. The most ambitious of these is an 80-page four-color brochure that

looks like a design magazine, complete with full-page color "ads" showing the firm's work.

Efforts to get published pay off in commissions

Forty-six per cent of the firms surveyed have a program to get their name into the press, a number similar to last year's results. Thirty per cent of these use outside public-relations firms. Because this is generally an image-building technique, it was surprising to hear of many firms getting jobs because of feature articles.

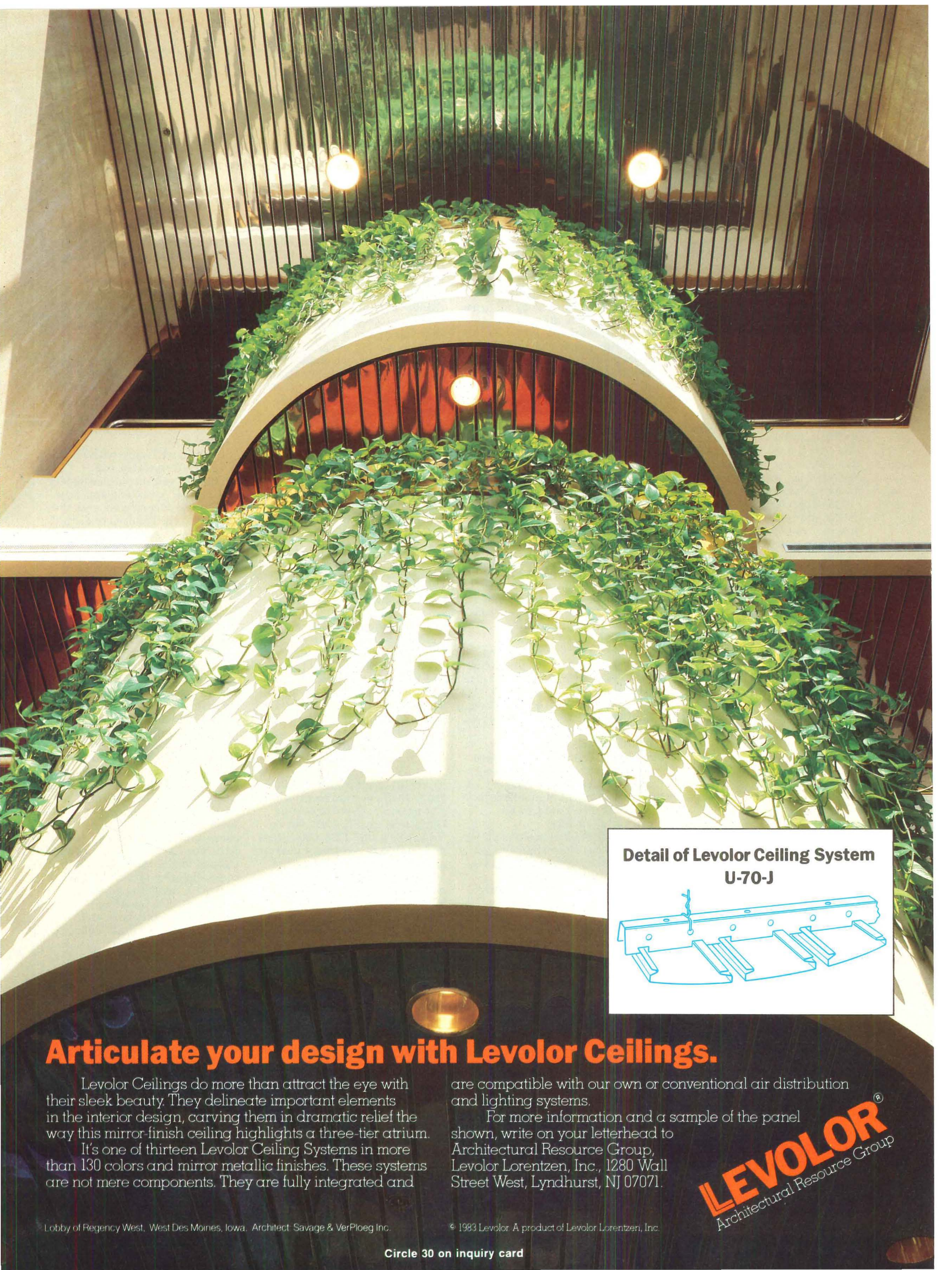
Such was the case with Hague-Richards Associates, Ltd., architects and interior designers in Chicago. An article appeared in *Commerce* magazine over the by-line of the firm's president. A few weeks later, a principal of a major Chicago corporation invited the firm to an interview after seeing the article, and then hired it for a large warehouse conversion.

Getting published is also a mainstay of the promotion program of Fanning/Howey, Architects and Engineers in Celina, Ohio. Education is one of the firm's major markets, so it has an active campaign to keep its name prominent in educational publications.

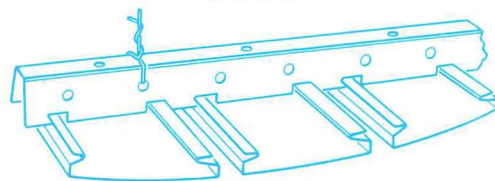
A joint venture of the Grad Partnership and the Hillier Group, architectural firms in New Jersey, was asked to prepare the press kit for the dedication of a justice complex that they designed. The package, put together by their public-relations consultant, had a special letterhead and included a news release with a composite photo, a comprehensive fact sheet and a design statement from the architects. The resulting coverage was extensive and varied. Says consultant Joan Capelin, "You must do everything you can to make it easy for editors to get a full selection of possibilities for articles."

Another speaker, Patricia Rosenzweig, vice president and director of marketing for Perkins & Will, believes the firm's active program to get published has helped it diversify into large overseas projects and also get more profitable projects. The key to success was recruiting an experienced public-relations director who then succeeded in placing feature stories in the right publications, increasing the number of articles published yearly from 29 to 105.

Other techniques in getting a firm's name before potential clients include participation in



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meetings of potential clients, such as conventions and trade shows. One firm of engineers and architects, Sear Brown Associates, has a special-events program that is working very well for this 100-person office in Rochester, New York. The firm hosts monthly open houses with buffet lunches and tours of the office for clients, prospects and clients' friends. The events cost about \$500 each.

Print advertising is catching on with smaller firms

This year's survey showed an increase in advertising activity in the press, and there is definitely more enthusiasm for it among the smaller firms.

Hudson White Carlin, a 15-person architectural firm in Houston, started advertising last year. The firm's full-page ad, aimed at developers, ran six times in real-estate publications such as the *National Real Estate Investor* and in *The Chamber of Commerce Magazine*. The budget for the creative work and space was \$25,000. The firm is pleased with the response to the program, and credits the campaign with at least one contract: A hotel developer, who saw the ad, invited the firm to submit a proposal, and Hudson White Carlin got a commission for a 250-room hotel.

Huber Haries Galvin, a 24-person firm in Syracuse, New York, runs a modest advertising campaign in central New York business and community publications, placing an ad at least once a month. The annual budget is \$6,000. The firm has been advertising for three years now, and the principals believe it strengthens their image in their market area.

KZF Architects and Engineers in Cincinnati, with several years experience in advertising, saw an opportunity to promote their capabilities in interior design and tenant improvement services in a special supplement to *Cincinnati Magazine*. The magazine has a monthly circulation of 100,000, and the chamber of commerce prints an additional 10,000 of these supplements to help attract new business to the city. KZF did all the creative work in-house. Total cost of running the ad, including space, was about \$1,600.

J.U.B. Engineers, Inc., a 100-person firm in Boise, saw the potential of the small hydro market in 1979, and developed a program to position the firm as experts in this field through a combination of advertising and newspaper articles. An ad run

three times in *Hydro Review* has generated a list of 20 potential clients. The response to an article that appeared in the *Seattle Daily Journal of Commerce* encouraged J.U.B. to mail reprints to a list of 300. The firm continues to get calls and referrals from this mailing. The vice president of marketing awards bonuses to managers who get articles published.

McGranahan Messenger Associates, a 16-person architecture and planning firm in Tacoma, has also used a combination of advertising and articles in *Performance* magazine to promote a specific service to a very specific market: designing and building wood domes. (The firm had teamed up with CH2M Hill, Weyerhaeuser, and Western Wood Structures to form Arena/Dome Associates.) One ad in an issue of *Performance* in which there were two articles on the team's work cost \$7,000 and resulted in inquiries from six developers.

As reported in the survey, Al Cohen, a construction firm in Denver, won the 1982 Print Advertising Award from the Society of Marketing Professional Services with a campaign developed to reach corporate users of office buildings. The first series of ads was designed to create an image for the firm as builders of high-quality office buildings, by calling attention to the well-known office buildings the firm had done. The second series featured client testimonials to reinforce that image. The campaign ran in local and regional business publications.

Diane C. Creel, director of business development communications for CH2M Hill, told of the initial reluctance of her firm to advertise. However, a research program showed market segments where they needed to develop an image, and so a test campaign was directed at the mining market to establish confidence in the firm's capability. Six ads were run in mining publications and resulted in 2,000 phone calls, 2,100 letters and over 1,000 response cards. A follow-up poll indicated these ads had increased the firm's recognition from 19 per cent of respondents to 46 per cent during the six-month campaign.

Some firms are experimenting with radio and television

In this year's survey, seven per cent of the firms reported some form of this advertising.

Catalyst, Inc., architects in

Orlando, has been sponsoring public television shows, such as *Wall Street Week* and *This Old House*, for four years. The firm's logo is shown with the announcement: "This program is made possible by a grant from Catalyst, Inc., Architects."

James Elzy Thomas & Partners, a 20-person firm in Columbus, Ohio, also sponsors programs on public broadcasting. Its logo appears at the beginning and end of a weekly program at 7:30 p.m. The cost of air time is \$10,000 for the year.

The Vitetta Group saw a good opportunity when Channel 12, the public station in Philadelphia, conducted an experiment with commercials. Vitetta created a 30-second commercial, doing most of the work in-house with the aid of an "animatography" expert, and then booking one hour in a video production studio and hiring a narrator. Total cost of producing the spot was less than \$2,000.

Vitetta made sure that the press was informed about this "first" by sending out press releases. The campaign was reported in all the newspapers before and after the commercial was shown. Vitetta had made news! The first night the commercial was aired, Vitetta hosted a "watch-the-commercial party" for clients, prospects and friends. Everyone was pleasantly surprised when all three national networks also played the tape on both the 6:00 and 11:00 news broadcasts. The spot ran 12 times in a two-week period. Cost of air time was \$7,000.

There's a lot of potential in new technology

such as video and computers

Carol McConochie, marketing management consultant, stressed the importance of using all kinds of promotional tools that make client visits not only easier to get but far more effective. She pointed out that messages that focus on the particular client are the ones that get results, and that many firms are researching their clients to find out what messages will be meaningful. For a firm that can't get through the door of a major company with a conventional presentation of qualifications, McConochie is now designing a video presentation geared to that prospect only.

One firm that has succeeded in impressing clients with new communications technology is Skidmore, Owings & Merrill. SOM has already installed "teleconferencing" facilities linking its New York and Chicago

offices, and its New York office is equipped with a rear-screen projection room with wireless remote control. The firm's sophisticated computer-design system can be projected from the computer terminal directly onto a large video screen for viewing. All of the firm's offices use video extensively in project management—to record meetings, site details and other project information.

Although the interest in video is clearly very high, only 30 per cent of the firms surveyed are actually using it in their practice now for presentations, training and/or rehearsing—possibly because of the recession, which discouraged large capital outlays. Firms with some experience are beginning to draw some conclusions about the medium:

1. Video presentations are most effective with clients who are accustomed to the use of the medium in their own businesses. Thus, corporate clients are almost always receptive to video, because large corporations are familiar with video as a communications tool. In fact, "video resumés" are now used by some job-seeking executives.
2. Video presentation is not a do-it-yourself medium. Although it might appear to be a hands-on technique, successful video presentations must be professionally edited and produced. Technology is changing so fast that even the experienced have trouble keeping up.
3. Transfers of multi-image slide shows onto video make a presentation much more transportable, eliminating the problems of transporting and setting up the equipment. Eighty per cent of the 1982 SMPS awards program video entries were converted slide shows.

Computers are playing a bigger part in marketing than ever before

They're being used both in marketing management and in promotion. Thirty-six per cent of the firms use marketing management systems. Since the first SMPS Awards Competition in 1980, nearly every audio-visual program has had a computer shown prominently.

Turner Collie & Braden, a Houston consulting firm, took first place in the 1980 competition with its 16mm film, *Metrocom*, designed to introduce a new and sophisticated computer service that could not be adequately described without a working demonstration.

Another entry was submitted

Continued on page 55

Why it's never a problem getting parts for Dover Elevators.

Every major Dover Elevator component is shipped in a carton that proudly announces "Made in U.S.A."

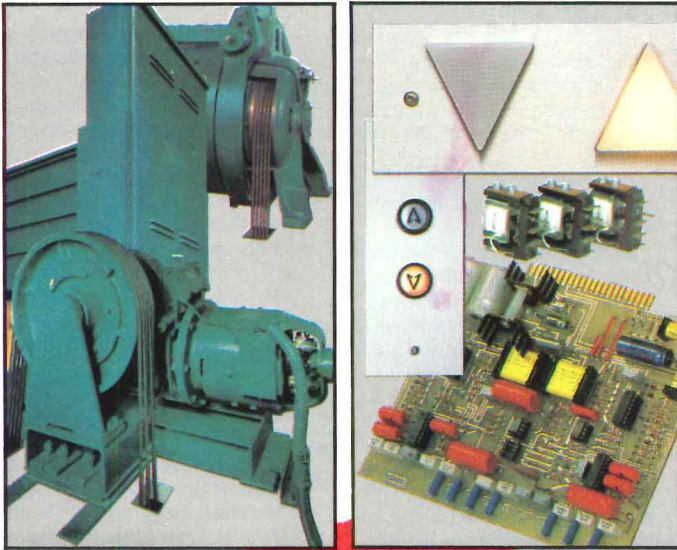
Our pride is much more than patriotic.

"Made in U.S.A." means that parts for Dover Elevators are always readily available. We know that when you need a replacement part, you need it now. And we understand the frustration

of waiting for something to come from "over the water."

So we manufacture most Dover Elevator components ourselves in our four centrally located plants. If your elevators are on Dover maintenance service and a needed part is not on hand in your local office, we can get it there pronto.

When you're looking at elevators or elevator maintenance service, look ahead. Look to Dover, the "All American" elevator. For more information on Dover Elevators or Dover Master Maintenance Service, write Dover Corporation, Elevator Division, Dept. 700, Memphis, Tennessee 38101.



**MADE IN
U.S.A.**

The profitable professional: Target your goals and priorities

This fourth article of a series on sound management argues for recognizing that your practice is a business

By Barry B. LePatner, Esq.

A very important part of good management for an architectural practice is the ability to weather the cyclical swings of our national economy. Having suffered through two severe recessionary periods in 10 years, design professionals should now be ready to make a commitment to management practices that provide the requisite flexibility for financial security—regardless of cycles.

Achieving efficiency of management and operations is an essential part of this financial success, and cannot be reached by falling back on tired, outdated ideas. Too often, individuals resist change by saying, "If it was good enough for the founder of the firm 30 years ago, it should be good enough to use today." This attitude will doom any attempt to energize a firm's commitment to coping with a fast-changing world.

An increasing number of architects are upgrading the caliber of their client rosters and seeking answers to questions about structuring fees, marketing and the implementation of computer equipment. They are turning their backs on the profession's traditional disdain for business affairs and going after the business acumen needed to ensure the future growth of their firms.

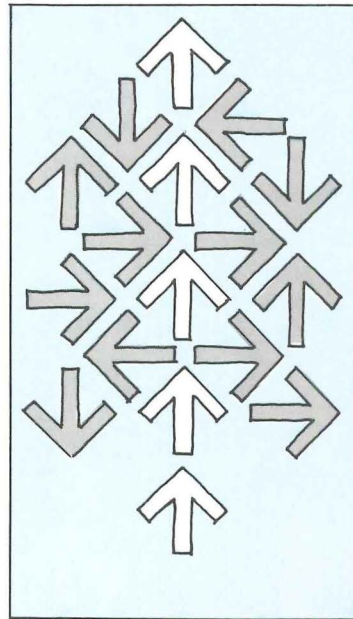
But creating a viable plan for establishing financial stability cannot be accomplished overnight. It is a painstaking process of self-analysis, study and discipline that will start a firm on the road to new ways of thinking, new ways of acting and new ways of reacting.

The first step is to know yourself

The most difficult, yet most important, first step in developing a workable financial/management plan is an incisive, self-analytical review of a firm's strengths, weaknesses and desired objectives. Such a review requires the principals of the firm to define:

1. The professional and personal qualities of each of its members.
2. The relative value of each member as a functioning part of the whole.
3. The nature of the firm's existing clientele. (Does it match capacities and ambitions?)
4. Those business and professional problems that are regularly encountered but never overcome.
5. A series of short- and long-term objectives (including possibly changing clientele) that realistically match the firm's talents.

Careful consideration must be given to selecting the setting for this review process. Holding such discussions in the office in the turmoil of everyday business will result in less than the full concentration of all participants. Meetings of this type are often best held at a conference center, at someone's vacation home or in the office over a weekend when other business can be put aside.



Not losing one's way; charting a path through chaos; single purpose. From Graphic Idea Notebook by Jan V. White published in Folio 1981.

In advance of this initial meeting, each principal should be asked to list his or her strengths and weaknesses as well as those of the firm as a whole. Also, each should include a statement as to a reasonable financial goal for the firm (and that of the principals) for two periods that end two and five years hence. In this way, each comes to the meeting having addressed the general status of the existing organization, as well as his or her own vision of the firm's future goals.

The purpose for such discussions is to reach a consensus as to the future direction of the firm and the contribution that each member can bring to achieving the sought-after results. Reasonableness and practicality must, at all times, prevail. For instance, a firm of four architects specializing in small residences will usually be ill-served if it establishes a two-year objective of securing a major corporate headquarters. Conversely, setting objectives that are clearly reachable

without any effort at all, such as securing three new clients over the next five years, serves no constructive purpose that will fire new ambition.

Be prepared to make some difficult decisions about people...

Perhaps the most unsettling aspect of this process is the possibility that each participant may be required to accept a revised role in the future operation of the firm. All too often the best business-getter is unduly burdened with time-consuming (unproductive) administrative matters. In some firms, one principal may refuse to accept the fact that his or her design talents would be better channeled into other areas of the firm's organization. All such self-analysis should be undertaken in constructive terms; the purpose of this review should not be seen as part of a bloodletting process between principals but, rather, as the basis for dynamic change.

...And then answer some questions about clients

The next step, an examination of the current list of clients, should address such critical questions as:

1. What is the general make-up of our client roster? Small residential, large and small commercial, corporate, industrial, eclectic?
2. Does our client roster reflect the best talents of the firm, or are we failing to attract clients to match our abilities in a given area?
3. Does the current client list match up with the long-range professional and financial goals we are discussing?
4. Where does our new business come from? If new business is not being referred by current clients, maybe we are not doing the kind of job we think we are.
5. Do our clients engage in businesses that are likely to generate design services regardless of the future state of the economy?
6. Are we aggressively pursuing all potential areas for projects (which reflect our areas of expertise) from each of our clients, or are we sitting back and taking whatever is offered to us?

From the answers to these questions, each firm will be able to address the problems of securing new business. It is rare that any firm would not be better off if it gave up 10 per cent of its less significant clients and replaced them by new clients who

Continued on page 57

How is Johns-Manville celebrating 125 years of designing better roofing?

Designer125.

For a century and a quarter, we've been making better roofing. And making roofing better.

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Architects tell us that the thing

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For more information, see your local Manville Sales Representative.



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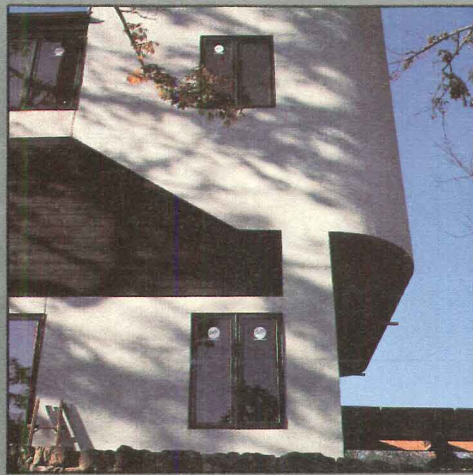
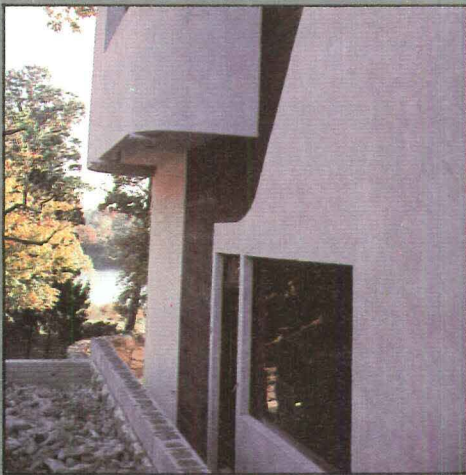
And it's this total, positive mechanical attachment that allows it to be applied to virtually *any* wall construction.

And, unlike traditional bead board panel products or systems—that dictate limited, flat surfaces—the Thorowall System allows total design freedom.

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Right: Auratone® New Horizons series. Deep textures moderately priced!



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Today U.S.G. leads the industry with more unique texture patterns, more high-fashion colors and the widest price range. For U.S.G. is the only ceiling products manufacturer to offer three complete lines of ceilings: prestigious ACOUSTONE® panels and tiles, versatile AURATONE® panels and tiles, and economical USG® Gypsum Ceiling Panels.

What you see here and on subsequent pages is a sampling of the News from U.S.G. Your U.S.G. Representative will be proud to show you all of them. Or write to us at 101 S. Wacker Dr., Chicago, IL 60606, Dept. AR683T

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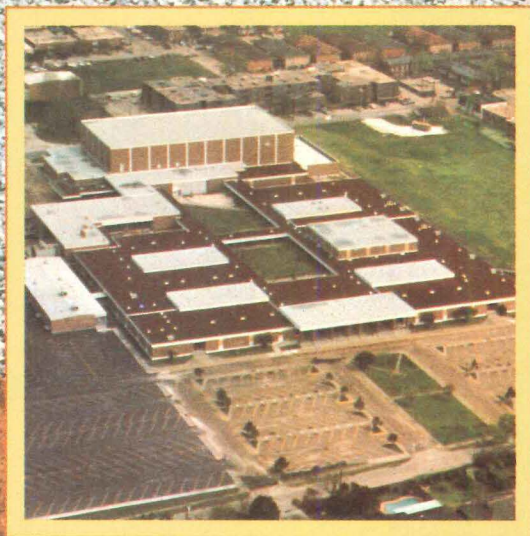
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and almost four times as many as 20 years ago. Of course, some firms have more than one claim against them at one time, so the chances of your being sued may not be quite so high.

Not all of the claims that are reported result in the need for indemnity payment. In fact, nearly three out of four require no indemnity payment by the company, but may result in other costs either to the professional design firm or the insurance company. The allegations need to be investigated by insurance company claim specialists and defense attorneys. Expert witnesses may have to be retained, and the design professional devotes valuable time to investigate and establish a successful defense. All of these "non-indemnity" expenses can be very costly.

Chart 2 displays the frequency of claims that result in an indemnity payment by the insurance company. It shows that in 1981 there were 10.5 paid indemnity claims per 100 insured firms, versus 6.5 per 100 in 1971. While these figures are significant by themselves, it is not until you look at claim severity that you begin to see the problem more clearly.

Chart 3 indicates what has happened to claim payments over the 1971-81 time period. It shows that in 1981, the insurance company had to pay \$70,459 in 1981 for each of the 10.5 paid claims per 100 insured firms shown in chart 2. This amount compares to \$35,294 paid in 1971 for each of 6.5 claims per 100. You may notice that the severity figures represent claims limited to a firm's first \$250,000 limit of liability, i.e., no claim payments above \$250,000 for any single claim are reflected. The figures also represent only the insurance company's payments, and do not include the design professional's deductible costs. Combine the effects of increasing claim frequency and severity, and you can appreciate why insurance premiums continually have risen in recent years.

To make sure you get what you pay for, it is important that you be aware of:

- How you should respond when a professional liability claim is made against you, and what your insurance company expects you to do and not do upon notice of a claim.
- What you should expect your insurance company to do for you.

To help increase your chances of a successful claim handling and defense, CNA and Schinnerer recommend you observe the following procedures:

What do you do when a claim is made against you?

1. As soon as you become aware of a claim, immediately notify your insurance company in writing. Generally, your insurance policy states the address where you should send the notice.
2. If the circumstances indicate the need for immediate counsel

and advice, call your insurance company's underwriting manager.

3. Include in your written claim report:

- Your firm's name and address.
- Your professional liability insurance policy number.
- The location of the incident.
- The name of the person or entity making the claim against you.
- The amount of the demand being made.
- The date and time of the incident.
- A brief narrative description of the incident.
- A description of any suit papers or legal proceedings.
- Client-architect/engineer agreement for the project.
- Any additional documents or correspondence pertinent to the claim.

4. If the claim involves a traumatic situation—such as a structural collapse or bodily injury—and if circumstances permit, take photographs of the site and situation. Amateur photographs taken promptly after the incident are usually of more value than professional pictures taken at a later date.

5. Do not attend or agree to attend any conferences set up specifically to discuss the claim, without first consulting your insurance company claim representative.

6. Do not sign or accept any releases from any parties without first obtaining approval from your insurance company. Do not admit liability. Do not attempt to place blame.

7. Write down the detailed circumstances that surround the claim situation as known to all principals and staff members involved. This should be done as soon as possible, as the passage of time tends to cloud memories and obscure details.

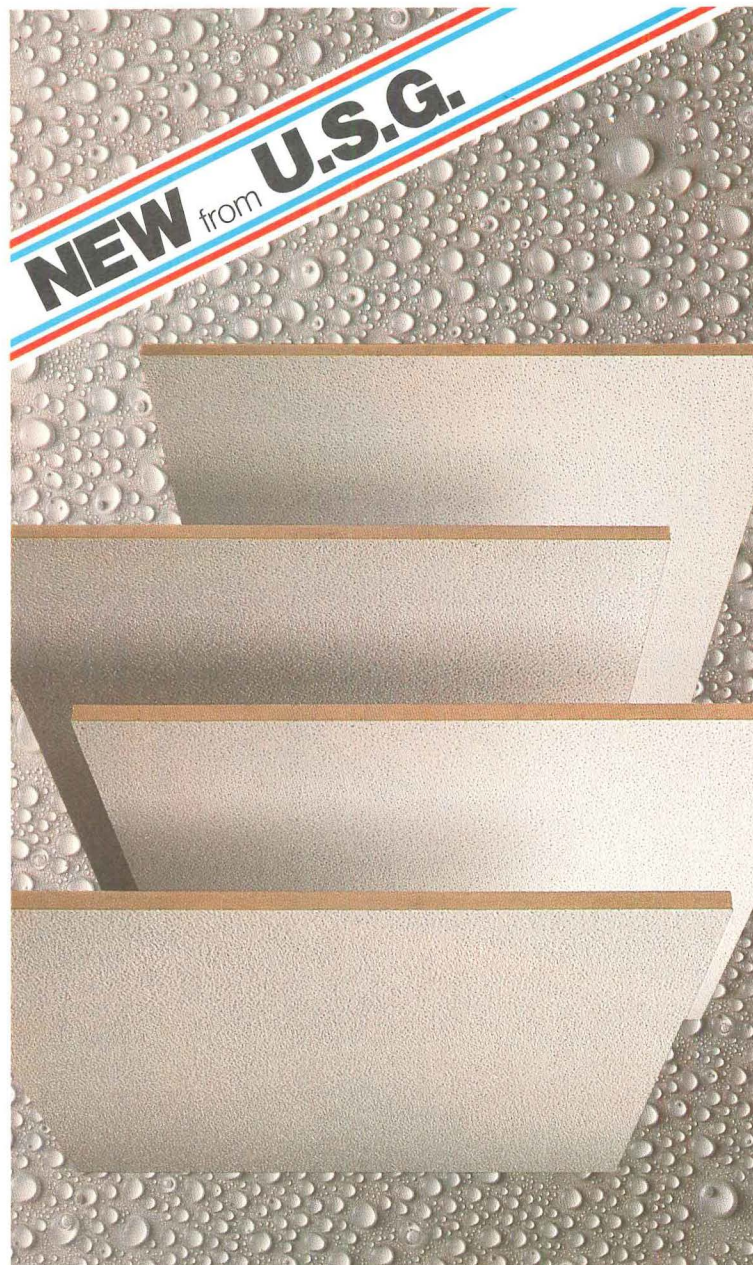
8. Assemble, in chronological order, all pertinent agreements for services as well as correspondence, memoranda, etc. affecting the claim situation.

9. Accept all letters, memoranda, suit papers, etc. without comments or argument. Again, do not admit liability and do not attempt to place blame.

What should your insurance company do?

1. Assign a claim specialist who should meet with you to seek facts and to coordinate and implement the defense effort for the claim.
2. Establish a file.
3. Evaluate your possible liability and what alternative courses of action are available.
4. Make recommendations to you regarding defense or settlement. Most professional liability insurance policies stipulate that settlement will not be entered into without your consent.
5. Immediately notify its claims specialist nearest the geographical territory in which the claim or incident lies. This claim specialist should contact you within 24 hours of being

Continued on page 78



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4'x4' at a time!

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Mobil System
Design: Heinz Wirth, 1971

Installation: Pershing Park, Wash. DC
Architect: M. Paul Friedberg & Partners

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more closely met the criteria for long-range growth. Defining your clients in this way allows a firm the luxury of assessing its interest in pursuing future business from these sources. Certainly, a client who is argumentative, rarely pays fees on time or in full, and offers projects of marginal interest should be considered for replacement by a client who more fully represents a step up the professional and financial security ladder.

Defining the course of a marketing strategy would be a logical follow-up to the analysis of a firm's present and future client base. Extensive efforts in this area, however, should not be undertaken until the over-all future direction and priorities—including functions of personnel—are really set. The goals should come first; then the ways of meeting those goals can be established.

Keep in mind that any marketing approach must include getting future clients to perceive the firm in a way that is consistent with their particular needs. All too often, architects' ideas of how prospective clients perceive them are vastly different from the actual perception itself.

Make sure all the new policies are communicated

Once a consensus as to the new or revised goals and priorities of the firm's operations and markets is reached, it is essential that such changes be put in writing, communicated to the staff and undertaken in as simple and effective a manner as possible. Adapting to the new system will be dependent upon the ability of the principals to explain the reasons for the system and their ability both to make it understandable to the staff and to ensure that it can be easily carried out.

Of course, before scrapping an existing way of doing things, it is advisable to question the reason it was established in the first place, to make sure that it is indeed unworkable—established "just because everyone else does it that way"—and that nothing important, like sending out bills or sections of specs, gets dropped in the new process that replaces the old.

And keep perfecting your act

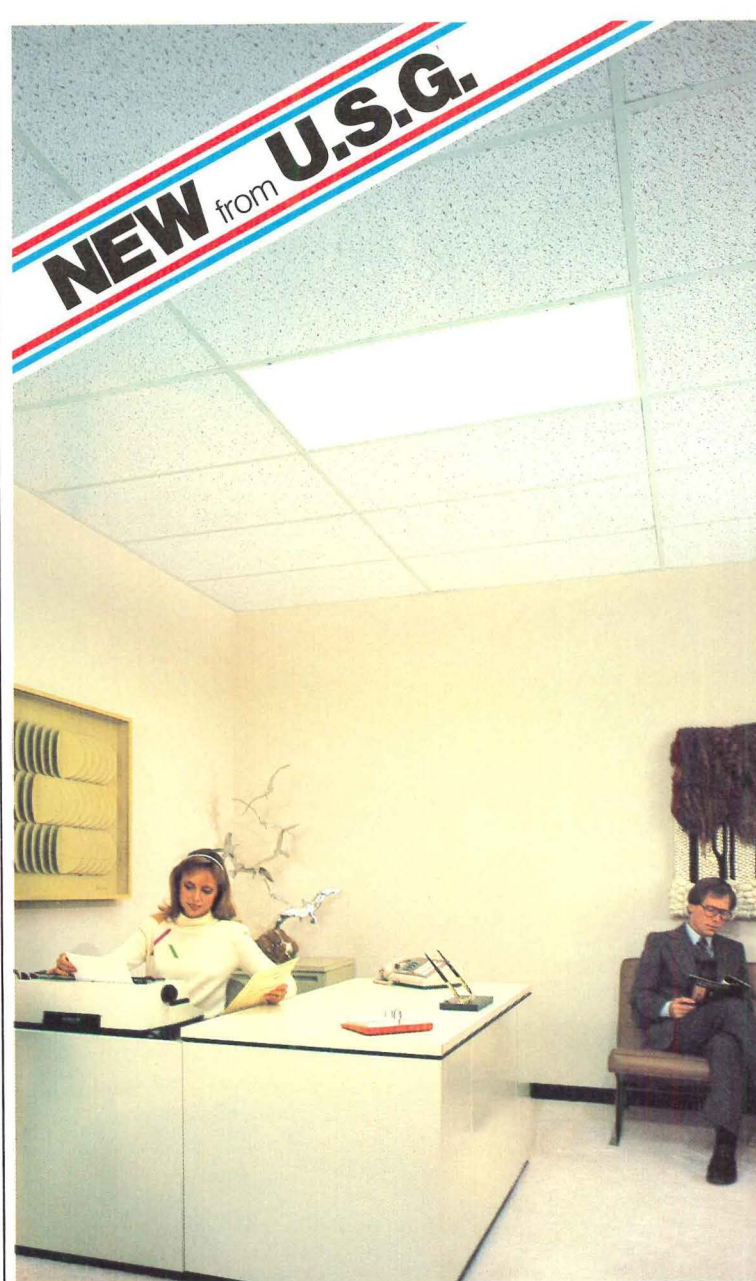
Upgrading a firm's business acumen must, of necessity, require that each principal expand his or her reading into the subjects of finance, taxation, management and law. Regular review of business articles in the *Wall Street Journal* and other major business publications will provide a wealth of helpful

information on what to expect from the economy, what types of buildings are being or might be built, who is building them, etc. Not to be overlooked is the variety of newly published magazines, such as *INC*, that cater to the interests of small- and medium-size businesses, and contain numerous pointers on efficient management.

The entire process described above will not be implemented without modification over months and years. Seeking outside assistance and guidance during this process will greatly aid a firm during the transition and should be an ongoing part of a firm's program. Such help can be obtained from a host of management, promotion and legal specialists that have sprung up in response to this need. Regular consultation with those familiar with your business will enable you to set interim checkpoints to ensure that the process is moving in the intended direction.

Setting goals and priorities is not an end in itself. It is the first step, albeit a crucial one, to moving a firm forward in tune with the economic turmoil of our times. If successful, a firm will be able to assure its younger members that the years ahead will be financially stable or, at least, free from the financial fears that so many firms regularly face. For a firm's older members, it will create financial security for their retirement and allow them to leave as a lasting legacy a firm dedicated to providing quality design in concert with management that lets it achieve those goals.

Mr. LePatner has law offices in New York City, where he specializes in the representation of architectural and engineering firms. He is co-author with Sidney M. Johnson of Structural and Foundation Failures: a Casebook for Architects, Engineers and Lawyers, published this year by McGraw-Hill. Portions of this article appeared in the "LePatner Report," a newsletter for design professionals published by the author. Copyright © 1982 by Barry B. LePatner, Esq. All rights reserved.



Now! A non-directional pattern that's dramatically deeper!

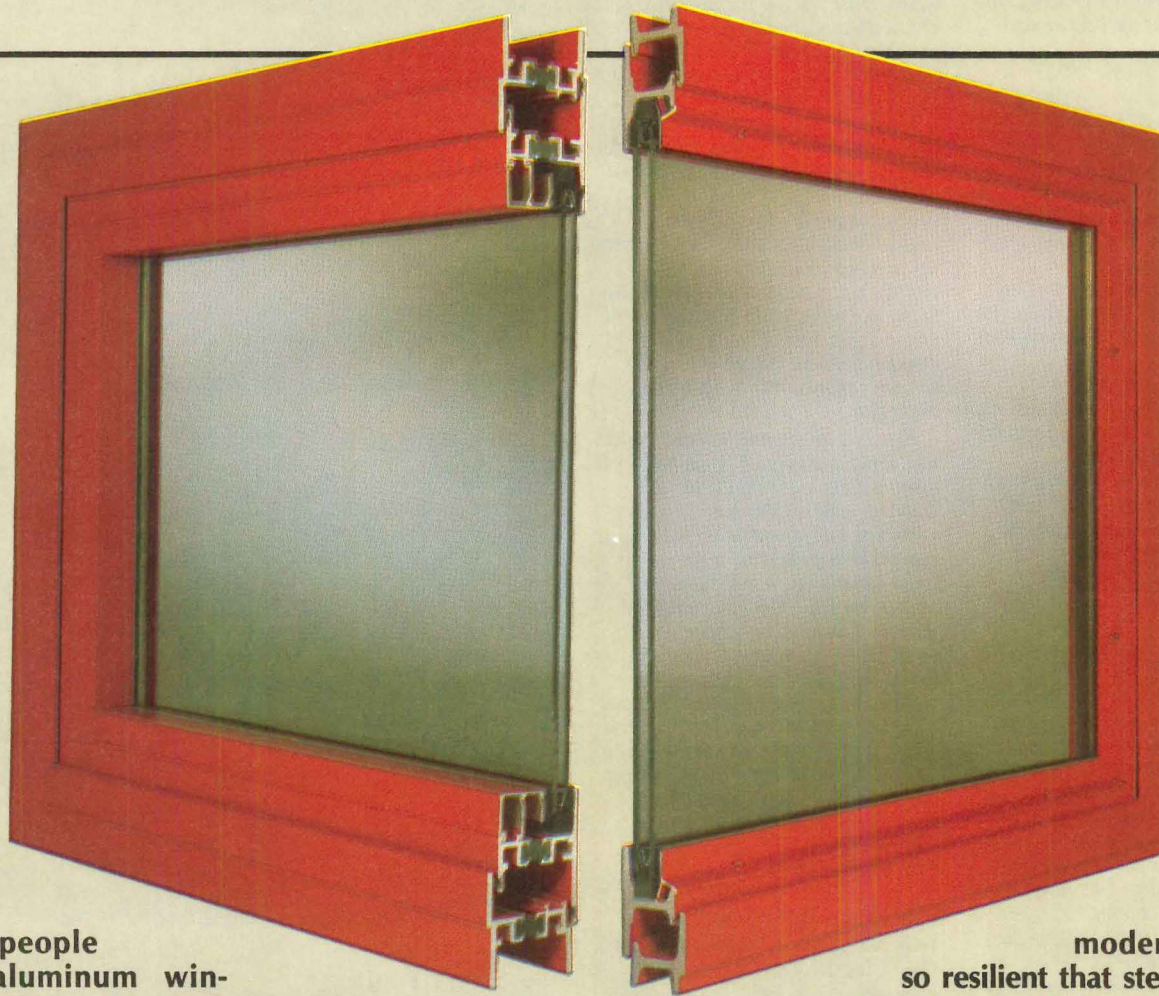
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Conference report: "American Architecture: Innovation and Tradition"

On April 21st-24th, the Graduate School of Architecture and Planning, Columbia University, held a major academic conference and exhibition "to explore and define what is uniquely American in the architecture of this country." The conference was in celebration of the opening of the School's new Temple Hoyne Buell Center for the Study of American Architecture, funded by a \$5-million gift from Mr. Buell, a 1917 graduate of Columbia and an architect/developer widely regarded as the originator of the regional shopping center. The center will be housed in East Hall, a three-story campus building erected in 1878.

*This report on the inaugural conference was written by architect and author William Hubbard.**

The theme for the conference was set during Vincent Scully's opening keynote address—but not by Dr. Scully alone.

In a recapitulation of the Milstein Lectures that he had delivered during the previous month, Scully sketched how two forces have been contending throughout American history, a desire to hold onto traditions that give meaning and familiarity, and a counter desire to escape the past and remake our world anew. Scully presented this theme with his unique blend of passion and empathy, but his efforts were dogged at every turn by disastrously malfunctioning slide projectors. In the awkward silences, one realized that Scully's two forces had now been joined by a third—the force of a mindless technology that threatens at every turn to undercut both tradition and aspiration.

But Scully himself demonstrated how the forces of technology can be overcome when his talk moved away from images. In a moving reading from Shelley, he talked of the hope of the historian—and the true mission of the academy: "to bring the past to life so that Fate may be hoodwinked," so that "the fatality that we know lies upon human institutions may, in our day, be set aside." In Shelley's words, "The world is weary of the past. O! might it die or rest at last!"

In that moment was a foreshadowing of the theme that

** William Hubbard is author of *Complicity and Conviction: Steps Toward an Architecture of Conviction* (MIT Press, 1981), and practices architecture in New York with Gerald Allen.*

would dominate the next two days' discussions. The world cannot be made wholly anew. We now accept that. But the desire of Shelley to have conscious control over the shape of our world—that desire remains. What now threatens our control of our destiny is not the dead hand of the past but the forces of a pervasive, technology-based materialism. So the task now facing us is to take our will and counterpoise it against the onrush of materialistic culture. Absent that conscious act of will, materialist technology will deprive us of both tradition and aspiration.

Thus the issues for the conference—and, in the future, for the center itself—were two (and it is a tribute to the organizers of the conference that all of the speakers, individually, addressed one or more of these issues):

First, what are the things and practices that deeply matter to us? How do we identify them? How are we to decide whether we want to conserve them? And who will do the deciding?

And second, by what processes do we conserve? How do we avoid mere nostalgia? And as we conserve, how do we remain true to the ideal of shaping the world according to our aspirations?

So how do we choose the things we will conserve? The assumption that emerged during the conference was that there have evolved in this country certain patterns and forms that are unique to us, uniquely "American" (either nationally or regionally), and it is from those patterns that we ought to choose.

Kenneth Frampton described how this process of choice and conservation might be accomplished. He spoke of two kinds of regionalism, restrictive and deliberative. A restrictive regionalism would be the kind of nostalgia or antiquarianism that simply refuses to deal with changed conditions. A deliberative regionalism would *deliberate* with technological materialism. In such a deliberation, we would face the fact that the material conditions that gave rise to a pattern no longer exist and that the pattern can thus be honestly maintained only by an act of our will. That knowledge would force upon us a decision: Do we choose to expend the energy, bear the inefficiencies, that the maintenance of that pattern will require? Such a deliberation would result in the maintenance of only those traditions that truly gave us deeply wanted

sustenance.

The talk by David Handlin—architect, Harvard professor, and author of the forthcoming "Concise History of American Architecture"—made one realize that we Americans have been doing something like Frampton's deliberative regionalism for all our history. He reminded us that every immigrant family who came to this country had to decide which household objects they would take and which they would leave behind. In making that decision they were forced to realize that even though the assortment of household objects (and the practices they facilitated) felt like a seamless whole, some objects and practices had been maintained out of mere habit and could be dispensed with, while others held deep meaning and had to be maintained, even against the difficulties of travel.

A further confrontation occurred for us Americans with the introduction of machine-produced goods into the home. In her story "*The Ravages of the Carpet*," Harriet Beecher Stowe described how the introduction of a manufactured rug into the home made familiar household objects (and the patterns they supported) suddenly look shabby. The introduction of a manufactured object made the family confront evolved patterns with which the old, home-made object had fit seamlessly. As with the immigrants, we Americans were faced with the experience of both artifacts and practices being called into question by extrapersonal, "inexorable" forces.

So what was the nature of those objects we had made for ourselves?

Denise Scott-Brown suggested that we might look at the objects produced by all colonial peoples, comparing them to contemporaneous objects produced in the mother country. The differences would reveal what was unique about the colonial objects.

Vincent Scully performed such a comparison in his keynote address, comparing American silverware, furniture, and buildings with their British counterparts. He sensed that our colonial objects were more "realist"—more attuned to the nature of the materials out of which they were made, more evocative of the flow of structural forces within them, but most of all, more reflective of the real self-image of the person for whose use they were intended: chairs that looked like

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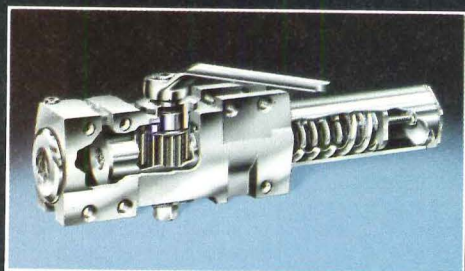


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a proudly sitting matron, pewter pitchers that looked like a prosperous portly merchant.

Industrial designer Arthur Pulos saw a similar realism in American objects. He attributed it to our reverence for the "dignity of survival." Americans take pride in their ability to produce the maximum effect out of the minimum means, and that aspiration gets reflected in the objects we make and choose.

But other speakers pointed to the strong idealistic strain in American objects and buildings, and suggested that we look there for the qualities that are uniquely American.

James O'Gorman—art historian and professor of American art at Wellesley—saw in the work of Richardson a working-out of Merson's injunction to his countrymen to "Look for your source of beauty in shop and mill and field." O'Gorman demonstrated how Richardson had looked to particularly American shops and mills in his Marshall Field Wholesale Store—the granite warehouses of Boston for the street fronts, the multi-windowed brick mills of New England for the back courtyard facades. For more rural sites, Richardson looked to "field" for his inspiration. He looked especially at the dramatic rock outcroppings of the American West that so caught the imagination of that period. Out of those images he produced two massive rock-piles of his own, the Ames Monument and the Ames Gate Lodge.

That idealistic strain in American design was present even in the supposedly all-out mercantile Chicago of the nineteenth century, as Donald Hoffmann demonstrated with images of fanciful carvings and aspirational decorations on buildings renowned for their structural and functional honesty.

But the talk by Dolores Hayden—author, urban planner, and professor at UCLA—made one realize that in an environment determined by commerce, idealism can do no more than hide out in the interstices. If we are to find those aspirations that are particularly American, we should look to environments not dominated by the commercial impulse, places like native American settlements, Shaker villages, and the small towns erected in the Greek Revival period. For Hayden, the places we have built under the demands of commercialism are place-less.

Placelessness is a charge often leveled at California, but Thomas Hines—professor at UCLA in history and architecture—sought to demonstrate how Californians have used a "tradition-touched architecture" to make places which would "tell people where they are and who they are."

What this means, in essence, is that Californians have felt it sufficient to decide who they were (or wanted to be) and then will into place an environment that would tell them they were that thing they had decided to be.

That *assertion of place* comes directly up against the other pregnant concept that Kenneth Frampton threw out to the conference—*tectonic density*. For Frampton it is not quite enough to simply will a building tradition into place (as was done, say, in Santa Barbara). That way lies the danger of mere nostalgia, and nostalgia is an unequal deliberator with materialist technology. The implication of Frampton's argument is that a tradition must have some root, even if only tenuously, in material conditions, and it must have been in place for at least some period of time.

This kind of tectonic tradition often gets identified with the vernacular, which we have come to define as a set of practices unconsciously evolved into near-perfect fit with both material conditions and cultural practices. But here J. B. Jackson—author, critic, editor-founder of *Landscape Magazine*, and ever the iconoclast—stepped in and denied us even this basis for tradition. In a brilliant exercise in dead-pan polemics, Jackson led his audience through a long history of vernacular houses for workers, stretching from late-medieval England, through the American colonial and frontier periods, and up to the present day. During that presentation he deduced, one by one, the traits that have characterized the vernacular through the ages.

When, at the end, he summarized those traits, one realized with a shock that our accustomed conception of the vernacular had been turned on its head:

1. Occupants of vernacular houses rarely have a contractual or even felt connection for the places in which their houses sit.
2. They occupy their houses in the expectation that they will soon move on to someplace else.
3. And so vernacular houses are built in haste.
4. They are built using the most expedient materials, not necessarily local in origin.
5. They are built by *ad hoc*, often

ill-conceived construction techniques.

6. The form of the house is usually imported or imposed upon the occupants.

7. With the result of a poor fit between the house and the household patterns lived inside it.

And so the cherished idea that the vernacular is somehow truer, more authentic than designed architecture—that idea is revealed as a romantic fantasy.

But the real power of Jackson's argument is that it puts the final nail in the coffin of the idea of which "the authentic vernacular" is a part, the idea that unselfconscious processes, if left to their own devices, will produce a better world. Allowing the unfettered forces of the marketplace to determine the form of our cities—that hasn't done it. Allowing function or the nature of materials to determine the shape of things—that didn't do it. And now we look closely at the unselfconscious tinkering of naive builders and see that that won't do it either.

We are forced finally to admit that unselfconscious processes will not produce the newer world that Shelley longed for. They are not a tool by which Fate may be hoodwinked. They are Fate itself.

If we are to have a world shaped to our human needs and aspirations, we will have it only by conscious and continuous acts of will. That is the real message of this conference on innovation and tradition. We should steel ourselves to look, periodically throughout all our lives, at the things and practices that give shape and familiarity to our existence. And each time we look we will have to decide *for ourselves* which things and practices we cannot do without, which ones we need to reinvent, and which ones we will allow to pass away. Only in that way can we hoodwink Fate and have that newer world.

That message is, in reality, a charge—to us surely, but especially to the center which this conference inaugurates. The danger lurking for any such center is that it will become only a center for study, that it will catalog and categorize traditions and trends, that it will attempt to find some balanced view (balanced by whatever criterion—political, ethnic, or sexual), but that it will shrink from critique and advocacy. If the Center for the Study of American Architecture does not take on that harder task, it will do no more than help us see more clearly where Fate drags us.

• A call has been issued for entries in the 21st PCI Awards Program recognizing architectural and engineering excellence in the design of precast and prestressed concrete buildings and bridges. Deadline for entries is July 1, 1983. Instructions for award program entries may be obtained from the Prestressed Concrete Institute, 201 North Wells, Chicago, Illinois 60606.

• The Los Angeles chapter of the AIA is sponsoring an international competition to design a gateway arch for the 1984 Summer Olympics in Los Angeles. First prize is \$1000, second prize \$500, and third prize \$250. Entries will be accepted until July 4, 1983. Entry forms may be obtained for \$25 from LA/AIA, 8687 Melrose Avenue, Los Angeles, California 90069.

• An international design program to honor excellence in architectural and interior lighting design has been announced by the International Association of Lighting Designers. Open to designers in the fields of architecture, interior design, lighting design, engineering, or related disciplines, the program invites designs for interior or exterior spaces which are either complete projects or discrete portions of larger projects. The cost of submissions is \$20 for the first and \$10 for each additional submission; entry deadline is August 12, 1983. Submission forms may be obtained from Stephen Lees, Jules G. Horton Lighting Design, Inc., 200 Park Avenue South, Suite 1401, New York, New York 10003.

• The American Wood Council's second national design award program for nonresidential wood buildings will recognize recently constructed new buildings and multiple building complexes in three categories: commercial, institutional, and industrial. A national Wood Design Award winner will be selected from among winning entries in the western, southern, north central, and eastern regions. Entry forms and program information are available from the American Wood Council, Suite 500, 1619 Massachusetts Avenue, N.W., Washington, D.C. 20036 (202/265-7766). The deadline for submissions is September 1, 1983.

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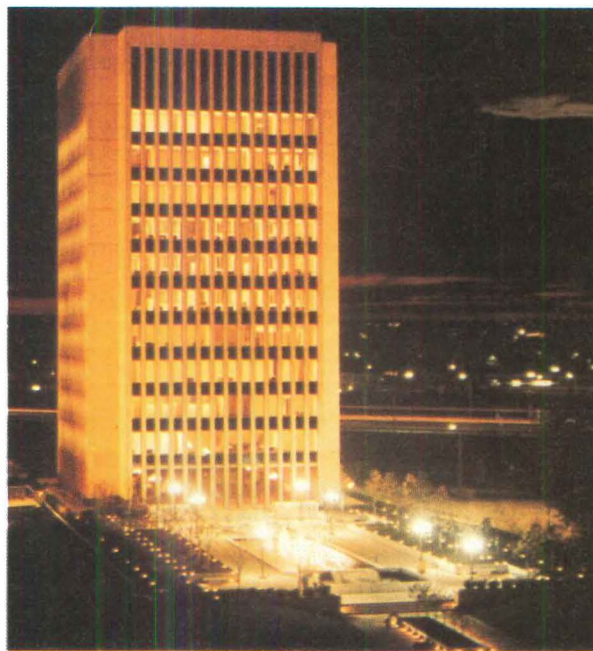
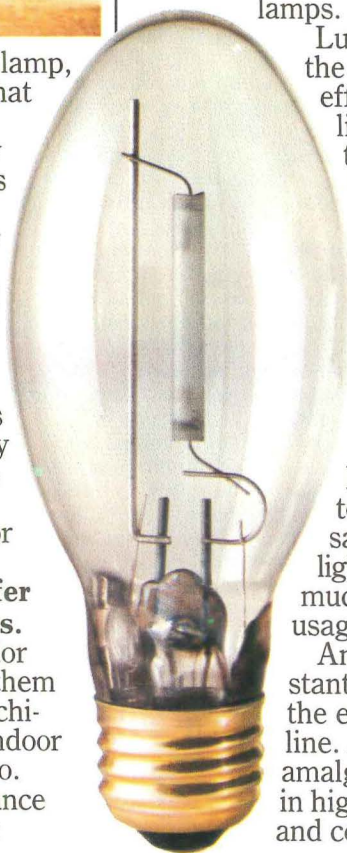
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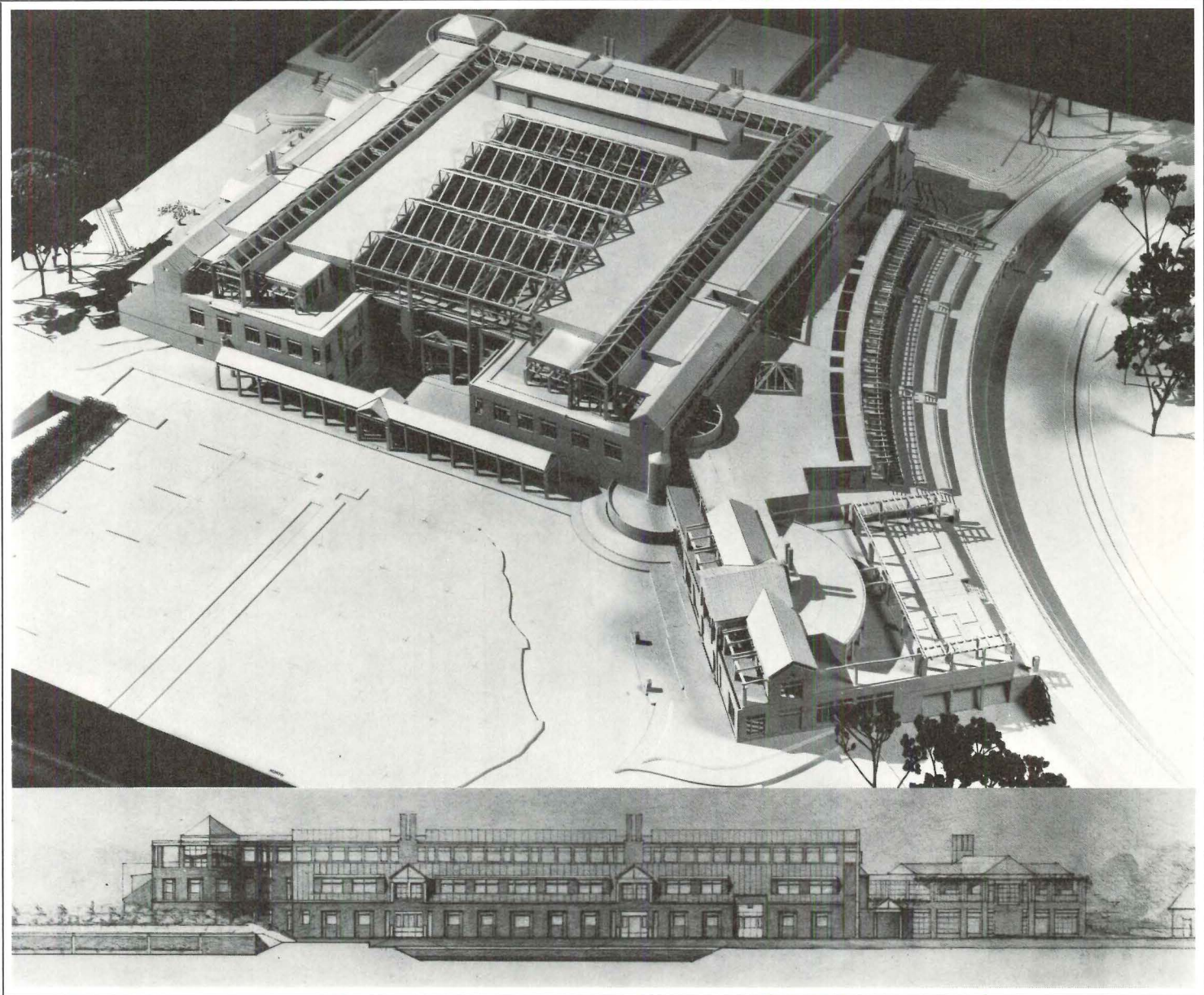
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Design awards/competitions: Codex Headquarters Design Competition

The Codex Corporation, an international data-communications firm, has announced the results of a design competition to select the architect of its 250,000-square-foot headquarters in Canton, Massachusetts. At the request of Codex management, development consultants Halcyon Ltd., of Hartford, Connecticut, compiled the list of over 100 American architectural firms who were invited to participate in Phase 1 of the two-stage competition. From the 47 submissions received, four finalists were chosen by jurors Jaquelin T. Robertson, FAIA, dean of the

Premiated design: Fred Koetter & Associates



Edward Jacoby Architectural Photography Group photos

Codex is committed to preserving the character of its rural site, a 55-acre tract known as Maresfield Farm, which is one of the last remnants of open land in a rapidly developing strip along Route 128. In a master plan approved after rigorous local and state environmental review, the corporation has limited its campus for 1,000 employees to 13.8 acres at the northeast corner of the site, adjoining a former racehorse training track. The remainder of the site will be devoted to agriculture, and existing farm structures are being restored. The headquarters program calls for predominantly open-plan offices, 30 conference rooms distributed throughout the complex, a variety of dining facilities, a 300-seat auditorium, a 2,500-square-foot library, and 25,000 square feet of laboratory

and computer space. Codex has also specified three 400-square-foot "quiet rooms" where employees can work away from their desks, and locker rooms and showers for on-site recreation. There were no budget requirements for Phase-1 submissions, although the jury and a professional cost estimator assessed the expense of projected construction in their evaluation of finalists.

Fred Koetter & Associates

The winning design is organized around a garden-atrium and skylighted corridors, with the innermost zones of the plan given to highly flexible office space, and the periphery assigned to more fixed program areas. Outside, in order to key the building to its surroundings, elevations and massing suggest a

series of dormered pavilions, with a large "side porch" facing views of the trotting track and farm. Though the atrium won praise for its "agricultural fairground atmosphere," the jury averred that it might be framed more appropriately in timber than in the steel originally proposed. Exterior elevations were judged to be scaled sensitively, particularly in the articulation of temple-front quiet rooms and the sweep of the stepped area alongside the track. The jury found Koetter's use of materials "ambiguous. . . . Brick would be one option, although a wood exterior would make the building look somewhat like an Adirondacks hotel—and look very nice. A significant amount of clapboard could, however, lead to a major maintenance expense. [The final choice is brick.] . . .

According to all the criteria [of cost efficiency] by which we compared the finalists. . . this scheme was the first or second best of four."

Architects:

Fred Koetter & Associates—Fred Koetter, Susie Kim, partners-in-charge; Kent Knight, Mark Chen, team leaders; Neil Denari, Jim Favaro, Deborah Fennick, Sophia Gruzdzys, Steve Johnson, Steve Moser, Carolyn Rufo, Kelly Wilson, project team

Engineers:

LeMessurier Associates/SCI (civil/site/structural); Flack & Kurtz, Consulting Engineers (mechanical/electrical)

Landscape architects:

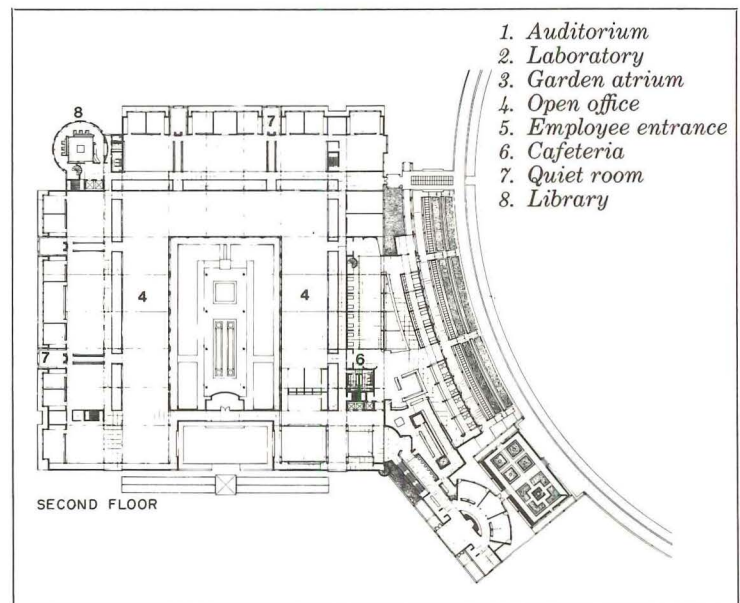
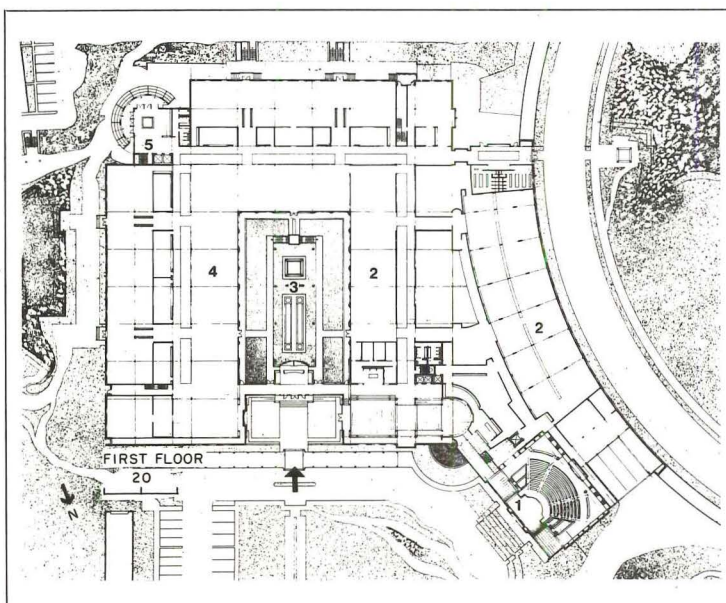
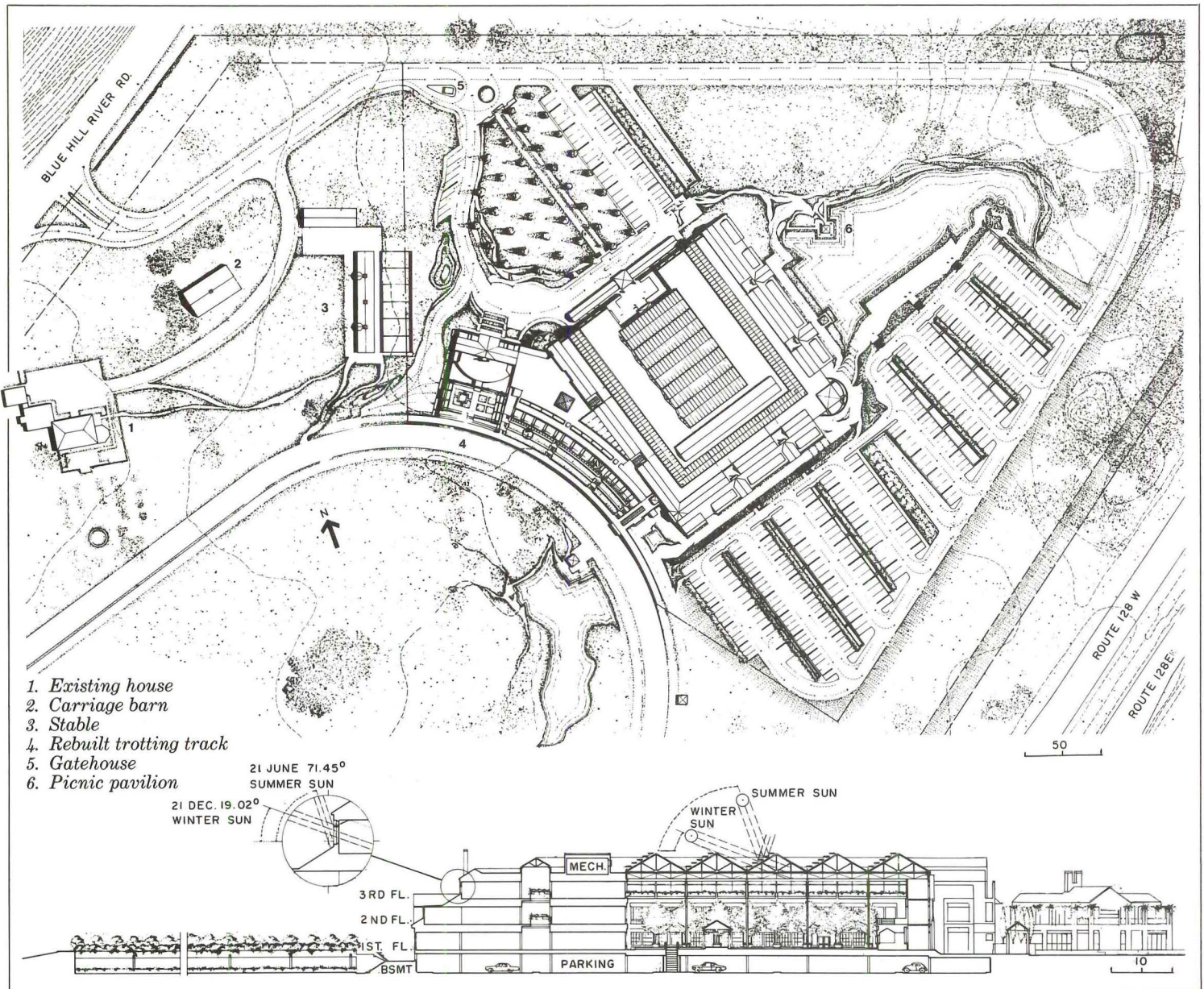
Hanna & Olin, Ltd.

Cost estimating:

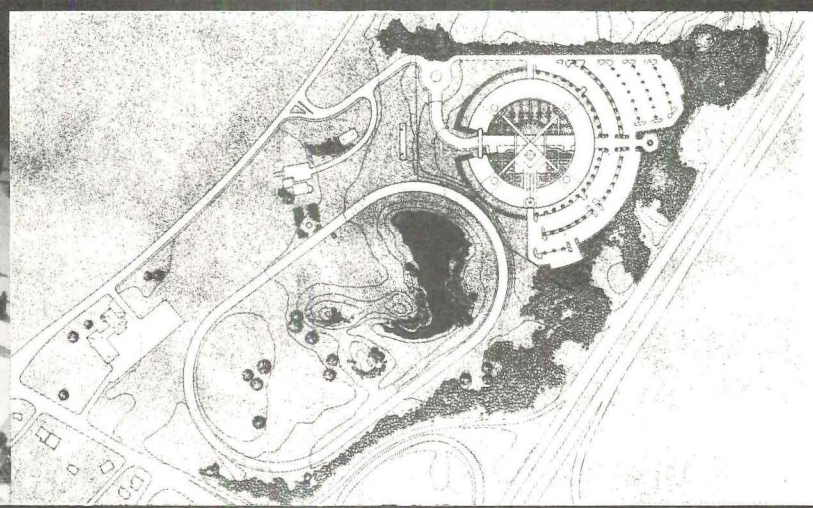
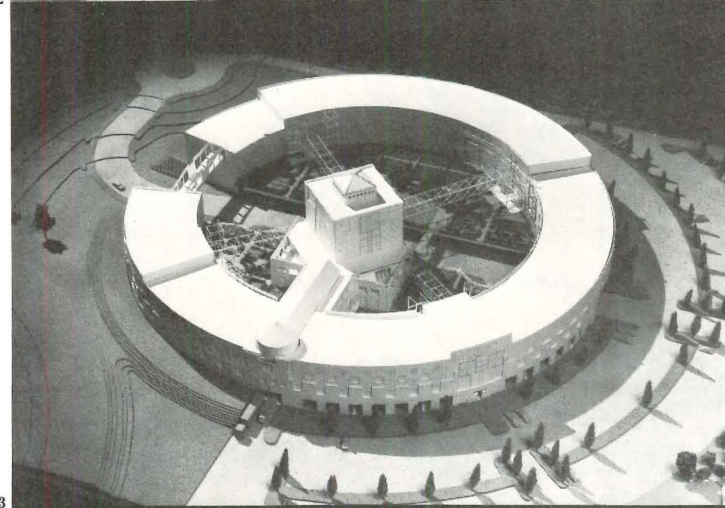
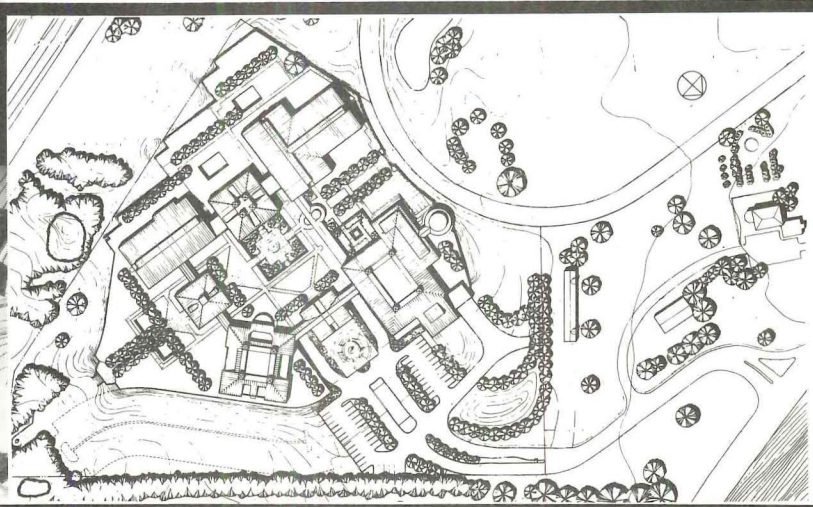
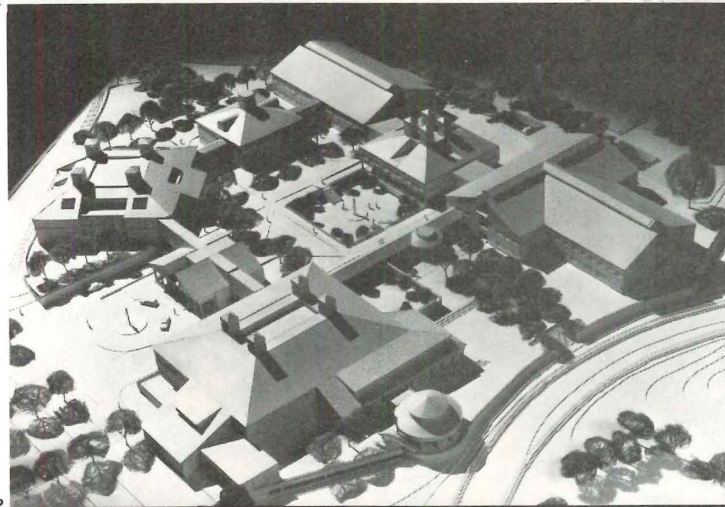
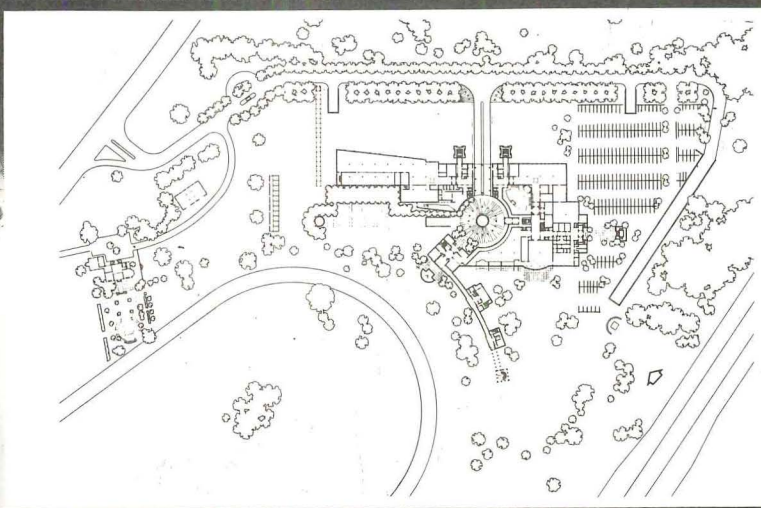
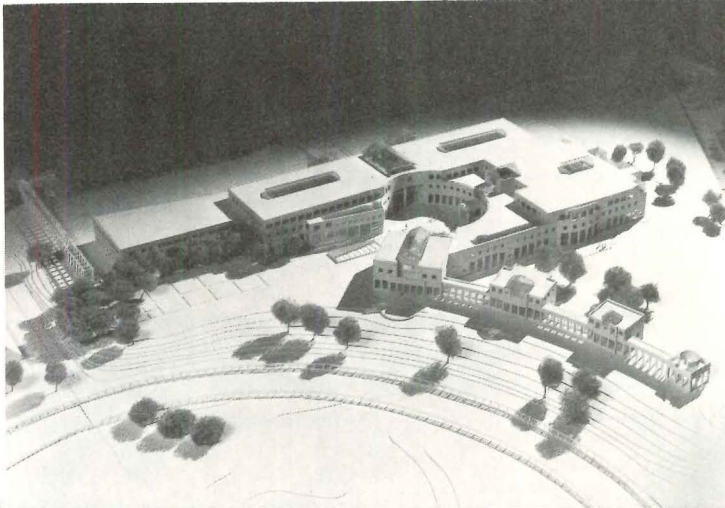
Leslie M. Buckingham

University of Virginia School of Architecture; James W. Storey, president of Codex; and Michael P. Buckley, AIA, president of Halcyon Ltd. (Carl Geupel, a senior associate with Halcyon, coordinated these proceedings). The four finalists prepared a second set of drawings, models, and program solutions, more detailed than those required of Phase-1 entries. A \$25,000 award was presented to each finalist (we show projects by the three runners-up overleaf), and the winner, Fred Koetter & Associates of Boston, has negotiated a contract for actual design services

(the premiated design appears opposite and below; see pages 68-69 for a selected group of Phase-1 proposals). The diversity of the schemes submitted responds to the client's program statement: "Codex is not committed to the 'high-tech' style its product line might suggest, nor to the pastoral image one might associate with the headquarters site. Instead, they are sponsoring the competition in an attempt to generate ideas on creating a different way of life for Codex employees."



1. Auditorium
2. Laboratory
3. Garden atrium
4. Open office
5. Employee entrance
6. Cafeteria
7. Quiet room
8. Library



Finalists:

1. The Grad Partnership
2. The Hillier Group
3. Perry, Dean, Rogers & Partners

1. The Grad Partnership

The scheme has two very different aspects: a formal entry facade to the northeast and a more informal crescent "garden front" along the racetrack. A circular courtyard joins these two realms. The jury commented: "While the statement is strong, the hierarchy may dominate the functional uses of the entries, and the parking and visitor entrances appear unresolved. The elevations and detailing are elegant and elaborate; they might be labeled 'New Mexican' or 'Italianate Rationalist.' They may also look dated in 15 years. . . . While there are exciting and well-handled two-story, skylit interior nodes, they may not create enough flexibility. . . . This building deals with the scale issue by presenting several small faces

toward the farm with very successful results. The Koetter scheme, in contrast, breaks down the scale into sections, which is not quite as effective. The project could probably be moved west, closer to the track, filling in an undefined space."

Architects:

The Grad Partnership—Harry B. Mahler, senior design partner; Peter C. Pran, design director; Lowell Brody, administrative partner; Peter Lokhammer, senior project designer; Michael Neumann, project designer; Charles Thanhauser, designer; Fred Travisano, design coordinator; Cleveland Adams, Lee Beck, Kenneth Bingham, Christina Boros, Jocelyn Brainard, Marcos Christodoulou, Helen Cohen, Patrick Compagnucci, Mary Evans, Robert Krause, Betsy Kriegsman,

Anthony LaFazia, Donald Leonard, Michael Markovitz, Steve Oakley, Shelton Peed, Allan Wahl, Carolyn Wise, Susan Yentema, assistants.

Engineers:

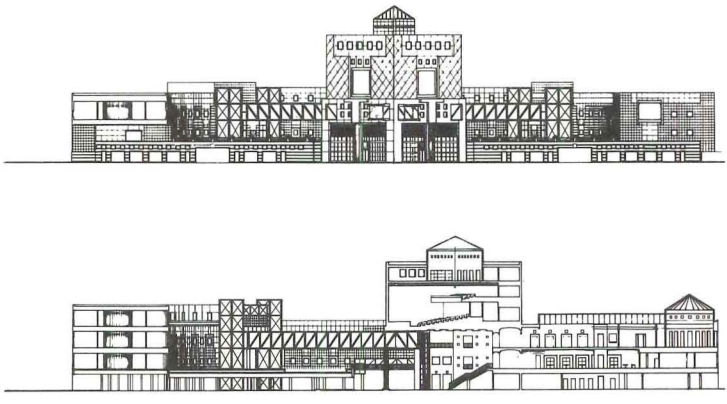
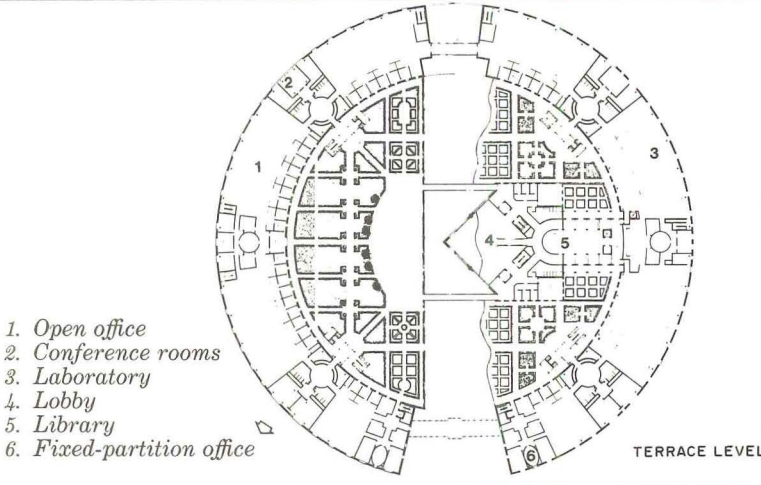
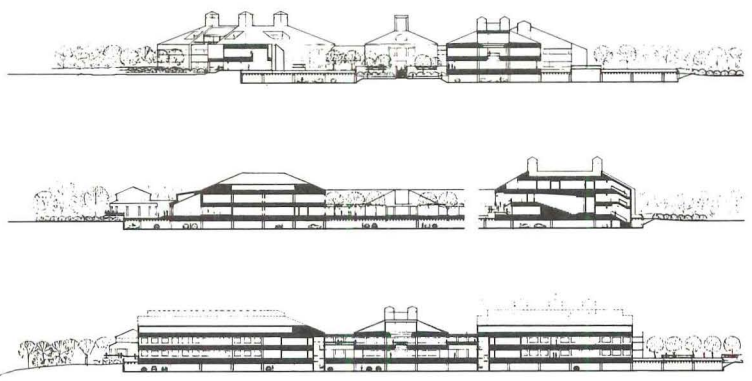
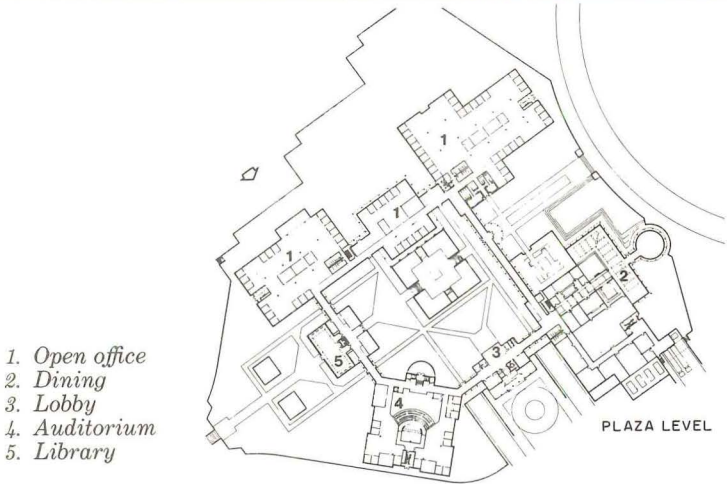
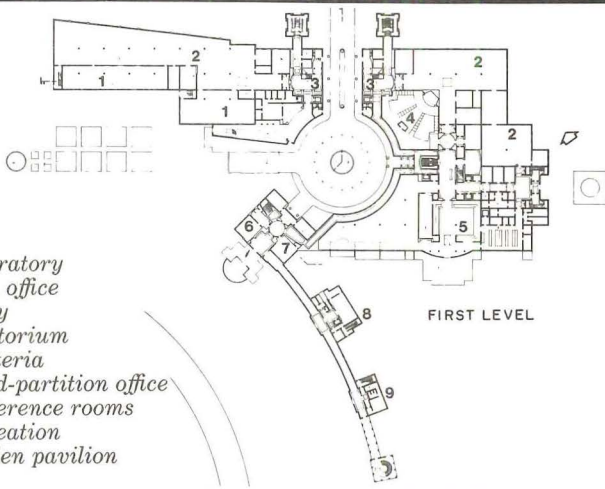
Raymond Keyes Engineering (civil); Robertson, Fowler & Associates, Inc. (structural); Jaros, Baum & Bolles (mechanical/electrical)

Landscape architects:

Paul Friedberg & Partners

Food service:

Zaralban & Associates

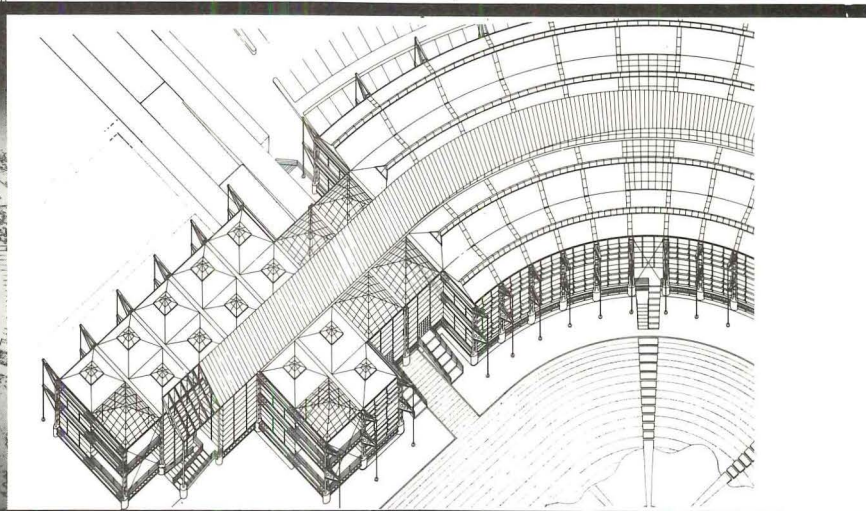
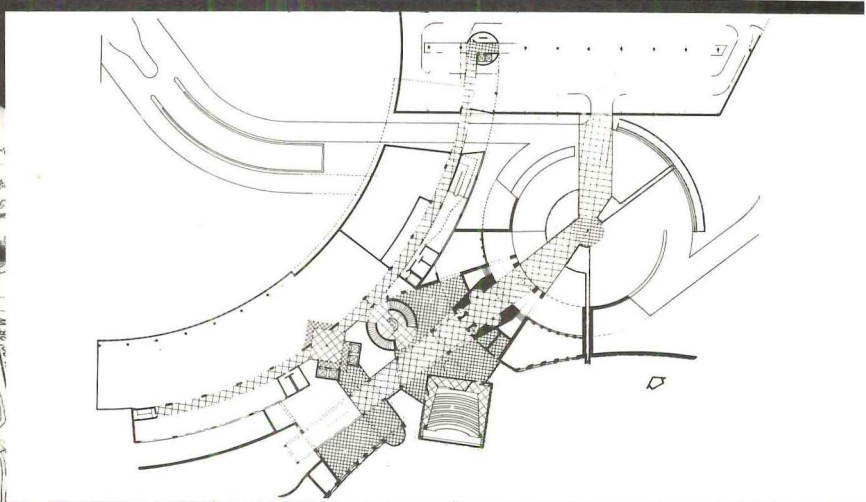
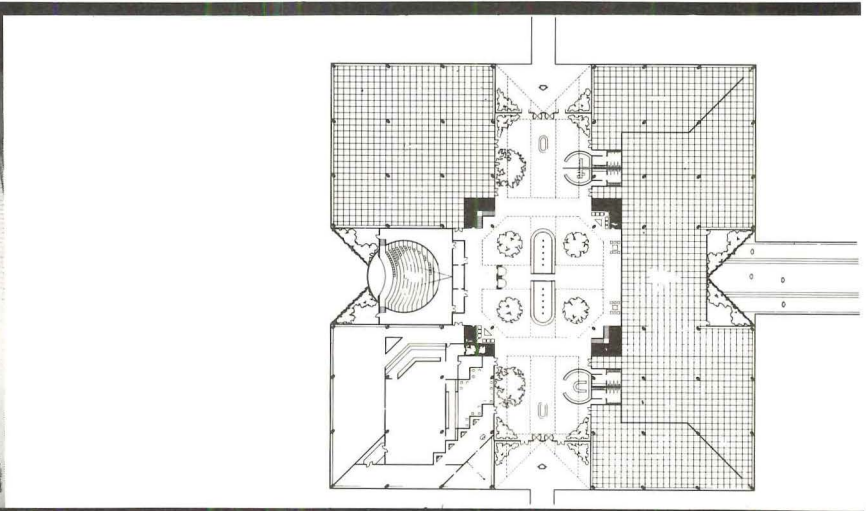
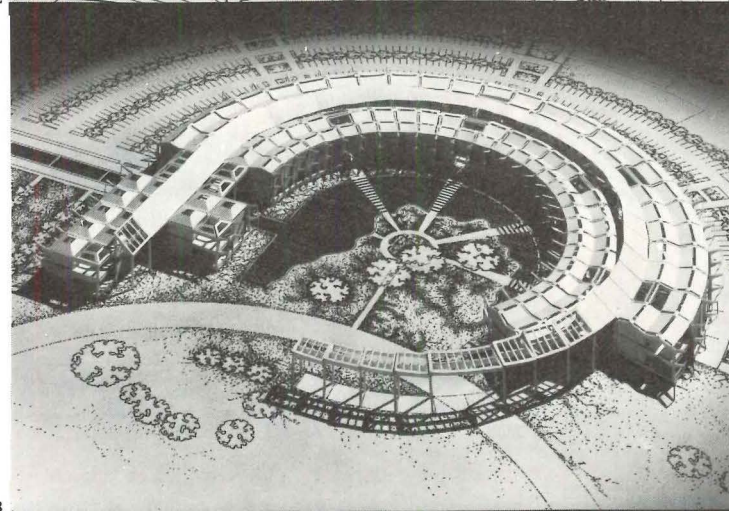
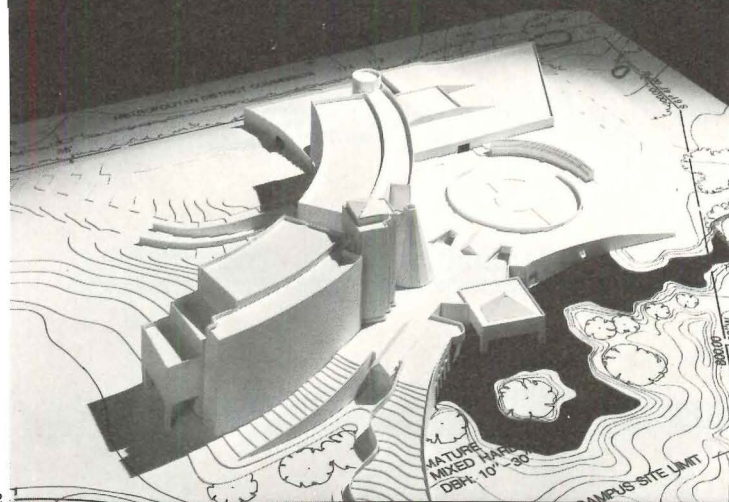
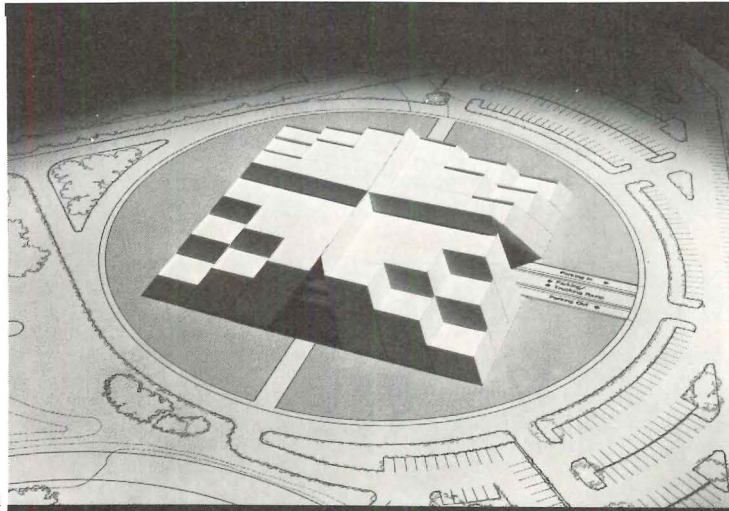


2. The Hillier Group
 All parking is out of sight under a campuslike assemblage of pavilions. "It is a sort of necklace of farm buildings strung together," remarked the jury. "The parti is not completely solved architecturally, though the functional issues are resolved. (The scheme would probably be very acceptable to corporate clients but perhaps less so to a jury of architects.) On farms, all buildings have a hierarchy and distinctive shapes related to their functions. This project lacks that second level of integration relating the forms of the individual buildings. . . . Wood surfacing is clearly the right choice and, according to the estimates provided, proves quite economical. . . . White windows add a residential character appropriate to both the scheme

and the farm. The parking layout under the podium is especially well resolved."
Architects:
The Hillier Group—J. Robert Hillier, Cyril Beveridge, Steve McDaniel, Bill Doran, Mike Hayes, John DeLuca, Mark Zawacki, Tim Burton, Nancy Balmer, Clarence Wang, project team

3. Perry, Dean, Rogers & Partners
 Described by the architects as at once an emblematic microcosm and a symbolic enclosure from the world outside, the office building is a freestanding circular structure linked to a central tower that houses shared facilities. The jury remarked that "The project closes in on itself hermetically to create a world of study, contemplation, and oneness. It seems to leave the landscape—one way to relate a contemporary office building to the scale and agricultural character of the site. The tower in the middle is perhaps too tall, and overly detailed vis-à-vis the rest of the farm. . . . The elegant elevations demonstrate the flexibility that the geometry of the plan lacks."

Architects:
Perry, Dean, Rogers & Partners, Inc.—Charles F. Rogers II, Steven M. Foote, S. Dell Mitchell, partners-in-charge; Gabriel Yaari, project architect; Martha Pilgreen, Ray Freeman, Joan Berg, Michael Lauber, Bill Lim, Jennifer King, Michael Senesi, Bob Caddigan, design team; Greg Conyngham, Janet Stegman, model-makers
Consultants:
Zaldastani Associates (structural); Dubin-Bloome Associates (hvac); Haley & Aldrich Associates (soils); A.M. Fogarty & Associates (cost); Innocenti & Webel (landscape); Fisher-Marantz (lighting); Architectural Research (code); Crabtree Associates (kitchen); Norman Abend (traffic)



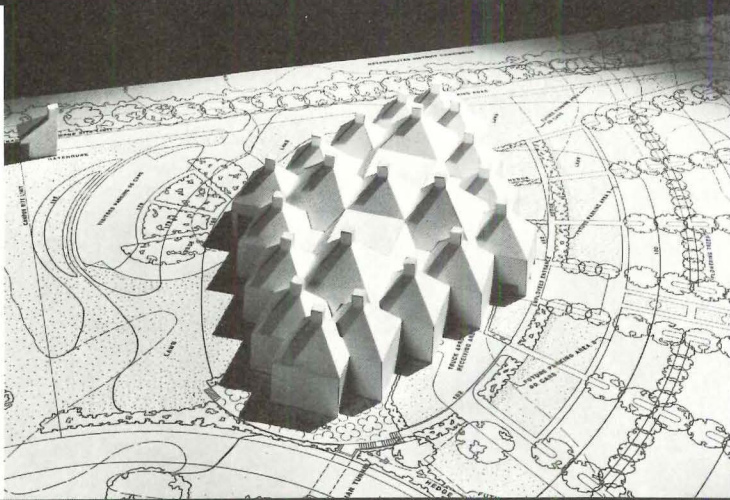
Selected Phase-1 submissions:

1. Attia & Perkins Architects
2. HNTB (Howard Needles Tammen & Bergendoff)
3. Murphy/Jahn Architects
4. Der Scutt Architect
5. John Carl Warnecke & Associates
6. Wolf Associates

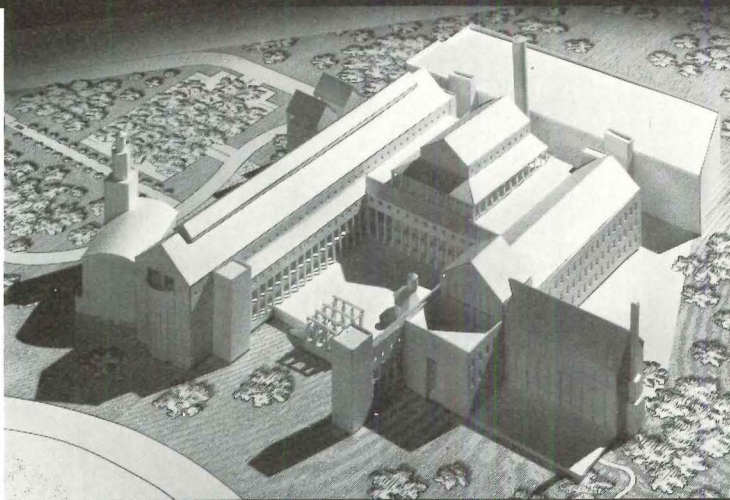
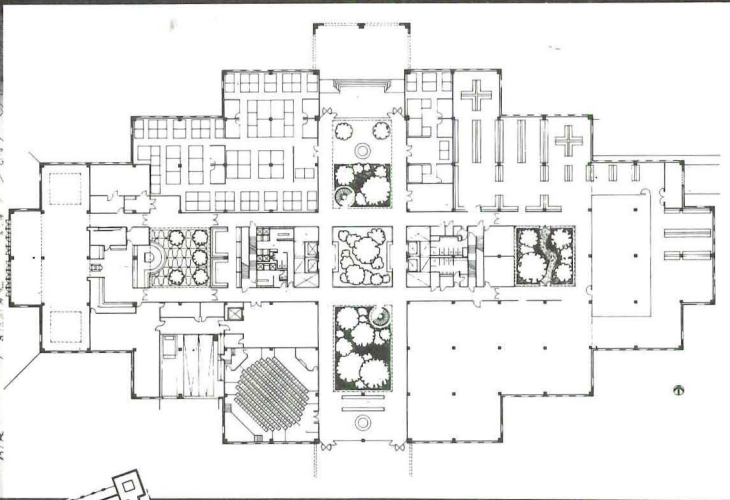
1. Attia & Perkins Architects
The choice of a strictly geometric configuration was prompted by the architects' belief that "the form should not try to be either a natural or a purely man-made object, but instead an abstract crystalline element that neither competes with nor disappears into the site." An atrium at the core of the bi-axial plan houses common spaces. The jury spoke of the project's "powerful Meso-American image," but added, "It has all the problems of a perfectly symmetrical plan; from inside, the building itself gives you no clues as to where you are, where you should go. The glass curtain wall and small roof area would probably make this scheme economical, but these economies might be offset by the cost of the angled columns."

2. HNTB
Reflecting in plan the curve of the track and its relationship to the irregularly placed farm buildings, the complex also steps down to the scale of its environs. The various concave arcs of the layout are intended as gestures toward the neighboring community and the surrounding landscape. The panel noted that "This scheme features good elevations, but uses every geometry in the book to do so. . . . The small geometric gestures effectively break down the large wall that provides the axial organization to this scheme. However, they appear to be on the wrong side [with regard to] the scale of Route 128 and the farm buildings."

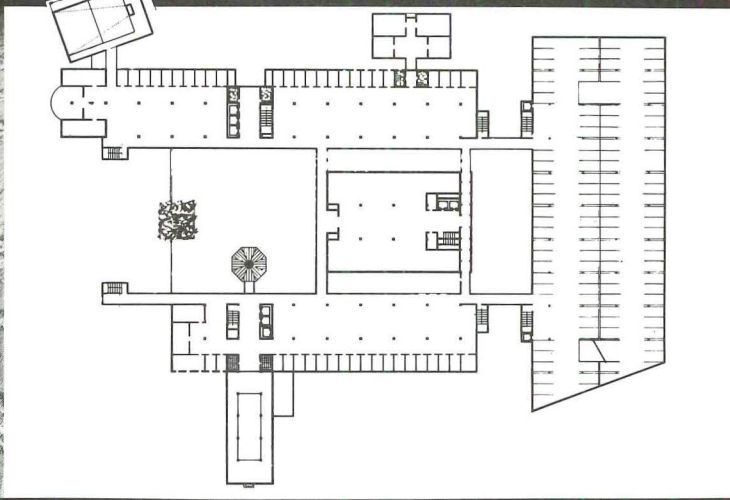
3. Murphy/Jahn Architects
"This is a very seductive model and axonometric, showing off a very daring structural and lighting system," said the jury. "The strength of the geometry is partly offset by the length of the circulation paths." A steel frame anchored by external steel tension cables allows for flexible space planning under 60-foot clear spans. Skylights, domes, clerestories, and radial atriums along the spine provide daylighting throughout the project. Elevations distinguish clearly between steel structural components and a timber and glass skin, which also incorporates wooden sun shades.



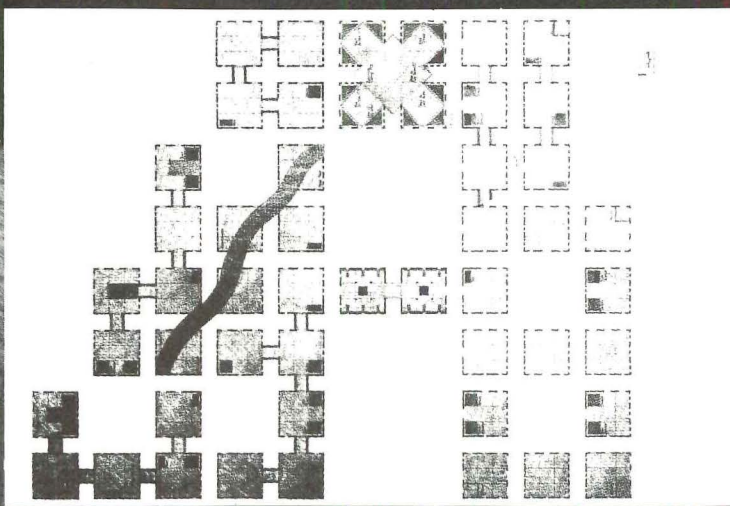
4



5



6



4. Der Scutt Architect

The small scale, hipped roofs, and chimneylike skylights of repeated modules deliberately evoke the shapes of old houses and farm buildings nearby. If clad with reflective glass, one of the options proposed, the scheme would most dramatically realize the architect's stated concept of vernacular forms carried out in contemporary materials. The jury described this as "an interesting, clear scheme which shows good planning and internal flexibility. The quality of light in the interior would be exceptional...."

5. John Carl Warnecke & Associates

The panel discerned the influence of Karl Friedrich Schinkel in the exquisite series of presentation drawings and in the design itself. "It has somewhat the feeling of a convent or monastery, but blown up to accommodate the scale of the program, it takes on an almost excessively institutional, even asylumlike feel." The architects were partly inspired by Thomas Jefferson's concept of an "academical village" organized around a quadrangle. Their courtyard is flanked by offices and laboratories, with the library at its head. The proposed structure is brick and limestone with a terne metal roof.

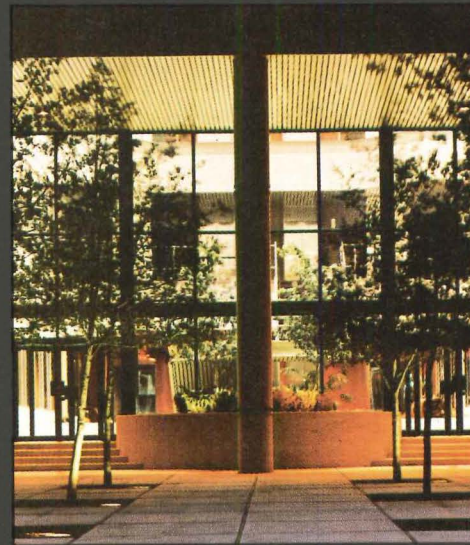
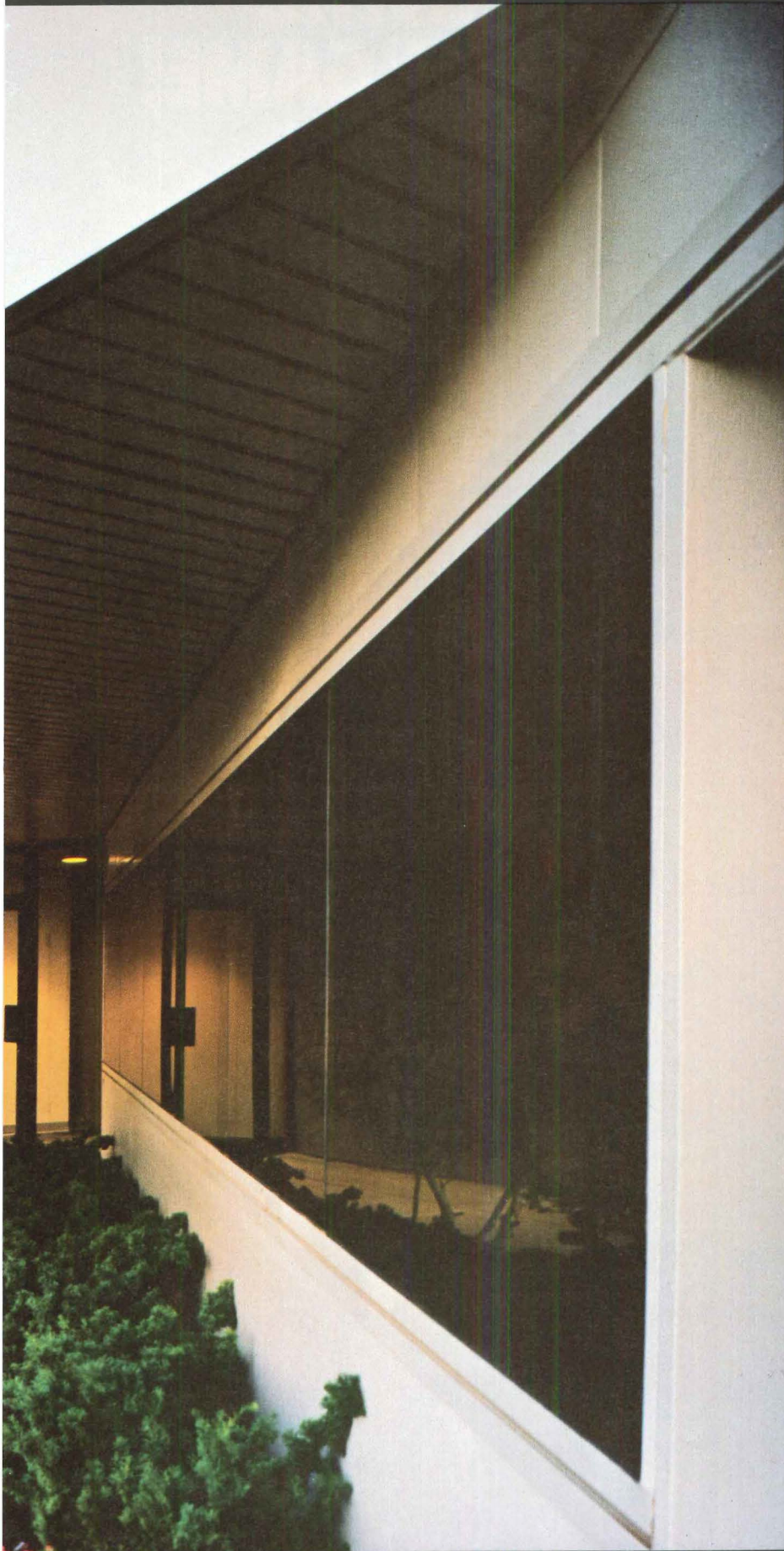
6. Wolf Associates

Individual pavilions connected within a network of pathways, bridges, and courtyards are meant to compose an abstract version of traditional buildings in New England villages and farms. Owing to the relative compactness of each 45-foot cube, employees would enjoy a sense of working within special "rooms" with ready access to views. A serpentine glass-roofed pedestrian street is the one anomaly in the regular grid. The jury decided, "This would be a great solution for a phased building, or for a university campus or multitenant structure, but the concept is probably not energy efficient for New England or cost effective in terms of surface area. The concept is likely to exacerbate communication problems."

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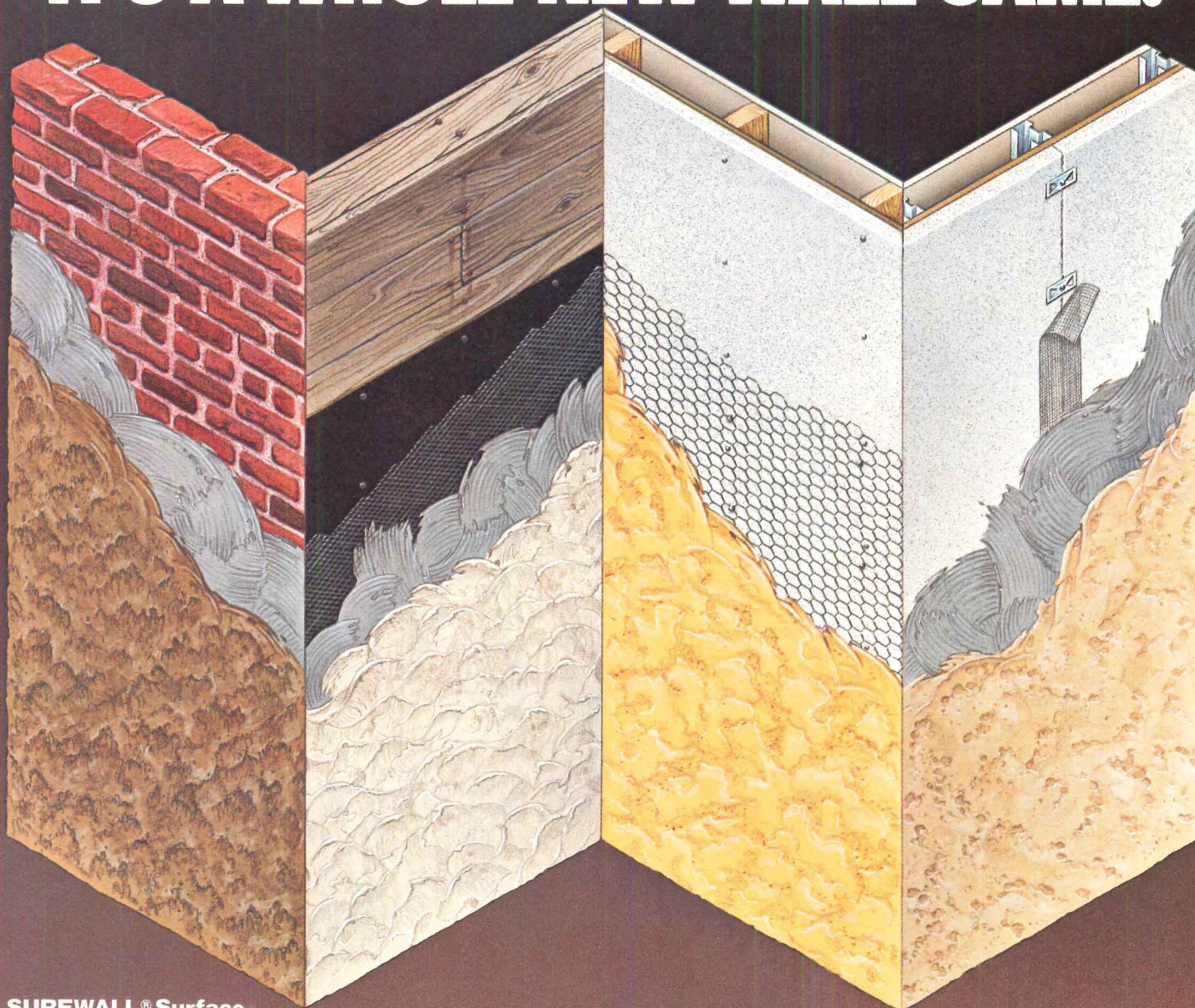


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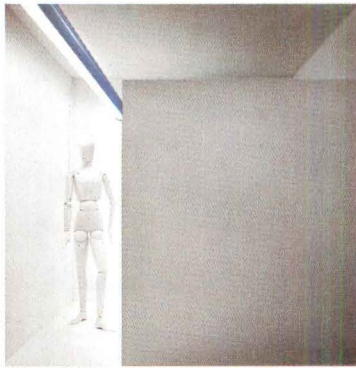
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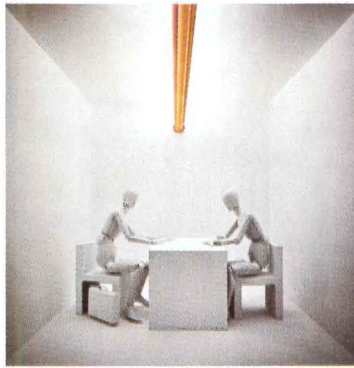
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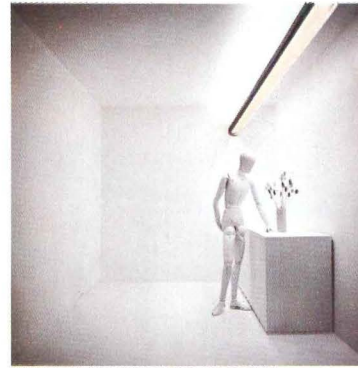
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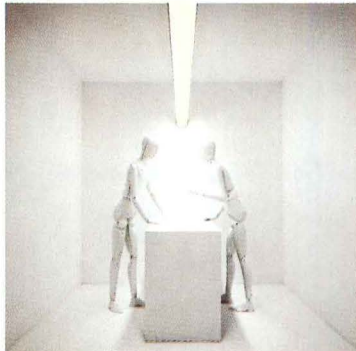
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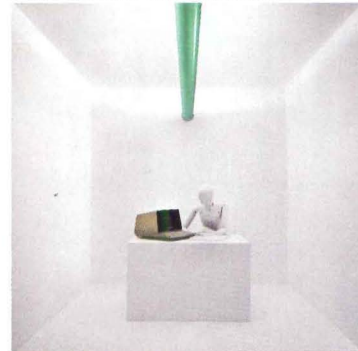
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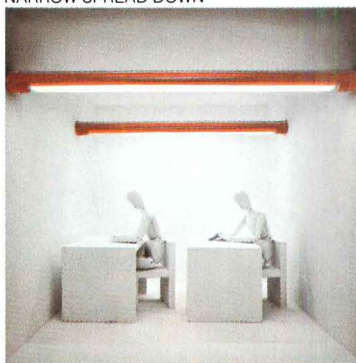
NARROW SPREAD DOWN



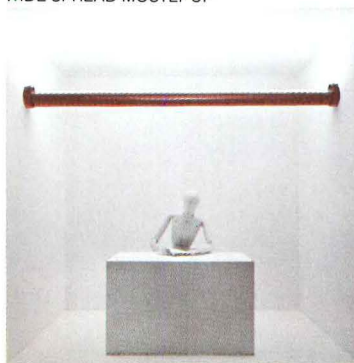
WIDE SPREAD MOSTLY UP



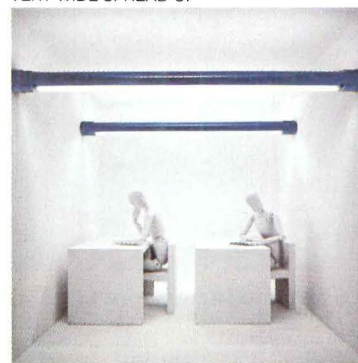
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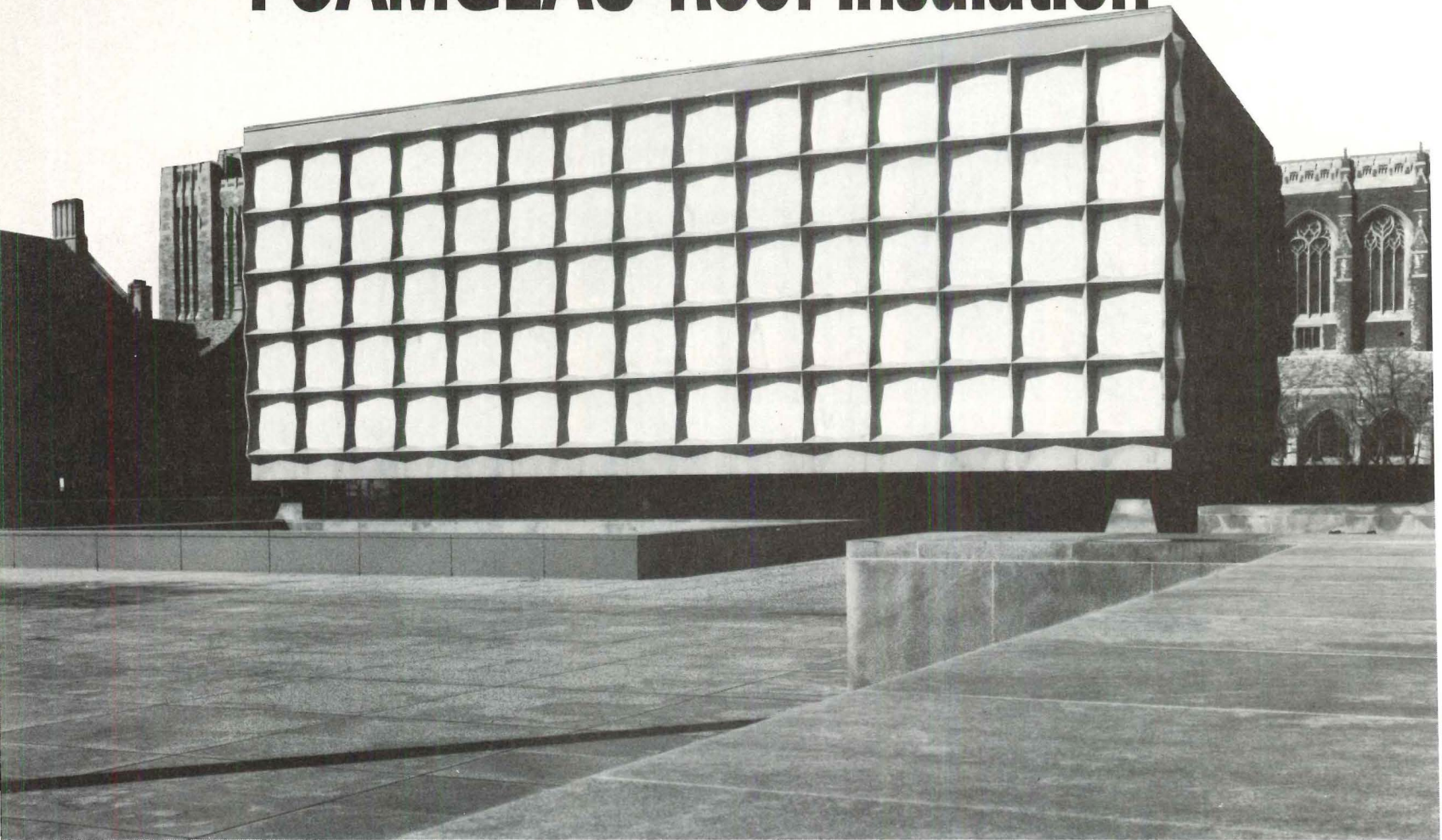
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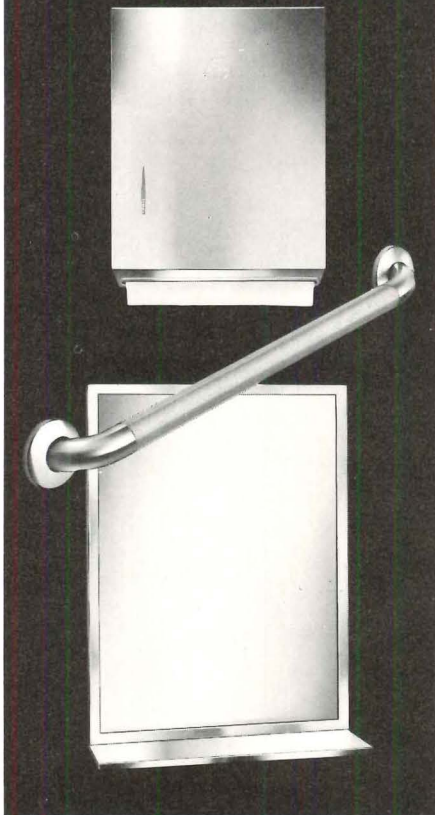
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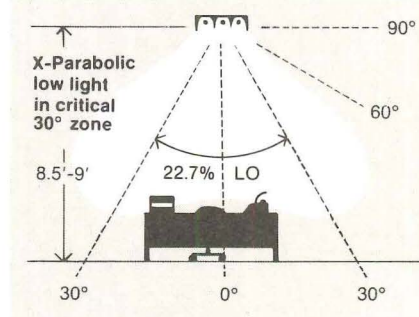
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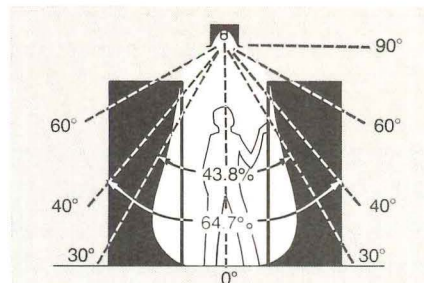
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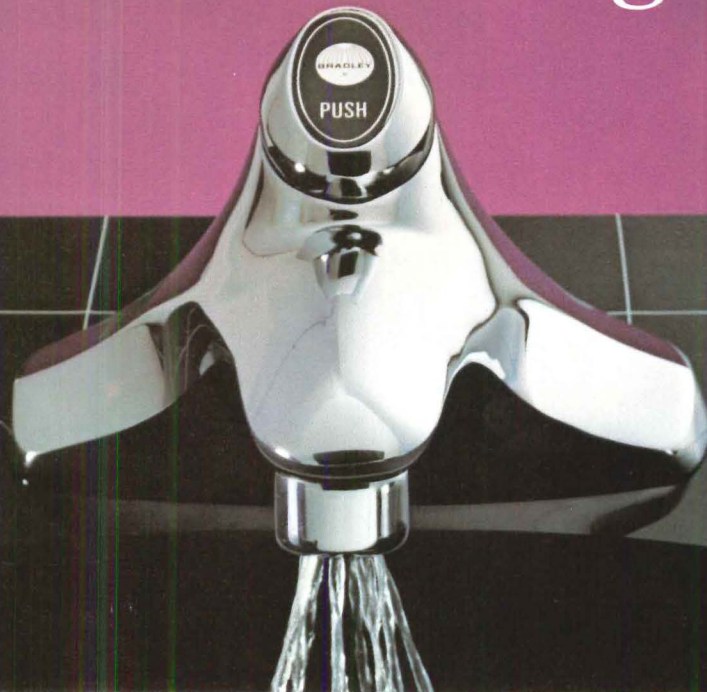


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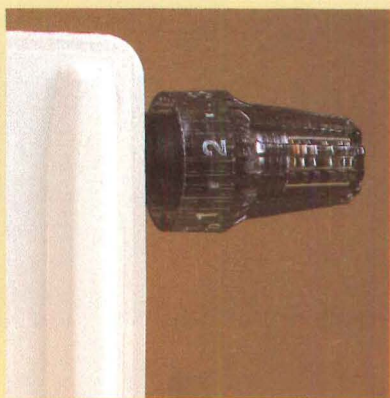
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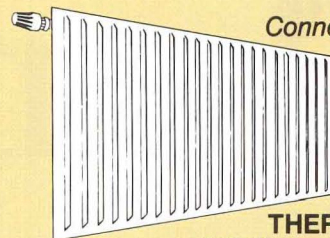
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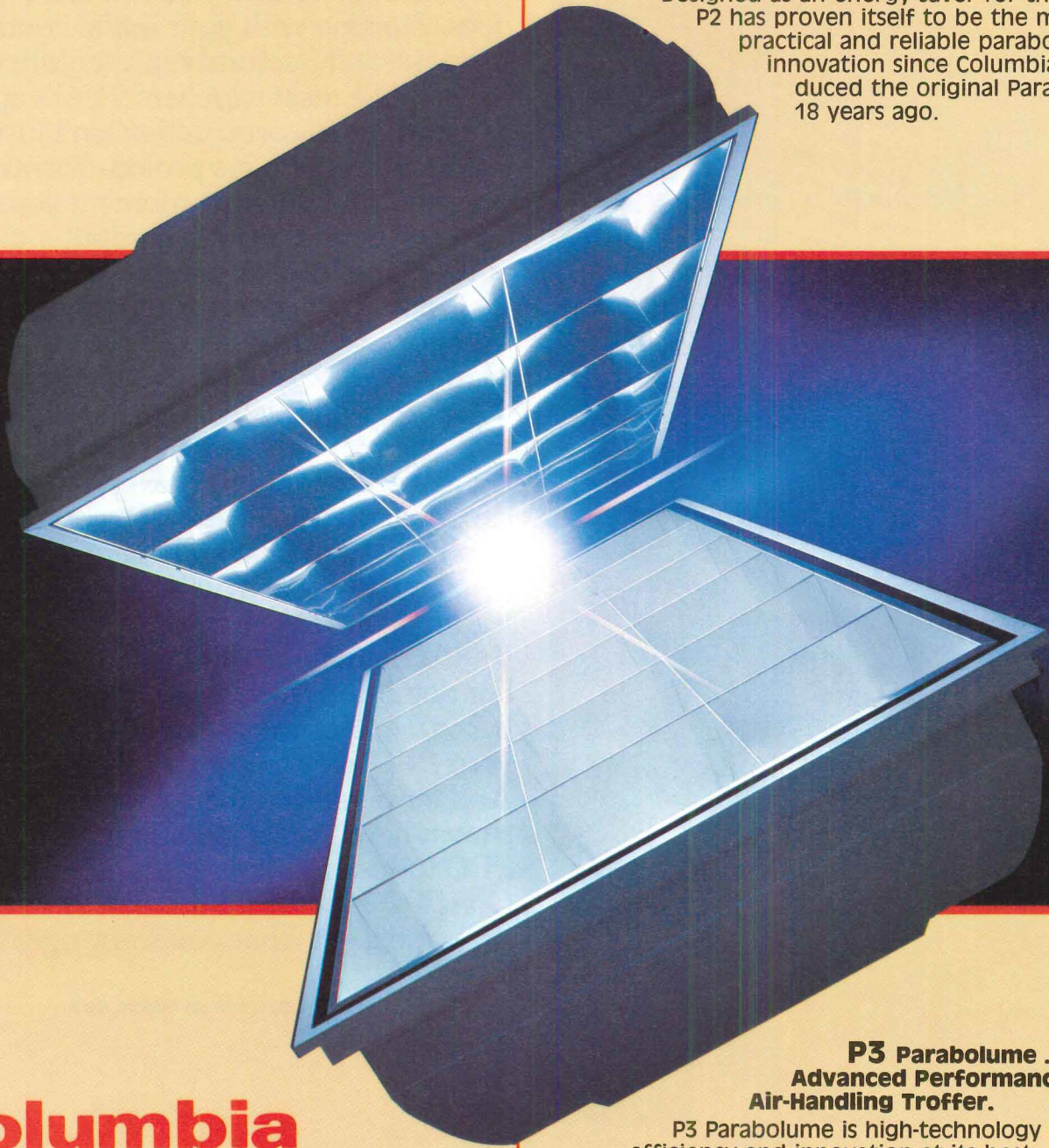
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Rx: Environment

No longer a dirty little secret to be closeted away in back wards and back attics, mental illness has come to be recognized as one of the country's most pressing health problems. In a recent outburst of pessimism, the President's Commission on Mental Health has placed at between 20 and 32 million the number of Americans who "need some kind of mental health care."

The rather glaring discrepancy in the numbers reflects a lack of unanimity within the field about the types and severity of illness that impose a "need" for mental health care and about appropriate treatment strategies. Undeniably, however, there has been a distinct shift over the last two decades from the notorious snake pits of state-operated custodial facilities to more humane and assertive, often drug-based, treatment programs designed to return victims of mental illness to normal life with all the speed consonant with sound therapy.

At the same time, health-care providers generally are undergoing a period of accelerating and traumatic change, detailed in the overview on page 102, one of whose byproducts has been to propel mental health facilities into the limelight as a growth area within a troubled industry.

To professional toilers in the vineyard of mental illness, "environment" means an all-encompassing therapeutic milieu: what the patients do, when and with whom, as well as where. As a result, their directives to the architects charged with assembling the purely physical components of the healing environment tend to be vague, coalescing slowly through the mists of admirable but imprecise visions and sometimes contradictory goals. The terms "homelike," "noninstitutional," "nonthreatening" recur. But concern for patient safety, however subtly provided for, is a fact of hospital life. Privacy is important. But so is a setting that discourages isolation, prompting patients to casual as well as structured encounters with their fellows. Continued connection with the outside world and the cycles of nature is vital to patient orientation. . . . But not at the price of a reassuring sense of enclosure and embrace.

The projects shown here are remarkable not only for their designers' acuity in striking the often-tenuous balances implicit in the programs, but for the similarities, reached independently, in the solutions. The resolution of disparate functional elements into clear and ordered patterns, the intuitive introduction of spatial options for privacy and communality, and the sensitive manipulation of light and color represent architecture of a high order reaching consensus in a common cause. *Margaret Gaskie*

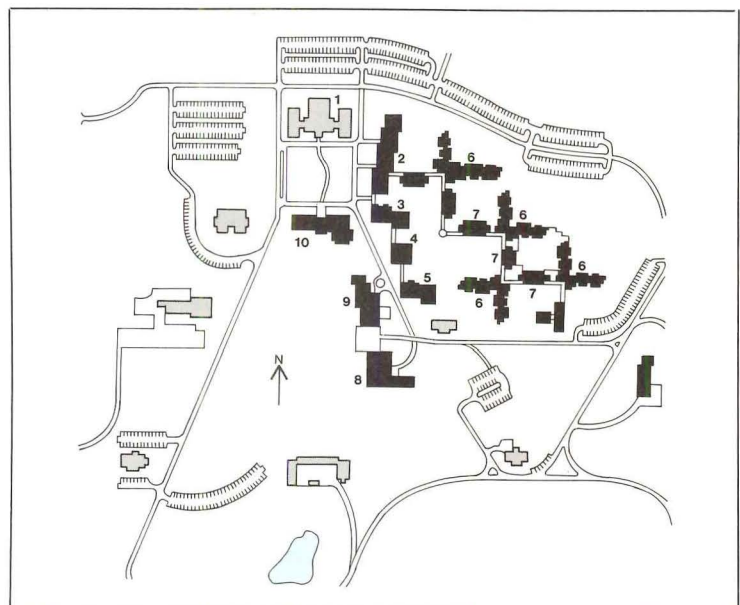
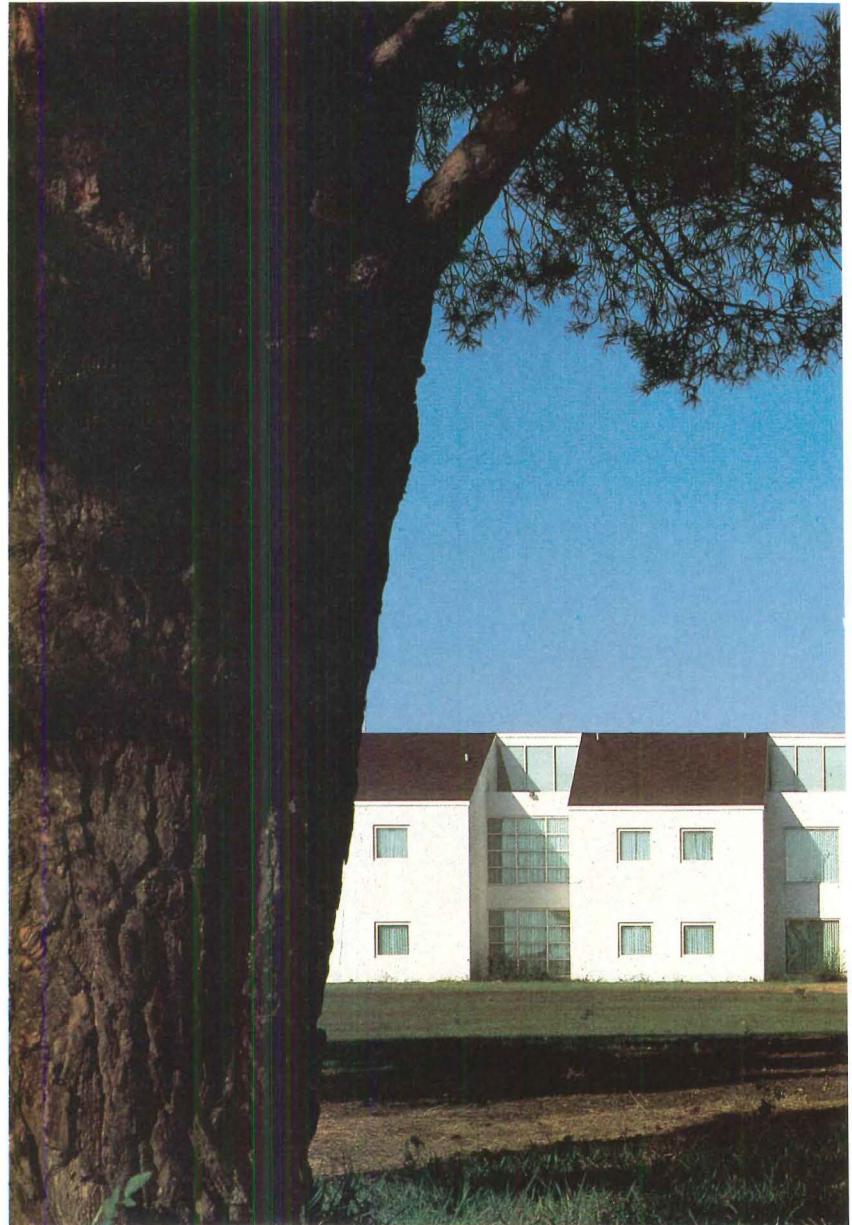
Bricks in the service of brains

The Menninger Foundation
Topeka, Kansas
Skidmore, Owings & Merrill/
Kiene and Bradley Design Group, Architects

From its inception in 1925 with 20 acres of land on the outskirts of Topeka, a farmhouse converted to a hospital for 13 patients, an assortment of outbuildings pressed into service for staff offices and patient activities—and a \$20,000 mortgage—the Menninger Foundation has espoused the philosophy enunciated by its founders, Dr. C. F. Menninger and his physician sons Karl and Will: “brains before bricks.” Over the ensuing years, while the fledgling clinic evolved to one of the nation’s foremost psychiatric institutions, encompassing in addition to greatly expanded hospital facilities significant programs of education and research, the founders’ priorities prevailed, evidenced in a physical plant that had grown Topsy-like to an assemblage of remodeled and re-modeled quarters ranging from the original farmhouse to a hotdog stand and barn combined to provide offices. And many of the growing institution’s nonclinical functions had been forced to spill over to a second nearby campus.

By the 50th anniversary of Menninger’s founding, when the trustees commissioned Llewellyn-Davies Associates to undertake an analysis of the foundation’s land, buildings, and environment, it was clear that the long-standing policy of brains before bricks had not been without cost. Noting that of 42 buildings only nine were being used for the purpose for which they were built, that the hospital facilities were outmoded, and most importantly that the fragmentation of services on two campuses hindered exchange between them, the consultants recommended construction of a new hospital on the west campus so as to integrate staff and programs on a single site.

But despite the sheer scope of the project—18 new buildings and reuse of seven neo-Georgian structures on a 310-acre hilltop site—and the seizing by the foundation and its architects of the rare opportunity to shape a wholly integrated therapeutic environment, the design of the new campus is informed by the old values. The sturdy red-brick buildings present on the site have been treated with respect, forming the web on which the new fabric is woven. The beauty of the natural landscape has been preserved (less than two per cent of the 1,280 trees on the site were lost to construction) and will be enhanced by extensive additional planting. Above all, though many of the buildings are large and all are meticulously planned, the newly created village nestles into its surround with becoming modesty, unassuming in style and human in scale as befits an institution whose people and programs have long taken precedence over place.



1. Tower Building
2. Menninger Clinic
- 3, 4, 5. Creative-arts complex
6. Patient living units
7. Clinical offices
8. Physical-recreation center
9. Commons/dining
10. Conference center

Every village wants a spire. Menninger's is the Tower Building (glimpsed at right in photo below), a near replica of Philadelphia's Independence Hall that began life as a general hospital and has since become the administrative hub of the foundation as well as the focal point of the new campus. Paired formally with a new conference center opposite across a spacious lawn, the building marks the front

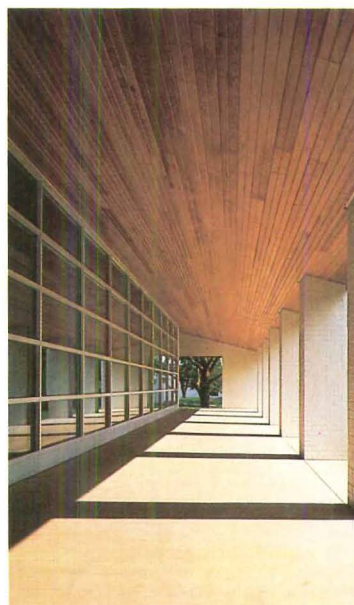
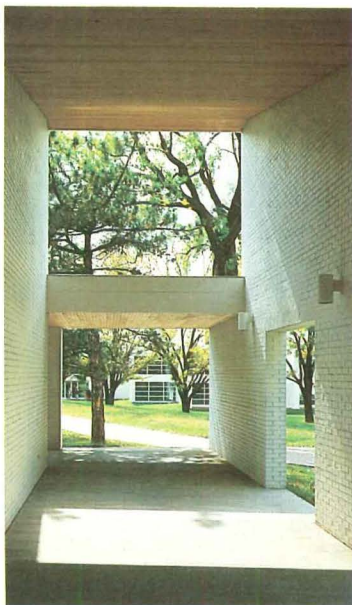
door of the campus, a point of public entry from which the site plan modulates to common, semipublic facilities that buffer the privacy of patient living units on the east. Facing the entry court is a professional office building, and ranging informally to the south along a brick-paved diagonal pedestrian street are an art and activities therapy complex, a recreation center and the dining

commons. The diagonal rather than frontal approach to the new buildings, which are themselves both straightforward in style and varied in form, contributes to the informal, villagelike character of the complex while establishing a readily understood system of orientation. Prominent in the design vocabulary of the low white-painted brick structures, whose materials and mass are intended to

complement without mimicry the surrounding older buildings, are a network of porches, arcades, and walkways (photos at bottom) that temper the perceived ease of movement through the campus with a reassuring sense of shelter and security.



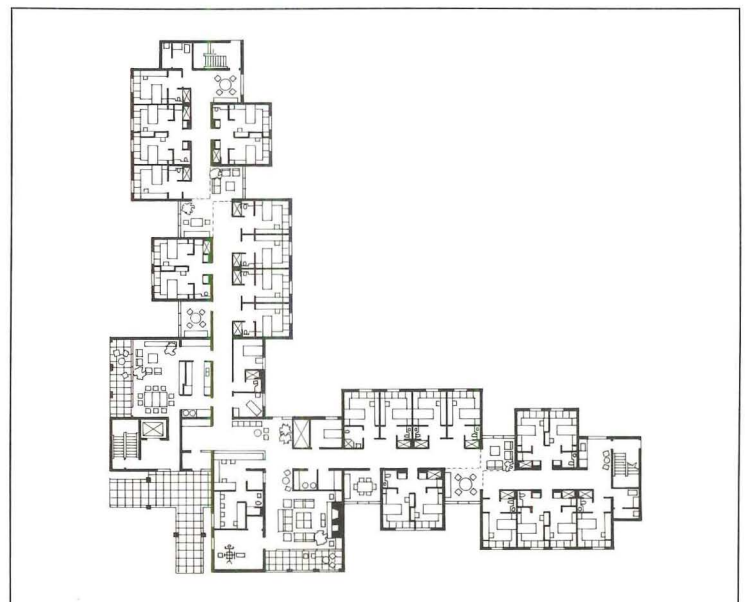
Merrick, Hedrich-Blessing photos



Small office buildings for staff who work directly with patients in adjacent living units combine with the pinwheel disposition of the residences to delineate courtyards that reinforce the planned tension between openness and enclosure characteristic of the campus as a whole. The need for spatial options and a careful balance between community and privacy, which emerged as a key issue in

consultations with staff and patients as well as in the observations of the team of SOM architects who lived in the old hospital for several days, was further addressed by the provision of intermediate spaces within the residence halls: intimate seating alcoves that break potentially institutional corridors, common lounges with adjoining kitchens, exercise rooms for patients too ill to

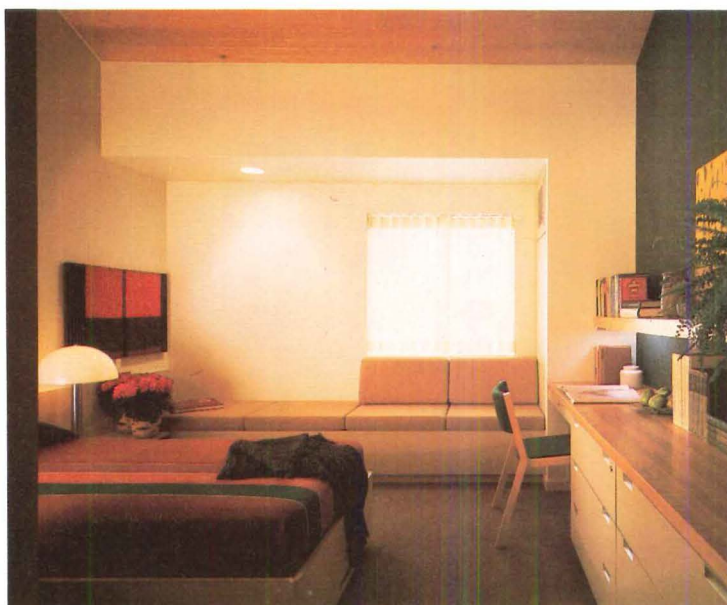
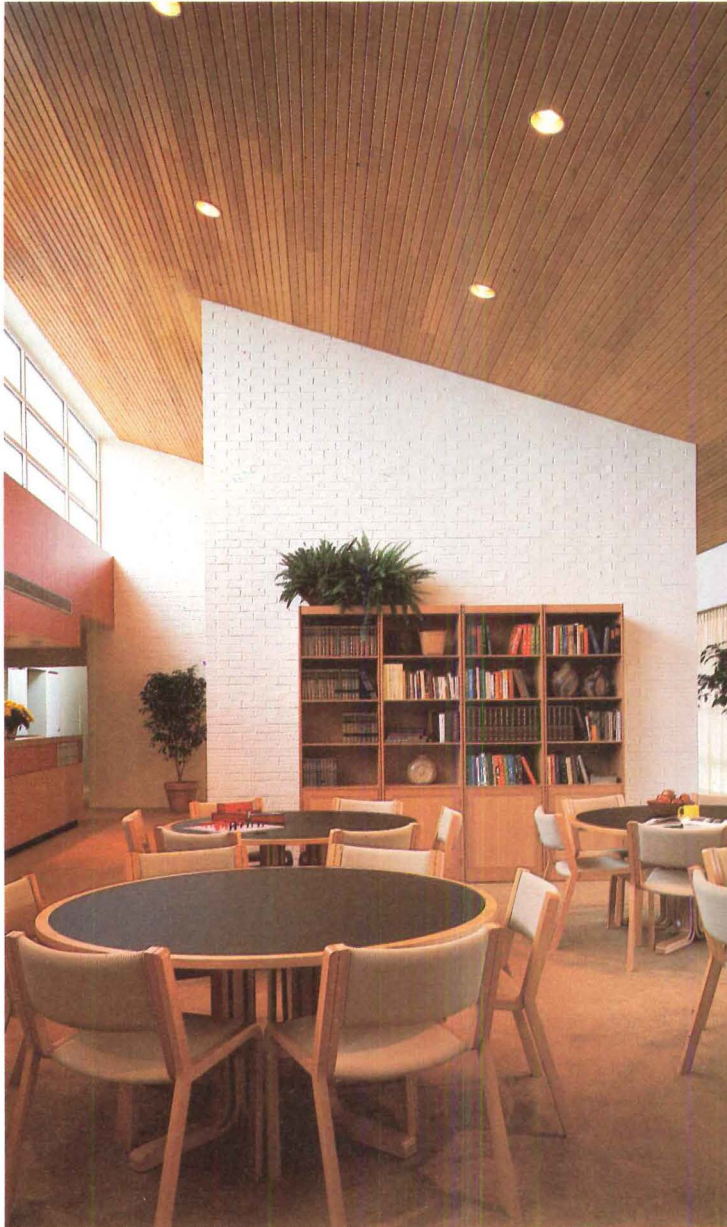
sally forth to the gymnasium. For all its latterday emphasis on outreach, the heart of the Menninger Foundation, and its raison d'être, remains the adult treatment programs centered in the C. F. Menninger Memorial Hospital, whose 166 beds with staff offices and related support facilities bulk large among the elements of the new campus. Swimming against the tide of recent trends in



psychiatric care, the hospital continues to focus on long-term treatment, and much of the attention lavished on the design of the patient living units was premised on the assumption that these residences will be the patient's home for periods averaging a year—and should therefore be homelike. The 166 patients are housed in four L-shaped residence halls (typical plan bottom left), one

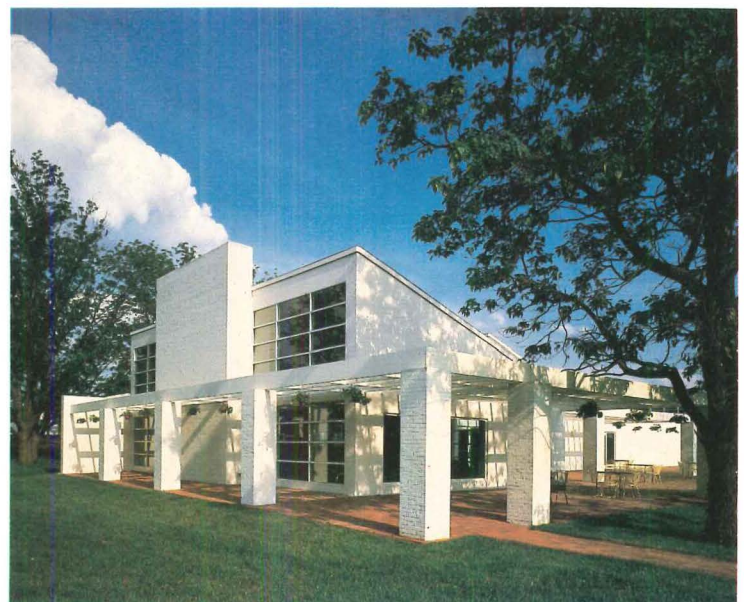
of which is devoted to short-term treatment programs: emergency admissions, diagnostics, and alcohol and drug abuse recovery. Although approximately half the patients at Menninger share double accommodations, single-room privacy (photo bottom) is approached in the shared spaces by using the built-in desks and the bulletin-board walls surmounting them as dividers to separate the two

sleeping and sitting areas. A predominantly neutral palette—camel-colored carpet, white walls, natural laminated wood ceilings—is warmed by colorful fabrics and an abundance of natural light. Color is used too as an orienting device: The entrance walls and nurses' station of each living unit are marked by an identifying accent tone that is repeated in the office building associated with that residence.



Not least among the ingredients of Menninger's community of healing, an enveloping therapeutic milieu that a visiting doctor admiringly described as "a mixture of Freud and friendliness," is the wealth of resources through which patients are encouraged to engage, as they are able, in constructive effort and supportive social concourse. Thus the new campus boasts an

creative, recreational, and educational activities. The three buildings of the creative-arts complex, for example, include a well-stocked patient library and attendant classrooms, studios for arts and crafts, and professionally equipped shops for wood- and metal-working. The physical-recreation center features, in addition to a gymnasium, a court for racquetball and handball and an



exercise room: An indoor swimming pool will be added later. And a horticulture building with greenhouse provides the therapy of growing things. The core of the community, however, is the commons (shown below), the central dining room and kitchen which, as in the home, is the primary place where staff and visitors as well as patients come together to eat and mingle. The commons also brings

together a number of the design themes that lend the campus cohesion despite the varied forms of its individual buildings. The shed roofs for example are a characteristic device (they also appear on the gymnasium and the arts complex) by which the architects have maintained residential scale in structures of institutional size—in this case, two dining rooms seating a total of 250

people plus kitchen and serving area and a private dining room for up to 80 persons. The generous use of glass, including clerestories, reflects SOM design partner James DeStefano's preoccupation with the manipulation of natural light, not merely as a preferred method of illumination but as a means of promoting among the occupants of a necessarily confined environment an awareness of the outdoors.



The increasing involvement of the Menninger Foundation in educational programs—from full-time professional training through seminars and workshops for executives and mental-health workers, to brief informational sessions for the interested public—is facilitated by the new Seeley Conference Center. Organized around a central atrium (photo bottom right) that steps down from

the entrance to a garden level with sweeping views of the Kansas countryside, the center features a 200-seat auditorium equipped for musical and dramatic presentations by patients as well as for lectures and conferences. Other facilities include audio-visual studios and work space, a seminar complex of large and small classrooms and conference rooms, and office space.





*The Menninger Foundation
Topeka, Kansas*

Owner:

The Menninger Foundation

Architects and engineers:

*Skidmore, Owings & Merrill,
Chicago—William E. Hartmann,
managing partner; James R.
DeStefano, design partner; John W.
Kelsey, project manager; Richard S.
Joslin, architectural senior
designer; C. Arthur Muschenheim,
technical coordinator; James S.
Guequierre, interior senior
designer; John F. Berchert, Alice R.
Wolfe, Michael Hagen and David
K. Welliver, project architects;
Daniel Weinbach, landscape
architect*

*Kiene & Bradley Design Group—
Jack R. Bradley, Jr., president;
James M. Hunt, project architect*

Consultants:

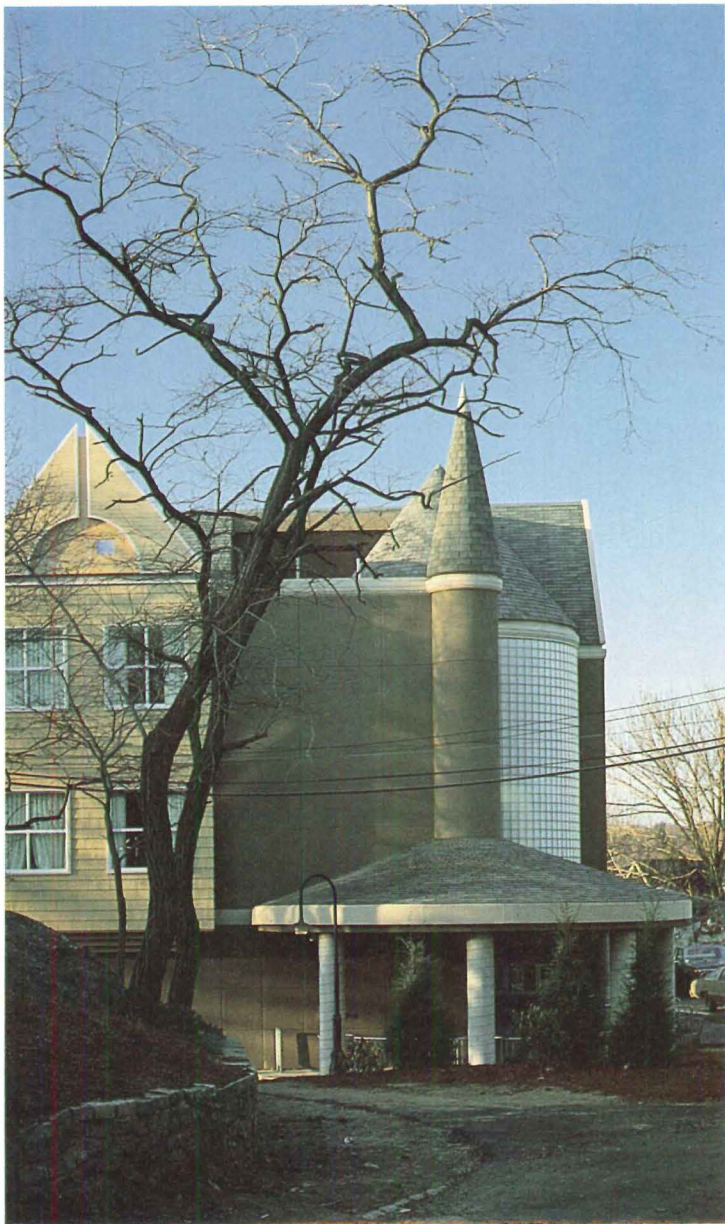
*Claude R. Engle (lighting); Cerami
and Associates, Inc. (acoustics);*

*Hubert Wilke, Inc. (audio visual);
Booz, Allen & Hamilton
(management); Llewelyn-Davies
Associates (space analysis); Blyth
Eastman Paine Webber, Inc.
(finance); Morse/Diesel
(construction)*

Construction manager:

M.W. Watson, Inc.

Designed to 'fit in'



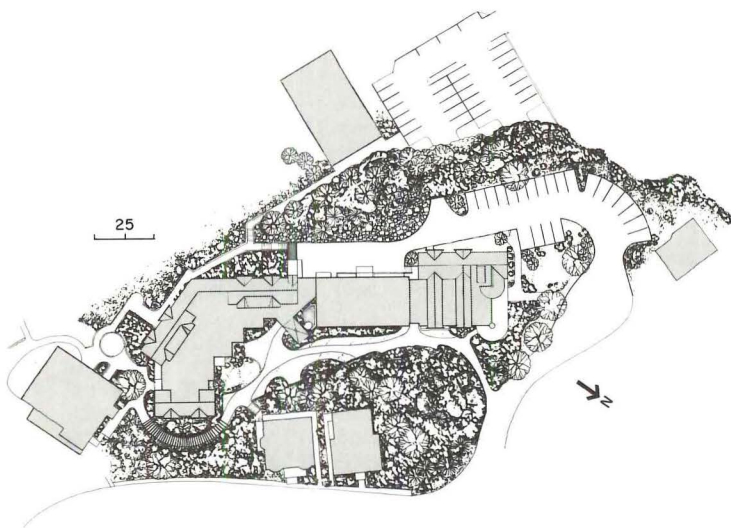
When the mental hospital in Jamaica Plain, a gentrifying suburb of Boston, changed hands and sought to redevelop and replace what had become substandard facilities, the community mobilized to rid itself of what many perceived to be an undesirable neighbor. It failed in the effort to halt reconstruction, but succeeded in molding the institution to compatibility with its surround. And thereby hangs a tale of advocacy architecture that would have been commonplace in the '60s, but surprises in the staid climate of the '80s.

Called in after community opposition had led to denial of the original proposal by the local zoning board, the young firm of Graham/Meus sought to engage community leaders in the design process. Their early overtures were rejected, though a compromise was reached in the form of a series of meetings to exchange information and give the community an opportunity to review the design as it developed.

This process yielded a proposal that was acceptable to the zoning board. It did not, however, quiet neighborhood opposition. Not until an impasse had been reached whose resolution threatened litigation costly to both sides did the neighborhood organization accept the architects' standing invitation to participate directly in the design process.

The vehicle chosen was an intensive one-day workshop during which neighborhood residents "walked through" the design constraints imposed by the program and a difficult hilltop site, emerging with a clearer understanding of what architectural accommodations were possible—and what were not. For their part, residents contributed new insights into the roots of their apprehension, which had come to be centered less on the grudgingly accepted fact of the continued existence of the mental institution in their midst than on its reincarnation as a brutal, intrusive—and new—presence.

Urged to identify those aspects of their neighborhood which in their eyes made up its special quality, the workshop participants were able to provide the architects with explicit directions for reaching design consensus: the preservation of residential scale and quality on the site perimeter and the introduction of an architectural vocabulary of mid-Victorian extravagance—pitched roofs, gabled and shingled bays, a welcoming circular porch embellished by a just-for-fun turret—played against a restrained backdrop in sympathetic echo of the solemn exuberance of the area's period homes.

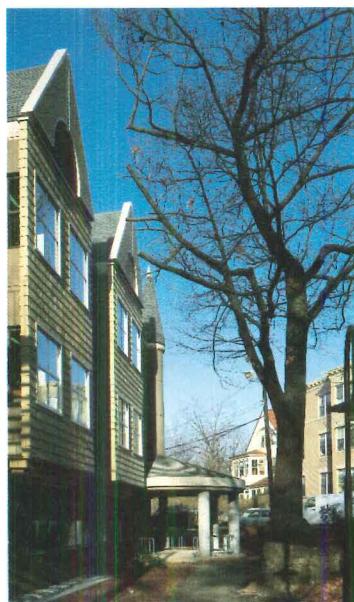


Architect Gary Graham speaks of the new Arbour Hospital as having three skins. The outer surface comprises those elements that bow to the neighborhood, although Graham emphasizes that these are not merely cosmetic: The gables surmounting the shingled bays that demark patient rooms, for example, disguise mechanical intake units, and the turreted front porch establishes literally as well as

symbolically a new entry to the admissions suite. The building envelope, of Dryvit panelized by simple scoring, is intended to be a neutral, receding backdrop, eventually covered by vines. And the third skin, evident primarily from the interior (overleaf), is a translucent wrapping of glass block that lends "public" corridors a sense of light and openness while preserving privacy.



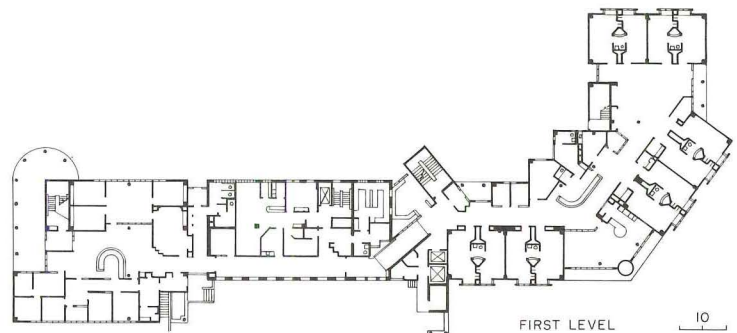
©Paul Ferrino photos



Although the Arbour Hospital is a low-budget project, thoughtful planning endows it with many of the amenities of more expansive facilities. The simple device of broadening corridors in patient wings, for example, provides casual social space, and particular attention has been given to establishing a pattern of order and clarity of circulation through carefully applied color and lighting,

a notable illustration being the directive fluorescent bands on the dropped ceiling of the corridor (photo below). The first phase of construction (left in plan below) adds a new entry and admissions suite adjoining administrative and treatment areas in an existing code-compliant section of the original hospital, and patient rooms on the upper floors. A second new wing, now under construction, will bring

the total of patient beds to 118. In the final phase of construction, the central existing building will be extensively renovated, and three residential-sized buildings at the rear of the property will be converted for activities therapy, administrative functions, and doctors' offices.



*The Arbour Hospital
Jamaica Plain, Massachusetts*

Owner:
Qualicare, Inc.

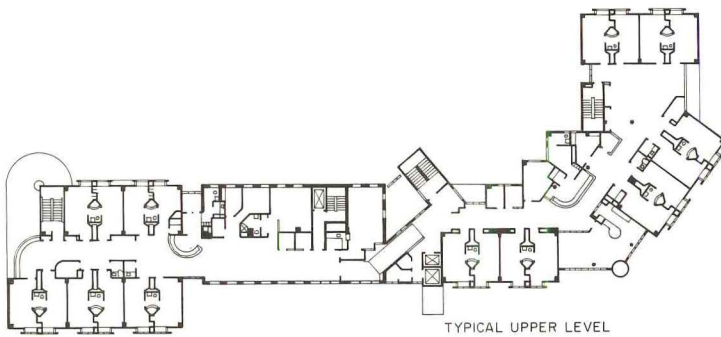
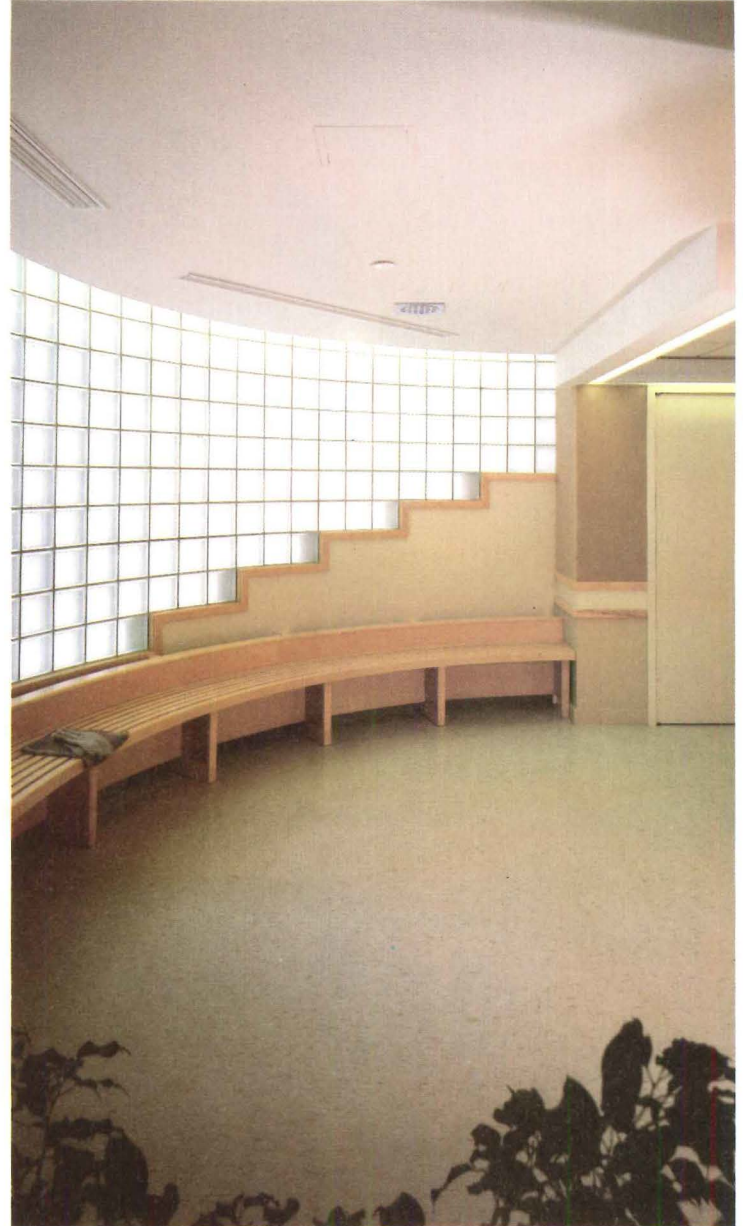
Architects:
*Graham/Meus Inc.—Gary Graham,
principal in charge; Daniel Meus,
Robert Quijano, Kyle Hanton,
Gibson Worsham, Tom Vitanza,
and Arthur Vogt, project team*

Engineers:
R.G. Vanderweil Engineers, Inc.

*(mechanical, electrical); Simpson,
Gumpertz & Heger Inc.
(structural); Sippican Consultants
International (civil)*

Consultants:
*The Halvorson Co. (landscape);
Health Systems Inc. (strategic
planners)*

Construction manager:
R.W. Granger & Sons, Inc.



A hybrid hospital and home

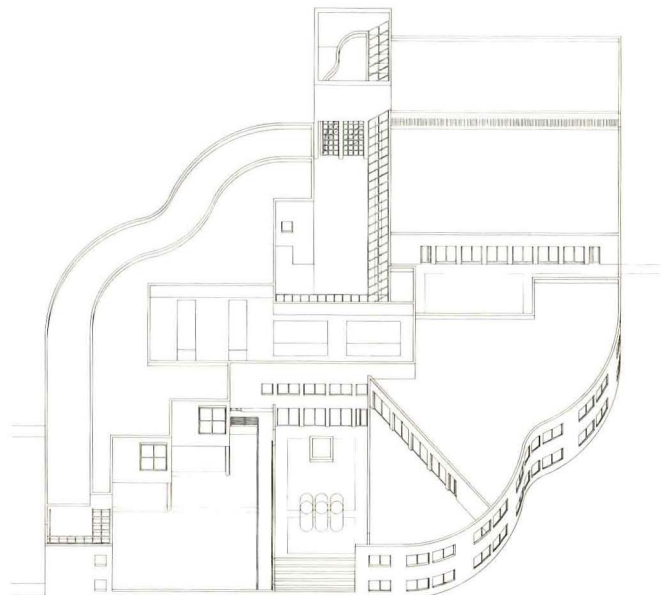


It is not a light consumers of their services are accustomed to see them in—nor a light they are anxious to shine brightly forth—but hospitals have increasingly become competitive corporate entities dedicated to doing well by doing good. The Wyman-Gordon Pavilion at the Ingalls Memorial Hospital in suburban Chicago is representative of the move by general hospitals into full-scale mental-health care in the wake of growing community need accompanied by a decline in state-operated services.

The new pavilion was spawned by Ingalls's entry into the alcoholic rehabilitation field with a program that proved so successful it soon outgrew its borrowed and makeshift space in the existing hospital. Subsequent "market studies" suggested that the increased incidence of psychiatric disease as well as alcoholism among the southern Cook County population served by the hospital justified not only the further expansion of the alcohol recovery unit but also the introduction of a short-term psychiatric treatment center. It was also decided that the new programs warranted construction of a new facility rather than an attempt to recycle or expand an existing building.

In an unusual—and enlightened—move, the hospital augmented staff involvement in the planning process by engaging psychiatric consultant Harvey Freed to collaborate with architects Perkins & Will in establishing design parameters for the new pavilion, with the goal of assuring, says the hospital, that "the placement of every brick and beam has a purpose in the over-all therapeutic strategy."

The pavilion is very much one with its setting, its solid-red brick form clamping firmly to the ground and its quasi-residential scale striking a not-altogether comfortable balance between the small houses of the surrounding neighborhood and the looming buildings of the hospital campus next door. The building is, however, by no means grimly institutional. The gently undulating walls of the patient wings lighten its presence. The prominent entry portico with its curved glass-block wall is inviting as well as imposing, and fulfills its promise by introducing progression through the building via a glass-walled corridor overlooking a courtyard. The organization of the structure around a series of landscaped outdoor spaces successfully mitigates the sense of enclosure. Above all, the effort is everywhere evident to create a setting of warmth and familiarity that combines the reassuring elements of both hospital and home.



The 96-bed Wyman-Gordon Pavilion encompasses three principal areas of activity. Two open 24-bed units for inpatient alcoholic treatment are on the ground floor, wrapped around two interior courts and a large recreation area; on the second level are 48 psychiatric beds in open, closed, and intermediate units. An outpatient clinic in an adjacent wing is devoted primarily to

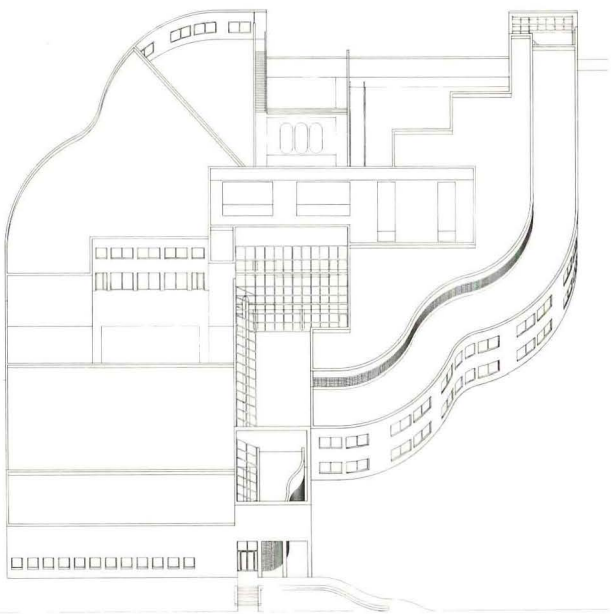
alcoholism treatment and research. The red-brick solidity of the new facility escapes institutional solemnity largely by dint of the undulating walls that delineate paired patient-room wings bordering a core of indoor and outdoor activity areas and well-defined circulation spaces. The twin themes of curved elements played against an orthogonal grid and the generous use of natural

light to counter the closure necessary for privacy and security are introduced at the entry reception area where a curved glass-block wall set within a four-square portico subtly steers visitors to the adjacent outpatient facility or to the inpatient wings beyond. At the rear of the site, spacious outdoor recreation courts (below opposite) are recessed to assure internal security while presenting

to the neighboring street only a low, nonthreatening three-foot wall. Outdoor recreation space for the closed patient units on the upper level is provided by a pie-shaped rooftop terrace. Within the court, exhaust shafts that signal the pavilion's mechanical link with the parent hospital have been exaggerated, painted sea-green, and converted to playful "found sculpture."

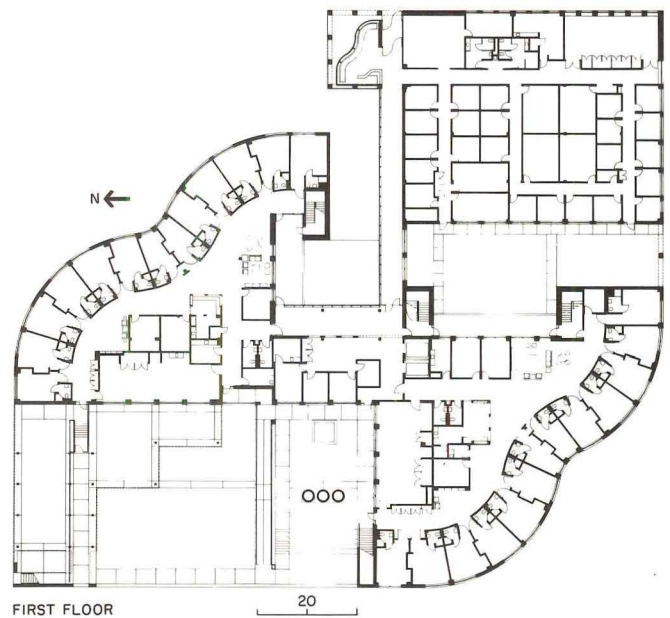
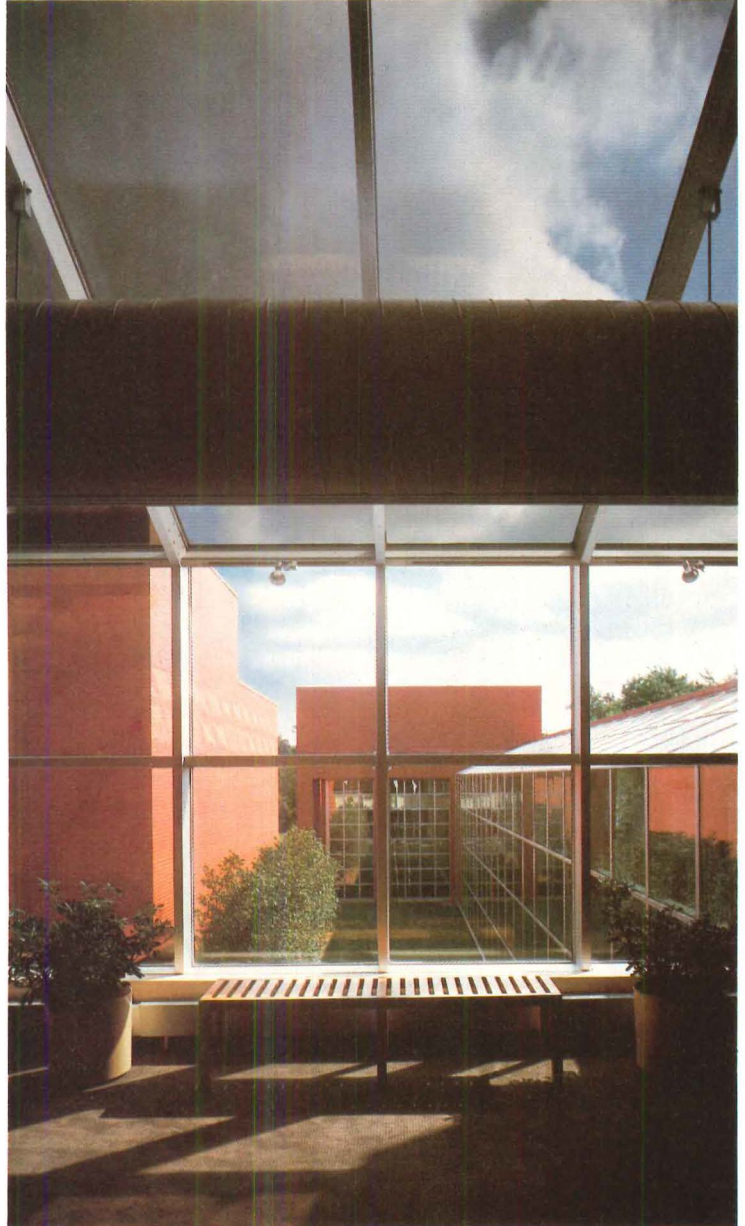


Hedrich-Blessing photos

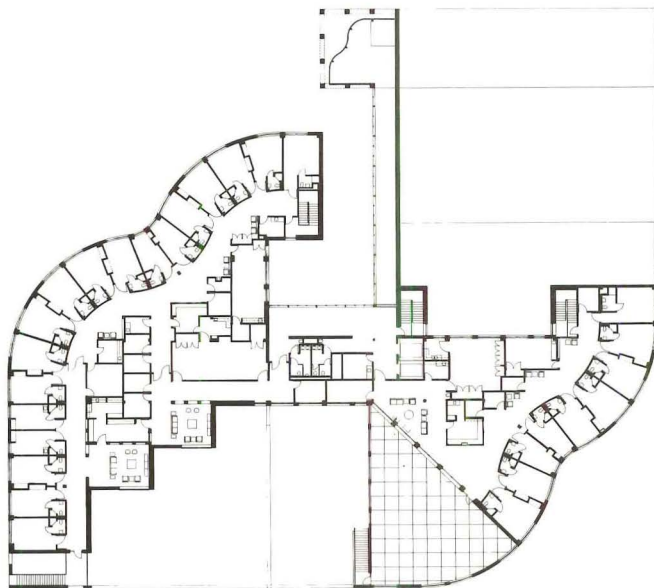
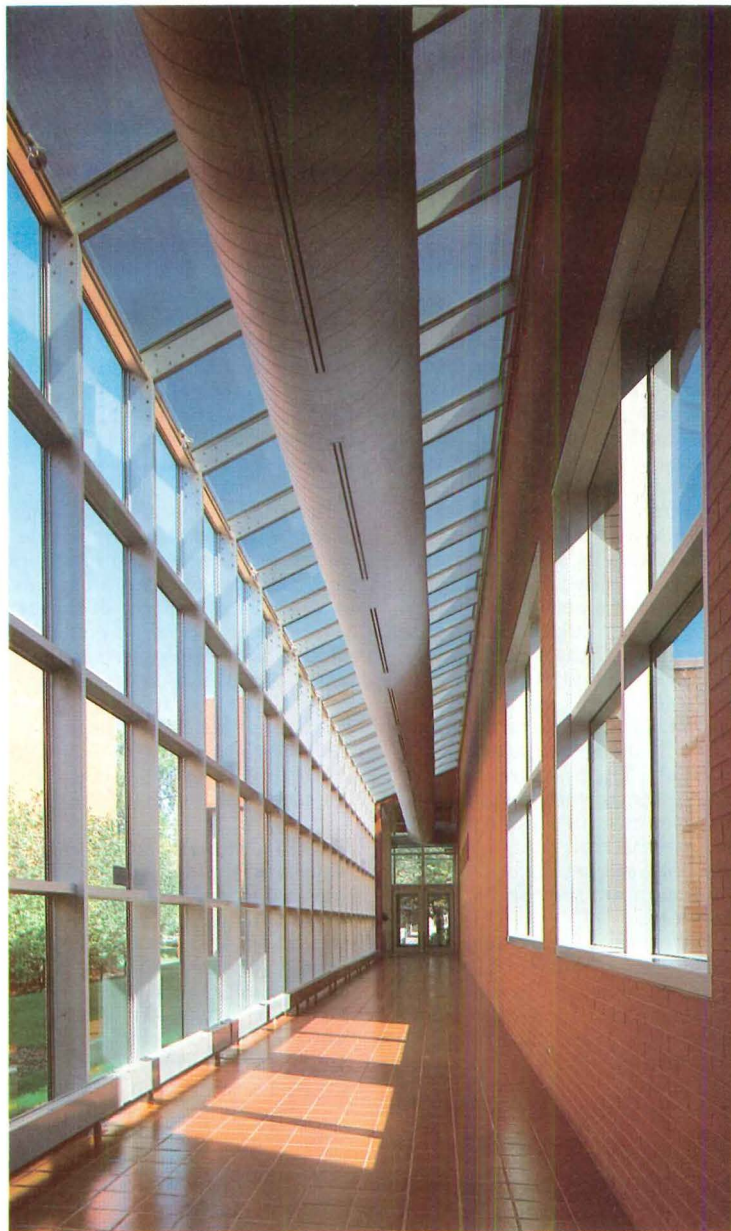
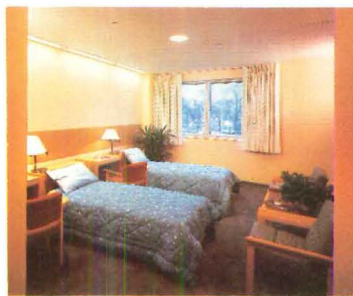


The visitor's first view of Ingalls' new mental health facility is of a formally landscaped courtyard, seen below from the patient wing at its opposite end, that extends from the simply but warmly furnished reception area to the building core. (A subsidiary court, right in plan, extends light and views to the outpatient clinic.) Bordering the courtyard is the building's principal circulation artery, a long and

potentially forbidding two-story corridor that is transformed by skylights, glazing, and the grace note of a baby blue duct to an airy and inviting passageway. Similar manipulation of circulation space is evident in the patient wings, where the irregular configuration of common facilities at the core combines with the curving walls of patient rooms (photo far right) to create welcome islands of "spill-



over" social space within the corridors. Pierced overlooks in the walls of upper-level patient living rooms allow these areas to share in the light and openness that permeate less-restricted units on the ground floor. Particular attention has been given to "dehospitalizing" patient living quarters, within the bounds of security, by residential furnishings and a palette of warm pastels.



SECOND FLOOR

*Wyman-Gordon Pavilion
Ingalls Memorial Hospital
Harvey, Illinois*
Owner:
Ingalls Memorial Hospital
Architects:
Perkins & Will—Donald J. Richards, officer-in-charge; Ralph Johnson, principal designer; August Battaglia, designer; John Helin, project manager; Paul Arthur, senior technical coordinator; Anne Ocampo, technical coordinator
Engineers:
Environmental Systems Design, Inc. (mechanical/electrical)
Consultant:
Harvey Freed, M.D. (psychiatric services)
Construction manager:
Morse/Diesel, Inc.

For health care providers too: an outlook of stressful—but hopeful—change

By Michael Bobrow, AIA and Julia Thomas

Architects of health care facilities are facing their biggest challenge in history. The industry has experienced more radical changes in the past 200 days than it has in the last 10 years. This period, which is characterized by new developments in reimbursement policies and significant demographic shifts, will continue into the mid-1980s. While the industry is in a crisis state, this can provide the impetus for healthy change and can open new opportunities for those who are willing to innovate.

The first and most important of the radical changes facing the health care industry is changes in the structure of reimbursement. Public sources provide some 42.7 per cent of the money spent on health in the United States.¹ The Federal government's involvement in the health care field through the Hill-Burton program (which built hospitals), and through the Medicare and Medicaid programs (which guaranteed payment for care) stimulated uncontrolled increases in utilization and cost.

In an attempt to control these costs (10 per cent of the Gross National Product compared to 7 per cent for defense), the government has limited reimbursement to achieve what health care planning and certificate-of-need legislation effectively failed to do—control costs.

The new Social Security law (Public Law 98-21) provides that hospitals will be paid for treating Medicare patients at predetermined, fixed rates.

Medicare now pays hospitals retrospectively on the basis of reasonable costs incurred. Reimbursement includes its share of the costs of administration, maintenance, depreciation of buildings and equipment, and interest payments. With individual hospitals having differing operational costs based upon size, efficiency, staffing and services as well as capital debt structure, these costs are "reimbursed" on a hospital-by-hospital basis.

However, under the new Social Security measure, fixed payment rates will be set in advance, in

effect prospectively setting the price for a "product" rather than retrospectively paying for costs. Use of diagnosis related groups (DRG's) will be phased in until hospitals will operate under a nationally set framework of DRG payments. Hospitals will be permitted to keep any payments that exceed their actual costs, but will be required to absorb any costs that exceed the fixed payments.

It is unclear at present how reimbursement for capital-related costs will be calculated. It will be based upon undetermined recommendations that are anticipated to be made to Congress. The Secretary of Health and Human Services is required to complete, within 18 months, a thorough review of the methods by which capital, including return on equity, can be incorporated into the prospective payment system. It is expected that additional legislation will be enacted by Congress to deal with capital-related issues under the prospective payment system before October 1, 1986.

Whether hospitals are going to be willing to risk the unclear reimbursement of these costs is the question. In the interim, many hospitals are considering halting major capital projects and talking of finding better use of existing facilities and of alternate forms of construction and services. Quite a few facilities are reinstating long-range and master-planning studies to reevaluate the initial assumptions that generated their current projects. Significantly, psychiatric facilities, long-term care, children's and rehabilitation hospitals will be excluded from the prospective payment system and will continue to be reimbursed on an actual cost basis. Thus, the interest increases in the construction of these types of facilities.

Investor-owned institutions (current generators of much new construction) will be additionally affected by this new legislation. Under prior law, such facilities were entitled to Medicare payments sufficient to ensure a rate of return on equity equal to one-and-a-half times the rate of interest paid by the Treasury on the investments of the Hospital Insurance Trust Fund. The new law reduces this amount to a rate equal to the rate of interest paid on investments of the trust fund.

Paul Ward, President of the California Hospital Association, warns that "to the degree that

hospitals can adjust their service programs and further reduce their labor costs, they will remain relatively viable. However, hospitals serving mainly the poor and the aged will have an increasingly difficult time adjusting to the new system."²

Since Medicare controls such a large portion of the health care dollar, its impact alone is significant. Yet a comparable set of actions is occurring with Medicaid and private insurance programs. Some 30 states use Medicare reimbursement rules to pay hospitals under Medicaid for inpatient services. Alternative programs for Medicaid reimbursement are also acceptable.

Hospitals in California provide Medicaid (called Medi-Cal) payment of a negotiated flat daily fee per patient hospitalized, regardless of the treatment required. Competition for contracts by bid among the hospitals has reduced the number of facilities serving Medi-Cal patients. The pressures of a flat-fee system of reimbursement will hamper hospitals' ability to regenerate their plants, add new services, attract medical staffs, and maintain the quality of services.

"Anywhere from 10 per cent to 20 per cent of hospitals today will not be around by the end of this century," according to Tom Chapman, Arthur D. Little, Inc. "Hospitals will go the way of the railroads—which forgot they were in the transportation business—if they continue to think they are just in the hospital, not the health care business."³

Hospital construction will have to be "bottom-line" oriented—geared to operating efficiency and providing a better life cycle cost for the facility. If not, projects will not go ahead, regardless of medical need.

A second trend that has occurred is increased competition between hospitals. As Henry W. Zaretsky, Ph.D., former director of the California Office of Statewide Health Planning and Development, has pointed out,⁴ "much of the thrust of . . . recent . . . legislation is geared toward encouraging competition."

A hospital has to know its competition and the potential of the private market in its community. "Competition will be not only for patients, but also for capital. Capital financing is going to be much more difficult in a world without cost-based

reimbursement. . . . Some non-profit systems [may] turn into for-profit systems to be able to sell stock to attract capital."

Dr. Zaretsky feels that a health care organization needs control over the spectrum of health care—health promotion, disease prevention, primary care, acute care, chronic care, rehabilitation, and long term care. The hospital staff is the logical focal point for this approach. "There should be tangible economic incentives to bring the medical staff and hospital closer together, so that the physicians will have a vested interest in the viability of their hospital."

Recently, proposals have been made to tap into the cumulative wealth of the physician investors, to restructure non-profit entities to allow the advantage of access to a broader capital market. By making their facilities (not the institution) a tax-paying entity, hospitals do two things: 1) provide needed capital from tax shelter-oriented investors; and 2) tie the investing physicians to the success of the institution.

The third major change is in restructuring the hospital from the traditional stand-alone, non-profit institution. The inpatient hospital is obsolete as a concept. We are seeing the death of the hospital as a stand-alone institution, and the birth of health service centers and systems. One recent trend is the new pharmaceutical-medical equipment-hospital complex.

Hospitals are attempting to capture new private pay markets by meeting a growing demand for wellness-related services. These generate revenue from new sources, such as business and non-ill members of the community, and have benefits such as increased utilization of hospital services and more referrals to the hospital's medical staff.

With \$30 billion being spent by Americans annually on wellness⁵ (rarely in a hospital setting), it is no wonder that hospitals are looking to this market. The result has been a spurt in construction of facilities to house these programs—education centers, physical fitness centers, and mental health centers.

In addition to meeting wellness needs, providers are looking to the country's growing elderly population in developing other revenue-producing projects. The number of Americans aged 65 or older will double by the year 2025, while the working-age population will increase only 16

Michael Bobrow and Julia Thomas are partners in Bobrow/Thomas and Associates, a Los Angeles firm with a large international health care component. The authors would like to thank Paula Van Gelder for her research assistance and the Los Angeles office of Weissburg and Aronson, Inc., a national health law firm, for reviewing this article.

Notes

1. Gibson, Robert M. and Waldo, Daniel R. "National Health Expenditures, 1981," *Health Care Financing Review*, vol. 4, no. 1, September, 1982.
2. *CHA News*, April 8, 1983.
3. Prothro, Laurie. "New Approaches," *Hospital Forum*, May/June 1983.
4. *CHA Insight*, Vol. 7, No. 10, January 26, 1983.
5. "America Shapes Up," *Time*, November 2, 1981.

per cent by 2030.

The unspoken dilemma will be that care for the elderly population is most expensive, and the ability to stem health costs of an aging population may create great ethical questions regarding "the true need" for care.

The ambulatory, healthy elderly also need affordable, easy-to-maintain living units that provide access to medical care when it is required. Fewer than 1 in 20 persons aged 65 or over now lives in an institution; 23 million do not. Hospital-based retirement center complexes can offer an alternative.

Other potential markets for hospitals in search of the private dollar include new modes of care. Satellite ambulatory medical or surgical and emergency care centers serve as a referral base to the hospital. They are often located in heavily traversed areas such as malls. The first freestanding emergency centers, industrial medicine clinics, extended-hour primary care offices, and other alternative health care centers made their appearance in recent years. By 1980, 200 of them existed. But in the last three years, that figure has more than tripled.³

Closely related to changes in payment methodologies are new acronyms for emerging types of organizations. The preferred provider organization (PPO) represents a new form of health care delivery system which is currently gaining popularity. PPO's can take a variety of different forms, but they are primarily structured as groups of hospitals and/or physicians which contract on a negotiated fee-for-service basis with employers, insurance carriers, or third party administrators to provide comprehensive medical service to enrollees.⁶

For example, Blue Cross's proposed Prudent Buyer Plan (PBP) is a new approach to controlling increasing health care costs. PBP offers subscribers freedom of choice in selecting a PBP provider (physician and/or hospital) or a non-participating provider. If they select a PBP provider, all covered services will be fully reimbursed by Blue Cross. If they select a non-participating provider, they will be required to pay a percentage of the fees.⁷ Traditional hospitals will face increased competition from health maintenance organizations (HMO's). HMO's, which provide care for a fixed prepayment per person, influence physicians' hospital admission

6. California Hospital Association and California Medical Association. *The Changing Environment of Third-Party Payment with Emphasis on Contracting*, February, 1983.

7. Arthur Young & Company. *Blue Cross's Prudent Buyer Plan*, March 21, 1983.

8. Capra, Fritjof. *The Turning Point: Science, Society, and the Rising Culture*. N.Y., Bantam Books, ©1982.

patterns and can either exert bargaining power in purchasing hospital care for their enrollees or operate their own facilities.

As major employers observe the cost of health care insurance as part of their business, we will see strong expansion in this area of the market.

Changes in health care. Along with better informed consumers, we are seeing the following trends emerge:

1. Holistic health concepts which erase the distinction between mind and body—which is especially well summarized in Capra's *Turning Point*.⁸ The brain is increasingly seen as the trigger for many of the physical and mental ailments previously thought to emanate from specific parts of the body. The line between physical and emotional illness is less clear than before.
2. A shift from surgical intervention to noninvasive medical management of a variety of diseases.
3. New and more powerful diagnostic and treatment equipment.
4. Stress management techniques to assist people in coping with everyday life and accommodating to rapid changes in lifestyle and technology.
5. An oversupply of physicians. There are many more doctors based in medical office buildings, emergency care centers, and freestanding emergency rooms, *competing with hospitals* for patients. The only thing that distinguishes these alternative settings from hospitals is their lack of inpatient beds. Paul Starr concludes that "as a result, doctors and hospitals may be on a 'collision course' as doctors invade institutional services and hospitals invade ambulatory care."⁹

Mental health. Since mental health facilities are exempt from some of the newly enacted legislation and do relate to the newer medical models, they might be a hot spot in the construction market. The design evolution of these facilities has occurred in a short time. No longer are we looking at the closed psychiatric ward as a major model. With changes in treatment, many patients are not a security problem. More residential-type inpatient facilities and more ambulatory care facilities have resulted. Concomitantly, new treatments have developed; for example, several recently built facilities include biofeedback testing laboratories.

9. Starr, Paul. *The Social Transformation of American Medicine*. N.Y., Basic Books, ©1982.

10. Mahnke, Frank. "Color in Medical Facilities," *Interior Design*, April, 1981.

11. Thomas, Julia and Lee, Kenneth E. "The Obtrusive Neighbor," *Hospitals*, vol. 57, no. 4, February 16, 1983.

Achieving the proper balance of privacy, security, social interaction, personal dignity, reassurance, and serenity is important in designing these facilities. The design, structure, and lighting must promote patients' awareness of their environment.

The Menninger campus (page 86) reflects its philosophy of treating the whole person in a community setting. Patient living units allow patients to live and interact in small groups, yet be a part of the larger community. Of particular interest is their two-bedroom configuration that provides privacy. The external environment was included in the design; great care was taken to retain the natural beauty of a park, fitting buildings and walkways within large stands of trees.

Choice of color is particularly important to patient orientation and even to behavior. Dr. Leighton Huey, Chief of the Psychiatric Service at the V.A. Hospital in San Diego, states that "correct color can affect the behavior of patients and the staff in a hospital. It affects how people interact and it affects productivity. It also influences people in terms of aggression." The environment must be part of the treatment.¹⁰

In common with other institutions, mental health facilities have had to respond to increased community involvement in the planning of new buildings. Increased belligerence on the part of community advocacy groups demands significant participation in this process.¹¹ Opposition may mean threats of legal action or of active intervention as a hospital seeks to obtain environmental impact review, or zoning and building permits.

At The Arbour Hospital, Massachusetts, (page 94) a combination of internal and external pressures required the replacement of this acute psychiatric hospital; unhappiness with the hospital's plans provided the issue which unified and organized the community.

By initiating contacts with community leaders and getting the neighborhood organization to accept the concept of participation in the design process, the architect was successful in achieving a design that was no longer opposed by the community and that was approved by the authorities.

The planning, design, and utilization of health care facilities will increasingly be

influenced by external forces.

The future may see the planning of facilities that reflect increased awareness of the nature of illness, as well as the inclusion of spaces for new treatment modalities that have yet to be developed. It is conceivable that the different modes of reimbursement for diagnoses that may be either "medical" or "psychiatric" may influence the future patterns of hospital utilization.

The benefits of providing better forms of care will be limited by the ability of an institution to financially incorporate the new costs in its rate structures. The shame of this, of course, is the division of our health care system into classes based not upon need, but upon ability to pay. As architects, we can at least strive to create an architecture that does not distinguish classes.

In particular, when contemplating hospital architecture of the future, we must bear in mind that hospitals will need:

- Ability to be 100 per cent responsive to cost control measures and the industry's needs.
 - Demonstrable efficiency in new structures in terms of staffing, operation, and energy consumption.
 - Flexibility to encompass changes in diagnostic and treatment modalities.
 - Ability to create low cost space for soft services, including administration, warehousing, and data processing.
 - Ability to create a sense of private space in double-bedded rooms.
 - Public spaces in hospitals comparable to those in hotels in terms of comfort and amenities.
 - Development of color palettes and materials that can be changed/replaced harmoniously over time.
 - Ability to conceptualize and help develop the health center of the year 2000 as discussed in this article—a reaching out of the old hospital into all walks of life through a new concept of integrated mental and physical health.
- Therefore, we must create in our buildings "added value" beyond the program, those undefined opportunities to create a special architecture for the most special moments of life—birth and death—in a building that gives us substance, hope, and most important, an appreciation of beauty through which every sense exists, at 9 months or 99 years of age.

Tradition rekindled



North Shore Congregation Israel
Glencoe, Illinois
Hammond Beeby and Babka, Architects



Timothy Hursley photos (except as noted)



Hedrich-Blessing photos (1964)

The North Shore Congregation Israel waited and watched while Hammond Beeby and Babka, Architects grappled with the question of what becomes a landmark most. Designer Thomas Beeby's first proposal situated the new, small sanctuary (photo top) directly on axis, in front of Minoru Yamasaki's 1963 sanctuary (photo above): "We did not regard Yamasaki's building as a masterpiece," avers Beeby. Many members of the congregation, however, did (and do), and Beeby was sent back to the drawing board.

A second proposal was offered and rejected ("too expensive"), before Beeby snared the Building Steering Committee's approbation with a more deferential—in plan, though not in form—proposal that situated the new, small sanctuary visually free of the original sanctuary. Beeby and congregation now concur, the third (built) proposal was the best: Anyone looking over the two earlier schemes—which bear a sizable debt to Louis Kahn's Dacca, Bangladesh Capital Complex—would surely agree.

Twenty years ago, in a suburb of Chicago, Minoru Yamasaki raised 16 fan-vault shells 50 feet in the air, filled the interstices with amber-colored glass, and gave North Shore Congregation Israel a landmark of the Late Modern Movement. For older members of the Reform temple, time has not diminished the pride of ownership. Younger members, however, do not necessarily share their elders' esteem for a 1,100-seat sanctuary, constructed of 1,440 tons of concrete, whose design appears borrowed from an Art Nouveau botanic garden. To many, the building is an idiosyncratic artifact of a particular moment in architectural history: its size, scale, and grandeur incompatible with contemporary religious practice and esthetic predilection. The 220 regular worshippers at Friday night services are all but lost in the 504,000-cubic-foot sanctuary; echoing within this vast space, Yamasaki's dictum, "The more imaginative the concept, the more rewarding the experience," does not have now the same ring it once had (ARCHITECTURAL RECORD, September 1964).

It is not unusual for religious leaders to speak in parables: you ask a question; they tell a story; you get the message. Rabbi Herbert Bronstein is no exception: "Twenty years ago, young couples would come to me and ask 'how long is the marriage ceremony?' They were asking because they were afraid it was too long. Now, when young couples come to me and ask 'how long...' they are asking because they are afraid it is too short." We are meant to understand why Yamasaki was not recalled to Glencoe when, in the late '70s, the need for a small sanctuary became irrefutable. The secular '60s, which spawned the original structure (and the abbreviated marriage ceremony), were over. There had been, with a change of decade, a change of mind—in religion, in architecture, in general culture: the rituals and traditions so cavalierly jettisoned so soon before were missed.

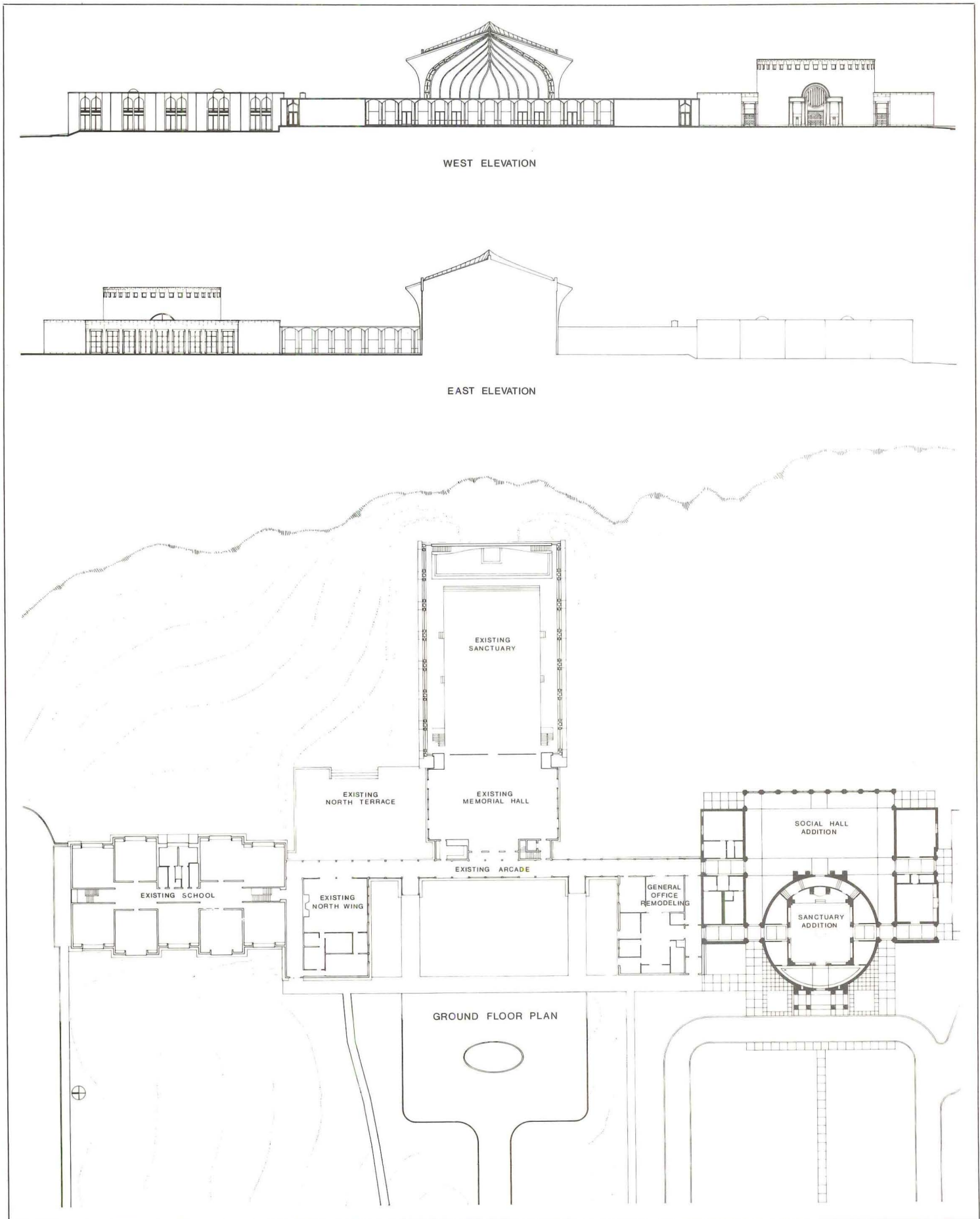
Fund-raising supplied the necessary \$3.5 million for a new sanctuary, social hall, rabbi's office, family room, and kitchen specified by the program; and research supplied the necessary historical perspective for the new traditional mien if not specified, at least suggested by Rabbi Bronstein. "People not only want religious substance," Bronstein says, "they want a sense of sanctity." Such wants, the Building Steering Committee felt (after spending 20 months interviewing 40 firms), could best be satisfied by Hammond Beeby and Babka, Architects. They were right. For the small, but distinguished Chicago firm was no less attentive to the master's thesis they were handed by a young member of the congregation outlining the history of synagogue architecture, than they were to a "Blue Book" they were handed by the Building Steering Committee outlining the programmatic requirements of the congregation. The master's thesis told what had come before; the "Blue Book," what was to come next. "The idea was to meld two traditions," recalls Beeby, who purportedly took his design cues both from the "elegant, Classical Sephardic synagogues of Spain, Venice, and Amsterdam," and from the "rustic, vernacular Ashkenazic synagogues of Eastern Europe." Though Judaic scholars may fault Beeby for his oversimplification of history, his instinct to build a temple that would bridge the traditions, that would address the heterogeneity of the American Jewish community it was to serve, is beyond reproach.

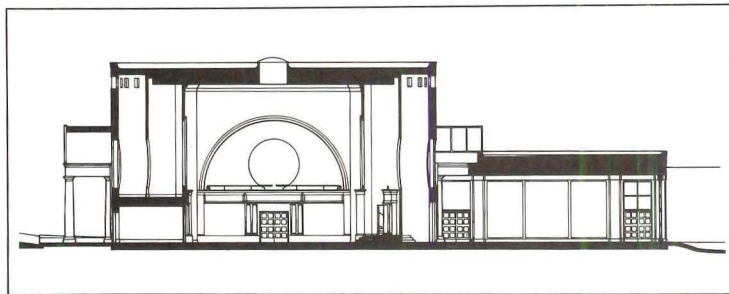
"In 50 years, people will think our building is the original, and Yamasaki's, the addition," avers Beeby. Clearly, it is a time the 41-year-old architect looks forward to. And perhaps he's right; perhaps they will. But in the meantime we know which is which. And we know why. Each generation strives to find its own voice. Minoru Yamasaki spoke for the last generation. Hammond Beeby and Babka speak for this. *Charles K. Gande*

Though only phase 1 was built (plans and elevations below), Minoru Yamasaki's 1963 master plan for the North Shore Congregation Israel included a phase-2 small sanctuary, and a phase-3 additional classroom wing. But when phase 2's time came, the congregation chose not to put the master plan into effect; they chose, instead, "to make their own statement," according to Rabbi

Herbert Bronstein. Stylistically, Hammond Beeby and Babka, Architects departed radically from Yamasaki's flora-inspired parti; they chose to build a "traditional" synagogue, which, again, according to Rabbi Bronstein, would fill worshippers with a "sense of intimacy, warmth, and community," rather than "a sense of awe-inspiring grandeur." As can be seen in the plan below, however,

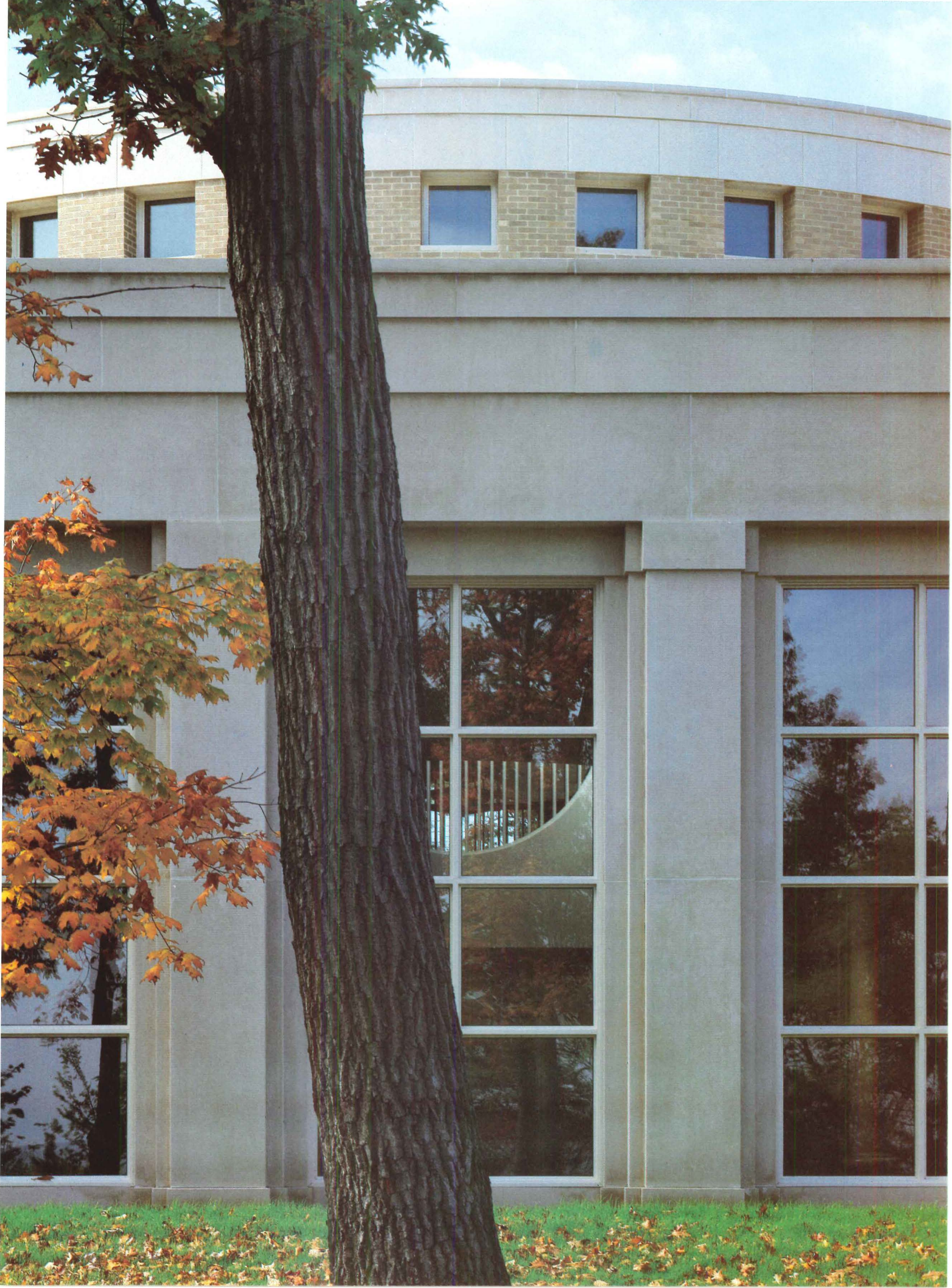
Hammond Beeby and Babka's building occupies the place—at the south end of the existing arcade—Yamasaki allocated for the small sanctuary he had proposed. And as can be seen in the photographs at left, Hammond Beeby and Babka's building maintains the material—sand-colored brick—Yamasaki specified.



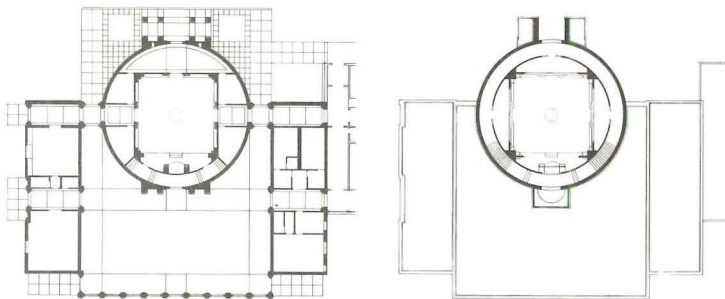


Though first on the congregation's list of needs was a small sanctuary, a social hall was a close second. And though the spiritual and social accommodations are discrete, they are inexorably linked. By tradition, Jewish services are followed by a period of community interaction in a room contiguous with the place of worship. Designer Thomas Beeby chose to express the disparate "sacred" and "secular" functions with disparate forms—a circle for the sanctuary, a rectangle for the social hall. They are, as the

functions they accommodate, discrete but linked—the circle penetrates the rectangle (plan previous page, section above). From inside the social hall (photo above), one looks out across Lake Michigan through a window wall punctuated by metal light sconces. From outside the social hall (photos above top and right), one looks in to the commodious room through a window wall punctuated by limestone pilasters. Either way, the view is spectacular.



"Who knows where ideas come from?" asks principal-in-charge Thomas Beeby, before citing Mies, Asplund, Wright, Sullivan and Kahn, and traditional Sephardic and Ashkenazic synagogues as his sources for the North Shore Congregation Israel. (Classicism, naturally, is also mentioned.) While the question, and its answer, will no doubt prove fascinating to contemporary architectural historians, members of the Reform temple will not necessarily share the fascination. Of greater import to them is the effect of the aforementioned eclecticism—the sum of all those disparate parts. Consider, for example, the "porch" within the social hall (photos right) which interconnects with the sanctuary: the total construction signals—and very clearly—the passage from "secular" place to "sacred" place, according to Beeby. "You get the idea that something significant is going on in there," adds partner James Hammond. You also get the idea—when passing through the sanctuary door (photo facing page)—that you're leaving a place where "something significant" has gone on. Yet to Beeby, the paneled doors refer to Mies, the four columns refer to Classical Orders, and the circular window refers to Kahn. This historical grab-bag assemblage, however, also refers—in toto—to the sanctuary porch (cover photo), which reinforces the east-west axis through the sanctuary. It was critical to Beeby to maintain the "sculptural purity" of the sanctuary's cylindrical form; consequently, both "front and back porch" have been rendered as appliqué—they are clearly attached. The forms are different; the scales are different; the materials are different.



North Shore Congregation Israel
Glencoe, Illinois

Owner:

North Shore Congregation Israel

Architects:

Hammond Beeby and Babka, Architects—Thomas Beeby, designer; James Hammond, Bernard Babka, John M. Syvertsen, project architects; Dennis Rupert, Jonathan Levi, Tannys Langdon, staff architects

Engineers:

Cohen Barreto Marchertas (structural); H.S. Nachman Associates (mechanical); Lysle F. Yerges (acoustical)

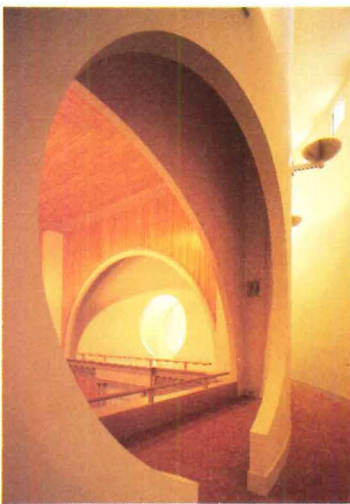
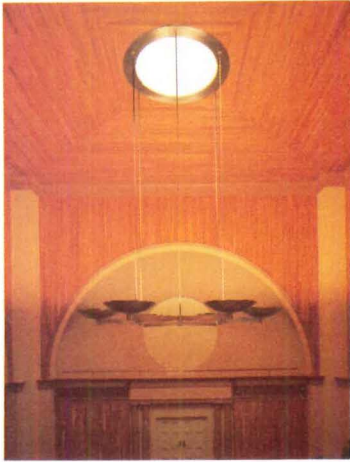
Consultant:

Cini-Grissom Associates (kitchen)

General contractor:

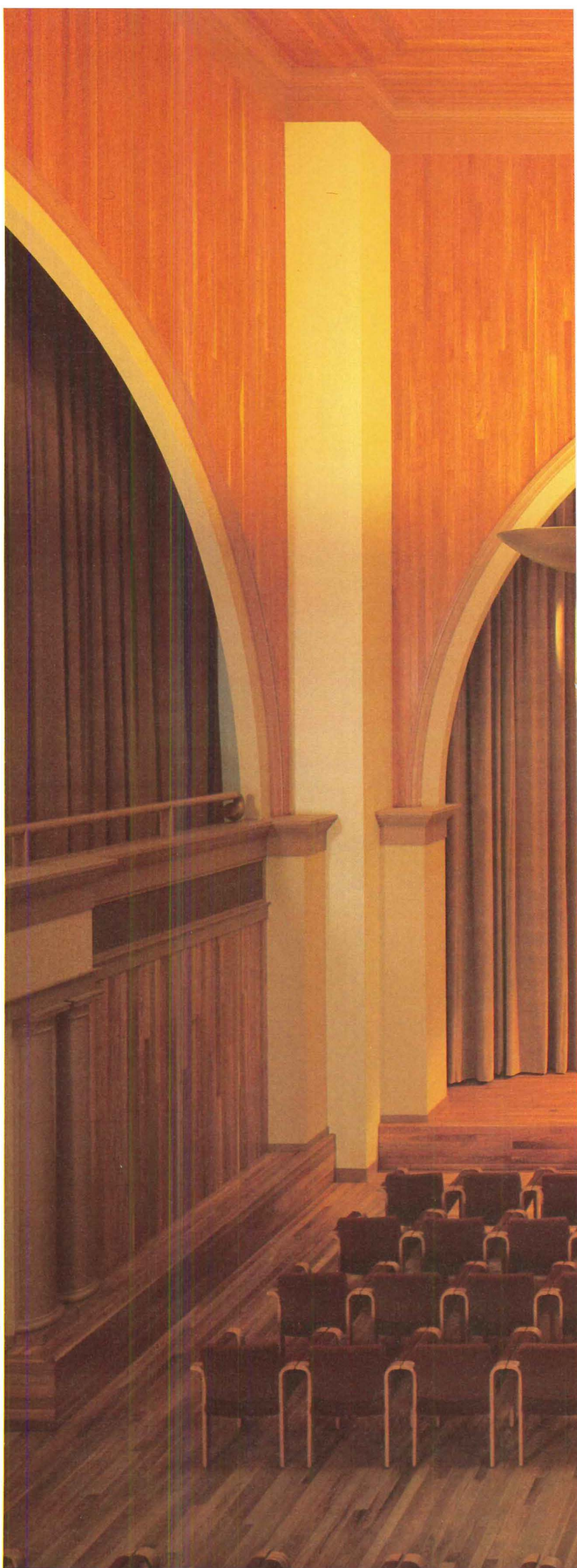
Gerhardt F. Meyne Company





Though membership is high, attendance is low at the North Shore Congregation Israel; consequently, Hammond Beeby and Babka's new 220-seat sanctuary comfortably accommodates all but the High Holy Days services (when Yamasaki's 1,100-seat sanctuary almost earns its upkeep). By Building Steering Committee mandate, the relatively diminutive sanctuary is "warm, intimate, inward-looking." The two circular windows have been placed on the east-west axis, high above the reach of all-but-balcony views, and filled with 4- by 4-inch panes to create the illusion (and quality) of leaded glass. Designer Thomas Beeby employed a retinue of images, details, and motifs he found in history books, in travels abroad, and in Judaic research to connect the new synagogue with those that had come before—with tradition. From the humble, vernacular Ashkenazic synagogues of Poland he took the imperfect white oak that covers the walls, the ceiling, the floor. From the elegant, Renaissance Sephardic synagogues of Venice and Spain he took the Classical columns, entablatures, and Ark. From Solomon's Temple in Jerusalem he took the cube and the four-post support. From Orthodox temples he took the balconies (where women were, by tradition, relegated). From ancient and not-so-ancient custom and symbol he took the aluminum Star of David chandelier suspended from the oculus (photos left), the brass ram's-horn shofar caps on the pipe-railing (photo right), and the wooden bench surrounding the perimeter of the sanctuary. [Could he have taken the arches from Louis Sullivan? And could he have taken the entry to the balcony (photo left) from Richard Meier's Aye Simon Reading Room in the Solomon R. Guggenheim Museum?] A final appropriation: In archaic synagogues, the rabbi could either read the Torah scrolls from a pulpit at the eastern end of the sanctuary, with the congregation facing Jerusalem (photo right), or from a lectern in the center of the sanctuary, with the congregation sitting theater-in-the-round style (not shown). The lectern is now in design.

©Barbara Karant/Karant & Associates, Inc.





A minimalist architecture of allusion: current projects of Frank Gehry

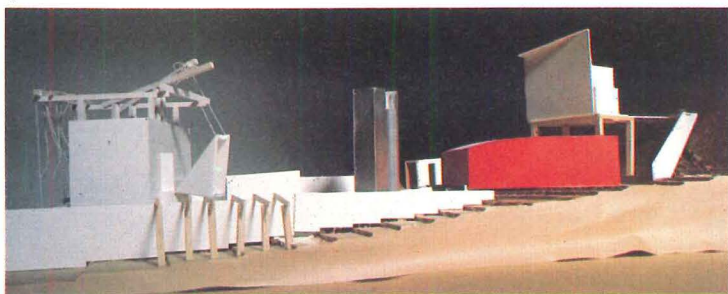
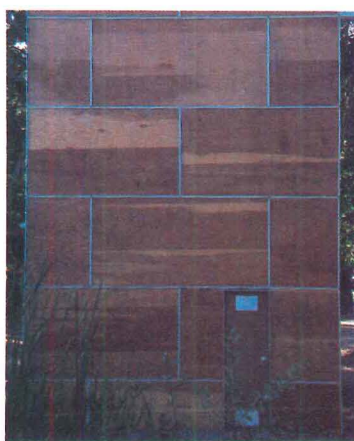
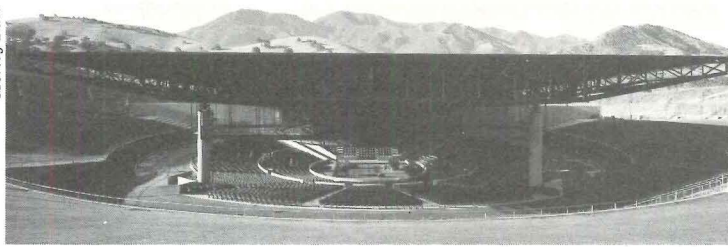
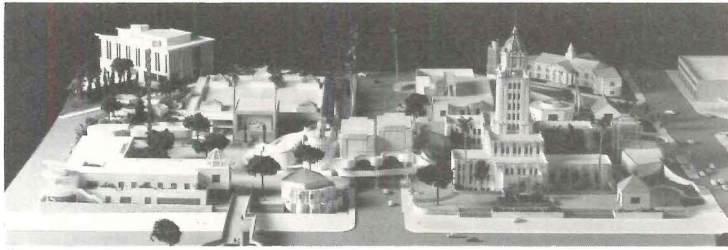
By Lindsay Stamm Shapiro

During this period of polarized debate between modernist and post-modernist positions, strong alternative architectural aesthetics are sorely needed. Frank Gehry offers a potent architectural vision not narrowly defined by any "isms." His work is visually radical—with direct ties to minimalist, conceptual, and process art, although it never remains a formalist diversion. Simultaneously his appropriation of industrial materials has a slangy touch to it, while his unorthodox collages of those materials suggest other formal operations. Regarding contemporary eclecticism, Gehry has stated that he takes a "minimalist stance toward historical allusion," as in his Loyola Law School (pages 120-121). While constantly drawing inspiration from both Eastern and Western architectural traditions, Gehry reinterprets and translates historical images and details into a tough, contemporary idiom. His environments are unexpectedly playful and liveable despite his seemingly raw palette of builders' materials. Obviously he does not depend on expensive finishes for effect. Gehry's work is economically feasible; cheap materials and unfinished interiors lower his building costs. With conceptual ties to "Arte Povera," but not to the pejorative associations of the term, Gehry's work summons up an architectonic poetry out of palpably inexpensive materials. Gehry defamiliarizes these commonplace building products by presenting them in a new context. His corrugated metal siding or plywood facades work intentionally, like Jasper Johns's targets or beer cans, to impede conventional responses.

Gehry's association on a personal and creative level with minimal and conceptual artists (such as Carl Andre, Michael Heizer, Donald Judd, and Richard Serra) radically differentiates his work from other contemporary architects. Gehry has close personal ties to California artists as well, including Charles Arnoldi, Larry Bell, Ron Davis, Sam Francis, and Ed Moses. While there is a lengthy history of architects appropriating from fine-art sources, Gehry is the first to align his architecture with the minimal and perceptual concerns of contemporary art. Gehry avoids both parody and irony as a primary effect as well as such direct appropriations from pop art as is seen in the work of Charles Moore, Robert Stern, and Robert Venturi.

Recently such prominent art critics as Rosalind Krauss and Douglas Crimp have been debating whether architecture can survive as an art form if it continues to include eclecticism and allusions to the historical past. At one time these critics were advocates of Gehry's work, because he appeared to quote, or appropriate, only from the present. But he is currently in their disfavor—for them, his Beverly Hills Civic Center competition project (1982) for Los Angeles (1) transgressed their norms because of its obvious historical allusions. But this view glosses over Gehry's own development. Throughout his career he has continually applied historical references filtered through a positively reductive sensibility, as in his office building for Kay Jewelers (1963) in Los Angeles (2), with its cubic capitals and concrete columns. Instead of merely copying historical details, he transforms them into an appropriate contemporary mode by paring down to minimalist forms and juxtaposing them with materials that defy the norm. Gehry can be perceived as engaging in inclusive, yet critical quotation from historic forms.

Lindsay Stamm Shapiro is a visiting lecturer at the Cooper Union's School of Architecture. She has contributed essays to the William Lescaze and Window/Room/Furniture catalogs. Also she curated Frank Gehry's first exhibition in New York at P.S.1, the Institute for Art and Urban Resources. Currently she is co-curating an exhibition of contemporary California architecture for the National Academy of Design.



Tom Vinetz

Morley Baer

5

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Not only can he adapt (or fully appropriate) materials direct from the current urban scene, he also suggests a radical reevaluation of these industrial materials by applying them to residential and public programs. Gehry is a force for a plural permissiveness and defiant openness because he is unwilling to be hemmed in by a critical *parti pris*. He loves to simultaneously quote and invent. The use of the past, present, and future in his works makes for an architecture of abundance.

For those searching for a canonic, classic balance, Gehry appears to be involved with chaos or disorder. But such involvement can be justified by the eminent art historian Meyer Schapiro's argument that perfection is a hypothesis and that much has been lost by a spurious search for perfected unities. In Gehry, we get a pragmatic, precarious architecture of discontinuity and disruption, of tilts and quirks. His seeming discontinuous esthetic sense is closer to Kurt Schwitters's collages than to any unplanned chaos, while he is equally distant from composer John Cage's "chance operations." Gehry's work is sculpturally replete, not at all that over-all homogeneity produced by the "kitsch of randomness." While his residential projects may convey a slapdash quality, this effect is consciously sought after by Gehry and finely controlled. He intentionally adopts these strategies to provoke himself into evolving a radical architectural vision.

Through a complex series of maneuvers, Gehry metaphorically links each separate function in his programs to a distinct, appropriate identity on the exterior. Here Gehry may almost intuitively associate a cross form with a kitchen, or a simplified "house" form taken from the Monopoly game with a family room, as seen in the Smith house (pages 118-119). To further complicate this process, a diverse series of materials (including ceramic tile, plywood, stucco, and glass covering exposed wood studs) is then applied. This vocabulary has been appropriated from an industrial, though not a high-tech, realm and is often not completely tied to Gehry's metaphorical associations. Although Gehry's brutalist collages initially seem to possess an almost unsettling rawness, the built work often fits adeptly into its California context.

By evolving a specific esthetic diction that is truly volumetric, Gehry has created an architectural order that is difficult to evaluate through two-dimensional representations. Gehry continues to evolve an architecture that deals with three-dimensional spatial sequences of overlapping planar layers and revels in the impact of light, that shifts and alters one's spatial perceptions. His spatial sequences can only be comprehended through models, which he uses as his primary working method, or through the phenomenal experience of his buildings. (His drawings, nevertheless, give their own quirky pleasure.)

Gehry's recent projects reflect a common concern with dividing or splitting apart the program into separate architectural volumes or rooms. This attitude suggests a reading of Gehry's facades as parallel to still-life paintings or as a city in miniature. Despite the distinct and rather disjunct volumes on the exterior, the interior spaces are often continuous, with diagonal spatial connections used as reinforcing devices.

Gehry's expression of rooms as separate sculptural objects has evolved from his initial project for the Jung Institute (1976) in Los Angeles, designed for artist Sam Francis. Each volume appeared to "float" within a walled field filled with a thin veneer of water. Gehry has been inspired in his process by precedents as various as Philip Johnson's estate in New Canaan, Connecticut, with its separate structures dispersed majestically throughout the site, or the temples on the Acropolis. In comparison with the

Johnson model, Gehry tends to effect a greater, almost urban, density relating to low-rise, high-density paradigms. This theme of separate building volumes continues in his Three Artists' Studios (1981) in Venice, California (3). Here the three condominium units are broken apart into separate sculptural objects and sheathed in varied materials (ranging from green asbestos shingles to exterior-grade plywood and bluish-purple stucco) that reinforce the distinctiveness of each unit.

Gehry's exploration of this theme continues in the Benson residence (1981-1983) in Calabasas, California (6). Here he segregated the parents' and children's bedrooms into a two-story structure sheathed in brown asphalt shingles. A moat connects this volume to the living compound, surfaced with gray-green shingles and a plywood clerestory. He has deftly managed to subvert one's initial expectation upon approaching the site that the two-story volume is the *entire* house by subtly inserting the living compound slightly below grade.

In the Santa Monica Canyon residence (1981) for a filmmaker (9), Gehry ties the complex together, despite the separate volumes, by layered sequences of views through the site. Gehry emphasizes his unified concept composed of divided "objects" by wittily creating both a literal and symbolic cinema out of the site (note the movie screen behind the garage). On the exterior wall of the master bedroom, Gehry creates a jewel-like setting for a commonplace material, exterior-grade plywood, by framing it with metal reglets (7).

Gehry's evolution of discrete "sculptural objects" continues in his more recent projects shown on the following pages—the Smith, Beverly Hills, and Norton residences, as well as, at a public scale, the Loyola Law School and the Aerospace Museum. Gehry's current esthetic includes overt symbolic references that appeared in a more latent form previously, as in the "log cabin" in the Berger, Kahn, Shafton & Moss law offices (1977) in Los Angeles (8). Direct biomorphic analogues have also emerged recently, as in the use of fish scales on the wing-shaped amphitheater for the Louisiana World Exposition (pages 124-125). Despite the symbolism, Gehry's work is still allied to the concerns of minimal and conceptual artists.

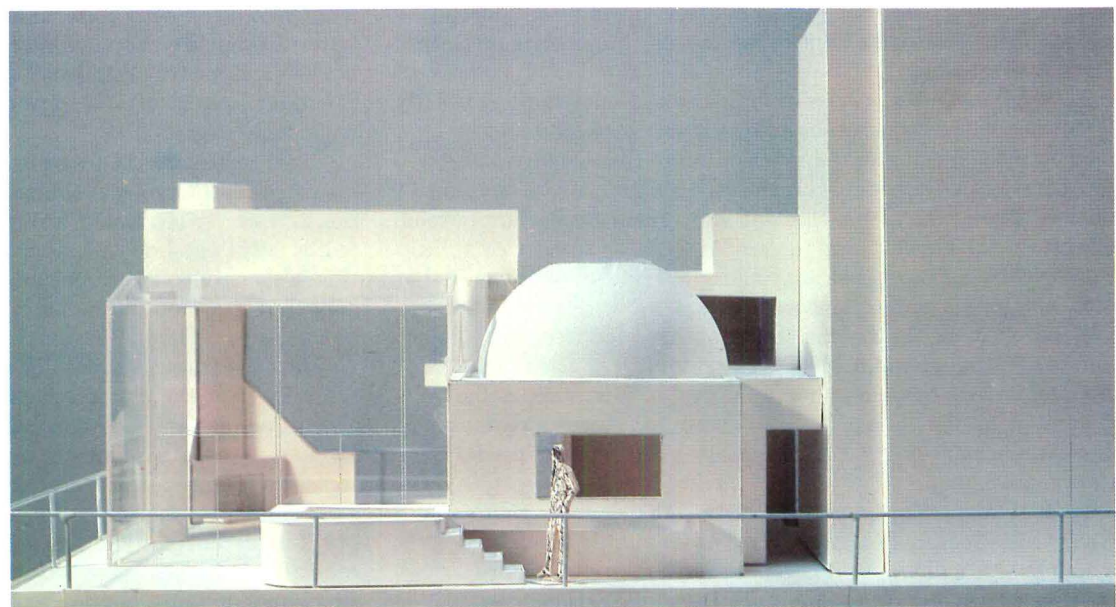
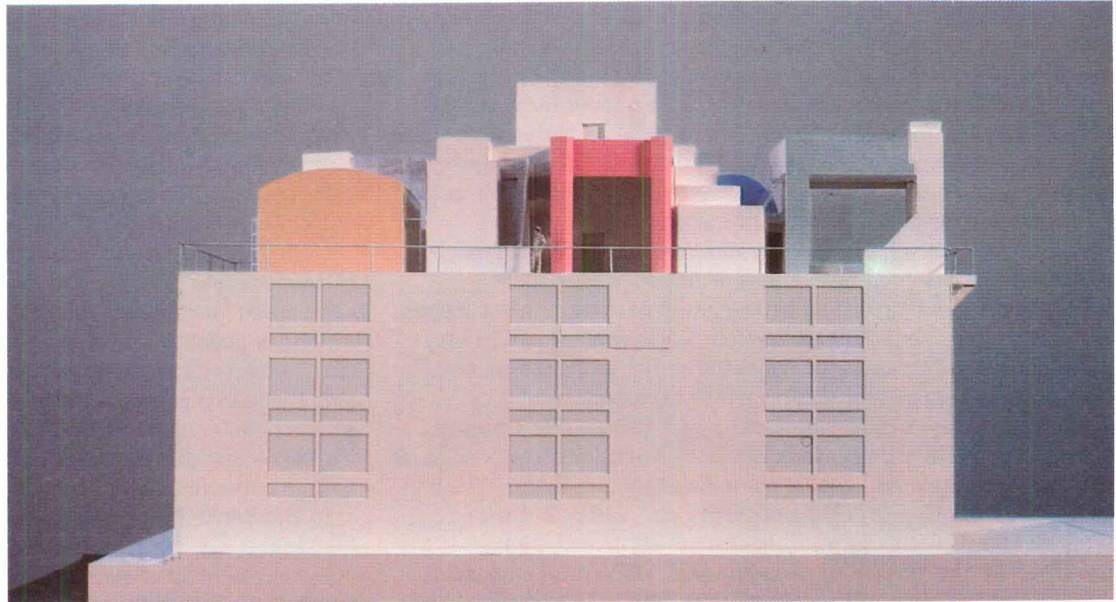
In the Smith, Beverly Hills, and Norton residences (pages 116-119) the discontinuity of the separate exterior volumes is radically denied by the interior continuity of the plan. As in his own home in Santa Monica, each room is always open and flowing into another space. Though radically different stylistically, this dichotomy between exterior and interior is similar in approach to Adolf Loos's villas, where a clear schism between public and private realms reigned. Gehry generates this effect intentionally by first evolving the plan, then designing each room separately when broken apart from the whole, and then continuing the design process when the "objects" have been reconnected.

Gehry offers a humane architecture that does not arrogantly or sentimentally founder in false utopianism. He "lays bare the devices" underlying the construction process, but the devices do not become the skeletal remains of a reduced functionalism. Gehry has finely balanced his eruptive forms enhanced by the play of natural light. He has evolved his own architectural position between the poles of academic historicism and formalist abstraction. His synthesis of sculptural architecture offers a colloquial use of materials that is usually appropriate contextually, despite its initially unsettling formal devices. There are certainly regionalist aspects to his production. Yet if Gehry has any region, it is that which the architect Kazuo Shinohara has called "naked architecture."

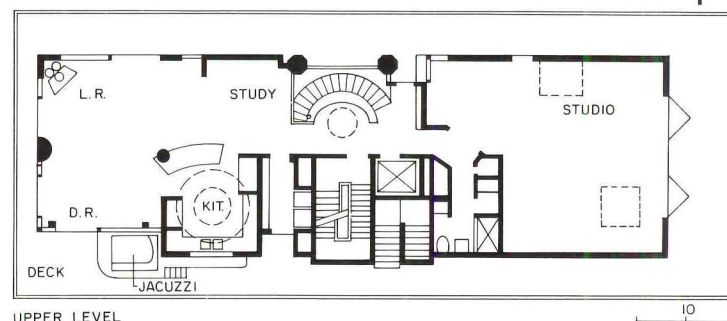
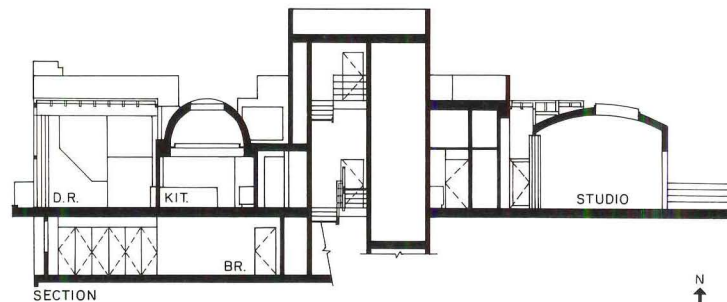
House in Beverly Hills

Beverly Hills, California

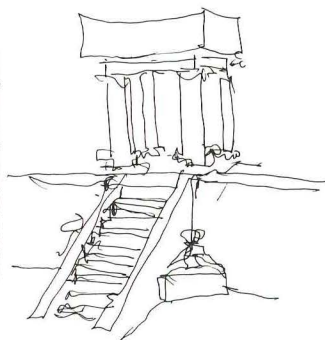
In a novel approach toward the site, Gehry considered this existing apartment building in Beverly Hills primarily as a podium. After removing the original top floor, he replaced it with a penthouse duplex, which is currently under construction, starting at the third-floor level. He treated the penthouse floor as a collection of volumetric "objects" fulfilling the major public functions of the apartment, while the third floor includes private functions, such as bedrooms and baths. Gehry views this restricted rooftop envelope as a challenging site condition. He associates the existing "podium" and its inserted "objects"—set back from the building's perimeter—with the temples on the Acropolis. An intentionally ambiguous scale emerges, evoking a miniature city on the rooftop. In initial sketches for this scheme, he adopted direct references to the Parthenon by appropriating a classical language filled with sequences of columns and entablatures. In the final scheme, he pared the rooms on the penthouse level down to varied geometric volumes, including a greenhouse/dining room, a ziggurat-shaped television room, a skylit hemispherical kitchen, and a curved skylit roof over the artist's studio. Aside from adapting admirably to the restricting building envelope, Gehry also was required to incorporate the nucleus of the existing fire stairs and mechanical equipment into this tightly organized parti. He tied the scheme together by repeating circular, diagonal, and rectilinear forms in plan and section. The curving roofs of the kitchen and studio complement the circular segment that forms the primary staircase. Gehry evolved this baroque stairway as well as other details after esthetic exchanges with his clients, whose preferences include the Art Deco period.



Tom Vinetz photos

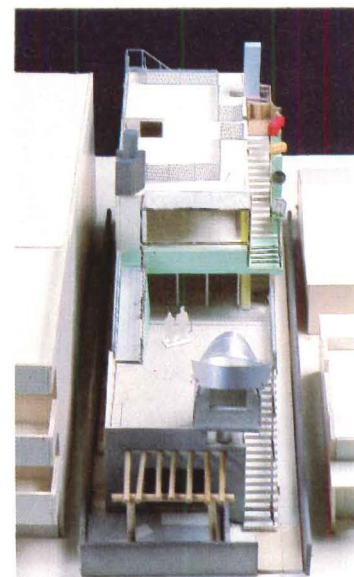
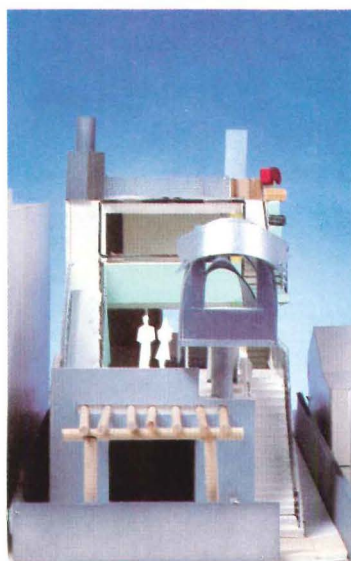
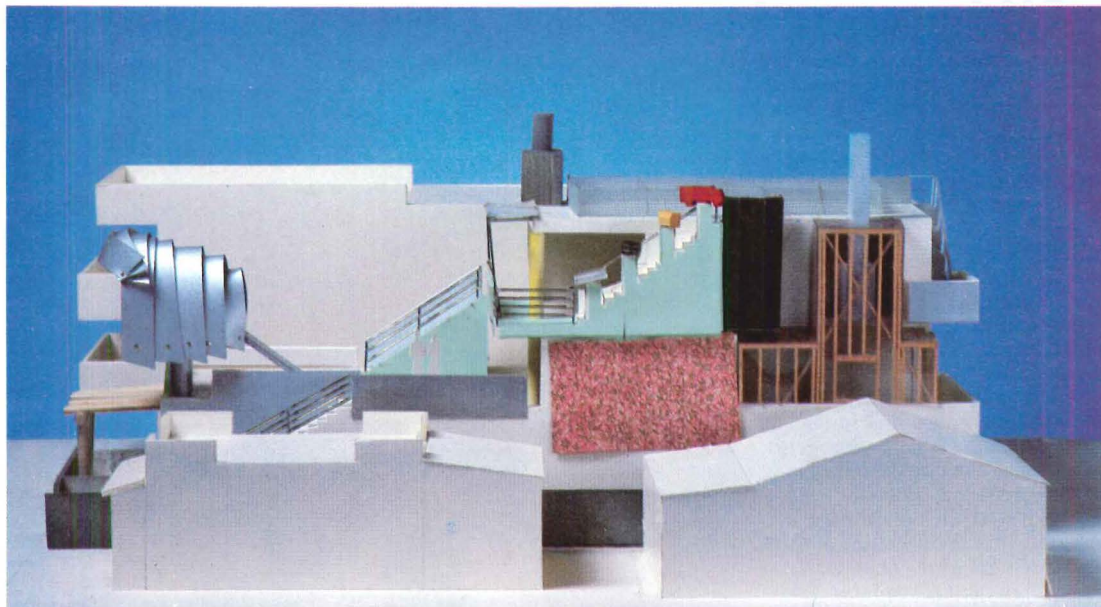


Private collection, Los Angeles

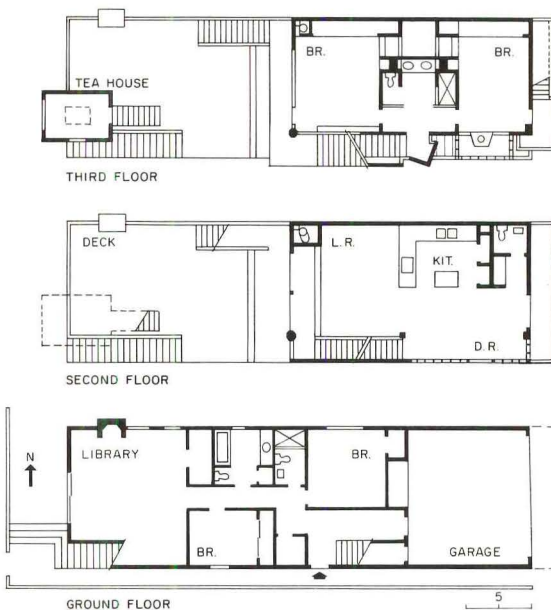


Norton House Venice, California

Currently under construction on a site facing the ocean in Venice, California, this single-family residence is one of Gehry's most provocative recent works. Gehry conceived this house as simulating a demolished building site that had been sheared in half, so one could peer at the remnants of the interiors. Here Gehry reverses the ambiguous inside/outside experience in his own house in Santa Monica, where the original house's exterior literally becomes the interior in the kitchen. In the Norton residence, the approach is more purely suggestive: the exterior facade appears interiorized. To reinforce this effect, Gehry simulates wallpaper patterns on the exterior wall of the living room that are reminiscent of Braque's and Picasso's cubist *trompe l'oeil* devices. For the exterior of the dining room, exposed wood studs sheathed with glass suggest a "deconstructed" wall after demolition. One thinks of the theme of entropy in Robert Smithson's earthworks. The client, who had been a lifeguard in his teens, had fulfilled his fantasies of returning to his tower retreat on the beach when Gehry transformed his private study into a lifeguard station. This booth resembles Darth Vader's helmet with metallic bands wrapping completely around both walls and roof. By combining elements of simultaneity and science fiction, Gehry makes the familiar strange.

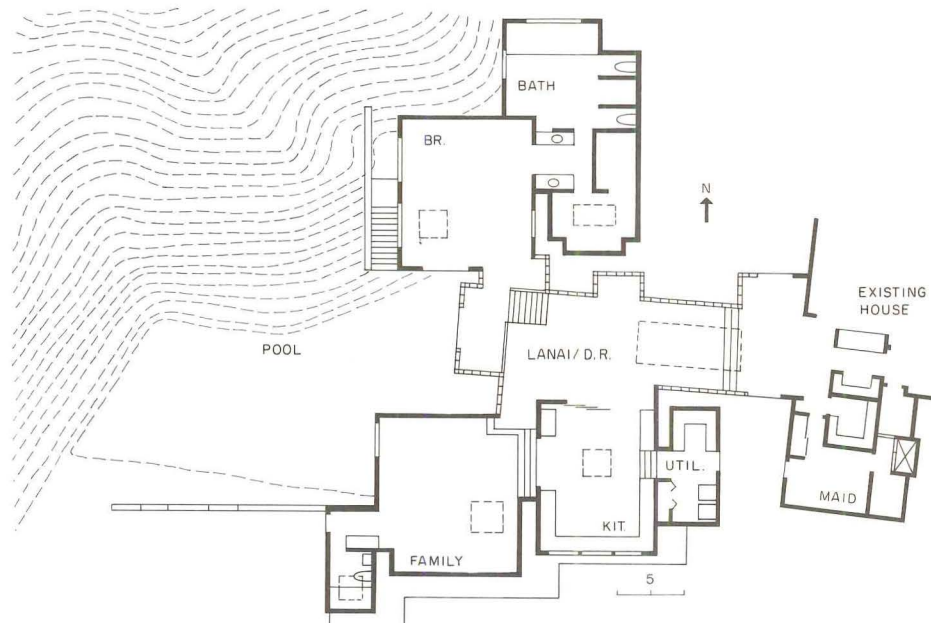
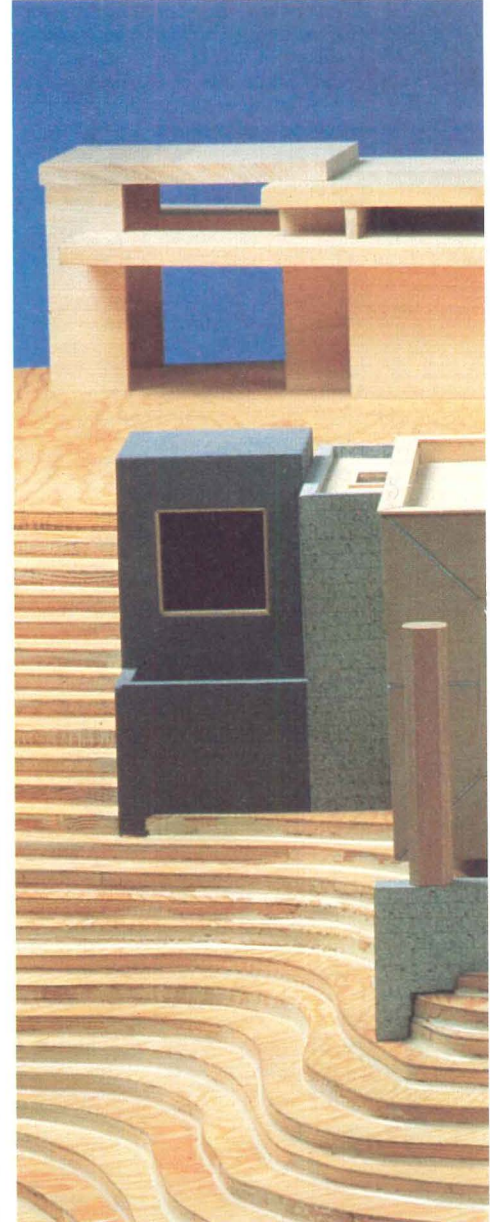
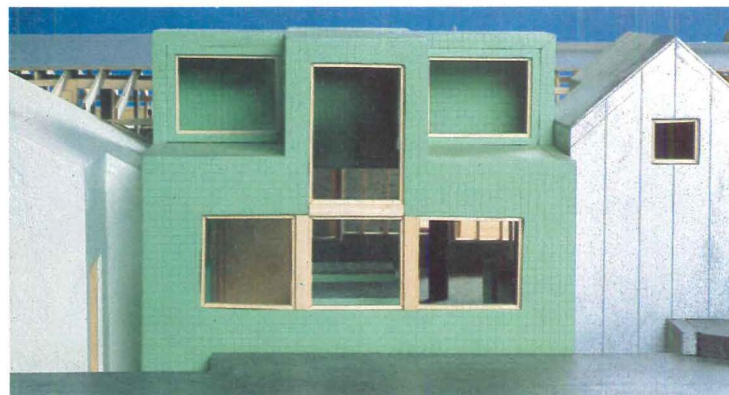
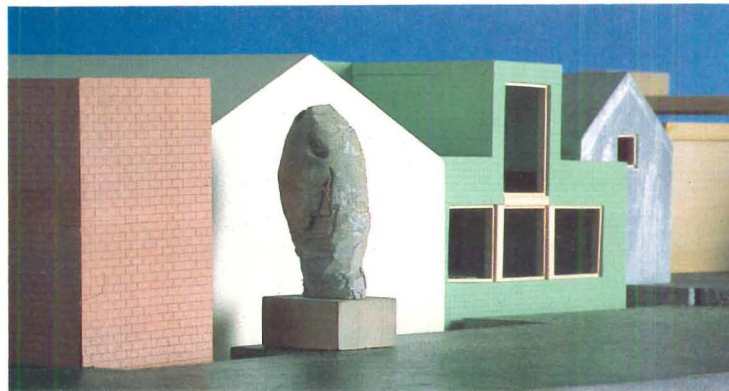
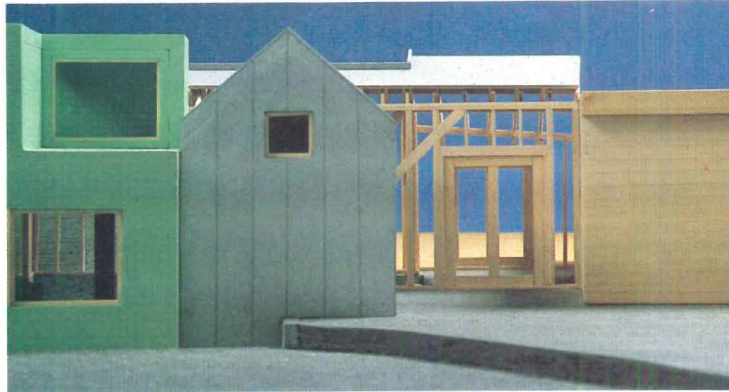


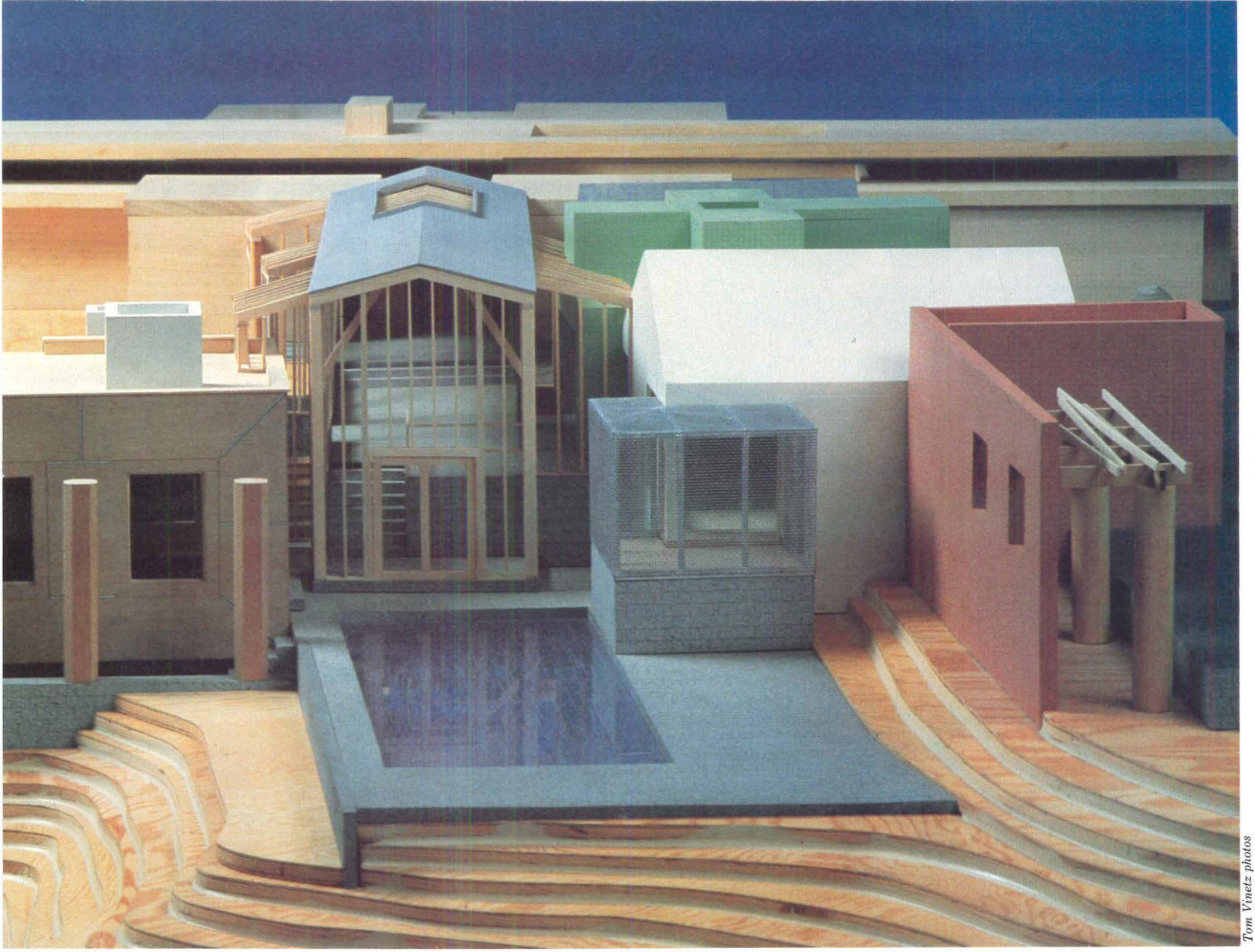
Tom Vinetz photos



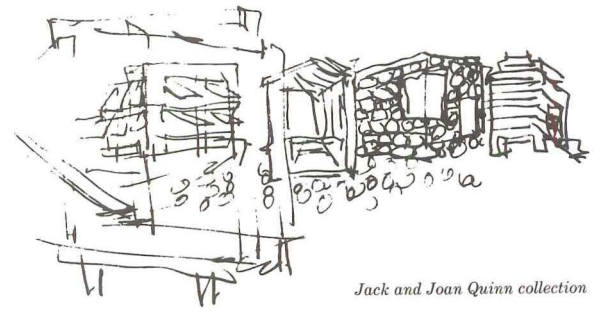
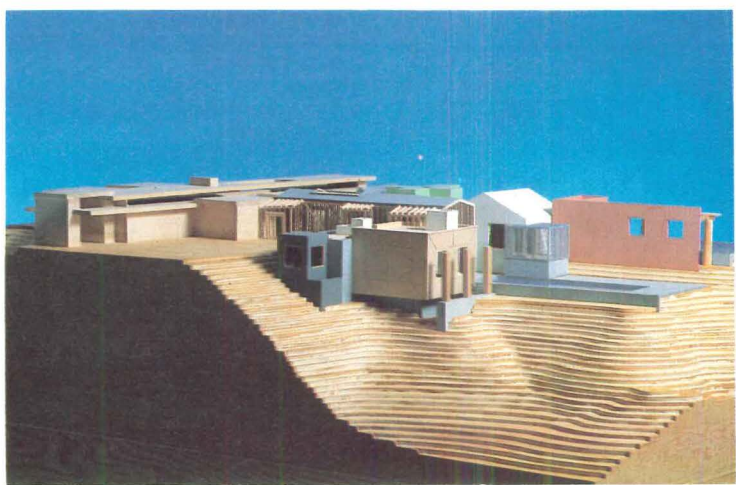
Smith House Los Angeles, California

The Smith house was designed as a major addition to the former Steeves residence, constructed by Gehry in 1959. He both extended and repeated the cruciform plan of the original house in the new scheme as a formal connecting link. While Gehry consciously alludes to the Wrightian overtones of the cruciform motif, he emphasized it also as a pivotal compositional device. This project reinforces the contrast between the exterior volumes, which appear autonomous, and the continuous interior spaces, where diagonal views are accentuated. According to Gehry, associations as widely divergent as views of the unplanned modern city and Giorgio Morandi's still-life paintings inspired this architecture of separated exterior "objects." Gehry here deftly explores the metaphoric quality of each object in the program. The exterior volumes display a phenomenal range, including an archetypal "house," taken from the Monopoly game, for the family room; and a kitchen with a cruciform reveal at its clerestory level. Gehry intuitively gave this cruciform a laboratory image he felt was appropriate. This minor cruciform, in particular, marks a pivotal point in the composition. The lanai/dining room, constructed of glass over wood studs, forms the connective tissue of the residence. As an expansive circulation spine, it extends the primary axis of the original house and initiates a series of cruciforms within the new addition. Gehry sheathed the master bedroom on one side of the lanai in plywood cut into a carefully devised pattern. He framed the plywood with metal reglets creating a three-dimensional illusion, which he refers to as "forced perspective." Gehry also used this device on the curtain-walled entry facade of the World Savings Bank in Burbank, California (see photo 5, page 114), where depth is implied on a literally flat facade. A reflective-glass sculpture by Larry Bell initially inspired this illusionistic device. The screen porch typifies Gehry's minimalist reinterpretations of room types. Here he retained the typical material used for porches (wire mesh), yet stripped the cubic volume of its associations so that it became a minimalist object (as in a Donald Judd sculpture or the cage of Peter Eisenman's House X). This cogent culmination of Gehry's current residential projects will unfortunately remain unbuilt.





Tom Vinetz photos



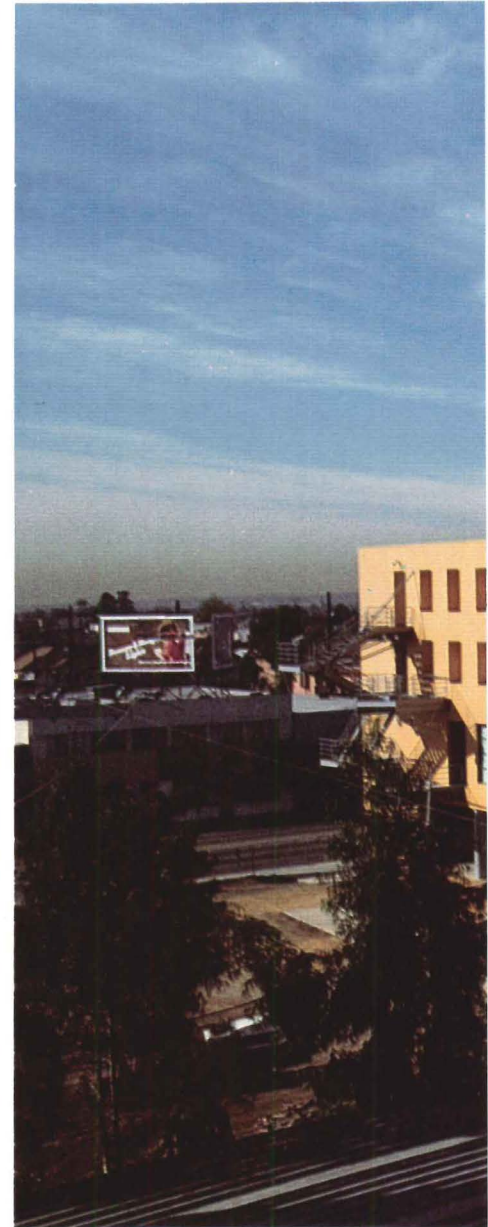
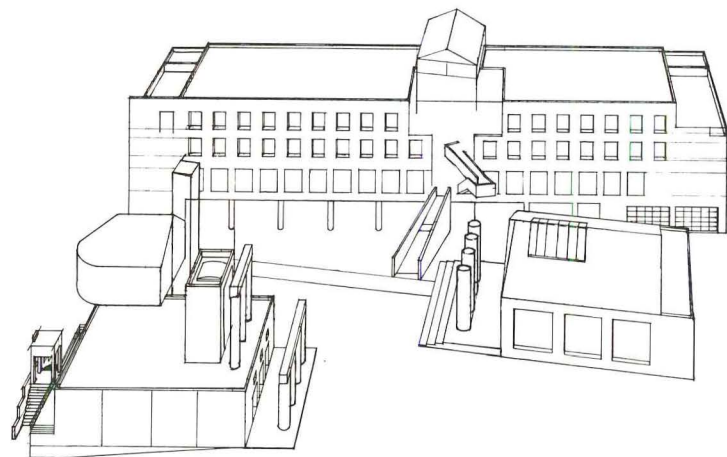
Jack and Joan Quinn collection

Loyola Law School Los Angeles, California

Gehry consciously sought to create a unified, urban campus for the Loyola Law School while endowing it with symbolic references appropriate to this center for legal education. The characterless site at the periphery of downtown Los Angeles had no sense of place, not to mention dignity or elegance. Now complete is the Fritz B. Burns Building, housing administrative functions, faculty offices, and small classrooms. To achieve a more collegiate environment, Gehry used the facade of this building as a backdrop or foil for separate courtroom and chapel structures, for which he had reserved room on the site. He designed the courtrooms as small theaters, where law students assume various legal roles. Taken together, all the structures in the foreground of the completed building will become part of the larger campus stage set.

In searching for a style appropriate for a law school, Gehry quotes Roman and Romanesque sources. Although this might superficially suggest his sudden advocacy of post modernism, Loyola is not the first, or even the most recent, example of inclusive quotation on Gehry's part.

The construction for this project has been planned in five phases. Phase 1 is the already completed major office building; the moot court, classroom structures, and the plywood chapel currently under construction is phase 2; and phases 3 to 5 will include construction of the law library and renovation of existing buildings. Aligning the Burns Building perpendicular to Olympic Boulevard, the main access street, and parallel to the existing law school designed by Albert C. Martin and Associates, allowed Gehry to insert the small-scaled moot court, chapel, and instruction halls as separate objects on the site. Gehry bisected the Burns Building slightly off center with angled stairs that suggest forced perspective, and by a greenhouse that conveys the image of a miniature "house" while it caps the rectilinear office volume. Regularly repeated, almost Italian Rationalist, windows are deeply set into this facade endowing it with the illusion of depth. The screenlike thinness of the Burns Building's front facade is revealed only at its extreme edges. Gehry designed the rear facade in light stucco to make it merge into the banal neighborhood context.



Loyola Law School
Los Angeles, California
Phase 1

Owner:

Loyola Marymount University

Architects:

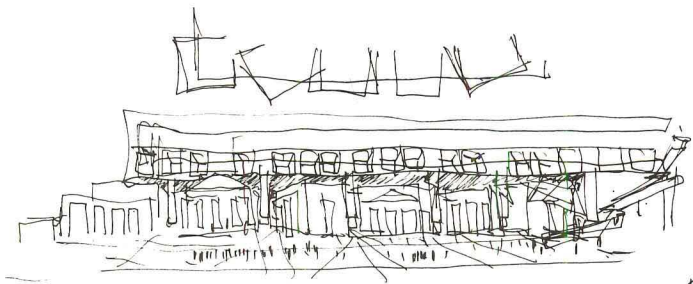
Frank O. Gehry & Associates—
Frank O. Gehry, Greg Walsh, Hak
Sik Son, Rene G. Ilustre, design
team; Brooks/Collier, associated
architects

Engineers:

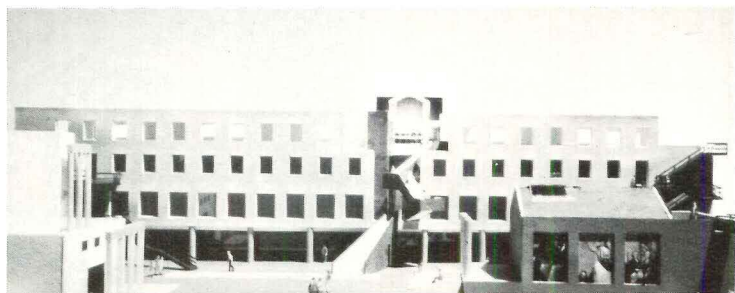
Erkel/Greenfield & Associates
(structural); Donald F. Dickerson &
Associates (mechanical); Athans &
Associates (electrical)

General contractor:

Collins-McPherson-Chapman

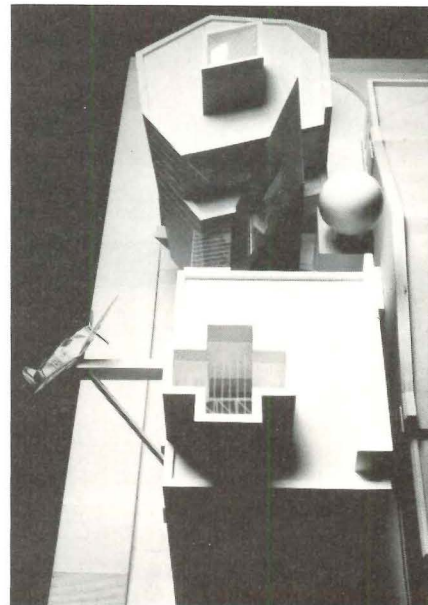
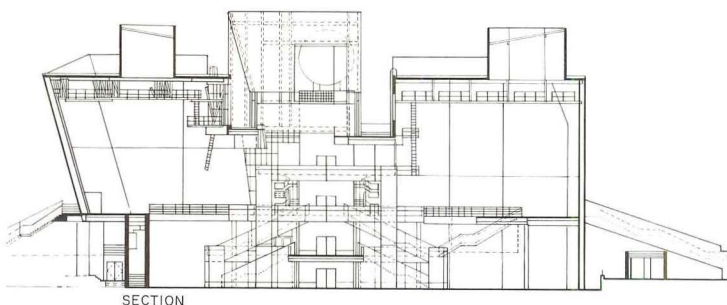
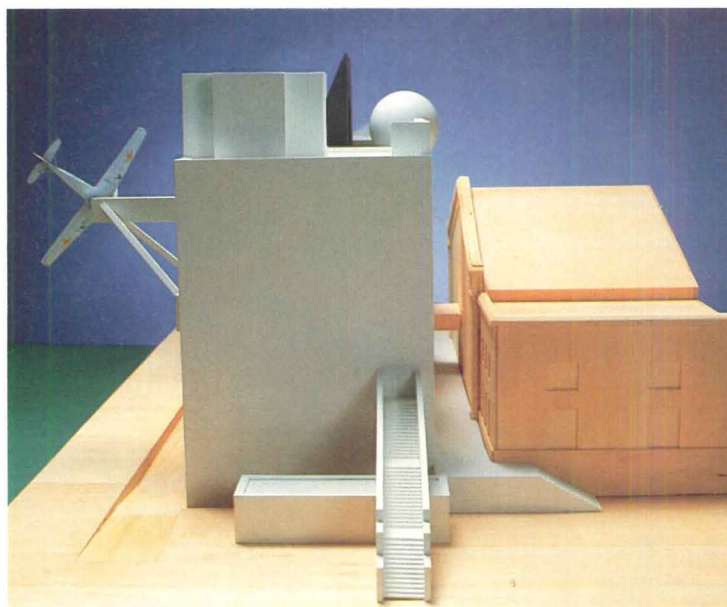


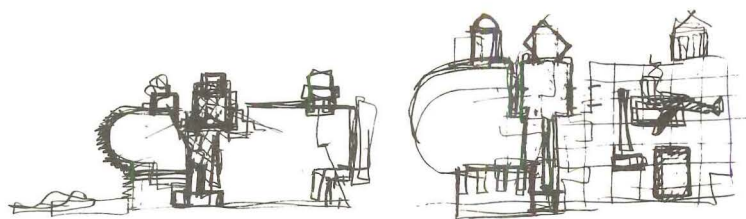
F. Gary



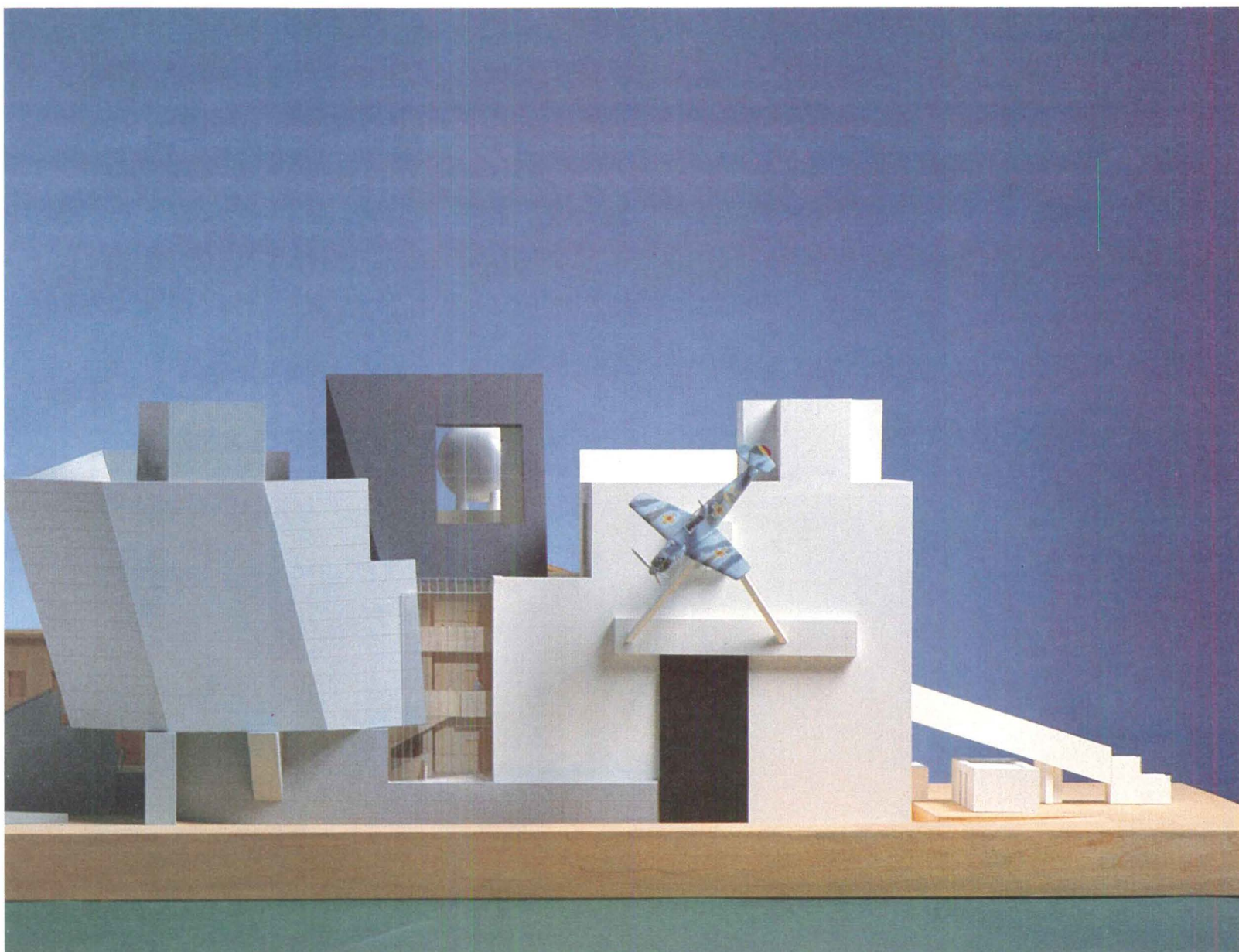
California Aerospace Museum Exposition Park Los Angeles, California

The California Aerospace Museum can be considered a culmination of Gehry's recent formal concerns. Gehry bisects the museum's volume at its center point by emphatically breaking it into two volumetric objects on the exterior. This approach has evolved from his Loyola Law School (pages 120-121) where the central skylight split apart the major rectilinear block of the office building. In contrast to the illusionistic planar quality of Loyola's facade, at Aerospace Gehry creates an impact by an overtly volumetric approach. Since the program was not extensive, the client (the State of California) requested that the building itself should act as an "exhibition" supplemented by several large aerospace artifacts. Gehry's intention was to work with the scale of these contemporary aerospace objects. The site for the museum is a narrow slot in front of an existing former armory, which will become the museum's major exhibition space during a later phase of the project. Gehry solved these problematic site conditions by contrasting the polygonal and rectilinear objects with the existing armory and simultaneously creating the illusion of an expanded interior space that appears both larger and wider than its actuality. A patently constructivist aura permeates this project. Gehry has selected painted galvanized sheet metal for the polygonal volume because of its kinship to the surfaces of early airplanes. Perched outside on a cruciform strut, a plane endows the facade with a heraldic sense of flight. Cruciform and diamond skylights punctuate the roof plan. With an Art Deco reference, a ziggurat topped by a sphere ties the two exhibition spaces together, while it suggests, or rather compels, entrance. On the interior Gehry transforms the ziggurat into an elevator core with glazed viewing platforms at its edges. Gehry installs this sphere on the roof for its abstract, formal value as well as its associations with the sun, the moon, and weather balloons. Illumination at night will highlight its lunar effect. Gehry has planned this building to reawaken our original sense of wonder at man's achievement of flight.

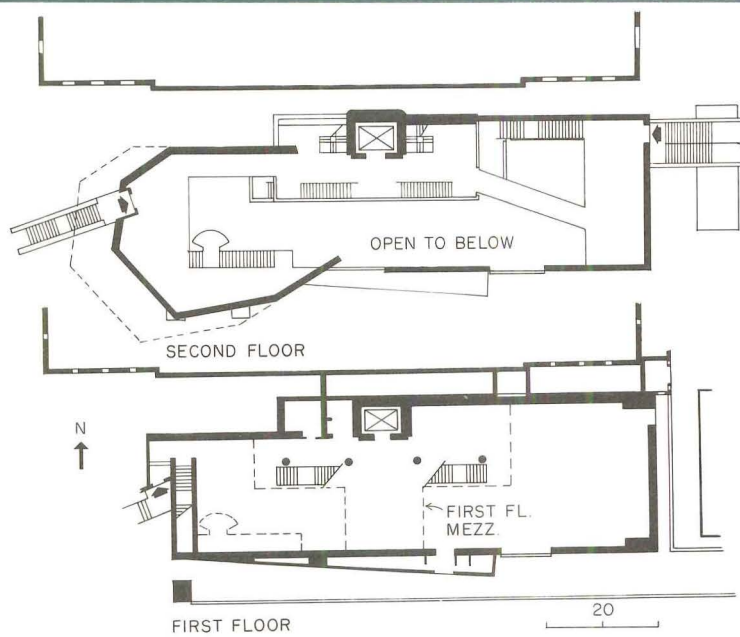




Private collection, Los Angeles,
courtesy Fred Hoffman Contemporary Art

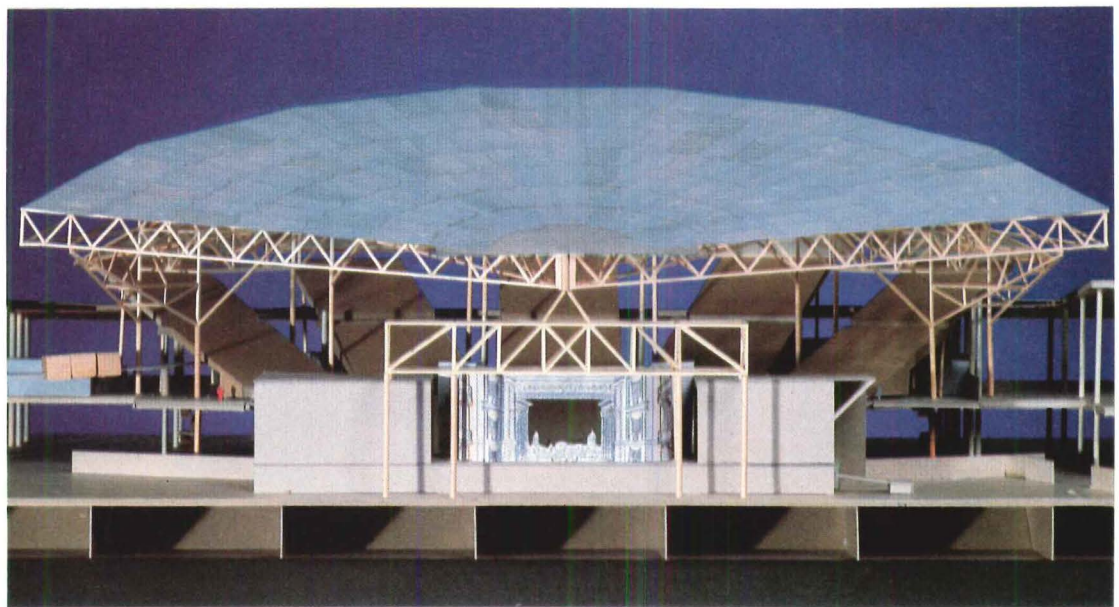
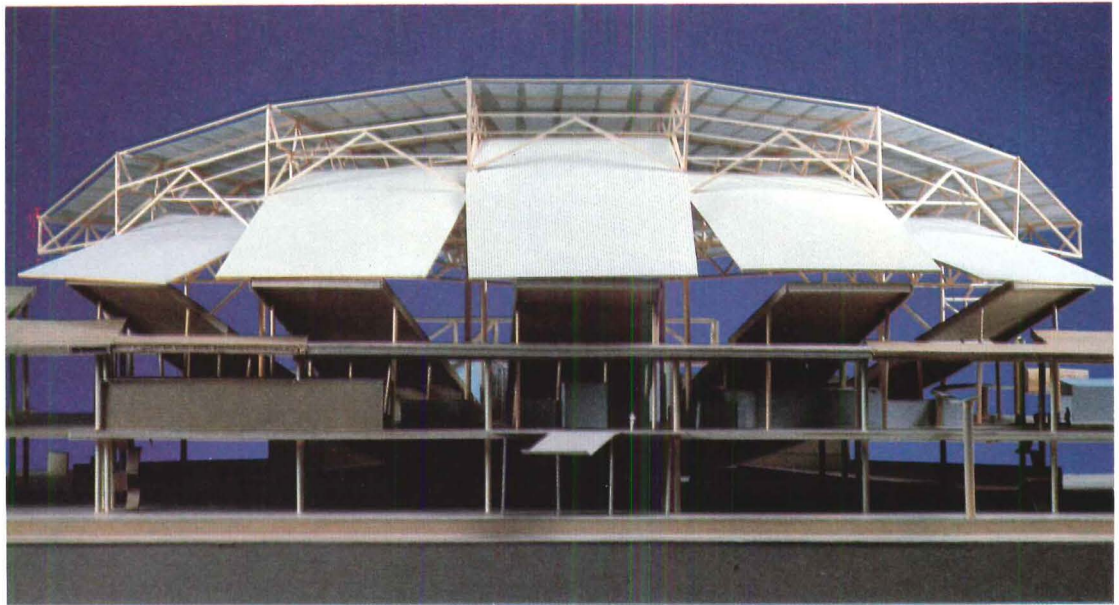


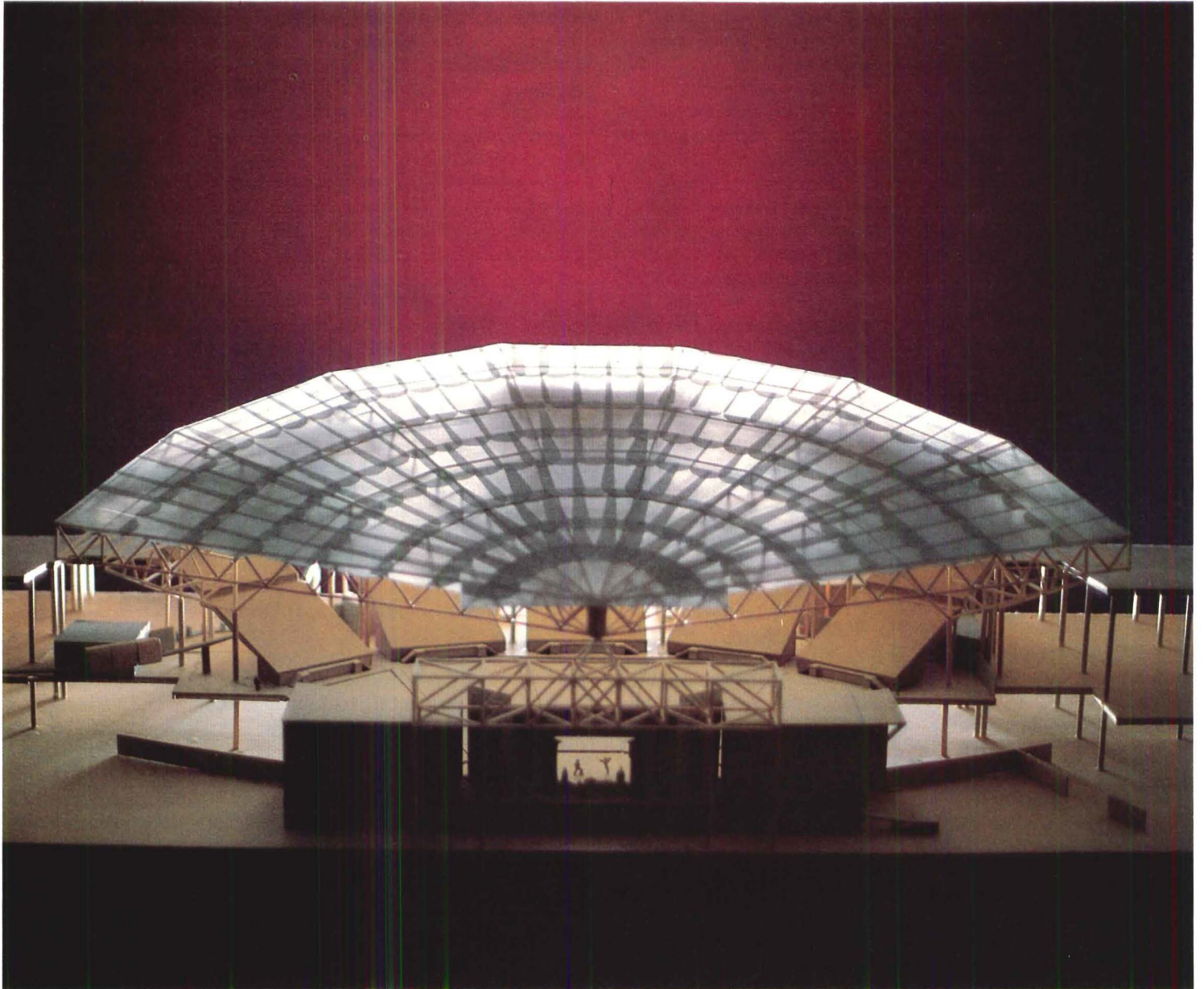
Tom Vinetz photos



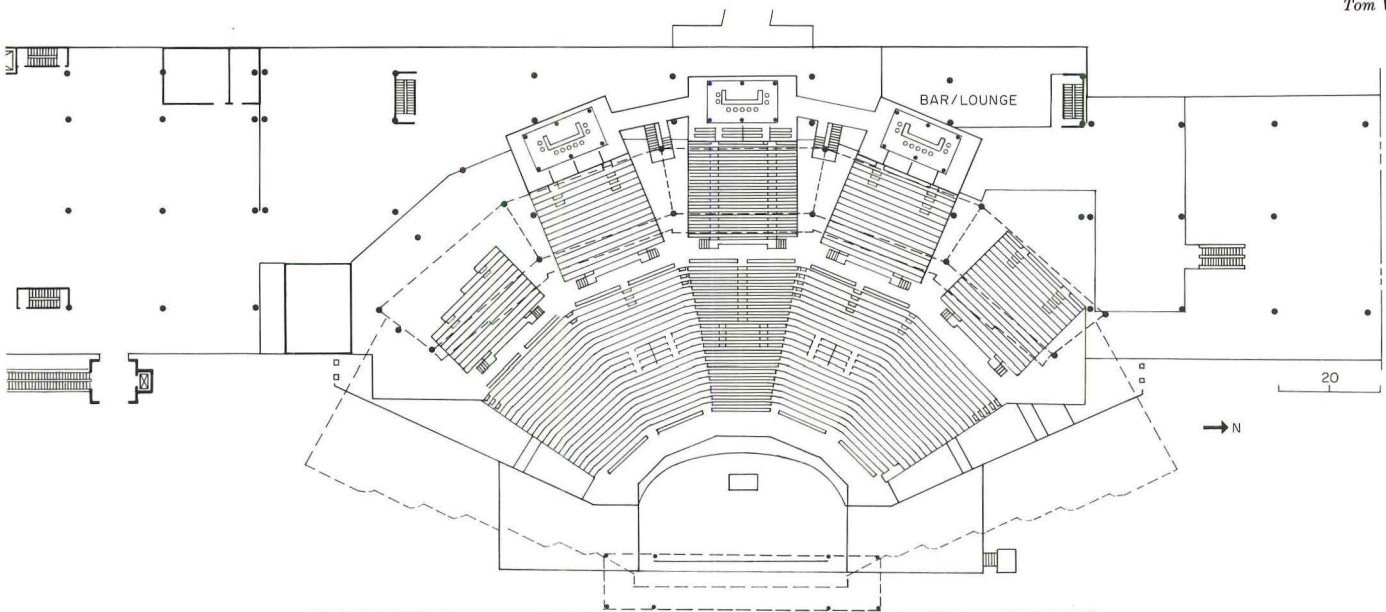
Amphitheater for the Louisiana, World Exposition, 1984 New Orleans, Louisiana

Gehry's recent obsession with biomorphic allusions reappears in this outdoor amphitheater on the bank of the Mississippi River—designed in association with Perez Associates/Studio Two for the Louisiana World Exposition scheduled for 1984 in New Orleans. The over-all massing of the theater's roof structure conjurs up a translucent wing in flight. Yet, curiously, instead of simulating plumage, Gehry plans to cover the steel-trussed roof structure with translucent plastic shingles that allude to a fish-scaled skin. When illuminated for night concerts, this fan-shaped plastic wing will have an iridescent glow. Shifting from the natural to the architectonic, Gehry installed a series of symbolic miniature "houses" constructed out of steel trusses as the support for this angled roof. (Gehry based this New Orleans amphitheater on the initial premise that he did not want to design it as another tent structure.) With obvious parallels to Gehry's Concord Pavilion (see photo 4, page 114), constructed in 1975, this amphitheater has been designed to "plug" into the surrounding fair pavilions.





Tom Vinetz photos



Still planning with the poor: community design centers keep up the good works

By Paul M. Sachner

"Advocacy planning" as a term and a practice began in the mid-1960s when it became apparent that much of the social-redress legislation enacted under the Kennedy and Johnson administrations, while well-intentioned, was not adequately addressing the injustices and economic deprivation that plagued America's poor. As riots dramatized the plight of urban ghettos and as the negative effects of urban renewal began to afflict cities across the nation, architects and city planners banded together to provide technical expertise in communities that had never had a voice in City Hall. These were the listeners of the profession—at first primarily black architects coming back to work in their home community, but later practitioners of all races who realized that they could not sufficiently serve the needs of society within the framework of a traditional design practice. Their answer was the formation of non-profit groups—known as community design centers (CDCs)—that are to architecture what legal aid is to law, and free clinics to medicine.

To some of the architects active in CDCs today, the forces that launched the participatory design movement and remain its central motivation are the interrelated issues of control and power. Ron Shiffman, director of the Pratt Institute Center for Community and Environmental Development in Brooklyn, observes that one of the key goals of his organization is to help low-income communities gain more control of their own resources. David Lewis, partner in the Pittsburgh firm of Urban Design Associates, agrees—and notes that ownership of property is essential if a neighborhood hopes to have any power over its own destiny. T. Michael Smith, director of the Center for Community Development and Design in Denver, adds that once control and power have been attained, the CDC seeks to "increase awareness and sensitivity for design by demystifying it through community education." He calls CDC practitioners the "folk architects" of our time.

The first CDC opened in 1963 when several architects supported by the New York Chapter of AIA started the Architects Renewal Committee in Harlem (ARCH), a now-defunct group that was formed initially to fight a proposed freeway in Upper Manhattan. Most early CDCs were characterized by activism among the young professionals who composed their all-volunteer staffs: there was little real design in those days as architects often took to the streets with community residents to protest a broad range of projects undertaken by government without local input.

Although a few centers quickly followed on the heels of ARCH, a majority of CDCs began during the turbulent years between 1968 and 1972, a period that saw dissatisfaction over the Vietnamese War and domestic social ills first explode into public unrest. One of the more productive results of this turmoil was a drawing together of architects, urban planners, sociologists, and other social scientists bent on solving the problems of America's poor. That so many CDCs opened at this time is not surprising; what is surprising, perhaps, given the political climate of the 1980s, is that most of those early centers are still around.

At present, some 60 CDCs operate across the country, and the variety among them is tremendous. Some see themselves as local development corporations stressing commercial or economic renewal; others are involved primarily in housing rehabilitation. Although many centers maintain a close relationship with schools of architecture—and benefit from the use of students on staff—most are run as independent non-profit entities. CDCs often stress free design services or underscore their role as community organizers, and most centers offer a combination of the two services. Accordingly, a typical CDC staff might consist of an architect, a planner, someone familiar with fund-raising (for both

client groups and the CDC itself), and an administrator well versed in government programs. To pay for staff salaries and overhead expenses, CDCs have relied on such diverse sources of income as the Community Development Block Grant program of HUD, the Federal CETA and ACTION programs, state housing and energy offices, private local foundations, and, in at least one case, the United Way campaign. CDCs have been particularly hard hit by the recent elimination of CETA, once a major source of staff, and by uncertainties over the future of CD grants to cities. Still, while some centers have been forced to cut back their operations since President Reagan took office, none has actually closed.

Perhaps the best way to understand more fully just what CDCs are all about is to examine in some detail three specific centers located in New York, a state that is a microcosm of the urban and rural woes that trouble many areas of the country. Although all three CDCs share a general philosophy and an organizational stability brought on, in part, by the continuous presence of strong leadership, they differ greatly in terms of budget, staff composition, and constituencies served. Together they comprise the core of technical assistance in three very different regions of a state that is struggling to cope with the related problems of economic decline, population loss to the Sunbelt, and a growing stock of undermaintained or abandoned buildings.

The Pratt Institute Center for Community and Environmental Development

Now in its twentieth year of operation under director Ron Shiffman, the Pratt Institute Center for Community and Environmental Development (PICCED) is the oldest, one of the largest, and possibly the most influential community design center in the country. As a special institute program, the center enjoys the services of advanced students from Pratt's schools of architecture and planning, who enroll for one year's credit and are assigned to perform architectural and planning services for one of the center's non-profit clients. What makes Pratt unusual among university-affiliated CDCs is the large number of full-time design professionals—17, including architects—who make up the core of the center's staff and supervise the students. Although Pratt Institute assists the center with some capital monies, insurance, and incidental expenses, Shiffman and development officer Susan Brome must annually raise funds for staff salaries and overhead costs. Despite the recent loss of over \$300,000 in Federal grants and contracts, the center has been remarkably successful in this regard and is one of the few CDCs in the country to receive substantial ongoing support from private foundations (Ford, Rockefeller, Mott, and others), banks, and local and state government sources (the City's Department of Housing Preservation & Development and the New York State Council on the Arts).

With an annual budget close to \$800,000, PICCED carries out a wide range of participatory design projects for local development corporations and other community-based groups throughout the five boroughs of New York City. Shiffman sees the center as operating on three closely related levels. First, there is architectural and planning assistance to nearly 80 organizations in such areas as housing rehabilitation, neighborhood surveying, re-use of community facilities, and economic development. Second, the center works with these same client groups to increase their administrative skills and build coalitions among like-minded organizations all over the city. Third, PICCED monitors and evaluates city, state, and national urban programs and attempts to educate (Shiffman eschews the word "lobby") legislators on the real needs that exist at the local level. Several

“At present some 60 CDCs operate across the country, and the variety among them is tremendous”

ongoing projects exemplify the kinds of assistance that the center regularly dispenses:

- Schematic design and the development of a fund-raising strategy for the gut rehabilitation of eight vacant rowhouses in the Longwood section of the South Bronx, an architecturally distinctive enclave that was recently placed on the National Register of Historic Places. Client: Longwood Historic District Community Association.
- A planning study emphasizing housing stabilization and commercial revitalization within a 40-block area of East Flatbush, a racially mixed neighborhood in Brooklyn. Client: East Rutland Road Citizens and Merchants Development Corporation.
- Preparation of schematic and working drawings, and supervision of construction on the conversion of three contiguous brownstones in the Bedford-Stuyvesant section of Brooklyn into an environmental education center. Client: Magnolia Tree Earth Center.
- Cost and design feasibility studies for the renovation of a commercial building in Manhattan's Chelsea neighborhood into a multi-purpose youth center. Client: Allied Chelsea Youth/Committee for a 19th Street Center.
- All design and construction phases of the restoration at Weeksville, a collection of early 19th-century frame buildings on the site of Brooklyn's first black settlement. Client: Society for the Preservation of Weeksville and Bedford-Stuyvesant History.

In addition to these “hands-on” projects, an increasing amount of the center's time is spent researching the intricacies of governmental policy in low-income housing and neighborhood development. For example, PICCED has contracted with the City's Public Development Corporation to do a survey of small businesses and factories in Astoria, Queens. A joint grant from the New York Community Trust and the Fund for the City of New York last year enabled Shiffman to coordinate a recently published study on the impact that a Federal housing voucher program for low-income people would have on New York City's population. Shiffman contends that the largely critical conclusions of the report may have led to the center's loss of some Federal aid in 1982. Nevertheless, he feels that research projects such as this have significantly affected Federal housing policies, and he sees the report as a crucial component of PICCED's mandate to advocate on behalf of low-income communities. Toward this end Shiffman hopes that the center will soon receive a contract with the State of New York Mortgage Authority to develop easily understood brochures for residents in neighborhoods eligible for subsidized, low-cost mortgages.

Troy Professional Assistance

Founded in 1969 by a group of students and faculty at Rensselaer Polytechnic Institute, Troy Professional Assistance—known by the transposed acronym TAP for easy pronunciation—is a community design center offering architectural and planning services to neighborhood groups, homeowners, tenants, and small businesses in the city of Troy, a working-class community of 56,000 situated across the Hudson River from Albany. Troy is typical of many medium-size cities in upstate New York that were once thriving industrial centers but have seen a steady decline in their economic base over the last 30 years. Known as the Collar City because of its former prominence as a shirtmaking center, Troy today presents a decidedly dual personality. On one hand the city is a college town (Rensselaer Polytechnic Institute, Russell Sage) and is endowed with a rich legacy of historic 19th-century architecture; on the other, it is a city beset by the kinds of urban woes that one associates with

much larger communities.

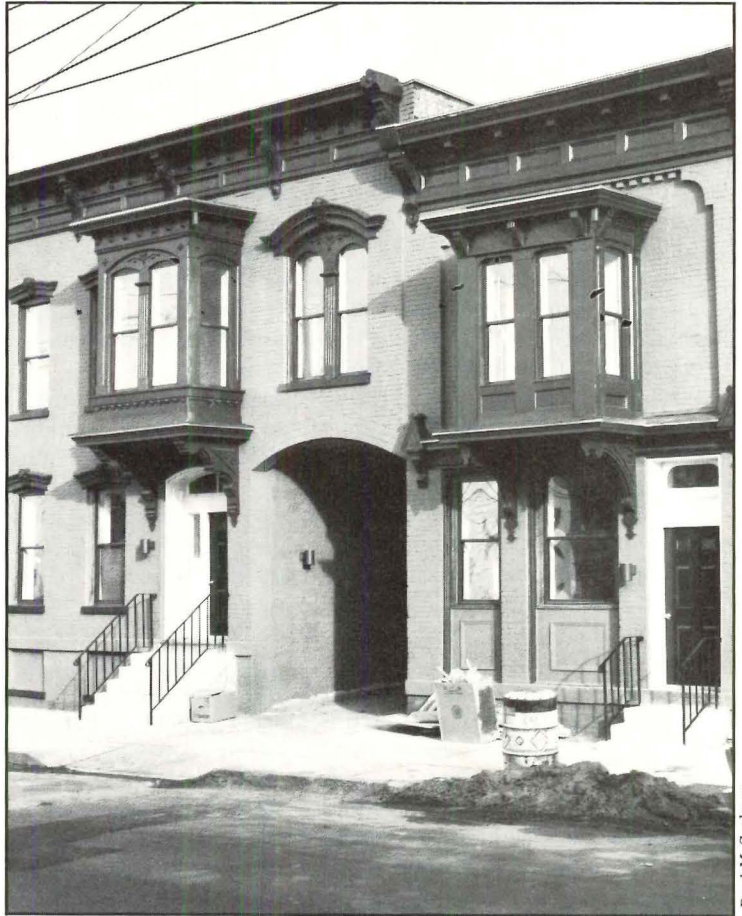
TAP was founded at the height of the period when urban-university student protests against the Vietnamese War were seen as a possible forum for addressing some of the social ills in the surrounding community. RPI was clearly a participant in this brief but powerful movement, and Joe Fama, TAP's executive director for the last ten years and one of the organization's student volunteers in 1969, recalls that “the level of operation back then was informal and hand-to-mouth. We were a storefront practice, and there were guys from the neighborhood who hung out on the weekends in our office and played cards on the drafting tables. There wasn't much in terms of advocacy for low-income people at that time, and TAP stepped in to do what had to be done.” Although it was formed by people associated with RPI, TAP has never maintained any formal relationship with the well-known technical institution that overlooks the city, a fact that separates the group from CDCs at Pratt and Cornell. During its early days TAP was an all-volunteer center, and much of its work involved participation in such relatively new notions as rent strikes and legal action against the State Department of Transportation for road projects that would have effectively wiped out large sections of the low-income community in Troy. As the organization matured, however, it gradually began to focus its efforts more on the kinds of design services—primarily housing, commercial rehabilitation, and planning for community facilities—that one associates with a classic CDC. Overseeing a six-person staff that includes two architects and two unlicensed graduates, Fama feels that TAP's real strength now is more in design, than in community organizing.

Today TAP operates out of modest offices in the heart of downtown Troy with an annual budget of approximately \$100,000. The group's work load is loosely divided into two project types. First there are major contracts that come from local development corporations and government agencies for cost estimates, working drawings, and supervision of construction, mainly for new and renovated housing. In two separate Neighborhood Strategy Area projects under HUD's Section 8 program, for instance, TAP worked with the Troy Rehabilitation and Improvement Program, a local development corporation, to design 96 units of renovated and 24 units of new housing in the city's predominantly black Ninth Street and Hillside neighborhoods, at a total cost of \$3.5 million. TAP will receive \$175,000 in project fees for its work on NSA, a substantial sum that will enable Fama's group to boast a rare, and probably short-lived, commodity among CDCs—a financial surplus.

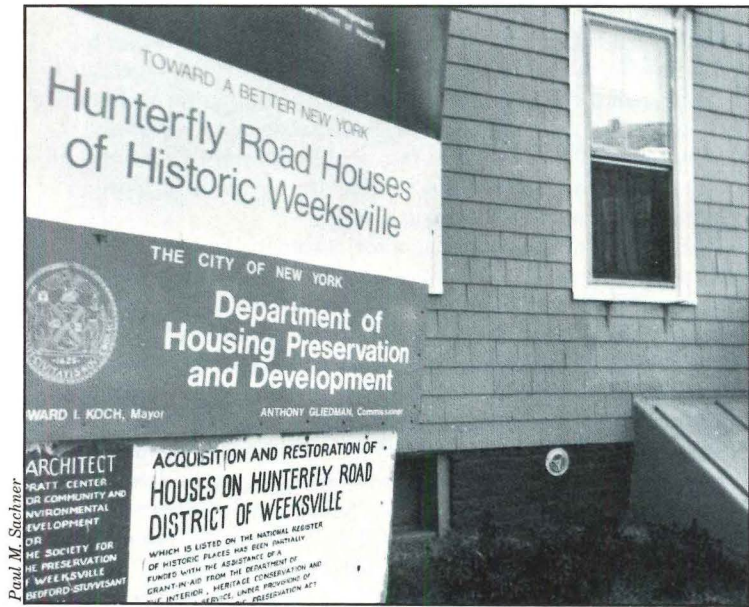
Fama hopes to use this temporary windfall to help subsidize TAP's second significant area of work, the Neighborhood Design Center. Informally run by architect G. Stephen Christopher, a one-time Peace Corps volunteer who has been with TAP on-and-off since 1970, the NDC assists approximately 60 organizations and individuals annually on a variety of architecture- and planning-related matters. A glance at the organization's project log shows that the range of TAP's assistance is impressive. Aid to the individual homeowner who must deal with the bewildering regulations of the city's fire and buildings departments, feasibility studies for the conversion of a church basement into a community center, development of a parking lot for a tavern owner, preparation of working drawings for the expansion of a day-care center—this is just a sampling of the kinds of projects that TAP handles regularly. The NDC phase of the organization's operation is funded chiefly through an annual grant from the New York State Council on the Arts and, most unusually, through project fees. In fact, one of the things that distinguishes



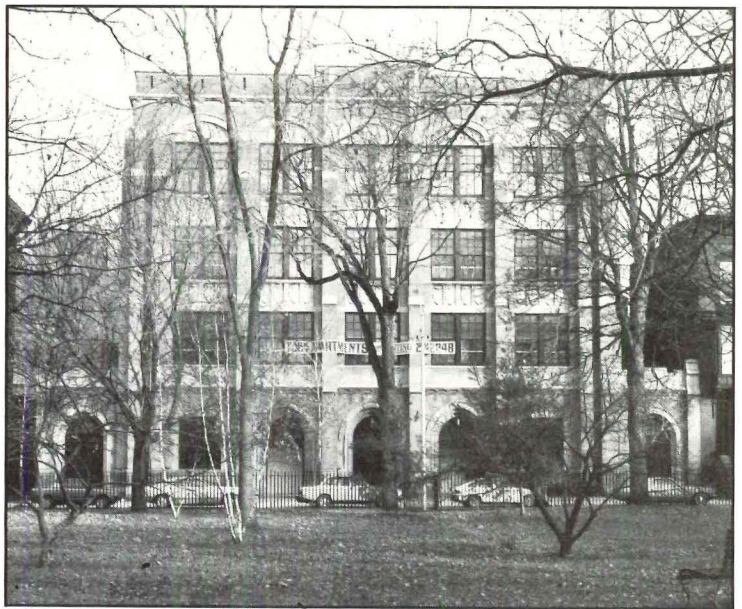
Paul M. Sachner



Paul M. Sachner



Paul M. Sachner

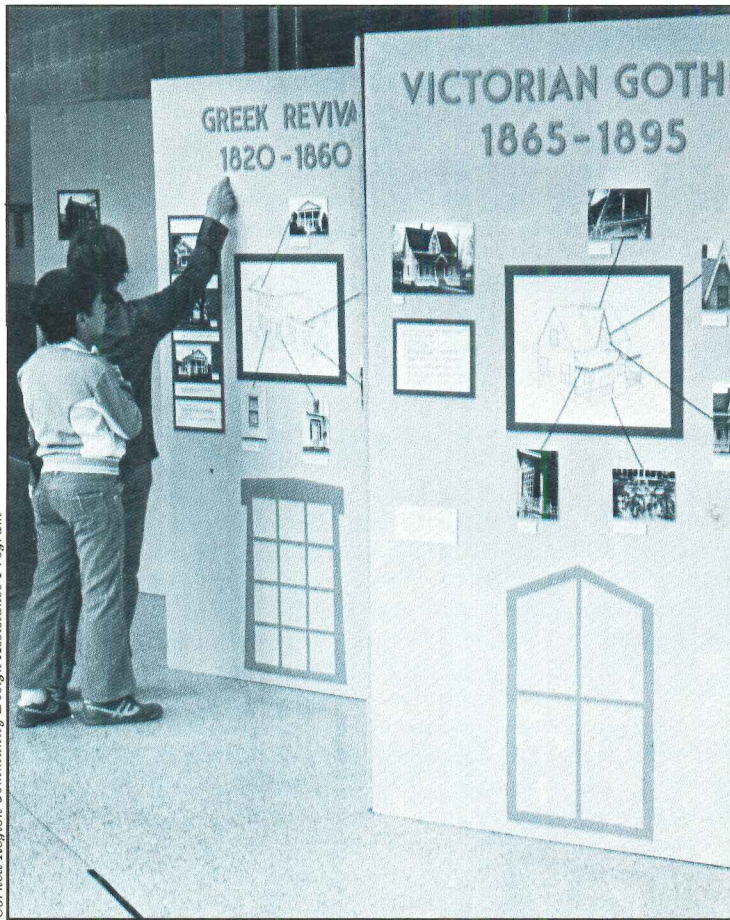


Two row houses (top) are being rehabilitated by Troy Professional Assistance under the HUD Neighborhood Strategy Area program. In 1979 TAP provided early feasibility studies for the conversion of the former St. Mary's School in Troy's Washington Park (above) into rental apartments. The actual renovation was carried out by The Ehrenkrantz Group of New York City and completed in 1982.

Three brownstones (top), on Lafayette Avenue in the Bedford-Stuyvesant section of Brooklyn, which were vacant, have been converted into new headquarters for the Magnolia Tree Earth Center. The work was done under the supervision of the Pratt Institute Center for Community and Environmental Development. PICCED is providing all design and technical assistance for the restoration of historic early 19th-century frame structures that comprised an early black settlement in Bedford-Stuyvesant (middle). Ron Shifman, director of PICCED, is shown in his office (left).



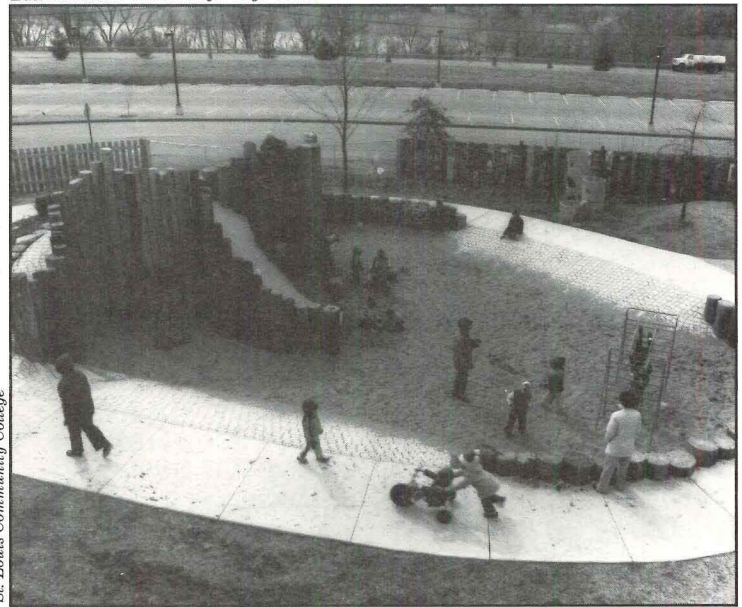
Paul M. Sachner



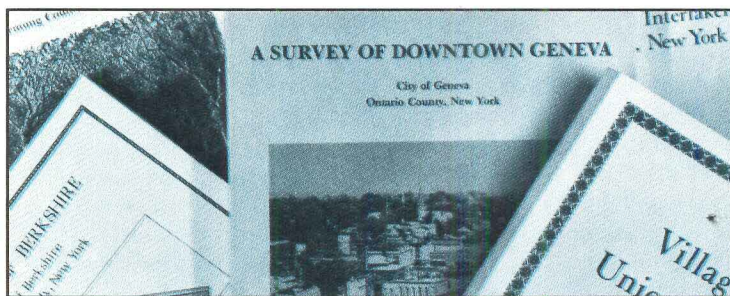
Cornell Region Community Design Assistance Program



East Tennessee Community Design Center



St. Louis Community College



A recent exhibition focusing on the historical styles of the region (top) was held in a local elementary school in the hamlet of Berkshire, Tioga County, New York. The exhibition, sponsored by the Cornell Region Community Design Assistance Program, was geared toward both adults and school children and was mounted by a team of students from Cornell as a follow-up to survey activity in the

hamlet. The sampling of survey reports (above) is the work of the Cornell Preservation Planning Workshop.



Minnesota Community Design Center

Shown at top are a group of local participants in Denver's Center for Community Development and Design. The Knoxville Housing Corporation purchased the house (second from top) and three other abandoned houses in the neighborhood, renovated them, and formed the first phase of a low-income cooperative. The East Tennessee Community Design Center provided preliminary plans.

A playground at Shaare Emeth Temple in St. Louis was designed and built by students and volunteer architects working in the CDC at St. Louis Community College. The Minnesota Community Design Center assisted the Merriam Park Neighborhood Housing Services and local businessmen in the improvement of a neighborhood commercial intersection in St. Paul (above).

“...while some centers have been forced to cut back their operations since President Reagan took office, none has actually closed”

TAP from many other CDCs is that the Troy group often charges for its services, a practice that Fama justifies by claiming that there is a high throw-away rate when services are completely free. TAP's records, however, show that the fees charged are nominal and, in many cases, never actually collected.

The issue of fees inevitably raises the question of the CDC's relationship to the rest of the architectural community and, more specifically, the problem of whether the low cost of TAP's services actually competes unfairly with architects engaged in private practice. Fama feels strongly that the work of his organization does not constitute unfair competition and, in fact, may even stimulate commissions for area architects. While TAP has the capability of seeing projects through working drawings and supervision of construction, most of its clients receive assistance only through a project's preliminary stages. In 1979, for example, TAP was asked by two local developers to help determine the feasibility of converting St. Mary's School on Washington Park into housing. Fama and his colleagues investigated zoning considerations, drew up some initial apartment layouts, checked for tax credits made possible by the structure's location in a National Register historic district, and helped the developer obtain a Federally-financed UDAG loan. After architectural and fiscal feasibility was assured, TAP turned the project over to The Ehrenkrantz Group of New York City, the architects of record who completed the renovation in 1982. Similarly, TAP recently assisted the Rensselaer County Council on the Arts when that organization was contemplating renovation of its three-story brownstone headquarters. TAP's early involvement in the planning stages helped the arts council raise capital funds for the construction phase, which was overseen by a local architect. Fama contends that without TAP's initial support neither project might ever have reached the final design stage.

Never an organization to stand still, TAP hopes to begin several new projects during the next two years. One involves the establishment of a community land trust in Troy; another would promote recycling by means of an urban environmental-awareness fair; a third, in cooperation with the Troy Public Library, would set up a collection of written materials and a catalog for property-owners undertaking building renovation. Last year TAP sponsored the Neighborhood Law Project, a program funded by the local Bush Foundation to pay for the services of Pat Morphy, a young lawyer who provides low-cost aid to city residents on housing-related legal matters. TAP is currently awaiting word on a \$60,000 grant proposal to the State Division for Housing and Community Renewal that would focus some of the organization's activity specifically on an area of South Troy, a largely Italian, Polish, and Irish working-class district that is being pushed and pulled apart by the familiar combination of deteriorating housing stock and the beginnings of gentrification. Since this grant is renewable, its receipt could determine TAP's direction for the next five years.

Cornell Region Community Design Assistance Program

A community design center serving the villages and small cities of upstate New York's Finger Lakes and Southern Tier? As improbable as this notion might sound, that is exactly what has evolved over the past ten years at the Cornell College of Architecture, Art, and Planning—a rural-based CDC fashioned to address the very specific needs of residents living within a 60-mile radius of Ithaca, Cornell's home town. Well-known as the largest wine-making region east of the Mississippi, the area is characterized by beautiful rolling farmland, crossroads hamlets, and the larger municipalities of Binghamton, Elmira, Geneva,

Auburn, and Corning that serve as commercial and tourist centers. Throughout the Finger Lakes and Southern Tier, moreover, there is an impressive array of 19th-century architecture that is a reminder of the significant role the region played in the history of the state's expansion to the west.

In spite of its considerable charm, the area surrounding Cornell is something of an economic backwater. Industries have cut back operations or, in some cases, closed, leaving behind a stock of underutilized and undermaintained buildings, a battered tax base, and high levels of unemployment. Farms that had been in families for generations have shut down. At the same time the fiscal health of central business districts in many economically beleaguered communities has been steadily eroding and even in more prosperous towns, the construction of peripheral shopping malls has resulted in a large number of vacant storefronts. Some CBDs have fought back—Corning's Market Street restoration is often held up as a national model for the successful renewal of small-town business districts—but the over-all picture in the region is one of slow decline. (Interestingly, the situation in upstate New York is exactly the opposite of conditions existing in rural Colorado, where the Denver-based Center for Community Development and Design is helping the western part of the Golden State cope with the social, physical, and cultural growing pains accompanying that state's current economic boom.)

In the early 1970s a few Cornell faculty members, led by professor of city planning Stuart Stein, recognized that the university's rural location did not necessarily preclude design assistance to area communities. On the contrary, the need seemed greatest in smaller localities that lacked any institutional resources and had little, if any, indigenous design-awareness activity. Early forays into the surrounding landscape by planning students solving hypothetical problems gradually evolved into a more formalized triple-tiered CDC known as the Cornell Region Community Design Assistance Program (CRCDAP). Around 60 students annually participate in the program's three components—historic preservation planning, downtown revitalization, and design education in area public schools—and, as at Pratt, all receive course credit for their work. CRCDAP's philosophy, however, is that it exists to work cooperatively with the client communities rather than to use the communities as subjects for research. Or as Stein puts it, “In this program we place community service first, students' education second.”

By far the most active of the program's three divisions is the Preservation Planning Workshop, led by Tania Werbizky, a young preservationist who, as a native of Binghamton, possesses a thorough knowledge of the region and is ideally suited to initiate preservation-related activities in the tiny villages and small cities comprising Cornell's 11-county constituency. The primary methodological tool that Werbizky and her students use in each community is a comprehensive survey of all architecturally and historically significant structures. After preliminary field work students conduct research on the surveyed material, propose individual structures and historic districts for possible listing on the National Register, and publish a written report of their findings that is distributed within the study area. Cornell's work in a town often culminates in a public program—*e.g.* lecture, exhibition, town meeting—designed to stimulate the community's awareness of its historic building fabric.

CRCDAP's second phase of activity, begun in 1979 and initially run by downtown consultant Norman Mintz of Corning, is the Small Town Community Design Workshop. Now coordinated by Syracuse architect Carl Stearns, this program seeks to “define the nature of small towns and question the origins of community

“As New York’s Chelseas and Columbus Avenues grow more prosperous, so too do its Bushwicks and Brownsvilles expand and become more desperate”

image.” The workshop is currently active in the communities of Maine, Whitney Point, and Canandaigua, where students have analyzed those qualities—buildings, landscape, people—that give each town its special sense of place. With input from local representatives, Cornell has prepared a series of design recommendations aimed at enhancing each locality’s image. Findings are made available to the public via either written reports or, more often, through graphic exhibits.

The third phase of Cornell’s community efforts—design education in the public schools—has been ongoing since 1972 but developed most actively when the university was funded by the Architects-in-the-Schools program of the National Endowment for the Arts. Although funding for the program ceased in 1978, Stein has continued sending Cornell students into the Ithaca public schools on his own and into the Corning-Painted Post system with the assistance of a grant from Corning Glass. Using a curriculum developed by Stein, advanced students in architecture, landscape architecture, historic preservation, planning, and architectural history teach one day a week at the elementary, middle, and high school levels. Howard Wolff, an Albany architect who periodically travels to Ithaca, supplements the curriculum with a basic structures course for elementary school students alone.

Although both Cornell and Pratt share the common goal of community service through their university-affiliated CDCs, the differences between the two programs are more obvious than their similarities. For one thing, while the Pratt Center receives financial support from a wide variety of public sources, private foundations, and government contracts, Cornell, with a budget roughly one-twelfth the size of Pratt’s, depends pretty much on the university itself for financial aid, along with modest annual grants from the New York State Council on the Arts and the State Division for Historic Preservation. The overriding emphasis at Cornell, moreover, is in the area of “design awareness” and “public information” projects, versus Pratt’s chief concern with neighborhood organizing and, more significantly, the actual design and construction of housing units and community facilities. This factor explains the difference in the composition of the two centers’ staffs: at Cornell three professionals supervise 60 students annually, while at Pratt, where the need for licensed designers is greater, the ratio is 15 professionals to 25 students. Finally, while both centers are concerned primarily with the re-use of existing structures, the interest in preservation among Cornell students is more “archaeological” than it is at Pratt, where the desire for historically accurate restoration is constantly tempered by the acute needs of New York City’s neighborhoods. It is not a case of one CDC being right and the other wrong: each is responding directly to the particular requirements of its constituency.

Because Stein has been involved in Cornell’s community program since its inception, he is in a good position to evaluate whether student attitudes toward public service have changed over the last 15 years. Among Cornell’s design students Stein feels that “although interest in community service has probably gone down, the interest in getting practical experience while in school has probably gone up.” Moreover, he adds that “during the late 1960s and early 1970s there was often a difference between what students said they wanted to do in the way of community design work and what they were in fact willing to do, which was sometimes disappointing. Now, perhaps because of the questionable state of the job market, there is a strong feeling among students to try things out and apply their skills.” The pool of students willing to engage in participatory design, then,

remains deep, regardless of whether it is altruism, self-interest or a combination of both that motivates them.

Conversations with the directors of other CDCs across the country confirm Stein’s contention that, for whatever reason, students are still available for community design work. In Boston, Don Brown coordinates the CDC at the Boston Architectural Center, which since 1977 has assigned over 150 students and volunteer architects to work with 100 organizations in Greater Boston. In St. Louis, Arthur Grunmann, associate professor of architecture at St. Louis Community College at Meramec, has developed what is thought to be the only CDC in the country operating out of a two-year institution. Of the some 50 students who are annually enrolled in an associate degree program in architectural technology and participate in the CDC, many are as young as 18 years. Like Stein, Grunmann feels that architecture students today want a “connective reality” in their education and the kind of “real projects” that come with working in participatory design.

While it is difficult for CDCs in the 1980s to exhibit the unbridled confidence that characterized the movement as little as five years ago, most centers seem to be coping well with their limited resources, and many directors remain optimistic for the future. By turning their attention to such programs as energy conservation and commercial development—areas that were virtually unheard of for a CDC back in the 1960s—centers have greatly expanded the range of services associated with participatory design. In energy use, for example, the East Tennessee Community Design Center recently coordinated a major exhibit on alternative power technology at the Knoxville World’s Fair. Plan/Build in Syracuse and the Pratt Center have also been active developing energy-saving weatherization systems for residential units. Two CDCs in the Midwest are concentrating on projects that involve the commercial revitalization of business strips in low- and middle-income neighborhoods. Ruth Murphy directs the Minnesota Community Design in Minneapolis where “we do a lot of work giving technical assistance to small businesses in the Twin Cities that don’t have the expertise to improve or expand.” Similarly, in Columbus, Ohio, architect Robert Busser divides his time between private practice and a newly formed CDC that is working with the Chamber of Commerce, the local Community Development office, volunteer architects, and students from Ohio State University to “restore the public image of the street” by means of a facade renovation program in six commercial areas of Ohio’s capital.

Far from being a phenomenon that ended in the 1970s, then, the urge for design professionals to form centers committed to righting some of society’s wrongs remains strong. Even though the situation in many of America’s municipalities has improved substantially over the last 20 years with the so-called “back-to-the-city” movement among young professionals, the fact remains that gentrification of inner-city neighborhoods does not remove blight or solve the problems of those who suffer from urban decay—it simply transfers the mess from one point to another. As New York’s Chelseas and Columbus Avenues grow more prosperous, so, too, do its Bushwicks and Brownsvilles expand and become more desperate. If CDCs and the practice of participatory design can never be expected to come up with all the answers, they at least provide a degree of hope in a world where the gap between the rich and poor is wider and more apparent than ever.

Paul M. Sachner is a free-lance author who writes frequently on preservation issues.

Upstairs, downstairs

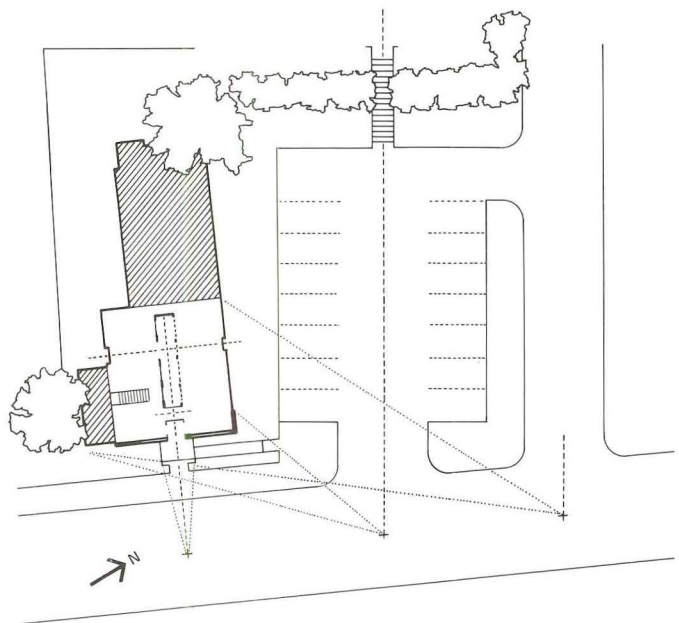
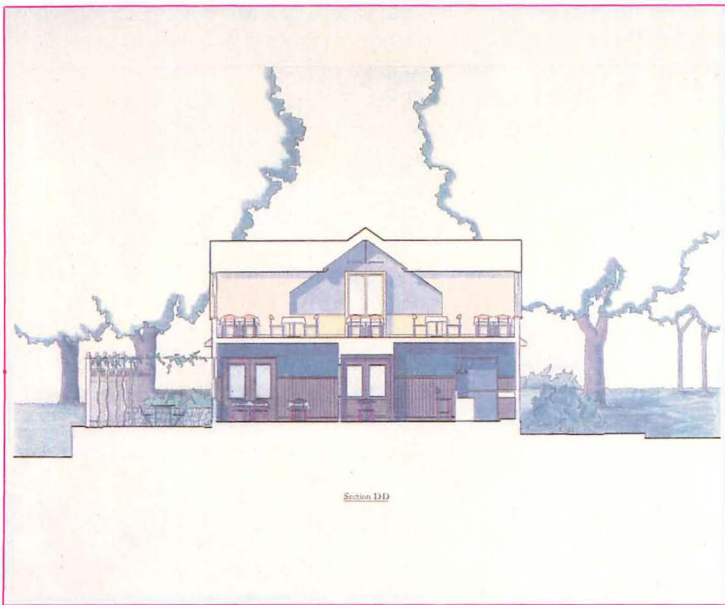
© 1982 Langdon Clay photos (except as noted)



"We wanted to keep the flavor of our surroundings too," recalls restaurateur Denis Ossorio, of the Covington Restaurant in Armonk, New York. And a 30-mph drive south along the New York suburb's Main Street (photo right) reveals that Ossorio and partner John McCormick did, in fact, keep what they wanted to keep, thanks to the recipe supplied by architect Mark Cigolle: begin with the foundations of a late 19th-century ice house and the frame of a mid-20th-century "roadhouse"; add a nine-foot bay on the street, a small bathroom and large kitchen shed to the side and rear (site plan below), eight dormers, and a front porch worthy of grandmother's house; then cover with glossy-white clapboard, and garnish with one red canvas awning and two brass carriage lamps (photo left). Voilà! It's picturesque. It's charming. It's Main Street, U.S.A. (which we now know is *at least* "almost all right"). It's also a commercial venture, however; one notorious for quickly separating the master chefs from the hash slingers, so to speak. Consequently, the owners would like motorists on Main Street to do more than admire—in passing—their contribution to Armonk's early-Americana "flavor." They would like them to admire—and frequently—the more robust flavor inside.

Whether lured by the quiet good taste of the exterior, or by the favorable review of *The New York Times* restaurant critic Mimi Sheraton, winners and diners at the Covington need not depend on Soave Bolla and filet of sole alone for warm welcome: assisting are a "traditional" English tearoom and an equally "traditional" English pub—upstairs and downstairs, respectively (section left, photos page 134-135). Just as the menu offers a choice between beef and fish, the restaurant offers a choice between "masculine" and "feminine," according to Cigolle. Gender stereotypes notwithstanding, one can either opt for the clubby ground-floor bar and dining room (photos page 134)—where Uncle George, with his cigar and French brandy, would feel at home among deep red and green lacquered walls, marble tables, oak and mahogany paneling, antique etched glass, and a grand old bar (formerly of "The Fighting Cock Saloon" in London)—or for the bright and airy second-floor dining room (photo page 135)—where Aunt Martha, with her white gloves and iced tea, would feel at home among subtle pastels, soft carpets, delicate stencilwork, and intimate alcoves.

It's nice to have a choice: in a menu, and in a restaurant.
Charles K. Gandee





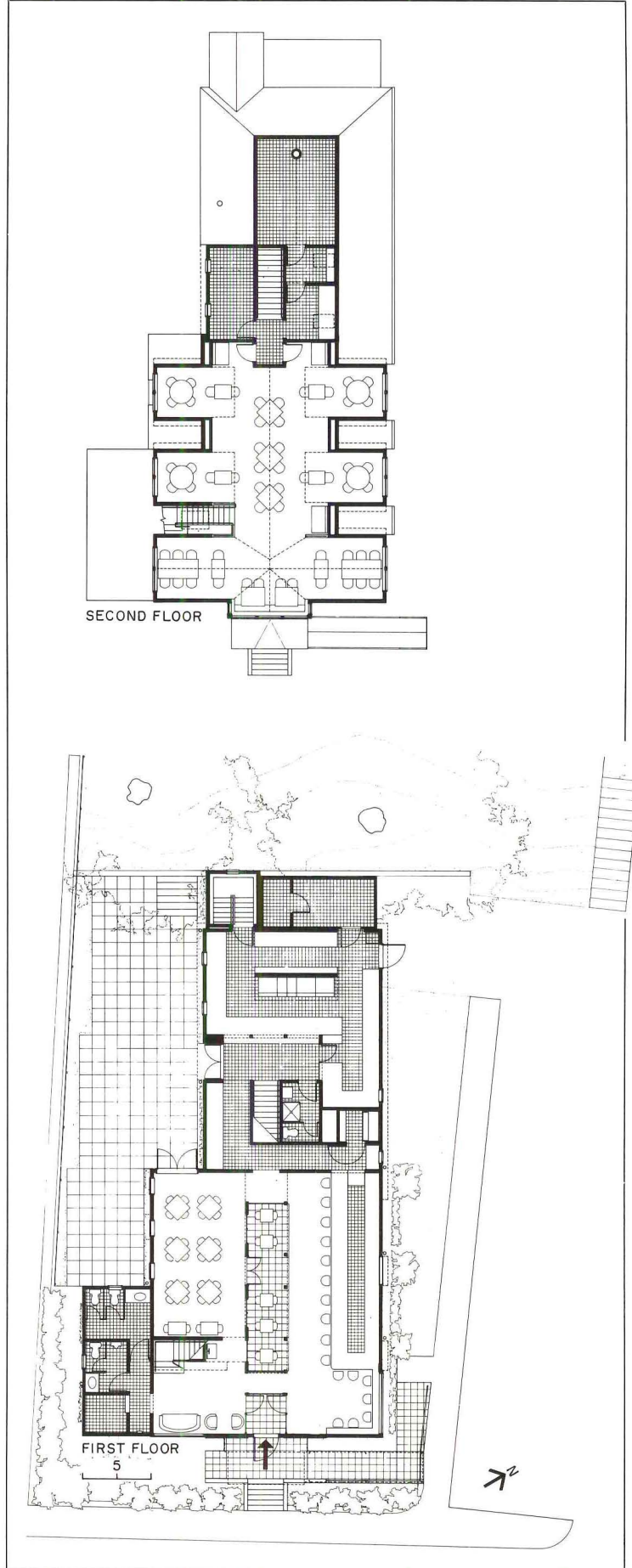
Miles Cigolle

Though the Covington Restaurant is a commercial enterprise, it does not, at first glance, appear so: no neon sign blazes; no festive banner waves. Architect Mark Cigolle eschewed such traditional commercial accouterments in favor of traditional domestic accouterments: gabled roofs, clapboard siding, double-hung windows. . . a front porch. Why? "The restaurant fronts on Main Street of the small town of Armonk,

New York. As is typical in such a town, a period of transition has left older private houses to share the street with recently added commercial structures of often jarring character." Clearly, Cigolle views that "period of transition" as lamentable; clearly, he has tried to give those older private houses a recently added commercial structure of sympathetic character.

Downstairs at the Covington (photos left, plan bottom), the ceilings are low, the materials are rich, the spaces are intimate, the palette is dark, and the atmosphere is clubby; upstairs (photo right, plan below), the ceilings are high, the materials are not so rich, the volumes are commodious, and the palette is light. The change in esthetic tempo is architect Mark Cigolle's response to client/

restaurateur Denis Ossorio's rhetorical question: "Two-story restaurants are tough. . . who wants to go upstairs?" By providing Covington's upstairs with an identity altogether different from Covington's downstairs, Cigolle has ensured that many will.





*Covington Restaurant
Armonk, New York*
Owners:
Denis Ossorio, John McCormick
Architect:
*Mark Cigolle, Architect—Katharine
Coleman, associate; Henry Chang,
Christopher Andrews, project team*
Engineer:
Ron Mayrbaur (structural)
Landscape architect:
Alexander Associates
General contractor:
Makdow Development Corporation

In a trading room, the right environment means business

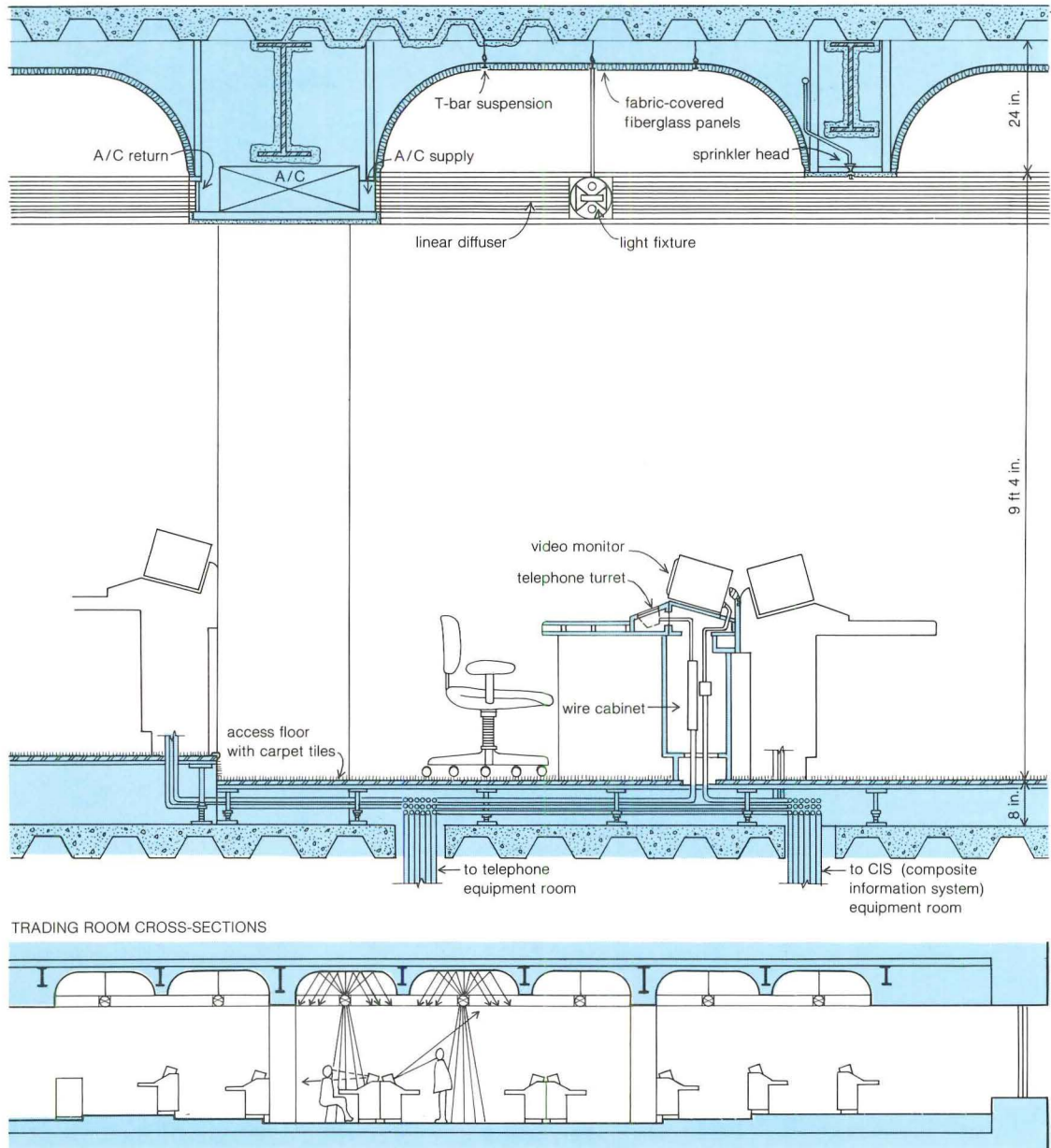
On a peak day the 240 traders and salesmen in the trading room of the Resources Management Division of Bankers Trust Company handle \$10-billion in transactions. Their ability to perform well in the hectic-paced business of dealing in municipal and government bonds and in foreign currencies depends greatly on the quality of the lighting and acoustical environments.

A lighting system is required that, first of all, avoids reflections on the CRT screens. Secondly, the illumination has to be sufficient for the normal tasks of reading and writing, but low enough so that the data on CRT screens have enough contrast, and so that the buttons on telephone turrets can be easily seen. Thirdly, the lighting system must provide adequate definition of depth and shadow so that hand gestures, and even lip movement, can be perceived.

Sound control is important because traders and sales people frequently shout across the room when trading is fast and furious. High ceilings are desirable so that sound, and thus noise, are not localized.

More heat has to be removed than in standard office space because of the density of people and the large number of CRTs.

In response to these multiple requirements, the designers developed a neatly resolved "organic" approach to the ceiling. By using a series of vaults of fabric-covered premolded fiberglass the designers achieved: 1) reflectors for the indirect component of the lighting, 2) a high ceiling for acoustical and esthetic purposes, and 3) routing space for ductwork.



The sections cut through the narrow dimension of the trading room, which is about 80 by 180 ft. The vaulted ceiling raises the height of the room while also enclosing longitudinal beams, and serving as a series of reflectors for indirect light. To maximize the head room over the trading area, the major trunk ducts were installed along the periphery above a concealed-spline ceiling.

Sprinklers and branch ducts were placed tight to the secondary beams, and air distribution into the space is provided by linear diffusers placed vertically along the fascias. Bulkheads enclosing cross-beams modulate the vaults along their length. The open trading room is stepped in two tiers on each side of the center section to improve visibility across the rows of desks—achieved by setting the access floor

at 8-, 12- and 16-in. heights. The lighting fixture is a cable-suspended, extruded aluminum tube light, continuous for the length of the bay. It has an unshielded single tube uplight and a single tube downlight that is shielded by a parallel-blade lower, directing light downward and providing a 45-deg cutoff.

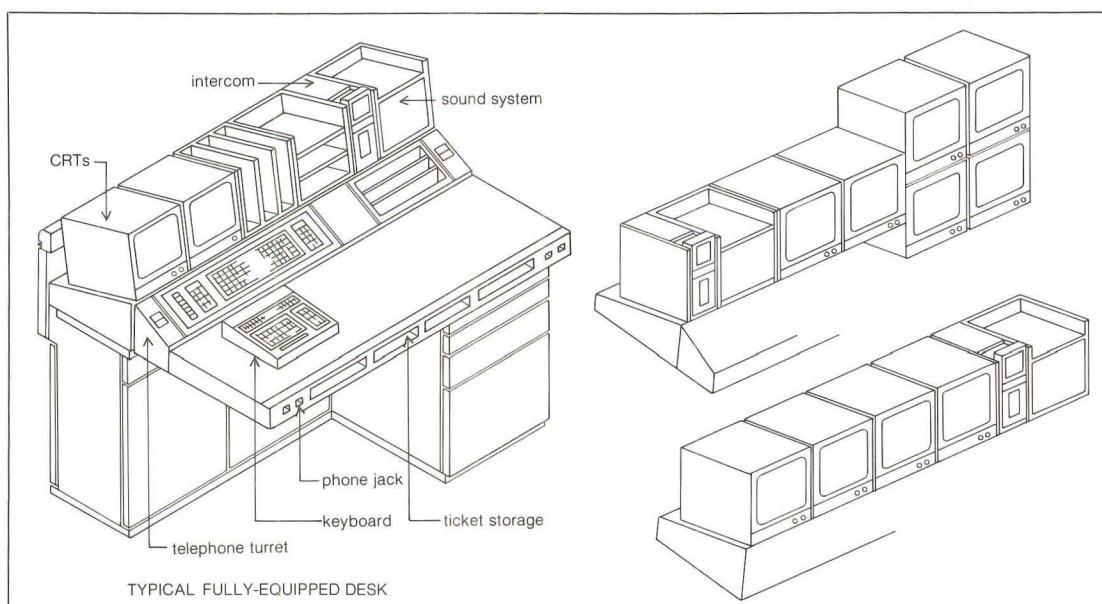
The basic workstation contains a full complement of visual and audio equipment to assist workers in making trades: 1) a composite information system (CIS) consisting of from one to four uniform CRTs, and a keyboard with CRTs dedicated to a workstation or shared between two workstations; 2) a direct-line telephone system consisting of a turret on each desk with from 40 to 200 lighted buttons; 3) an intercom

for internal communication; 4) a sound system consisting of a microphone and four speakers (in one box) broadcasting specific and ambient sound to and from other bank-owned trading stations (London, Chicago, Los Angeles), or between any designated locations on the floor, itself. In addition, at the ceiling, are news bulletin boards that must be visible to everyone in the room.

Norman McGrath



Engineering



Trading Room, Resources Management Division, Bankers Trust Company, New York City
Interior designers: Interior Facilities Associates, Inc.—Robert J. Orlando, Gerd Althofer, AIA
Consultants: Jules Fisher/Paul Marantz, Inc. (lighting); Robert A. Hansen Associates (acoustics); Dermot Reddy (mechanical/electrical)
Owners' representatives: Joseph Intonato, project manager; Daniel T. Mudge, coordinator for the owner

A project that takes passive energy seriously

Over the years, building designers have used air movement and the sun's energy in varying degrees to enhance human comfort.

But, by and large, their techniques have been component-type, piecemeal approaches. Only recently have architects begun to deal with the building envelope and with energy as interrelated systems.

Initiated three years ago by the Scottish Development Agency, which may have offices in the building complex, St. Enoch Square is an instructive example of a serious energy study for a major-size commercial venture, and of effective early collaboration among owner, developer, architects, and consultants.

The joint-venture architects briefly considered a conventional building, but since the client wanted to minimize use of electric energy and fossil fuels, and because final uses of commercial space (aside from the client's own offices) have yet to be determined, the architects hit upon the idea of sheltering a variety of enclosed structures and open-area functions with one huge clear-glass envelope.

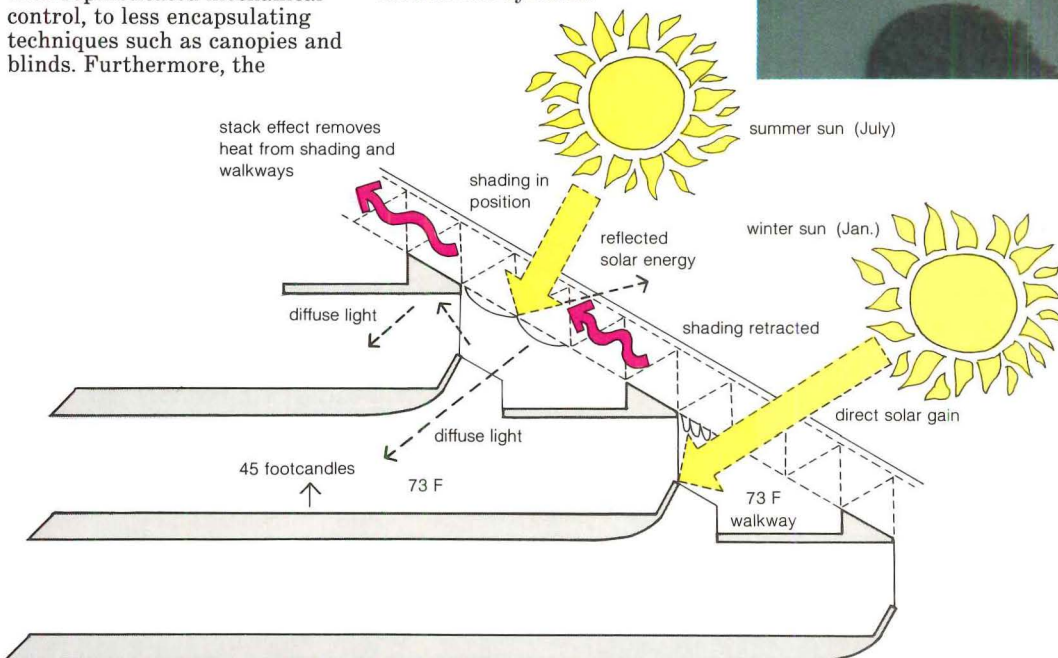
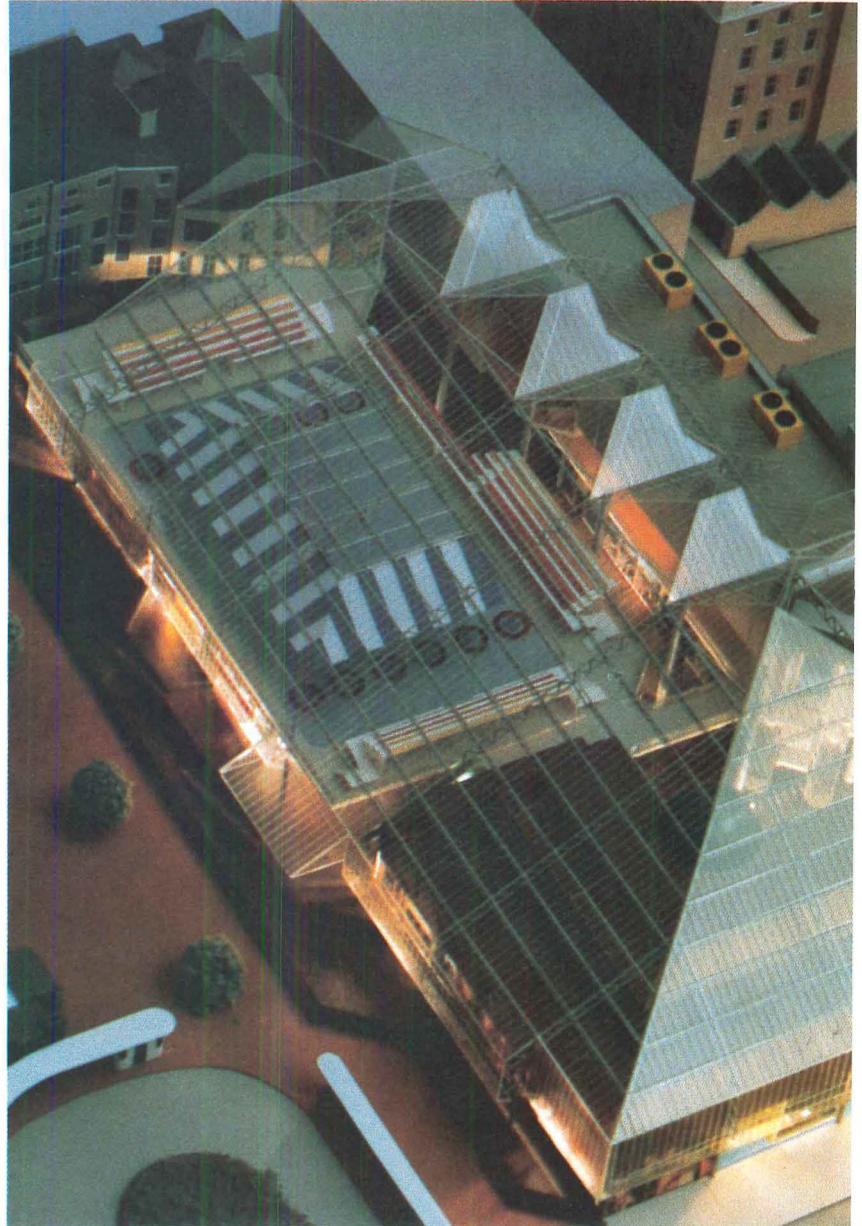
This glass envelope was conceived as an architectural approach to meet the demands of a competitive venture while at the same time establishing a civic presence, and, most importantly, achieving a high degree of natural environmental control. The architects envisaged spaces within the enclosure to range from full-wall enclosure with sophisticated mechanical control, to less encapsulating techniques such as canopies and blinds. Furthermore, the

architects and engineers felt that with non-critical areas such as the atrium and office walkways, temperatures could "float" corresponding with diurnal and seasonal temperatures.

Specifically, the design seeks to utilize: 1) passive solar gain in the winter, spring and fall; 2) excess heat from stores, offices and ice rink mechanical system to heat the atrium in winter; 3) natural ventilation and solar control in summer; and 4) daylighting to the maximum extent possible all year.

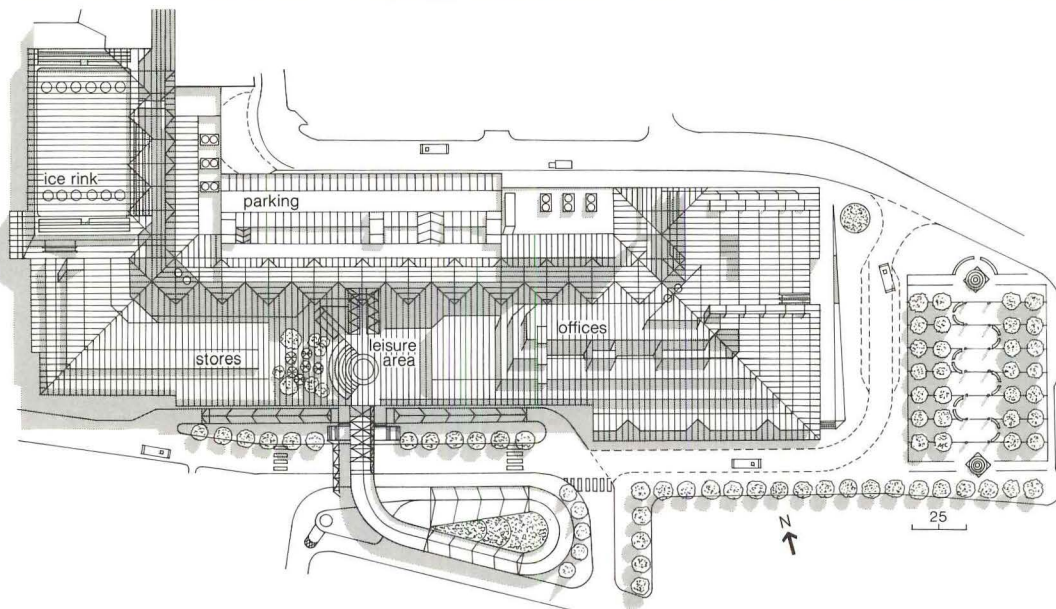
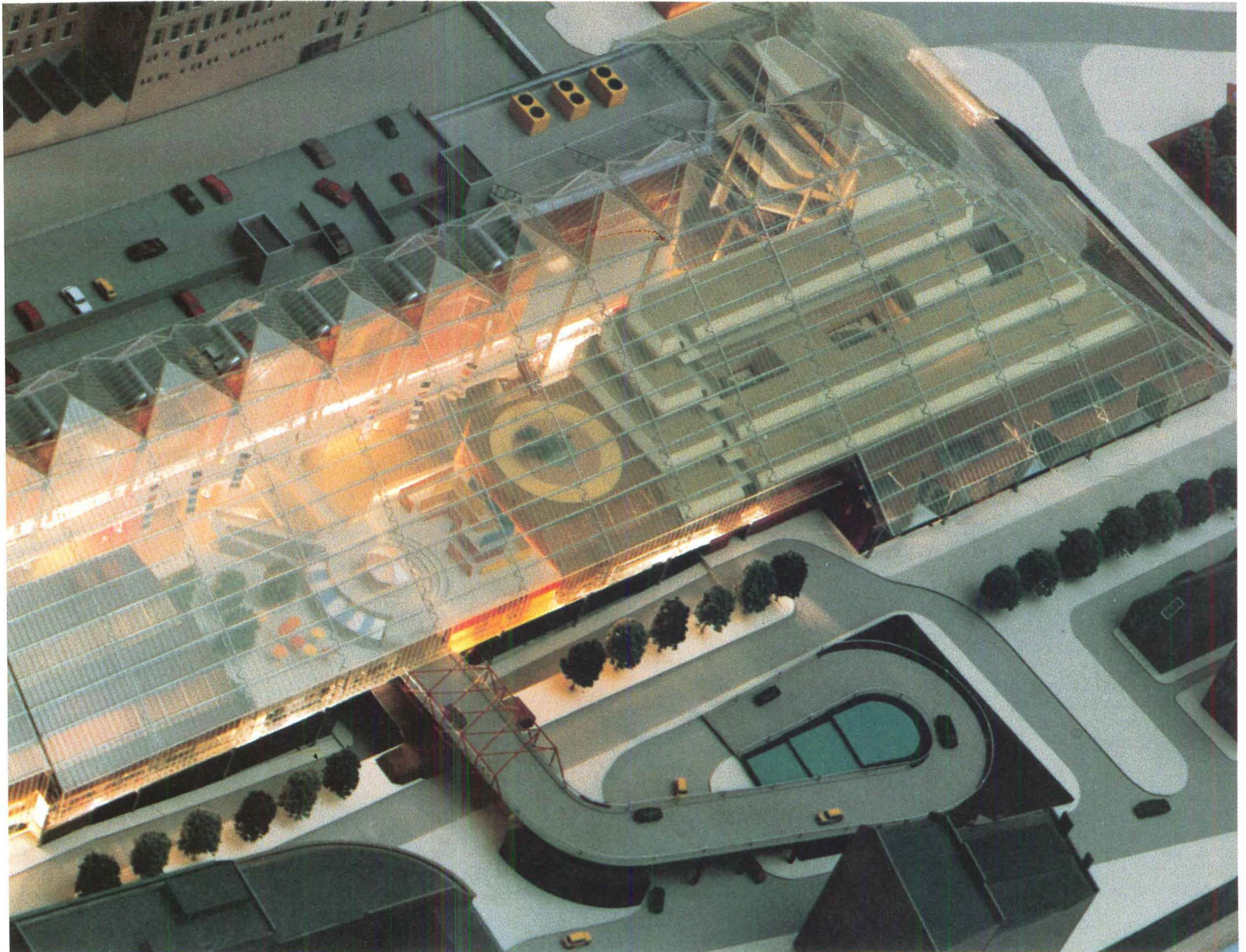
Before checking the climate of Glasgow, Michael Maybaum, head of the consultant team, who is now with Cosentini Associates, but formerly headed the passive and hybrid-solar group of DOE, guessed that opportunity for passive energy might be marginal. But they found the climate to be very mild—no colder than 26 F in winter and 74 F in summer—and resembling somewhat the weather of our Pacific Northwest. And though the weather is cloudy in winter (only 1 hr of sun per day in January), diffuse solar energy can be used for daylighting, and a well-designed passive system can use this energy for partial daytime heating.

Computer analysis shows that passive systems produce the comfort conditions agreed upon by the client and consultants. This favorable outcome results from architectural and energy issues being considered simultaneously by architects and consultants, including climate, envelope, interiors, and mechanical systems.



This section through 2½ floors of the office building shows how solar energy is utilized for daylighting and passive solar heating. In warm, sunny weather, a retractable mesh shade of high reflectivity can be drawn in front of the glass. To remove heat from back of the south-facing glass, lowers at the top and bottom automatically open. The open space of walkways encourages heat removal from the area.

St Enoch Square
Glasgow, Scotland
Reiach and Hall + G.M.W. Partnership
Joint-Venture Architects



The proposed \$65-million St. Enoch Square complex has a glass envelope sheltering 400,000 sq ft of stores, shops, and offices (140,000 sq ft), plus a mall, a leisure area, and an ice rink. Parking is left exposed on the north side. The office building is 5 stories, with setbacks at each floor corresponding to the slope of the glass. The glass is clear and only single-thickness.

After the client and architects decided on the passive approach, their search for energy talent led them to Cosentini engineers because of the firm's previous experience with natural environmental control in such buildings as the Winter Garden at Niagara Falls and the Crystal Cathedral in southern California.

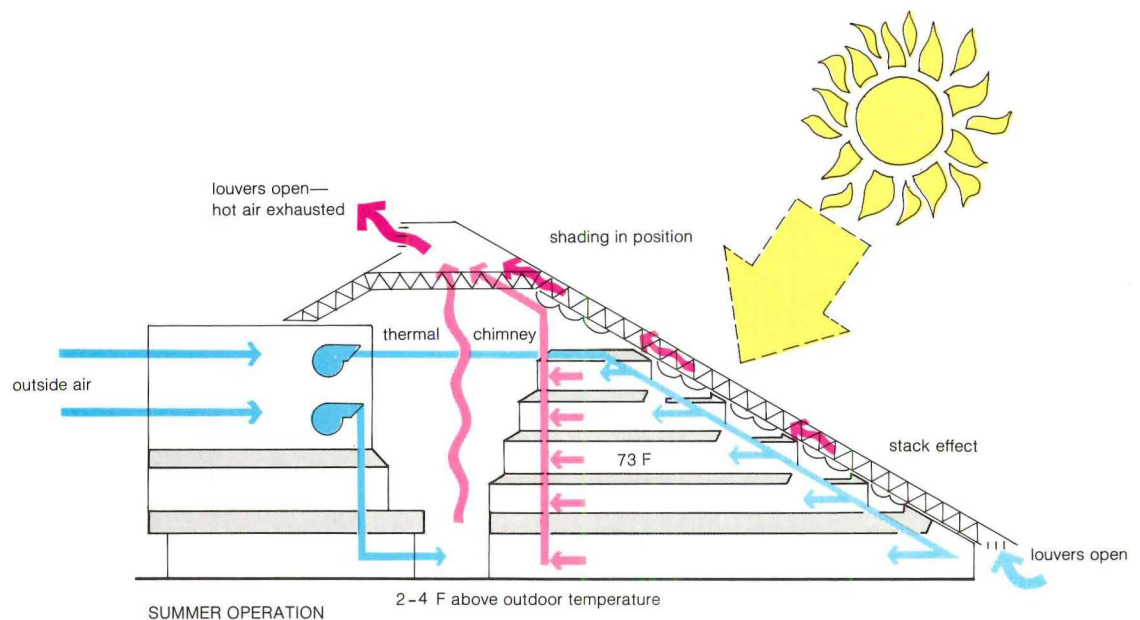
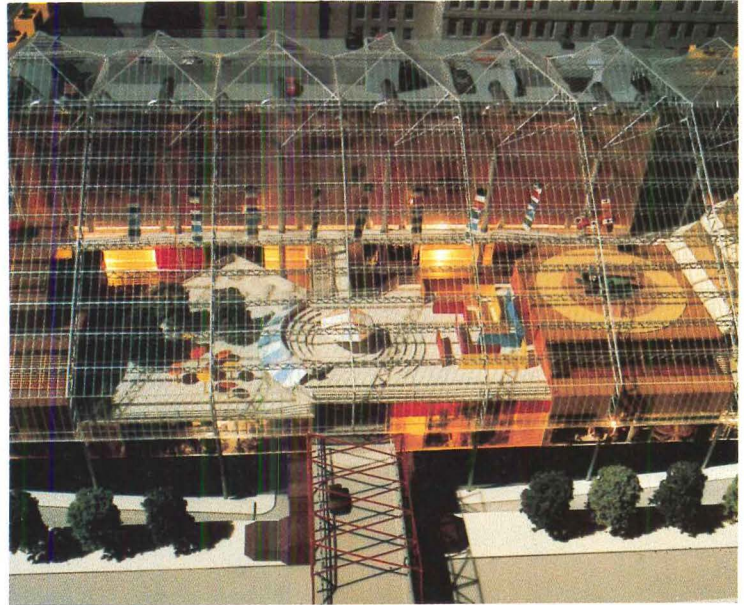
For St. Enoch Square, they used both manual and computer methods to evaluate various alternative designs, including ASHRAE methods for thermal loads and ventilation rates, and the Building Loads Analysis and System Thermodynamics (BLAST) computer program for dynamic analyses. Manual calculations helped them discard approaches early that dynamic analysis would soon eliminate anyway.

But the potential high heat loss of the glass envelope, and solar transmission in warm weather, raised concerns that the engineers had to answer with computer dynamic analysis. Specifically, they conducted extensive studies of mall air temperatures, summer and winter, and radiant and air temperatures of the walkway surface, summer and winter. (See graphs facing page.)

The basic design approach is to use natural ventilation (stack effect plus the push/pull effects of the wind, when the wind is blowing) to remove the sun's heat from the stepped walkways adjacent the offices, and from the remaining south wall. Natural ventilation also is used to exhaust air from the atrium. But fan-induced outdoor air is necessary to keep the temperature "float" of the atrium within a reasonable comfort range.

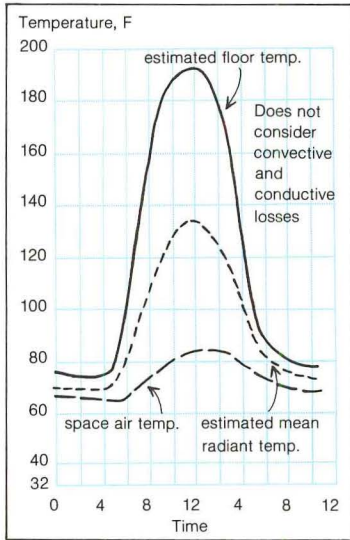
It is becoming more acceptable to let the temperatures of buffer spaces in buildings be moderated to some level between outdoor temperatures and the narrower temperature limits of stores and offices. This provides not only a more natural transition from outdoors to inside, but saves energy. The schematic drawing below shows that in summer mechanical supply of outdoor air to the mall

keeps its temperature within reasonable comfort limits. Natural ventilation removes heat from walkways next to the glass envelope. In winter (schematic across page) exhaust air from offices tempers mall space. Air is heated only when solar input is insufficient.

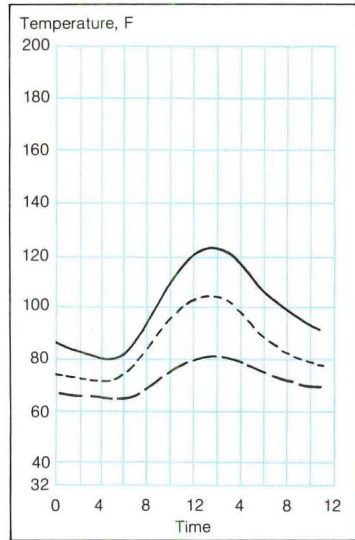


The study of walkway temperatures examined a number of different conditions affecting surface and air temperatures. Even with a medium-dark floor covering (top left) for the walkways—a “worst” condition—the air temperature was found not to exceed 83 F, though the floor temperature is unacceptable. In actuality this would have been closer to 140 F had convection and conduction losses

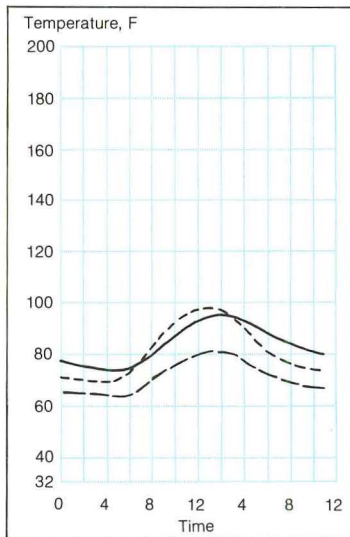
from the floor been considered, but including them complicated the analysis. With light-colored floors (top right), the floor and mean-radiant temperature dropped sharply. The addition of reflective shades (bottom left) reduced radiant temperatures still more. When ventilation is reduced (bottom right) both radiant and air temperatures climb.



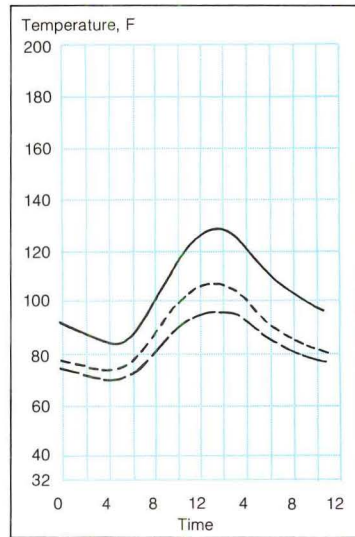
FOURTH-FLOOR WALKWAY TEMPERATURES



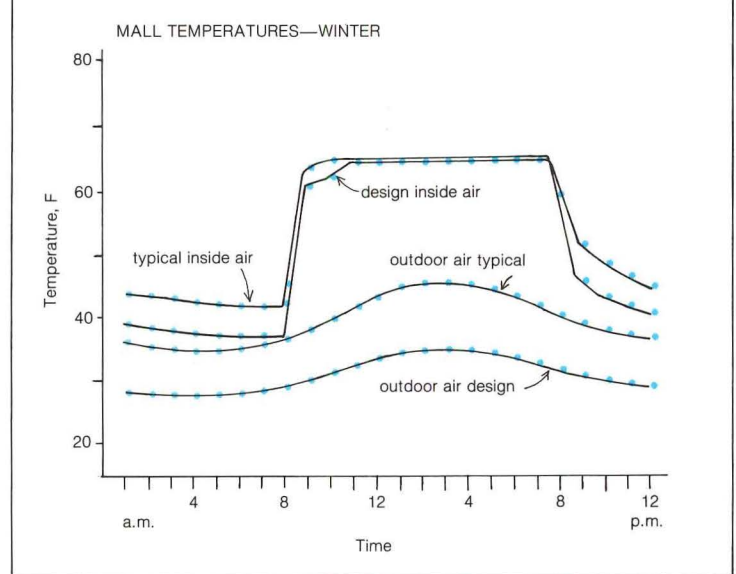
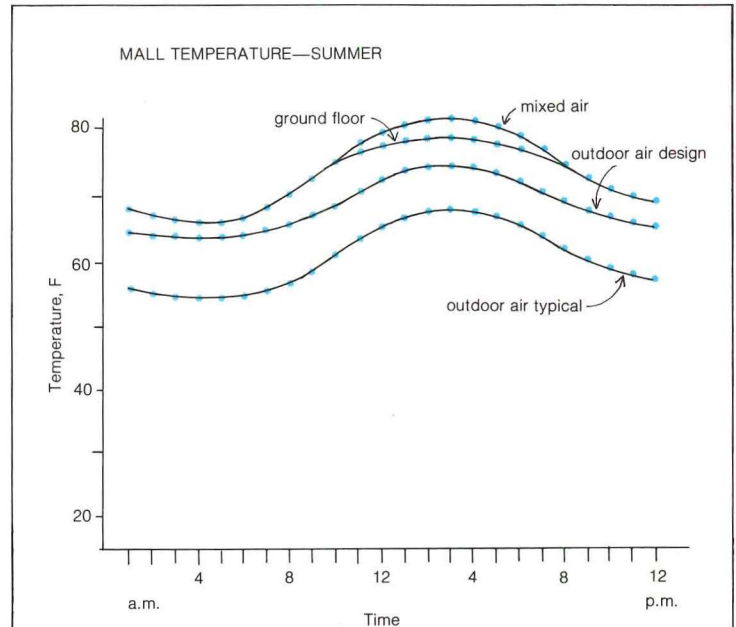
FOURTH-FLOOR WALKWAY, LIGHT-COLORED FLOOR



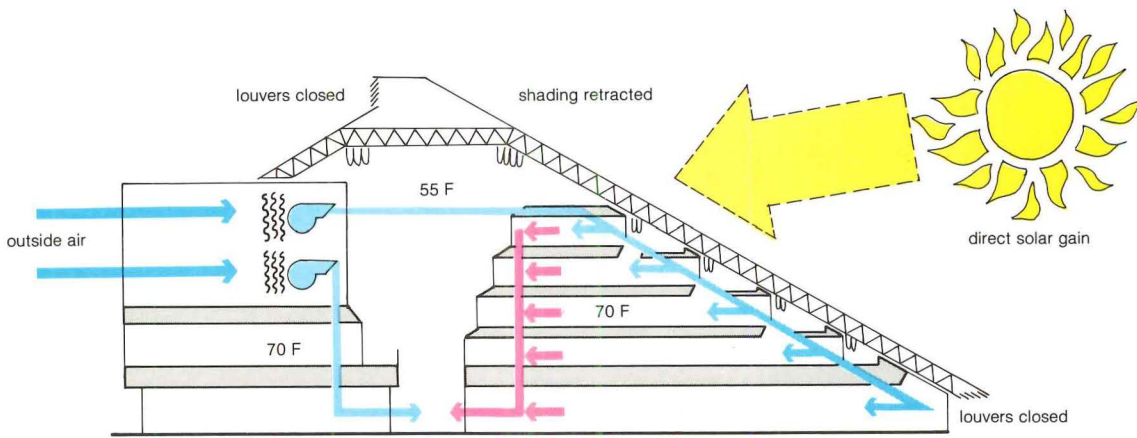
FOURTH-FLOOR WALKWAY, LIGHT-COLORED FLOOR, REFLECTIVE SHADES



FOURTH-FLOOR WALKWAY, LIGHT-COLORED FLOOR, LOW VENTILATION



The evaluation of mall temperatures is plotted in the two graphs above. The curves show both extreme and typical outdoor temperature swings for summer and winter, but the typical temperatures are the most meaningful, since these conditions occur 95 per cent of the time. For a typical day in winter during open hours, the mall temperature hovers at a level of 63 F. In the summer the mall temperature swings between 68 and 74 F. (Ground floor temperature is the pertinent curve for comparison, since mixed-air temperature is assumed to be taken 30 ft above the floor level.)



WINTER OPERATION

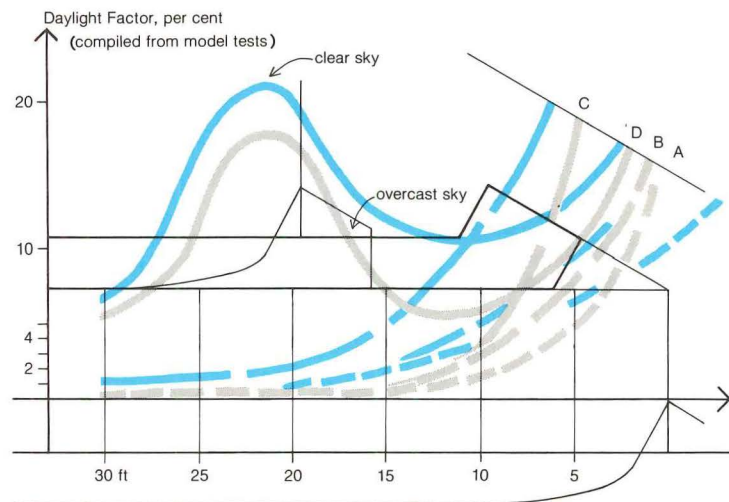
Daylighting specialists in the Princeton Energy Group, along with the architects and the other energy consultants, studied six different lighting schemes shown in the sections at right. For daylight simulation, the investigators tested physical models built at a scale of 1:25, fitted with glass having 80 per cent transmittance.

With the clear envelope the availability of daylight is maximum, but shading must be used to minimize heat gain in summer, to shield people from uncomfortable radiation, and to avoid melting of ice on the rink.

What did the energy and daylighting analyses show?

The results: 1) annual operating cost of the project is 20 per cent less than for a conventional building, 2) the mall requires no auxiliary heating or air-conditioning equipment—only fan-assisted air supply; 3) leisure areas require a small amount of auxiliary heating during cold periods; 4) natural ventilation, daylighting and solar control substantially reduce the energy requirements of offices; 5) office walkways can be maintained at below 74 F during peak summer periods, and well above freezing in winter; 6) the annual energy requirement of offices is estimated to be 49,000 Btu/sq ft/yr; 7) natural and task lighting can save 50 per cent in auxiliary lighting costs.

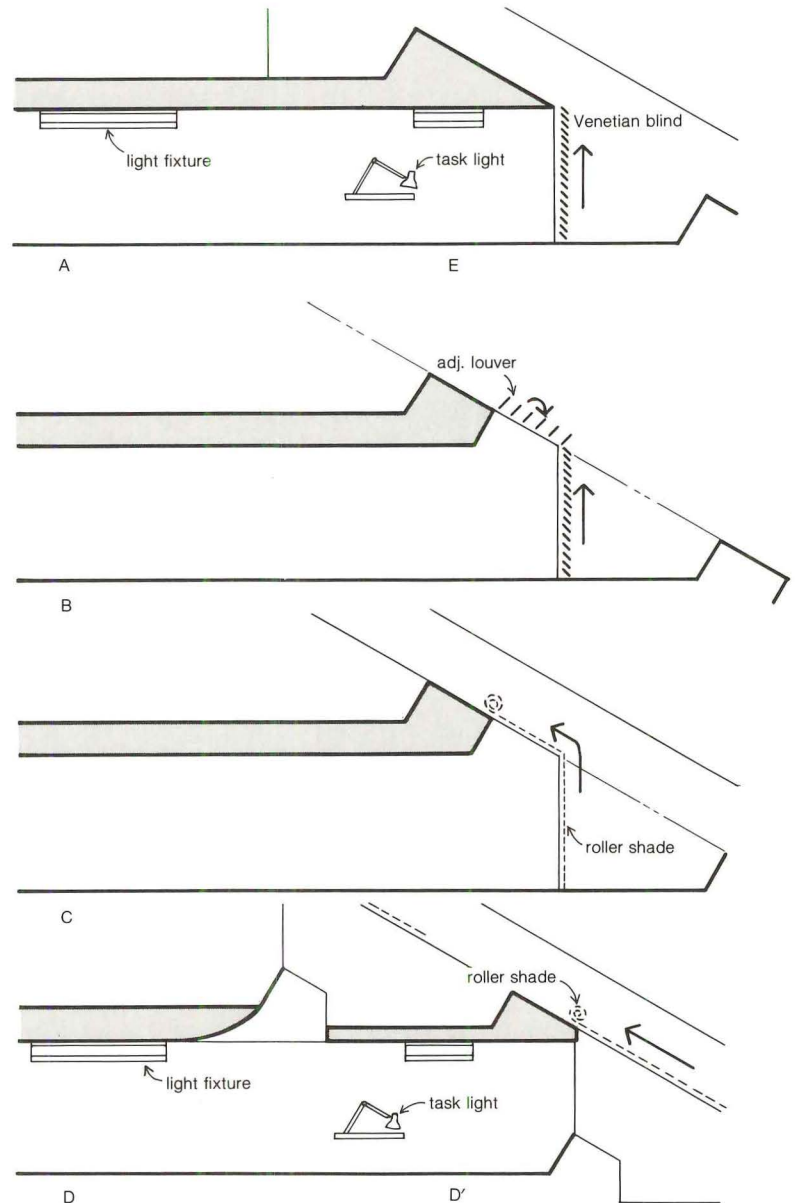
Any caveats? Yes: 1) careful design of passive systems, ventilation openings, shading devices and controls, are necessary; 2) energy budgets are targets that can only be achieved with careful attention to design and construction details and careful operation.



DAYLIGHTING CURVES

Details of the daylighting options: Scheme A has full-height glass and is shaded by a light-colored Venetian blind. Schemes B and C open the perimeter-office facades with overhead sloped glazing. In B the glass is protected from the sun on clear days by manually-operated pivoting louvers. Scheme C uses a light-colored window shade with a transmittance of 50 per cent which excludes solar heat, but lets daylight

through. The shade is raised on overcast days. Scheme D has an overhead skylight to bring light into the interior. A white translucent shade for solar control is suspended from the trusses. Scheme D' is the same as D, and E is the same as A, except for replacing overhead fixtures with task lighting.

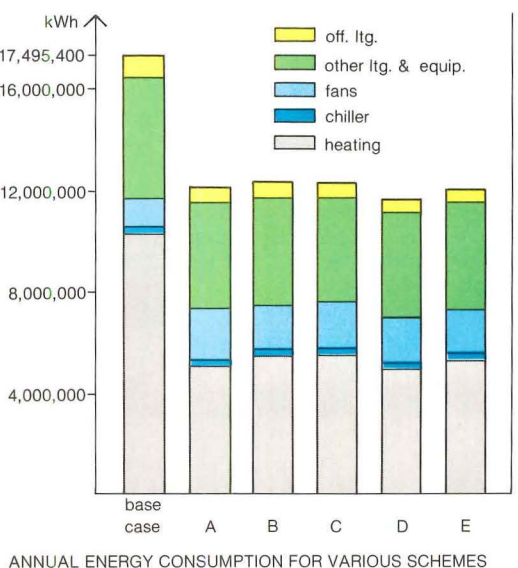
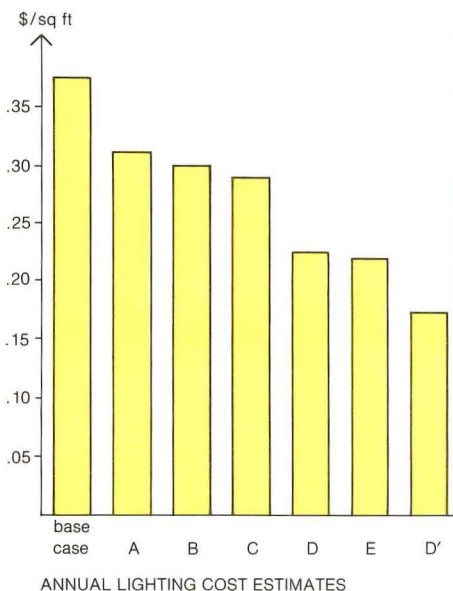
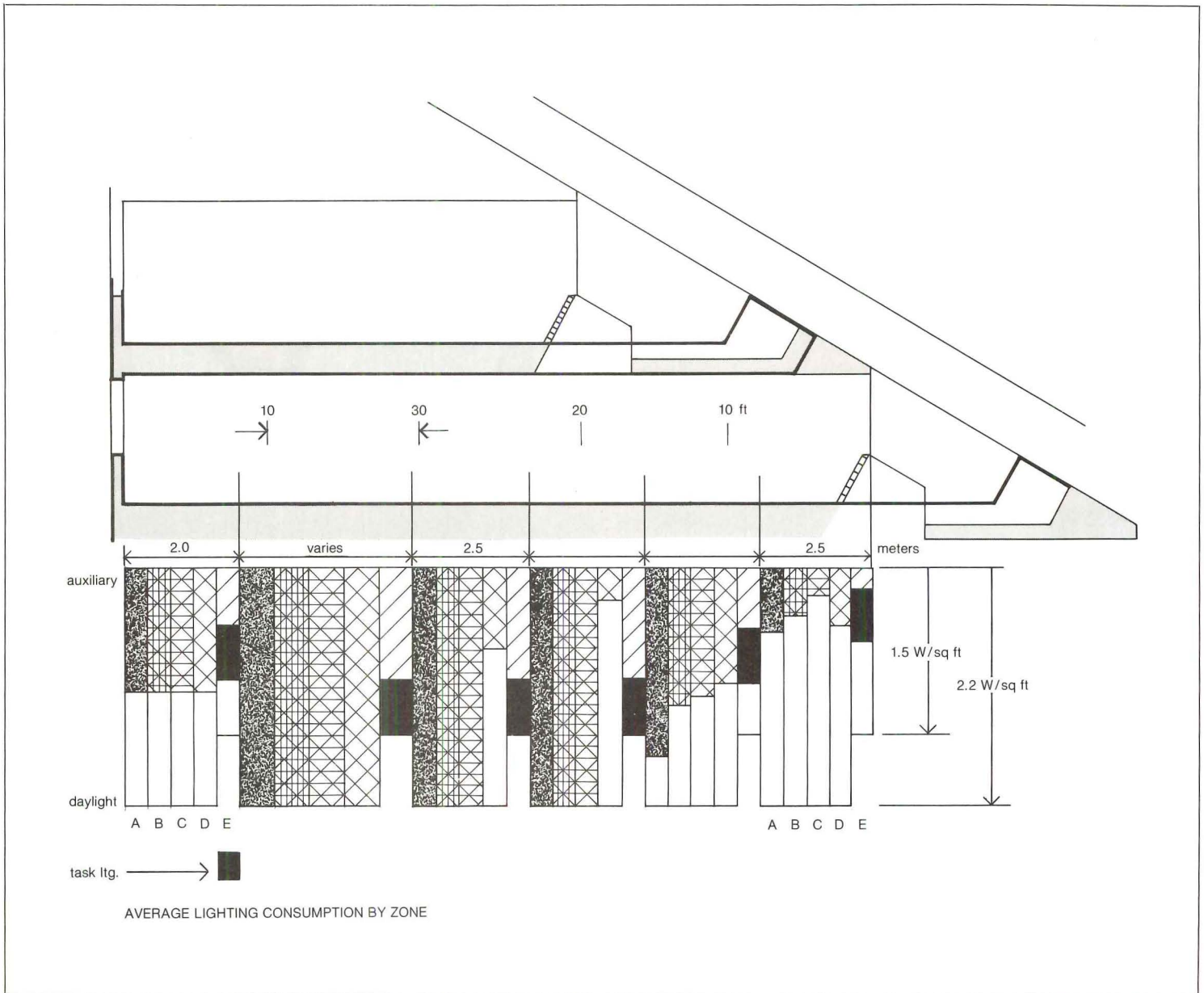


DAYLIGHTING AND SHADING OPTIONS

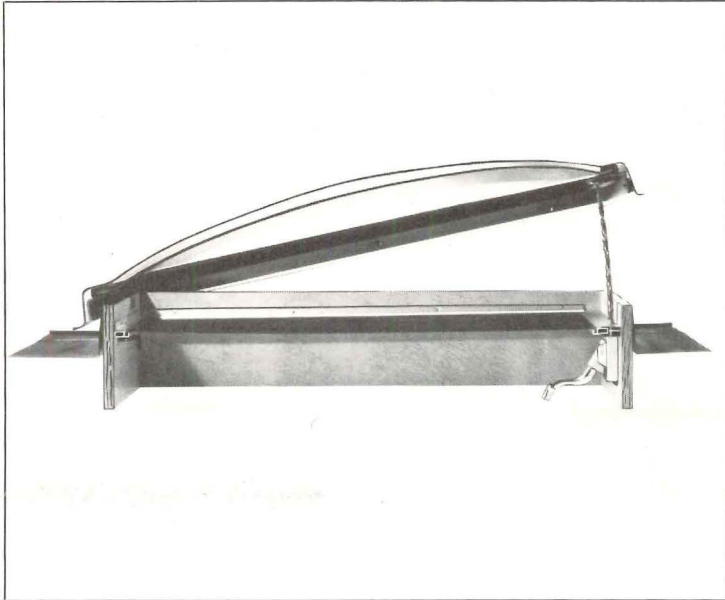
Daylight curves for 1) a clear day (blue lines) with the sun shining on the south facade, and for 2) an overcast day (gray lines) indicate relative lighting levels and illustrate the effect of incorporating a skylight in the ceiling. The graphs accompanying the section across page show the amounts of daylight and auxiliary-light energy needed at different distances from the sloping south wall and from the atrium wall to provide 45 footcandles.

St. Enoch Square
Glasgow, Scotland
Owner:
Scottish Development Agency
Developer:
Richard Ellis—Simon Winslow
Architects:
Reiach & Hall + GMW
Partnership, joint venture—Stuart
Renton, Tom Bostoch, (Reiach &
Hall); Brian Mayes, Terry Brown
(GMW)

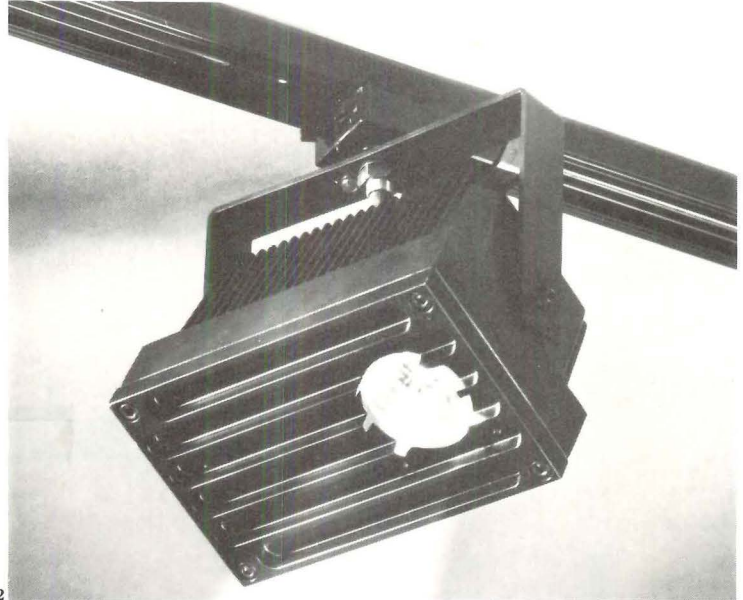
Consultants:
Cosentini Associates (energy)—Jack
Weisbin, partner; Michael W.
Maybaum, associate; Princeton
Energy Group (daylighting)—
Harrison Fraker; Walter Halligan;
Blyth & Blyth (mechanical/
electrical)—Ron Bowerbank;
University of Strathclyde—Dr. Joe
Clark; Dr. Douglas Hittle (computer
analysis)



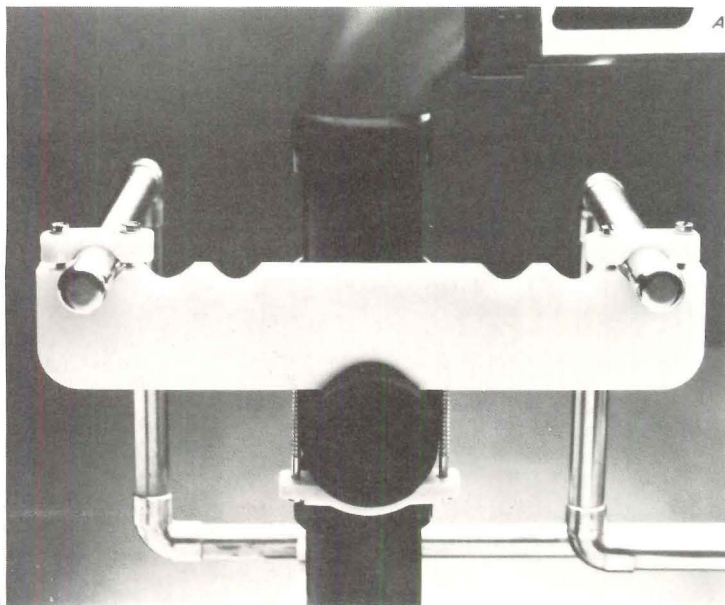
Annual energy consumption figures, including heating, cooling and lighting were determined by simulating the six building configurations and running dynamic analyses with the BLAST computer program. This analysis takes into account heat transfer between zones, solar radiation, envelope transmission effects, daylighting and auxiliary lighting. The base case building is a conventional mall-type building with the same area as the glass-envelope schemes. The major savings with the envelope buildings accrued from the much lower heating requirement, though daylighting made substantial reductions in the energy requirement for illumination.



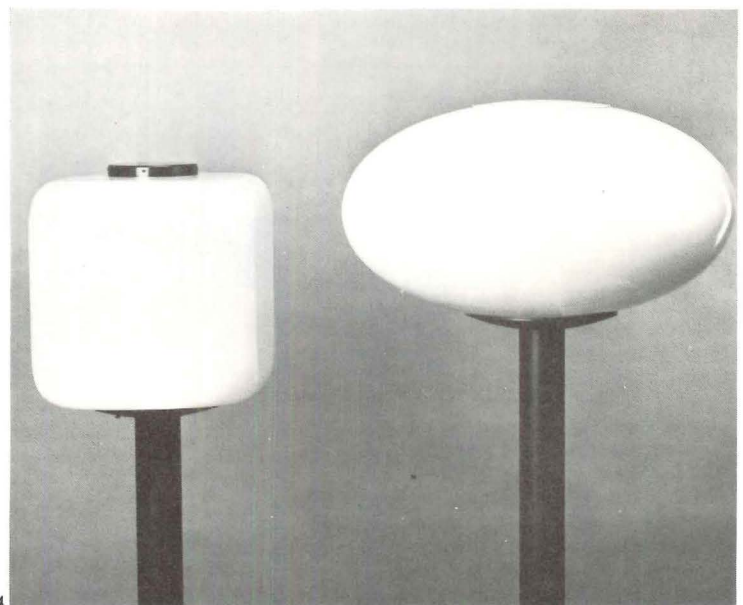
1



2



3



4

1. Skylight

The *Lo-Dome* skylight is approximately 3 in. high and has a double dome of *Plexiglas* which is shatterproof and weighs less than glass. The unit is copper flashed, curbed and screened and may be operated manually or with a motor. Ventarama Skylight Corp., Hicksville, N.Y.

Circle 300 on reader service card

2. Low-voltage lighting fixture

The *Cyclops*, constructed of heavy-duty die-cast aluminum, has a built-in transformer and a patented heat sink that ensures longer lamp life. It uses an MR-16 multimirror lamp, smaller in width and height than a writing pen. The fixture is designed to fit this manufacturer's *3000 Series* track and comes with a canopy or a pipe mount in a choice of black or white latex paint finishes. Inlite Corp., Berkeley, Calif.

Circle 301 on reader service card

3. Pipe support and alignment

Four pipe supports designed to eliminate the need for measuring are made of high-impact polystyrene or ABS plastic and stainless steel. They provide electrolytic isolation without the use of tape and can expand and contract with no damage to joints and no noise. Sumner Manufacturing Co., Inc., Houston, Texas.

Circle 302 on reader service card

4. Luminaires

The *Contour Cube* and *Elliptic Globe* use high-pressure sodium lamps of 70 through 150 W and mercury lamps of 100 and 175 W. They are available with opal white acrylic globes. The *Contour Cube* is also available with clear and bronze globes that come with internal prismatic glass refractors. It may be mounted on a 3-in. OD pole top, tenon, wall bracket or in clusters on a pole. The *Elliptic Globe* is designed for pole-top mounting alone. Both luminaires feature cast-aluminum mounting rings, slipfitters and socket assemblies in black or dark bronze finishes. General Electric Co., Hendersonville, N.C.

Circle 303 on reader service card
More products on page 157



Sloan presents the
no-hands restroom.

Sloan eliminates a costly factor in restroom design.

Human nature.

People are at best indifferent about restrooms. They forget to flush. They flush too much. They turn faucets on—and leave them on. They abuse, misuse, and leave the place the worse for wear.

But take the operation of the restroom *out* of people's hands, and it becomes a cleaner, more cost-efficient place.

That's an idea Sloan technology has turned into reality—the no-hands restroom, with no handles, buttons, or levers needed. It's a restroom where everything operates *automatically*, on demand only. Because everything is under the command and control of Sloan Optima® electronic sensors.

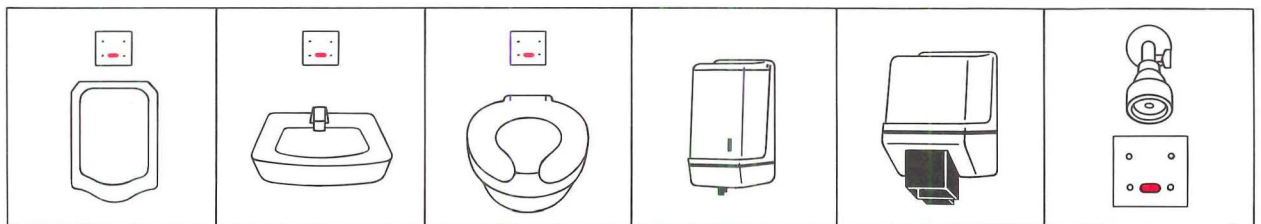
Now, free of human whim, the Optima sensor flushes sanitary fixtures with metered quantities of water. And never forgets a flush. It turns faucets and appliances on. And never forgets to turn them off.

The results: Improved sanitation. Reduced water usage. A cut in energy consumption. Fewer repairs. And less maintenance.

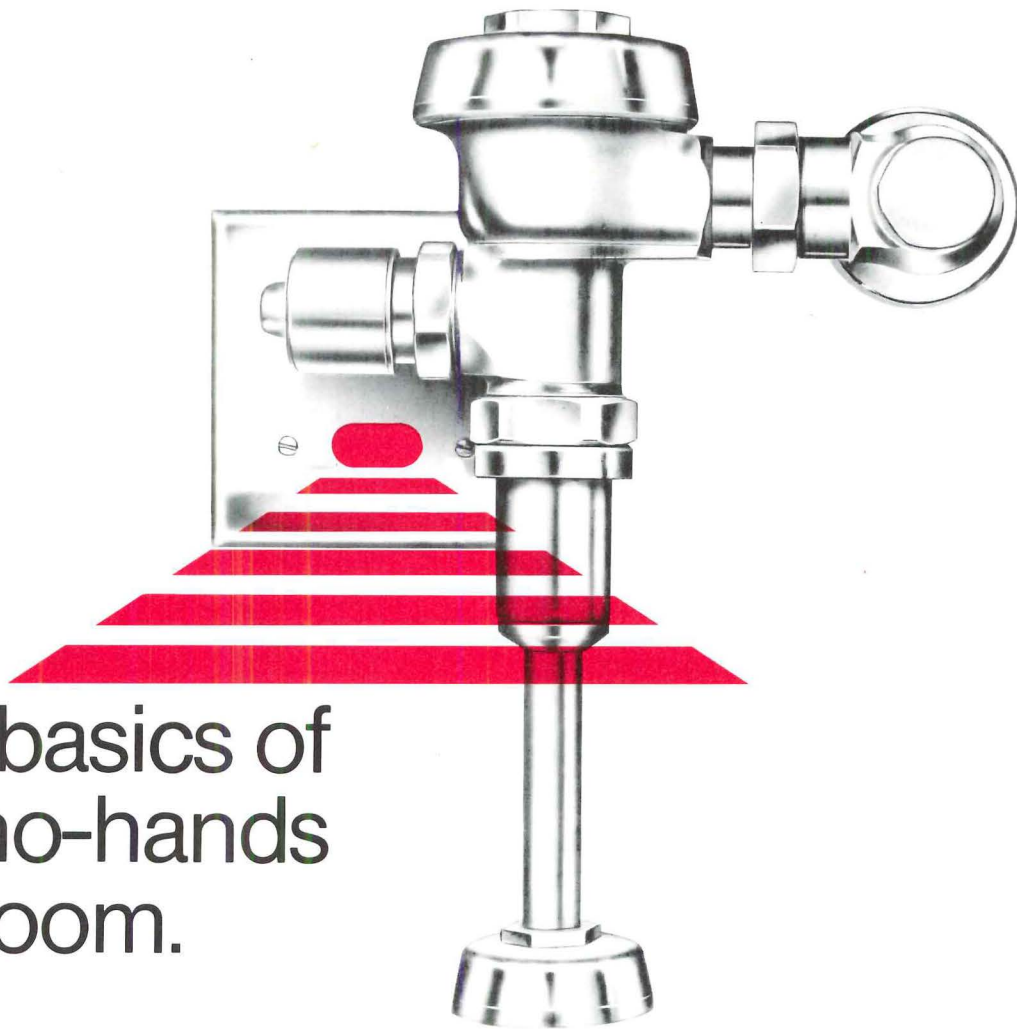
Note also that no-hands operation automatically solves the problem of mandated access for the handicapped.

The Optima no-hands concept has already proved practical in a variety of installations. It's evidence of Sloan's ability to combine established leadership in flushometer design with expertise in electronic control. And now there are several new and important applications of Optima technology available.

Read on. See how you can equip no-hands restrooms with Optima systems everywhere. And get optimum sanitation and optimum savings.



The basics of the no-hands restroom.



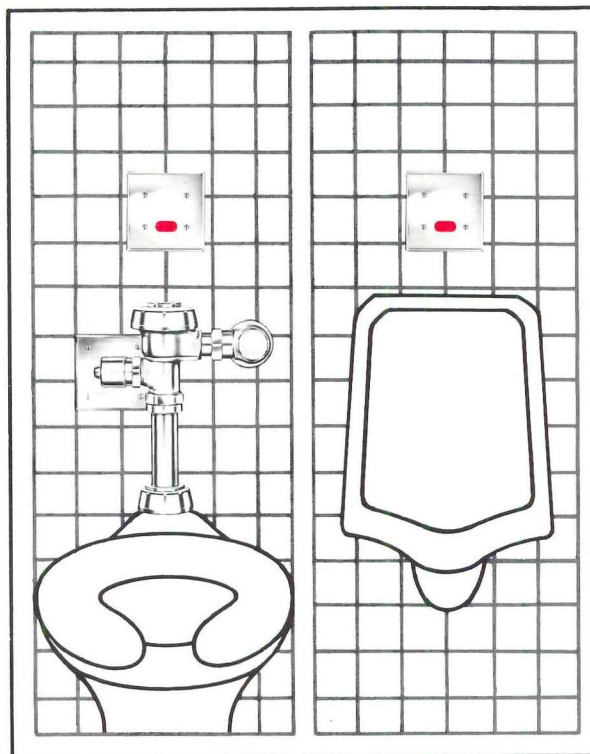
The Optima sensor-operated flushing system first proved itself on urinals. Now the same money-saving idea can be applied to the restroom toilet.

On either fixture, the user reflects an invisible beam of light back into the Optima sensor, arming the system. When the user steps away, the beam is broken and the Sloan flushometer flushes the fixture automatically.

So, no-hands operations means improved sanitation—no more forgotten flushes. There's less water waste, since only a precisely metered amount of water is used. And only on demand. Using less water, of course, also means saving on the energy used to pump that water.

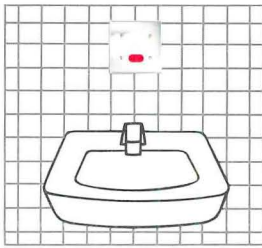
The no-hands toilet naturally has no tank. There are no complicated inner mechanisms that need frequent repair. Valuable extra space is also opened up.

No hands toilets and urinals are two ways that Sloan Optima optimizes sanitation and savings. And they're only the beginning.



Beyond the basics.

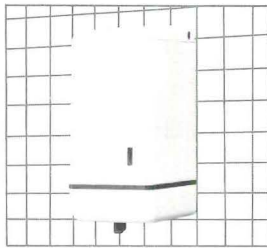
You can extend the Optima no-hands advantage to virtually every appliance and convenience in the restroom—and beyond.



The Optima-equipped lavatory.

Here, the user breaks the Optima sensor beam and a controlled flow of water is initiated automatically.

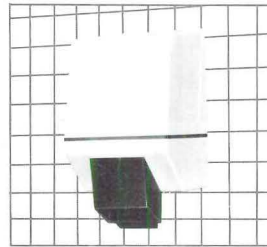
There's less cleaning with no handles to get dirty. And the water shuts off automatically to cut waste.



The Optima-equipped soap dispenser.

Patrons place their hands under the dispenser and a preset amount of soap is dispensed automatically.

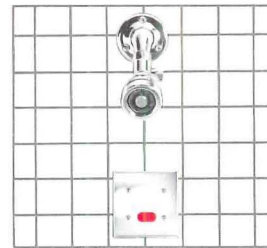
Soap usage is reduced. And patrons appreciate the no-touch operation. This dispenser is also ideal for health-care and food preparation, where strict hygiene is critical.



The Optima-equipped hand dryer.

Pushbutton hand dryers run on and on, wasting electricity. This one starts when the hands are placed

beneath its vent and stops when the hands are removed. It conserves energy. And it's far more economical than paper or linen towels.



The Optima-equipped shower.

This shower can't be left running. Or be turned up full blast to waste water. The user just dials the desired

water temperature, steps under the shower-head, and the water comes on automatically. Then it shuts off when the user steps away.

Let Sloan give you a hand in planning your restrooms.

Your Sloan representative will be happy to demonstrate the many advantages of Optima systems for both new and renovated construction. Or please write or call us directly for more information.



The no-hands restroom. By Sloan, of course.



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Performance-proven STYROFOAM brand insulation works in walls of all kinds, in foundation and perimeter applications, roofs and plaza decks. So whatever kind of building you have in mind, build for the energy-efficient ages. With the lasting R-value of blue STYROFOAM brand insulation, made only by Dow.

Don't accept anything less than STYROFOAM brand insulation.

CAUTION: STYROFOAM brand insulation is combustible and should be handled and installed properly according to Dow literature available from your supplier or from Dow.
*Trademark of The Dow Chemical Company ©1982. The Dow Chemical Company. 2-291A



How do you improve an ordinary bronze window without changing its appearance?

With Heat Mirror™ transparent insulation.

Similar Appearance* Superior Performance



Bronze Double Glass
U-value = .49
R-Value = 2.1
Shading Coefficient = .56
Relative Heat Gain = 120

Bronze Double Glass with Heat Mirror™ 55
U-value = .22
R-value = 4.5
Shading Coefficient = .27
Relative Heat Gain = 56

A bronze window with Heat Mirror™ 55 transparent insulation and an ordinary bronze window look alike, but perform far differently. The Heat Mirror™ unit (shown above right) offers more than twice the insulating capacity and an incredible 53% reduction in relative heat gain. Offices stay cool and comfortable even on the hottest days.

How does Heat Mirror™ achieve superior performance? By mirroring heat, not light. Heat Mirror™ is factory mounted in the airspace of a double glass unit. It acts as a wavelength selective filter, reflecting the invisible wavelengths of solar heat and radiant heat, while permitting visible light to pass through.

As a result, Heat Mirror™ does not substantially change the glass appearance—it changes the performance.

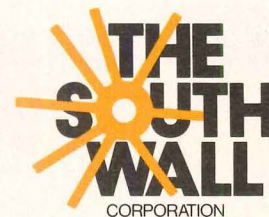
With Heat Mirror™ the kind of performance that reduces HVAC equipment costs and operating bills now is possible in aesthetically pleasing bronze glass, or clear, gray, blue-green, etc. The relative performance advantages remain constant.

Very simple. Very elegant. Heat Mirror™ 55 transparent insulation—making ordinary windows extraordinary. Look for it from leading window manufacturers worldwide, or check our Sweet's listing 8.26a/SOU.

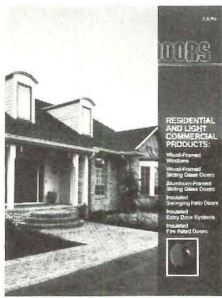
Visit us at CSI Booth #2130 and BOMA Booth #366.

Heat Mirror™ is a registered trademark of The Southwall Corporation
© 1983 The Southwall Corporation

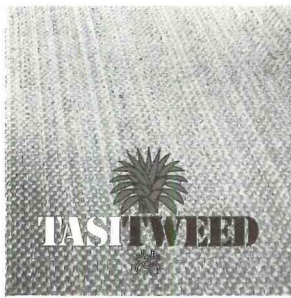
***Not an illusion. The office was photographed in real time and space through two bronze double glass windows—one with Heat Mirror™ 55 and one without.**



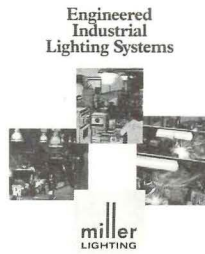
The Southwall Corporation
3961 East Bayshore Road
Palo Alto, CA 94303
415/962-9111



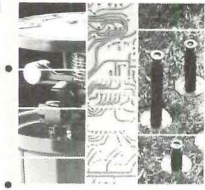
Windows and doors
Residential and light-commercial windows and doors, including casement, fixed and awning windows and sliding-glass, swinging-patio, entry and fire-rated doors, are covered in a 24-page brochure. Charts show standard bow and bay window arrangements, standard unit schedules of sizes and details for doors, and performance data. Details of typical installations are included. Peachtree Doors, Inc., Norcross, Ga.
Circle 400 on reader service card



Floor and wall covering
A 12-page color brochure features photographs of a wide variety of installations of *Tasi-Tweed* sisal floor and wall coverings, said to be antistatic, difficult to ignite, and to need minimum maintenance. Tasibel, Hamme, Belgium.
Circle 403 on reader service card



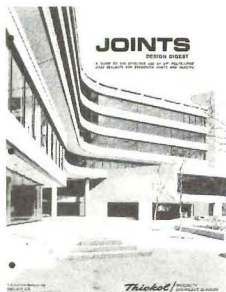
Industrial lighting
HID lighting fixtures for low mounting heights and high-bay installations as well as fluorescents for both general task and adverse environments are shown and described in a 6-page color brochure. Options and accessories are listed. The Miller Co., Meriden, Conn.
Circle 404 on reader service card



Turf irrigation
Spray, impact and impact rotor pop-up sprinklers plus valves, controllers, backflow preventers and drip irrigation equipment are covered in a 72-page catalog. Photos show products next to specifications and lists of product features. Rain Bird Sales, Inc., Glendora, Calif.
Circle 405 on reader service card
Continued on page 153



Roofing fabrics
Two kinds of polyester roofing fabrics for smooth- or gravel-surface roofs are described in a 12-page brochure. Included is information on new roof design, nailable and non-nailable decks, flashings, roof repair and reroofing. Procedures are listed along with diagrams and specifications, while tables list properties, test results and recommended mastics for use with the fabrics. DuPont Co., Wilmington, Del.
Circle 401 on reader service card



Curtain wall joint sealants
An 18-page brochure covers LP polysulfide base joint sealants. Calculation charts of joint movements and widths for various building materials are given, while glazing combinations are illustrated in section details. Details and recommended procedures for typical sealant uses with metal curtain walls and concrete/masonry construction are included. Morton Thiokol, Inc., Trenton, N.J.
Circle 402 on reader service card

Granite.

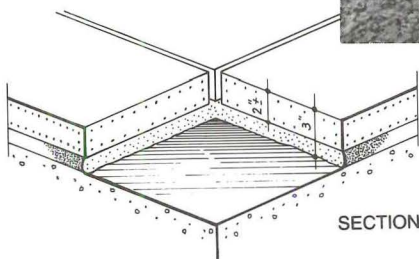
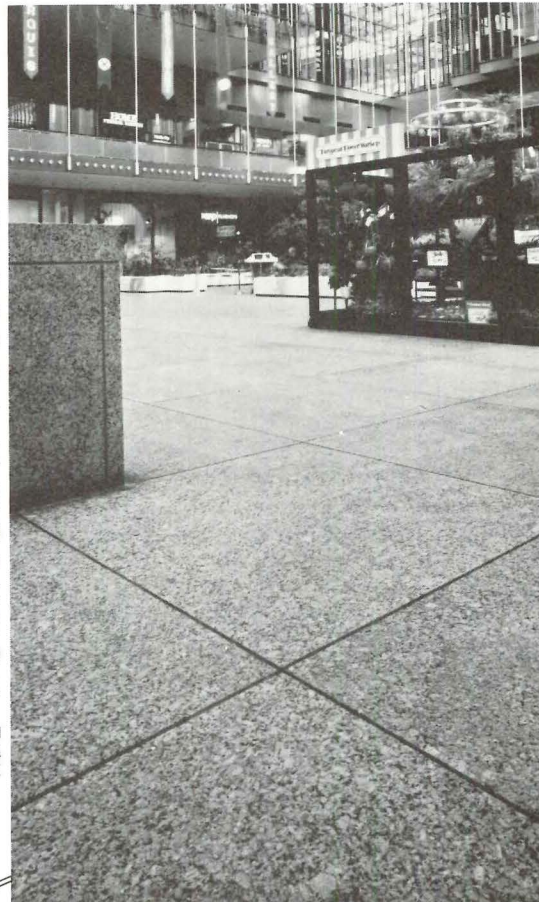
A step up to beauty.

A step up to wearability.

Forever-lasting beauty that requires no maintenance, adds a stepping stone to prestige, elegance. Choose from twenty colors, endless shapes and patterns, and all the expert help we can give you. Consider the character of mixing more than one color or pattern in an application.

For more information, and a packet of full color literature illustrating Cold Spring Granite products in use, call toll free **800-328-7038**. In Minnesota call (612) 685-3621, or write to the address below.

I.D.S. Center, Minneapolis, MN
Architect: Philip Johnson & John Burgee, New York, N.Y.



Cold Spring Granite Company, Dept. AR-6 202 South 3rd Avenue, Cold Spring, MN 56320

Circle 59 on inquiry card



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Polarpane® Gold Reflective Insulating Glass Units are made with real, 24-Karat gold. Aside from an obvious aesthetic quality, real gold gives Polarpane the highest solar energy rejection value and the greatest insulating value of any glass on the market . . . outperforming imitation gold, silver, and other reflective coatings.

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added benefit, its heat retention in winter is at least equal to triple glazing and low emissivity coatings.

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For more information on Polarpane Gold or Polarpane Silver, check your Sweet's Catalog Section 8.26a/Ho, or call or write Product Manager-Reflective Glass, Hordis Brothers, Inc., 825 Hylton Road, Pennsauken, N.J. 08110, (609) 662-0400.

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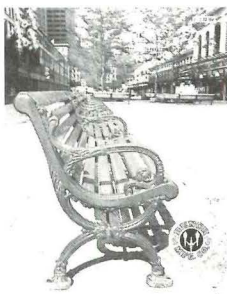
Circle 60 on inquiry card



Fans

Axial propeller fans for ventilation are illustrated and described in an 8-page color brochure. Fan units and shutters are ivory colored, except the darkroom model—with complete light exclusion—which is black. Photographs of installations, dimensions, performance data and information on switches, dampers and special kits are included. Vent-Axia, Inc., Woburn, Mass.

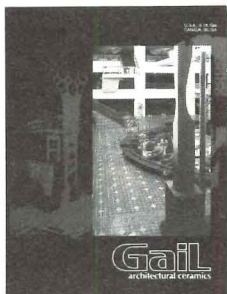
Circle 406 on reader service card



Benches

A packet of literature shows benches for use both indoors and out with cast-iron stanchions and oak or greenheart wood slats. Stanchions are finished in enamel or porcelain in a variety of colors. Picnic tables and trash receptacles are also shown. Diagrams with dimensions, specifications and a folder showing 14 available old-fashioned streetlamps are included. Bench Manufacturing Co., Boston, Mass.

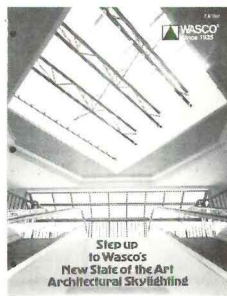
Circle 407 on reader service card



Ceramic tiles

A 12-page color brochure covers 7 series of tiles for interior and exterior applications and a prefab tile panel system for exterior applications. Available colors, shapes and dimensions for each series are shown as well as photographs of installations around the country. A chart of standard corner and base shapes and sizes is included. Gail International Corp., Tustin, Calif.

Circle 408 on reader service card



Skylights

Barrel vault, pyramid, hipped-end pyramid, lean-to, low-profile and dome-cluster skylights are shown in photos and diagrams and described in a 12-page color brochure. Section details and elevations are included along with specifications. Wasco Products, Inc. Sanford, Maine.

Circle 409 on reader service card



Ceiling panels

A 4-page color brochure describes and illustrates the Simplex Baked White Aluminum ceiling panel. Photographs show installations and sizes; other finishes are listed. Simplex Ceiling Corp., Hoboken, N.J.

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The CNA/Schinnerer-Professional Liability Insurance Program commended by AIA and NSPE/PEPP



Insurance

A packet of literature describes a professional liability insurance program for architects and engineers. What the program covers, special features, sources of claims and optional features are discussed. Victor O. Schinnerer Co., Inc., Washington, D.C.

Circle 411 on reader service card

Continued on page 155

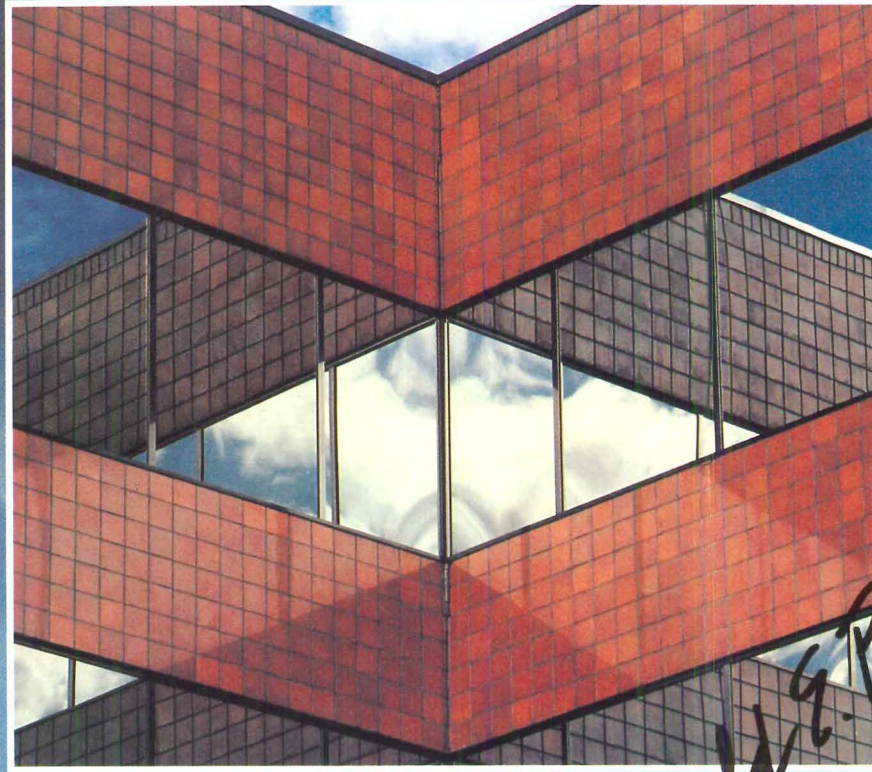
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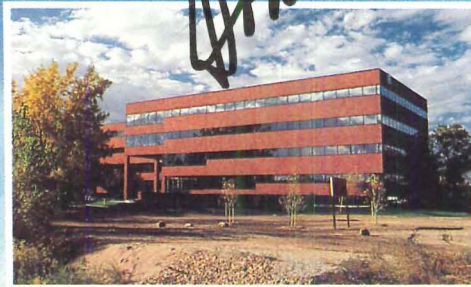
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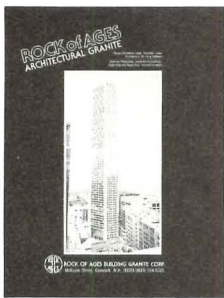
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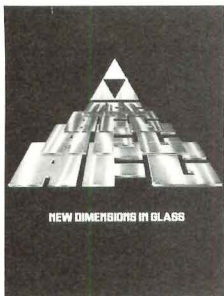
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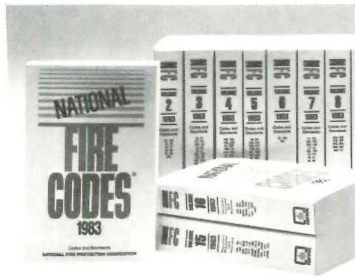
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Granite
Granite finishes are described and illustrated in close-up photographs of 12 granite types in an 8-page color brochure. Several finishes are shown for each granite type. Details, photographs of installations around the country and a description of product benefits are included. A separate page lists specifications. Rock of Ages Building Granite Corp., Concord, N.H.
Circle 412 on reader service card



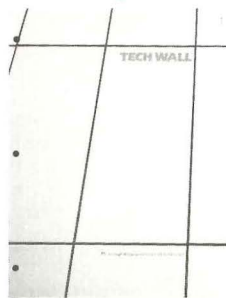
Glass
A 20-page color brochure contains technical data, descriptions and photos of glass for various functions. Among the types shown are: thin, heavy and gray/bronze float glass, tempered, insulating and ornamental glass and glass for active and passive solar applications. Three types of glass used for lighting fixtures are also shown and described. AFG Ind., Inc., Kingsport, Tenn.
Circle 413 on reader service card



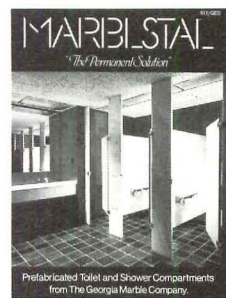
Fire codes
The 1983 National Fire Codes is a 16-volume set with 48 new and updated codes, including NFPA13, Installation of Sprinkler Systems. The complete text of all 242 fire codes is given as well as standards, recommended practices, guides and manuals. Also available is the 1983 National Fire Codes Supplement, which contains the revised 1984 National Electrical Code. National Fire Protection Association, Quincy, Mass.
Circle 414 on reader service card



Snow melting system
Photos illustrate the components and installation of the Hume Snow Melting System in a 4-page brochure. A description highlighting the system's basic features accompanies engineering details and specifications. Hume Snow Melting Systems, Inc., Royal Oak, Mich.
Circle 415 on reader service card



Aluminum wall panels
As described in a 4-page color brochure, solid aluminum exterior wall panels cannot delaminate and may be removed individually. They are available in 28 color finishes. Section details and specifications are included. Construction Specialties, Inc., Cranford, N.J.
Circle 416 on reader service card



Toilet and shower stalls
A line of prefabricated marble toilet and shower stalls called Marblstal is covered in a 12-page color brochure. Photographs of installations and hardware, close-ups of marble types, details, elevations and specifications are included. Georgia Marble Co., Nelson, Ga.
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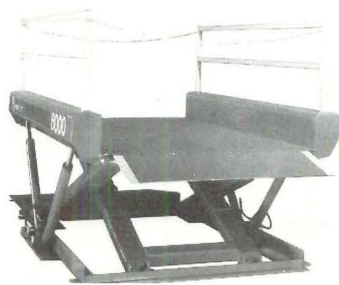
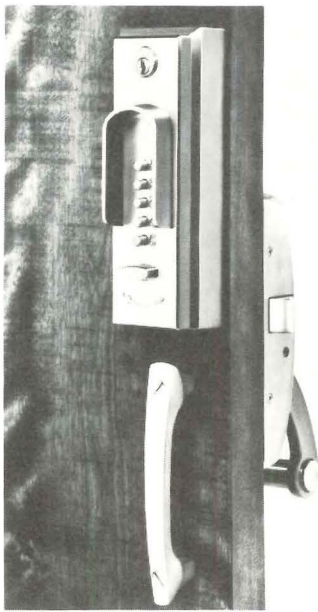
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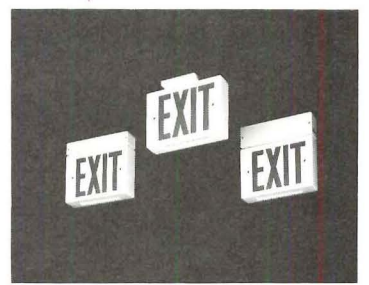
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Dock lifts
Three 6000 Series models of universal loading docks, which require no concrete pits, handle all loading needs—for loads carried by manual pallet jacks, small powered equipment or fork trucks. Advance Lifts, Inc., St. Charles, Ill.
Circle 306 on reader service card



Grating
Interlocking steel grating eliminates the need for welding or bolting. Grating planks come in 6- or 9-in. widths with lengths up to 45 ft. They may be cut to size and shape with a saber saw and are useful in converting air space to mezzanine storage space. United McGill Corp., Groveport, Ohio.
Circle 307 on reader service card

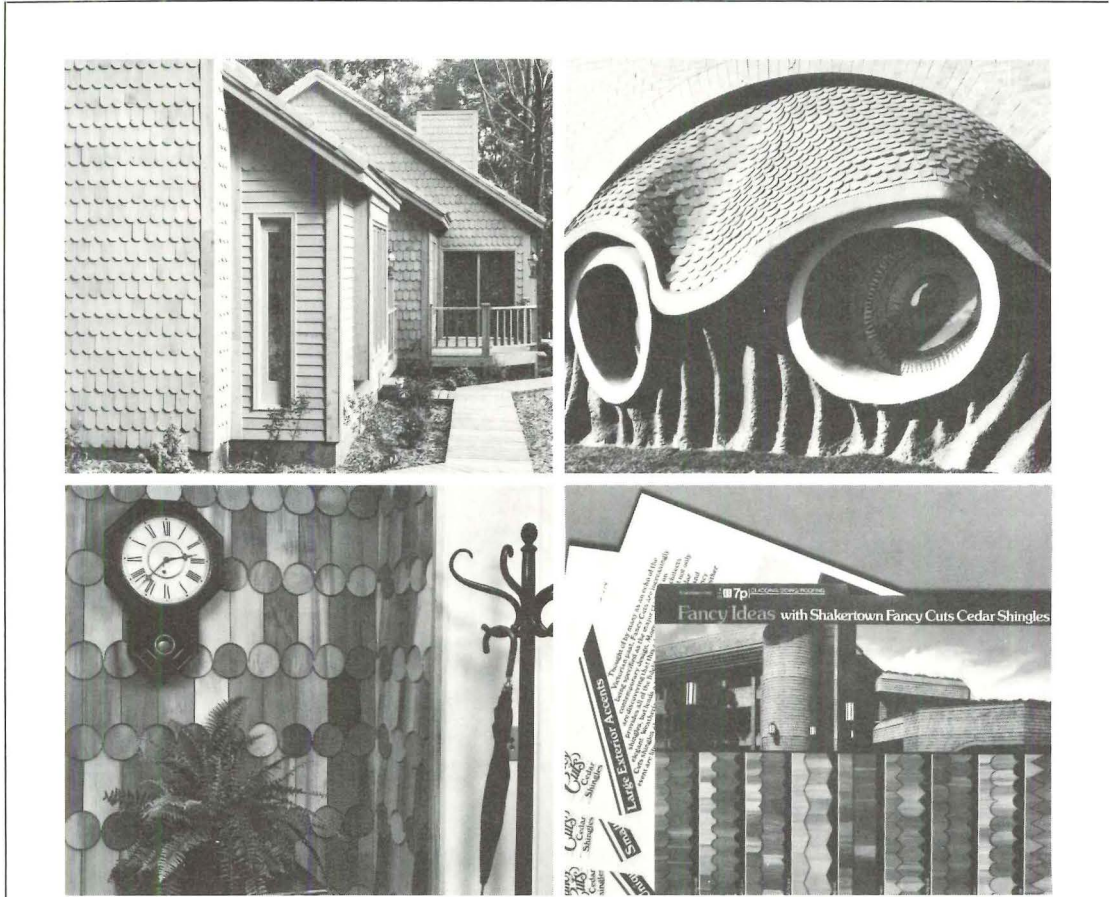


Emergency exits
Exit signs for emergency operation are made of injection-molded A.B.S. plastic with metal stencil faces. They take standard 120V, 277V or 120/277V lamps and will accept a modular step-down transformer and emergency battery pack. Prescolite, San Leandro, Calif.
Circle 308 on reader service card
Continued on page 159

Keyless locks
The Model 2000-15 pushbutton combination lock system can replace a key cylinder on new or existing surface-mounted exit devices. It can also be used with many leading brands of surface-mounted panic exit devices. The system's metal case fastens to a door without any visible bolts or screws that may be vandalized. Simplex Security Systems, Inc., Collinsville, Conn.
Circle 304 on reader service card



Insulated glass
Heat Mirror, a glazing product claimed to provide 65 per cent better insulation than conventional double-glazed products, is available in this manufacturer's casement windows and patio doors. It is made by sandwiching a clear polyester film between two layers of glass, and it works by allowing short wavelength solar rays, including visible rays, to penetrate while reflecting the longer wavelength heat rays. In a 1-in. double-pane insulated glass window it has an R-value of 3.7, providing 1/3 more insulation than triple glazing. Louisiana-Pacific Corp., Barberton, Ohio.
Circle 305 on reader service card



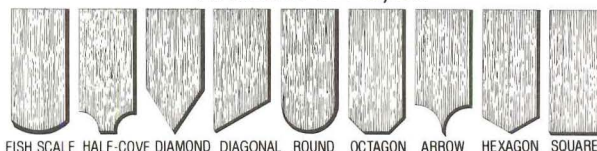
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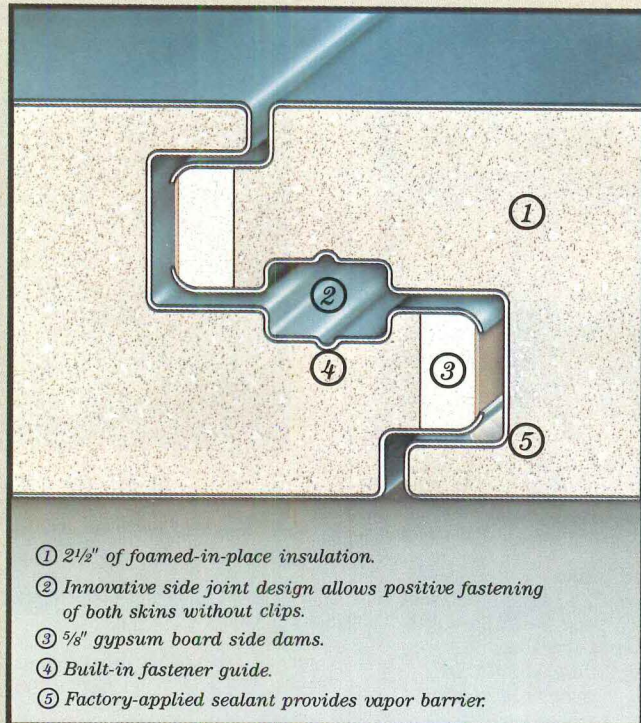
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Armchair

The *Valerio* armchair has a molded beech plywood seat that may be upholstered or left uncovered. Chairs come in natural, aniline-dyed or enameled finishes; 20 standard finishes are available. Chairs measure 21¼ in. wide by 21 in. deep by 29½ in. high and have a seat height of 17½ in. Loewenstein, Inc., Fort Lauderdale, Fla. Circle 309 on reader service card



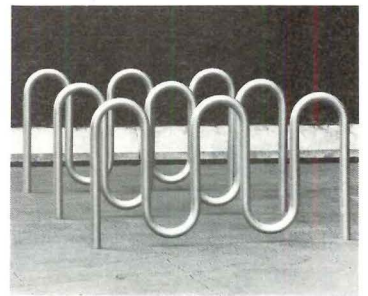
Intercom system

The *YKX* microprocessor-based intercom system offers a handset alone or combined in a unit with conference capability. The system permits multiple simultaneous conversations, transfers and zone paging with or without talkback. Aiphone Corp., Bellevue, Wash. Circle 312 on reader service card



Lounge seating

The *Mirabell* design by Hans Hopper comes in both a settee (shown) and an armchair. Seats and backs are polyurethane with *Dacron* fiberfill overlay. The settee measures 61 in. wide by 32 in. deep by 28½ in. high with a 16-in. seat height. Monel Contract Furniture, Inc., Oakland Gardens, N.Y. Circle 313 on reader service card



Bicycle rack

The *Ribbon Rack*, made of heavy-gauge, galvanized steel pipe, allows a bicycle frame and both wheels to be secured. When bicycles of any size are placed in opposite directions every space can be used. Brandir International, Inc., New York City. Circle 314 on reader service card Continued on page 161



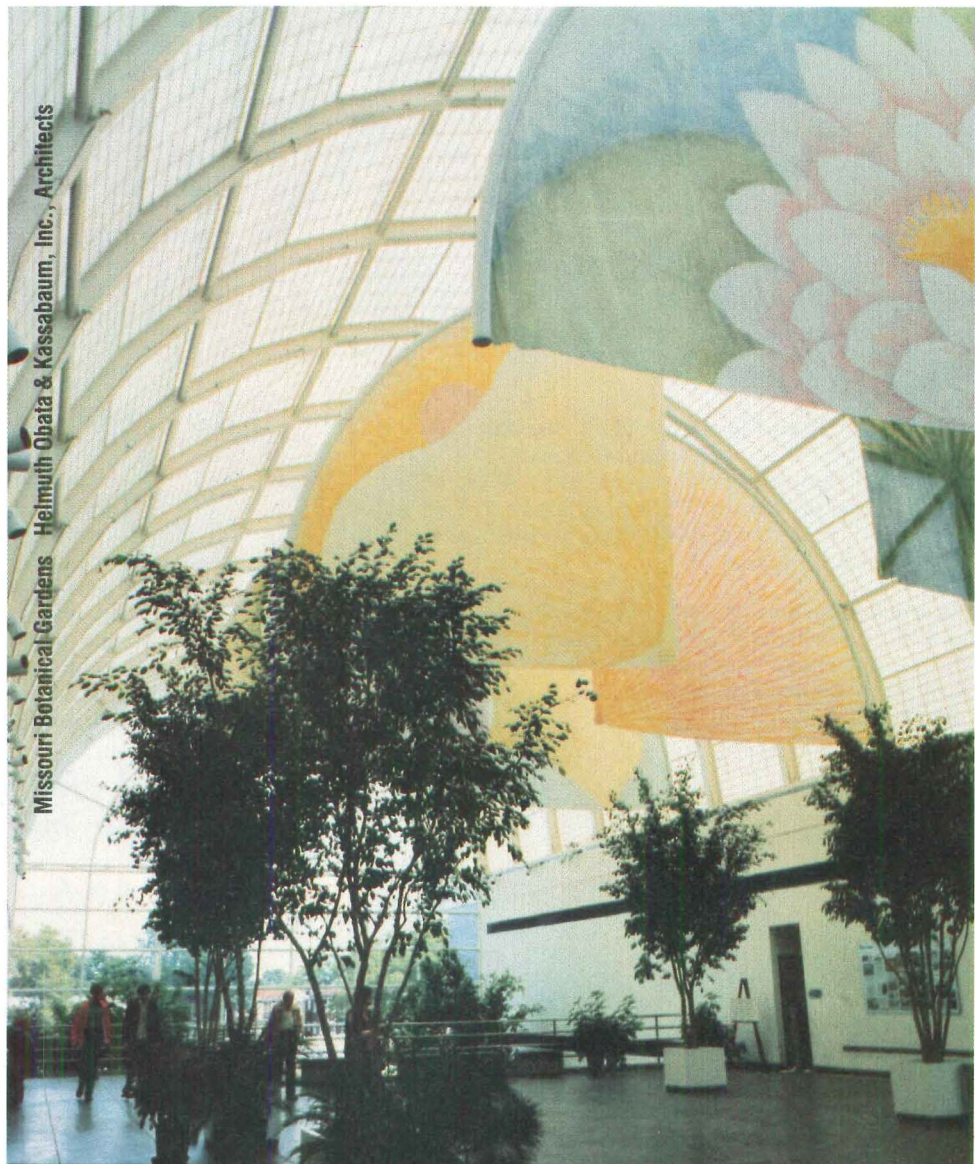
Drawing bag

Made from 11-oz water-repellant cordura nylon, these drawing bags feature nylon zippers that run the full length of the bag. Adjustable straps are made from the same material as the bags, and handles are made of polypropylene webbing. Bags measure 24, 30, 36, or 42 in. and are 4, 5, or 6 in. in diameter. When empty, the bags, with no inner frames, may be folded for storage. They feature 14-in.-long tool pockets inside and come in black, navy, gray, maroon or brown. Abrams Schletzbaum, Charlotte, N.C. Circle 310 on reader service card



Matting

Mateflex matting is made of high-pressure polyethylene in a honeycomb pattern and comes in interlocking 13-in. squares, ¼ in. thick. Manufacturers claim the squares may be installed over almost any surface and may be easily cut to conform to unusual shapes. Mateflex-Mele Corp., Utica, N.Y. Circle 311 on reader service card



Missouri Botanical Gardens Helmuth Obata & Kassabaum, Inc., Architects

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Luminaires

The *Holophane Primalume* uses a coverless glass reflector that provides from 15 to 20 per cent uplight to reduce ceiling contrast. The fixture is available with either the large *PRSL 635* reflector (shown) or a small *PRSL 585* model. Both models are supported by full retaining rings and 3 support rods. The larger unit can use a broad array of HID lamps including 150W, 250W and 400W HPS, 400W metal halide and 400W mercury. Manville Service Center, Denver, Colo.

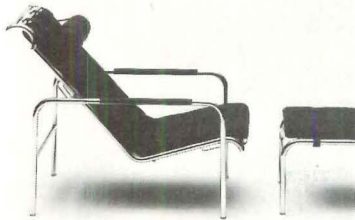
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Pre-rinse spray

First introduced 10 years ago and now being reintroduced, the *Nautilus* is a heavy-duty pre-rinse spray unit specially designed for commercial and institutional kitchens. It features a retractable swivel joint design, which eliminates the potential for hose breakage. The design permits coverage of a 4- to 6-ft area. It is made of brass and has a chromium-plated finish. When not in use, it stands at 42 in. in height. T & S Brass and Bronze Works, Inc., Travelers Rest, S.C.

Circle 316 on reader service card



Lounge chair

Reproductions of a 1935 design called *Genni*, the lounge chair and ottoman shown feature tubular steel frames that are either chromium-plated or finished in white epoxy and leather-covered cushions. Chairs adjust to lounge or reading positions. ICF, Inc., New York City.

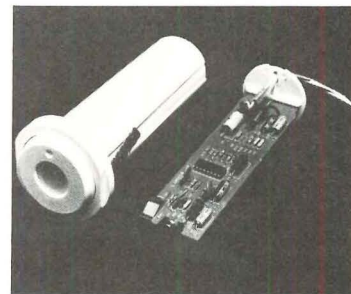
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Drafting table

A pedestal-based drafting table adjusts vertically up to 15 in. and features a tilt angle adjustment from 0 to 85 deg. Vertical adjustment is made with a handle that folds away when not in use. Available pedestal color finishes are putty, rosewood and walnut. Creative Dimensions, Nappanee, Ind.

Circle 318 on reader service card



Light control

Infracon is an electronic, passive, infrared sensor that automatically turns lights on and off as people enter and leave a room. Besides saving energy, this device may be installed for greater security as well. Tishman Research Co., New York City.

Circle 319 on reader service card
Continued on page 162



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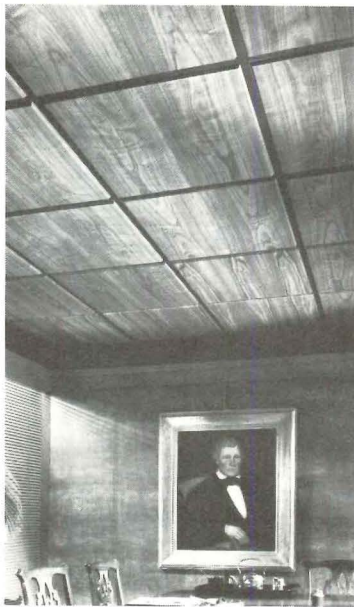
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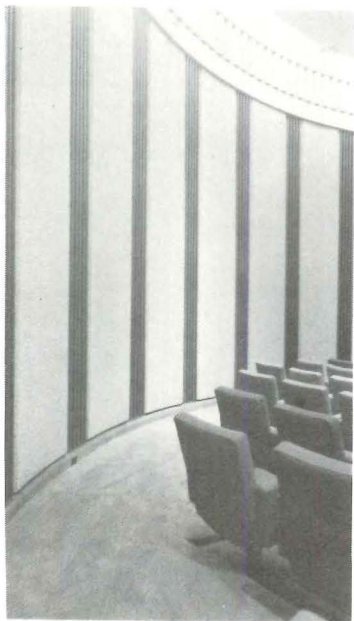
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Wood ceiling panels

Woodcuts ceilings are made of solid wood veneers in walnut and light oak applied over a mineral-fiber substrate. Tegular panels measure 2 ft by 2 ft and may be installed in this manufacturer's Trimlok grid system or in conventional bronze or other metallic suspension grids. Walnut panels are available in a mahogany finish. Armstrong World Industries, Lancaster, Pa. Circle 320 on reader service card



Acoustical panels

Sound-reducing panels are made with an inner frame of extruded aluminum alloy. Panel cores are semirigid fiberglass, 3/4, 1, or 2 in. thick. Available surface materials are 100 per cent polyester in 27 colors, perforated vinyl in 29 colors, and PVC-backed burlap in 6 colors. All panels carry Class A fire-safety ratings. They may be used in either wall or ceiling applications, and typical installations include open office systems, data processing areas, open ceiling areas and auditoriums. Sound Reduction Corp., Cleveland, Ohio. Circle 321 on reader service card

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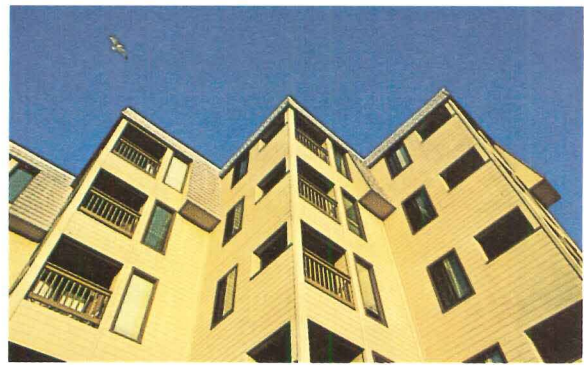


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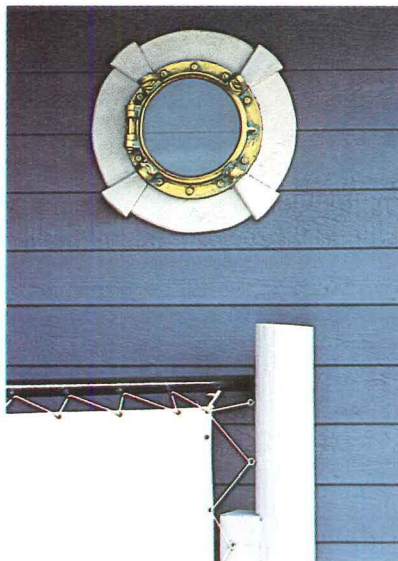


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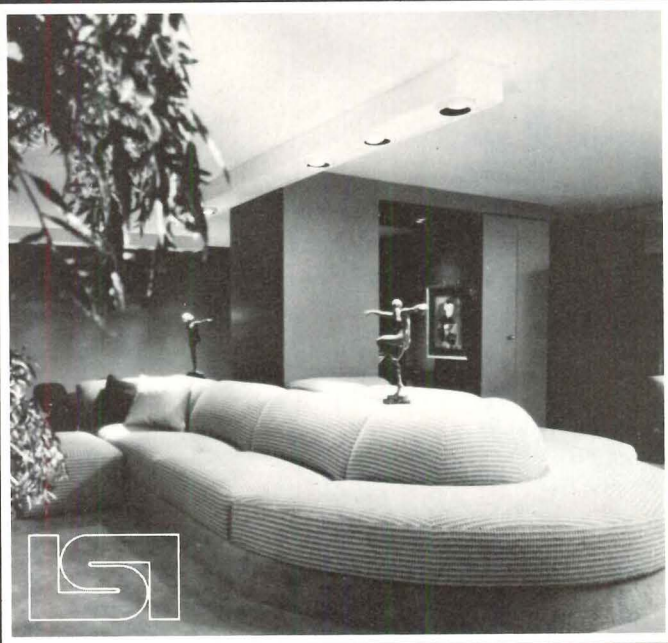


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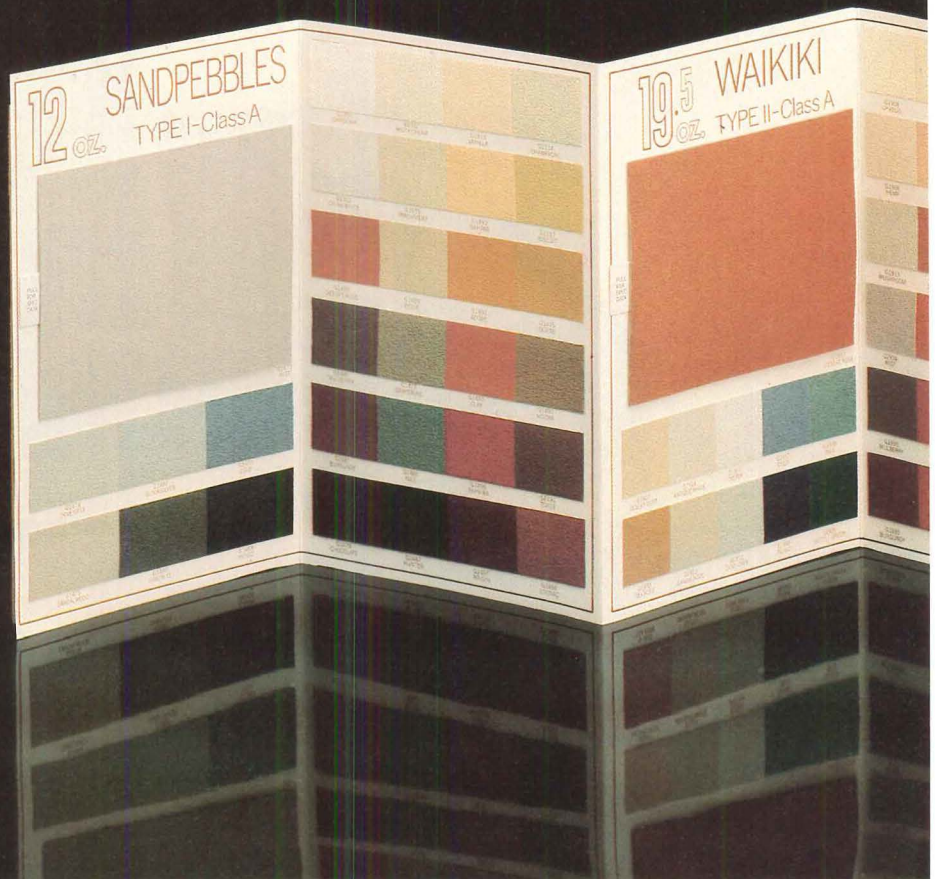
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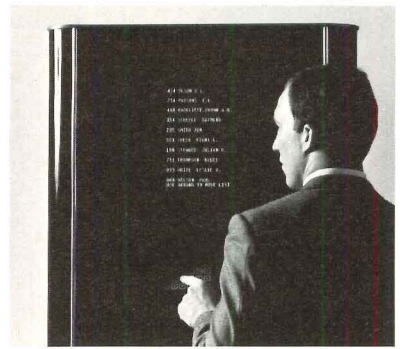


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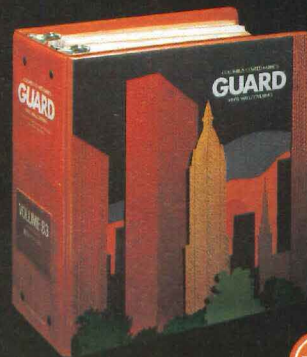
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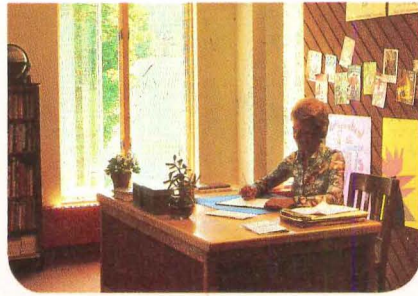
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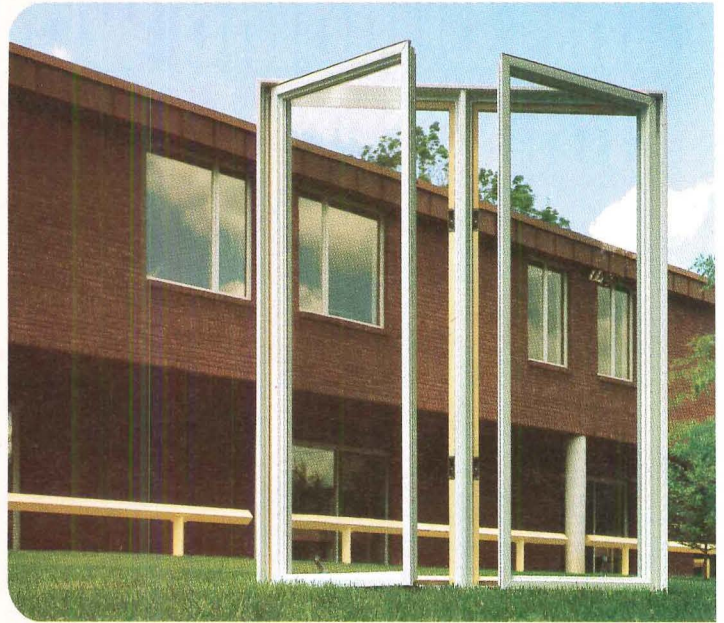
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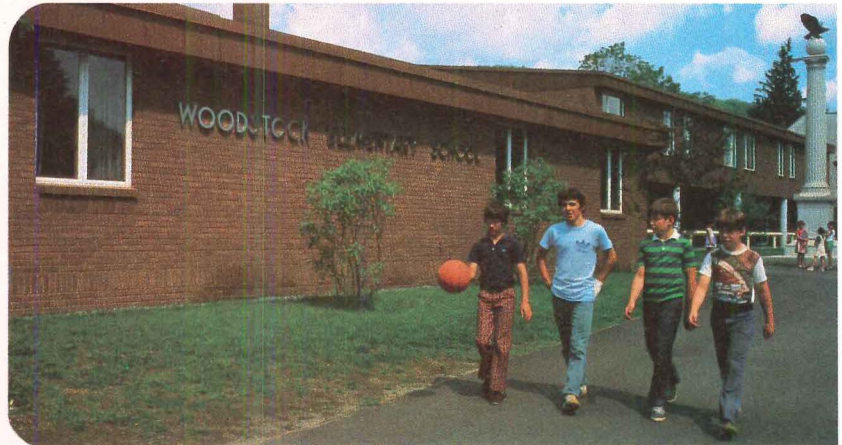
My teacher.



my sister's class.



The principal's windows.





My Science Class Report:

How our school windows save lots of energy.

The windows in our school are very good examples of things that help save energy.

They're called Andersen windows and they come from a small town in Minnesota.

They're real tall and wide and let lots of sunshine in. So we can read and study without lights on all the time. That saves electricity.

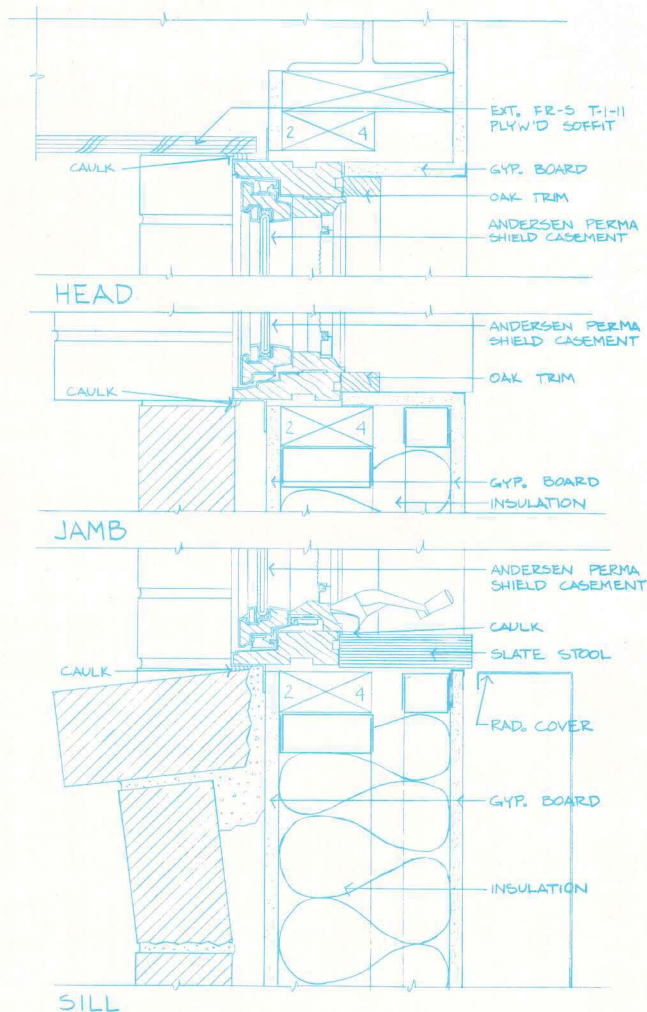
The guy who helped build our school (he's called an architect) said Andersen windows will save energy in the winter, too.

Because they're made out of wood. A real good material. And they fit together super tight.

He also said each window's got two pieces of glass instead of just one. And it's all those things together that will keep us warm in class and help save fuel all winter.

The last good thing about our windows is that they've got vinyl on the outside. This vinyl is real hard and not like paint. So it won't have to be fixed up all the time.

When I get older I'd like to be an architect. If that ever happens I'll remember how good Andersen windows were in our school.



Woodstock Elementary School
Woodstock, Vermont
Architect: Banwell, White & Arnold, Inc.
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If you're already grown up and are an architect/designer, look into Andersen® windows, roof windows and gliding patio doors.

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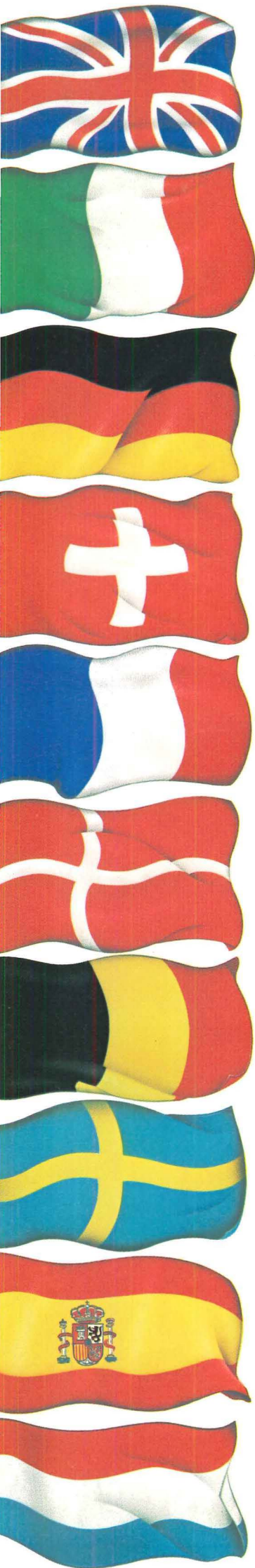
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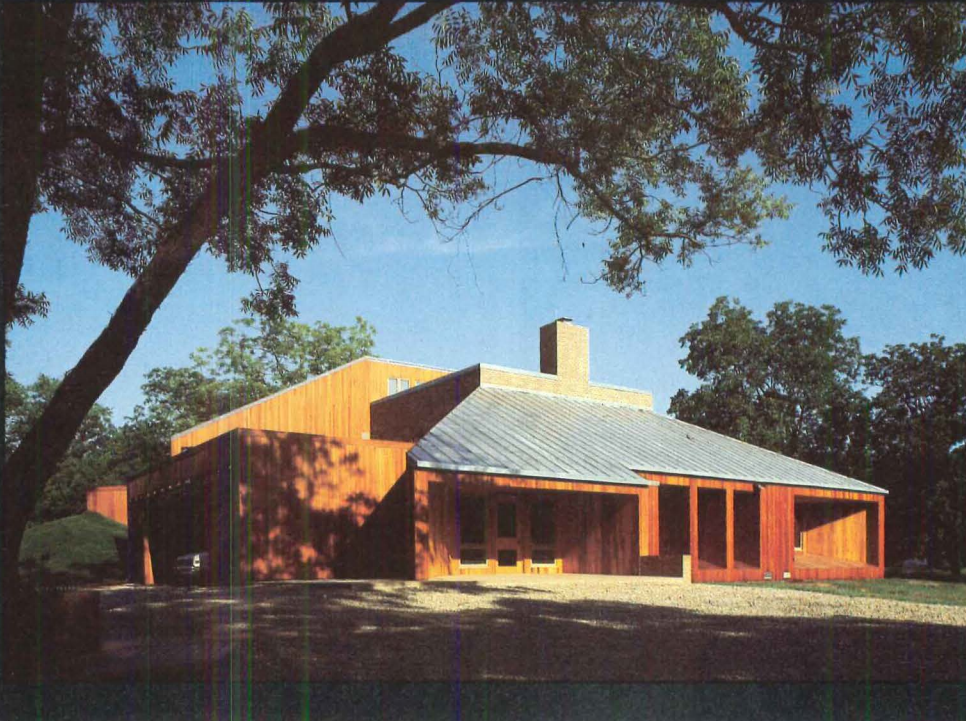


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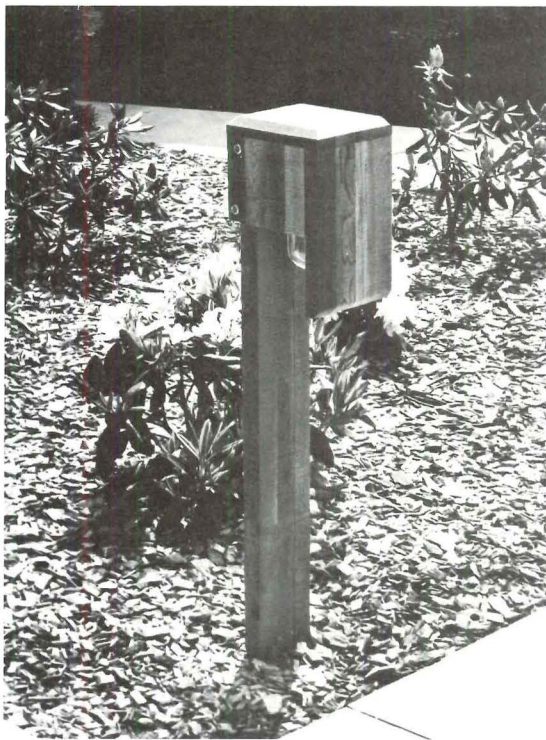
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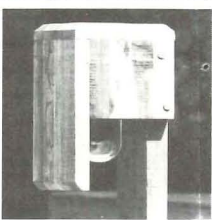
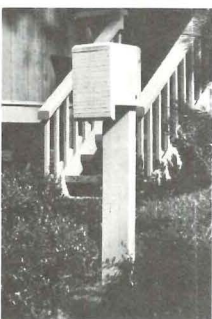
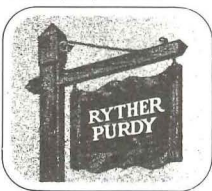


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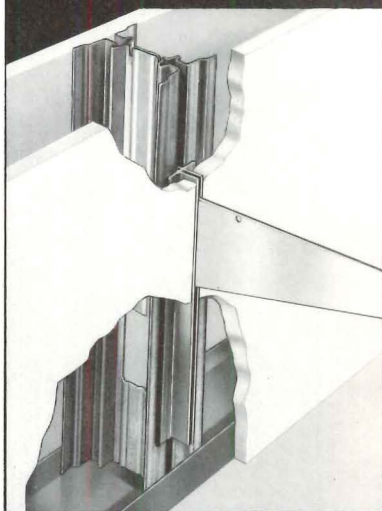
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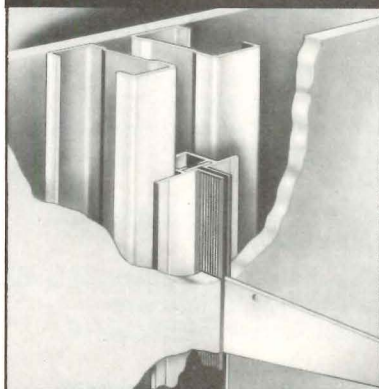
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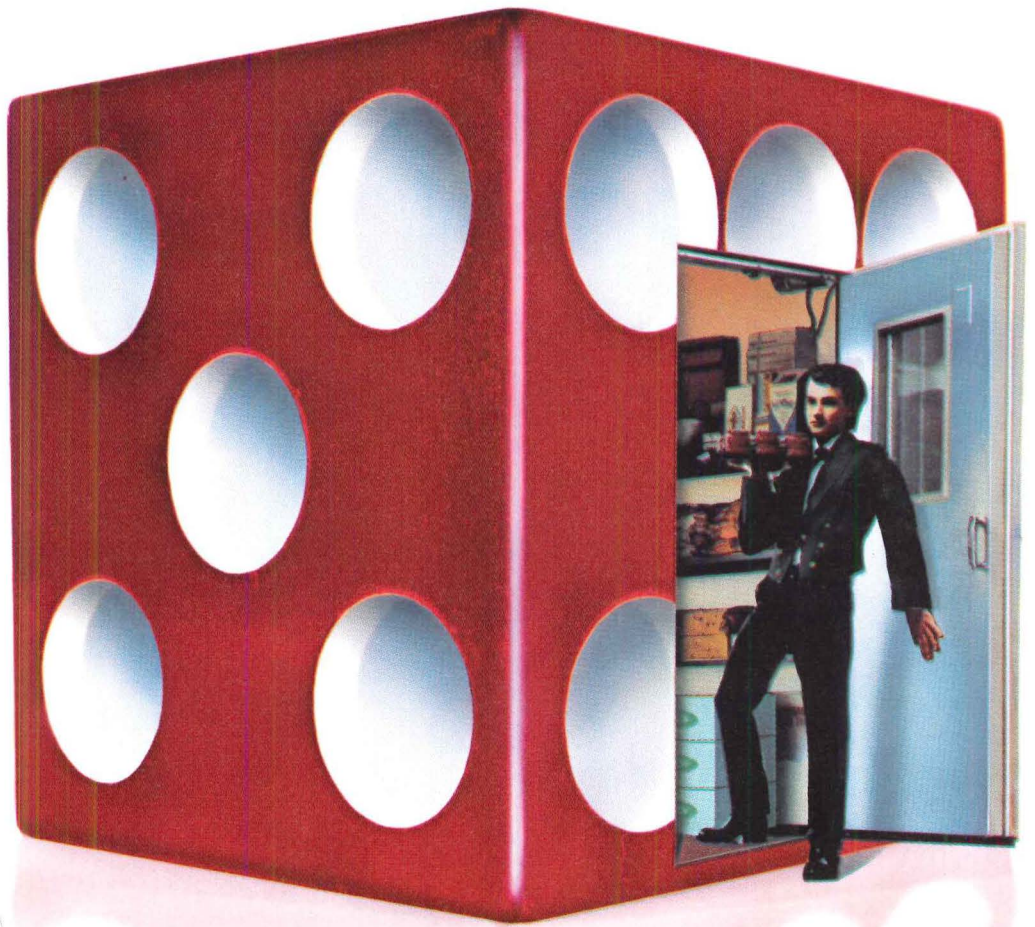
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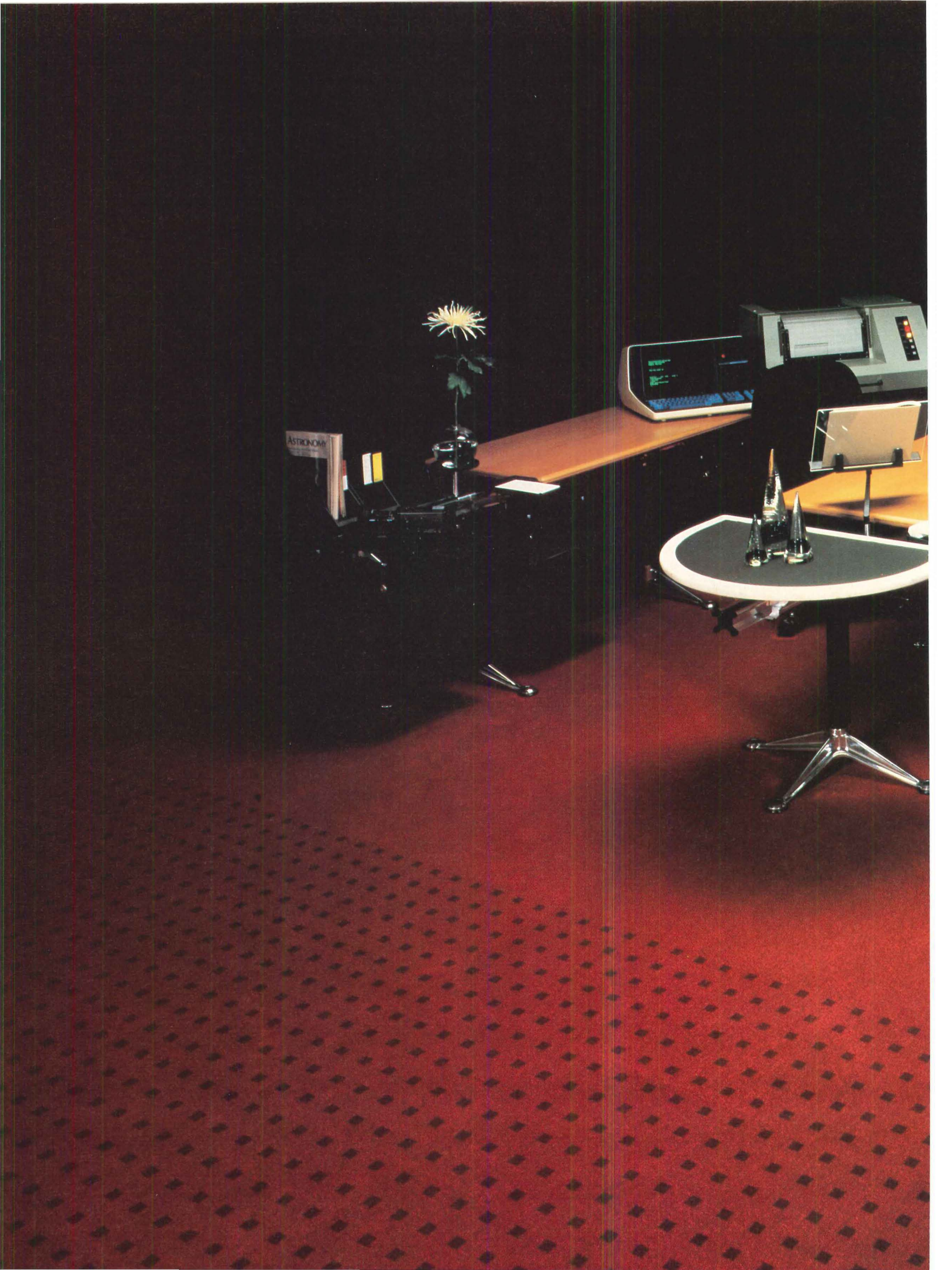
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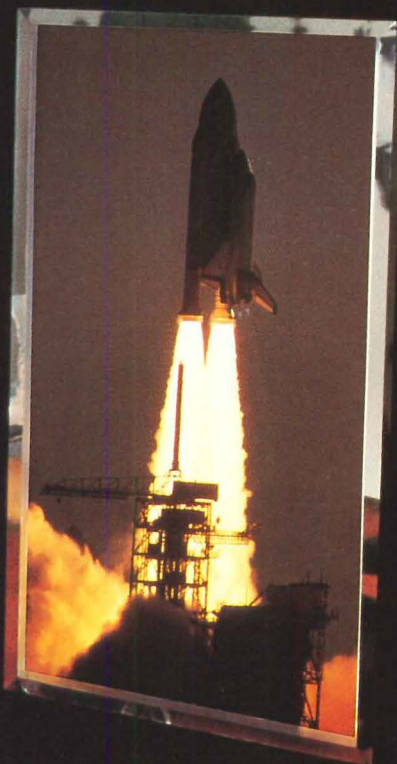
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INTERFACE

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The competition is open to professional designers and architects only. Entries must be postmarked by February 15, 1984.

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FOR FULL DETAILS

Entrants are requested to send for the complete rules brochure. Copies of the award-winning competition poster, designed by Emilio Ambasz, are available on request while quantities last. Address all inquiries to:

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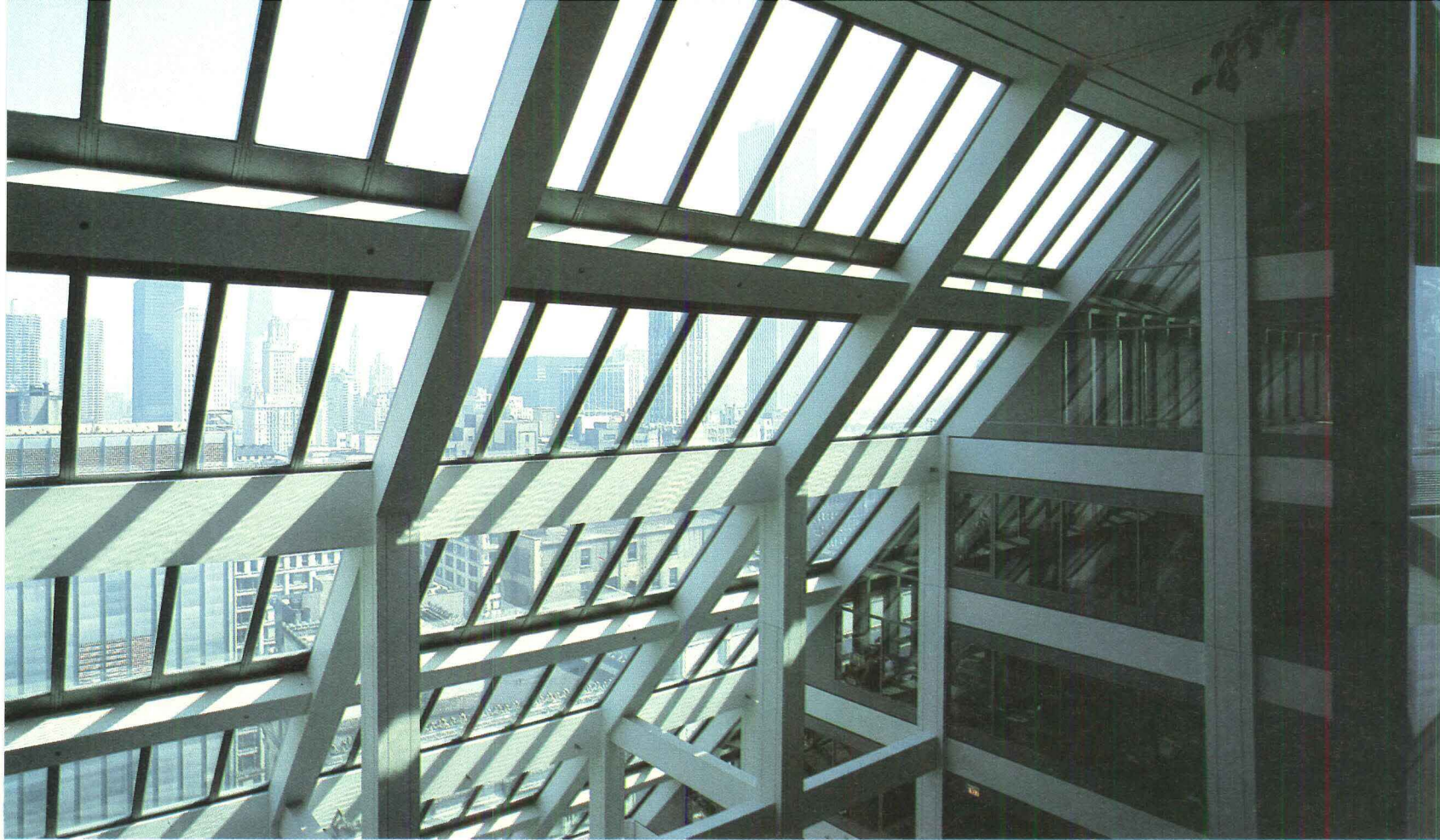
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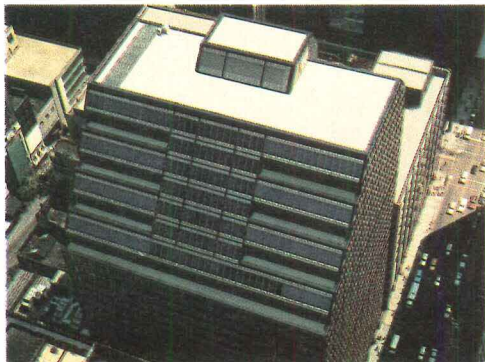
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Chicago's dramatic 33 West Monroe building was designed by Skidmore, Owings & Merrill and is managed by Draper and Kramer, Inc.

How Laminated Glass helped move the great outdoors upstairs.

It was an inspired idea. Instead of a ground-level atrium, create a sunny, open space on the top eight floors of Chicago's 33 West Monroe building.



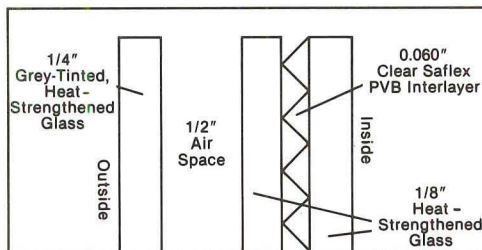
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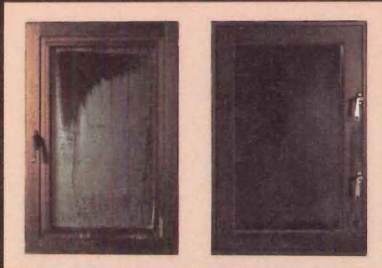
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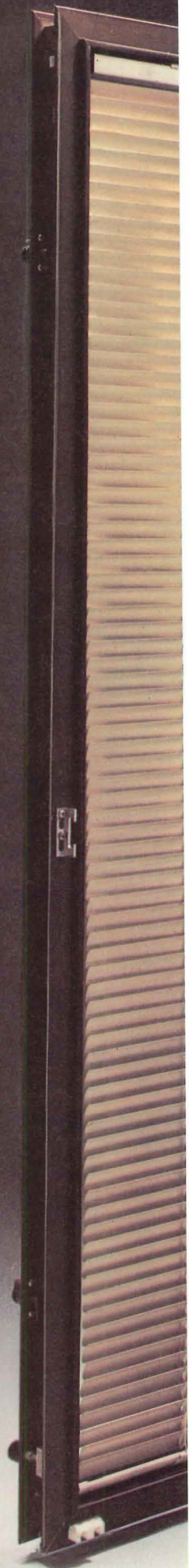


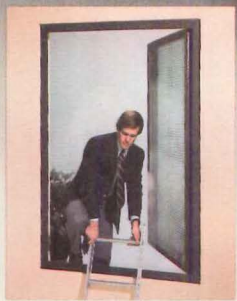
Ventilation

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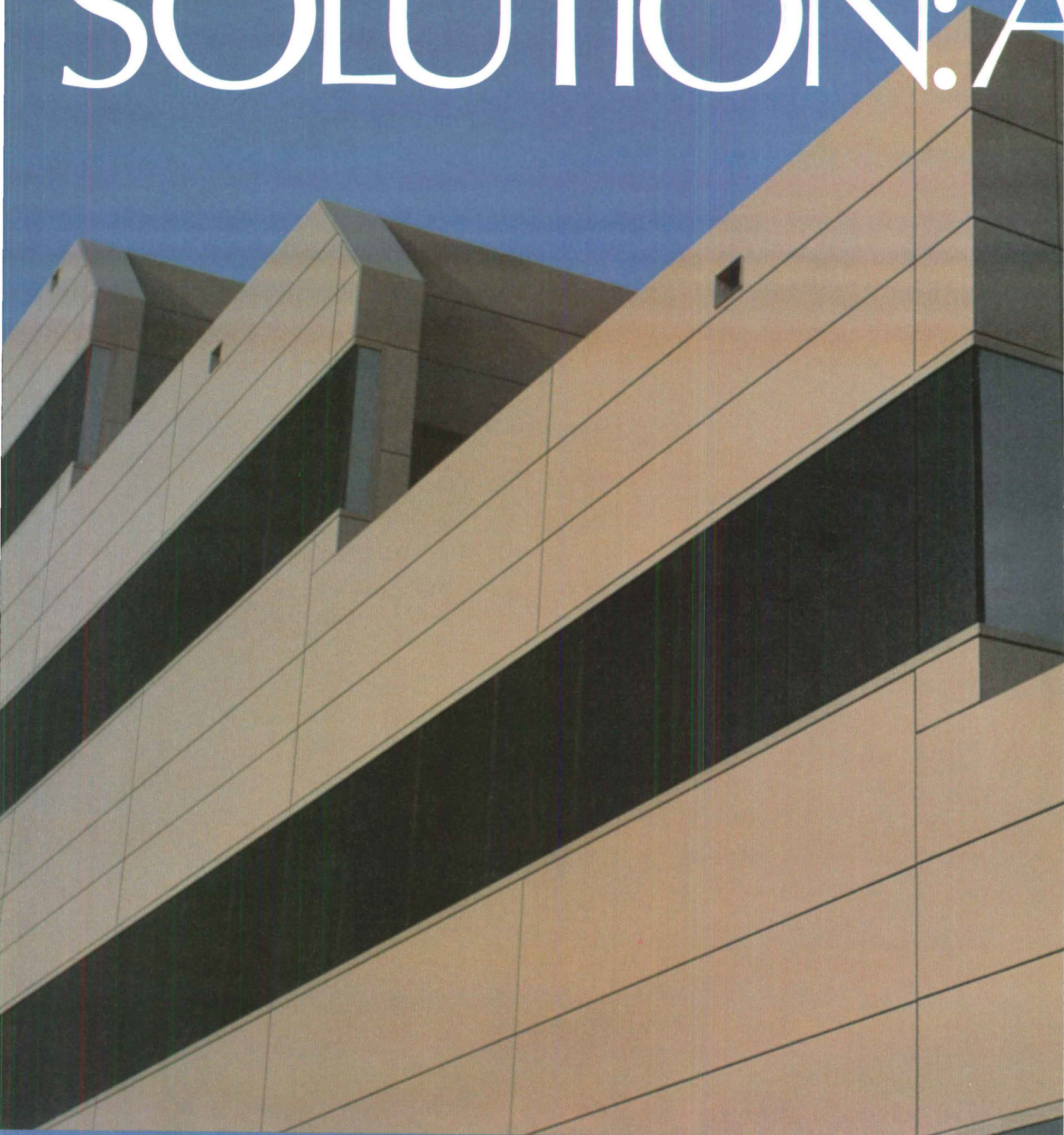


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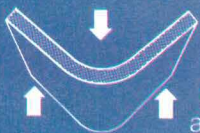
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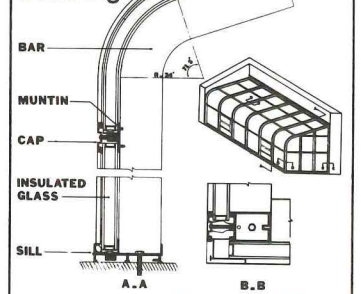
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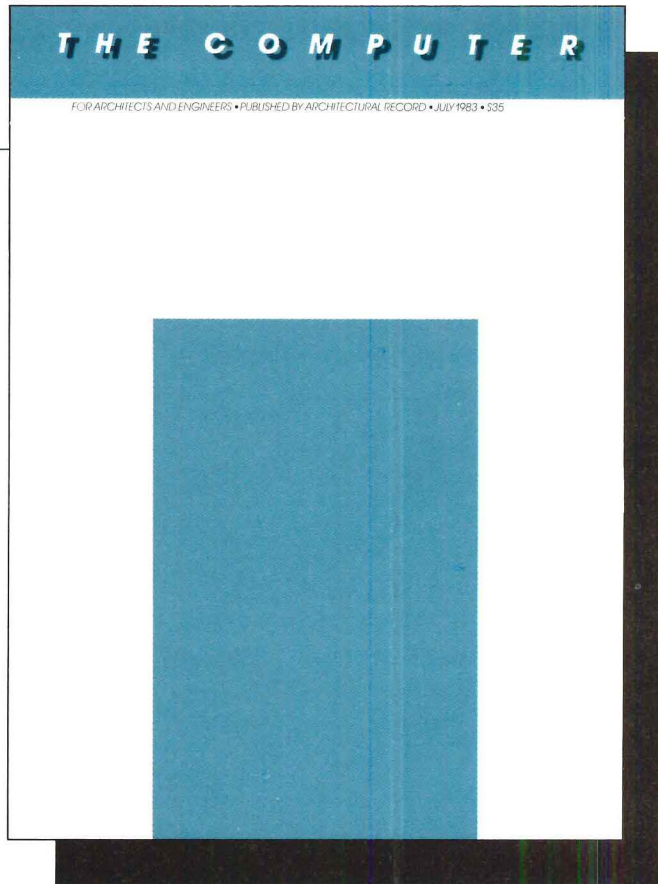
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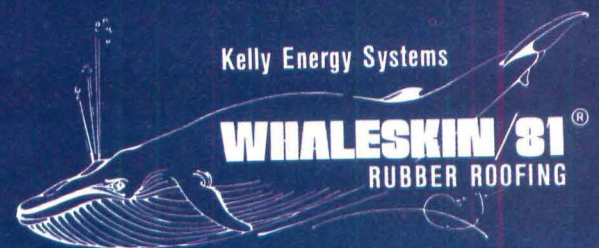


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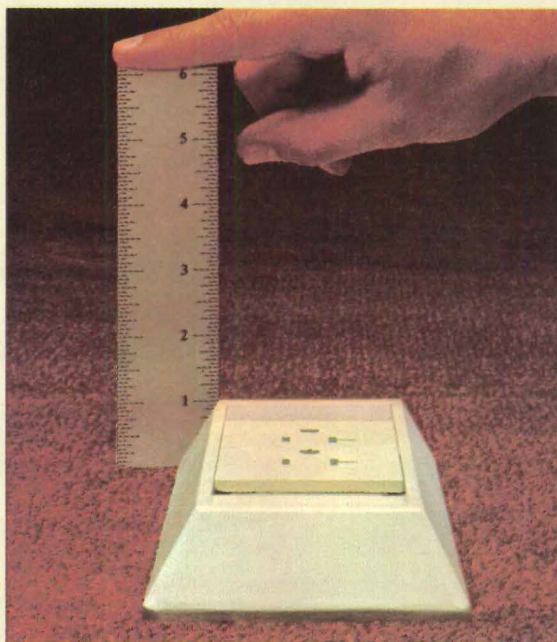
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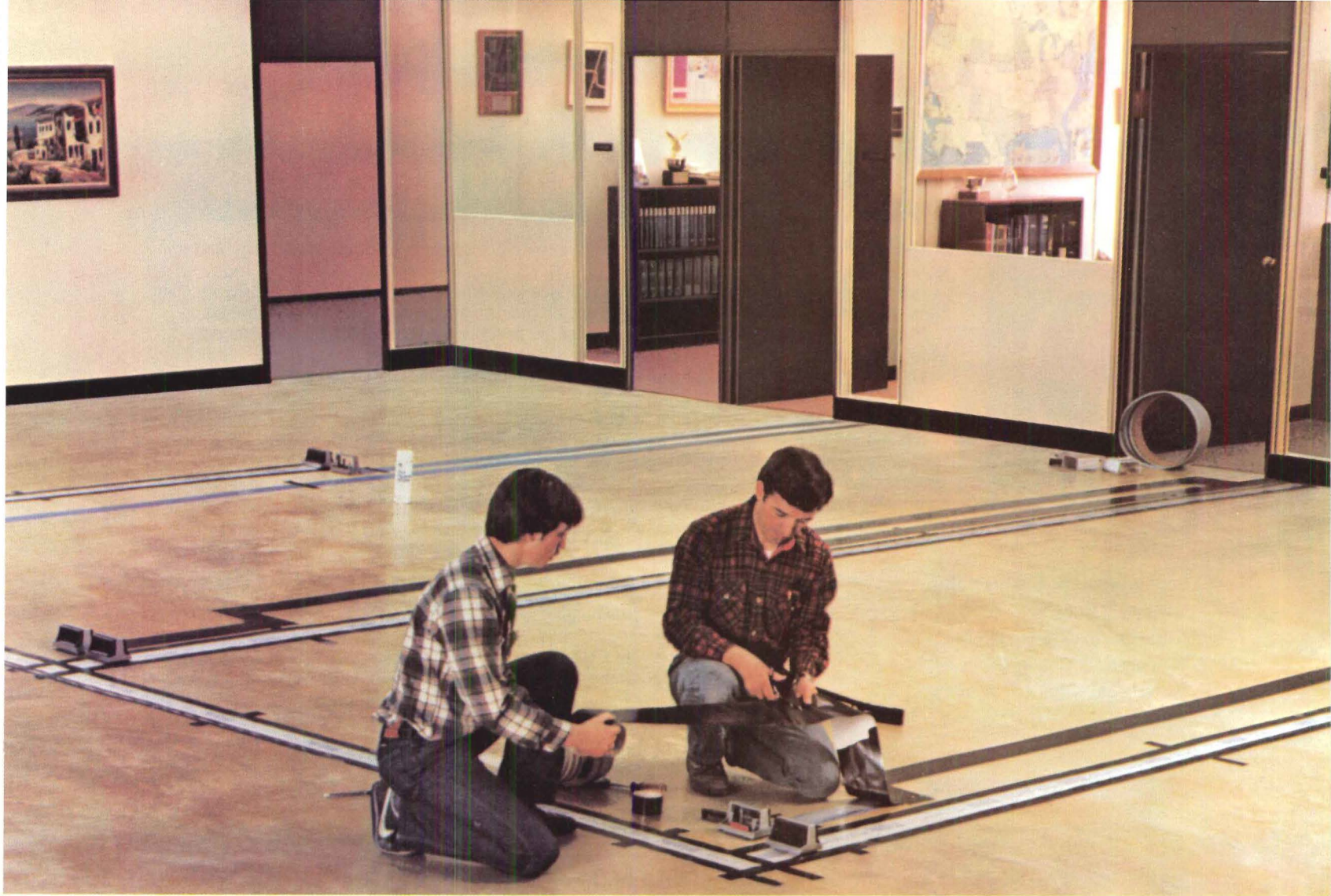
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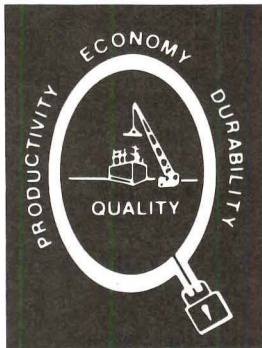
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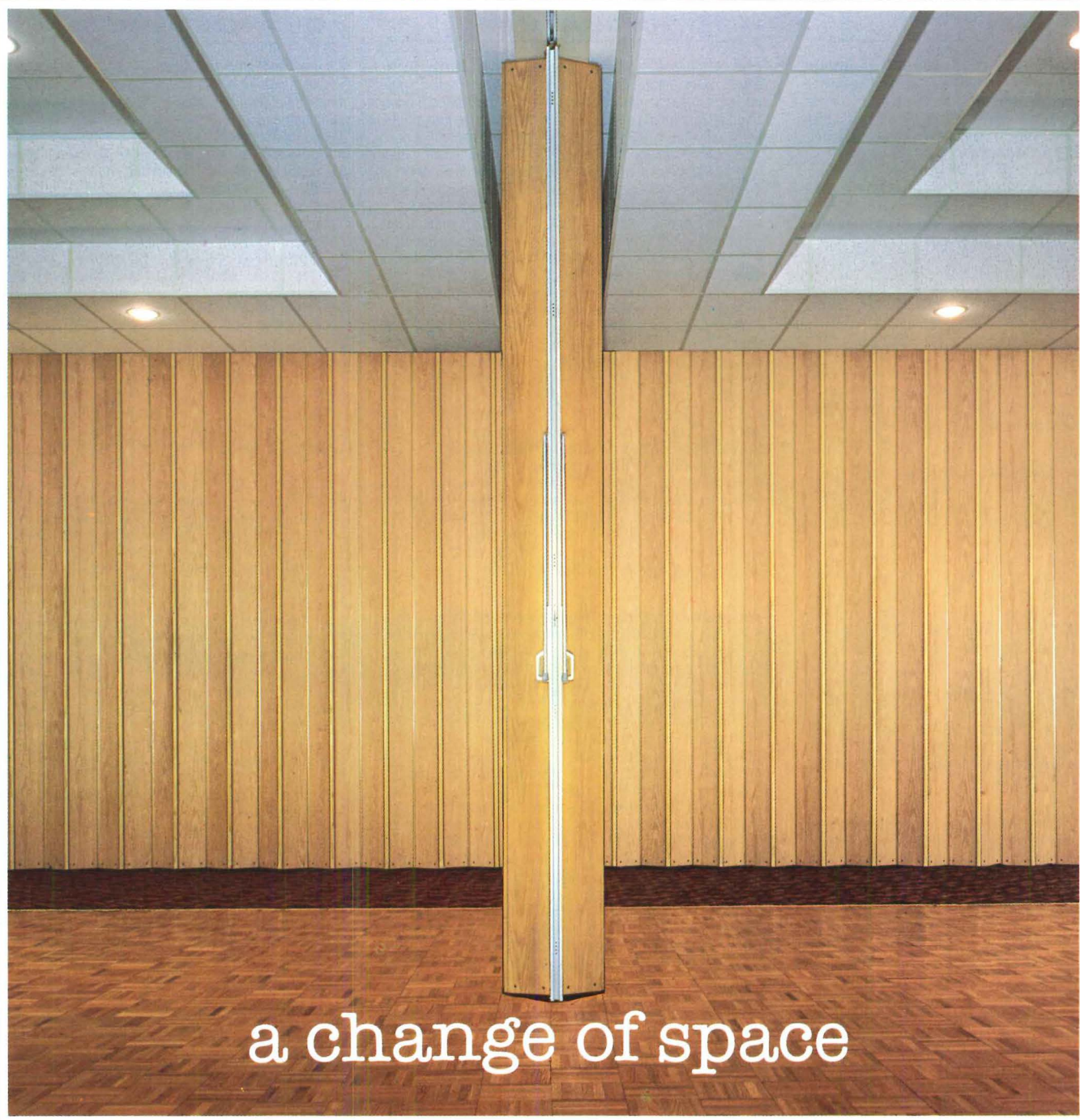
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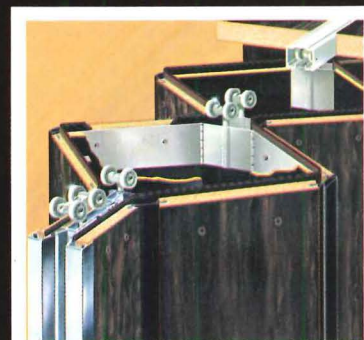
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John P. Lindblad has opened an architectural practice under the name of Lindblad Architects at 13455 Ventura Boulevard, Sherman Oaks, California.

Paul Muller and Terry Brown have established an architectural design firm, Muller & Brown, located at 800 Broadway, Cincinnati, Ohio.

The formation of a new Anchorage consulting firm, PAVA Design, Inc., has been announced by Frank Piatkowski, president; Don Vogan, vice president and Toby Peratrovich, manager. The firm will offer services in architecture, landscape architecture and planning. Their offices are located at 3305 Arctic Boulevard, Suite 205, Anchorage, Alaska.

Raul L. Rodriguez, George Khuly and Antonio M. Quiroga announce the formation of a partnership for the practice of architecture under the firm name of Rodriguez Khuly Quiroga Architects and is located at 4440 Ponce de Leon Boulevard, Coral Gables, Florida.

3D/International has opened an office in Washington, D.C.

Frederic P. Warnecke and Peter R. Rosekrans announce their partnership, to be known as Warnecke/Rosekrans, offering master planning, site planning and landscape architectural services. The new firm will be headquartered at 417 Montgomery Street, Suite 500, San Francisco, California.

Firm changes

Ricky E. Boeving has been appointed an associate of Allen & Hoshall, Inc.

Brendler-Dove Associates, Inc. announces the addition of Mark Drake, Robert Watts and Randy Thomas as architects.

Butler Rogers Baskett announces that Joan Petersen and David M. McAlpin have been named associates, and Leslie Armstrong has joined the firm as an associate.

William E. Burgess has joined Cerna/Garza/Raba, Inc. as director of development of the mechanical/electrical division.



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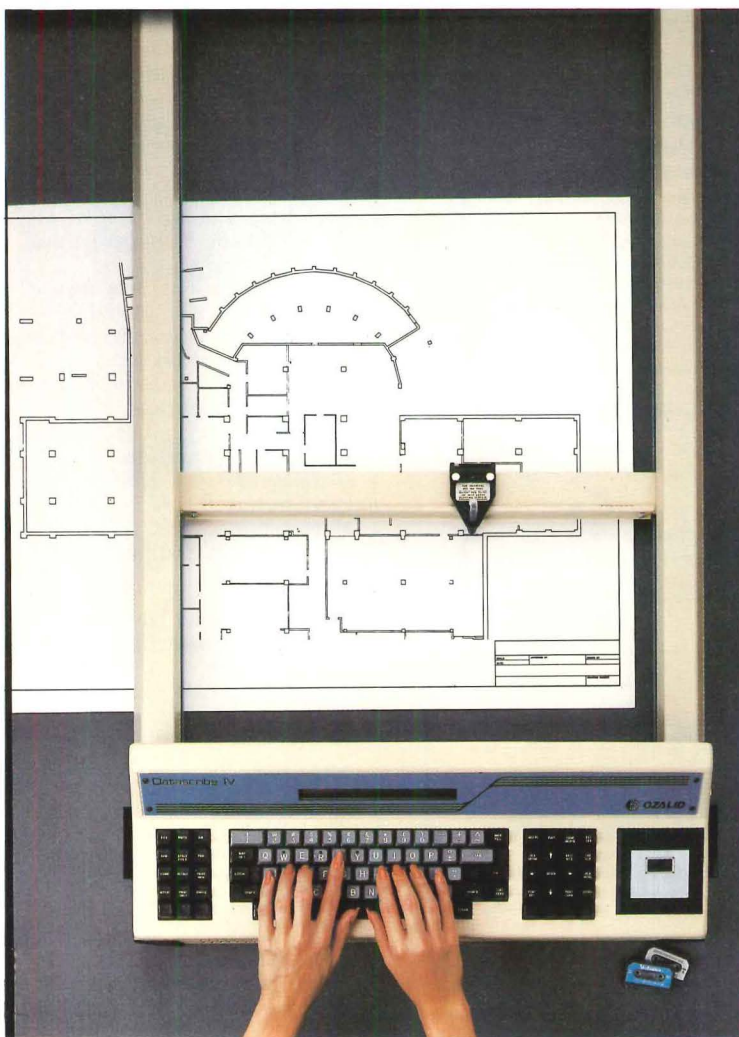
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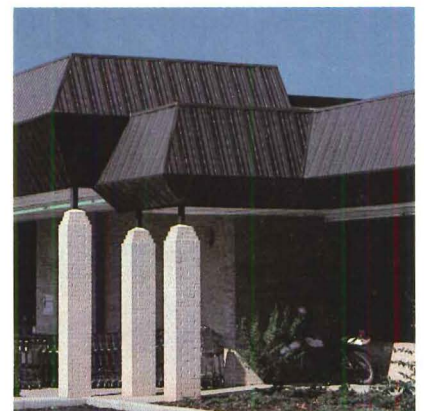
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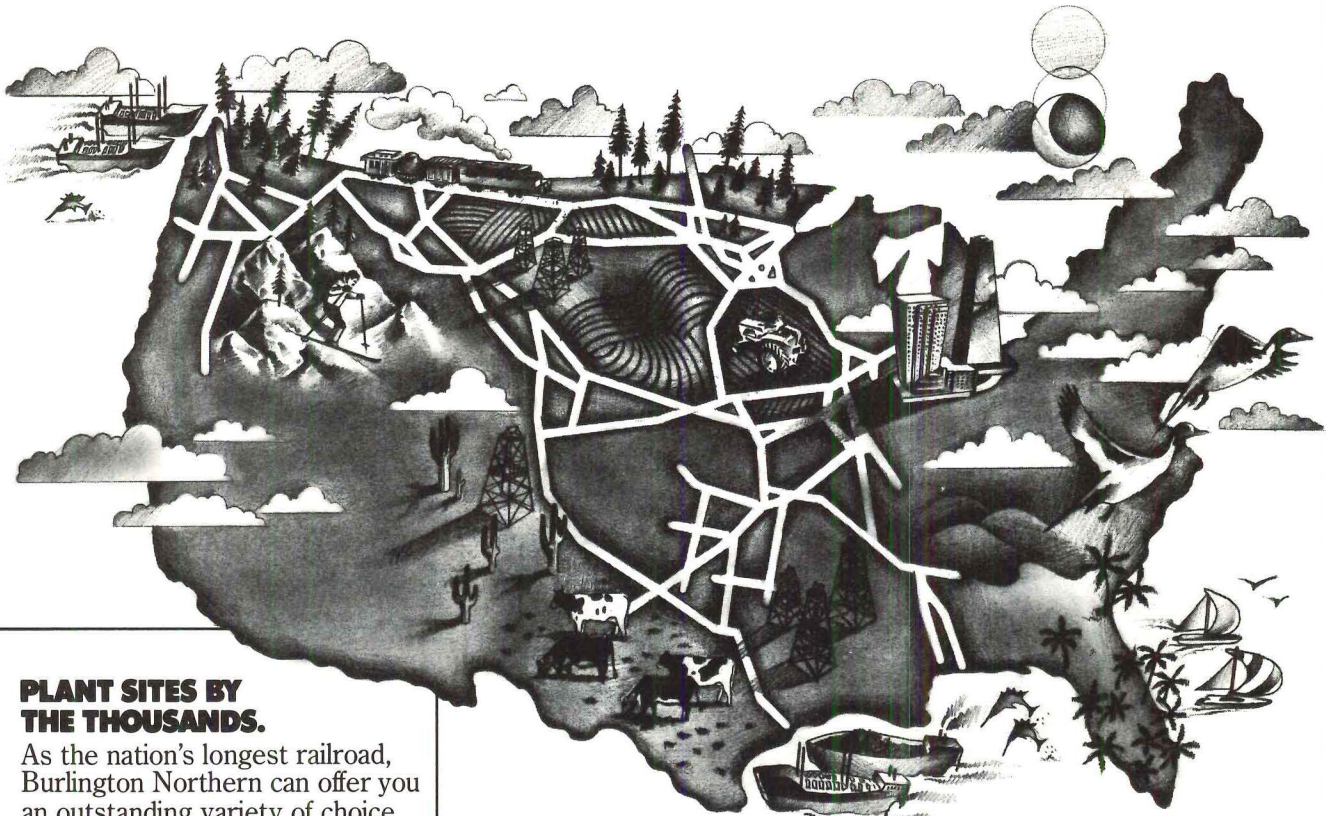
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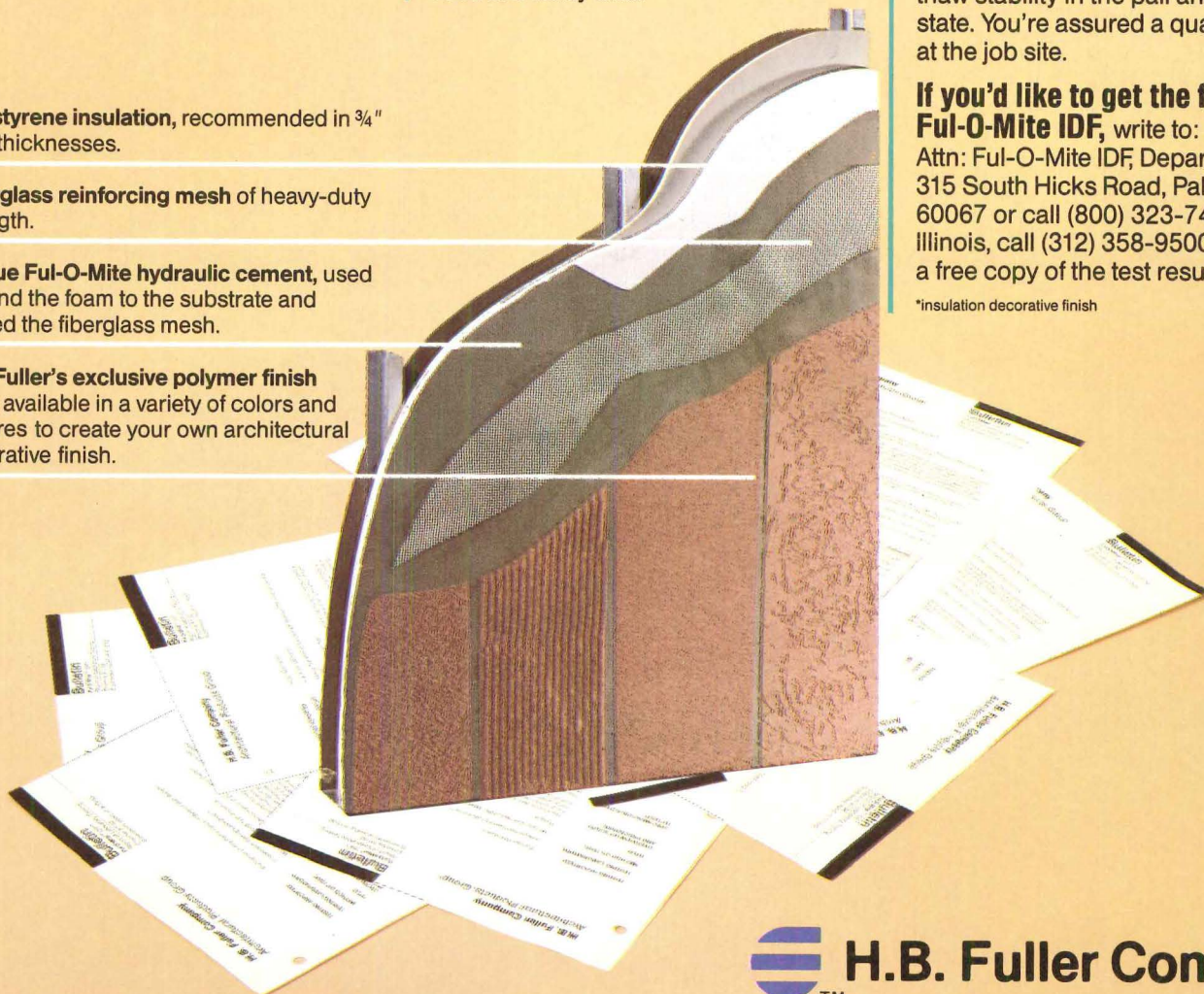
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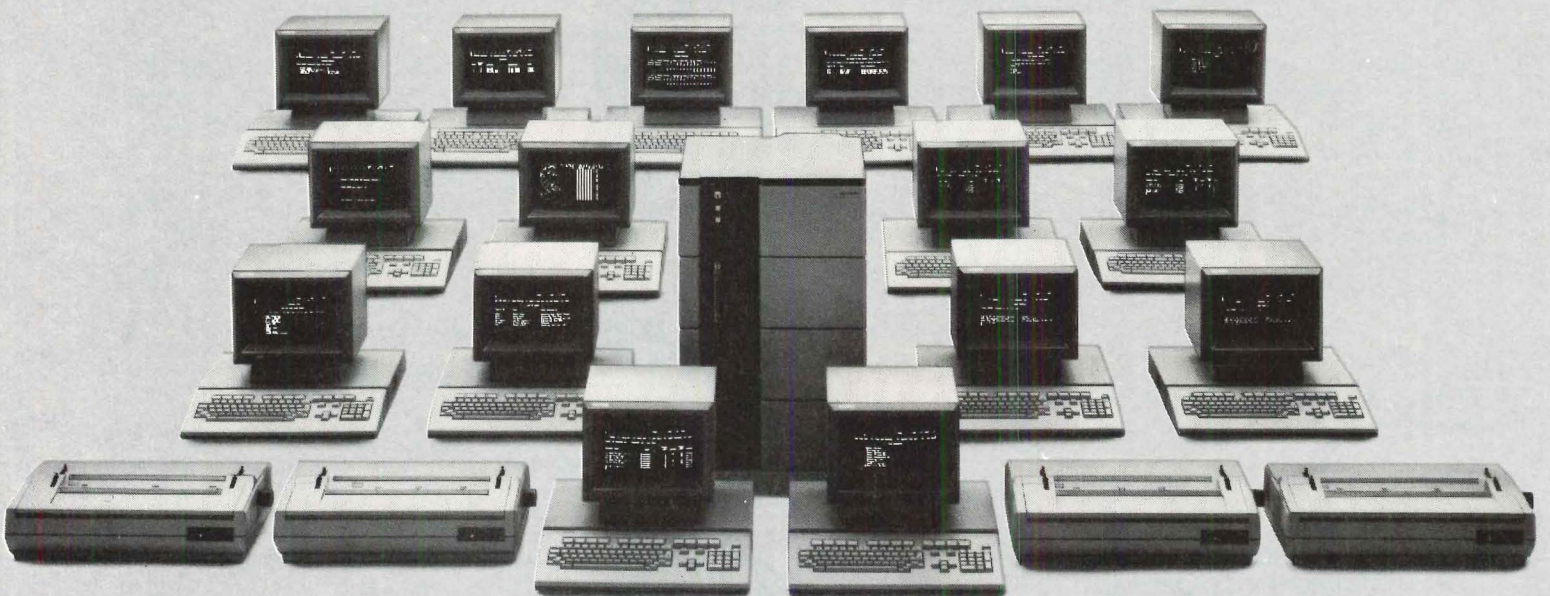


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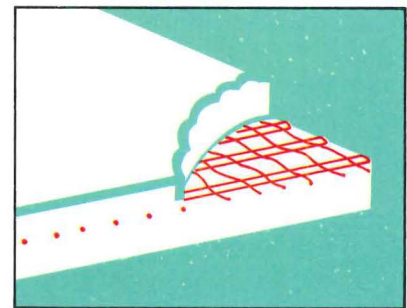
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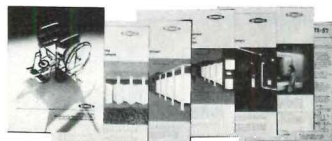
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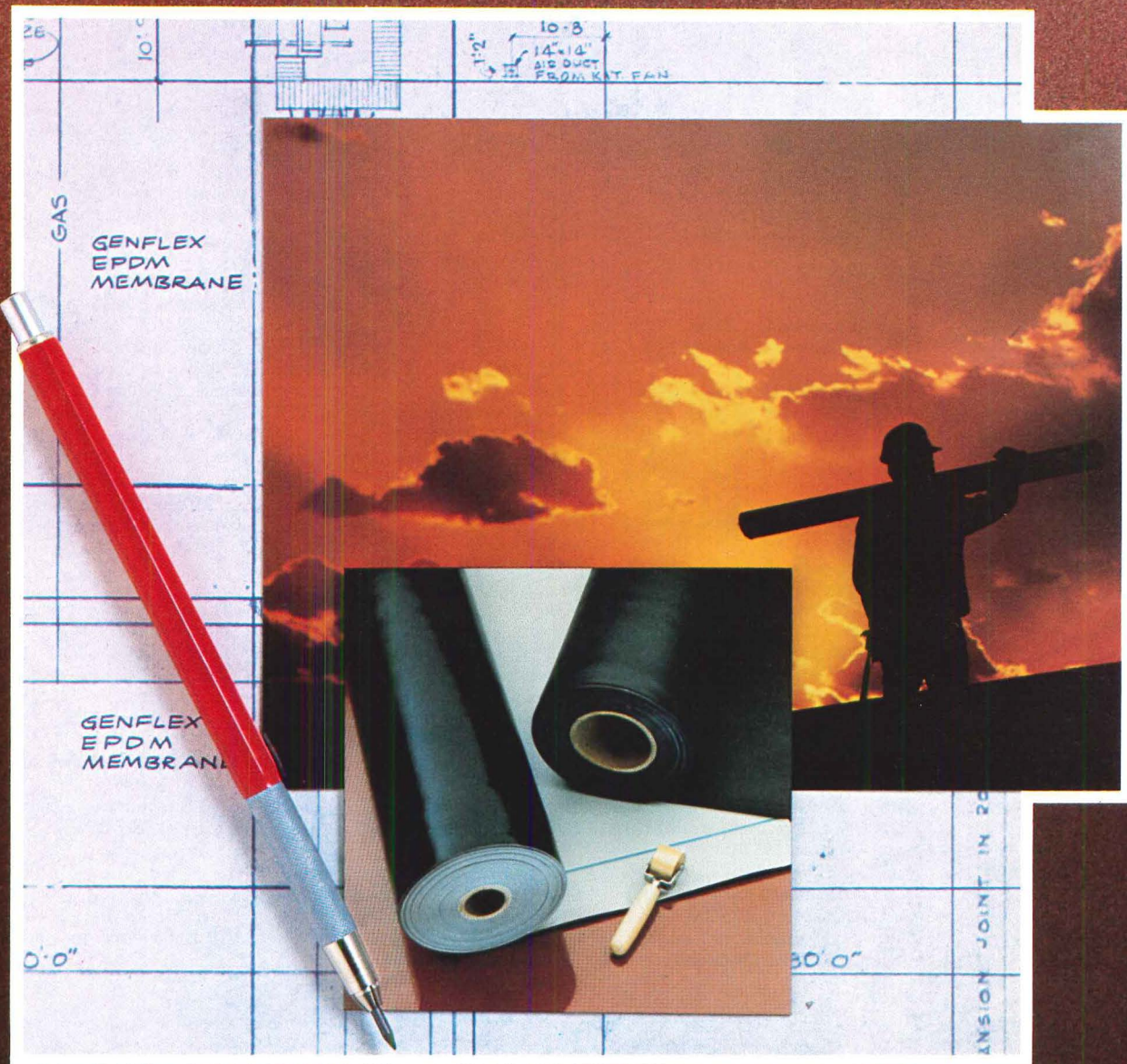
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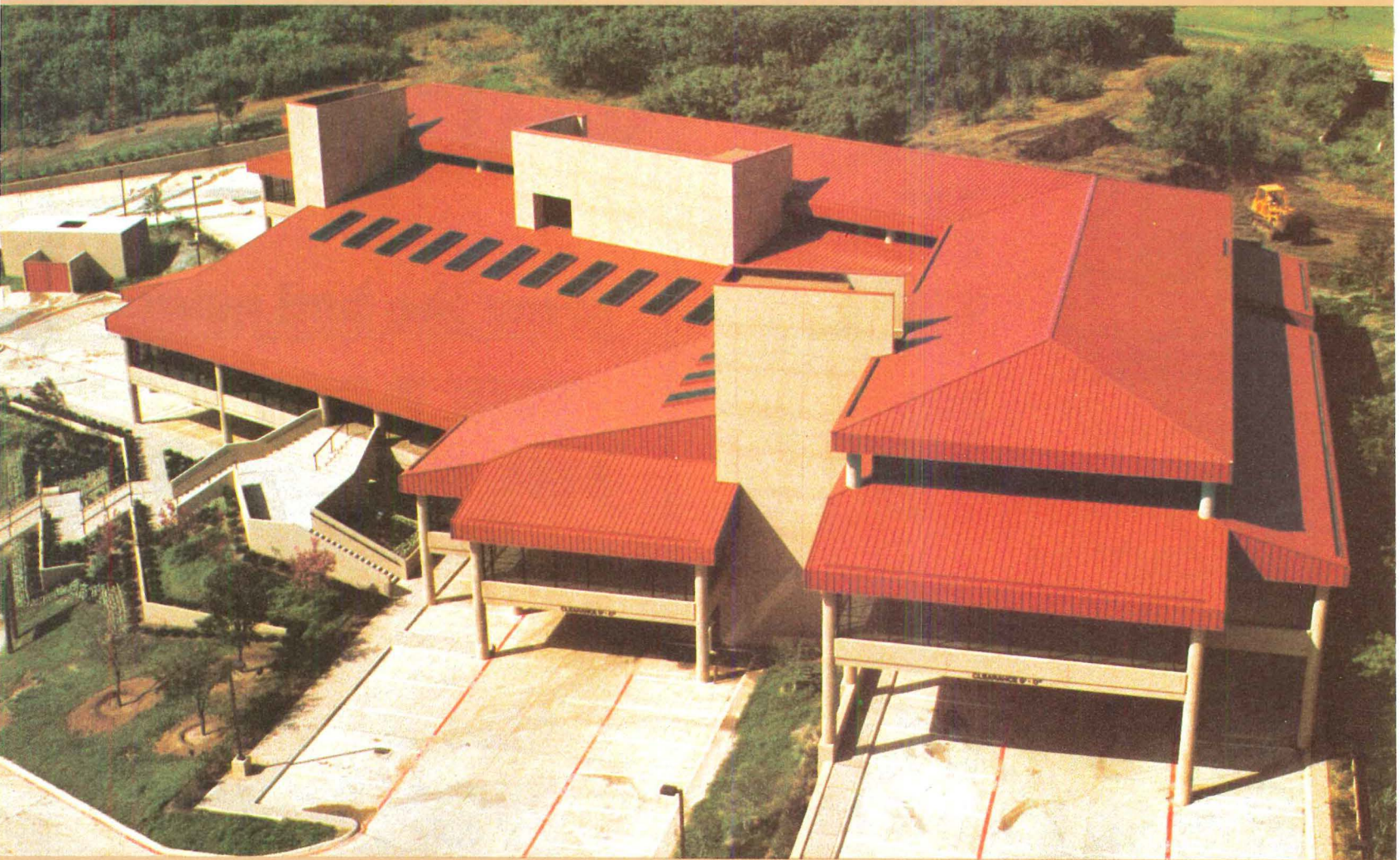
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PROJECT: Office building at Las Colinas, Irving, TX
OWNER: LAS COLINAS REAL ESTATE RESOURCES, Irving, TX
ARCHITECT: FISHER & SPILLMAN ARCHITECTS, Dallas, TX
GENERAL CONTRACTOR: THE CROCKETT COMPANY, Dallas, TX

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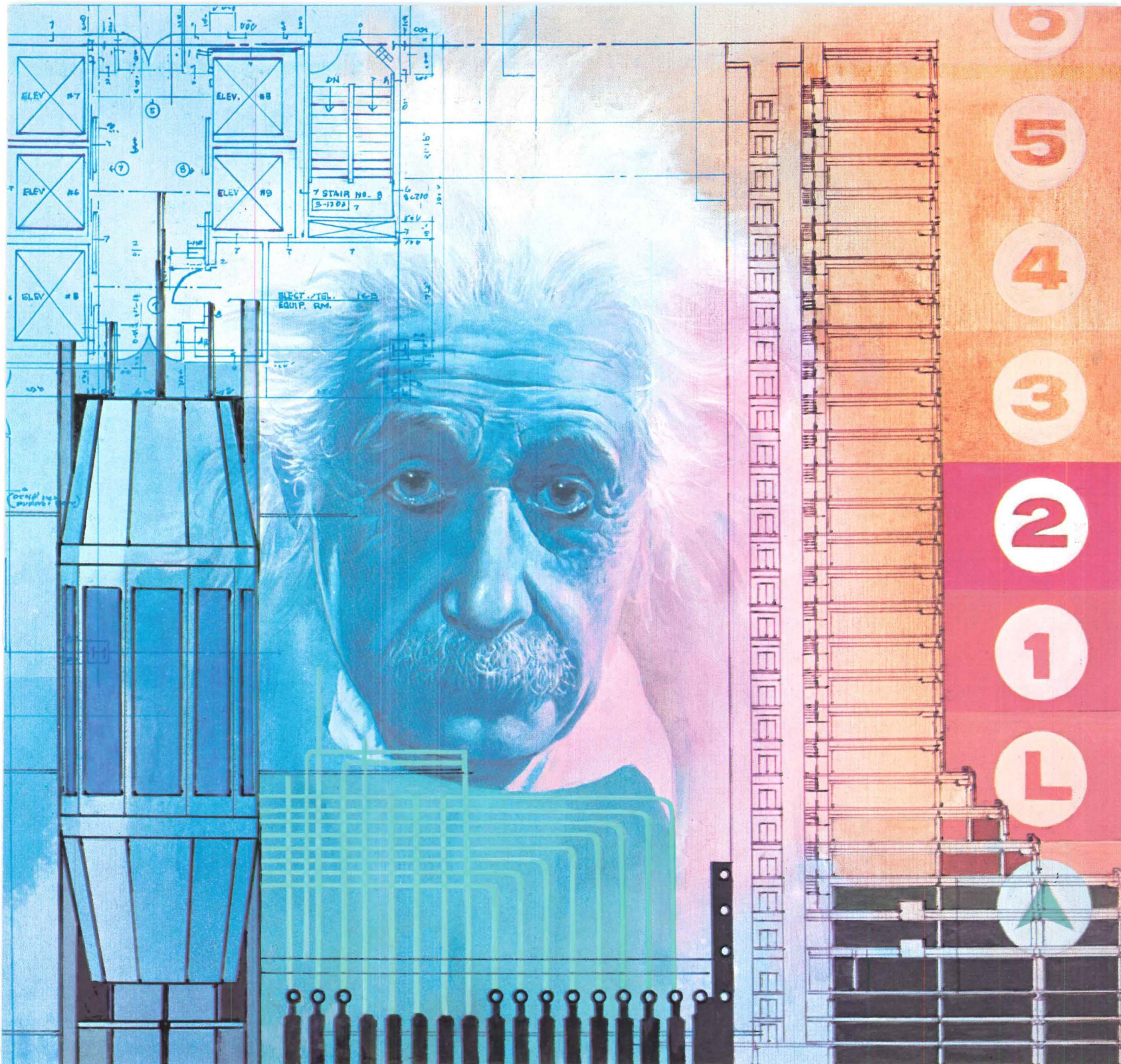
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