ARCHITECTURAL RECORD

Business Design Engineering
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October 1986

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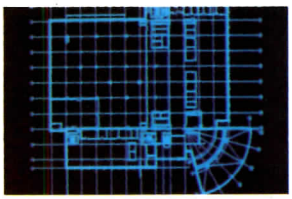

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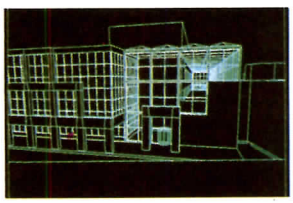

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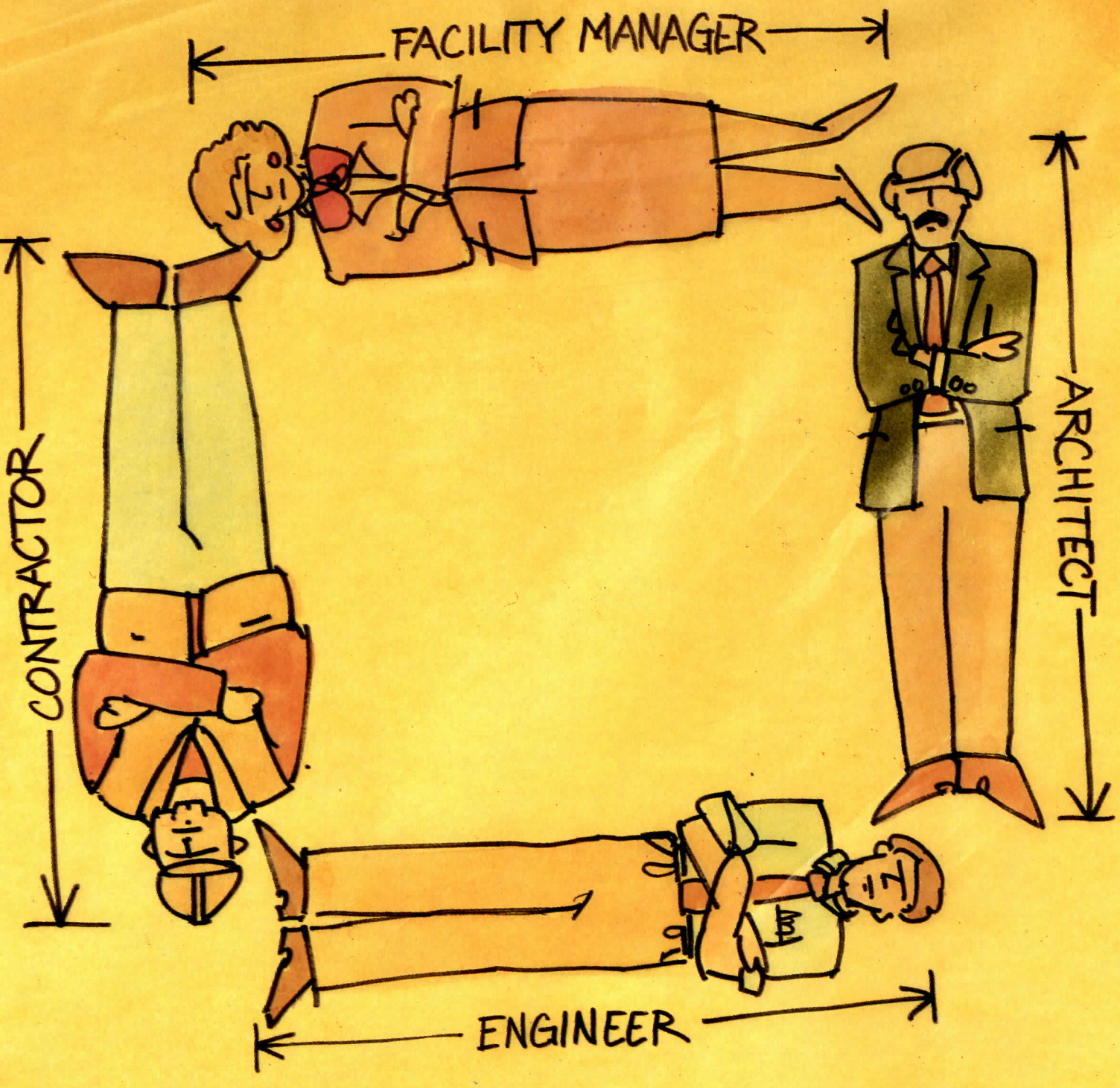
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Letters

In the Round Table on furniture [RECORD, July 1986, pages 114-119], you probably came up with as much solid material as it's possible to do in this formative and unsettled time.

I do, however, find it ironic that in the same issue the new products section has the same simple-minded approach to selection of furniture you and the other magazines usually have. It's disappointing that the architectural journals don't learn enough about performance design to adequately represent it.

While the Round Table participants' remarks taken as a whole make a good case for both visual esthetic design and performance (human factored) design, the one ingredient I found missing is the same as is always ignored or uncomprehended, and that is the complete merger of the two approaches. If this was not a potential, I would instantly lose interest in the whole pursuit. The excitement and the challenge of design for useful objects is to reach a high state of esthetic elegance for *both* appearance and performance.

This is, of course, a classical condition and exists in many of the admired objects from the past, from both the handcraft and production eras. It is only with the current turmoil in the visual arts that this condition has been ignored. The division between the art/architecture group and the industrial designers becomes most profound where rooted in serial vs. mass production.

The comments on this point in your article help illuminate the difference, but I would add that industrial designers are committed to design for high production. Hence the implication is that the resultant product be acceptable to the masses—all those TV-drugged, junk-food-dazed simpletons we imagine constitute the "masses."

My feeling is that we will not produce a responsible, responsive, or first-rate art until we do manage to mate the "looks and works." When this is done sensitively and effectively, we may find the masses are not such simpletons after all. There is, I believe, a potential for mass turn-on for really good products. Certainly the Japanese and, to some degree, the Germans and Italians are proving this.

In the final analysis, to design a successful mass-produced product that is visually and functionally sophisticated is one of the most advanced intellectual and skillful exercises currently available.
Niels Diffrient
Ridgefield, Connecticut

Your July 1986 Round Table on furniture design was *more* than interesting. It is about time a lot of those thoughts should be expressed.

The most important one to this firm was in the last paragraph—"the possibility of collaboration," not only between architects and industrial designers but with the whole spectrum of talent in the design field.
Gere Kavanaugh
Gere Kavanaugh/Designs
Los Angeles

Congratulations on your article "The Structural Art of Santiago Calatrava" [RECORD, August 1985, pages 130-139]. I was an apprentice of Frank Lloyd Wright, and the master used to say that "architecture was the poetry of structure." Mr. Calatrava's work reflects that ideal.

I hope you will publish more of his work.
A. Elniger, Architect
McDonald & Williams, AIA
Architects & Planners
Washington, D. C.

Reading my March 1986 issue of ARCHITECTURAL RECORD, I came upon the heart-rending proposal for an extension to the Guggenheim Museum. The museum is a quintessential piece, bequeathed to the world of art and architecture by a master, and it is only fair that the trustees of this inheritance should make the inheritors responsible, in their entirety, for any alteration of this architectural pearl.

I get the impression that ideals in architecture, like unity, balance, harmony, etc., must make dangerously low levels of impact on the cerebral architectural repository of the author. You see, by way of summary of my feelings, no matter how beautifully you fashion a piece of jewelry in brass, juxtaposing it with one done in gold tells a tale of disorder immediately.

As the saying goes among the Ibo of Nigeria, "A beautiful face does not deserve scratch marks, whether inadvertently or wilfully made."
George Ike Okoye, Architect
Lyke & George Designs
Enugu, Nigeria

Corrections

In RECORD's article on Burt Hill Kosar Rittelmann Associates' design for Two Mellon Bank Center (September 1985, pages 96-97), credit should also have gone to project architect Robert J. Noah and to architects David F. Hill and H. Jack Snyder.

For the Ellis Island preservation and restoration project (RECORD, May 1986, page 15), the architects, working as a single firm for this commission, include both Beyer Blinder Belle, as noted in the text, and Notter Finegold & Alexander, who were inadvertently omitted.

Calendar

Through October 26
Tokyo: Form and Spirit, an exhibition including the work of architects Ando, Hara, Isozaki, Ito, and Maki; at the Museum of Contemporary Art, Los Angeles.

Through December 28
The Architecture of Richard Morris Hunt, an exhibition of drawings, watercolors, and photographs; at the Octagon Museum, Washington, D. C.

October 8-11
Designer's Saturday, in conjunction with the Grand Opening of the International Design Center, Long Island City, N. Y. For information: Fern Mallis, Vice President, Marketing/Communications, IDCNY, Satellite Office, 919 Third Ave., North Plaza, New York, N. Y. 10022 (212/486-5252).

October 10 to January 4
Drawing Toward Building: Philadelphia Architectural Graphics 1732-1986, an exhibition sponsored by the Pennsylvania Academy of the Fine Arts, the Philadelphia Chapter of the AIA, and the Foundation for Architecture; at the Pennsylvania Academy of the Fine Arts, Philadelphia.

October 20 to December 19
The Architecture of Charles Moore: Buildings and Projects, 1949-1986, a retrospective exhibit; at the Williams College Museum of Art, Williamstown, Mass.

October 23 to January 11, 1987
In Pursuit of Beauty: Americans and the Aesthetic Movement, decorative art works from the 1870s and '80s; at the Metropolitan Museum of Art, New York City.

November 4-6
Training course on downtown revitalization, conducted by the Main Street Center of the National Trust for Historic Preservation; in St. Paul, Minn. For information: Vicki Onderdonk, National Main Street Center, 1785 New York Ave., N. W., Washington, D. C. 20036 (202/673-4000).

November 9-11
Sixth Annual Zoning Institute, sponsored by the Planners Training Service, American Institute of Certified Planners; in Orlando, Fla. For information: Vicki Groat, AICP, 1313 E. 60th St., Chicago, Ill. 60637 (312/955-9100).

November 11-12
"Fostering Strategic Innovation," a conference considering industrial design, human-factors engineering, and design engineering, sponsored by the Design Management Institute of Boston, in collaboration with Tufts University College of Engineering; at the Meridien Hotel, Boston. For information: Earl Powell, Director, Design Management Institute, 621 Huntington Ave., Boston, Mass. (617/232-4496).

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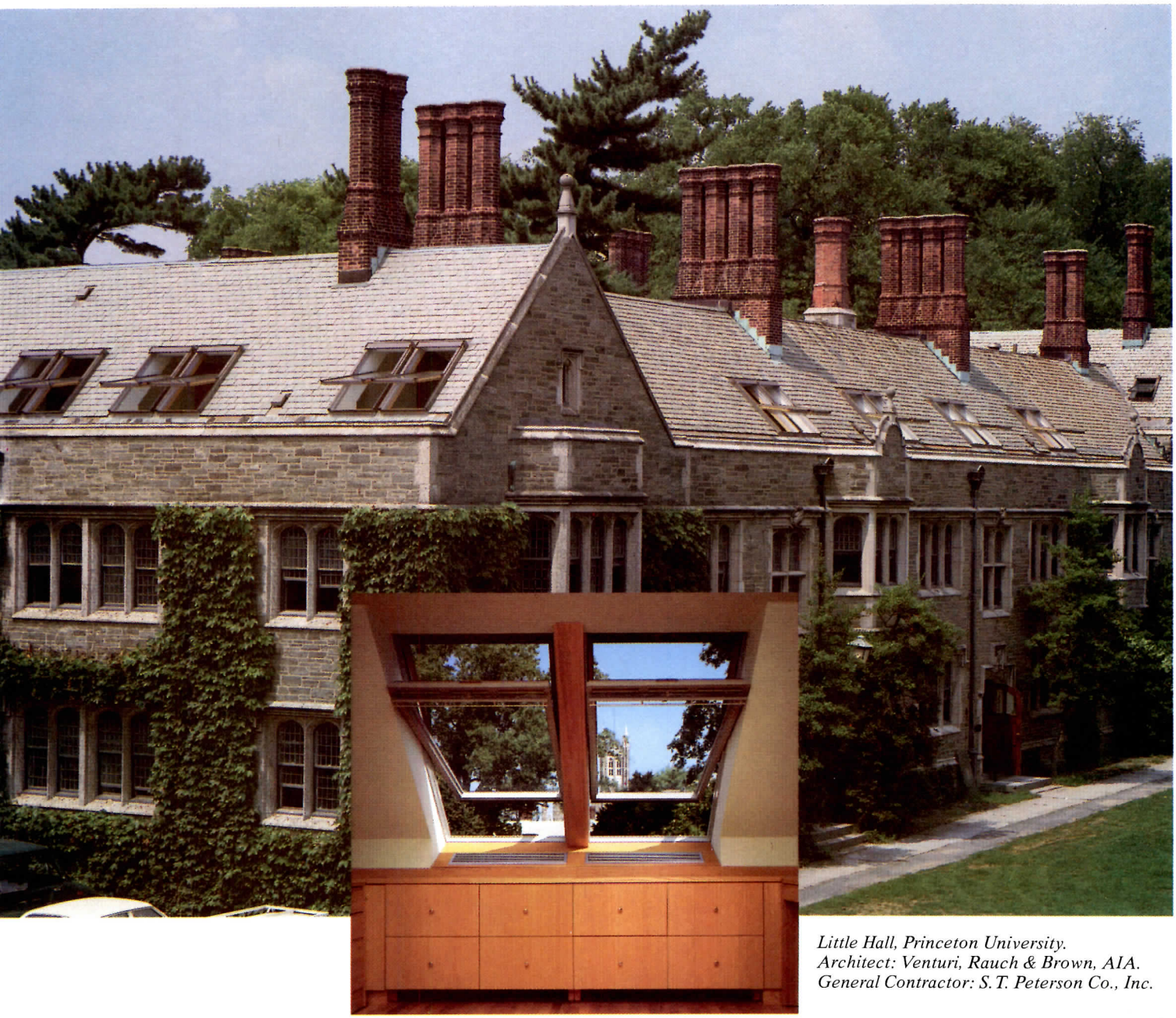

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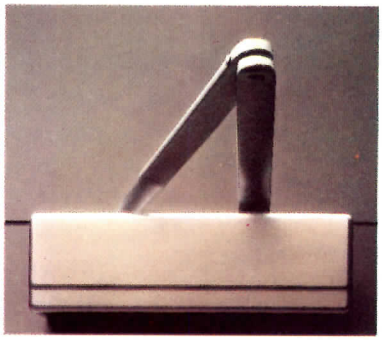

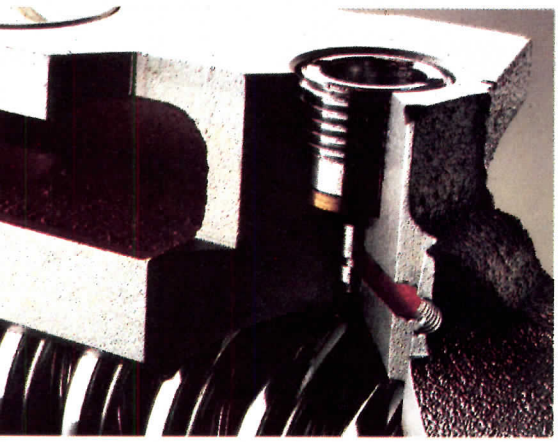

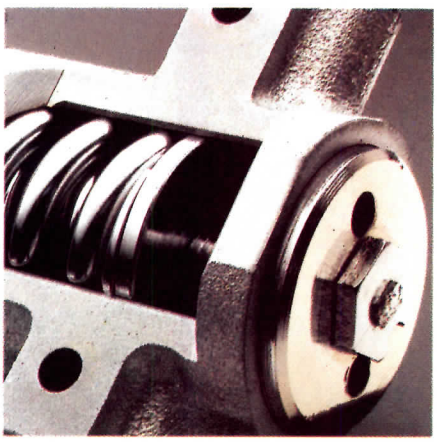

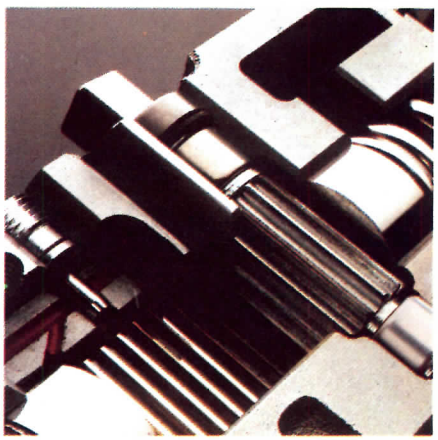

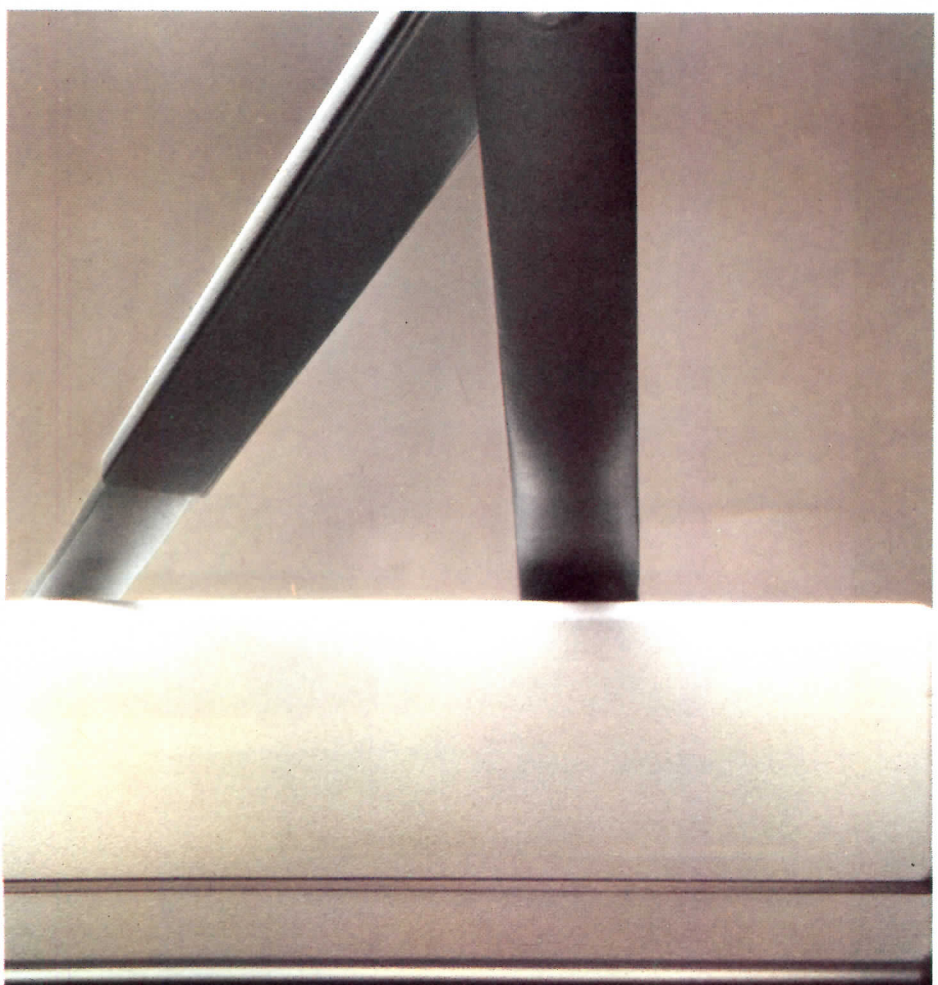

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Barriers to life

"Just picture the following scene for a minute. It is a warm summer's evening and you are at the ballpark with friends. You are excited because one of the best pitchers will be in action. There is one problem, however, one not usually troublesome to most people—it is that an architectural obstruction blocks most of your view. Again, most people would get around this little difficulty by standing up, or by jumping up and down as the excitement mounted. But not you. You are confined to a wheelchair. And the offending barrier is a simple railing directly at your eye level. This is not a question of cost, but rather, the choice of a design detail. So much for your long awaited outing."

The handicapped person describing his failure to catch a glimpse of one of his favorite players is Olaf A. Sööt, son of the well-known consulting engineer Olaf Sööt. The place was Shea Stadium. We all know that Shea Stadium is not the only public building in the United States that has been designed as though the handicapped do not exist. According to Sööt, few public buildings are easily accessible to people who cannot walk. He is grateful for such tokens as the occasional ramp, but many cinemas, restaurants, and even public toilets don't have them. "It can be a major undertaking to go to a movie in one's hometown and have to be lifted up several narrow steps; to be pushed and jolted through narrow doorways, only to find oneself blocking the center aisle. And lastly to feel all the while that one must be violating the local fire code. This happened to me in one of the most affluent towns in the country, Greenwich, Connecticut. The episode brought home all too poignantly the plight of others who reside in less comfortable environments. I do not need to point out the tremendous limitations life has imposed on those of us who are confined to wheelchairs, nor do I ask for any special privileges from the owners of public buildings. In spite of my infirmity and physical limitations I am still a taxpayer, a consumer, and a citizen of the wealthiest country in the world. Why then must I, and thousands like me, suffer the pain and humiliation of inaccessibility?"

Travel can be even more difficult, because the handicapped tend to be denied ordinary access to transportation. Unbeknownst to the rest of us, they are using freight elevators to make their way through air terminals, and at airports that require boarding from the apron, they are hoisted into planes by means of fork lifts or food-service trucks.

As most architects are aware, "accessibility" laws have been on the books in many states and municipalities since the late '60s and early '70s. The Architectural Barriers Act of 1968 decreed that all new or altered federal buildings and all federally funded or leased buildings must be barrier-free. Unfortunately, this act applies only to new or substantially renovated buildings, not to the greater part of our building stock constructed before the passage of the act. Sööt argues that there is no excuse for this state of affairs: "We have the resources and technical expertise to make both new and older buildings accessible to the handicapped. What is needed is good architecture, based on an understanding of the handicapped person's difficulties and a sensitive design response. Statutes alone cannot do the job."

There is more to the problem, of course, than helping the handicapped make it to the movies or to the ballpark, simplifying their access to transportation, and finding ways to get them more comfortably on and off planes. Handicapped people are joining the workforce in ever greater numbers, making the need for accessible buildings more urgent than ever. Sööt puts forth the argument that "perhaps a closer reading of the Constitution of the United States might well decide that not providing accessibility for the handicapped is in violation of its guarantee that all people are entitled to life, liberty, and the pursuit of happiness. And 'happiness' for most is a job, freedom of movement and, above all, choice. That is the bottom line for the handicapped—choice." Sööt believes that the architectural profession must do much more to help. He is right.
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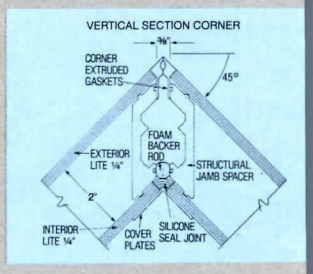

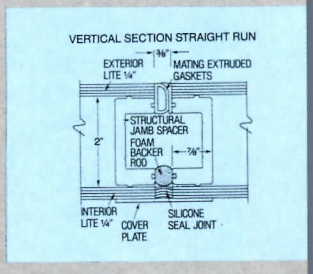

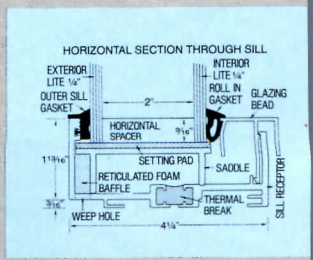

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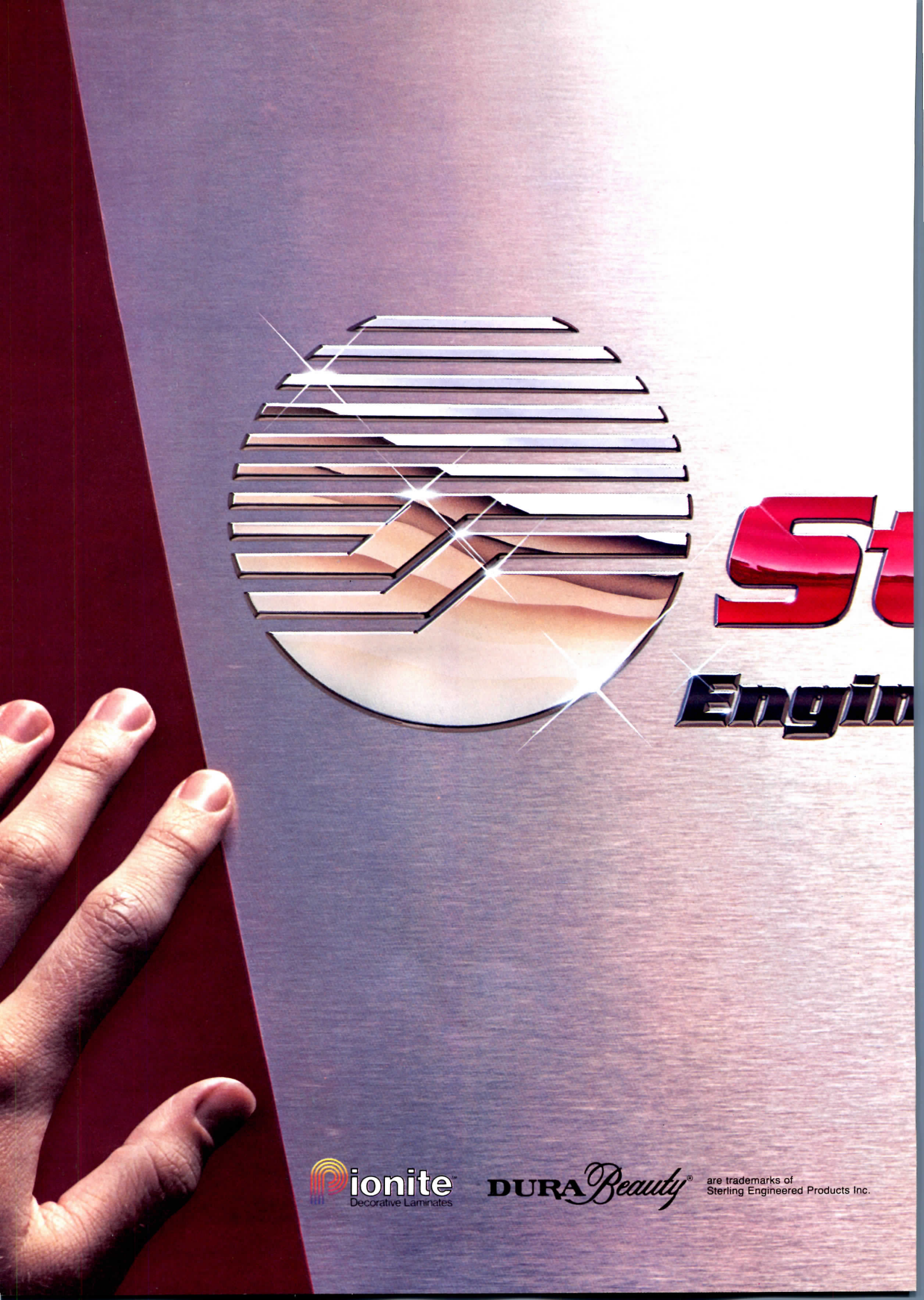
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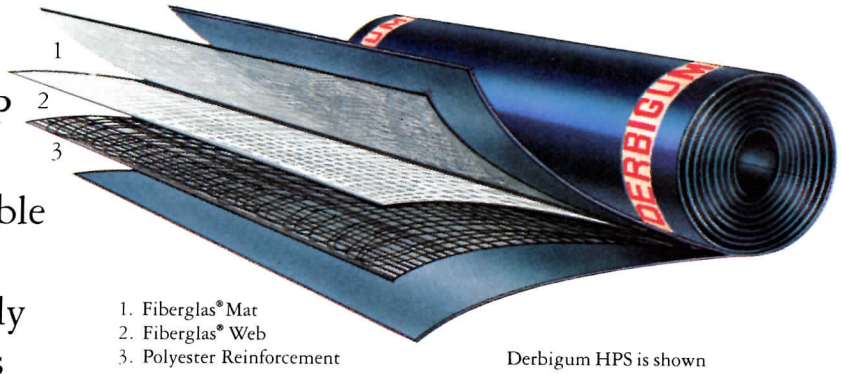
Ultraviolet light is also one of the nfalls of roofing. But here, we're by to say, Owens-Corning has been to resist nature by designing our bigum® roof system so that it actually rs out ultraviolet light.

Take a look at our diagram. The truction of Derbigum HPS and SP ng is unique—unlike that of any r modified bitumen roofing available merica.

While most competitors have only reinforcing mat, Derbigum SP has nd Derbigum HPS has *three.* And e others have their reinforcement in the dle of the membrane, Derbigum's are the upper surface. This positioning at op enables Derbigum's Fiberglas® mat flect ultraviolet light as soon as it es. So the maximum amount of mod- asphalt waterproofing material is cted from the sun.

Derbigum's *multiple* mats—polyester *and* Fiberglas—serve different purposes. One provides puncture and tear resistance. The other combines tensile strength of 200 lbs. per sq. inch with dimensional stability across a wide temperature range.

No wonder Derbigum can boast an 18-year record of proven performance to date, both in Europe and at home. And no wonder Derbigum comes complete with what we think you'll agree is the best overall warranty in the roofing industry.



1. Fiberglas® Mat
2. Fiberglas® Web
3. Polyester Reinforcement

Derbigum HPS is shown

Isn't life too short to spend a lot of time worrying about roofs? For additional reasons to specify Derbigum for your next commercial building, just talk to your representative from Owens-Corning, the world's largest roofing manufacturer.

Or write for a spec sheet. The address: C.C.L. Meeks, Owens-Corning Fiberglas Corp., Fiberglas Tower, Toledo, Ohio 43659.

OWENS/CORNING FIBERGLAS

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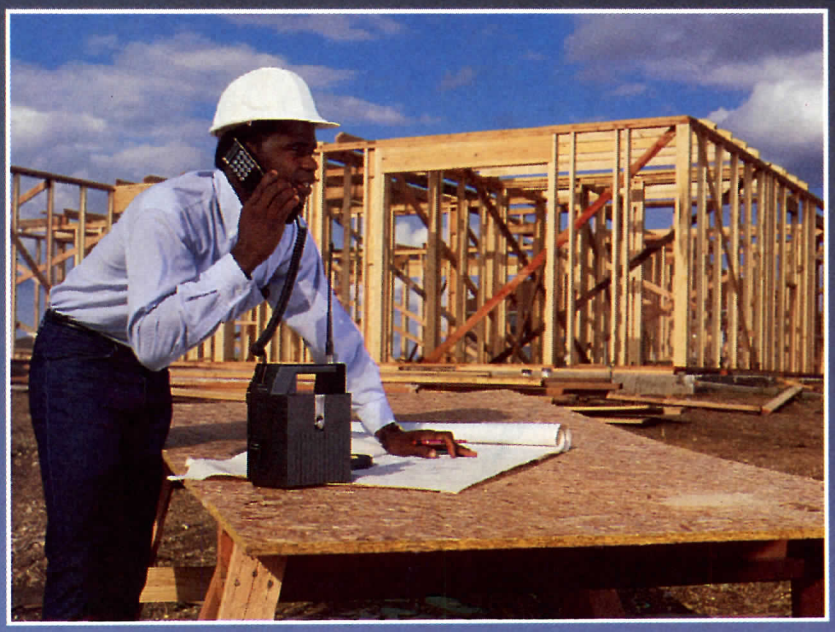
Car or Carry!

Radio Shack's Cellular Phone is Easy to Transfer From Car to Car or Carry With You.



And It's the First Full-Power Mobile/Portable Telephone You Can Install Yourself.

An Incredibly Useful Tool. Radio Shack's transportable phone keeps you in touch while you drive. You can order materials, call for additional crew, receive important messages, and avoid unnecessary trips. Snap on the Portable Adapter Pack* and you can be on line at a job site, in a boat, and wherever there's cellular service. The transportable also moves easily to your personal car, so you or a family member will never have to drive "alone" again.

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Now in Most Major Cities. Radio Shack obtains your cellular number, programs your phone, and handles the start-up paperwork. The basic phone is $1199 and you can lease-to-own for as low as $39.95 per month*. Visit our store near you today for a personal demonstration.

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*Mobile antennas, portable adapter and batteries extra. Lease availability and terms may vary in different service areas. Prices apply at participating Radio Shack stores and dealers.

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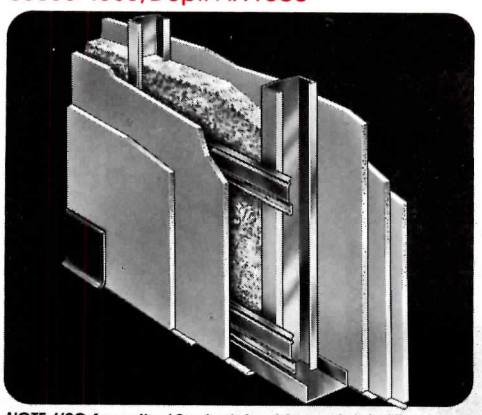
Now, our innovative USG® SJ Stud/RC-1™ Resilient Channel System

isolates all types of sound problem areas—including tall walls in mechanical rooms and theatres. This exclusive MTC* drywall partition (Music, Mechanical Equipment Transmission Class) is especially effective in handling even such pervasive low frequency sounds as *blower motors, machinery and the bass tone in music.* Our high performance partition systems employ SJ Studs and RC-1™ Resilient channels —offer superior STC/MTC sound ratings plus fire ratings up to 3 hrs. (UL Design U451-U455). And our new computer-aided design service utilizes hundreds of new combinations of materials to customize sound control performance for virtually any requirement. Get specifics. Write to us at 101 S. Wacker Dr., Chicago, IL 60606-4385, Dept. AR1086



NOTE: USG Acoustical Sealant should completely fill gap under panels.
**MTC is a single number rating, resulting from a methodology developed and copyrighted by U.S. Gypsum as an index of partition performance in low-frequency sound isolation such as music, motors and some other types of mechanical equipment.*

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UNITED STATES GYPSUM COMPANY

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New partition goes to great heights to isolate mechanical rumble sounds!

MARVIN WINDOWS SELL ANY HOUSE. NO MATTER WHAT SHAPE IT'S IN.

SOLD

If this is the sign of success in your business, then consider that more and more signs are pointing to Marvin Windows as the window of choice in distinctive home designs.

Not *just because* we have higher standards than other window companies. Which we do.

Or more standards, which we do. (In fact, we have over 5,000 standard sizes or we'll custom build to your specifications.)

But because we *set* many of the standards now found throughout the industry.

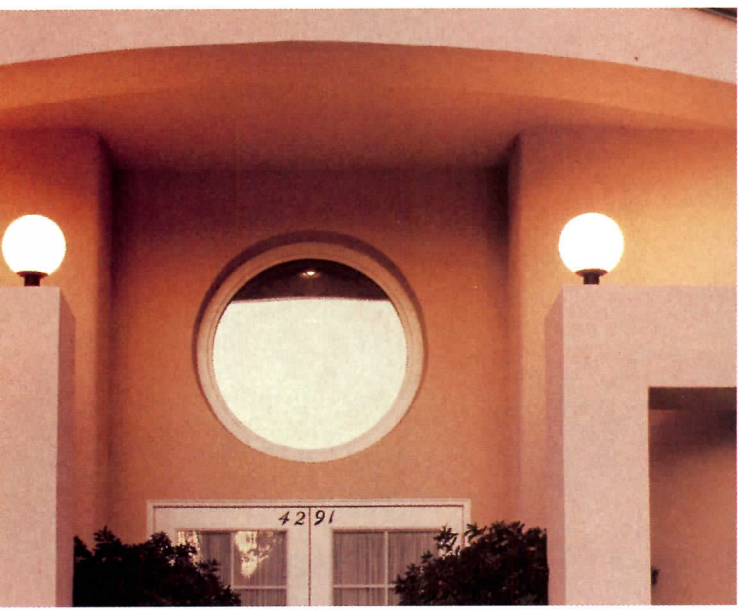
THE WINDOW THAT LASTS HAS A HISTORY OF FIRSTS.

You should know that Marvin was the first national manufacturer to offer Round Top windows.

We were the first major manufacturer to offer Trapezoids and Triangles as complete units.

The first manufacturer to ship factory-installed extension jambs and completely assembled set-up windows.

First to bring wood bead glazing to the market on a



national scale.

First with its own nationwide trucking fleet, cutting delivery time from weeks to days.

We were the first to offer Low-E glass on its entire line.

And the list goes on.

WHY NEW IDEAS TAKE SHAPE FIRST AT MARVIN.

When you make a window to order, and word gets around, you start getting some pretty wild requests. Like factory applied jamb extensions that are 20" wide. Or Round Tops that are eight feet across.

All of which get our research guys thinking on an even bigger and grander scale.

But as our list of innovations shows, they're not just thinking shapes and sizes.

Up here in Warroad, temperatures can plunge to 40° or 50° below. So we've been building triple-glazed, double weatherstripped windows for a long time. And living with them comfortably through freezing winters and blistering summers. Because every window is made to order, we're able to offer state-of-the-art manufacturing and options, like deep-treated vacuum penetration processes for protection against rot and decay, and different metal and Polycron® finishes for maintenance-free exteriors.

FIRST IN AVAILABILITY AND SERVICE, TOO.

Of course you can't sell any shape house if your windows haven't arrived on time. So we had another innovative idea: no matter what size, no matter what options, we can usually ship in 3 weeks or less from the time we get your order. (Round Tops and special glazing take longer.)

Your Marvin dealer has all the information and advice you need to help your greatest designs take shape. He's specially trained in back-up support and timely service.

For more information on the shape of things to come, call **1-800-346-5128** (in Minnesota, 1-800-552-1167), or write, Marvin Windows, Warroad, MN 56763.

MARVIN WINDOWS ARE MADE TO ORDER.

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Gainey Ranch Financial Center, Scottsdale, AZ
Architect: Cornoyer-Hedrick Architects & Planners, Inc.

Even when th
Dryvit® lets yo

An early completion date can constrict a designer's viewpoint. But when you work with Dryvit® Outsulation®, you're freed from worries about tight schedules. Case in point: the prestigious Gainey Ranch Financial Center (left), in Scottsdale. It's a beautiful example of the Sante Fe/Arizona style with flying beams and wing walls springing from two main buildings.

Planned originally for stucco, it was changed to a Dryvit Outsulation project because of time constraints. And the 100,000 square feet — and almost joint-free — application was completed well within deadline.

Outsulation is not only fast going up, it offers special aesthetic dividends.

This building is a soft subtle mauve, a color custom mixed by Dryvit; something the company is equipped to do over and above the 21 standard colors offered. And like all Dryvit finishes, it's based on a 100% acrylic polymer to resist staining, fading and cracking.

While the main buildings employ the full four component Dryvit Outsulation System, the flying beams and wing walls of Portland cement/metal lathe are coated in Dryvit's Finisher® for a perfect color match.

There's more. With Dryvit you get the proven wall system.

Over a period of 17 years, 55,000 buildings coast-to-coast stand as witness to Dryvit's leadership and success. It's the system backed by corporate research and testing and a broad network of professionals ready to offer technical help in the field.

With results as stunning as this, no wonder building #2 is underway.

An exact duplicate of the Gainey Ranch Financial Center is under construction as of Summer 1986. One difference, however: the Dryvit System application time has been cut by a month. Once you've worked with Outsulation, you find you can do a lot more in a lot less time!

Whether for new construction or retrofit, call or write for more information.

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Look for us in Sweets: 7.13Dr and 7.13Dry

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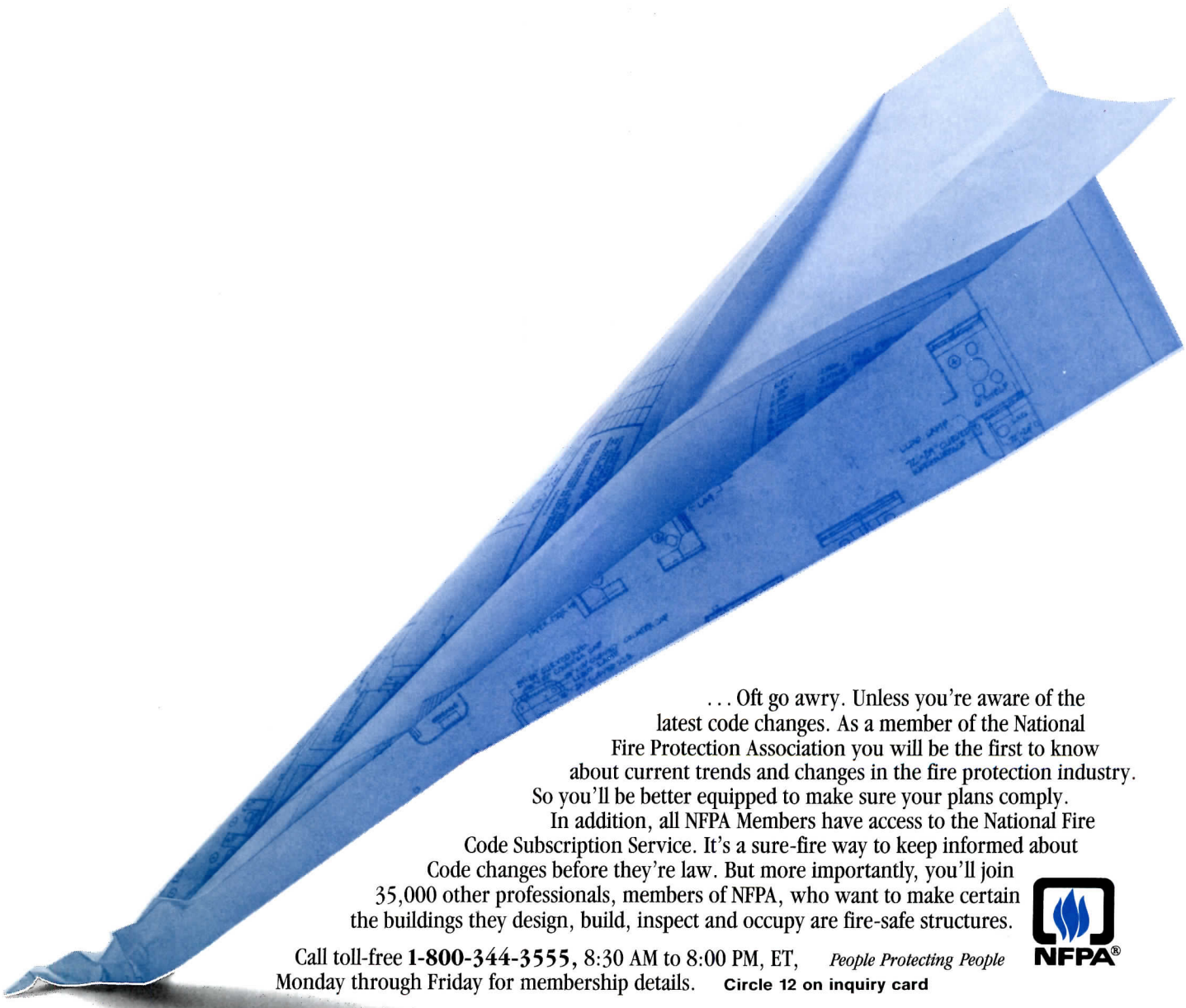
schedule's tough, spread your wings.

The best laid plans...



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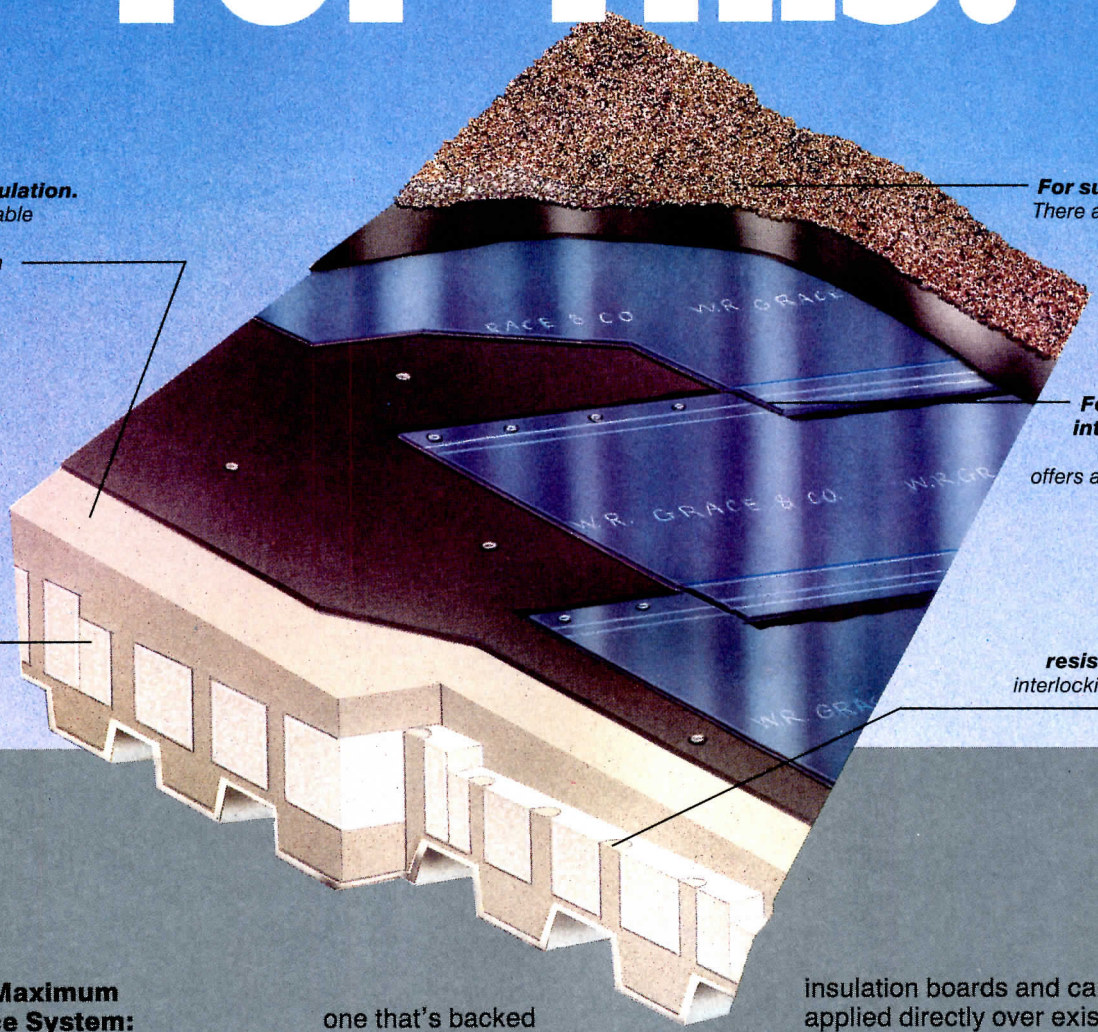

For permanent insulation. *Our dimensionally stable Roofing Base is an ideal substrate which is also reroofable.*

For surfacing options. *There are three, including smooth white.*

For waterproofing integrity. *GRM is so tough, this System offers a 15-year warranty.*

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We've spent 20 years and millions of dollars researching the best in roofing products and the problems associated with roofing systems. We know the problems architects and owners face — and the risks.

If we weren't totally *convinced* of the integrity of this system, we wouldn't make a statement like, "You Can't Top This". We believe the combination of GRM (Grace Roofing Membrane) and Zonolite Roof Insulation (Insulperm Board and Roofing Base) provides you with a system you can count on for years — one that's backed by the best 15/20 year warranty in the business.

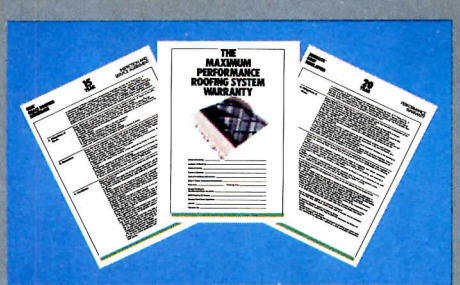
For all your roofing needs, we offer a variety of systems that satisfy a wide range of demands. Our GRM Membrane is compatible with many insulation boards and can often be applied directly over existing BUR's. Our PRMA System (Protected Roof Membrane Assembly) is a proven, inverted system that extends membrane life. Like our Maximum Performance System, it provides you with the added advantage of single source responsibilty. And, like all Grace systems, it's expertly installed by our nationwide network of approved contractors.

Whether you need new or retrofit roofing, look into Grace Roofing Systems — you'll like what you see.

Call us today at 800-242-4476. Grace Construction Products, 62 Whittemore Avenue, Cambridge, MA 02140.

GRACE
Construction Products

OR THIS.



GRACE ROOFING SYSTEMS. THEY TOP THEM ALL.

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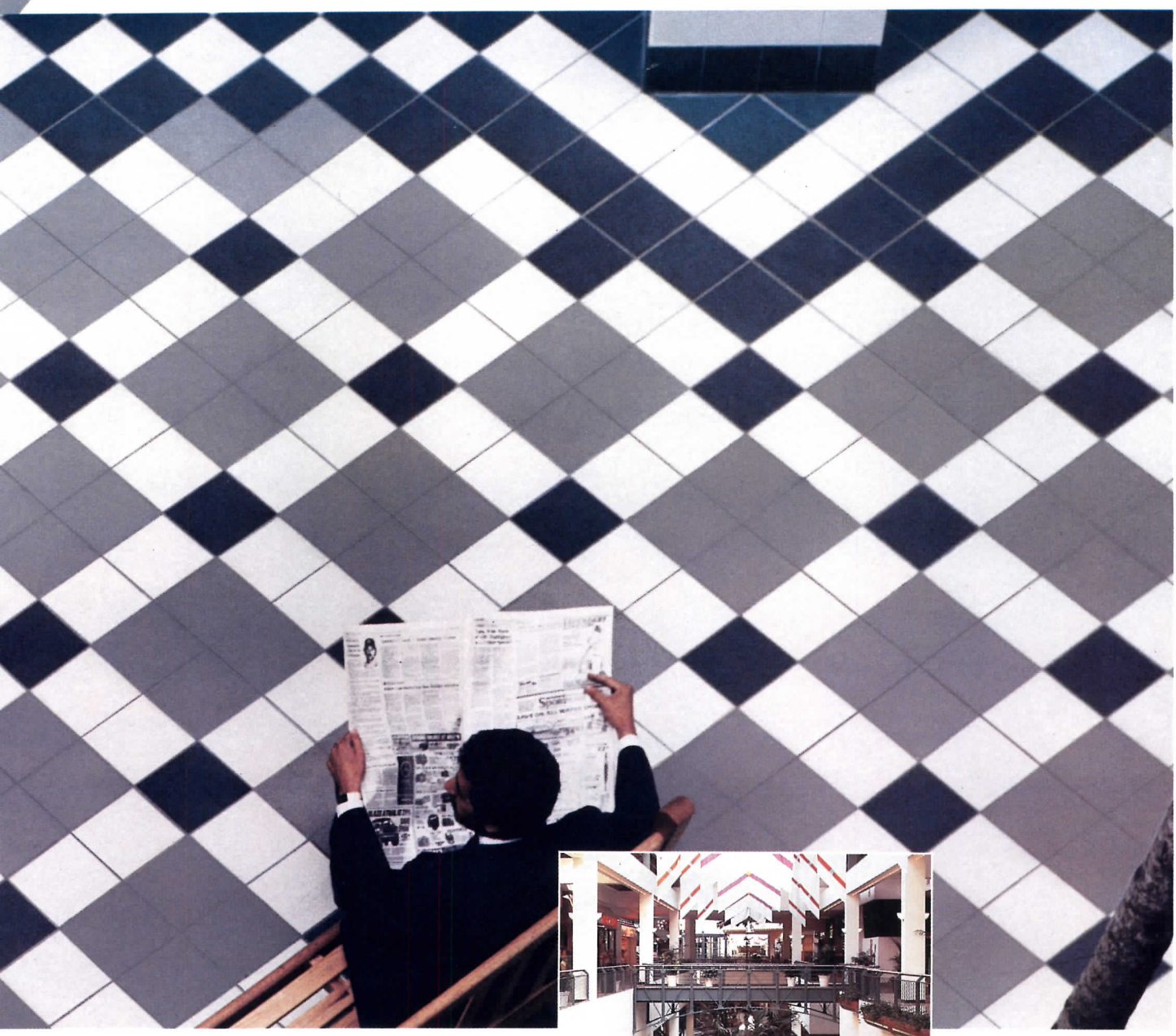
CERAMIC STATEMENTS



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Quantum's unglazed surface features through-body color including both neutral and accent tones. Sizes available are 4 x 4, 4 x 8, 6 x 6, and 8 x 8. Colorful, lightweight, modular and stain-resistant statements for your next ceramic flooring design.

Shown: *Montclair Plaza; Montclair, CA*
Architect: *The Jerde Partnership*
Developer: *The Homart Corp.*

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Since then, we've filled the years with innovations.

Like the inter-connected residential lock. For better security and safety. And our new non-handed mortise lock. Awarded 11 design patents, it's taking the industry by storm.

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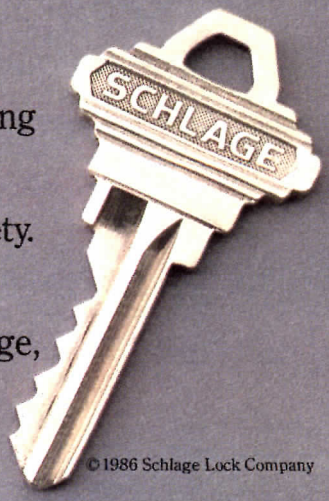
And discover some of today's most enduring contributions to American architecture.



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The sole

Presenting carpet of Antron Precedent™– carpet that looks newer, longer than any other.

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

Finally, there's a carpet fiber system that's a step above all others: Du Pont ANTRON PRECEDENT. Because carpet of ANTRON PRECEDENT looks newer *up to two times longer* than any other carpet.

We've proven it. In a side-by-side test held in a busy New York City university, more than a million people walked across two contract carpets: one made of Du Pont certified ANTRON PRECEDENT, the other an equal construction of the acknowledged industry leader.

survivor.

Take a close look. Not only did the carpet ANTRON PRECEDENT excel in soil and stain sistance; it also *succeeded in* retaining original look and texture longer.

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DU PONT Approved Carpet of ANTRON PRECEDENT Contains DuraTech™

So, for a carpet that will stand up better, specify one backed with Du Pont's signature of quality, the quality "Q".

Find out how your next carpet project can outlive more soles, with ANTRON PRECEDENT. Call us today at:

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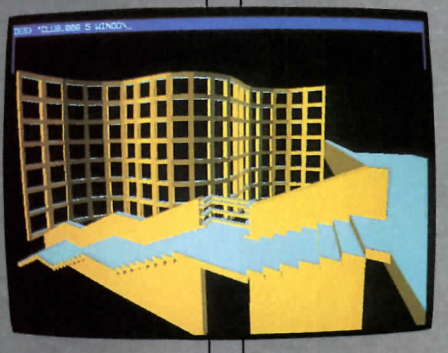
The Personal Architect. It can help you get more business and do more business. And isn't that the name of the game?



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

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

For more information on the Personal Architect write: Computervision Corporation, Personal Systems Business Unit, Building 16-2, 100 Crosby Drive, Bedford, MA 01730.

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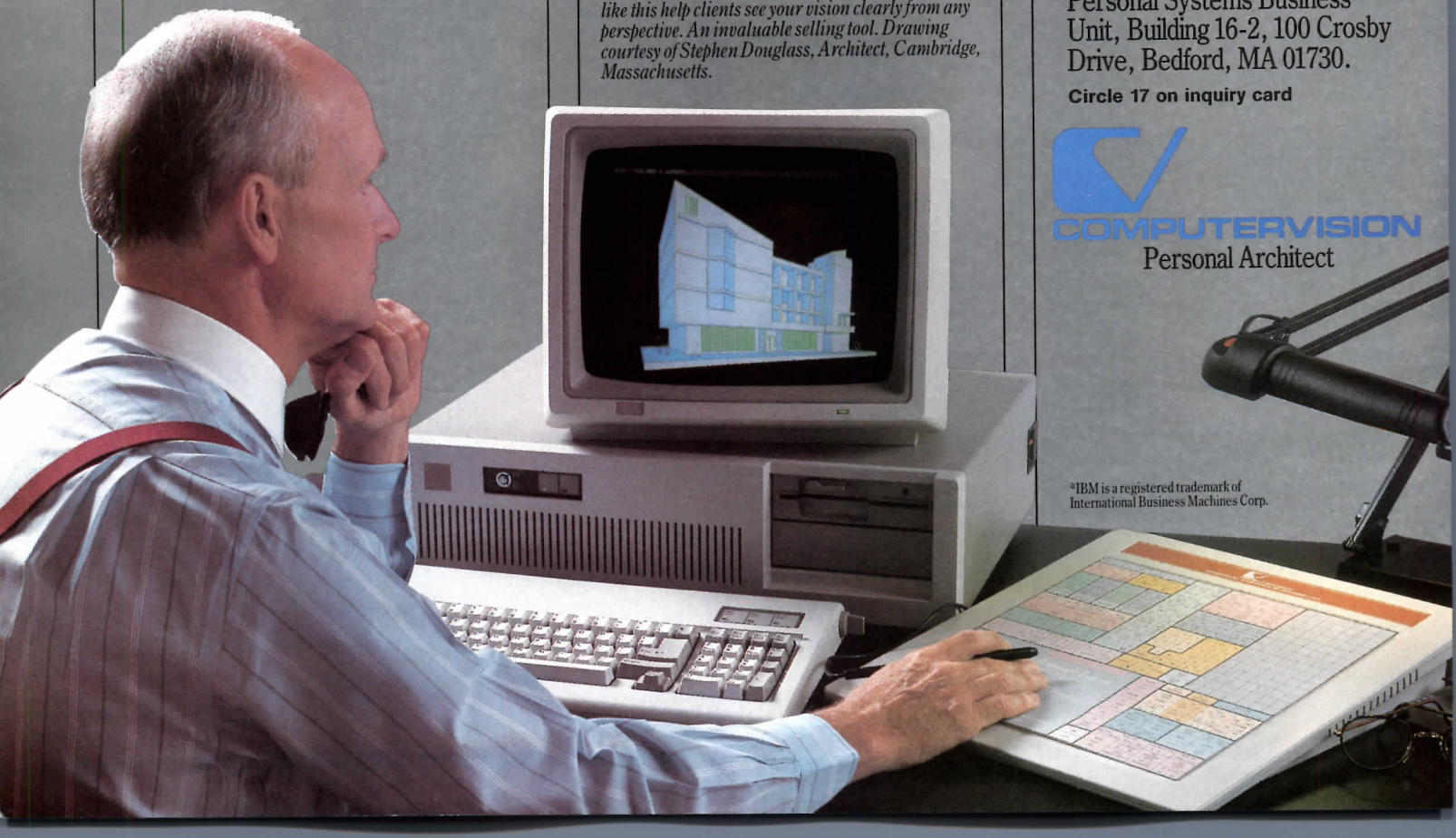
Personal Architect



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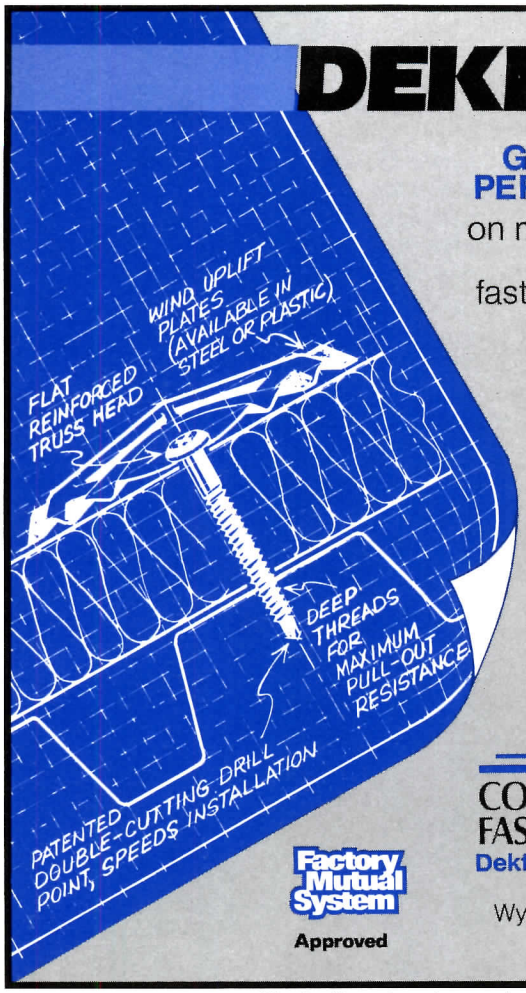

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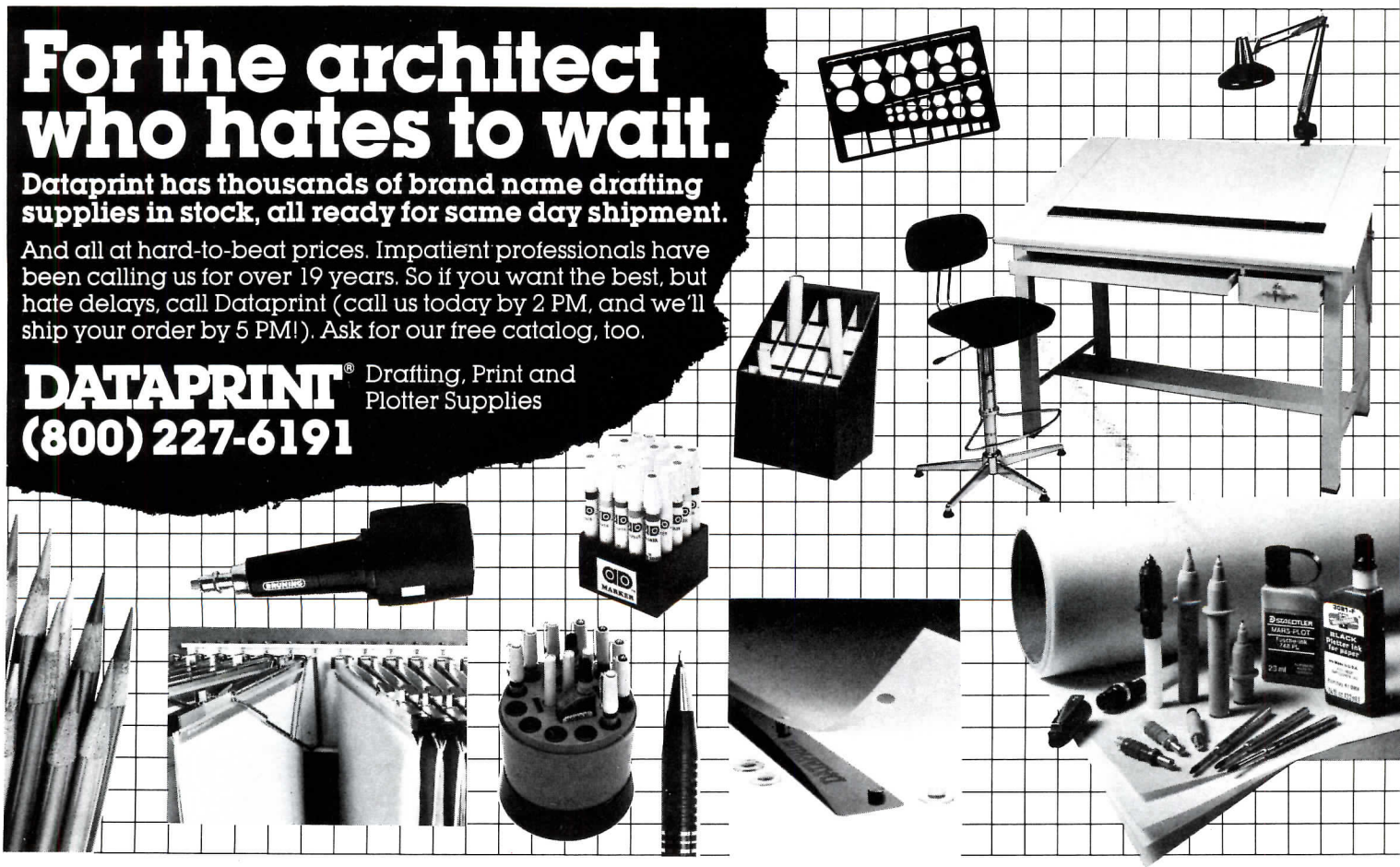

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With a proud heritage of its own, Buckingham-Virginia Slate was often specified by Thomas Jefferson; and is still selected by eminent architects of our time for its permanence and natural beauty.

Because it blends with either contemporary or traditional architecture, and helps to blend both, it's a natural, superlative choice for residential work, churches, schools, commercial and municipal jobs.

If you want to create shelter that will be around for generations to come, above all, use a permanent roof of world-class Buckingham-Virginia Slate.

Generations will appreciate the distinctive, handmade quality, natural cleft and texture of Buckingham-Virginia Slate roofing products that make any roof enduringly beautiful. Call or write for our free catalog and specifications catalog today.

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The Corrstan® Challenge

Steelite challenges *any* other metal panel coating system to even equal—much less exceed —the all-around performance and long-term field experience of the unique Corrstan multi-mil coating system!

Nothing—but nothing—even equals the Corrstan system. That is quite a strong statement. There is some strong evidence behind it. Call or write for our new Corrstan Challenge brochure.

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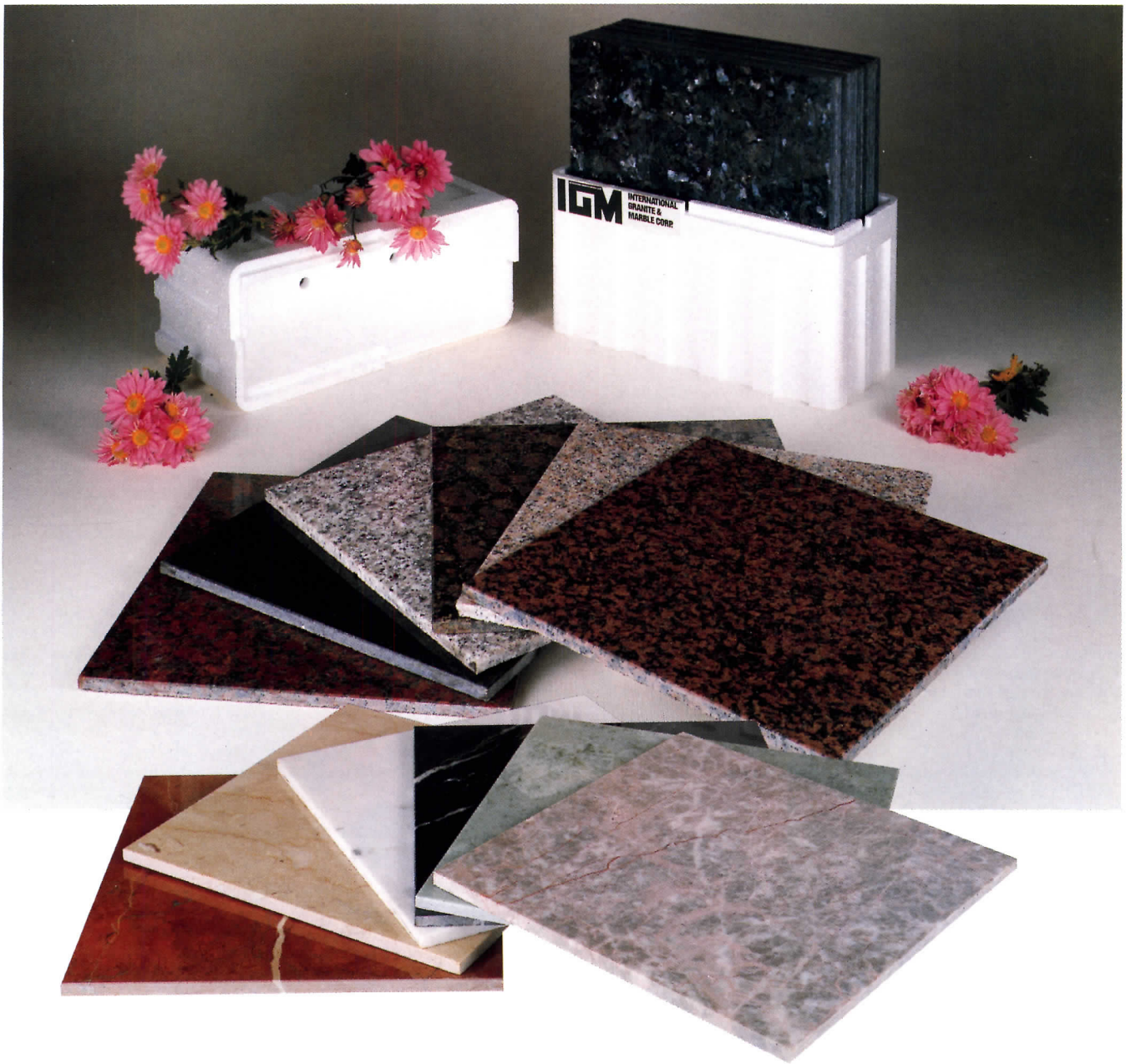
Granite & Marble Thin Tiles



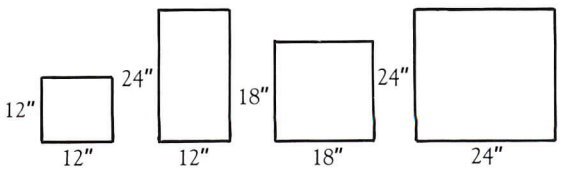
IGM Granite and Marble Thin Tiles are a high quality, economical and convenient product for residential and commercial applications.

Available in more than 60 varieties of color and style, Thin Tiles feature excellent flatness with tight sizing. Standardized measurements make Thin Tiles quick and easy to install. Packed in polystyrene cases for easy shipping, storing and handling, Thin Tiles increase profitability by lowering the cost of purchasing, transportation and installation.

Granite and Marble Thin Tiles are in stock at the five IGM Distribution Centers and at independent distributors. Special orders are also available. All are finest quality available.

Finishing: Granite: Polished, honed or flamed.
Marble: Polished or honed.

Available Sizes: 3/8" Thin & 1/2" Thin



IGM International Granite and Marble Co. Inc.

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North Bergen, NJ 07047
201-869-5200

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Baltimore, MD 21207
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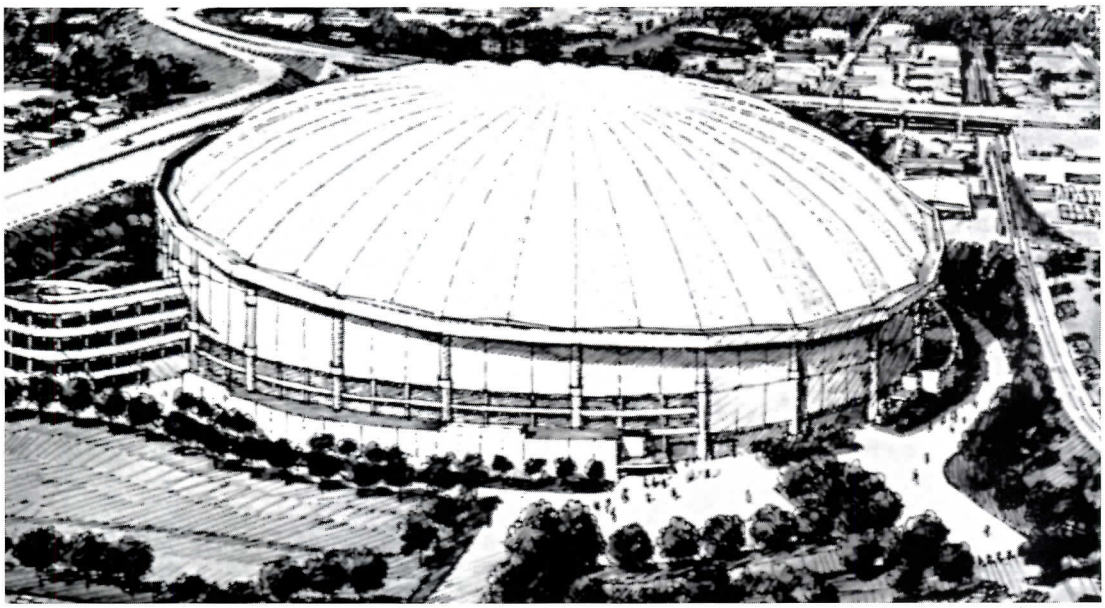
Circle 24 on inquiry card

A new multi-event stadium for St. Petersburg



Looking to lure a baseball team, the city of St. Petersburg is planning to build a 43,000-seat domed stadium, with no assurance it will get a baseball franchise. Rick de Flon, vice president of Hellmuth, Obata & Kassabaum's Kansas City office and principal of HOK Sports Facilities Group, is the chief architect in charge of the project.

The stadium's configuration, containing three seating levels and 60 luxury suites (enclosed boxes containing lounge area and upscale amenities), provides 43,000 seats for baseball, 37,400 for football, 39,600 for outdoor soccer, 20,000 for basketball and tennis, 37,500 for track, 28,900 for indoor soccer and hockey, and 15,000 to 60,000 for concerts. For conventions and trade shows 152,000 square feet of flat floor space with a 30- by 30-foot utility grid will be available. Another feature is a system of eight movable seating sections with incorporated restrooms and concessions. According to de Flon, the translucent fabric roof, supported by cables, will be the first of its kind in the United States.

The roof is similar to those put on two smaller facilities that will be used in Seoul, South Korea, for the 1988 Summer Olympics.

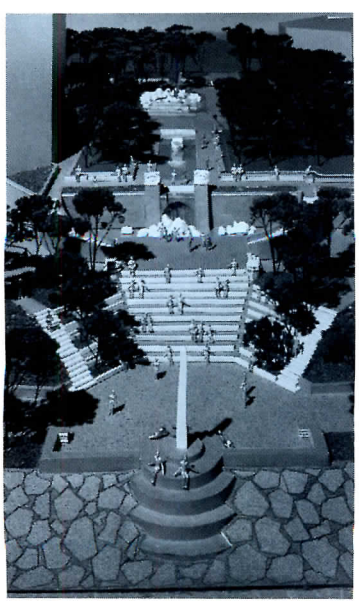
News briefs

Alan M. Hantman has joined the Rockefeller Center Management Corporation as director of design, planning, and engineering. Architect Hantman was project director of the C&W Development Consultants Group, a unit of Cushman and Wakefield.

Alan Chimacoff has joined The Hillier Group in Princeton, N. J., as director of design. On leave from his current position as professor of architecture and director of graduate studies at the Princeton University School of Architecture, Chimacoff has had his own practice in Princeton since 1978. Previously, he was a partner in the firm Chimacoff/Peterson, Architects in Princeton.

First prize in the state of Maryland's Vietnam Memorial competition has been captured by the Columbia, Md., architectural team of Robert Tennenbaum and Michael Elliott. The site of the proposed memorial is Federal Hill Park, overlooking Baltimore's Inner Harbor. The Maryland Vietnam Veterans Memorial Commission received 232 design entries from architects, landscape architects, students, designers, and sculptors.

Outdoor sculpture and landscaped environment set for unveiling



A monumental outdoor sculpture installation, comprised of colossal mythological fragments reminiscent of archeological ruins and set within a landscaped garden, is scheduled for completion this month at the TransPotomac Canal Center, a $125-million waterfront office complex, now under construction on the Potomac River in Alexandria, Va.

The sculpture, a collaborative effort between French artists Anne and Patrick Poirier and American landscape architect M. Paul Friedberg, features a 30-foot-high bronze arrow thrust into a fountain that cascades from the plaza's center to the Potomac River's edge, a 14-ton marble obelisk, and colossal figurative fragments carved in white Cararra marble.

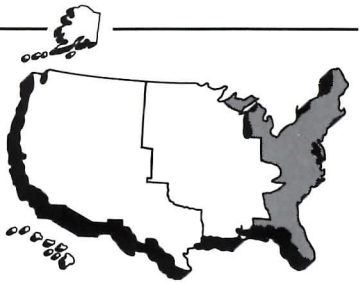
The Canal Center, designed by CHK Architects and Planners of Silver Spring, Md., is due to open in December.

Renovation planned for landmark office building in nation's capital

The Colorado Building, one of the most strikingly ornamented of Washington, D. C.'s turn-of-the-century buildings, will undergo a major renovation in 1987.

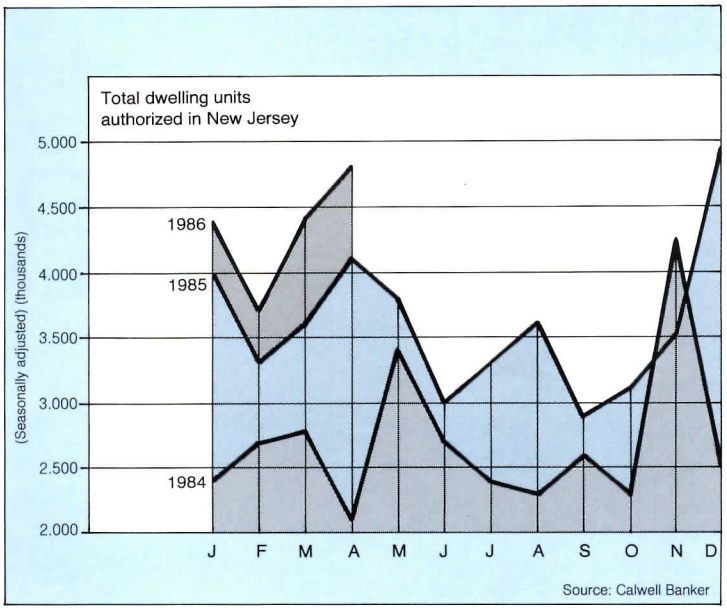
Washington-based architects Kress Cox Associates will oversee the renovation of the 83-year-old building, originally designed by Ralph Townsend. Nine stories high, the building contains 105,000 square feet of space.

Eastern economic report: Though construction may slow, New Jersey is well-placed for continued growth



Much maligned and sometimes underrated, the state of New Jersey possesses one of the most vibrant economies in the U. S. New Jersey's unemployment rate in the first half of 1986 was 5.5 percent, below the national average of 7.3 percent. Personal income in 1986, moreover, has grown much faster than income in other states. As of 1985, New Jersey residents enjoyed the third highest per-capita income—$16,368—in the country. And of the 10 richest large metropolitan areas in the U. S., three are in the Garden State. In fact, residential construction contracts surged 19 percent in the first five months of 1986 compared with 8 percent nationally, pointing to strong housing construction for the rest of the year. In the past three years, housing starts in the state rocketed nearly 70 percent to 59,000, according to DRI/McGraw-Hill estimates, and construction employment grew rapidly. Despite this impressive record, however, the number of registered architects in New Jersey rose only 11 percent between 1982 and 1985, to 1,816, according to an American Institute of Architects tabulation. That left the state with relatively few architects, suggesting that they did better in the past few years than did their colleagues elsewhere.

But what of business in the future? After several years of boom, it is likely the economy will slow down. In particular, notes a state government analysis, construction has probably peaked. Industrial construction is being hurt by sluggishness in manufacturing and commercial construction. Under the gun of federal tax reform, which almost surely will undercut tax-shelter investment in offices, shopping centers, and hotels, New Jersey will suffer along with the rest of the United States. Yet, compared with other states, New Jersey appears well-placed for continued growth. While home to old, declining cities like Newark, Camden, and Paterson, it is also developing high-growth regions such as those around Princeton, Piscataway, and Parsippany, marked by business parks and high-tech companies.



Calendar

October 9

"Selling Design Services," a one-day seminar sponsored by Practice Management Associates in Boston. For information: Betsy Miller, PMA, 10 Midland Ave., Newton Mass. 02158 (617/965-0055).

November 6-7

"Getting Qualified Leads," and "Selling Techniques: Written and Verbal," two-day seminars sponsored by Practice Management Associates; at the Hyatt Regency/Crystal City, Arlington, Va. (For information, see above).

November 18

"Developments in Roof Systems" is the topic of the National Roofing Contractors Association Experience Conference; at the Doral Hotel-on-the-Ocean, Miami Beach, Fla. For information: NRCA Education Department, 8600 Bryn Mawr Ave., Chicago, Ill. 60631 (312/693-0700).

November 19-20

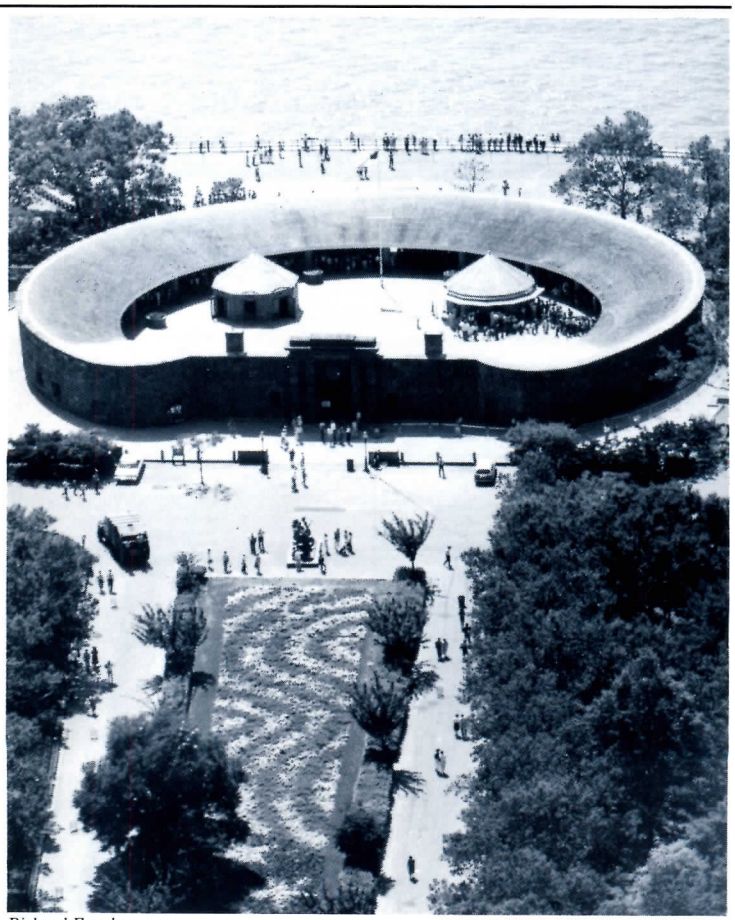
RECORD editor Mildred F.Schmertz will be the keynote speaker at the Boston Society of Architects' convention at the World Trade Center, Boston. Canadian architect Barton Myers will offer a major presentation of his work sponsored by the International Masonry Institute. For information: Richard Fitzgerald, executive director, Boston Society of Architects, Boston, Mass. (617-267-5175).

Battery Park fort restored as ticket and visitor center

Manhattan's Castle Clinton, the semicircular stone fort in Battery Park City constructed in 1811, has been reborn as an orientation center for visitors to Liberty and Ellis Islands by Manhattan-based architects Beyer Blinder Belle and associated architects Notter Finegold & Alexander of Boston.

A notable aspect of the restoration was the reopening of a doorway in the west wall, looking toward the Statue of Liberty. The precast concrete of the doorway blends with the existing stone, and the new gate is a modern steel interpretation of the woven wrought-iron gratings at neighboring gun ports.

The architects have also created a 12-sided ticket booth and an octagonal information center. Both structures have vertical cedar siding, glass-and metal canopies, and shingled roofs.



Richard Franko

Landmarks group offers book on restoration services

The New York Landmarks Conservancy has just published *The Restoration Directory: A Listing of Services in the New York City Area*, a compilation of information on restoration services in today's market. The directory's 12 chapters reflect the broad range of professions, trades, and skills necessary to execute a restoration project. Listed are those involved in researching, planning, and supervising the work, as well as those who execute it.

The cost of *The Restoration Directory* is $15 plus $3 for postage and handling. It may be obtained by writing the New York Landmarks Conservancy at 330 West 42nd Street, New York, N. Y. 10036. To submit information for the directory, contact Wesley Haynes, Manager, Technical Preservation Services Center, at the Conservancy (212/736-7575).

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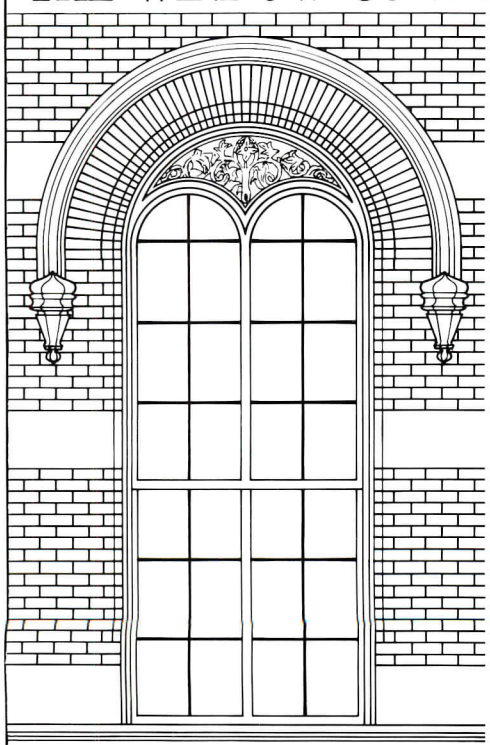

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ARCHITECTURAL RECORD

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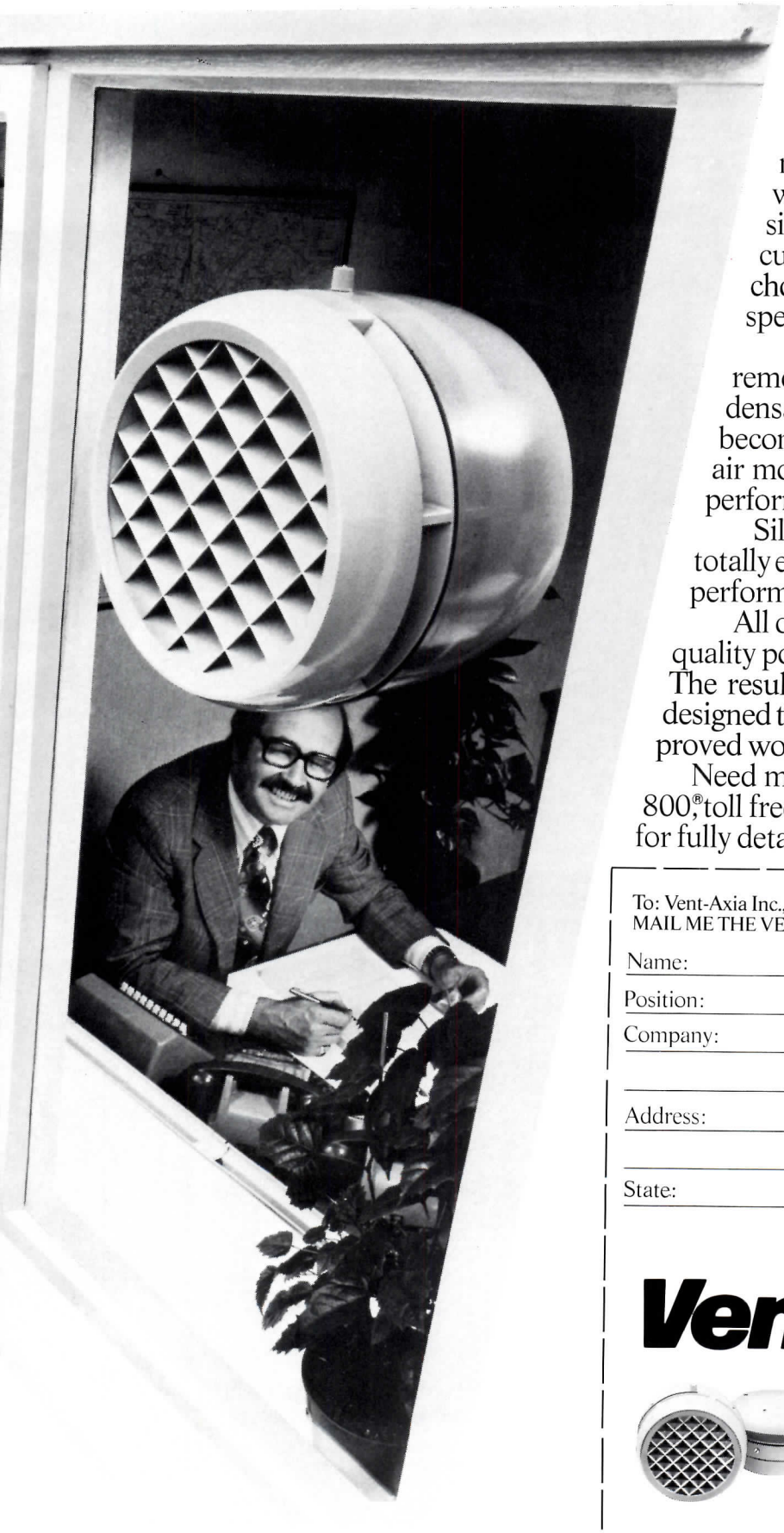

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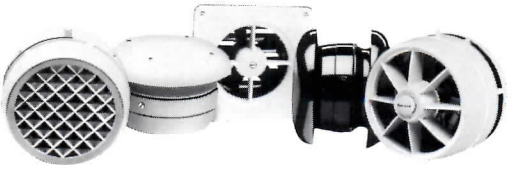

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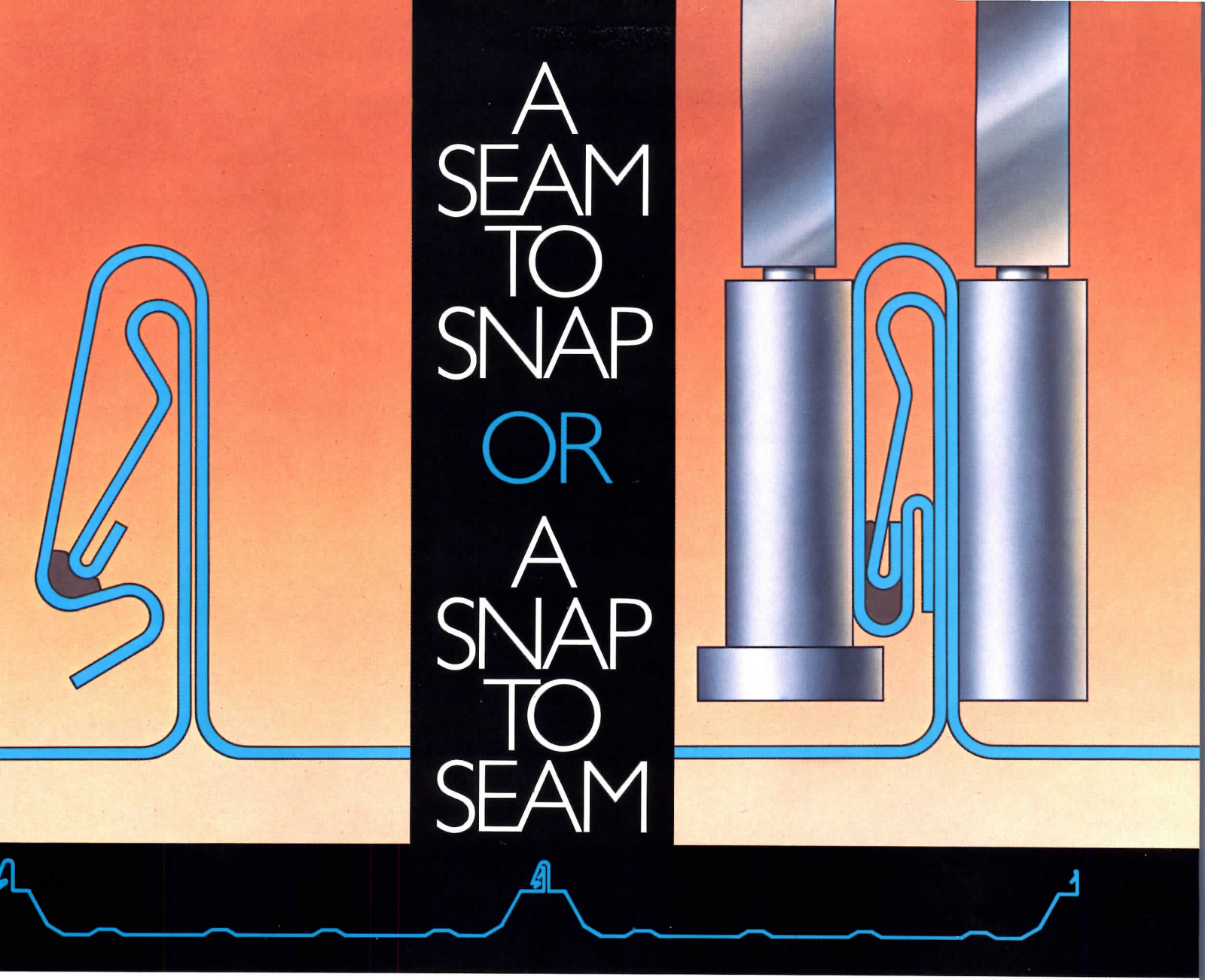

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Student convention to include competition for education-forum participation

This year's convention of the AIAS, called Forum '86, will be held in Phoenix on Nov. 23-29 and will focus on architects' ability to affect the sprawl of anonymous development across the nation's open regions. Serious business will begin on the 25th with addresses by prominent people in the field, charettes, and competitions. Among the speakers will be RECORD editor Mildred Schmertz and, among the competitions, the final selection of the student participant in the Walter Wagner Education Forum at next year's AIA convention. The winner will be picked from students sending papers to the AIAS by Nov. 1. The subject: Are there too many architects being trained? For more information, contact, Thomas Awai, convention chairman, Arizona State University, Tempe, Ariz. 85287.

Main Street Center rehabilitation program gets off to a good start

A mere $4.3 million reinvestment in decaying downtown neighborhoods and a little over 100 new jobs in them may seem like small change, but not so to Dolores P. Palma, an urban planner with the National Trust for Historic Preservation's Main Street Center. She is in charge of a three-year demonstration program, which began a little over a year ago in seven medium-sized cities with the basic aim of revitalizing decaying downtowns.

In addition to new jobs and new investments, says Palma, the downtowns in the program have already recorded 52 new business starts, against 28 closures, even though the operational part of the program was not yet stated. Previously, all seven cities were in a downward spiral. Nor were these 52 starts by fast-food chains. All were independently owned small businesses, such as restaurants, clothing stores, and offices.

The program, financed entirely by local contributions, covers the business districts of Cheyenne, Wyo.; Dubuque, Iowa; Joliet, Ill.; Knoxville, Tenn.; Albuquerque, N. M.; Pittsburgh's South Side; and Boston's Roslindale Village.

The demonstration program identifies the issues and needs and develops model strategies, in partnership with local-community and government groups. It uses the target area's latent architectural appeal and visual character as a starting point in improving a business district's image.

The program stresses four main points—organization, promotion, design, and economic diversification. "It's a very incremental approach," says Palma. The first year typically concentrates on organization and preliminary redesign and rehab projects. "It is important to do things that are visible and that attract volunteers," Palma says. The second year gets heavily into design and promotion, and economic development gets going in the third year. "After that, the locals are on their own. But, if a good local organization is in place, the pace typically continues. It's like the management of any good shopping center," Palma says.

To take stock of what the program has achieved and where it is headed, the Trust and the Center are holding their first urban main-street conference on Nov. 11-13 in Washington D. C. at the mid-point of the program. Attendance will be limited to some 200 persons actively involved in revitalization and management of urban business districts and will give them maximum opportunity for discussion with the center's staff and visiting faculty.

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

Is it shape up or sell out for New York City's model landmarks law?

New York City's landmarks law, created in 1965, has long been a national model for other such laws that would protect buildings of historic, architectural, or quality of life importance. That law, often criticized by developers for obstructing large-scale new construction and by almost everyone else for not obstructing enough, would seem to have struck a happy middle ground. Yet it has recently come under attack by, first, churches that want a state-wide exemption, and now, seemingly, by the city government, which created it in the first place.

Spurred by ongoing discontent in the real-estate community and, specifically, by the last-minute designation of buildings in an assemblage as landmarks, causing the developers to cry "ambush," and by the hasty stripping of ornament from another building to prevent a similar outcome, the city has proposed amendments to the law it believes will satisfy all interests.

In essence, the commission would have to create a list of *all* buildings deemed worthy of its consideration. And, at a developer's request, act on them. The benefit for the public? Potentially worthy buildings on the list would be officially protected from demolition or defacement on an interim basis. (Currently, buildings of interest to the commission are protected by an informal agreement with the buildings department.)

Besides knowing with certainty the status of buildings in the path of proposed developments, developers would get strict time limits on the commission's actions. The commission would have to complete the protected-buildings list within four years. And it would have to act on any designation within 12 months of a request or not again for four to five years. Very reasonable, it would seem.

However, it has to be remembered that, in the 21 years of the commission's existence, fewer than 1/10th of 1 percent of all buildings in the city have been individually designated—which omits many familiar buildings by internationally known architects. (Rockefeller Center, for instance, has just received its plaque.)

And a survey of eligible buildings in only one of the five city boroughs, Manhattan, is, after all that time, just nearing completion. Part of the problem, which the inflexibility of the proposed amendments does not address, is that research and changing values constantly produce new candidates. The other part of the problem: understaffed and underbudgeted, the commission (on which only the chairman is salaried) has traditionally fought an uphill battle just to keep ahead of the pressure by developers to be allowed to demolish noteworthy sites and buildings which landmark advocates wish to preserve. Hence the cries of "ambush."

True, the amendments would give the commission more money to speed up the completion of an eligiblity list for the whole city, but, given the strict time limits, many argue that the new budget of $4 million (which only increases the current one by a little more than twice), coupled with the slow and cumbersome process of designation, would mean that very few additional buildings will ever be designated. If New York is successful in passing the proposed amendments, the preservation community then has to hope that they will not become, like the current law has been, a national model. *C. K. H.*

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Construction economy: Is the office boom really bombing?

The current status of the tax-reform bill makes the author's observations well worth reading

By Joseph Spiers

It's been a long wait, but the boom in office-building construction may finally have come to a not-unexpected end (*Update*, RECORD September 1986, page 35).

The evidence: During the past year, inflation-adjusted outlays for new office buildings have been teetering (chart overleaf); construction contracts for office buildings have been sinking; and office-vacancy rates in many cities have not only reached the sky but continue to climb. The table overleaf makes this clear.

Is there anything surprising about this particular construction market getting weak?
Nothing, except that this particular market has been behaving in an extraordinary manner year after year since 1978. And despite *many* predictions of an office-building demise during those years, the market kept shooting up to new highs.

Just as they are now, those earlier forecasts of an office slump were based on seemingly irrefutable evidence: soaring vacancy rates, extraordinarily high interest rates, economic recession, overbuilding, disinflation, and, of course, potential tax-law changes. Yet from 1976—the bottom of the mid-1970s office slump—to 1985, real outlays for office buildings surged at a 15-percent average annual rate. That compares with only 5 percent for the rest of nonresidential buildings in the same period.

During this ever-onward-and-upward stretch, there was one glitch—1983—when office construction tumbled 13 percent. At the time, it seemed the office market had had it.

The Coldwell Banker national vacancy rate had doubled during 1982 and hit 12.4 percent by the end of 1983. Interest rates, while down from their incredible 1981-82 peaks, were still extremely high. The prime rate in 1983, for example, averaged nearly 11 percent, compared with 8.5 percent today. Yet, while interest rates fell in 1983, so did inflation, meaning that the real cost of money did not change dramatically.

Meanwhile, transition to a low-inflation economy knocked loose an important pillar supporting the office boom. For inflation assures developers and investors that future capital gains on sales of their properties will more than justify the current high cost of interest payments.

Mr. Spiers is senior economist for McGraw-Hill's Data Resources, Inc., which supplies economic forecasting to government, industry, and financial institutions.

In short, by 1983, it looked like the precocious office market had tussled with reality and reality had won.

Not so. After its setback in 1983, office construction skyrocketed by 19 percent in both 1984 and 1985. An analyst's reaction: "irrational... incredible... inscrutable." In 1984, interest rates actually rose while inflation remained relatively low. Meanwhile, office-vacancy rates continued to rise, nearing 15 percent by the end of 1984. As oil prices weakened in 1984, vacancy rates in Denver, Houston, and Oklahoma City topped 20 percent.

With energy prices continuing down in 1985 and formerly vibrant Sun Belt cities feeling an economic chill, surely the strong facade of the office market would begin to crack. Yet, as noted, in 1985 as a whole, office construction soared once again.

So, given all the false signals in the past, why think that the end is here now?
Indeed, some signals are still flashing strength in offices. On a general level, many analysts believe the economy will grow comfortably in the second half of 1986 and will continue to grow well in 1987. The big pluses for the economy: the cheapest oil, the lowest interest rates, and the weakest dollar in years. If the economy does, in fact, strengthen, companies will hire more secretaries, managers, and accountants, helping to fill up all those half-empty office buildings throughout the country.

More specifically, strength in offices still shows up in certain markets. The most important market in the country, Manhattan, also happens to be the strongest. The office-vacancy rate in midtown Manhattan was only 8 percent as recently as March. In downtown Manhattan, the rate was higher at 10.8 percent, but still far below the national urban average of 16.5 percent and the national average suburban rate of 22.5 percent. In nearby Long Island, the rate was just 10 percent.

Other Northeastern cities—Boston, Philadelphia, Washington, D. C.—also sport vacancy rates far below the national average. With the continued growth of financial and other services, the Northeastern market looks solid compared with the rest of the country.

Yet even in the Northeast all is not rosy. In nearby New Jersey and Westchester County, which borders New York City, empty office space abounds. And in such cities as Baltimore and Columbus, Ohio, more than 13 percent of downtown office space was unleased as of March.

Compared with the Sun Belt, however, space in Baltimore and Columbus is tight. From Miami with a vacancy rate of 23.8 percent to San Diego with a rate of 20.2 percent, the Sun Belt has become the overbuilt belt. These rates have forced building owners to offer tenants great deals—such as a year without rent, or free furniture and redecoration. Yet, excess space remains a drag on many markets.

Clearly, with perhaps a few geographic exceptions, overbuilding has reached an extreme point. Corroborating evidence comes from the growing number of real-estate deals that are going into default. In addition, while interest rates are far lower today than they were a few years ago, inflation is also a lot lower. Hence the prospects of fat capital gains have faded.

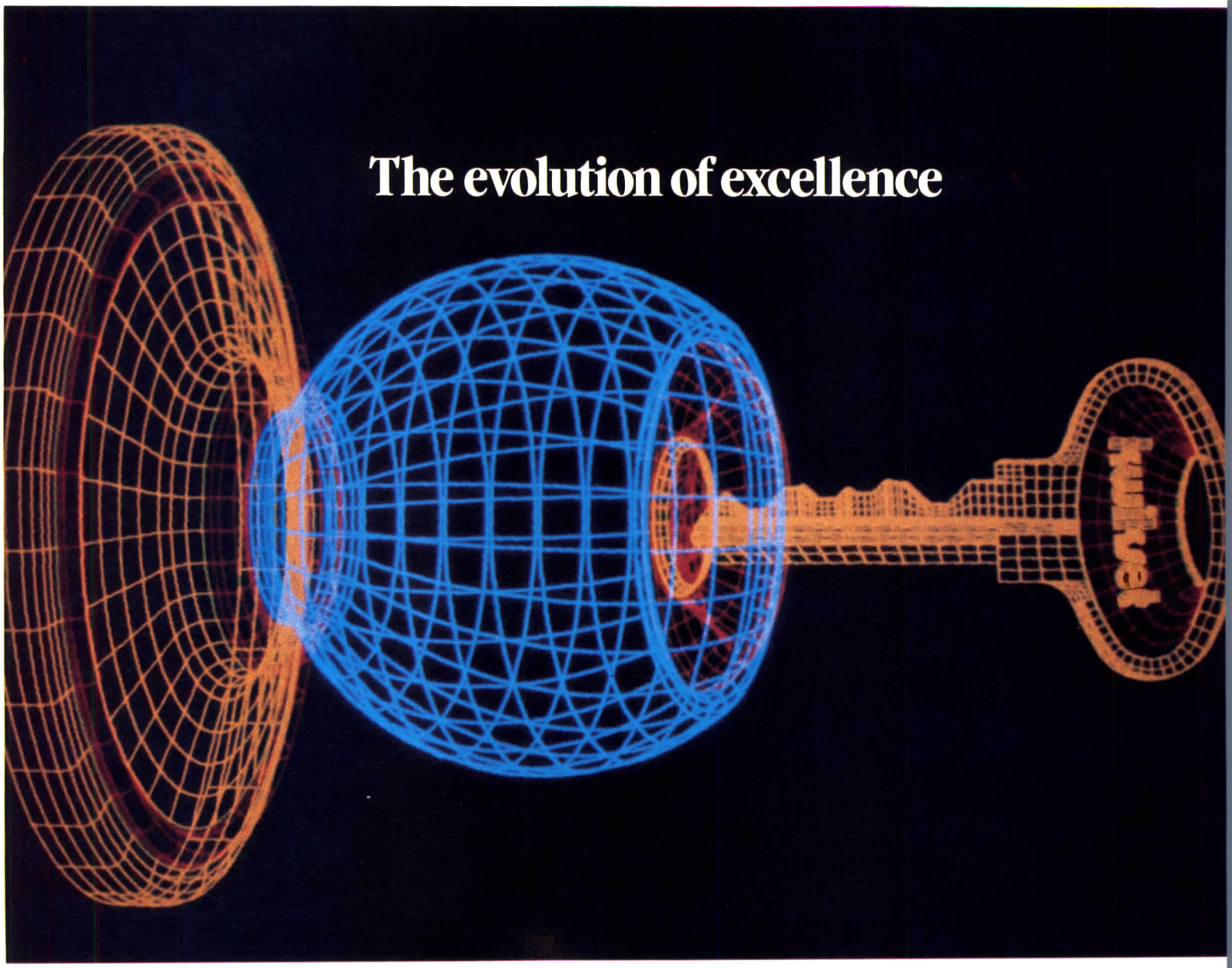
Perhaps the most important reason to believe office construction is coming to a crashing halt is tax reform
To be sure, tax reform has been in the political wind for several years, with tax shelters a target in just about every proposal. And, of course, limited partnerships formed to build offices have been one of the most popular tax shelters in recent years. Nevertheless, despite tax-reform uncertainty, offices kept booming along.

It's possible that news of tax reform could actually have spurred tax-shelter investment in new office buildings on the assumption that tax benefits for projects already under way would be protected by grandfather clauses. But it's also possible that few market participants really believed tax reform would occur, or at least that any new tax bill would actually take a meat cleaver to real estate. After all, real-estate lobbies abound in Washington. And, anyway, there had been a lot of talk before and nothing happened to tax shelters.

That view may have been valid as recently as six months ago. But then came the startling announcement by the Senate Finance Committee that it had agreed on a bill to reduce the number of personal marginal tax rates from 14 to 2. Tax reform suddenly became a front-burner, can-do issue.

And while some taxpayers would get pinched by elimination of deductions, such as state sales taxes and nonmortgage interest payments, promoters of office tax shelters would get devastated by another proposal: the elimination of a taxpayer's ability to write off losses from limited partnerships against ordinary income.

If the Senate Finance bill became law, losses from limited



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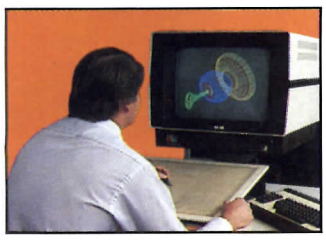

Design engineer shown developing a three-dimensional isometric view of the exterior knob assembly on computer terminal.

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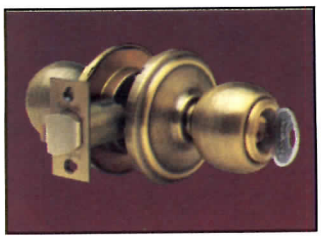

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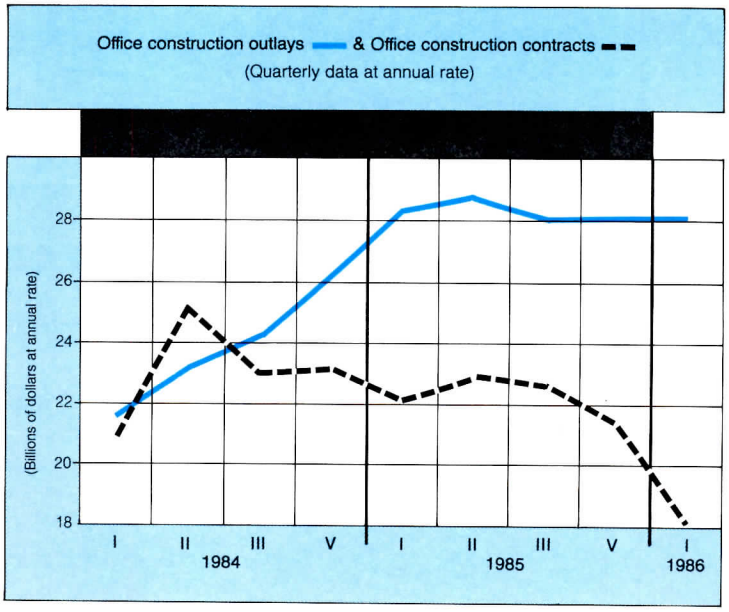
True enough, downward predictions have been made before. But the wild card in the construction deck—tax reform—had not been played then. Today, tax reform is on the table for all to ponder before making their bets



Downtown office vacancy rates (%)

	March 1986	March 1985	Percentage Point Change, 1985-86
Northeast			
Baltimore	13.3%	9.9%	3.4
Boston	10.5	13.5	−3.0
Manhattan, Downtown	10.8	8.5	2.3
Manhattan, Midtown	8.0	7.1	0.9
Philadelphia	9.2	8.0	1.2
Washington, DC	10.3	10.6	−0.3
Midwest			
Chicago	11.0	10.5	0.5
Cincinnati	18.4	17.8	0.6
Columbus	14.0	20.2	−6.2
Indianapolis	9.4	11.8	−2.4
Minneapolis-St. Paul	12.6	14.4	−1.8
St. Louis	11.0	11.0	0.0
South			
Atlanta	13.9	15.8	−1.9
Charlotte	7.0	10.3	−3.3
Dallas	18.4	17.3	1.1
Houston	19.1	19.5	−0.4
Miami	23.8	17.4	6.4
Nashville	17.9	20.8	−2.9
New Orleans	23.1	19.5	3.6
Oklahoma City	24.0	24.4	−0.4
Orlando	17.2	16.9	0.3
San Antonio	21.0	21.4	−0.4
Tampa	23.8	7.8	16.0
West			
Denver	26.1	24.7	1.4
Kansas City	18.5	13.0	5.5
Los Angeles	18.5	12.4	6.1
Oakland-East Bay	20.3	18.0	2.3
Phoenix	21.5	20.7	0.8
Portland, Oregon	19.8	18.2	1.6
Sacramento	16.0	20.3	−4.3
San Diego	20.2	21.7	−1.5
San Francisco	15.7	10.9	4.8
San Jose	23.0	18.7	4.3
Seattle	14.9	13.5	1.4
U.S. Average	**16.5**	**15.4**	**1.1**

Source: Coldwell Banker

partnerships could be written off only against gains from other partnership investments. But, of course, the point of these investments is to generate losses, with the benefits coming from tax deductions and eventually from capital gains. Hence, under such a tax regime it is unlikely that many investors would want to invest in office-construction deals unless these deals were founded on a firm economic basis, not merely on tax-code clauses.

Estimates are that limited partnerships account for some $8 billion in real-estate deals, with a good chunk going for office development. Obviously, if this source of funds dried up, the office market would suffer. In fact, syndicators have been reporting a loss of investor interest in real-estate partnerships.

Besides the swipe at partnerships, tax reform also extends the depreciable lifetimes of nonresidential structures by some ten years. Thus, even for nonpartnership developers, the tax advantages of putting up a new office building are diminished.

On top of the proposals specific to real estate, the general reduction in both personal and corporate marginal rates also reduces incentives to report losses; they simply aren't worth as much as under a higher-rate regime.

Putting all of the above arguments into an office construction balance sheet looks like this:
The asset side of the ledger includes an anticipated pickup in general economic growth that would lead to increased office employment, hence increased demand for office space. Faster economic growth would, in part, be spurred by lower interest rates, which of course directly benefit construction. The asset account also includes relatively strong markets in the Northeast.

On the liability side of the ledger are extremely high and rising office-vacancy rates, a depression in energy-producing areas of the country, low inflation, high interest rates in relation to inflation, and tax reform's blow to shelters.

All in all, it appears that the liabilities outweigh the assets, with tax reform the decisive factor. Given softness in office construction in the past few quarters, it's possible that fear of tax reform and inability to lease out space have already put a damper on this market. The view from here, therefore, is that the office boom is over, and not just for the moment, but for a couple of years.

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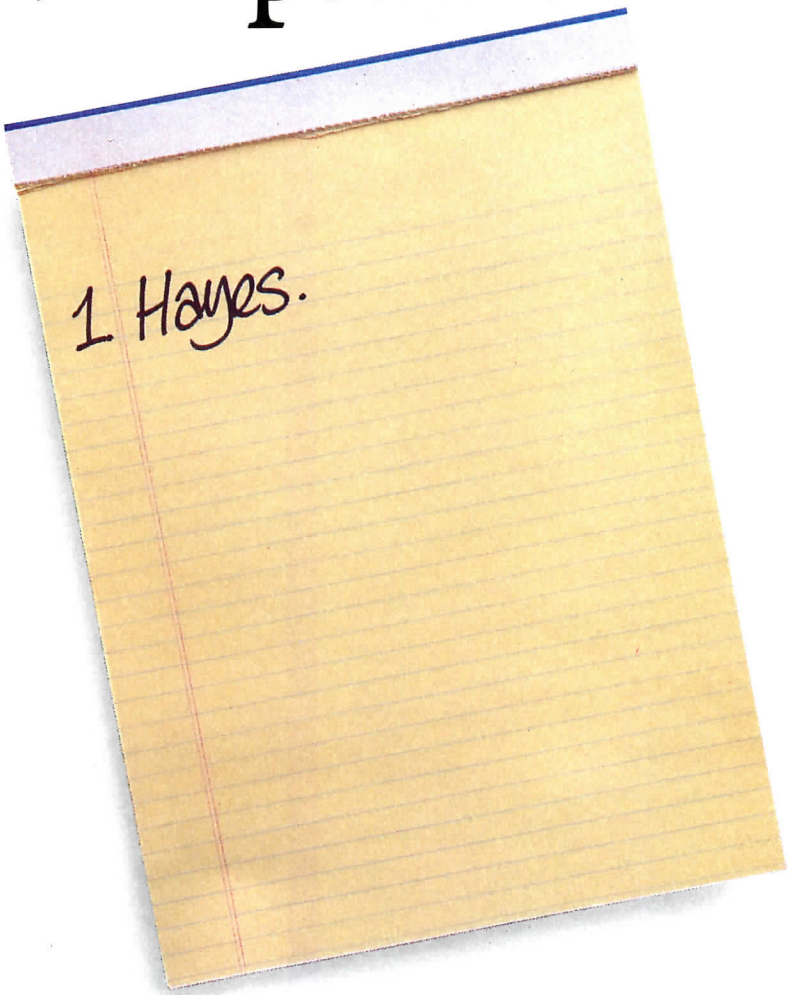

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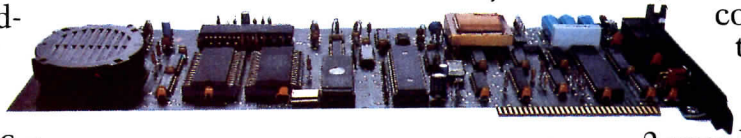

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Management: Incentive programs will improve your firm's performance

By James Pashek

Incentive programs are important because they both motivate staff productivity and keep key members from leaving. These two goals were repeatedly brought up by managers in a survey of Pennsylvania design firms recently conducted by the author. Yet, some programs fail because they lack key elements that will make them effective. The purpose of Mr. Pashek's survey, then, was to identify those key elements he sets out here.

The highly successful firms, the ones that repeatedly generate large profits and, as part of the process of doing so, spur employee motivation and control the rate of turnover, place high emphasis on both compensation management and incentive plans. But this does not mean that every firm's incentive plans are equally effective—or even minimally so.

A recent study by the *Professional Services Management Journal* found that 85 percent of typical design firms have some form of bonus plan. It also found that 40 percent have profit sharing and 38 percent participate in 401K retirement plans. Most design firms provide incentives because other firms do or because the firm has provided the incentive in the past. Some managers believe that they hire only well-motivated employees, who, if paid well, won't need incentives. Research indicates that, in the long run, this is not true. So what, specifically, do those firms with successful incentive plans do better than others? They recognize the fundamentals.

Behavioral scientists, including Abraham Maslow, F. Herzberg, and D. C. McClelland, three who worked in the '50s and '60s, have developed many theories about how employees respond to office environments. A shared component of these theories is that each individual has physical and psychological needs that are different from those of his peers. So not a few pat fulfillments but a whole range of custom-tailored ones must be given in order to generate true motivation.

These theories also say the obvious: that the more desirable the reward, the better the incentive to perform a required task. Of prime importance, then, is the ability to carefully match different rewards with different needs. One bonus plan for the entire office will not do. For example, people having a strong need for achievement will be highly motivated by challenging work experiences more than by additional cash.

Keeping such basics in mind, the key elements of a successful incentive plan can be broken down into five categories:

- There must be a variety of monetary and nonmonetary rewards in order to meet the varying needs of individuals.
- For a reward to be motivating, there must be a clear and direct link to performance.
- There must be objective criteria for distributing the rewards.
- The incentive program should be simple, clearly defined, reliable, standardized, and part of a system of open communications between management and employees.
- Employees must perceive the distribution of monetary and non-monetary rewards as fair.

Let's try to relate these elements of a successful incentive plan to your firm:

Money is not the only incentive

Recognition, for example, is one of the most powerful nonmonetary incentives. When asked why they left their last firm in my survey, most designers said, "lack of recognition." Motivation through recognition is one reason fast-food restaurants have an "employee of the month."

Recognition does not have to be costly. Send out an announcement and have a party when a member of the staff is promoted, passes the registration exam, or makes some other noteworthy achievement. It will also give your firm added exposure to clients.

Ample opportunity for advancement is another successful nonmonetary reward. This includes not only increased responsibilities but self-development as well.

As an employee's satifaction with a particular reward approaches satiety, the capacity to motivate with more of the same diminishes rapidly. Hence, having a variety of rewards not only reponds to a variety of individuals' needs but offers various substitutions for rewards that have lost their effect.

A reward should be seen to be a reward

There should be a differentiation, made clear to all, between the compensation given to one who performs in a satisfactory manner and the reward given to a person performing at a higher level. Rewards must be seen to be a direct result of exceptional performance and not of just a functional membership in an organization.

Curiously, some types of monetary rewards are not seen by many less sophisticated employees to have a direct link with performance. Stock-option plans, profit sharing, and some tax-deferred plans have a payoff too far in the future to be motivating today.

What is being rewarded needs to be made clear

Objective criteria for real achievement form one of the most important elements in incentive programs even though, unfortunately, they are difficult to establish. Nonetheless, leading design firms focus on results that can be measured. They use performance appraisals, specific goals, performance-level definitions, and formalized methods of goal achievement.

While a manager discusses employees' needs with them, he also talks about what the employee will be expected to do to achieve need fulfillment. The manager molds personal goals to those of the organization. He focuses on results.

For incentive plans to work, they require each employee:

- To want to achieve;
- To be clear about what is to be achieved;
- To know how to achieve.

One person in marketing might target a new market area and set a goal of listing 50 new potential clients in that market. A project manager might set a goal of improving the annual profitability of his projects by, say, 10 percent. A draftsman might shoot for decreasing the number of change orders on his projects. The key to the goal setting is to determine goals that extend a person's ability. They must be difficult but not impossible to achieve. And they must be flexible to be realistic. They may well change with experience.

The method of rewards need not be a burden

Most managers, burdened with decisions on a broad scale, are understandably reluctant to take time out to talk to their subordinates about details as much as they might. This is especially true when it comes to discussing performance appraisals. But if an incentive program is simple and easily understood by all, it need not take large chunks of a manager's time. Frequent updates on the financial status of the organization and numerous opportunities for employee suggestions are important. And a manager should make regular evaluations that tell employees where they stand in comparison to the established performance standards.

Firms can include many of the above elements in their incentive programs, but if the distribution of rewards is not perceived to be fair, the programs are doomed to failure. Trust in top management can be

Mr. Pashek is a landscape architect and president of Pashek Associates, a site-planning firm in Pittsburgh

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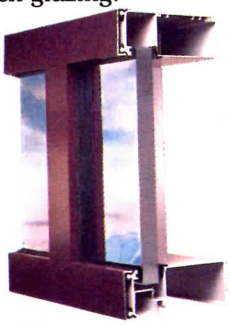

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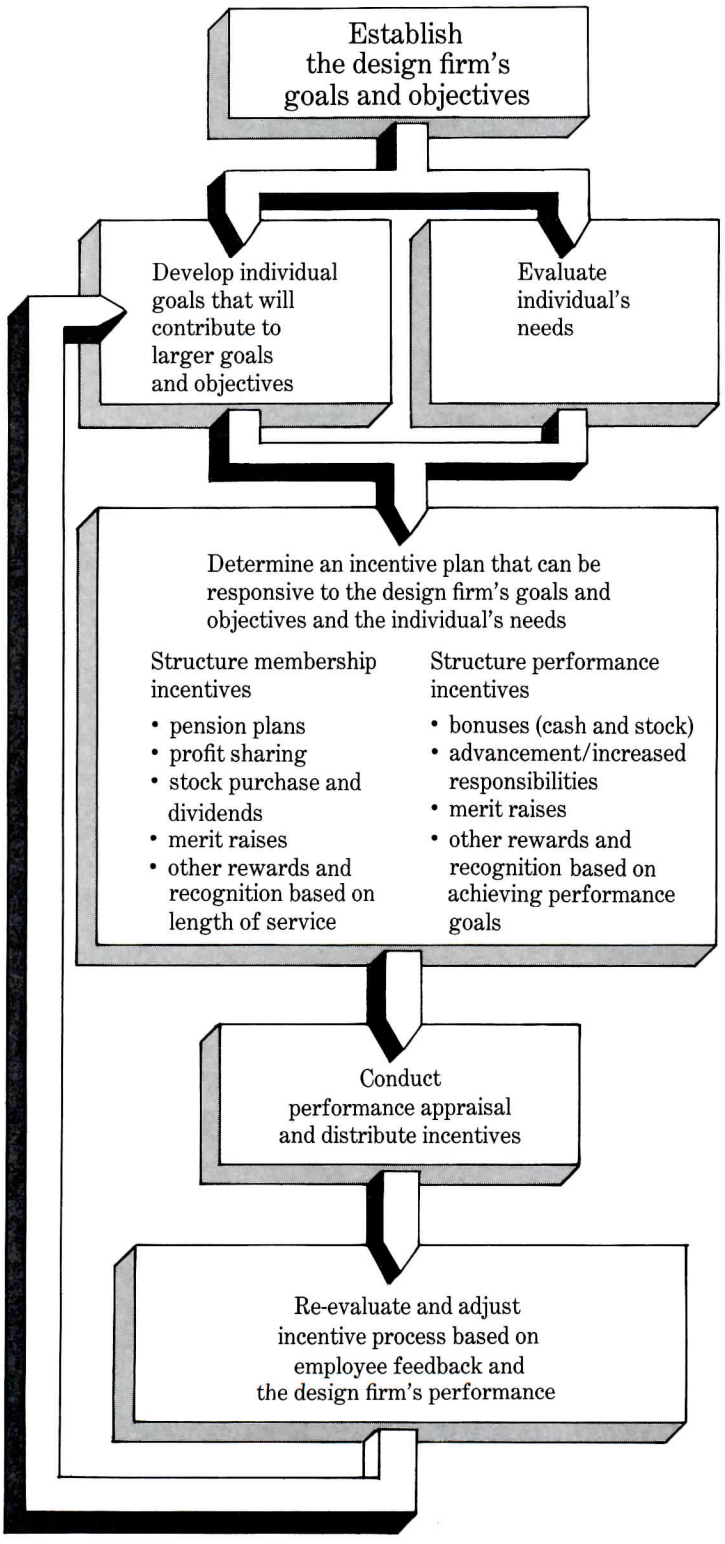
Below, the author offers a procedural framework for implementing the recommendations for successful incentive plans that came out of his research



achieved primarily through open communications and objectivity.

A good program needs a framework

The incentive model shown in Table 1 presents such a framework. First, identify the firm's goals. Make them specific—such as increasing annual billings by 20 percent, reducing accounts receivable by 5 percent, improving overall staff utilization by 5 percent, increasing return on investments by 5 percent, opening a branch office, entering a new market area, acquiring or developing a new in-house expertise, etc.

Once the firm goals are set, the second step is to discuss with the staff what their individual needs are. Some individuals will indeed want the potential to earn more money. Others will want to achieve a higher level of responsibility or receive greater recognition. One person might want to develop a greater professional knowledge through attending seminars or other training opportunities in an area of expertise beneficial to the office. Other people might want to take charge of the office's participation in design competitions, to have more paid vacation, or to have a company car. Ask each individual what three things are most important to him or her. Several firms have formed employee committees to survey staff needs and to determine whether adjustments were required in performance-appraisal methodologies.

Once you have determined what the organization's goals, the individual's goals, and the individual needs are, you can get down to basics. First, know what your competition is paying. Studies show that offering compensation less than 85 to 90 percent of the prevailing wage level in your community will result in undesired staff turnover simply based on salary.

One firm I surveyed sets earnings goals for key staff at a minimum of 130 percent of prevailing wages but with only 50 percent of that amount in fixed salary. The remainder is tied to achieving those goals agreed to between the individual and manager. Other firms surveyed also pay salaries below the prevailing wage, although not so far below, and provide bonuses and other compensation tied to meeting objectives that equal 10 or more percent of the base salary. A comprehensive program, then, can include both incentives for basic membership in the firm and performance.

How often should appraisals be made and rewards given? Most firms do this on an annual basis. Be flexible so that an unusually stellar performance can be singled out more often than annually. Finally, obtain feedback from employees regarding the goals and evaluations of performance so that adjustments in the program can be made to be more responsive.

Is all of this really necessary? If you are satisfied with your firm's financial performance, the turnover rate of employees is acceptable, and employee morale is high, your existing incentive program may be acceptable. However, if not, then a new plan based on the above lines may be well worth your firm's time.

The head of one engineering firm I surveyed said he spends one to two days each year crunching numbers to determine the exact distribution of profits to his top-level managers. By having the formulas called for here, his managers know what they need to do to achieve their share. He can be objective and they can feel they are being treated fairly.

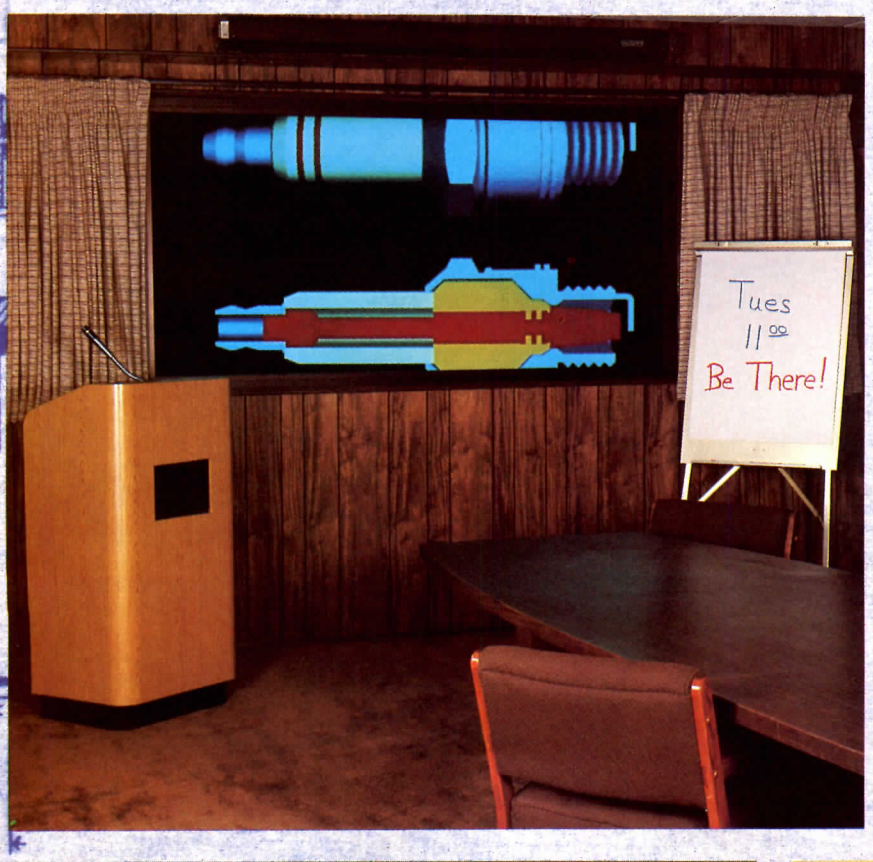
A few final notes about incentive programs. When discussing reduced turnover, I am not advocating zero turnover. Rather, the firm should control who leaves when. Again a plan can help this situation because it opens the road to the better communications that are so vital in making an employee feel appreciated. More reasons for better communications: When employees do not believe that they know what is going on in their firm, they may be subconsciously counterproductive. The shifting of responsibility for organizational success to lower levels is an action which can be very motivating.

In summary, a manager should tell the employee:

- The firm's goals;
- The overall strategy to achieve those goals;
- How the individual can contribute to the overall goals;
- What personal goals should be met;
- How those goals can be met;
- What the firm's priorities are;
- What the rewards will be if the goals of both the individual and the company are achieved.

As a manager of one large company surveyed said, "Employees need real responsibility; they need to feel they do something worthwhile, and to identify with what they do."

The advantage of an expanded family



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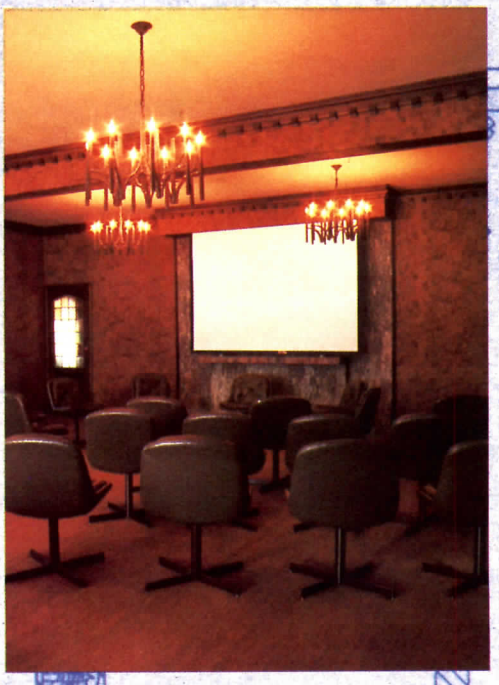

Practice: What we can do about the liability crisis in the near future

The second of a three-part report on a recently held joint RECORD/AIA symposium on liability focuses upon the legal remedies discussed

Panelists

Ava Abramowitz, attorney and associate general counsel of the American Institute of Architects for liability issues.

John A. Busby, Jr., architect, president of the American Institute of Architects, and executive vice president of Jova/Daniels/Busby.

Paul Genecki, senior vice president of Victor O. Schinnerer Company.

Arthur Gensler, Jr., architect and principal of Arthur Gensler and Associates.

Peter Hawes, president and chief executive officer of DPIC Companies and vice president of Orion Capital Corporation.

Arthur Kornblut, attorney, architect, and principal of Kornblut & Sokolove.

Barry Moore, architect and principal of Barry Moore Architects.

Martin Raab, architect, senior managing partner of Haines Lundberg Waehler, and vice president of the New York Chapter of the AIA.

Carl Sapers, attorney, partner of Hill & Barlow, counsel to the NCARB, and adjunct professor at Harvard School of Design.

Christopher J. Smith, architect, president of CJS Group-Architects, and board member of the AIA.

Stanley P. Steinberg, architect, engineer, and chief executive officer of John Portman & Associates.

Charles B. Thomsen, architect and president-chief executive officer of 3D/International.

*When we began this series (*RECORD, *June 1986, pages 35-39), we reported what our expert panelists recommended be done immediately to lessen the impact of the architects' and engineers' current liability crisis. The elements of the crisis are well known: huge awards by the courts to plaintiffs, not as compensation for loss or hurt but to inflict extreme punishment on the defendants; insurance-premium increases this year of as much as 400 percent with more to come, and the inability of some firms to get coverage at all. As one panelist put it, "When we talk about premiums that are 6 percent of a design firm's revenues, that's the profit. You are out of business."*

The immediate solutions the panelists recommended included going bare, reducing insurance coverage, raising insurance deductibles, and passing increased costs on to clients. Doing the latter, it was acknowledged, requires some well-applied psychology, but may be especially desirable if it permanently increases fees.

Of equal interest were the solutions proposed that require legal groundwork before they can be implemented. The best of these are presented here. C. K. H.

The panelists blamed the liability crisis, in part, on the profession's failure to see the obvious coming. As AIA president John Busby put it: "The AIA recently reviewed history and found that, sure enough, 10 years ago we were faced with a similar crisis. And here we are faced with the same concerns we must address again. If the problems facing the insurance industry are cyclical, if we haven't consistently addressed this, how do we keep architects from being sucked in on the next go round?"

Said architect Christopher Smith, who sits on the national AIA's planning and budget committee, "We didn't foresee the high interest rates a number of years ago; we definitely didn't see the energy crisis coming; and we missed on liability. So we need strategies for the future. The folks that build cars can plan ahead. So we must do that too." But what are the strategies that will help us out of the crisis in the future *and* in the short term?

Change the laws that encourage people to sue at will

"What is important in what we do here at this meeting," said Busby, "is not only to address the needs of our particular profession, but to come out of this with information that we can take to our clients, other members of the design team, the general public, and certainly our legislators on the complexity of the construction industry. We need legislative support in addressing this issue."

"We in the insurance industry," said Victor O. Schinnerer senior vice president Paul Genecki, "think there is some legislative relief that's long overdue."

AIA associate general counsel Ava Abramowitz listed some of the targets for tort reform: "Workers' compensation is critical. So are statutes of limitations, by which people come to the courts years after a building is finished because of a maintenance problem and try to make it into a design problem." She emphasized that tort reform is a long-term solution: "We at the AIA are only beginning to look at legislative routes that are available to us and we see that this will be a long and arduous task. We do not see any immediate relief within the next year or two."

Architect Arthur Gensler pressed the issue. "We're going to have to change the laws. That isn't to say that there aren't things in our house that we should put in order, but I believe that architects can't insulate themselves from the rest of society, and I do think that we need some major tort reform. I can't run a business on the assumption that I'm going to be sued. I refuse to run a business that way and, if I am forced to, I will abandon it."

And he amplified on one model for meaningful reform—a ballot initiative in California meant to limit the amount of awards for pain and suffering: "We have to deter the deep-pocket theory which, to me, is the scary part of the problem."

Another possible solution, newly initiated in Hawaii, was described by Smith: a conciliation panel to which all plaintiffs must submit their causes for evaluation before the courts will hear them. He described the immediate result as a logjam but the long-term result as a majority of cases being resolved out of court. "I want to hold my judgment," Smith said, "because it's a growing tool and, like all new things, needs some adjustments. On the whole, it's working very effectively."

What everyone seemed to want was a system that would penalize frivolous suits. The English system, by which the loser in a civil case pays all court costs, seemed to be one possibility. (For other ways to instill fear in plaintiffs, see the next column.)

Architect Barry Moore amplified on the need for changes in workers' compensation: "Specifically, in Texas, we have a law that bars a workman on a construction site from suing his employer, the general contractor. Which means that the architects are going through the woods like Little Red Riding Hood with a basket full of money and guess who the wolf is after? I think changing the laws on workers' compensation is where we need to spend a great deal of our time and effort."

Architect Martin Raab offered a dissenting view: "You want to know what we can do. I don't think there is much we can do. I don't believe we can do a number of things which are bandied about. Certainly, as a profession, we have very little clout in the area of changing the legal practice in this country."

Gensler offered a whole new area of the law for consideration—building codes—which, while not the basis for many liability suits per se, certainly contribute to building designers' exposure. "Codes are changing daily. They change with each local jurisdiction, while many firms work nationally. And the interpretations vary. An important issue on which we've had very sticky negotiations was our following a code during design and, by the time the building got through working drawings, our being presented with another interpretation."

Architect Charles Thomsen agreed on the importance of codes: "We have a case just like that right now. I think that's one of the strongest, clearest ideas that I have heard today. Let's all get together and standardize the bloody codes."

Fight back against suits that have no merit

A number of the architectural firms represented at the panel, including Thomsen's 3D/I and Stanley Steinberg's John Portman & Associates not only advocated but practiced fighting back. "We have an in-house counsel," said Thomsen, "who is one of the major reasons we have never had a liability loss."

Gensler: "We have been paying liability insurance for 20 years and have had 23 claims against us. The only award or settlement we've ever paid was $1,500 to get someone to go away. She stood on a table and fell backward while pulling a book out of a shelf; her husband was an ambulance-chasing lawyer and the insurance company forced us to settle. All other claims we have fought and never paid the plaintiffs a dime. But we've paid one hell of a lot in legal fees. I believe we are required to stand up, get counted, and set precedents."

Insurance executive Peter Hawes had what seemed to be the perfect answer. He proposed a legal defense fund to which the insurance industry will contribute. The fund's purpose: to fight suits brought for reasons other than errors, omissions, or negligent acts—those

Continued

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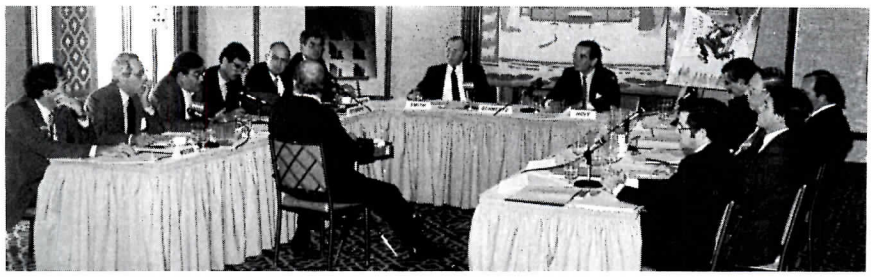

that have often been referred to as being based on entitlement. What design professionals need, said Hawes, "is timely and expert defense of any such action brought anywhere in the United States and the winning of precedent cases. What they need is an immediate don't-tread-on-me psychology imposed on the plaintiff industry.

"I have chosen today in this forum to put forth the proposal of a design-professional defense fund for the express purpose of manning the battlements, to publicize and protect the rights and legal positions of architects and engineers to the fullest extent of the resources available whenever and wherever improper claims develop. I hereby challenge all parties to step forward—the AIA, the American Consulting Engineers Council, the professional-liability insurers, defense attorneys, and, most of all firms in private practice.

"In my estimation, an initial fund of well over $3 million can be easily raised by just the contributions of 0.2 percent of practice fees collected by those firms insured by DPIC and Schinnerer. I am prepared to try to secure a commitment of $300,000 from DPIC and its agents. In addition, we are prepared to use our facilities to mount the campaign. This means individual solicitation of each of our insureds and others, if desirable, and the use of our claims and defense facilities. I feel certain Schinnerer would do the same.

"Is such a plan feasible? I think so. Needed? Absolutely. Then let's get on with it." Hawes described the first necessary ingredient: volunteers to explore the proposal in detail, including representatives from the AIA, ACEC, DPIC, Schinnerer, and the latter's parent company CNA.

Added Gensler, "I think that a legal defense fund will do what we want—give a penalty to irresponsibility."

Get the potential for suits out of contracts

Attorney Carl Sapers pointed out that, because the construction industry alone has contracts between all parties to the process, it would be possible to shield architects by simply exempting them from suit by the other parties in each contract. This would be a quicker route than changing any laws. There would, of course, have to be some other mechanism for complaints against architects put back in contracts.

Again Hawes had an answer: "I want to see disputes between design professionals and their clients resolved in a speedy, efficient, and elegant way through some form of mediation. I am not sure that the American Arbitration Association provides that now." Nor, often, is it legally required to as a forum of first resort at present.

"I am sure," Hawes continued, "that the AIA together with others concerned about these problems can devise a system for dispute resolution which will avoid the entanglements of outrageous litigation and, at the same time, provide fair resolutions of what I understand to be 60 percent of liability cases in the industry—the owner suing the architect plain and simple."

"You are absolutely on target," agreed Abramowitz. "I hope that what we're doing at the institute now will follow logically into what you are talking about—the implementation of mediation and conciliation, or different types of arbitration. That will restore the kind of position that the architect used to hold, that of a person who expedites design and construction for the owner. It is certainly a priority with us."

Get rid of bad contracts altogether

Attorney Arthur Kornblut described the new willingness of architects to resist a contract drawn up by an owner that imposes untoward responsibility. But this left open the issue of the large owner, "the institutional owner using its clout," as Hawes put it, "to enforce a disadvantageous contract" that the hungry professional is unable to resist.

"I can give an example," said Steinberg, "the Board of Regents of the State of Georgia. We were selected by Georgia Tech for a project and the school sent us down to the Board of Regents to enter into its standard contract. I read it. I said I didn't need a lawyer; I wouldn't sign it. And we walked. Subsequently, I talked to three or four major firms that did sign that contract believing that 'they never really enact what's in that document.' But I don't understand how any firm could sign it, and I want to ask if there is anything that the AIA is doing to advise its members on bad contracts by major clients. There is one way those types of contracts will collapse and that is if *no* architect signed them."

Abramowitz asked what, in particular, was so unacceptable in the board's contract. "Everything," said Steinberg, "from guaranteeing construction on time to the water-tightness of the building. And they wanted us to accept fees that I wouldn't accept even without all the guarantees."

"You should not hesitate," said Genecki, "to use insurance as a negotiating tool. It's extremely effective when you are able to demonstrate to a client that, if he insists on certain language—especially guarantees—and even if you signed that contract, you would void your professional-liability insurance. It's not 100 percent effective, but most clients want a financially viable design firm. And that means insurance."

"Still," said Steinberg, "small architects out there don't realize there are people turning bad contracts down."

Busby spoke for the AIA efforts. "Nationally, we're working to get those kinds of inequities out of federal contracts. We do, in fact, point out that our liability coverage is void when such provisions as guarantees are included—that we can't transfer responsibilty."

"What we have done in the Hawaii chapter," said Smith, "is to initiate a task force to cry foul through the media." He described how the chapter intends to publicize bad contracts and advise all architects not to sign.

Moore talked about what the Houston chapter is doing. "The city has a perfectly terrible contract that you have to sign if you do city work. Finally, this year, after much protest, the head of the public-works department has asked the chapter to submit all of the AIA documents as a basis for a new city contract. You can do it. It takes a lot of time. And you have to be politically sensitive and active."

Change the nature of services offered

Thomsen came closest to suggesting a revolution in the profession to solve the liability problem. "In Japan, in France, other countries of the world," he pointed out, "final-design documents are what we call design-development drawings. The contractors have very large engineering and architectural teams and their competitive edge comes from their engineering and architectural expertise, not from the ability to beat subs over the head to get low prices.

"There are people in the U. S. who are saying that, for certain kinds of projects, we can do that too; we can do scoping drawings, we can do performance specs, we can describe objectives, we can control what the client wants us to control and leave the rest to the competitive marketplace. That will put the architect on a team with the contractor and reduce the conflict of interest on technical details. You hear George Heery talking about that. The Air Force is coming out with a project to be done this way. It's not a new idea."

As might be expected, Thomsen's idea raised serious opposition: "I interpret what you say," said Raab, "as a backing away from responsibility. The person who should set the criteria to meet the client's needs moves further away from the end product. He becomes a contractor's sketch service."

Steinberg joined in the dissenting view. "I think my firm is perceived as a deep pocket and we get sued quite often. But we have only lost once. The contractor and subcontractor came in and said they would like to replace our curtain wall with another. They asked us to give some design criteria, assumed full responsibility, and designed it. It leaked. We went into court and guess who lost? We lost, simply because we had approved it to the extent that their design met our criteria as long as they lived up to their guarantees. And that's the only suit we have lost."

"The basic idea of design-build," replied Thomsen, "that the people who design and the people who build are dealing with the same thing, isn't a bad idea. After all, the biggest organizations in the country are design/build companies. It does work."

Sapers offered not dissent but caution. "One of the things we don't do very well, when we come across new ways of project delivery, is to figure out how the law will look at our responsibility for them. It is very important, then, to spell out the liability responsibilities of the various parties. It's been one of the hazards of this business that people have tended to use old forms of agreement for new processes, modified them only slightly, and then gone before judges, who are not terribly smart about what's going on in the construction industry. When those judges apply yesterday's conventional wisdom, you are back paying the dues that you paid in the conventional system—which is what you were trying to get away from. So, new ways of doing things ought to be in italics and very big print in contracts so that even a myopic judge can see that you have done something different."

How long do we have to wait to see things improve of their own course?

Genecki promised a turnaround in the insurance cycle—the moderation of premiums and more available coverage, possibly within a year. When the industry becomes economically healthy, he then expects more competition—"more players," as he put it. And Steinberg offered a view based on faith: "Ultimately, this lottery concept will be tamed. It may take a long time and we may not know for years afterward when we did it. But we will."

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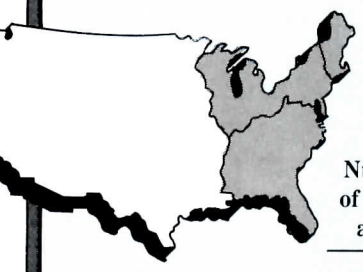
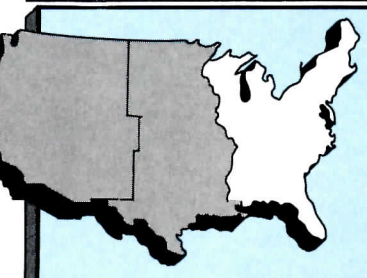
Costs: More moderation seen

Summary of Building Construction Costs



Districts Eastern U. S.

	Number of metro areas	4/86 to 7/86	7/85 to 7/86	1977* to 7/86
Metro NY-NJ	18	0.94	2.33	1738.55
New England States	33	0.44	2.15	1680.19
Northeastern and North Central States	120	0.36	1.37	1661.80
Southeastern States	106	0.42	1.31	1716.26
Average Eastern U. S.	277	0.43	1.50	1689.82



Western U. S.

Mississippi River and West Central States	122	0.24	1.03	1667.35
Pacific Coast and Rocky Mountain States	106	-0.02	-0.25	1727.49
Average Western U. S.	228	0.12	0.43	1695.31
United States Average	505	0.29	1.02	1692.30

Using only cities with base year of 1977

After a string of infinitesimal rises and even some drops in construction costs stretching across the previous year and a half, the McGraw-Hill Information Systems Company report for the first quarter of 1986 saw a rise that was certainly noticeable (RECORD, August 1986, page 41). But now, as predicted, those costs seem to be leveling out again. The combined components of material and labor rose in the second quarter by less than a third of a percent nationwide.

To be sure, there are some paradoxes in the situation. For one, there are, as noted in the first-quarter report, those pinched profits of many material suppliers that would tend to put upward pressure on this component. But material costs remained about flat.

And then, there are the regional variations. Metropolitan New York and New Jersey traded places with the Southeastern states as the leader in overall upward movement with an almost 1 percent rise (summary chart left)—nearly double any regional rise in that inflationary first quarter.

At least the geographic switch in positions did seem somewhat rational, as, in the tradition of supply and demand, the Northeast had a much healthier construction picture (contract value up 8 percent) than did the Southeast, where contracts fell by 2 percent. But wait a minute. Costs west of the Rocky Mountains, where contracts were up the most (by 9 percent), fell.

Nationwide, labor was the big variable component of construction costs, with average contracts in the second quarter rising some 2.8 percent for the first year covered. There was some good news in the labor picture for the future. In three-year contracts, an industry norm, the second year allowed for average gains of just over 1.5 percent—the same amount as last year—and the third year allowed slightly less than that figure.

McGraw-Hill Information Systems Company studies are conducted quarterly by direct contact with union and nonunion sources, direct-mail suppliers, construction-labor consultants, and both general and specialty contractors in each city.

Cost Information Systems
McGraw-Hill Information Systems Company

Historical Building Costs Indexes

Average of all Nonresidential Building Types, 21 Cities

1977 average for each city = 1000.0

Metropolitan area	1977	1978	1979	1980	1981	1982	1983	1984	1985 1st	1985 2nd	1985 3rd	1985 4th	1986 1st	1986 2nd
Atlanta	1171.5	1712.6	1925.6	2098.6	2078.0	2360.6	2456.7	2448.7	2446.2	2506.3	2539.5	2518.3	2526.3	2534.1
Baltimore	1018.4	1107.7	1304.5	1446.5	1544.9	1639.5	1689.7	1703.7	1737.1	1749.9	1750.8	1743.8	1744.5	1762.2
Birmingham	1029.7	1142.4	1329.9	1407.2	1469.9	1468.1	1535.7	1594.7	1592.8	1583.9	1567.5	1565.7	1578.8	1574.6
Boston	1028.4	0998.6	1236.0	1283.7	1432.5	1502.0	1569.9	1646.0	1671.6	1696.9	1714.5	1721.0	1725.7	1730.0
Chicago	1007.7	1032.8	1199.7	1323.6	1344.7	1425.8	1439.5	1476.7	1476.8	1479.5	1499.1	1528.0	1556.4	1559.1
Cincinnati	0848.9	0991.0	1323.9	1385.2	1350.4	1362.6	1430.8	1484.5	1487.7	1492.5	1488.1	1486.6	1489.1	1494.2
Cleveland	1034.4	1040.8	1287.5	1388.2	1459.5	1511.4	1475.9	1464.0	1461.6	1472.8	1481.8	1474.1	1482.6	1503.7
Dallas	1042.4	1130.6	1431.9	1481.9	1750.6	1834.3	1925.9	1958.0	1961.5	1971.5	1964.6	1963.3	1964.2	1963.6
Denver	1038.8	1100.4	1495.6	1487.4	1632.2	1679.1	1800.1	1824.3	1828.7	1824.6	1825.9	1821.8	1798.8	1772.5
Detroit	1018.1	1087.3	1275.3	1447.4	1580.3	1638.0	1672.1	1697.9	1711.9	1712.3	1704.6	1692.6	1696.0	1708.6
Kansas City	1023.5	0951.5	1125.8	1233.2	1323.4	1381.8	1407.5	1447.1	1455.7	1465.1	1471.0	1472.5	1476.9	1478.8
Los Angeles	1022.5	1111.0	1255.3	1387.5	1474.3	1503.3	1523.9	1555.1	1571.0	1584.3	1579.1	1582.0	1598.4	1575.7
Miami	1004.5	1080.9	1330.1	1380.6	1369.1	1392.1	1467.6	1522.2	1529.8	1536.1	1543.7	1540.6	1549.9	1552.2
Minneapolis	1060.2	1196.8	1286.9	1327.7	1442.6	1576.8	1624.6	1640.4	1639.9	1667.3	1680.7	1661.0	1641.9	1647.5
New Orleans	1001.3	1138.8	1291.9	1505.7	1572.7	1616.9	1650.5	1691.4	1739.5	1751.0	1758.8	1762.5	1782.0	1784.6
New York	1005.4	1043.0	1247.1	1319.4	1419.2	1491.8	1672.5	1747.2	1765.1	1789.5	1812.3	1806.7	1803.3	1831.7
Philadelphia	1013.8	1074.2	1487.5	1539.5	1660.7	1769.4	1819.5	1922.1	1965.4	1982.2	1981.3	1967.9	1974.2	1968.5
Pittsburgh	1016.1	1015.0	1227.0	1341.7	1493.2	1479.5	1497.2	1576.1	1580.2	1595.5	1612.5	1611.0	1607.7	1619.2
St. Louis	1039.1	1198.8	1275.9	1320.0	1397.3	1451.2	1524.9	1625.5	1628.2	1644.8	1637.8	1641.8	1652.4	1644.1
San Francisco	1083.2	1326.8	1473.4	1644.8	1776.4	1810.1	1856.8	1935.3	1929.5	1944.8	1958.3	1961.8	1955.9	1960.2
Seattle	1142.5	1137.9	1373.4	1616.8	1814.9	1962.7	1979.0	1948.9	1973.1	1955.3	1963.5	1937.9	1925.2	1916.7

Costs in a given city for a certain period may be compared with costs in another period by dividing one index into the other; if the index for a city for one period (200.) divided by the index for a second period (150.0) equals 133%, the costs in the one period are 33% higher than the costs in the other. Also, second period costs are 75% of those in the first period (150.0 divided by 200.0 = 75%) or they are 25% lower in the second period.

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Architectural education: Teaching urban design now that clients really want it

Urban design has been evolving for some time as an alternate career specialty or as part of expanded architectural services. Consultant and professor Jonathan Barnett explores current realities of the field and how it should be taught

By Jonathan Barnett

A generation ago it was possible to build a whole architectural practice on government or institutional buildings, on work for big corporations, or even on subsidized housing. Today real-estate development has become a far larger component of what is built.

Since developers go to the planning authorities with schemes for millions of square feet on farmland sites, for communities with hundreds of houses, for multi-use downtown building groups with controlled interior environments, what they want from architects is often more than individual building design. Even an ordinary new office or apartment building, or the renovation of a historic structure, now involves ever more complicated development incentives and regulations, which must be considered, and negotiated, before detailed design can begin.

Developers increasingly turn to architects for pre-schematic services which are, essentially, urban design. What building concepts meet the zoning code? What development can fit on a given site? Which alternative best meets environmental regulations? What is needed to get discretionary zoning approvals? For what use can we renovate this building? These are all opportunities to make a major difference in the quality of a new development.

On the other side of the negotiating table, cities and towns are increasingly turning to designers for advice on how to regulate what is being built. Design controls, no longer a minor sub-section of zoning regulations, raise important philosophical issues about the nature of architecture: what is good design, or better design in a particular set of circumstances? How detailed must regulation be to convey the essence of a design concept, and, is it economically feasible?

Rapid new development is creating enormous urban design opportunities; it also makes it possible to mess up the environment on an ever larger scale.

The one skill that the architect or landscape architect brings to the table that other players of the development game do not is the ability to produce a design of high quality appropriate for the particular set of circumstances. But, to be effective, the designer must also understand real estate and the mechanisms of regulation.

Real estate

In discussions about design, real-estate developers often smile pityingly and say that they would be delighted to make such and such a change, if only it made economic sense. A few courses in real estate are not going to give urban designers the ability to juggle figures to the amazement of seasoned real-estate veterans, but the designers will at least understand the issues. A developer who sees design being considered from an economic point of view is also much more likely to take an interest in solving a design problem.

We have found that the urban designer needs at least two semesters of real-estate finance, which is more than many business schools offer. In the first semester students learn about conventional office, retail, and residential projects. In the second they learn how to use real-estate financing techniques to further complex urban design objectives. We have also found that there is no substitute for a project-by-project approach where the students "crunch the numbers" themselves.

Law

While you can teach quite a bit about real-estate finance in a year, you can only hope to make the most general introduction to the law. Nevertheless, urban designers need to know the basic framework in which government incentives and regulations operate; they need a sense of what a government can ask for and what goes too far; they need to understand how lawyers define and approach these problems.

History

Designers also need to know the history of significant city design ideas, understanding the original context in which they developed as well as their recent applications. The mechanisms employed to make improvements in cities also have a past, and it is important to see them in historical perspective.

Putting it all together

The reality of city design is multiple clients with conflicting requirements and rapidly changing political and market circumstances, not an easy situation to simulate in an architectural studio. Students in most urban-design programs already have degrees in architecture or landscape architecture, and have probably already confronted an urban-design problem in a studio setting. The urban-design student now must deal with a whole new series of design situations, and has only limited time in which to do it.

It is necessary to be able to supplement the conventional studio with educational approaches that are both faster and easier to make realistic, that take people who are already trained as designers and give them the skills to translate their design ability to a larger scale.

We have evolved a case-study course where students acquire an overview of current urban design issues and get to test their own design skills against some of the most interesting architects. It is an intense experience: one problem a week. Each problem is presented by an architect, who is on hand the following week to criticize the students' work and explain what happened in the actual situation. Some of the cases, like choosing the station locations for the downtown Houston subway system, only require a memorandum; but most require design. Robert Stern has presented several cases where the students have been asked to lay out an upper-income suburban subdivision to permit the maximum number of units—but, at the same time, to create a design character attractive to people who have plenty of choices.

When Cesar Pelli set a problem in the shaping and placement of a downtown office tower, he gave the students the floor area, the design of the core, and a series of rules about dimensions between the core and the outer walls, leaving the students to concentrate on the shape of the building on the skyline and its relationships to the surrounding structures.

Students have tried their hands at Market Square in Pittsburgh with Hugh Hardy, downtown Cumberland, Maryland, with John Belle; street designs in Miami and suburban Baltimore, adaptive reuse of Tobacco Row in Richmond, housing, office, and industrial parks, second-home communities, as well as zoning analyses, and the pricing and scheduling of urban design services.

Our other substitute for the conventional studio is a professional internship. Our students work half-time, are paid by the offices where they work, and receive academic credit for this work each semester. Our urban design internship has given students a chance to work on a plan for downtown New Brunswick at I. M. Pei & Partners, on the planning of PPG Place in Pittsburgh with Philip Johnson and John Burgee, or on Crown Center in Kansas City at the office of Edward L. Barnes. Students work on zoning studies at the New York City Planning Department and on waterfront development plans at the City's Public Development Corporation. They work on development feasibility studies at Kohn Pedersen Fox. They work on resort plans of thousands of acres for Robert Lamb Hart, or on how to improve an urban plaza at the Project for Public Spaces.

We are getting an increasing number of highly qualified mid-career students who have had professional experience in urban design and want a year to catch up on the latest techniques and deepen their own design understanding. For most of these students, an internship, even in a high-powered office, would repeat experience they already have. Instead they do a research project of their own choosing, take our courses, and are free to develop their own interests.

But, for the student who has only recently finished a professional architecture or landscape architecture degree, I believe our internship program does work, and the experience of seeing what actually happens to an urban design project from within an office is a useful extension of the studio.

Clearly there are also other possibilities. The specific approaches we have worked out at City College could only be followed in a major metropolitan area where there are enough offices with significant urban-design projects.

When students finish an urban-design program, they should be able to function in professional urban design situations, but it may be years before they get a chance to make major urban-design decisions, and that chance may come in circumstances that are hard to predict right now. A graduate might be working for a developer or a city government, might be designing a planned community in a professional office, or writing a new downtown plan. Perhaps subsidized housing programs will be available again; energy efficiency might again be a design determinant; there might be a prolonged real-estate depression. The only future we can project with certainty is that it is bound to change. Urban-design education can only take the student so far; learning to design cities, like learning architecture itself, is a lifetime task.

Jonathan Barnett is a professor of architecture and director of the Graduate Program in Urban Design at the City College of New York. He is also an urban design consultant, currently advising the cities of Pittsburgh, Cleveland, Kansas City, Bridgeport, Conn., and Charleston, S. C., (and is also an editorial consultant to RECORD.*) He is the author of two recent books, both published by Harper & Row:* Introduction to Urban Design *and* The Elusive City: Five Centuries of Design, Ambition and Miscalculation.

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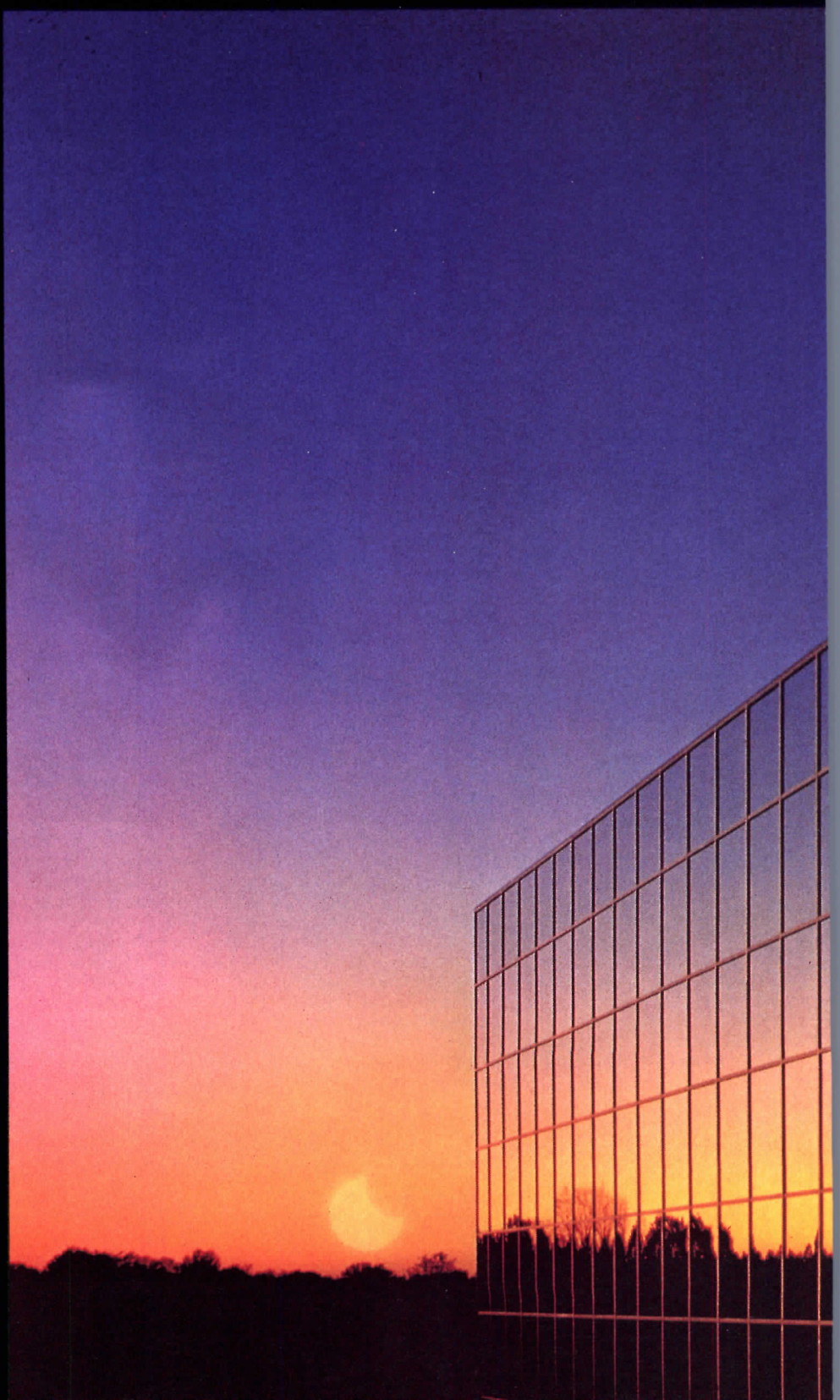

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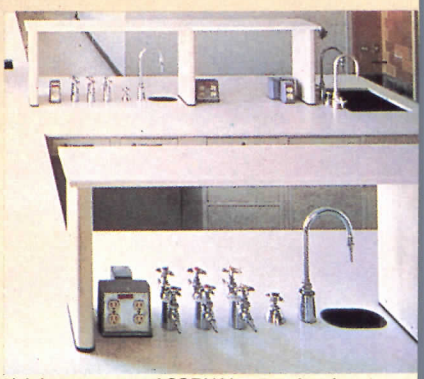
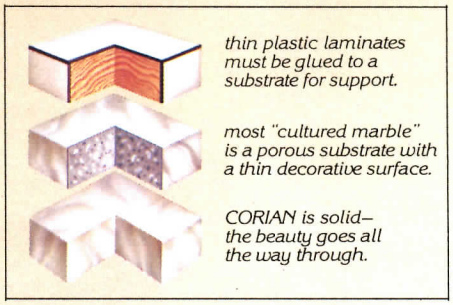


A laboratory top of CORIAN resists the chemicals and solvents used in the Pathology Department of a major Chicago hospital.



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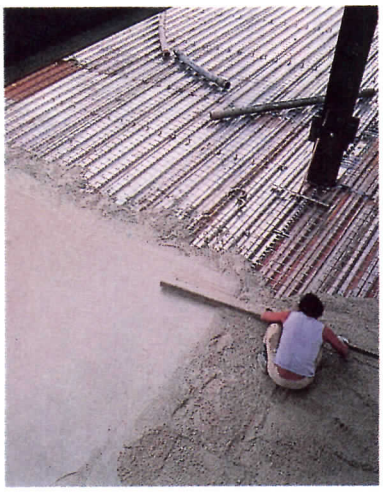

Composite deck simplifies construction

Although Vulcraft's composite deck would allow construction to proceed much faster and easier than the material and labor-intensive alternative of poured-in-place concrete, there was another consideration: delivery schedules. In order to accommodate the lack of "lay down space" on the confined job site, Vulcraft promised to deliver specified bundles *at exact times on exact days*. On this job there was no room for hedging your bets. Vulcraft's attention to the sequencing and coordination of composite deck and joist deliveries made sure nothing was lost in the shuffle. All 241,000 square feet of composite deck and 38 tons of joists arrived at the site exactly when it was needed.

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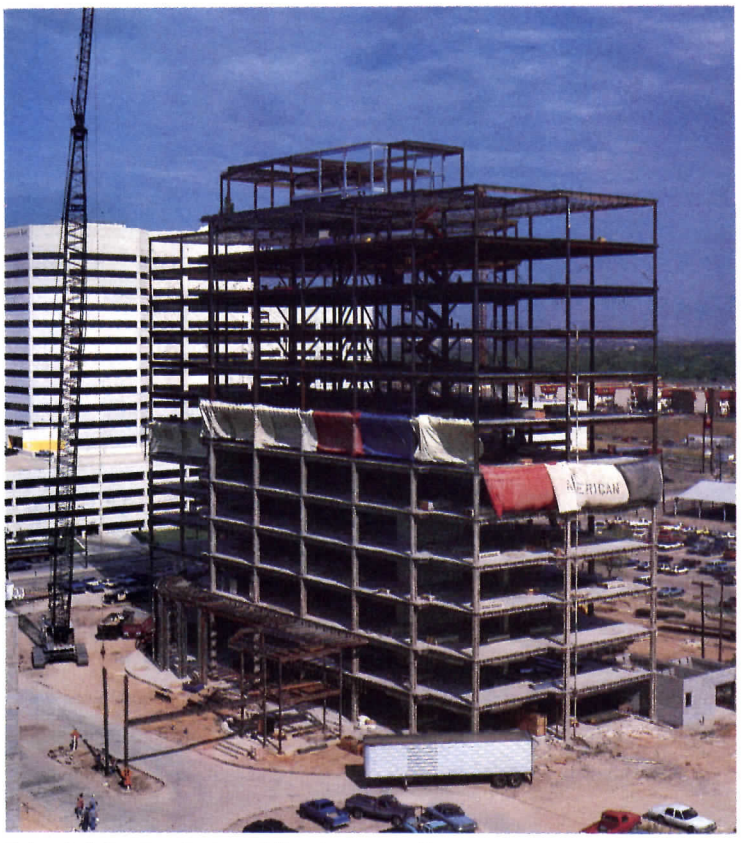

Vulcraft deliveries eliminated "lay down space" worries

For more information, contact any of the Vulcraft plants listed below. Or, see Sweet's 5.5/Vu.

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The 12-story North Central Plaza II used 241,000 square feet of Vulcraft composite deck as well as 38 tons of Vulcraft joists.

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General Contractor: Spaw-Glass Constructors
Steel Fabricator: Mosher Steel Company
Consulting Engineers: M. Hourani & Associates

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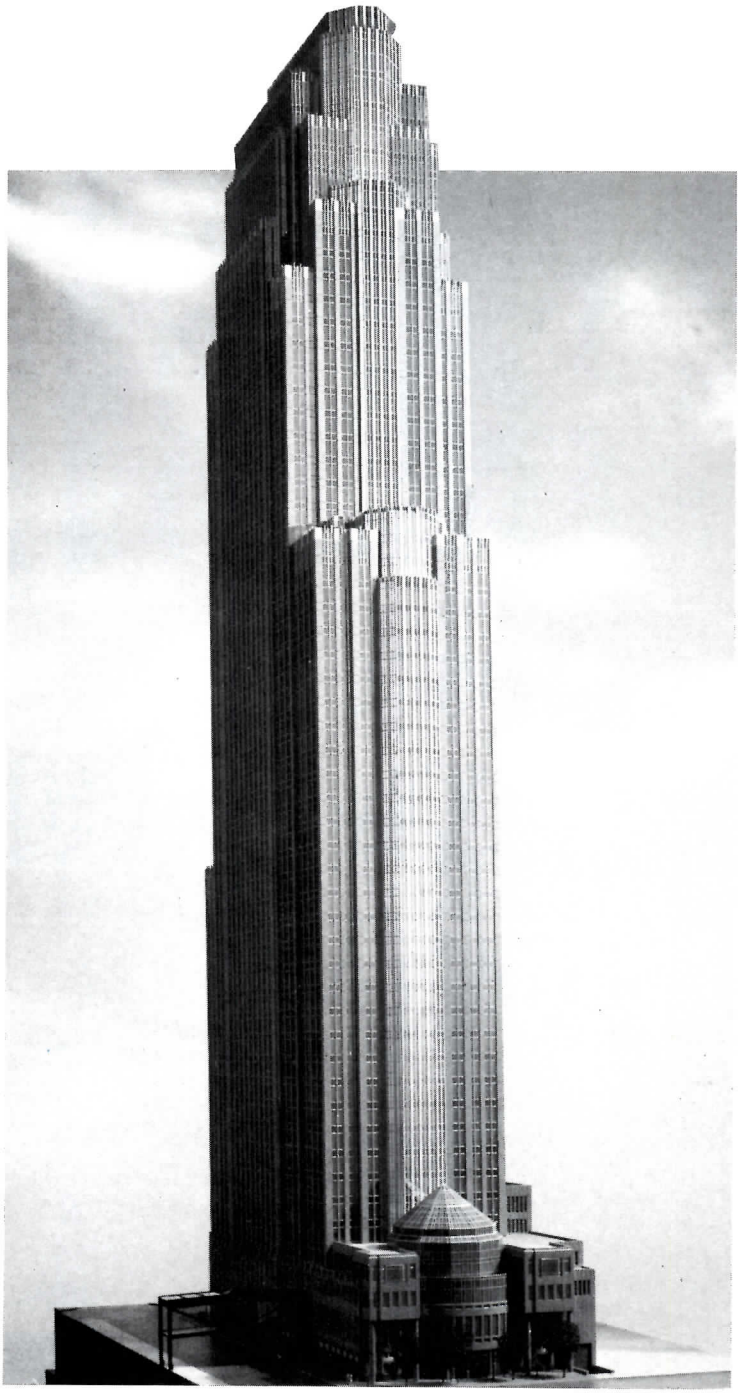
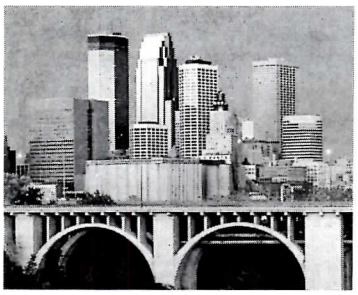
Final design unveiled for Minneapolis tower

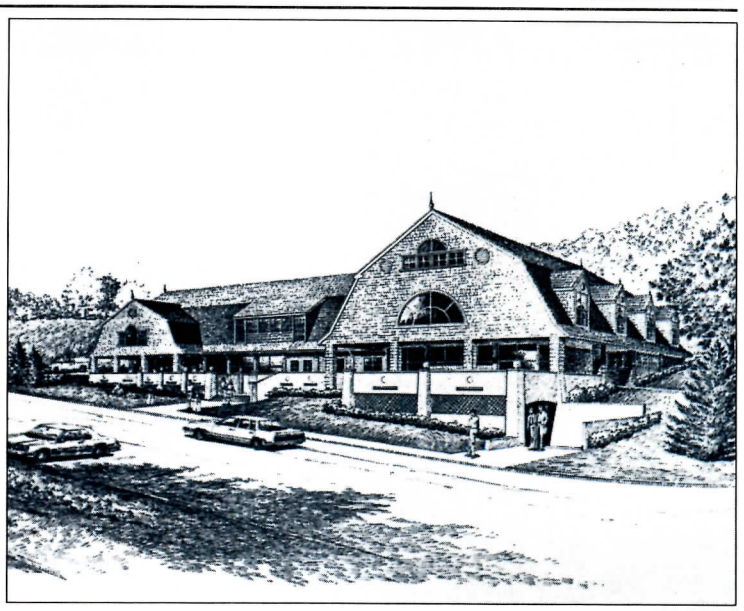


Two years after it was first announced, the on-again, off-again Norwest Center project in downtown Minneapolis has been given a definite go-ahead, though in somewhat more modest form than the 950-foot tower initially envisioned (RECORD, August 1984, page 53). Developed by Gerald D. Hines Interests and designed by Cesar Pelli & Associates, the current proposal calls for a 57-story, 773-foot-high tower that will house 1.1 million square feet of office space and 200,000 square feet of below-grade parking. Unlike Pelli's first design for the project—a campanile-like structure topped by a glass pyramid—the present rendition is a setback slab whose "dominant vertical rhythm" (Pelli's words) seems strongly influenced by the architecture of the RCA Building in New York City. Embellished with gold-colored metal



finials and sheathed in local Kasota stone and gray glass, the tower will occupy the site of the old Northwestern National Bank, a 1927 building that was destroyed by fire in 1982. Artifacts salvaged from the earlier structure—including 10-foot-tall Art Deco chandeliers, bronze plaques, and cast-plaster medallions—will be incorporated into the new tower's lobby and seven-story-high rotunda space.

Schmooze and muse



One of the most unusual mixed-use buildings in recent memory—a gambrel-roofed, shingle-clad structure currently nearing completion outside the village of Woodstock, Vt.—will incorporate a delicatessen and an art gallery. Designed by Robert Carl Williams Associates, the building will bring "a new level of cultural, retail, and dining experience to Woodstock," according to the architects.

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News briefs

SITE Projects has been selected over 241 architects in an international competition to redesign Pershing Square in downtown Los Angeles. The November issue of RECORD will include more detailed coverage of SITE's winning design and the four runner-up submissions.

Leon Krier of London has been named the first director of a new scholarly institute established by the Skidmore, Owings & Merrill Foundation in Chicago. The post begins early in 1987, and the directorship will change every three years. In addition to sponsoring a program of research and symposia stressing "physical visions and societal strategies toward architecture that are in sympathy with the ecology of human habitation," the institute will oversee the restoration of Frank Lloyd Wright's Charnley House, which will serve as the organization's headquarters.

The Willard Hotel, designed by Henry J. Hardenberg in 1904 and for years a vacant eyesore along Washington's Pennsylvania Avenue, has reopened following a $120-million restoration and expansion program. The landmark structure is now part of a larger complex that includes an adjacent new office and retail building.

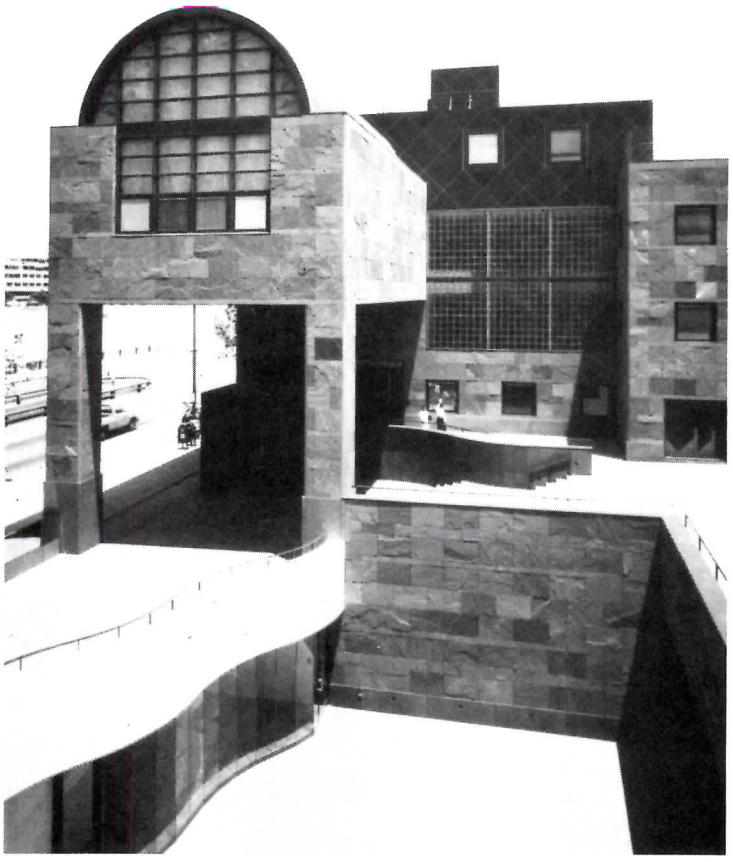
Thompson, Ventulett, Stainback & Associates, working in association with Borrelli, Frankel, Blitstein, has designed a 500,000-square-foot addition to the Miami Beach Convention Center. When the expansion is completed in 1989, the center will have just over one million square feet, making it one of the largest convention facilities in the country.

The American Craft Museum will open its new home in midtown Manhattan on October 26. Designed by Fox and Fowle Architects, the four-level museum is located across the street from the Museum of Modern Art in Kevin Roche John Dinkeloo and Associates' new E. F. Hutton headquarters building.

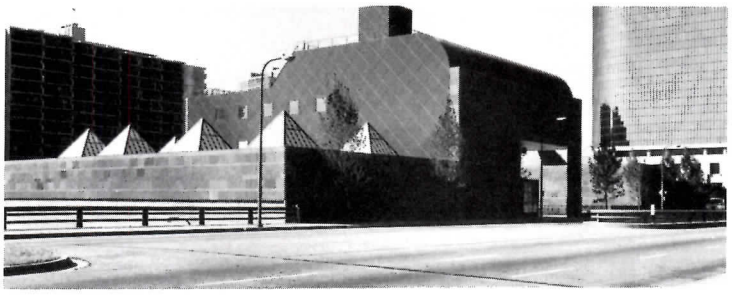
James P. Cramer has been named president of the AIA Foundation, succeeding Mary C. Means.

Thomas L. Schumacher, an associate professor of architecture at the University of Maryland, has been selected the 1986 recipient of the Arnold W. Brunner Grant, given annually by the New York Chapter of the AIA. The $12,000 award will enable Schumacher to write a book on Giuseppe Terragni and the development of late 19th- and early 20th-century Italian architecture.

New Los Angeles art museum nears completion



Tim Street-Porter



Michael Moran

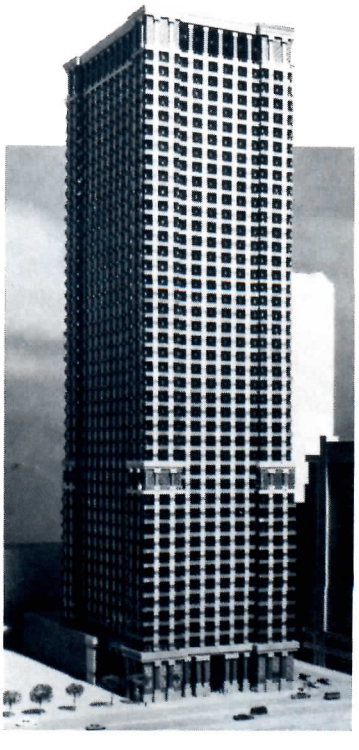
Arata Isozaki's Museum of Contemporary Art, one of the most eagerly anticipated buildings of the past decade, will open in downtown Los Angeles on December 10. Situated in the center of California Plaza, an 11.2-acre redevelopment project that will eventually comprise a variety of commercial, cultural, and residential structures, the new building will house space for the museum's permanent collection and loan shows that until now had been displayed in the so-called "Temporary Contemporary," a former warehouse adapted for exhibition use by Frank Gehry in 1983. (Gehry's supposedly temporary facility has proved so popular that the museum will continue to lease the structure from the city through the year 2038, providing MOCA with a total of 70,000 square feet of exhibition space.) Isozaki's building, with its barrel-vaulted entrance and library wing (top) and low-slung galleries crowned by pyramidal skylights (bottom), is meant, according to museum director Richard Koshalek, "to give the overall impression of a neatly ordered village." The structure is sheathed in striking red sandstone, quarried in India and laser-cut in Japan, which contrasts with panels of green and pink cross-hatched aluminum covering other portions of the facade.

Competition calendar

• The Stained Glass Association of America seeks entries to its first annual competition and exhibition of original works of stained glass. Cash prizes will be awarded in several categories, and finalists will be exhibited at the Corning Museum in the fall of 1987. Entry deadline is March 1, 1987. For information and submission forms, write SGAA Competition, Rt. 3, Box 218-0, Edmond, Okla. 73034.

• Limn Company is seeking entries to its first annual Work Space Design Competition. The competition theme for 1986-87 is designing a work space for young people. A cash prize of $5,000 will be awarded to the first-place entry; other awards may be made at the jury's discretion. Entry deadline is June 1, 1987. For information, contact Limn Company, 821 Sansome St., San Francisco, Calif. 94133 (415/397-7471).

Corner articulation, classical style



Kevin Roche John Dinkeloo and Associates has unveiled plans for the firm's first project in Chicago—a one-million-square-foot office tower that will house the world headquarters of the Leo Burnett Company, the city's largest advertising agency. Situated at 35 West Wacker Drive in Chicago's North Loop redevelopment area, the 46-story building will feature a curtain wall comprising alternating bands of flame-cut and honed-finish granite, and gray-tinted windows set into polished stainless-steel frames. The design's most distinctive characteristic is a motif of stylized pilasters and Roman grilles—used at the base, 15th-story corners, and rooftop—that reveals Kevin Roche's continuing movement away from his distinctive brand of Modernism toward the eclectically historicist work of many current practitioners.

Architect: HOK+4 Consortium
Mechanical Engineer: Syska & Hennessy, Inc.

At King Saud University there are nearly 2000 fixtures installed upside down... on purpose

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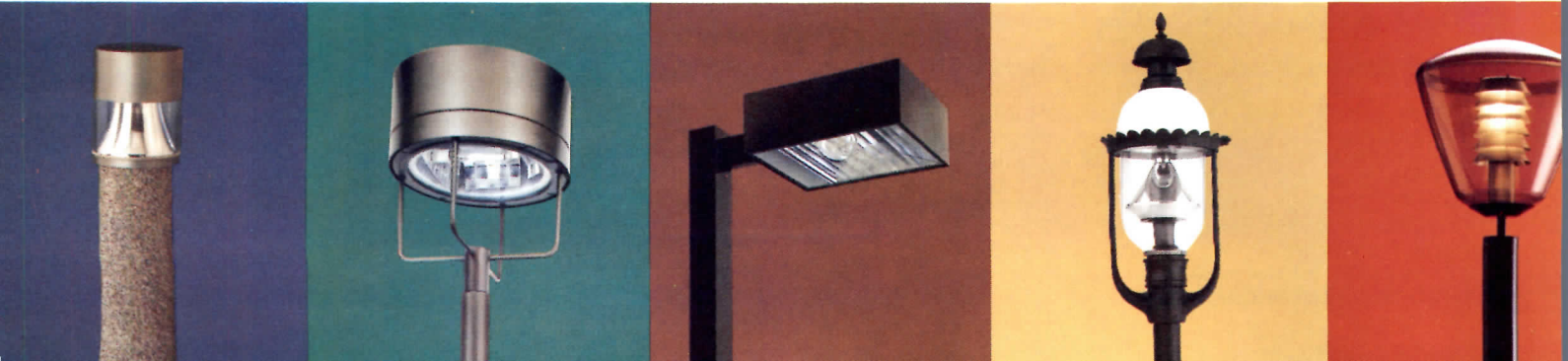
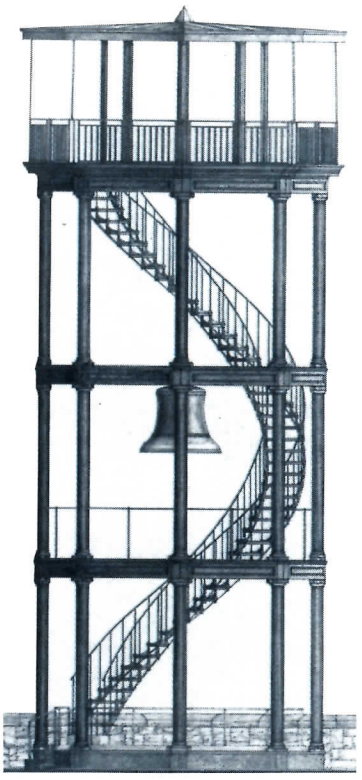


Insulation against the passage of time: Stuttgart restores a landmark of architectural Modernism

While much of the current celebration surrounding the centenary of Mies van der Rohe's birth has focused on the reconstruction of the Barcelona Pavilion, the restoration of a lesser-known work by Mies—the 24-unit apartment block erected in 1927 for the Weissenhof Housing Development in Stuttgart—has been successfully completed. The rehabilitation dealt primarily with the repair of the structure's deteriorating, lime-cement plaster facade, especially in areas adjacent to vertical steel supports. A fully insulated bonded system was utilized, comprising rigid foam insulation panels, reinforcing glass-fiber mesh, an outer coating of synthetic-resin plaster, and a final coat of acrylate exterior paint tinted pale red to match the color of the original facade.

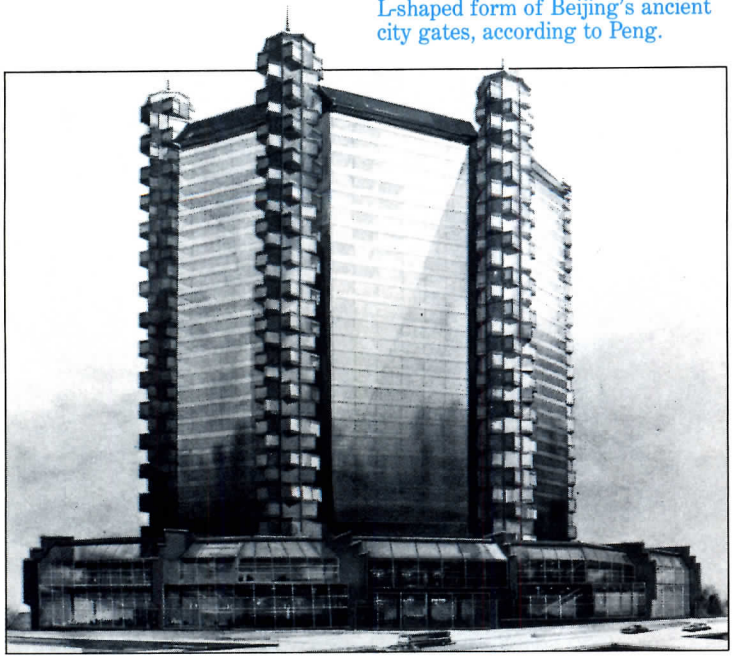
An ironclad reconstruction



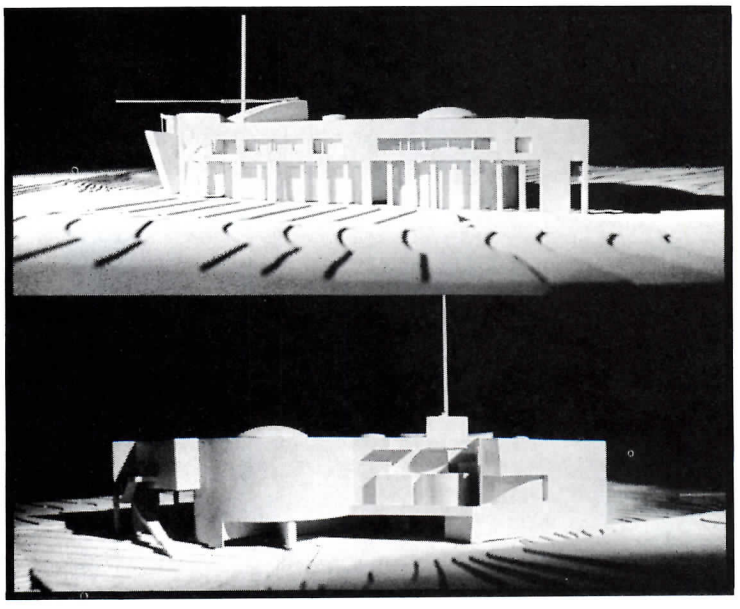
Among New York's mid 19th-century architectural artifacts, perhaps none is more evocative of its period than the fire watchtower located in Marcus Garvey Park in Harlem. Erected in 1856 of mass-producible cast-iron components, the tower prefigured the steel-framed curtain-wall structures that eventually allowed New York to become the vertical city we know today. Time has not been kind to the landmark structure and in order to atone for its years of neglect, the city's Department of Parks and Recreation has undertaken a major rehabilitation program that will involve redesigning and recasting the tower's deteriorated truss girders, refabricating some original iron tie rods in stainless steel, and replacing a wood deck in the lookout with steel grating. Architect for the restoration is Medhat Salam Associates.

International architectural consortium designs new "gateway" for Beijing

Great Earth Architects and Engineers, a private consortium of Chinese and Canadian architects organized in 1985 by Chinese-born practitioner Alfred Peng, has won an invited competition to design a 650-room hotel and office complex for the China Travel Service in Beijing. The building's chamfered configuration was inspired by the L-shaped form of Beijing's ancient city gates, according to Peng.



Moderne times: Paying homage to radio's golden era



When Parker and Scogin Architects set out to design a new 34,000-square-foot headquarters for radio station WQXI in Atlanta, their stated goal was "to revitalize a building type that had not received much architectural attention since the Streamline Moderne stations of the 1920s and '30s." The architects also sought to "reinforce the high-energy, criss-cross interaction of the staff" that they had observed in the station's existing facility, while conveying the image of a stable, lucrative business. The result is a sleek two-story facility whose exterior exhibits a dual personality. The flat planes and rectilinear openings of the structure's north elevation (top) are meant to exude a dignified air, while the agitated, unresolved south elevation (bottom) reflects the frenetic activity frequently occurring within.

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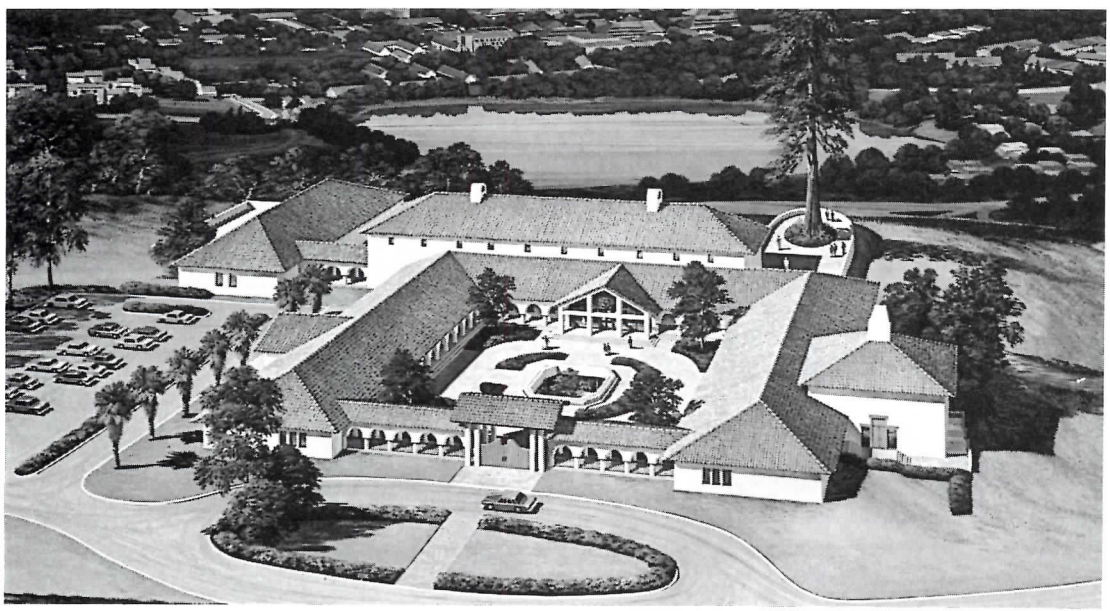
The Stubbins Associates wins Reagan Presidential Library commission



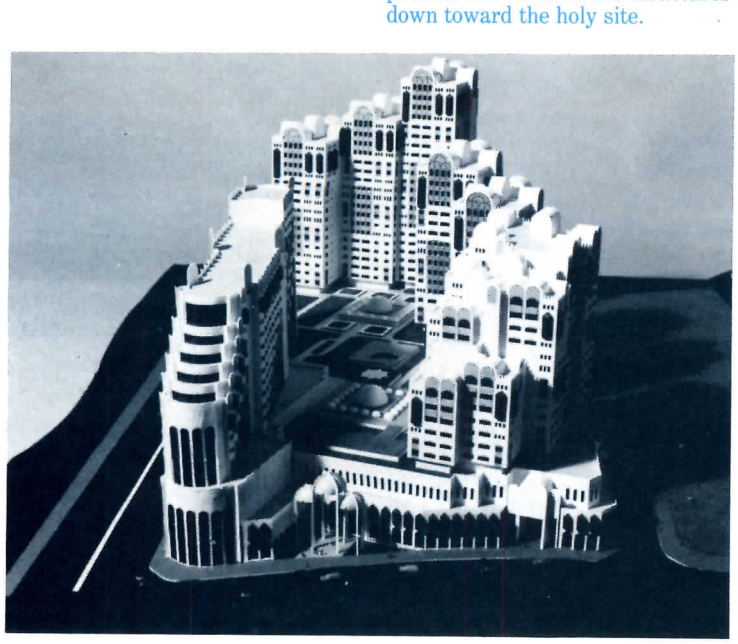
Red-tile roofs, beige stucco walls, and a 150-foot-square courtyard—in short, the features associated with California Mission Revival architecture—characterize the design of the Ronald Reagan Presidential Library, planned for a ridge along the western edge of the Stanford University campus in Palo Alto. The Stubbins Associates was named architect for the complex following an invited competition sponsored by the Ronald Reagan Presidential Foundation. The proposed library will serve as both a study center for the history of the Reagan presidency and an archival repository for the personal and official papers of President Reagan and his associates. In architectural terms the library represents a significant departure from the norm on two levels. First, its seemingly modest size and consciously contextual details are a welcome contrast to the overscaled presidential libraries that have been built in recent years. (The Kennedy Library in Boston and the Johnson Library in Austin come to mind in this regard.) Second, the design by Stubbins's office is striking in its clear evocation of regional architectural history—rare for a firm known chiefly for its signature brand of Modernism.

A decorous shed

Although America's purveyors of fast food have never been known for their commitment to "good taste," be it esthetic or gastronomic, some chains have begun to eschew the architectural flash of roadside eateries erected during the 1950s and '60s for something more, well, discreet. Witness Cozy Nook, a new chain of take-out hamburger stands that plans to open 200 units in southern California and Okalahoma within the next year. Designed by Hammel and McKinney as a "compact double drive-through that fits into small, high-traffic locations where the big chains don't have space to build," each 16-foot-wide shop boasts a disarmingly monumental appearance—complete with cross-gabled roof and paired columns flanking a round-arched opening—that seems incongruously akin to the spare, Neoclassical architecture of 18th-century France.

Saudi project a secular proposal in a religious context

Zaki Farsi Consultants of Jeddah have won a competition to design a major residential, retail, and hotel complex for a site adjoining the Holy Mosque in Makkah, Saudi Arabia. In order to maximize views of the Mosque from the project's hotel and apartment towers, the architects have positioned the buildings atop an eight-story podium and terraced the structures down toward the holy site.



Mixed-use Connecticut building is a marriage of art and real estate

The growing practice of profit-making real-estate ventures subsidizing nonprofit arts organizations has reached New Haven, where a proposed five-story office and retail project will be a key physical—and financial—component of the Connecticut city's Audubon Arts District. In an unusual arrangement, the city will sell the building site to the Arts Council of Greater New Haven, which will then lease the parcel to a private management company and use subsequent rental income to help underwrite its program of activities. Designed by Roth and Moore Architects, the building will be articulated by three-sided bay windows, sheathed in water-struck brick, and trimmed with limestone and granite—details meant to link the new structure stylistically with older adjacent buildings.

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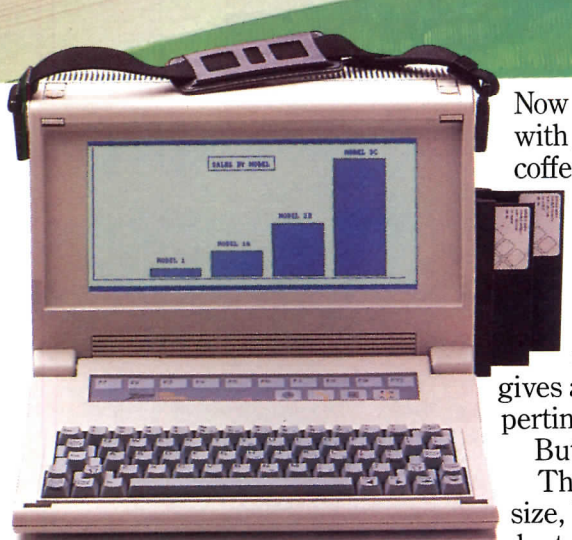

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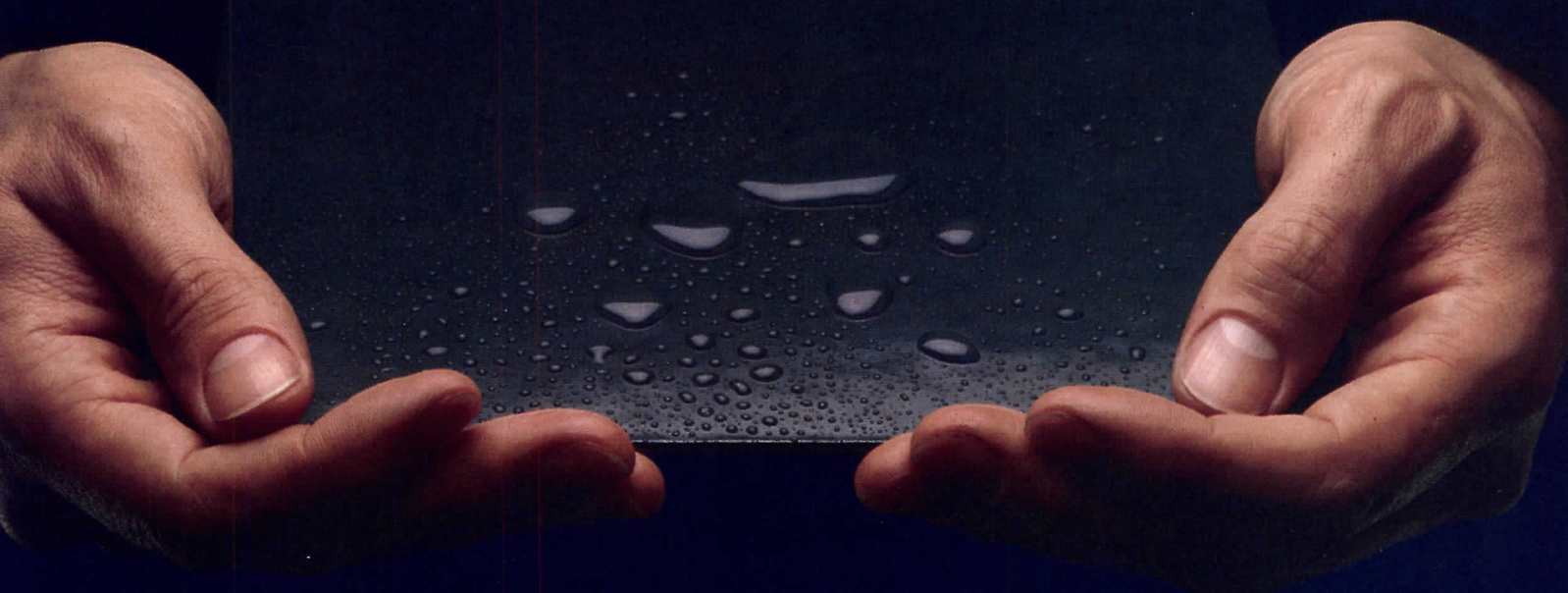

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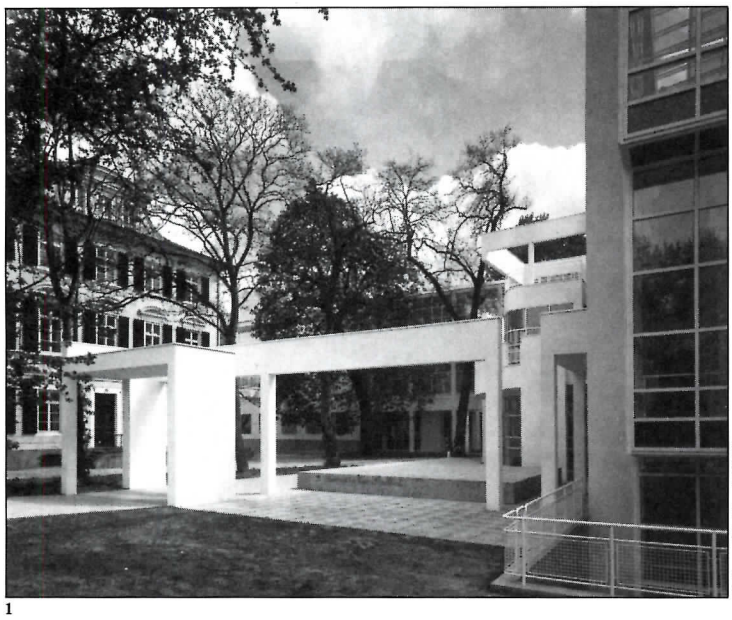
Design awards/competitions: New York Chapter/AIA 1986 Distinguished Architecture Awards

An art museum in Des Moines, a television station headquarters in Minneapolis, and a trio of houses on the eastern end of Long Island were among the 13 buildings cited in the 1986 Distinguished Architecture Awards program, sponsored annually by the New York Chapter of the AIA. In selecting the winning designs from 112 competition entries, jurors Charles Moore, Norman Foster, and Robert Mangurian observed that no one architectural style predominated. "There is no regional consistency," Moore pointed out, "nor would you expect there to be . . . in buildings designed by



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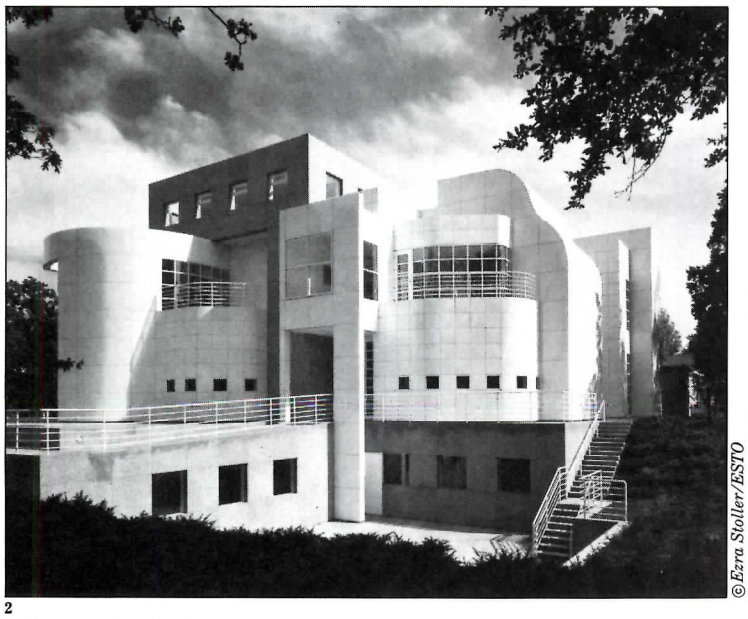

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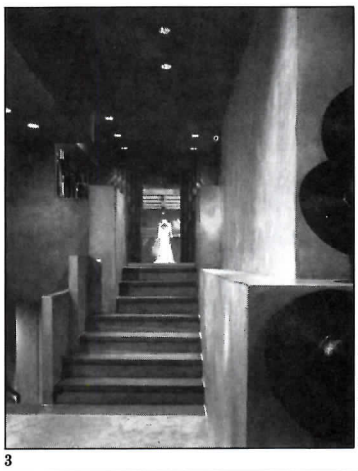

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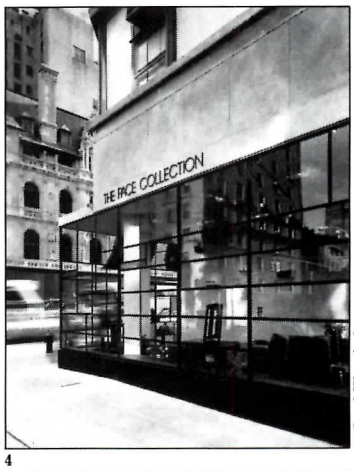

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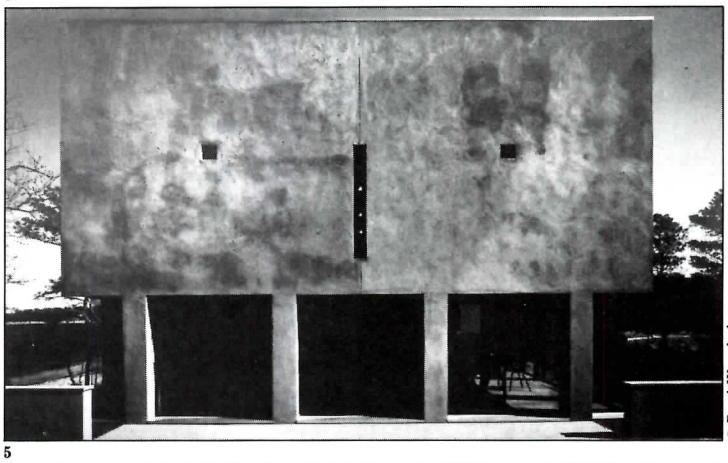

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1. Museum for the Decorative Arts, Frankfurt am Main, West Germany; Richard Meier & Partners, Architects (Honor Award). According to the architect, the design of this new musuem complex on the Main River is based on two grids that overlap at a 3 1/2-degree angle. One grid was dictated by the existing 19th-century Villa Metzler, the second by the location of other buildings along the river. The museum's new structures are clad in the architect's signature palette of porcelain-on-steel panels and stucco.

2. Addition to the Des Moines Art Center, Des Moines, Iowa; Richard Meier & Partners, Architects (Honor Award). Originally designed in 1948 by Eliel Saarinen and expanded by I. M. Pei in 1968, the Des Moines Art Center turned to Meier when it needed additional space to house its 20th-century collection, traveling exhibitions, a restaurant, and storage areas. The architect's expansion scheme comprises three separate buildings—two small extensions to existing structures and a larger freestanding "villa"—clad in a combination of porcelain-on-steel and granite panels.

3. OMO Norma Kamali, New York City; Rothzeid Kaiserman Thomson & Bee and Peter Michael Marino, Joint-Venture Architects (Award). The client's request for strong monolithic forms enclosing a sequence of intimate spaces dictated the configuration of a prominent fashion designer's new retail headquarters, located in a gutted Manhattan townhouse (RECORD, mid-September 1984, pages 112-117). The jury admired the project for "its special qualities and its integrity of materials and spaces."

4. The Pace Collection Show Room, New York City; Steven Holl, Architect (Award). "An elegant, complete, altogether studied and sophisticated work" was the jury's characterization of a tiny, 364-square-foot furniture show room on New York's Madison Avenue (RECORD, April 1986, pages 98-103). Closely spaced mullions holding panels of clear and opaque glass evoke the paintings of Piet Mondrian and, more pragmatically, are said to eliminate the need for vertical roll-down security gates.

5. Eisenberg Residence, Hampton Bays, New York; Tod Williams and Associates, Architects (Award). This 3,200-square-foot waterfront dwelling (RECORD, July 1985, pages 122-131) consists of a stuccoed cube housing a 15-foot-high "great room," an aluminum-sheathed stair tower, and a cedar-sided bedroom wing and pool deck—a combination of forms and materials that evokes the work of Louis Kahn and neo-rationalist Italian and Swiss architecture. The jury praised the architects for "making an intense and powerful work out of simple materials."

6. Additions and Alterations to the Observatory Hill Dining Hall, University of Virginia, Charlottesville, Virginia; Robert A. M. Stern Architects (Award). In addition to adding 200 seats to a student dining hall erected in 1974, two new porchlike pavilions (RECORD, November 1985, pages 110-115) formally relate the existing Modernist structure to Thomas Jefferson's nearby Classical architecture. The jury called the extension "a handsome, elegant solution that manages in its scale and its quality of space and light to enhance an already distinguished place."

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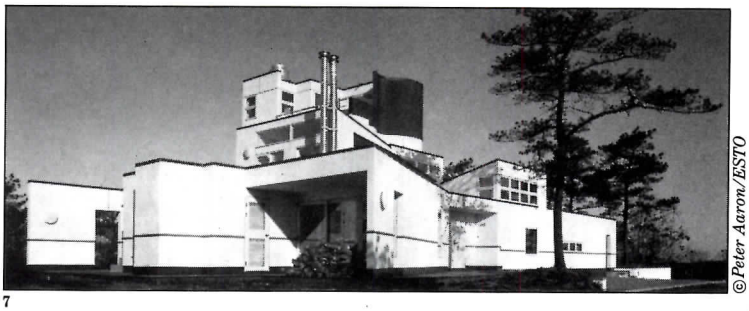
New York architects but built in every corner of the world." Mangurian added that the jurors saw "a strange, shaky kind of pluralism that sometimes borders on revivalism." Although Foster was pleased to note that "the drive, energy, and diversity" that characterizes New York City was also reflected in the project submissions, he regarded his experience as a juror "bittersweet, because the diversity [of the architecture], instead of producing a richness or true plurality, seemed to be more a mask for indecision. Buildings that were evocative of other styles or influences just did not seem to have anywhere near the depth, strength, or conviction of the original models that presumably inspired them. Maybe that is why [Richard] Meier's buildings stand out in a totally different league from the others." In addition to granting two honor awards to buildings by Meier, the jury tapped four projects for awards and seven for citations.



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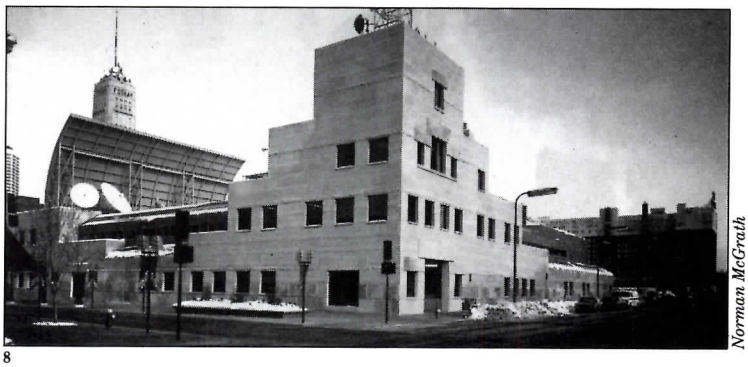

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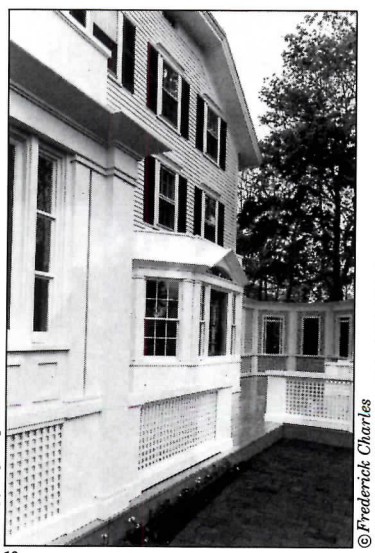

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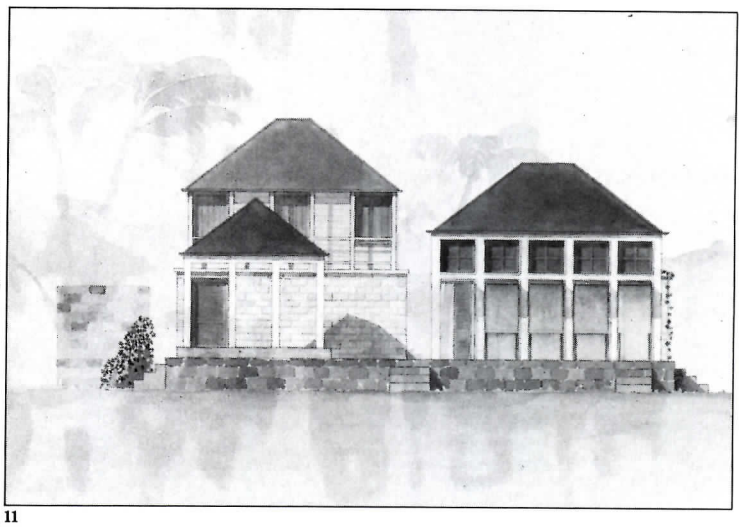

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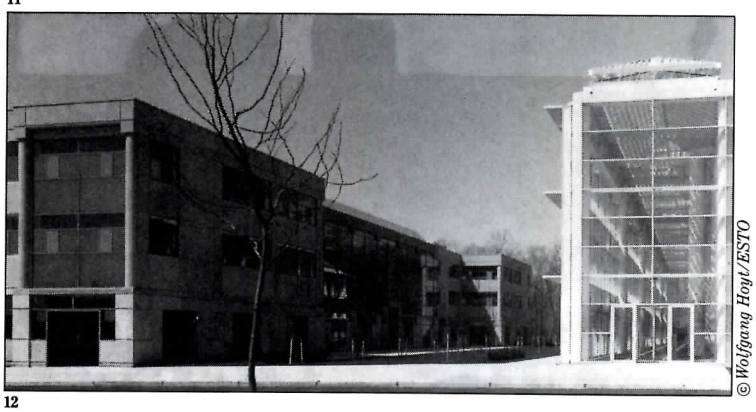

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7. Rubenstein Residence, Watermill, New York; Michael A. Rubenstein, Architect (Citation). In his design of a year-round vacation house, the architect stated that his aim was to create elevations that would "take their character from the differing views and the varied nature of outdoor activities." The jury observed that the house "seemed to relate to the site and produce an enjoyable sequence of spaces permeated by natural light."

8. WCCO-TV Headquarters, Minneapolis, Minnesota; Hardy Holzman Pfeiffer Associates, Architects (Citation). Yellow-pink Minnesota granite, copper shingles, and insulated glass articulate the facade of a new television-station headquarters in downtown Minneapolis. The jury especially admired the architects' treatment of the building's smooth and rusticated stonework.

9. Irving Trust Operations Center, New York City; Skidmore, Owings & Merrill, Architects (Citation). The jury praised the architects of this midrise office building in lower Manhattan's financial district for "attempting to bring a sense of space and light into the interior" by means of a 60-foot-wide atrium that extends the length of the structure. The building's banded facade was created through the use of alternating rows of white, partially reflective, and clear vision glass panels.

10. Boltres House Renovation, Remsenburg, New York; Hagmann/Mitchell, Architects (Citation). In response to the client's request to open up the first floor of this early 20th-century farmhouse, the architects removed the walls separating the dining and living rooms to create one large area whose various functions are defined by wood posts and articulated trim. "A very handsome place," said the jury. "The architects have created a "comfortable and utterly inhabitable house."

11. A House in the Tropics, Nevis-St. Kitts, West Indies; Walter Chatham, 1100 Architects (Citation). The 40-foot-square foundation walls of a 19th-century house were reused for this new residence, designed for two writers and located on a four-acre mountainside site overlooking the Caribbean. "The architecture gives off a feeling of comfortable Shinkelian classicism," said the jury. "It looks breezy and tropical."

12. Prudential-at-Princeton Enerplex, Plainsboro, New Jersey; Skidmore, Owings & Merrill, Architects, with Alan Chimacoff (Citation). This suburban project, developed as a prototype for an energy-efficient office building, consists of two separate structures facing each other across a narrow court. Although both buildings have large atriums and extensive perimeter glazing for daylighting, the glass-enclosed north building uses an active solar collection system, while the limestone-clad south building conserves energy through passive means.

13. Residence at Farm Neck, Oak Bluffs, Massachusetts; Robert A. M. Stern Architects (Citation). According to the architect, this shingled house is meant to "respond to its vast site and to a complex program with an archetypal gable form evocative of McKim, Mead and White's Low House and Grovesnor Atterbury's Swayne House." Despite such patent historic references, the jury praised the structure as "an unusually relaxed and generous country house in which the shadow of the past doesn't hang too darkly."

Downtown Research & Development Center 1986 Awards

Ten outstanding downtown improvement projects in cities ranging in size from Wahpeton, North Dakota (population 9,889) to San Diego, California (population 875,504) were recently honored in the fifth biennial awards program sponsored by the Downtown Research & Development Center. Established in 1954, the center encourages the revitalization of central business districts through the publication of newsletters, reports, and studies. We illustrate below the six first award- and four merit award-winning entries, selected from 73 project submissions by jurors Peter Samton, FAIA,

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1. Pioneer Courthouse Square, Portland, Oregon; Martin, Soderstrom, Matteson, Architects. The result of a design competition to produce an "outdoor living room" for downtown Portland, Pioneer Courthouse Square was constructed with a combination of federal, city, and private funding. The square was designed to incorporate an ornamental colonnade, extensive public seating areas for open-air performances, and a restaurant. According to city officials, the project has become a tourist attraction and has triggered the rehabilitation of several buildings in the area.

2. Two Rivers Market, Albany, Oregon; Cornerstone Architects & Planners. Cooperation between local businesses and public officials—and an infusion of state Community Development funding—enabled this city of 28,000 to restore two vacant downtown buildings and convert them into a mixed-use center comprising upper-story offices and street-level retail space. A common area at the core of the complex is used for community events, and a landscaped parking lot, sidewalk cafés, and other public amenities face the buildings' rear elevations.

3. Town Center Square, Wahpeton, North Dakota; Norman E. Triebwasser, Architect. Although the downtown renewal of this small city in southeastern North Dakota was initially proposed in 1969, it was not until 1985 that a mixed-use center comprising new and renovated structures was completed. The project is a U-shaped building ensemble that includes 15 stores and offices, a restaurant, 47 apartments, an enclosed commons area, a pedestrian mall along Fifth Street, and parking space for 120 cars. A clock tower is meant as a focal point for the new downtown. Project funding was primarily through a $2.3-million municipal industrial development bond.

4. Winston Square, Winston-Salem, North Carolina; Various architects. Public agencies, private businesses, and local arts organizations collaborated on an ambitious downtown revitalization program that incorporates the conversion of a former Woolworth store into an enclosed atrium mall called Mercantile Plaza; the adaptive use of the old Carolina hotel and theater into an art school and performing arts center; the conversion of a J. C. Penney store into an office building; the rehabilitation of a former YMCA building into 39 condominiums; and the conversion of a complex of industrial structures into a visual arts center. The focal point of the project is Winston Square, a revitalized open plaza that features a terraced amphitheater.

5. St. Louis Centre, St. Louis, Missouri; RTKL Associates, Architects. Among major American cities St. Louis has been particularly hard-hit by the flight of its downtown retail businesses to the suburbs. Intended to stem any further erosion of the city's economic base, this major revitalization project serves as a connector between Famous-Barr and Stix, Baer & Fuller, the two largest department stores remaining downtown. The 350,000-square-foot retail center is organized around a four-level, glass-vaulted atrium and is topped by a 21-story office tower. Expansion plans call for a 250-room hotel and additional parking for 1,400 cars.

partner in charge of design with Gruzen Samton Steinglass Architects in New York City; Fereshteh Bekhrad, AICP, senior vice-president with York-Hannover Developments in New York City; and John L. Heller, AICP, commissioner of development for the city of New Rochelle, New York.

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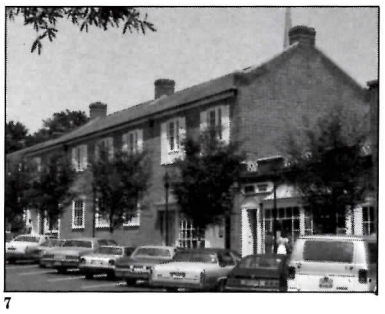

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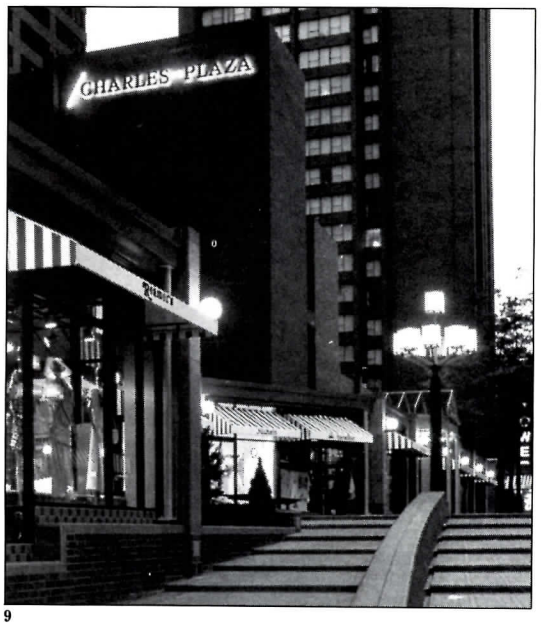

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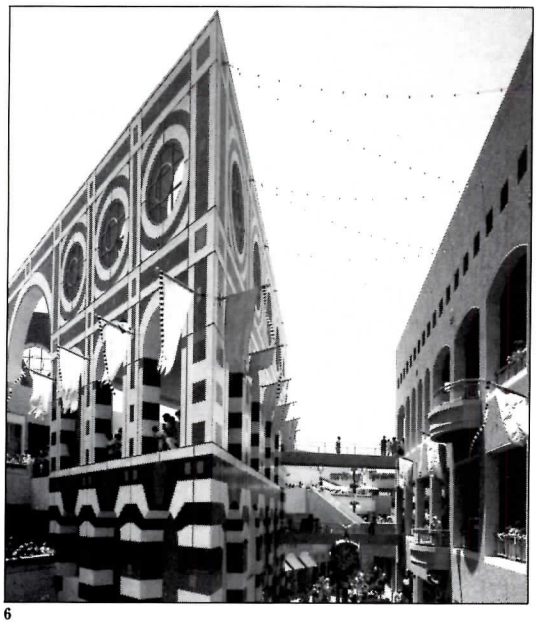

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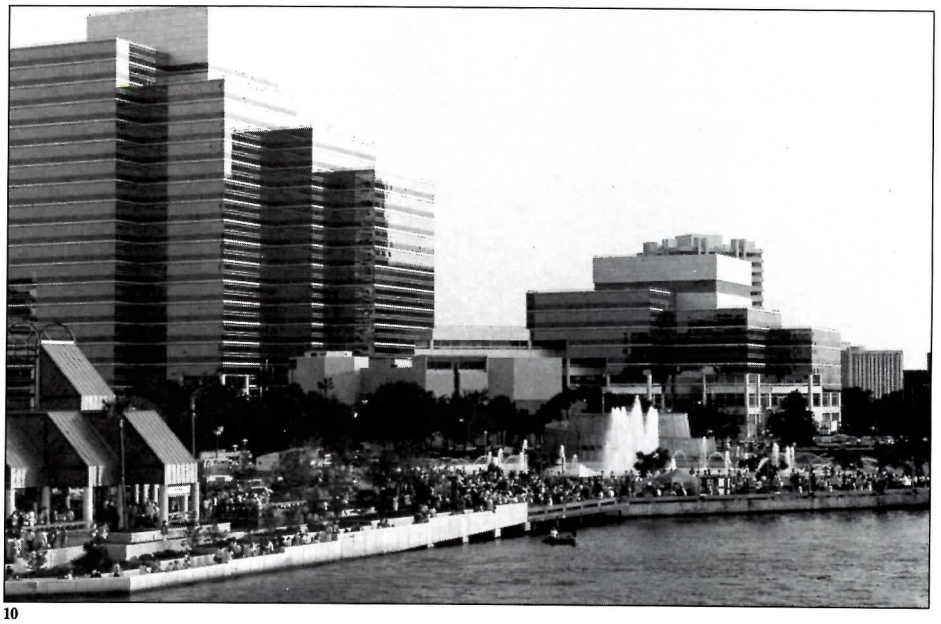

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6. Horton Plaza, San Diego, California; The Jerde Partnership, Architects (RECORD, March 1986, pages 128-135). Designed to revitalize San Diego's faded Broadway shopping district, Horton Plaza was developed by The Hahn Company after the city invested $39 million in the acquisition of an 11.5-acre building site. The project consists of four department stores, 150 specialty shops and restaurants, a seven-screen cinema, a 500-seat performing arts theater, a 450-room hotel, and parking for 2,400 cars—all housed in a stylistically diverse group of buildings set along a diagonal axis that intentionally breaks with the city's orthogonal grid of streets.

7. Cannon Village, Kannapolis, North Carolina; Arnold C. Savrann, Architect (master plan). This city of 35,000 in central North Carolina was originally the home of Cannon Mills. After purchasing the mills and the downtown area, a new owner began taking steps to reposition the company town as a true central business district servicing a broader retail trading area. Toward that end, he commissioned the architect to draw up a master development plan that would add 400,000 square feet of retail space and such amenities as a civic center, parks, theaters, a variety of street furnishings, and expanded parking. The first phase of the project included the installation of wide brick sidewalks and the redesign of storefronts in a consistent neo-Federal style.

8. The Brown Hotel/Theater Square Project, Louisville, Kentucky; Landmark Designs, Architects. The initial phase of a larger redevelopment proposal aimed at revitalizing Louisville's Broadway theater district comprises the rehabilitation of the old Brown Hotel and an adjacent office building; the restoration of the 1,400-seat Macauley Theater; the development of Theater Square, a 50,000-square-foot theme center of shops and restaurants; and the construction of a new 475-car parking garage. The project is organized around a 146,000-square-foot open square embellished with fountains and public seating, and was coordinated by a not-for-profit corporation set up by the city and two private developers.

9. Charles Plaza, Baltimore, Maryland; Cho Wilks and Benn, Architects. Eight stores and seven restaurants occupy this 15-unit retail center, which is located on a once-vacant site at the edge of the densely developed Charles Center urban renewal area in downtown Baltimore. Rather than design a conventional enclosed shopping mall, the architects configured the project around an open-air, multi-level public plaza. The result: the city now collects significant new tax income from a site that was once poorly utilized and economically unproductive.

10. Southbank Riverwalk, Jacksonville, Florida; Perkins & Partners, Architects. Built along the underutilized shoreline of the St. Johns River, Jacksonville's Southbank Riverwalk is a 1.2-mile-long, 20-foot-wide public esplanade that connects several downtown development projects erected over the past decade. The boardwalk features terraced resting places, illuminated entertainment areas, and a variety of kiosks and ornamental banners. At selected points the improvements along the river extend inland, encouraging pedestrian movement between the waterfront and downtown.

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Books

American Architecture Now II, by Barbaralee Diamonstein. New York: Rizzoli, 1985, $29.95.

Reviewed by Scott Gutterman

Architects are, by and large, a reticent group. Witness a recent conference held at New York University: a panel of highly distinguished architects (along with one critic) gathered for a general discussion of their field. Perhaps it was the absence of a strong moderator (Bill Lacy of The Cooper Union confined himself to introductions and avoided any guidance in order to promote "discourse"); or perhaps it was the sizable audience and hot lights. Whatever the case, these industry leaders could not get a decent discussion going. Robert Venturi led off by saying that the whole idea of talking about his work filled him with dread and that he wished he could respond as Sir Edwin Lutyens had when confronted by a similar setup (Lutyens had merely turned to his audience and asked, "Any questions?"). Venturi proceeded to offer such insights as "I just try to do the best job I can every day"—an admirable sentiment, but not overly enlightening. Charles Gwathmey appeared equally uncomfortable and opted to keep his comments brief; on the issue of his firm's proposed addition to the Guggenheim Musuem, he would only remark tersely that time would be the best judge. Bernardo Fort-Brescia managed to spark some grumbling by saying that the early Modernists were not important to him stylistically, but strictly as "a way of thinking about the future as pure possibility." The other panelists looked askance, Lacy continued to smile benignly, and the conversation spun in circles. One began to think of Mies's dictum "Build, don't talk" less as a professional rebuke than as a necessary corrective to this sort of oppressive tedium.

What a refreshing change, then, to read Barbaralee Diamonstein's *American Architecture Now II*, a follow-up to her 1980 *American Architecture Now* that consists of interviews with 29 of this country's best-known architects. Here, one finds not only that architects can speak when spoken to, but that they often prove to be insightful, reflective subjects with a clear-cut and passionate commitment to their profession. The lion's share of the credit for the book's success must go to Diamonstein, who exhibits superior skills as an interviewer. She is well-versed in her subject, assumes a welcome respect for the reader's intelligence, yet keeps the dialogue free from jargon.

The answers to her questions are revealing in a number of ways. One idea that comes across clearly is the degree to which business intrudes at every level of this most practical art. Peter Eisenman relates the story of the gathering of a few of his friends: they were less a theoretically distinct group than a loose association of struggling architects who each needed to front some money to get a book of their work published. Paul Goldberger, however, named the group "The New York Five," the book sold well, and the rest, as they say, is history. Such events—an important first client, a chance meeting, an unexpected choice of school—figure as heavily as the intellectual programs each architect develops in pursuing his career.

The labeling of their work is a sore point for many of the architects interviewed. Most feel that such stylistic labels as Modern, Postmodern, and the like are inaccurate, that they call too much attention to themselves, and that they detract from individual considerations of form. In the words of John Hejduk, "You dismiss things by naming them." It is perhaps for this reason that none of the architects questioned wishes to be identified with any one label.

A deep respect for the past, particularly for the giants of the Modern movement, pervades most of the architects' thinking. Having come of age in a period that saw the rise of the architect as hero and visionary, most were not so ready to dismiss their mentors when bastardized variations of their work began littering American cities during the 1950s and '60s. Mies, of course, is appreciated by all, not least for his sheer devotion to the art of architecture, and even those who reacted strongly against Mies's work saw him as a measure of architecture's possibilities. Louis Kahn, not surprisingly, also draws high marks from several architects.

An unexpected fringe benefit from all this is the humor that comes through in so many of the architects' responses. Regarding his career as both full-time architect and academic, Henry Cobb states, "I subscribe to Mae West's famous pronouncement: 'Too much of a good thing is wonderful!' " Philip Johnson, after being introduced with a string of affirmations of his fame, replies, "I didn't know I was such a famous and delightful person!" He is, and his interview is just one of the gems that enhances this delightful and fascinating compendium.

"That's as far as we go until the merger is settled."

Scott Gutterman is a freelance architectural writer from New York City.

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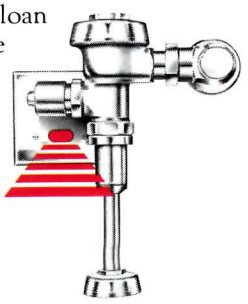

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Books

Contemporary Japanese Architecture, by Botond Bognar. New York: Van Nostrand Reinhold, 1985, $39.95.

Ernest Flagg: Beaux-Arts Architect and Urban Reformer, by Mardges Bacon. Cambridge: The Architectural History Foundation with The MIT Press, 1986, $40.

Charles A. Platt: The Artist as Architect, by Keith N. Morgan. Cambridge: The Architectural History Foundation with The MIT Press, 1986, $35.

Reviewed by Thomas Matthews

Throughout the 20th century Japanese architects have embraced Western technology and design, giving their work a superficially Occidental appearance. Still, many contemporary Japanese buildings have a distinctly non-Western quality, with their adventurous, even weird, forms, forbidding exteriors, and interior spaces that nestle within each other like inner sancta. In this book, Botond Bognar helps demystify Japan's 20th-century architecture by tracing its development since Commodore Perry opened the country's ports to the West in 1853 and tying it to its pre-Meiji traditions.

Although most modern Japanese buildings bear little resemblance to traditional structures, they owe their unique qualities, Bognar explains, to Shinto and Buddhist concepts of space and nature. Especially important are *ma*, meaning void but not emptiness, which is reflected in the spareness of Japanese art, and *oku*, meaning "innermost or least accessible" in a psychological as well as a physical sense. From the beginning of the book, Bognar clearly and concisely explains these concepts, which, he writes, reflect a radically different emotional response to space than ours—one that is "rooted in the sense of intangible qualities," rather than "along the perspective rules of rationalized and objective thought." As he describes such recent Japanese architectural movements as Structuralism and Metabolism and the waxing and waning interest in traditional forms, he refers back to these ideas, analyzing the ways they continue to permeate the thinking of modern Japanese architects.

Through capsule biographies Bognar also traces the "genealogy" of such luminaries of Japanese architecture as Kenzo Tange, Fumihiko Maki, and Arata Isozaki (who wrote the foreword) as each emerges from training and apprenticeship with the previous generation. Interestingly, though the buildings illustrated and described in the book have a fantastic and intuitive quality, both Bognar and the Japanese architects he interviewed tend to discuss them in a ponderously analytical fashion. After wading through pages of this, one finds Bognar's conclusion that "the new Japanese architecture is the result of poetic inspiration and sentiment rather than a merely problem-solving or scientific analysis" both surprising and something of a relief.

Julia Lichtblau

American architecture at the turn of the 20th century is too often reduced to a struggle between the "classic revival," epitomized by the 1893 World's Columbian Exposition, and the precursors of Modernism in Chicago. Architects working outside these categories have been relatively ignored. The American Monograph Series, published jointly by The Architectural History Foundation and The MIT Press to examine significant but neglected American architects, is happily correcting this imbalance.

Recent books on Ernest Flagg and Charles A. Platt demonstrate the diversity of architectural style that flourished under the Beaux-Arts umbrella. These two men were close contemporaries, and although both affirmed the importance of history as a determinant of form, their work derived from different philosophies and exhibited distinctive personal styles.

In *Ernest Flagg: Beaux-Arts Architect and Urban Reformer,* Mardges Bacon explores the checkered career of a talented, but difficult, man. Flagg (1857-1947) worked as a real-estate developer in New York before Cornelius Vanderbilt, a cousin by marriage, offered to underwrite his education at the Ecole des Beaux Arts in Paris. The architecture that emerged combined the structural rationalism of Viollet-le-Duc with a profound understanding of urban economics—a search for what Flagg called "a *parti* for America."

This truly national architecture would use historical forms in the service of scientific planning: elevations would express structure, while decoration would embody regional and functional character. Flagg's public buildings were boldly monumental. A Classical design for the Corcoran Gallery in Washington, D. C., predated the Columbian Exposition by a year; his plan for the U. S. Naval Academy (1896) was "the first instance in which Beaux-Arts planning was methodically applied to a large-scale government complex." Flagg's commercial structures were both functional and inventive. The Singer Building in New York (1908), briefly the tallest structure in the world, led to Flagg's leadership in zoning reform and urban planning, and he subsequently designed model tenements that improved living conditions for the working class.

Thomas Matthews is a freelance architectural writer who contributes frequently to RECORD.

But despite his creative ability, personal ambition, and the family ties to the Vanderbilts and Scribners that generated many of his commissions, Flagg remained outside the American architectural establishment. His combative personality sparked conflicts with patrons, while suspect building competitions and shady dealings by his family damaged his professional standing. Although Bacon touches lightly on these troubles, her book is more architectural analysis than biography.

Beginning with Flagg's early years, the author concentrates on his studies and travels in Europe, and she examines the architectural theories that informed his work. The longer second part discusses his buildings typologically. The book is thorough and extremely well-documented, if occasionally unwieldy, and photographs and floor plans illustrate without overwhelming the text. Bacon champions Flagg's work, but she doesn't hesitate to criticize its inconsistencies. Inventor and entrepreneur, iconoclast and rugged individualist, Flagg clearly deserves Bacon's encomium as "one of the most innovative Beaux-Arts architects in America."

Charles A. Platt (1861-1933), like Flagg, came late to architecture, but otherwise enjoyed a very different career. While Flagg began with the Corcoran and ended up building small houses on his Staten Island estate, Platt's first architectural efforts were homes for his family and friends, and he steadily progressed to public monuments, including an addition to Flagg's Corcoran in 1925. Platt achieved early prominence as a painter and etcher during the 1880s, and it was not until 1889 that he turned to architecture. By 1913 he was "preeminent" in the design of country houses and so influential that a monograph of his work was published, the first of its kind in the United States.

Writing in *Charles Platt: The Artist as Architect,* Keith Morgan observes that Platt sought an ideal, almost abstract beauty through the "reduction and simplification of compositional elements," and in the "refinement of forms through close study of limited models," specifically those of 16th-century Italy and English Palladianism. His buildings combine elegance and refinement with stability and order. The Freer Gallery in Washington, D. C., perhaps his best-known work, epitomizes Platt's responsiveness to context and function. His career culminated in the development of Phillips Academy in Andover, Mass., where his "nearly total control over the environment" allowed full expression of his "resolute sense of purpose and calm repose" in a lucid harmony of design and meaning.

Morgan examines Platt's life and work chronologically, a task made easier by the steady linear development of both. Like Bacon's book, Morgan's volume is well-illustrated and thoroughly documented. The author's prose is graceful and his argument coherent. If the social analysis occasionally becomes rather broad, at least Morgan strives to understand the causes of style rather than stopping with its history. His attention to Platt's art and his office practice helps ground his design esthetic. A brief memoir by the architect's son is a welcome personal touch.

Perhaps more than anything else, these books reveal the disunity of the genteel tradition. Flagg bitterly criticized the 1893 Columbian Exposition as "archaeological," while Platt rejected the Gothic and picturesque work of his contemporaries. Although both men worked to define a "national style," Flagg's prototypes were French, Platt's Italian. In fact, with a single exception each, neither author even mentions the other's subject, as though their worlds were completely discrete. These men pursued distinctive visions with persistence and skill; the books distinguish them with sympathy and rigor.

Nevertheless, Flagg and Platt do share underlying assumptions—"a devotion to the classical past as inspiration for the modern world," as Morgan puts it, a "belief in historicism and the perpetuation of cultural values," in Bacon's words—that tie them to a certain phase in the development of American architecture and culture. As these valuable books make clear, the period was more diverse and, perhaps, more significant than recent history has been inclined to accept. Their contributions help clarify the development of late 19th- and early 20th-century American architecture in all its complexity and contradiction.

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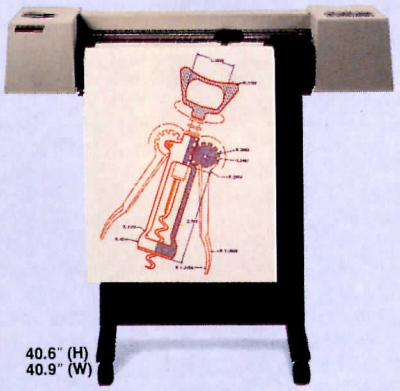

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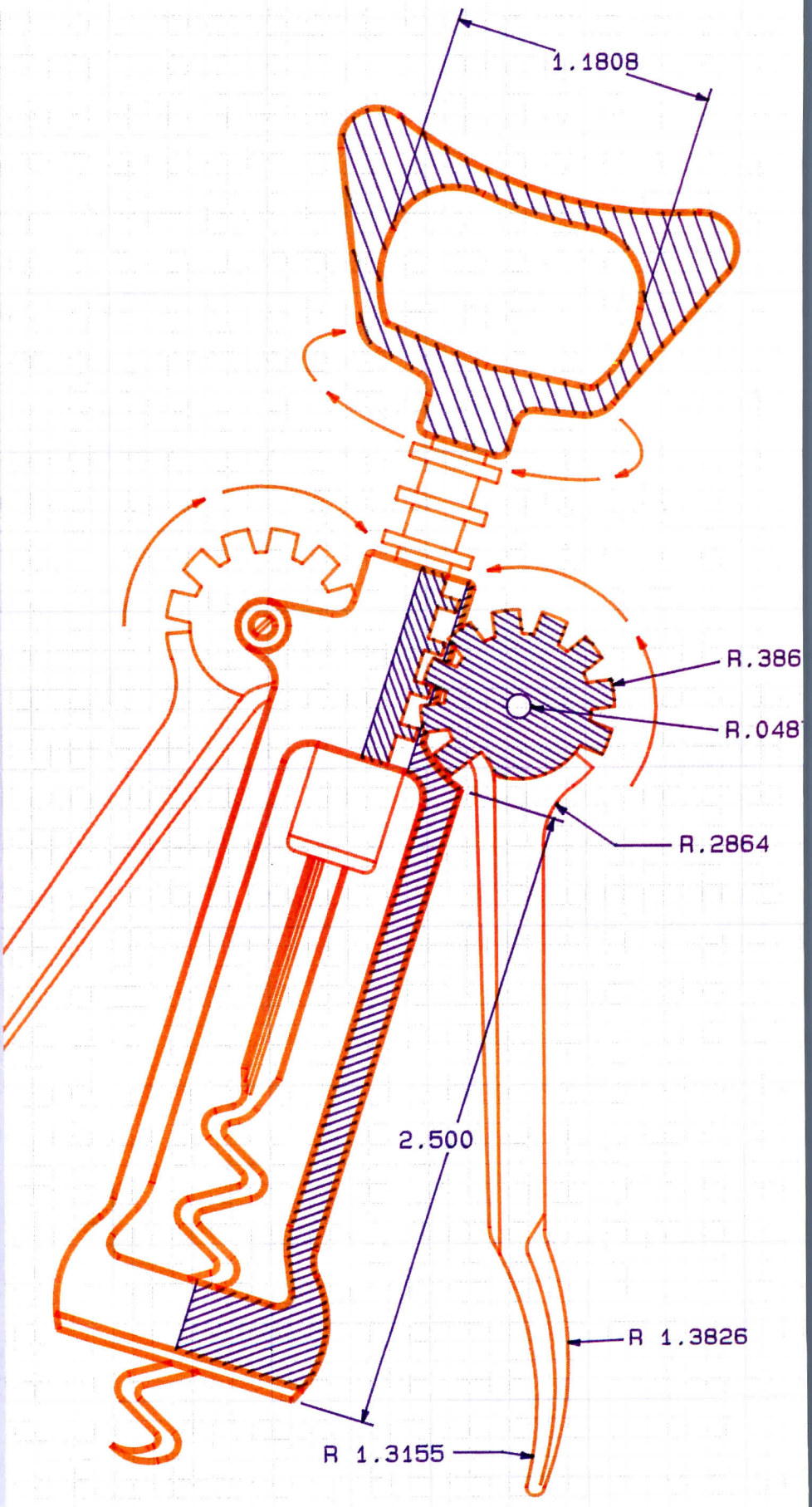

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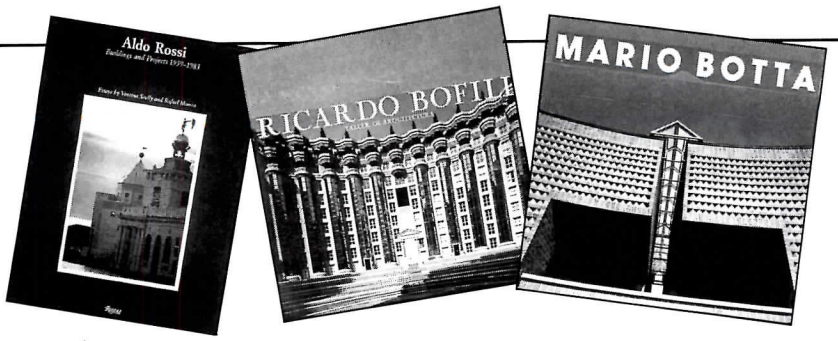
Books



Aldo Rossi: Buildings and Projects, edited by Peter Arnell and Ted Bickford; text by Mason Andrews; photographs by Roberto Schezen; essays by Vincent Scully and Rafael Moneo. New York: Rizzoli, 1985, $45 ($29.95 paperback).

Ricardo Bofill: Taller de Arquitectura, edited and photographed by Yukio Futagawa; introduction by Christian Norberg-Schulz. New York: Rizzoli, 1985, $50 ($35 paperback).

The Architecture of Mario Botta, text by Mirko Zardini; introduction by Christian Norberg-Schulz; photographs by Yukio Futagawa. New York: Rizzoli, 1985, $45 ($29.95 paperback).

Reviewed by Steven Holt

No matter the individual's age, or the circumstances under which it happens, it's almost always a kick for an architect when his work is published. It provides a validation of sorts, a seal of approval from an impartial and objective source. The present architectural apotheosis of this lies in the production of lavish monographs. With the printed (and well-illustrated) word increasingly popular among architects and design enthusiasts alike, monographs have turned bookshops into candy stores of sorts. Designers pick, sample, and nibble their way through so many pages in search of visual feasts and quick pick-me-ups. The three tomes on Aldo Rossi, Ricardo Bofill, and Mario Botta continue this trend by simultaneously showing us how each architect cooks up his design ideas and giving us the chance to taste-test each architect's style; with these deliciously visual cookbooks, the implicit message is that you can have your cake and eat it, too.

Rossi is represented by a standard-size book concerned with the architect's buildings, words, paintings, and drawings. Covering a period of over 25 years, the book begins with Rossi's cultural center and theater thesis project from the Milan Politecnico where, he recalls with typical candor, "I was one of the worst students," and it ends with plans for the still-to-be-executed Centro Direzionale in Perugia.

Clearly, much has happened in between these two points, and the book shows us more than 60 projects, many accompanied by Rossi's own drawings. As Vincent Scully notes of these renderings in his brief and frothy introduction, "[Rossi] draws a new poetry." While there is magic in all of Rossi's drawings, the project where it is most transubstantiated is the Teatro del Mundo (Theater of the World) at the 1979 Venice Biennale. If one supposes for a moment that the world *is* a stage—and architects are but actors who ply their sundry styles across its theatric (or better, operatic) dimensions—Rossi might well be cast as the phantom of such a space. Neither his imagination nor his travels are without purpose, however: they are intimately connected to such essentials as element, plan, moment, monument, and morphology.

As Rossi has remarked of these typological basics, "I have always known that architecture was determined by the hour and the event; and it was this hour that I sought in vain." Such words also reveal the dramatic sense of timing that Rossi yearns to uncover, whether it be through drawing, designing, writing, or building. For Rossi, it is the fragment rather than the whole that tells the story, and this book is about the beauty of individual pieces and forgotten parts. While Rossi has published these ideas before in *A Scientific Autobiography* and *The Architecture of the City,* they assume a new power here when collected with the full corpus of his work, allowing us to see exactly how Rossi views his world.

The oversized volumes on Bofill and Botta are nearly identical in size, approach, and graphic design. Of the two, the one that explores the work of Bofill and his firm Taller de Arquitectura over the last 15 years is the more visual. Although Yukio Futagawa photographed both books, his large full-bleed color shots of Bofill's work leap off the page; it is vital architecture given accordingly vibrant treatment.

As Christian Norberg-Schulz points out in his insightful introduction, Bofill's architecture unites the attributes of house and cathedral. In fact, he is one of the few who has built Postmodern megastructures that convey a sense of both purpose and people—a quality exemplified by the adjacent Walden 7 and La Fabrica projects in Barcelona. Walden 7 comprises three gigantic apartment buildings (only one of which is presented) that form a hypothetical triangle. Both open and closed, small and large, the building evinces the phenomenological property that Robert Venturi has referred to as "both/and" rather than "either/or." Outside, the building is mainly red brick; inside, it is tiled, primarily in shades of blue and green. Large cut-outs in the building's monolithic massing create Bofill's famous "urban windows." Walden 7 joins La Fabrica (Bofill's home and office) amid the ruins of the Samson cement factory. A sense of place permeates the ensemble. In one of the book's many revealing texts, Bofill tells us that here, "life unfolds in a continuous manner with little difference between work time and free time." Today, perhaps only in Barcelona could an architect have his masterwork, office, and house all on the same piece of property. Or, maybe this is simply the Catalan approach to inner-city commuting. In either event, the book is a vigorous summation of Bofill's work to date.

The volume on Botta, also blessed with a penetrating introduction by Norberg-Schulz, probably contains the fewest visual fireworks of the three books considered here. But what may be lacking in quick visual sizzle is made up for by a display of buildings that spans a rich and varied quarter-century of practice. More specifically, it shows how Botta has linked his architecture to such fundamentals of human experience as archetype, institution, locality, and historical moment. In this sense, Botta is a contextualist, not just of the site but of the psyche.

For Botta, the youngest of the three architects, having a sense of place is a necessity because the times we live in are so abstract. Architecture must connect, and to do so, it must work in ways that are simultaneously new and old. Forms, unlike clients, do not have to be invented over and over again. Accordingly, much of Botta's work feels as though it already belongs together, as if it always has *been.*

Bofill, Botta, and Rossi share a number of characteristics. Each, most significantly, wants to create a sense of place. Each is also intensely involved in a search for the *essential* in architecture. For Bofill it involves the basic concepts of experience and powerful built forms; for Botta it is a "return to architecture" expressed through blocklike masses, symmetrical facades, and sophisticated materials; and for Rossi it is the playful manipulation of surfaces, simple geometries, and qualities like hardness and clarity. The three architects, moreover, all have ties to Classical architecture, and they are closely associated with their native regions—Bofill to Catalonia in Spain, Botta to the Swiss Ticino, and Rossi to Milan. The result isn't simply nostalgia, but a personal integration of old (the vernacular) and new (Modernism) within an articulate system that makes evident their interest in what has previously been hidden or repressed.

But it's not enough simply to relate what has been done to the past: one must make the connection, to be sure, but at some higher level one must also sever that connection. As Norberg-Schulz says of Bofill, "An order is related to life when it is . . . broken;" furthermore, when speaking of Botta, the author describes the need for "continuous reinterpretation." Rossi, in turn, notes that "it may be that only ruins express a fact completely." And so the dialectic between the past and the present, the part and the whole, goes.

Although these architects are often considered members of the avant-garde, these monographs clearly reveal that what they care most about are the simple things—how a building meets the ground, how it relates to others, how it rises to the sky, and how it opens and closes. Bofill, Botta, and Rossi not only construct on a site; from the start, they attempt to construct the site itself.

Happily, all three books also include more than just realized works of architecture. An abundance of sketches for unbuilt projects fills each of the volumes. We also see more than just architecture: sketches and photographs of Bofill's urban furniture, Botta's Prima and Seconda armchairs, and Rossi's Cabine dell'Elba furniture provide a valuable counterpoint in scale and intention to their architecture.

In the end, while one can speak at length about an architect's horizontal rhythms, irrational varieties, and logical organizations, there is at least one level where the work of Bofill, Rossi, and Botta needs no interpretation. At the level of direct experience, their buildings are either thoughtful housings of the human spirit or they aren't. As conveyors of that experience, these books reiterate the message. You either get what they do, or you don't.

Steven Holt writes regularly on art, architecture, and design. He is a former managing editor of Industrial Design.

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1 for the road: An affectionate stroll down memory lane

Although Robert Venturi, Denise Scott Brown, and Steven Izenour glorified the architecture of the strip as early as 1970 in their classic Learning from Las Vegas, *it was not until 1977 that the Society for Commercial Archeology was formed with the express purpose of documenting and preserving "appropriate American automobile roadside structures and landscapes." The SCA publishes a periodic newsletter, and it sponsors occasional trips meant to uncover the best of America's highway vernacular. SCA member Rachel Carley reports on the group's recent weekend jaunt through New England.*

By Rachel Carley

Cruising Route 1 to see the sights may not be everybody's idea of a regular joyride, but for the friends and members of the Society for Commercial Archeology whom I recently joined aboard a Pierce Transit Co. bus in Boston, it turned out to be a fine way to spend the weekend. The occasion was the society's spring outing, a two-day insider's tour of the old Federal Post Road between Boston and Portland, Me., officially designated U. S. Route 1 in 1925.

This isn't just any old road—at least not to my companions, 32 highway aficionados who, constantly on the lookout for buildings shaped like igloos, giant clam boxes, and molar teeth, regard U. S. 1 a prime hunting ground for classic images of American roadside architecture. This legacy of our early automobile age is the special passion of SCA members, who can spot a tacky billboard or vintage gas pump faster than most people can say "fill 'er up with unleaded."

That U. S. 1 is home to some of the more bizarre symbols of highway travel was soon apparent as we neared Saugus, Mass., and stopped to admire the Kowlook Restaurant, an overblown, fiberglass-thatched Polynesian hut with a 20-foot foamboard Tiki god atop the entrance. The group's interest was naturally piqued, so we quickly made for the Bel Aire Diner just over the Peabody town line, where Michael Jackson, an architect from Springfield, Ill., who moonlights as SCA president, shared some thoughts over eggs, toast, and home fries.

"The SCA is really a wonderful small-scale organization—about 450 members nationwide—committed to documenting and preserving the history of the American roadside," Mr. Jackson said as he cast an admiring glance at the boomerang-patterned Formica countertop. "We stick to the commercial environment, things like bowling alleys, miniature golf courses, auto showrooms, and drive-in movie theaters. We're not interested in houses, and we're not interested in churches, unless they're storefront churches, which are my own special side issue. Too much of what historians have been trying to save has been the monuments associated with 'important' people. But most of us find it just as interesting to look at how everybody else lived—the common culture. The commercial strip is part of the ordinary experience, and that experience should be available to everyone over the generations."

Rachel Carley is a former senior editor at Home *magazine. She is currently a freelance writer specializing in architecture and historic preservation.*

Rachel Carley

The Clam Box, Ipswich, Massachusetts, 1935.

Experience it we did, as our bus rolled past an original Mr. Peanut sign and a neon cowboy lassoing a chicken near Rowley before pulling in at Fowle's drugstore, the only 1940s holdout in restored Colonial Newburyport. Fowle's is a local institution, where anyone in the know comes for a daily newspaper, coffee and gossip, maybe a greeting card or a tube of toothpaste. While admiring the original black Cararra glass storefront, the deep, old-fashioned plate-glass windows, the neon sign (the oldest in the Merrimac Valley), and the streamlined soda fountain, we learned from present owner Sam Waterhouse that he nearly scrapped the dated look in the 1970s, when most of the historic townscape was renovated.

"I grew up with this kind of decor, and I wasn't too happy with it," recalled Waterhouse, who wanted to upgrade his place with a new brick-veneered storefront. But a local architect with federal funds in hand convinced him to restore the original features. A good thing, too, because it turned out that the town's residents also preferred it that way. "A woman swore at me when I took out the stools to get them refurbished—she thought they were going for good," said Waterhouse. He is now a convert himself. "I love it," he admitted. "Just getting this interest is fantastic. I don't want to change anything now."

The group felt good about that and pressed northward to Salisbury Beach, distinguished birthplace of Dodge'em cars. The amusement park, now a ticky-tacky jumble of fried food and plastic souvenirs, dates to the 1860s when a plank road was laid over the meadows to provide access to the beach. Later, a trolley line connected the seaside resort to Haverhill, Lawrence, and Lowell. More intrepid travelers could also take a paddle-wheeler down the Merrimac River, but that cost 25 cents and took two-and-a-half hours from Haverhill.

Relieved that we weren't booked into nearby Haggerty's Motel, a jerry-built arrangement of six or seven Quonset huts, we advanced across the New Hampshire border through Hampton and Rye beaches before stopping briefly at a snappy miniature golf course built in 1956 by submarine-worker Edmund Silva. Made of salvaged bits and pieces, the course is a tribute to Rube Goldberg. A used washing-machine agitator powers a windmill, for example, and there is a little highway made of old cinderblocks (aim through the toll booth). To finish the game, you putt into Mickey Mouse's mouth, and the ball rolls back into the office.

The course is a classic example of roadside inventiveness, according to Chester Liebs, our historian-in-residence. A founding member of the SCA, Liebs recently published a book on roadside architecture (*Main Street to Miracle Mile,* reviewed in RECORD, July 1986, page 81), and he considers the American motorway an asphalt-and-concrete timeline, a visual landscape where things are best explained by their context. "In a society that is switching from words to images, we need to know how to read what is out there," said Liebs as he relaxed in his bus seat. "I don't think that looking at commercial architecture is a widespread activity—the public is just beginning to care. But 15 years ago, the public didn't care about Main Street. Victorian houses were only good for funeral homes, and no one would have dreamed of living in a cotton mill. I think that in the next 50 years, the whole issue of what to do about the 20th century will be dominant. The real goal is to get people to read the landscape, to ask questions about what they see, to go back and forth in time."

Our group went back in time in a big way on the next stretch of Route 1, a kind of Bermuda Triangle of roadside just south of Portsmouth, N. H., where time hovers somewhere in the 1930s. Here, we visited with John Stef, Jr., the cheery proprietor of Stef's tourist cabins and gasoline alley. Established by John Stef, Sr., in 1920 when Route 1 was still a dirt road, this remarkably unchanged complex grew to include 21 guest cabins and four separate gas stations, built mostly of scrap lumber and cabbage crates. Some property has since been sold, but the heart of the business still stands and operates. Eleven slightly sagging one-room cabins—little peak-roofed boxes with tiny porches—are tucked into a shady knoll on one side of the road. Opposite is the Stefs's white farmhouse and the three remaining gas stations, each with its own wood service shed and pump island.

Stef's has always been a homey sort of place, and the present Mobil station looks about the way it did when his mother served up homemade blueberry pie, fresh cream, ham sandwiches, and hot dogs. The lunch counter is still there, and so is an old football, a bag of Maine Pop'lar potatoes, a wood-burning stove, a table topped by a map of New Hampshire, an old G. E. fan, a couple of cans of No. 7 chrome polish, some Forest Fresh car deodorizer, a Beechies display rack, and a Tru-Cold refrigerator that dispenses Coca-Cola.

Unfortunately, that probably won't be true much longer, because Stef is nearing retirement age, has no children, and plans to sell part of the complex to developers. It makes him a bit sad, but he also sees it as part of the natural evolution of things. "We gave good service and worked long hours. That's why we think we were successful," says Stef. "But things change, and now we might sell this place—you just keep going along."

Our group kept going along, too, into Maine, past the Birch Knoll cabins in Ogunquit, a giant GO Gulf sign in Scarborough, a neon duck at Drakes Island Motel in Wells, and on to Saco, where we spent a restful night at the Cascade Inn. Opened in 1930, the Cascade comprises a central hotel building with restaurant and guest rooms, and 40 or so individual cabins set in a neat diamond pattern on a manicured lawn. The cabins come with pine-paneled walls, bathrooms, wood-burning fireplaces, and little

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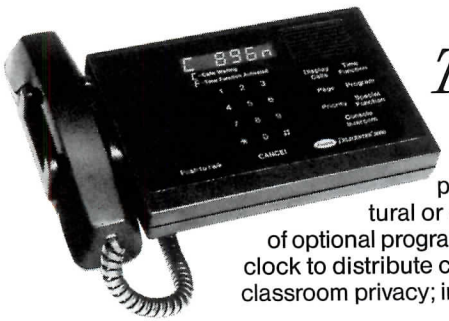

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screened porches. New bright yellow shingles topped the peaked roofs but, with typical New England thrift, only on the sides that faced the road.

The next day we breakfasted at the Miss Portland Diner (Worcester Car #818, built in 1946), where owner Randy Chasse has carefully maintained the original chrome fixtures and leatherette booths, keeps '50s songs on the jukebox, and regularly serves 48 dozen eggs on any given morning.

A U-turn through Portland then sent us back down the flip side of Route 1. If one had to pick the high point of our return journey, it might be the Golden Rod resort store in York Beach, Me. A summertime emporium opened in 1896, the Golden Rod is a first-class operation by any standards. It is primarily a combination soda fountain and salt-water taffy manufacturer, but it also dispenses souvenirs, fudge, gummy worms, dill pickles, red-hot dollars, fireballs, licorice whips, peanut brittle, Vermont maple sugar, pepper jelly, and Old-Fashioned Molasses Sponge, a concoction of sugar, corn syrup, molasses, water, and bicarbonate of soda that looks something like brown polystyrene foam. Outside, through old storefront windows, riveted passersby can view the actual taffy-making assembly line, where copper cauldrons bubble away with molten sugar, a mechanical arm pulls and twists the candy into a stretchy mass, and an incredible machine spits out wrapped pieces of candy in bite-sized twists.

Other outstanding sights occupied our itinerary. In Essex, Mass., for example, there was Woodman's, birthplace of the fried clam. The story goes that on July 3, 1916, "Chubby" Woodman was frying up a batch of potato chips at his small roadside stand, when a friend happened in. "Why don't you throw some clams in?" asked the friend. "Don't be ridiculous," replied Chubby. "Clams have shells." But something made him reconsider, and when his friend returned the following day—July 4, of course—he may have been the first person in American history to sample that deep-fried, batter-coated delicacy.

All good things, even our lunch at Woodman's, must come to an end. But as we neared Boston and hurried by the Ship Restaurant, an exact replica of a 1760 sailing barque with 150-foot masts, and sped past a gigantic orange Tyrannosaurus Rex, Michael Jackson left us with some pleasant thoughts: "What we've got here is the baby-boom generation, which grew up with the automobile culture and television, and they're just starting to look back," he explained. "It's not just nostalgia, which is a quick-hit word for memory; it's something more. We want to understand and preserve the power of the strip. I guess you could say we're the children of the road, trying to save the more important things for the grandchildren of the road."

With that in mind, we sang happy birthday to the bus, which had just turned ten, and headed for home.

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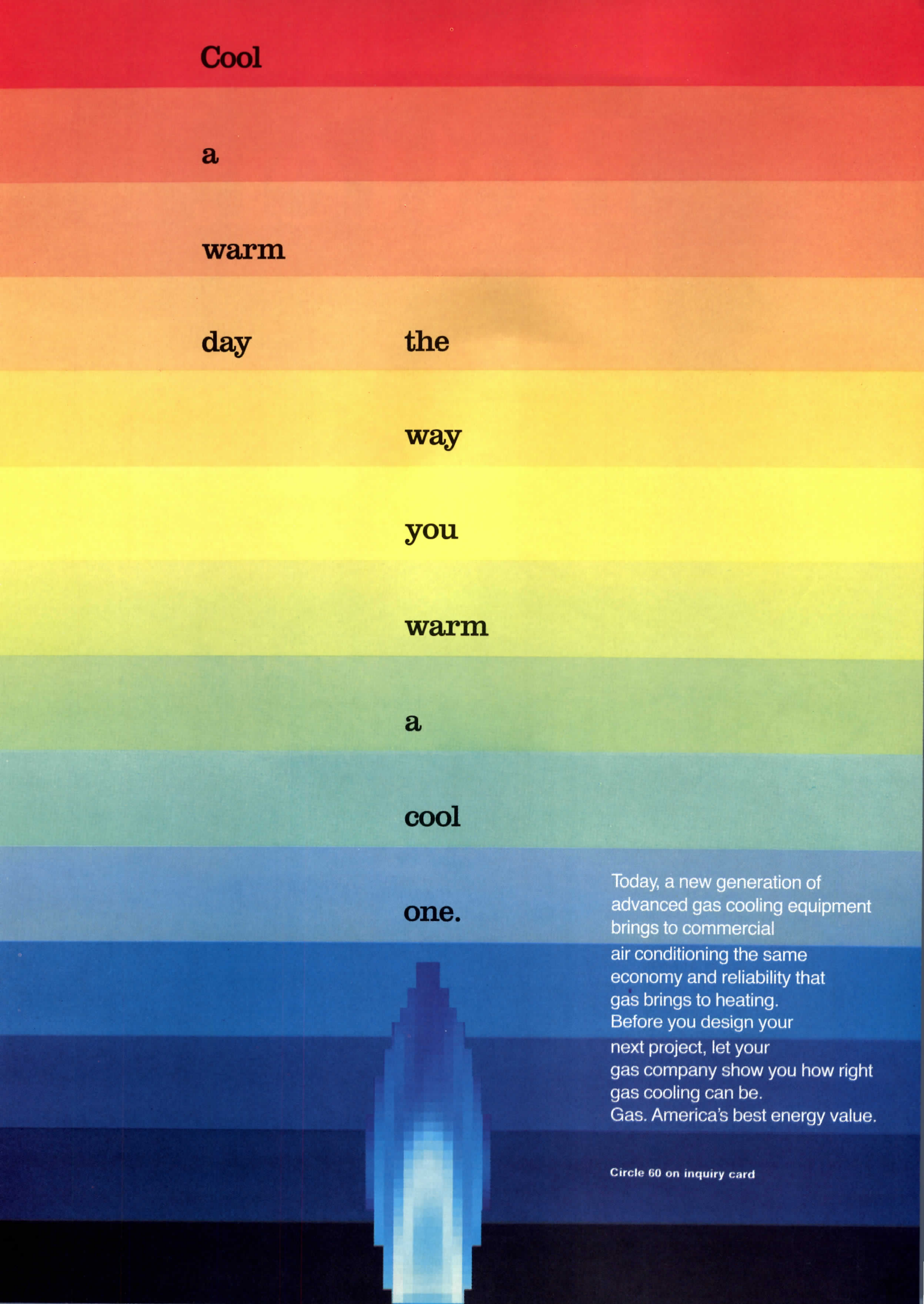

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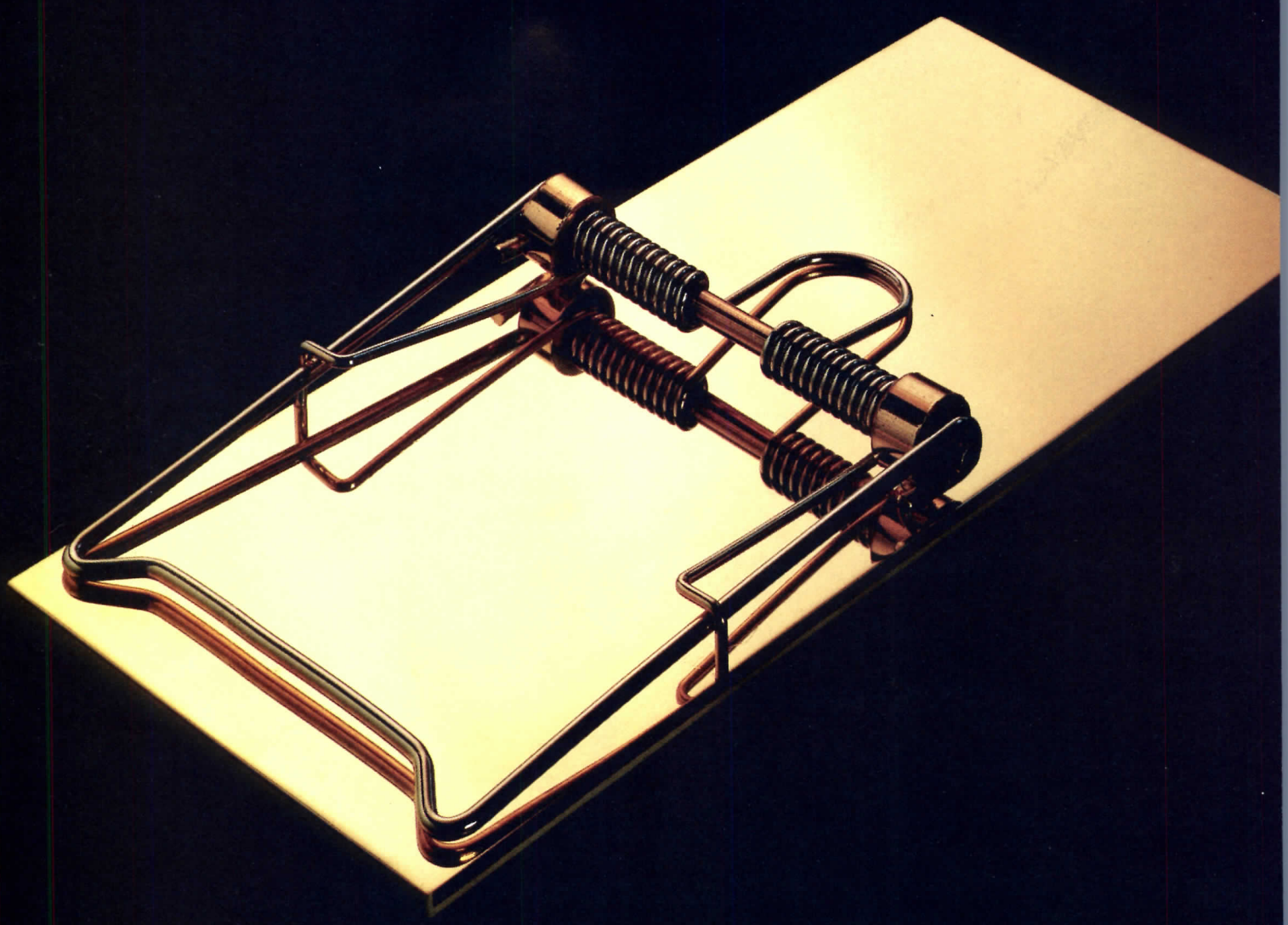

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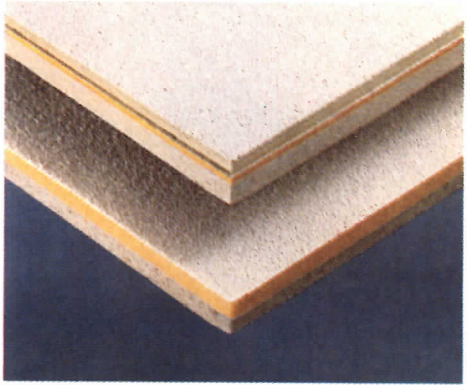

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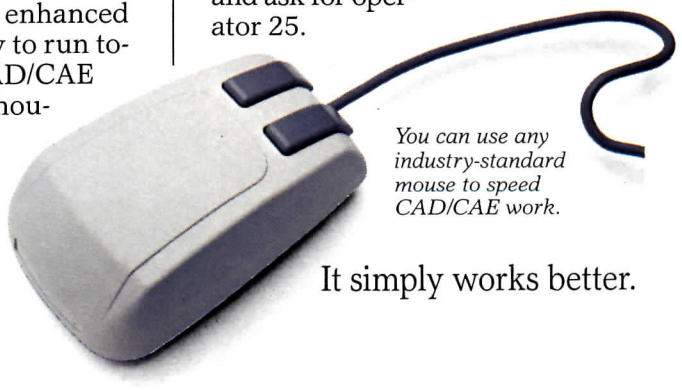

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To give everyone a view of the lake, the building shape had to repeat itself. So Pella was chosen to say "quality" over and over.

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

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

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

Pella standard and custom windows and doors.

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

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

Pella says quality in custom colors.

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

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Pella. The significant difference in windows and doors.

Excelsior Bay Gables Condominums
Excelsior, Minnesota

Developer: Keewaydin Development Group, Inc.
Minneapolis, Minnesota

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

Contractor: John Lambin Construction Company
Excelsior, Minnesota

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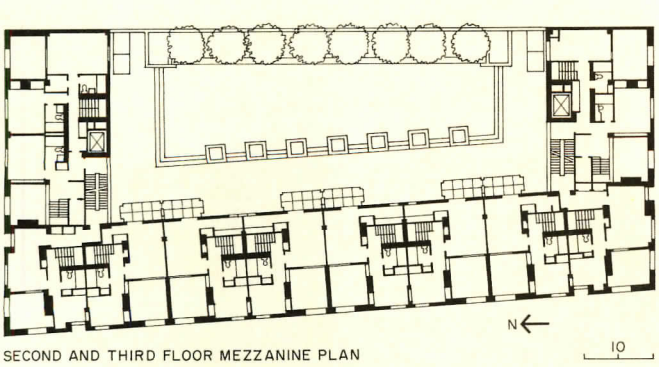
City limits

"Appropriateness" is the standard rallying cry of all parties involved in contemporary urban infill. Regardless of whether they are pro or con a particular construction project, architects, developers, government officials, and community representatives are embroiled these days in wrangling over niceties of "contextualism" and the decorum of our city streets. It is heartening to know that such issues are now discussed almost as a matter of course, even though, as Roger Kimball observes in his commentary on one recent infill building (overleaf), we must bear in mind that the notion of "appropriateness," necessarily a relative concept, can be so subjective or vague as to lose its pertinence for critical judgment. The rightness of style, materials, scale, or any of the other factors that adjust the shades of local color is always debatable and, depending on the vantage point of the viewer, the same "good" architecture that fits comfortably into one city can seem rudely out of place in another.

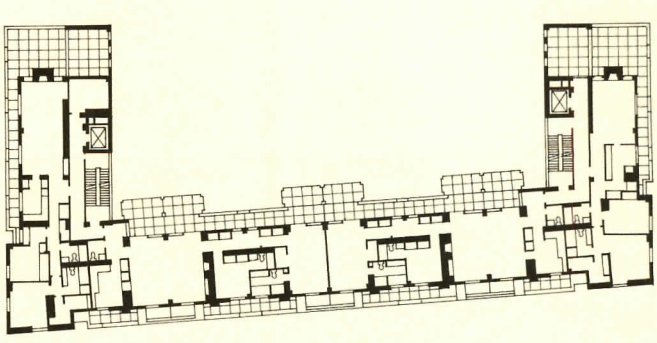
The three infill projects illustrated in the following portfolio impressed us as far more than respectful newcomers to well-established neighborhoods. Even if discretion were their signal quality, our case-study examples would embody an achievement of sorts, located as they are in communities renowned for vigilant stewardship of a distinguished architectural heritage. Architects James Stewart Polshek and Partners faced the challenge of a block-long site in the heart of Greenwich Village, New York City's most famous designated landmark district, where no historic stone is turned without a hue and cry from bureaucrats and neighborhood activists (pages 90-95). Arthur Cotton Moore/Associates took on a delicate diplomatic mission among the movers and shakers of Washington, D. C., in the equally historic—and jealously guarded—precinct of Georgetown (pages 96-99). Robert A. M. Stern Architects was summoned by commercial developers to another venerable "village," in La Jolla, California, just as angry citizens' groups such as B.L.O.B. (Ban Large Office Buildings) were manning the ramparts (pages 100-103). In each instance, owing to patient, extended dialogue and the designers' sensitivity to community concerns, a tense situation that might have exploded in bitter combat, or halted in an uneasy truce, turned out to everyone's advantage. Besides paying their owners a handsome return, the results enrich the surrounding urban fabric. They may even be models for future infill development—where appropriate. *Douglas Brenner*

Washington Court
New York City
James Stewart Polshek and
Partners, Architects

©*Paul Warchol photos*



SECOND AND THIRD FLOOR MEZZANINE PLAN



PENTHOUSE FLOOR

A Village vanguard

Washington Court, James Stewart Polshek and Partners' new apartment complex at Sixth Avenue between Washington Place and Waverly Place in Greenwich Village, is the first multiple residence to be built in the Greenwich Village Historic District since the area was so designated in 1969. In addition to providing 28 condominiums, the handsome brick-faced building accommodates some 25,000 square feet of commercial space on the ground floor and below grade. Its carefully proportioned three-bay facade, firmly anchored by square towers north and south, recalls the brick row houses that populate the Village; mullioned windows and limestone and green-tile appointments quietly harmonize with their 19th-century predecessors in the neighborhood.

Yet for all this, there is never any question that we are looking at an essentially modern—indeed a Modernist—building. The punched windows, the rigorous simplicity of the design, the structure subtly but frankly expressed: the underlying feel of the whole building is unmistakably Modernist. And considering that Washington Court replaces not some cherished architectural legacy but a parking lot, one might well assume that from the start the building was heralded for what it is: a model of sensitive, "contextual" urban design.

Appearances, however, are deceiving. From the moment the design for Washington Court was announced, local community groups took up arms against it. Polshek, who lives but a block from the building, recounts going to his garage nearby and encountering flyers protesting the proposed intrusion by a "corporate architect." Along the way, the design was rejected by both the local Community Planning Board and the Landmarks Preservation Commission, which has the authority to block any new building in a designated historic district, before finally being approved in December 1984.

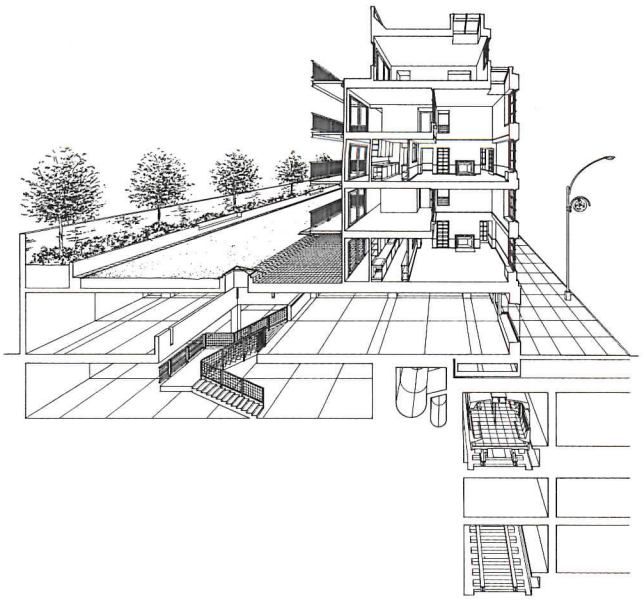
The primary objection to the design was stylistic: it was not thought "appropriate" for the neighborhood. Now the widespread use of the term "appropriate" in architectural criticism these days is in need of scrutiny. For while there is no doubt the term is often quite pertinent, it is also clear that it is infinitely malleable; like a chameleon, it is quick to adopt the colors of the point of view it is called upon to justify. And when a point of view is uninformed or dubious, its idea of appropriateness will likewise be questionable.

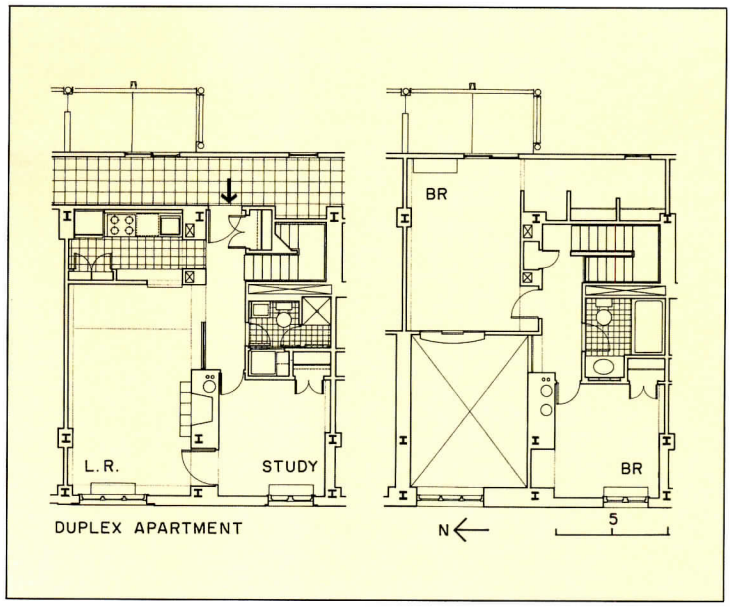
According to Polshek, the design of Washington Court was initially held to be inappropriate because it did not echo the architecture of St. Joseph's Church, an 1834 Greek Revival structure that stands across the street. As he points out, though, neither Greenwich Village nor the immediate neighborhood is predominately Greek Revival; it is rather an eclectically vernacular accretion of styles—including some Greek Revival buildings—but displaying above all a profusion of red brick and a modest, row-house scale.

At bottom, what we see in the charge that Washington Court is "inappropriate" for its neighborhood is a reaction against modern design that stems in part from genuine concern to preserve our architectural heritage, but also in part from a romance with historical pastiche that Postmodernism has done much to encourage. Something of the latter was at work, for example, in an advertisement for the condominiums at Washington Court that offered prospective buyers "a Federal-style duplex." Of course, the building is no more "Federal-style" than, well, the Greek Revival church across the street. But it is a token of the power of the current, sentimentalizing enchantment with historical stylization that one would call an essentially Modernist brick building "Federal-style" in order to boost sales. In the end, the architect's original design was accepted with no substantial changes, and by all accounts the public is terribly pleased with the product. Polshek tells of seeing a couple stopping to inspect his firm's handiwork. One of the pair pointed admiringly to the building and remarked how easy it was to make good architecture. That, I suppose, is debatable; what is surely difficult is getting the chance to build it.
Roger Kimball

With its facade of warm red brick, limestone, and bands of off-white concrete tile, Washington Court slips inconspicuously into the Washington Square Park neighborhood of New York's Greenwich Village. The building's immediate Sixth Avenue environment, though historic, is perhaps not the most picturesque part of the Village; indeed, one of the best things about the building is the way it interacts with the busy street life along the avenue, all but transforming a nondescript commercial strip. While the building is scaled and detailed to be "context sensitive," especially to the row houses on Washington and Waverly places, it does so without resorting to historical pastiche or what architect James Stewart Polshek referred to as "a lot of surface trickery that would peel off later." (One notices, however, that somewhat haphazard construction renders the detailing less elegant than it might have been.) As Polshek and chief designer James Garrison stress, in its basic design and conception Washington Court remains an essentially Modernist structure, from its steel-frame construction and punched windows to the interior courtyard (opposite), which deliberately recalls Mies van der Rohe's Weissenhofsiedlung in

Stuttgart. Ironically, though the design occasioned considerable outcry when first announced, it was in fact built almost exactly as proposed. The architects rejected a call for a more elaborate cornice and made only two minute changes in the design of the facade: limestone sills were added under the air conditioners, and the few feet of brick on either side of the white bands near the top of the bays were arranged in soldier courses. Polshek emphasizes that while stylistic questions were apparently the sole concern of early critics of Washington Court, style was only one consideration among many in approaching the project (which was, incidentally, built without any variances). In addition to the usual mundane problems of marketing and meeting applicable codes, the building presented substantial technical challenges. Instead of setting the structure back from the street, the architects decided on a U-shaped building that would reinforce the Sixth Avenue street wall. But this arrangement also placed the first 20 feet of the building directly over city subway and sewer lines, requiring the structure to be cantilevered over subterranean vaults from midblock columns (section below).





The 24 duplex condominiums and four single-story penthouses at Washington Court range in size from 800 to 1,500 square feet. The duplexes each feature a two-story living room (opposite), and many have balconies that overlook the courtyard. All the apartments include oak-strip flooring, wood-burning fireplaces, tile showers, and such contemporary amenities as whirlpool tubs. Because most of the apartments are situated directly over the Sixth Avenue subway line, train vibration and noise were potential nuisances; the architects addressed this problem by specifying compressible neoprene pads, which substantially reduced—if not completely eliminated—the rumble from below. Generously proportioned windows provide an abundance of natural illumination, which is augmented in upper-level apartments by skylights (above).

Washington Court
New York City
Owner:
Philips International Holding Corp.
Architects:
James Stewart Polshek & Partners—James Stewart Polshek, design partner; Paul Byard, management partner; James Garrison, design associate; Gaston Silva, project architect; Young Lee, job captain; Thomas Koloski, Christopher Bardt, Arthur Hibbs, Jihyon Kim, Blake Middleton, Lisa Reindorf, Carolyn Senft, project team
Engineers:
Andrew Elliott & Associates (structural); Robert Zuckerman & Associates (mechanical)
Consultants:
Quennell-Rothschild (landscape); Tracy Turner Design (graphics)
General contractor:
Lehrer McGovern Three-Sixty Construction Corp.

Corcoran at Georgetown
Washington, D. C.
Arthur Cotton Moore/Associates,
Architects

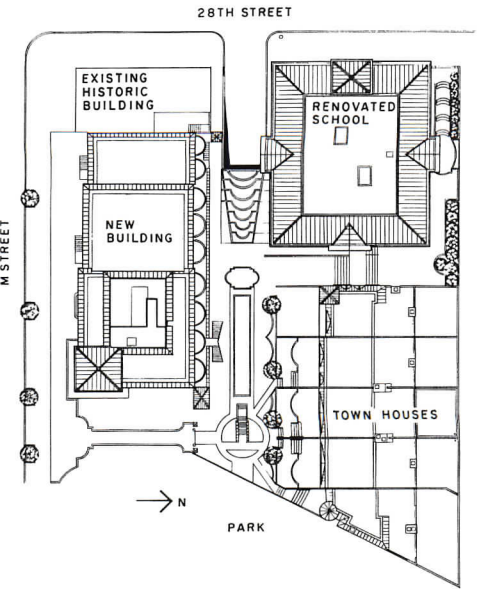
Buildings of the old school

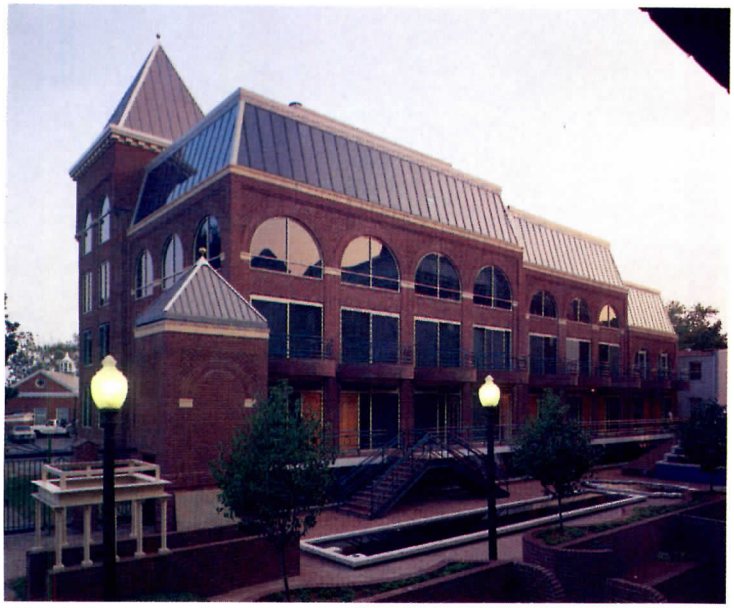
© *Walter Smalling photos*

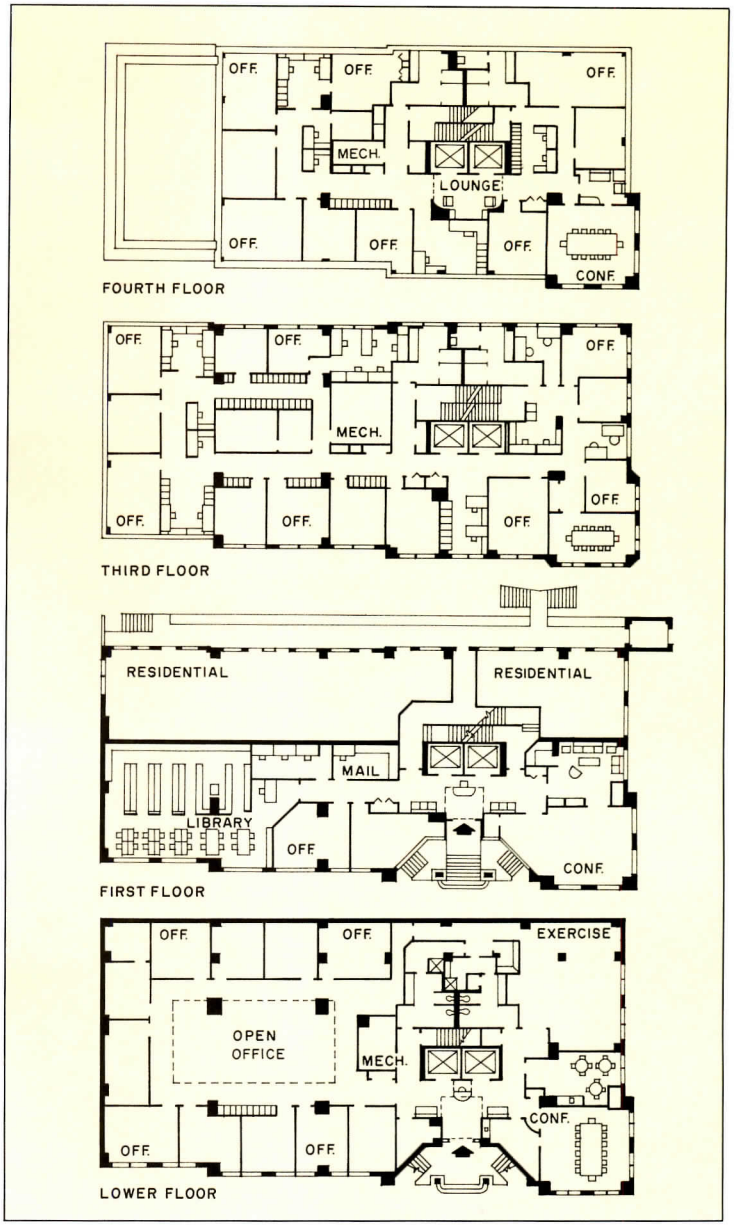
Stepped massing mediates between the urban grandeur of central Washington, to the east across the M Street Bridge, and the villagelike byways of Georgetown. New towers on the Corcoran office-apartment block and town houses are reminiscent of similar vertical elements on the remodeled school (top photo, far left), a Victorian trolley car barn near Georgetown's western boundary, and a modern hotel across the way. Negotiations with the National Park Service and The District of Columbia cleared the way for landscaping a half-acre of adjoining Rock Creek Park as part of the $5.3-million Corcoran project.

One of Washington's major corridors of power extends from monumental porticoes and rotundas along the Mall to intimate drawing rooms on the side streets of Georgetown. Socially and politically, these two domains are barely steps apart. Architecturally, however, they are separated by a disparity of scale and esthetic tenor as unmistakable as the Rock Creek ravine that divides them geographically. Powerful Washingtonians prize the visual contrast between these different realms and wield a formidable array of legal means to keep such distinctions clear (RECORD, January 1986, pages 91-105). Within this urban setting *any* attempt at infill building is problematic; and from the commercial developer's standpoint, the task becomes positively herculean when it is complicated by issues of landmark regulation, mixed zoning, as well as the need for negotiation with community groups and both municipal and federal government agencies. All of the above applied to the site for a multiuse complex known as Corcoran at Georgetown, demanding extraordinary strategic skill on the part of its architect and master planner, Arthur Cotton Moore/Associates. The project takes its name from the former Corcoran School, a 97-year-old brick structure at the northwest corner of a 40,000-square-foot parcel auctioned off by the District of Columbia as surplus property. Sadly deteriorated, the Corcoran had most recently housed the D. C. highway maintenance department, which parked its trucks behind cyclone fences in the abandoned playground. Residents of elegant town houses in the surrounding historic district, and businessmen on M Street, the principal neighborhood thoroughfare, deplored the rundown schoolyard. Besides lending an unsavory air to the adjacent stretch of Rock Creek Park, the Corcoran site created a conspicuous, unsightly gap at the eastern gateway to Georgetown from downtown Washington. At the same time, local citizens also feared the intrusion of a hulking modern building. Out in the field, Moore, senior associate Ik Pyo Hong, and their design team patiently addressed these concerns in community meetings; at the drawing board, they grappled with their client's dauntingly few options for profitable development.

Maximum office and retail space was an economic priority, even though only the strip fronting onto M Street is zoned commercial; the rest of the lot (more than half) is designated residential—a serious dilemma on only 40,000 square feet of land governed by a city-wide 50-foot building-height restriction. The parti that most effectively combined a reasonable financial return with architectural interest was a mid-block "mews" framed by the school, existing storefronts on the southwest corner (not owned by the present developer), and new construction along M Street and along the northern edge of the site; parking was dug underground. After lengthy hearings before the D. C. Board of Zoning Adjustment, the Old Georgetown Board of the city's Fine Arts Commission, as well as the full Commission, Moore's scheme won approval. This success depended on the cogency of an intricate dovetail of architecture and finance. For example, thorough restoration of the school to Department of the Interior standards satisfied preservationists, easing the way to a variance for conversion to offices and ensuring tax credits. The mews provided the theoretical street frontage legally required to lay out lots for five row houses erected to code on the remainder of the residentially zoned area behind the school. By sandwiching additional units of housing in the rear of the M Street office building, Moore not only created a graceful transition from office to residential use, but gained a full 1.5 FAR credit for commercial space (sinking the ground floor partially below grade exempted this entire level from the FAR computation); courtyard access to the apartments obviated wasteful interior circulation. By right, Moore could have stretched the M Street range to fill its zoning envelope, but chose instead to carve into the brick facades, tuck the top story into a glass-mansarded attic, and step the roof line down from a corner pavilion. The tower, an echo of older landmarks nearby, gives Georgetown a proper urban gatepost where it meets the "other" Washington. *D. B.*

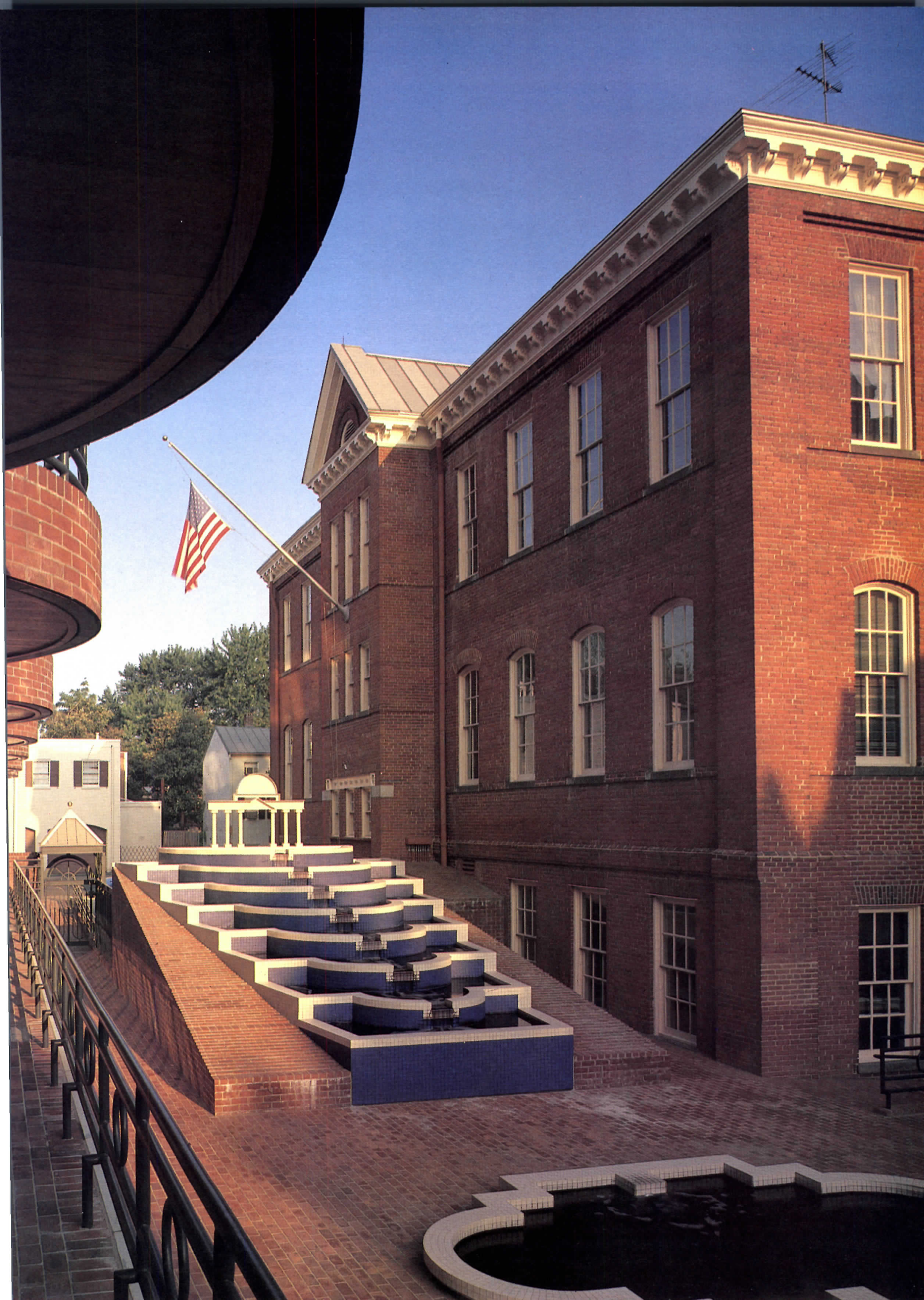

28TH STREET
EXISTING HISTORIC BUILDING
RENOVATED SCHOOL
NEW BUILDING
M STREET
TOWN HOUSES
N
PARK





A cascade atop the sloping roof of the ramp to underground parking forms an ornamental terminus to the mid-block courtyard, whose reflecting pools and diminutive colonnades whimsically evoke landmarks on Capitol Hill and the Mall. Visibility through metal fences reinforces the courtyard's role as a quasi-public passage, though residents derive a measure of privacy from sunken town-house forecourts (the result of efforts to minimize building heights alongside older dwellings to the north) and walk-up apartment entries. Raising the lobby floor of the M Street building above grade permitted a below-grade zoning bonus, but necessitated the addition of an elevator for the handicapped, which occupies a turret at the northeast corner. Arches and basketweave brickwork repeat decorative motifs on the former school.

Corcoran at Georgetown
Owner:
Corcoran Limited Partnership
Architects:
Arthur Cotton Moore/Associates, P. C.—Arthur Cotton Moore, principal; Ik Pyo Hong, senior associate-in-charge
Engineers:
Tadjer-Cohen Associates (structural); Gormley-Wareham (mechanical/electrical/plumbing)
General contractor:
Sigal Construction Company



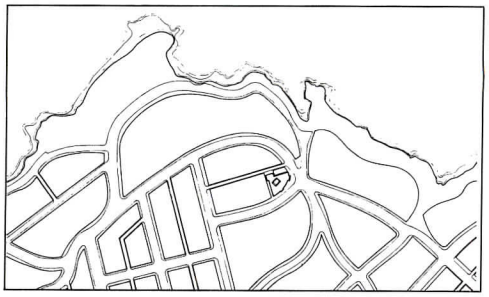
Pacific overture

Prospect Point
La Jolla, California
Robert A. M. Stern Architects in Association with Martinez/Wong Associates and Wheeler/Wimer Architects

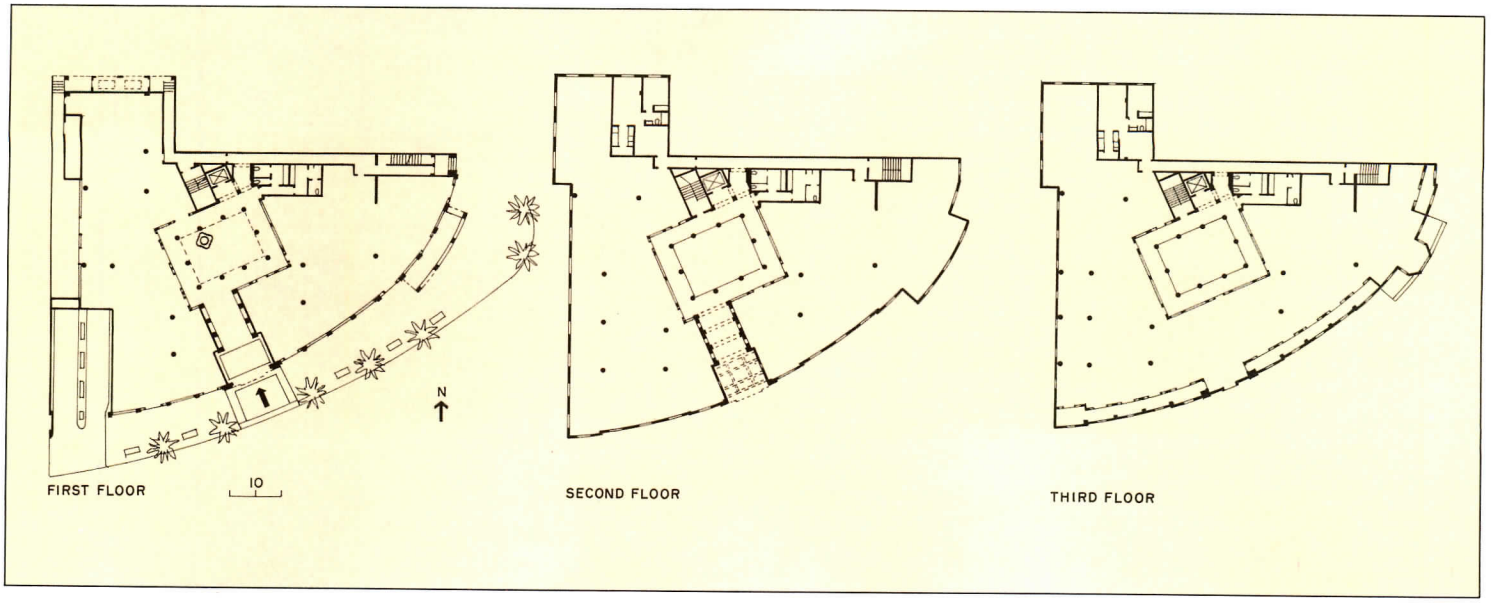
Though their town has always legally been part of San Diego, residents of La Jolla like to think of themselves as dwelling in a quiet enclave far removed from the city. La Jolla was founded as a coastal resort in 1887 and long retained the tranquil charm of a seaside colony; residents still refer to the center of town as "the village." The survival of this ambience owes much to the wealth and influence of its inhabitants, who include some of San Diego's richest citizens, and to a gentleman's agreement about the kind of architecture that seems at home in this setting: small-scale, low-density, and picturesque in a restrained, more-or-less Spanish Colonial manner. Irving Gill, who designed some of his finest houses and public buildings in La Jolla during the first two decades of this century, embodied the discreet romanticism of local taste to perfection. Inevitably, or so it now appears, the idyll was rudely interrupted in the 1960s by developers eager to capitalize on its allure. City approval of a high rise on La Jolla's Cove galvanized popular opposition to big buildings; but despite the subsequent establishment of a Community Plan, systematic down-zoning, and height ceilings, the town's commercial space has expanded more than fourfold over the past 20 years, and the concrete, glass, and metal structures that house it are anathema to many who live here.

Patently different from the oversize Modernist office blocks that stir such ire, a new mixed-use building called Prospect Point has become the focus for La Jolla's most effective campaign to tailor development to its own measure. Drawings of the then-unbuilt project were initially filed for a San Diego Planned Commercial Development permit in 1983, just prior to the city's enactment of a one-year moratorium on such construction in La Jolla (plans were also submitted to the California Coastal Commission). The moratorium was intended to allow a thorough assessment of the local planning process, a review which in due course yielded a more comprehensive and stringent La Jolla Commercial Area Planned District Ordinance. Ultimate approval of the Prospect Point scheme was doubly significant: having supplied an influential model, in design form, for those who drafted the ordinance, the building would embody the spirit and the letter of the law at one of the most prominent locations in town, a wedge-shaped parcel at the major entrance to La Jolla "village." Robert A. M. Stern Architects, who designed Prospect Point in association with Martinez/Wong Associates and Wheeler/Wimer Architects, deftly served several masters, installing enough attractive rental office space to justify the client's investment (without exceeding a statutory 30-foot height limit), creating a sidewalk arcade and bilevel underground garage to further community encouragement of a pedestrian shopping district, and providing two apartments to comply with a Coastal Commission requirement that a pair of houses torn down to clear the site be replaced with an equivalent number of residential units.

To meet all of these demands, the 45,000-square-foot building follows the curved street line to practically fill the available land, although the architects managed to reserve a central courtyard accessible from the sidewalk through a two-story gallery. Lined with stores and a restaurant on the ground floor and loggias above, the patio affords open-air circulation suitable to a southern climate and brings light and views to interior offices. Except for a rear corner taken up by apartments, the two upper stories comprise leasable loft space, laid out on a standard five-foot office planning module adaptable for tenant improvements. Amenities such as French doors, balconies, and trellised terraces belie the pragmatic ordinariness of the basic commercial scheme—and a construction cost just under $50 per square foot. Clearly, Stern and company have profited from the example of Irving Gill and the architects of other nearby landmarks such as the estimable La Valencia Hotel (small photo). Ornament is sparing at Prospect Point, but skillful massing of stucco walls and placement of openings where they are most likely to tell recall the understated grace of an earlier La Jolla where "the bottom line" was not discussed in polite society. *D. B.*

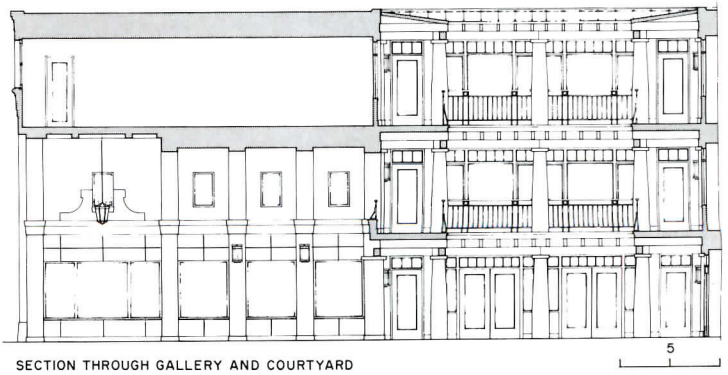


Stephen Simpson photos



Heeding the example of Irving Gill, the architects of Prospect Point abstracted the geometric essence of the Spanish Colonial style to suit a modern economy of means (the structure is poured-in-place concrete with metal studs clad in stucco). Deep, shaded openings and chaste but emphatic moldings, pilasters, and columns articulate the plastic density of simple wall masses. Portals and towerlike bays compose a vertical counterweight to the building's dominant horizontality; arcades, balconies, and terraces rhythmically vary what could have been the overbearing sweep of a curved facade along the edge of the street. Continuous terra-cotta paving visually draws the sidewalk through the vaulted gallery and into the courtyard. Bougainvillea will eventually cover timber trellises. Irrigation pipes are integral to the building's mechanical system.

Prospect Point
La Jolla, California
Owner:
The Prospect Point Partnership/ SEG-Southwest Estate Group, General Partner
Architects:
Robert A. M. Stern Architects— Thomas A. Kligerman and Graham S. Wyatt, project architects
Associated architects:
Martinez/Wong Associates, Inc., and Wheeler/Wimer Architects—Gus Bidart, project architect (Wheeler/Wimer)
Engineers:
Dunn, Lee, Smith, Klein (mechanical/electrical); Burkett and Wong (structural)
Consultants:
Cline Bettridge Bernstein Lighting Design, Inc. (lighting); The Cambridge Group (landscape)
General contractor:
The Koll Company



SECTION THROUGH GALLERY AND COURTYARD

Lying low

Corporate Headquarters
Hughes Aircraft Company
Los Angeles, California
Skidmore, Owings & Merrill/
Los Angeles, Architects

Although the flashwords efficiency and flexibility invariably top the list of planning objectives, no office building—and certainly no corporate citadel—is merely a business machine. It is also a public profession of what the company is (or wants to be, or wants to be seen as being) and for the people who work there an embodiment, witting or unwitting, of the company ethos. A probe of the agenda underlying the stated requirements seldom need thrust more than skin-deep before striking the sensitive nerves of identity and image.

When Hughes Aircraft Company decided to consolidate its corporate staff in a new building nostalgically near the war-surplus barracks that were its first home, the issue of image was more than ordinarily explicit because more than ordinarily problematic. As a prime supplier of exotic military hardware, Hughes has had scant occasion to curry public favor: missiles need not inspire the consumer goodwill evoked by, say, a familiar red-and-white label on a can of tomato soup. Its aim for its built persona was less to win the community's affection than to command its respect with a dignified "landmark image" certifying both the firm's "leadership position" and its fiscal chastity.

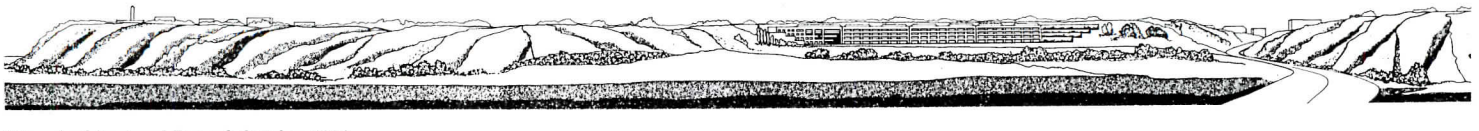
Shaping that image, however, was contingent on the successful wooing of a small resident public which was courted not out of courtesy but of necessity. The chosen site was a 20-acre hillside parcel that presented in its 100-foot rise a splendid panorama across a wetlands preserve to the Pacific. It also presented two drawbacks. First, to build there would require changing the local zoning from residential to commercial, amending the city's general plan for the area, and vacating public streets. Second, the affluent and politically influential homeowners on the bluff above the site enjoyed the panorama too.

Since gaining the necessary entitlements for use of the site hinged on the neighbors' approval, it was agreed from the outset that the building's placement and configuration would keep the hilltop community's unblemished ocean view in sight, and the building and its parking out of sight—provisos that not only set a four-story height limit and forced parking underground but curtailed the available depth. With one dimension left, and a program calling for 450,000 square feet of office space plus a 1,150-car garage, the structure could only stretch endwise in the ungainly 865-foot-long equivalent of a toppled 25-story skyscraper pushed so claustrophobically tight against the bluff that half its occupants would overlook only a steep embankment.

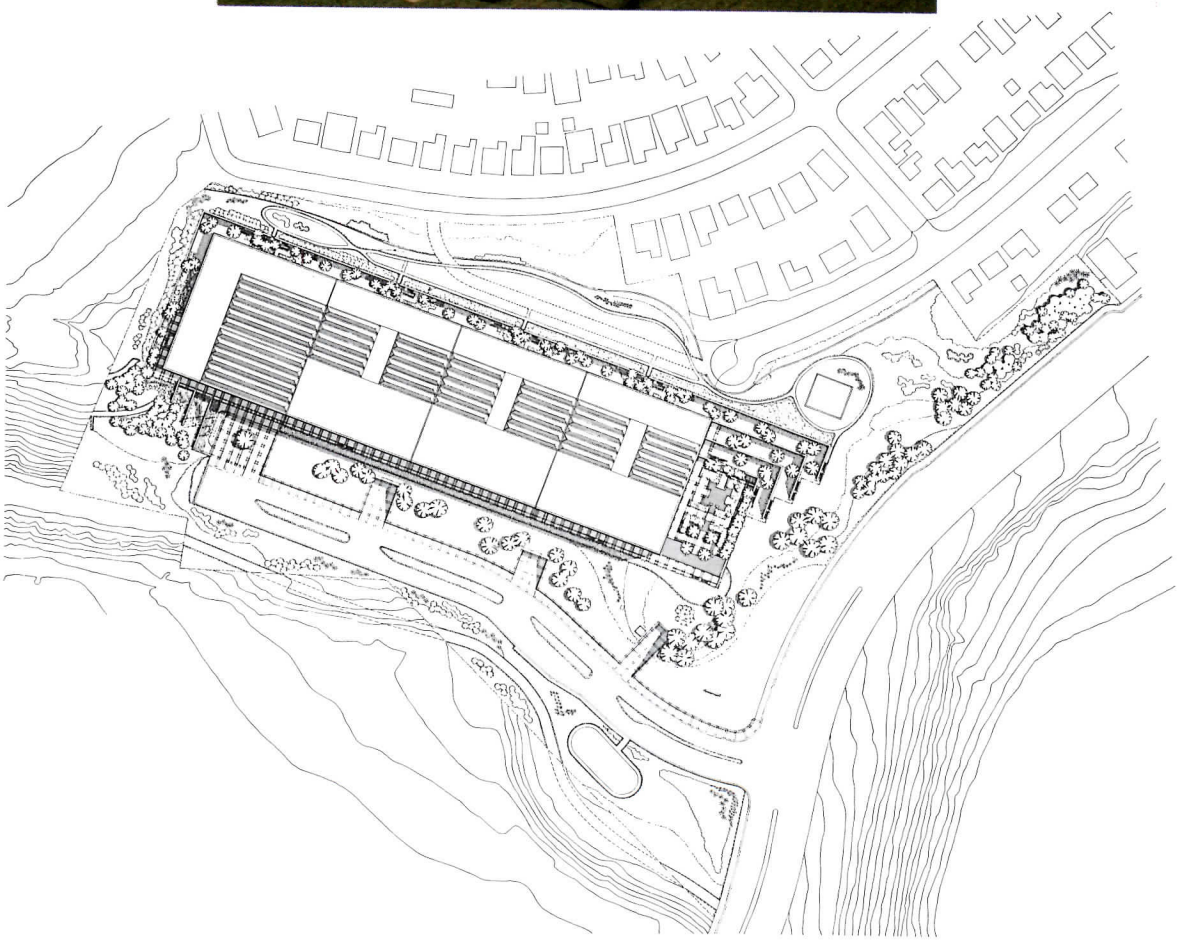
The designers' response was to push it tighter still. Half of the building is stepped into the hillside; the forward half, a more conventional office block, replicates the original face of the bluff. And the found space between the two is a sweep of skylit atrium (pages 108-109 and 110-111) at the heart of a serene inner landscape that startles with a largesse and lift scarcely hinted by the *lumpen* exterior.

Rising without ceremony from a narrow strip of formal lawn, the austere facade marches relentlessly—only slightly slowed by such scale-relieving gestures as light-catching faceted spandrels and a generously glazed entrance— through heavy bays whose chilly surface of polished gray granite and blue-tinted glass seems almost to rebuke the warm greens and golds of the grassy blanket spread before it. The tentative promise of the entry, though, is fully redeemed by an interior where open-plan office spaces preserve broad vistas across the atrium and beyond to the sea. From planted terraces on one side, balconies on the other, the span is crossed by pedestrian bridges, with escalators and stairs to link office levels to the landscaped ground-floor street lined by store-front employee services that culminate in a dining area open to an outdoor garden terrace. Though lively with movement, the airy court shuns the forced vivacity such spaces too often borrow from the dubious model of the shopping mall for a low-keyed control supported by sensitive small-scale detailing, conveying a composure the more remarkable for manifesting a corporate culture driven by hardnosed, hard-working scientists and engineers. *Margaret Gaskie*

©*Gregory Murphey photos*

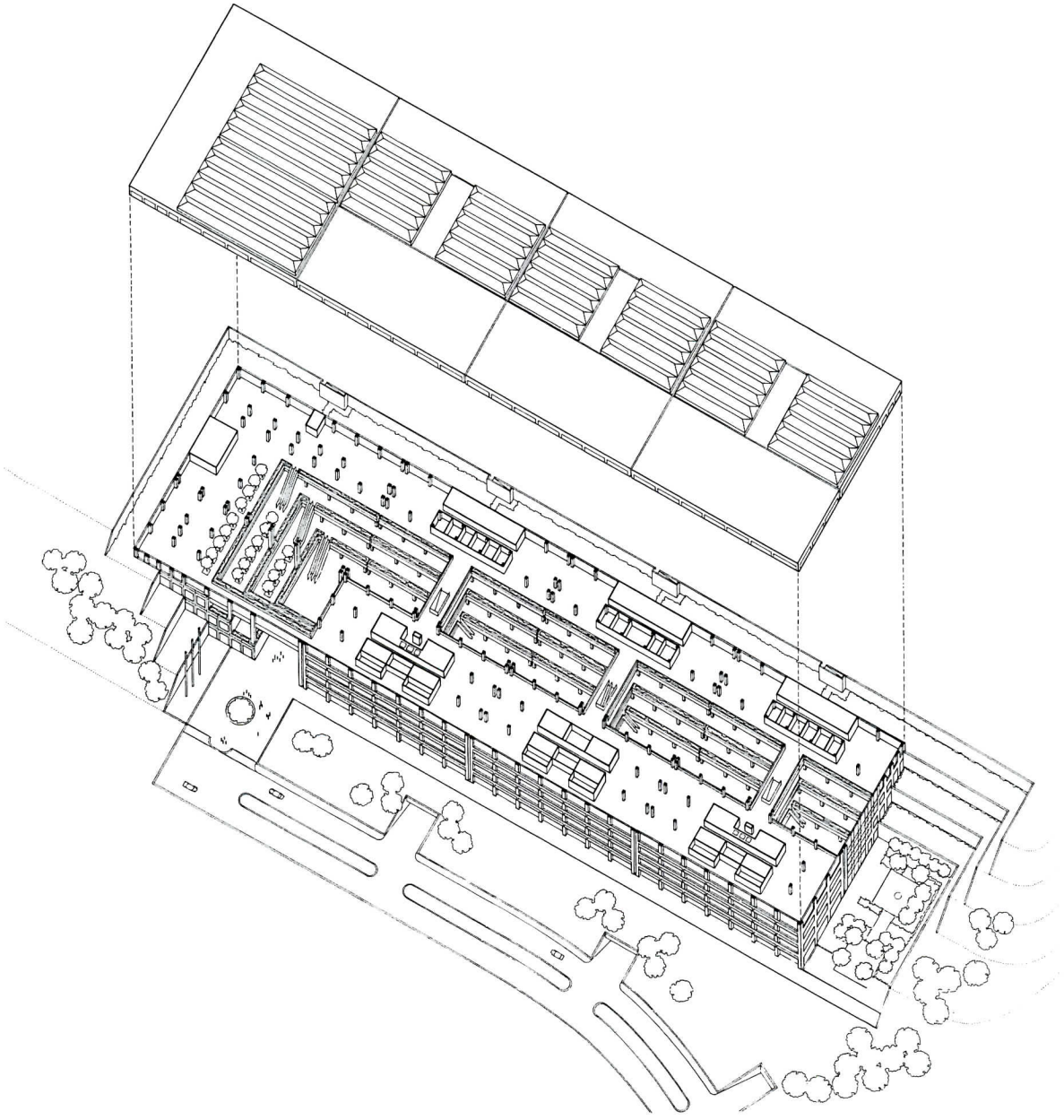


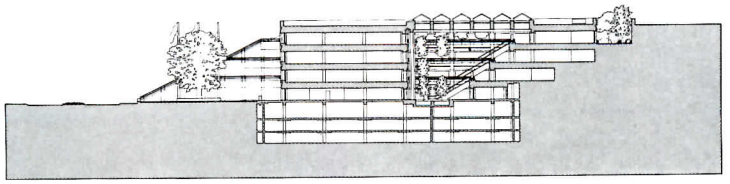
The tripartite division of the Hughes headquarters is best expressed at the south end of the building, where the repetitive bays carried from the long front elevation are lightened by the glass wall terminating the atrium and by the strong modeling of the rear office block, which for construction economy was terraced into a self-stabilizing 1-in-2 slope. (Even so, the excavation for the building and the 550,000-square-foot, three-level underground garage beneath it was extensive enough to float an aircraft carrier.) To minimize its intrusion on the view from the residential community on the upper bluff and the fragile wetlands below, the building was crammed into a 5-acre sliver of its 21-acre site and the landscaping confined to the grounds immediately adjacent to the building and its embracing side embankments.



Along the front, an access boulevard set off from the building face by a narrow sloping lawn leads to a formal entry plaza. The steep embankments at the ends, however, are informally planted to frame the structure with natural landscaping, elaborated on the south to a garden courtyard enclosed by terraced balconies, which provides a popular outdoor dining and lounge area for employees as well as a visual terminus for the atrium. A moat beside the dining island off the cafeteria brings the garden within the building's security envelope and introduces a series of weirs and waterways rising to a large pool centered on a water sculpture. Around them, granite-paved walks amid richly varied plantings lead to a stair that climbs the terrace to a jogging track stretched along the bluff at the rear of the building.

For seismic control, each of the long shallow office blocks was constructed in four 225-foot segments demarked by paired columns (drawing below) and accented on the walls facing the atrium by open joints, which at the balconied face are also framed with cruciform columns (opposite). The structural divisions further suggested abetting the flow of movement through the building with an efficient circulation pattern based on spanning between the seismic packages of the forward and rear office blocks with pedestrian bridges at the center of each segment, from which stairs and escalators interconnect the three upper office levels and the ground-floor street. Internal stairs and elevators add to the circulation options, as do corridors through the compact cookie-cutter service cores that divide and define the open office areas.





To assure ocean views as well as interior views from both sides of the building, 80 percent of the work spaces are open to the atrium and divided only by low privacy panels. Full-height walls are confined to the fourth-floor executive suite and to support areas, including such street-level enterprises as personnel services, training facilities, auditorium, credit union, health club, and food services. Although the street at its base is relatively narrow, the upper terraces expand the atrium's usable space to 80,000 square feet. To balance the daylight pouring from above with the office lighting, the coffered skylights are glazed with laminated glass that cuts light transmission to 15 percent.

On entering the Hughes building one immediately faces (apart from a tight security gamut) the escalators traversing the terraced north end, so the full volume of the atrium is introduced gradually. Despite its size the space revealed is rather welcoming than overbearing, its austerity warmed by the filtered brightness of the Southern California sun, the lush planting that screens and domesticates its forbidding length, and the sensitive calm of its detailing and palette. The stern gray exterior facing is transmuted to elegance in a tartan floor of honed granite plaided with polished strips (whose rhythm is echoed in brushed stainless and enameled steel balcony and stair railings) and the polished-granite copings of the terrace faces, which are also underscored by the black-painted linings of the linear air returns. In addition to the breaks at the seismic joints, the crisscrossing pedestrian bridges, a recurring carpet stripe, and terrace and plaza plantings of varied height help to reduce the atrium's long expanse to comfortable human scale.

Corporate Headquarters
Hughes Aircraft Company
Los Angeles, California
Owner:
Hughes Aircraft Company
Architects/engineers:
Skidmore, Owings & Merrill/ Los Angeles—Richard Ciceri, project partner; Maris Peika, design partner; John Matthews, project manager; Ron Frink, senior designer; Bruce Toman, technical coordinator; Lauren Carpenter, structural engineer; Karen Mahshi, landscape designer
Engineers:
James A. Knowles Associates (mechanical); Levine and Seegel (electrical); Psomas Associates (civil)
Consultants:
Environmental Planning and Research, Inc.; Interior Architects, Inc. (interior design); David A. Mintz (lighting); Rafe Afleck Studio (water sculpture)
Developer/contractor:
The Koll Company

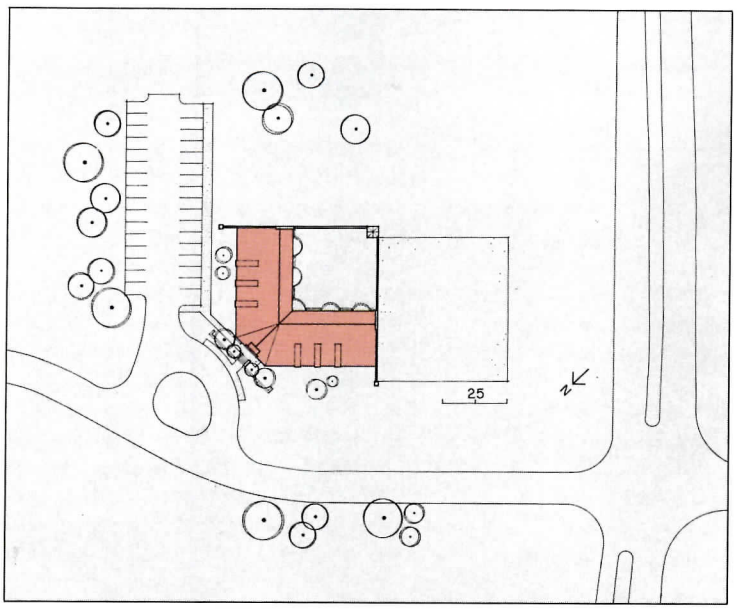
Child's play

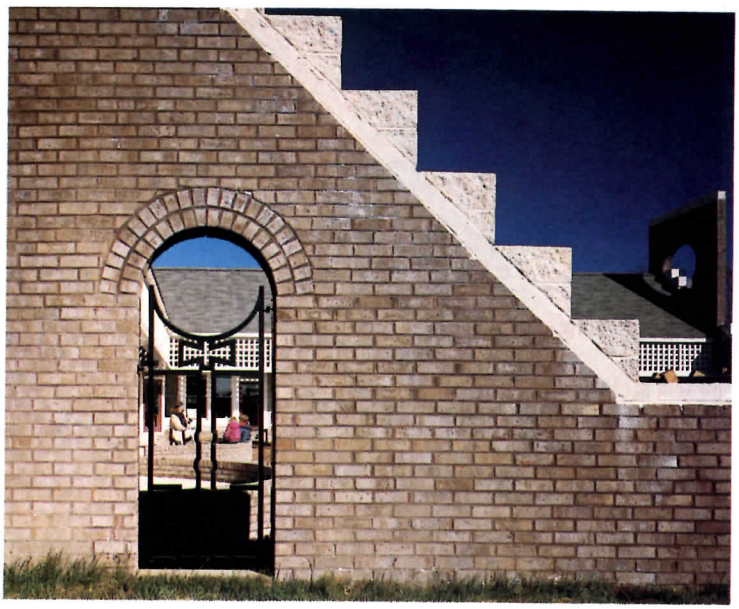
Rick Alexander photos

Grownups who recall a child's world as a realm where solemnity and purpose reign hand in hand with discovery and delight will greet this unassuming school for the very young with a nod of recognition. Its simple, clear forms might have been constructed from a set of building blocks; its artless schoolhouse imagery rendered in Crayola. But it sidesteps the condescending cuteness too often mistaken for child-appeal in favor of a lighthearted dignity proper to its place and use.

By a quirk of timing, the Countryside Montessori School was the first building up and occupied in the emerging 250-acre residential and commercial core of a much larger planned community sparked by the combustive growth of the nearby campus of the University of North Carolina at Charlotte and an affiliated research park. This unwonted prominence, heightened by the conspicuousness of a large site along the principal thoroughfare through the complex, prompted architect David Furman to announce the school with brick "billboards" on the public facades, where lopsided, sawtoothed gables thrust low walls around an enclosed play yard, coming together at a cozy peak-roofed playhouse made to the measure of pint-sized people. Half concealing, half revealing the school they embrace, the sedate screens at first suggest a solemnity quickly deflated by engaging details: a twisty metal spire atop the playhouse; a tall wind-whipped flagstaff; giant

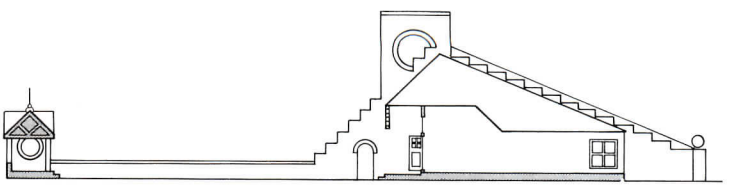
Countryside Montessori School
University Place
Charlotte, North Carolina
David Furman/Architecture,
Architects





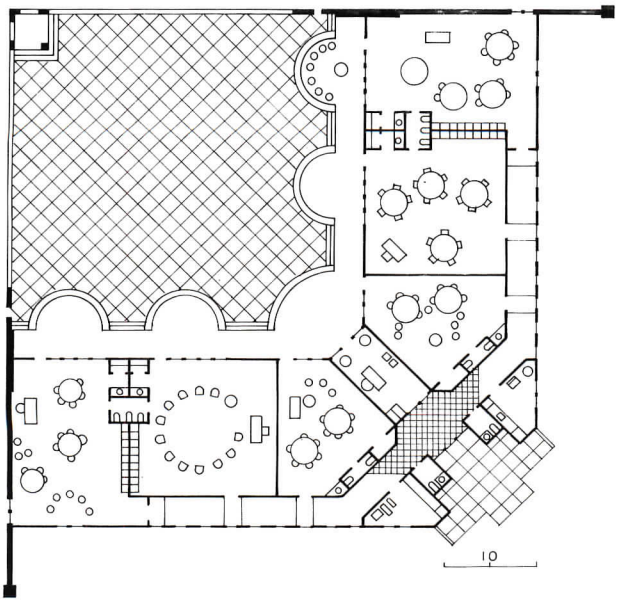
concrete jawbreakers balanced on chubby columns; and the stencil cutouts of a four-square window, a not-quite-circle punched through a chunky non-chimney, and an arched portal guarded by wrought-iron "Mr. Gate" (photo top right), sporting a bowtie, buttons, and a smile.

On closer approach the snug domesticity hinted by glimpses of the school across the play-yard wall is confirmed by a simple L-shaped building spreading long, low, cedar-shingled wings beneath a gently sloping dormered roof. At the drive-by corner entry, arriving youngsters are welcomed by a paradigm of the old-time country schoolhouse, from the broad sheltered porch nestled behind a shallow arch to the sketched-in turret with a bull's-eye opening for a pretend schoolbell. Coming into the building (plan page 115), they can peep through the administrative office for an anticipatory (and orienting) peek at the play yard and the little pavilion at its far corner before traveling the branching perimeter corridors that take them to their big sunny classrooms. Dormers and clerestories above each classroom door mark their destinations along a path cheered by light and views from child-high openings alternating with ordinary adult-height windows. From the exterior, the same bouncing rhythm of window and dormer brightens the long elevations and reinforces the duality of scale that is among the school's subtle salutes to its small inhabitants. *M.F.G.*



In keeping with the tenet that play is the work of children, the interior of the Countryside school provides a neutral noncompeting envelope for the tools and activities concentrated within its spacious uncluttered classrooms. Expanded upward by what architect Furman refers to as "token vaults" rising to 12-foot-high window walls tucked under broad eaves and latticed sun visors, the spaces also extend outward to the terrace edging the play court, where low semicircular sitting walls define private patios used as outdoor classrooms. Similarly, the court opens out, courtesy of Mr. Gate, to a big bermed playground for organized games. Modest by necessity—the budget was only $35 a square foot—as well as conviction, the simple frame structure is clothed in muted colors and homely materials: white and grape trim against gray shingle siding for the schoolhouse, mauve-gray sandbrick with crisp white-block rick-rack edging for its billboard enclosure.

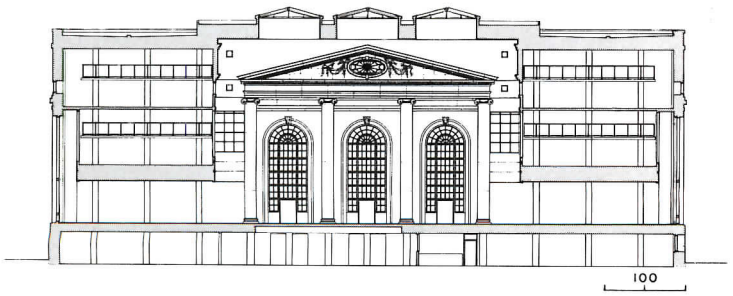
Countryside Montessori School
University Place
Charlotte, North Carolina
Owner:
Carley Capital Group
Architects:
David Furman/Architecture—David Furman, principal; Pete Ebersole, project architect; Andrew Lustig, Michael O'Brien
Landscape architects:
LandDesign, Inc.
General contractor:
Strickland, Inc.



Splendor on the grass

Olin Memorial Library
Wesleyan University
Middletown, Connecticut
Perry, Dean, Rogers & Partners,
Architects

©Steve Rosenthal photos



The bow-fronted extension of the Olin Library not only preserves the checkerboard profile of the buildings rimming Andrus Field (top) but merges smoothly with the original. Although its waterstruck brick is a near-perfect match, the architects avoided a direct collision of new with old—what architect Foote calls "the train-wreck school of additions"—with a notch at their juncture (middle). The simplified facades also reflect in their fenestration and strong horizontal articulation the clarity of the internal organization (section). The half-basement houses technical services and periodicals; reference functions, including the building-high index/reference room, are clustered on the first level; the second and third floors contain study spaces, reading rooms, and new two-level stacks adjoining the existing stack block.

No gentle quad, the heart of Wesleyan University is an immense meadow with a cinder track, goal posts, and the well-worn circuit of a baseball diamond where one looks for stately groves. The affections of the college community are engaged by this scruffy playing field not only for its dominating presence or the games people play there but for the pleasures of its frame. In fast-descending New England dusks, its western border of capacious, well-spaced manses, known to insiders as Brownstone Row, silhouettes against the panorama of the Connecticut River Valley a dotted line of solids and voids continued on the south by a trio of buildings centered on the library. The latter, a 1928 McKim Mead & White classic with a handsome rear wing is fondly recalled by generations of students as the backdrop for graduation ceremonies held on a marble terrace and podium descending to Andrus Field.

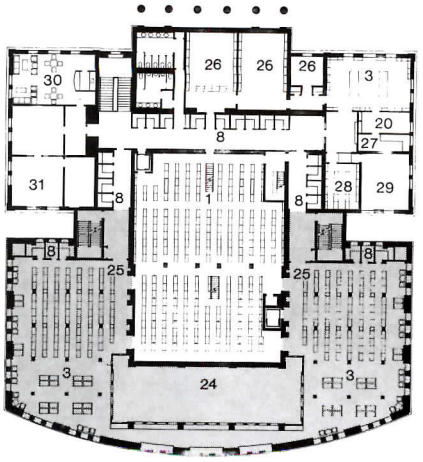
In middle age, the library's design remained distinguished, but makeshift efforts to cope with a quadrupled student body and doubled collections had rendered its once-proud interiors, as a professor complained, "shabby, overcrowded, maltreated, and uninviting." Unable to find seats, students spilled into halls and stairwells. The majestic reception hall was embarrassed by a welter of bookshelves and study tables. Resources were fragmented; services suffered.

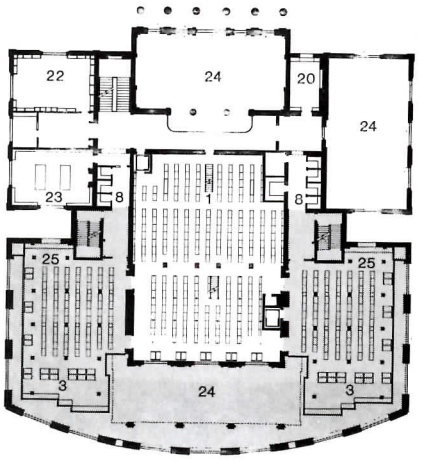
When the college at last brought to Perry, Dean, Rogers & Partners its decision to undertake a major renovation and addition—and a long wish list—the first task was whittling the program to fit the budget. As predesign moved to design, though, a more delicate question arose: where to put the needed addition? To the college the facade looking to Andrus Field was sacrosanct; the architects were reluctant to dilute the distinctive broken profile of the ensemble it starred in. Early schemes, principal-in-charge Steven Foote recalls, proposed placement "fore and aft, left and right, and underground," but all would uncouple the reference departments requiring the largest single floor area, or remove them from the main level—both anathema to the librarian. In the end, symbolism gave way to the sense of wrapping a graceful U-shaped extension around the existing stack wing. Sense, though, was tempered by sensitivity to the totemic importance of the classical facade, which was preserved as the inner wall of the new reference room and echoed in an outer wall curved deferentially to maintain the integrity of the buildings and intervening spaces on either side.

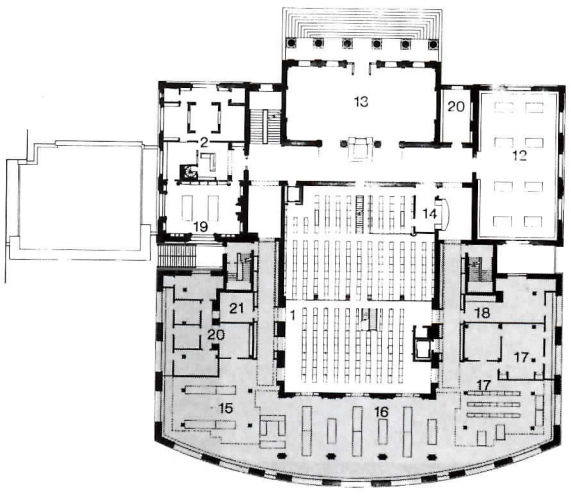
The plan reflects the logic of a compositional sequence from grand entrance to grand destination via corridors along the stacks, reinforced by carrying through the existing vertical module of 7 1/2-foot-high stack floors multiplied to 15 feet in most rooms and corridors and 30-foot ceilings in reception areas. It was also shaped, however, by the decision to disengage intermediate floor structures from the exterior with a slot of "waste" space—staunchly but unsuccessfully resisted by some of the library staff—that allowed outer windows to rise independent of the disparate interior spaces. The inner enclosures were then made permeable to bring even to the depths of the stacks a link with the outdoors or the soaring sun-bathed reference room. More directly, cunningly placed interior windows tease the eye to miniature vistas and telegraphic views, creating a pervasive sense of openness and ordered interrelationships as well as the delights of surprise.

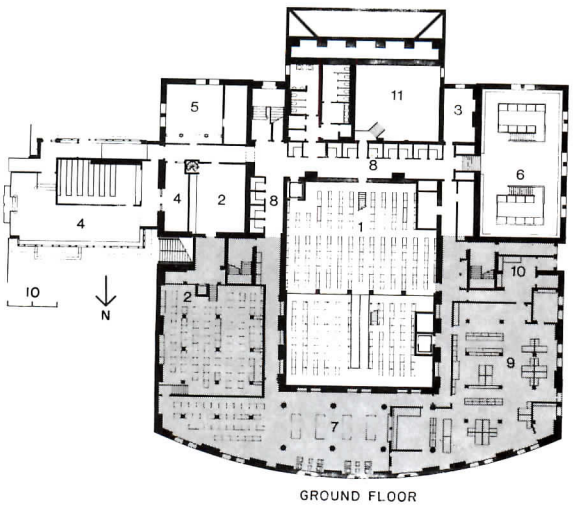
In composing the new facade, the designers were blessed, they say, by the last-gasp uncovering of the misfiled, crumpled, dirty—but original—McKim Mead & White drawings. Their magnified and simplified interpretation reproduces the dominant arched windows, with the sole refinement of replacing the architrave with a band of green glass to enlarge the glazed opening. The brickwork and limestone detailing, however, aimed for streamlining profiles to the extent possible without sacrificing boldness of relief, and excluding static vertical detail that would mar the taut sweep of the curve. In its stately repose, the face the building presents to Andrus Field breathes the care and ingenuity that brought the library, a planning committee member observes thankfully, "back to a state of grace." *Margaret Gaskie*

1. Existing stacks
2. Special collections
3. Reading
4. Reserve books
5. Dietrich collection
6. Microforms
7. Periodicals
8. Study carrels
9. Technical services
10. Receiving
11. Mechanical
12. Smith Reading Room
13. Memorial Hall
14. Circulation
15. Card catalog
16. Index/reading
17. Government documents
18. Inter-library loan office
19. Davison Room
20. Office
21. Data base
22. Librarian's office/reception
23. Develin Room
24. Open to below
25. New stacks
26. Listening
27. Dubbing
28. Music archive
29. Seminar room
30. Staff lounge
31. Computer room/study/reception

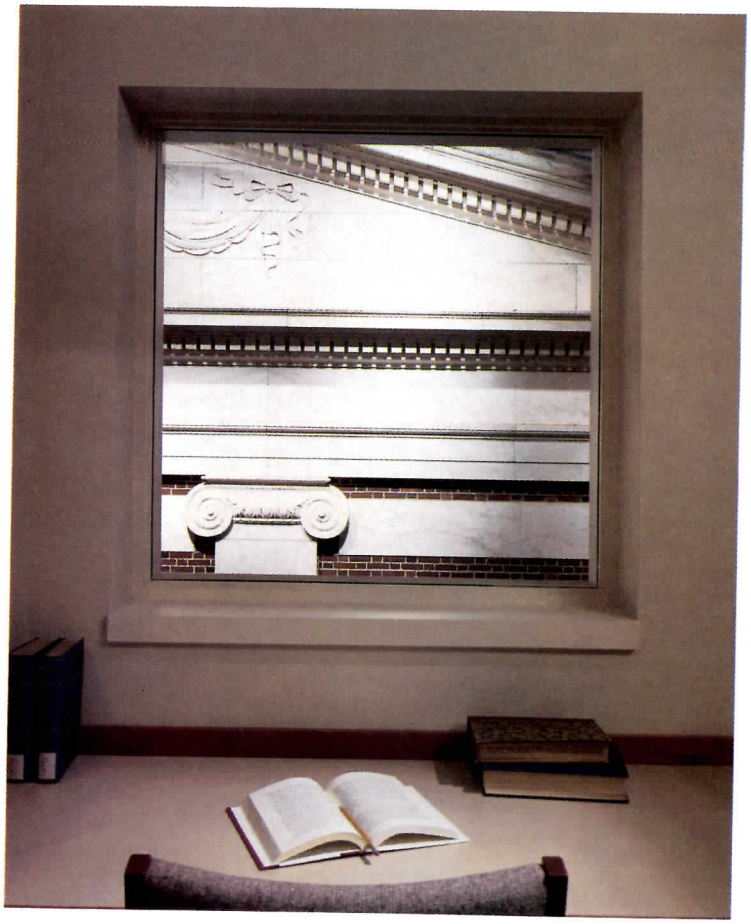






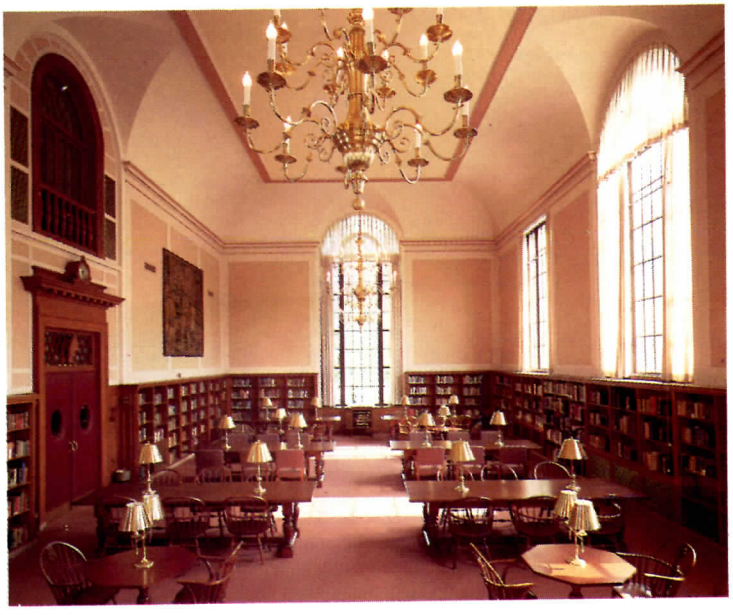


The admirably simple plan moves from reception hall to reference atrium by way of corridors around the stack block, with subsidiary functions on either side. The architects contrived the three-story-high reference atrium (opposite), while adding 300 study spaces, in part by filling in the imposing but inefficient 15-foot-high "super-corridors"—and every other unassigned cranny, plus an attic floor (not shown)—with carrels or shelving. Again using the old to enhance the new, they salvaged stout oak study tables and brass lamps for the reference room. And ignoring the shibboleths of library illumination, they relied wherever possible on downlighting and task lighting that gives the scholar a private pool of brightness, augmented in the reference room by little half-round-shaded bookshelf fixtures.



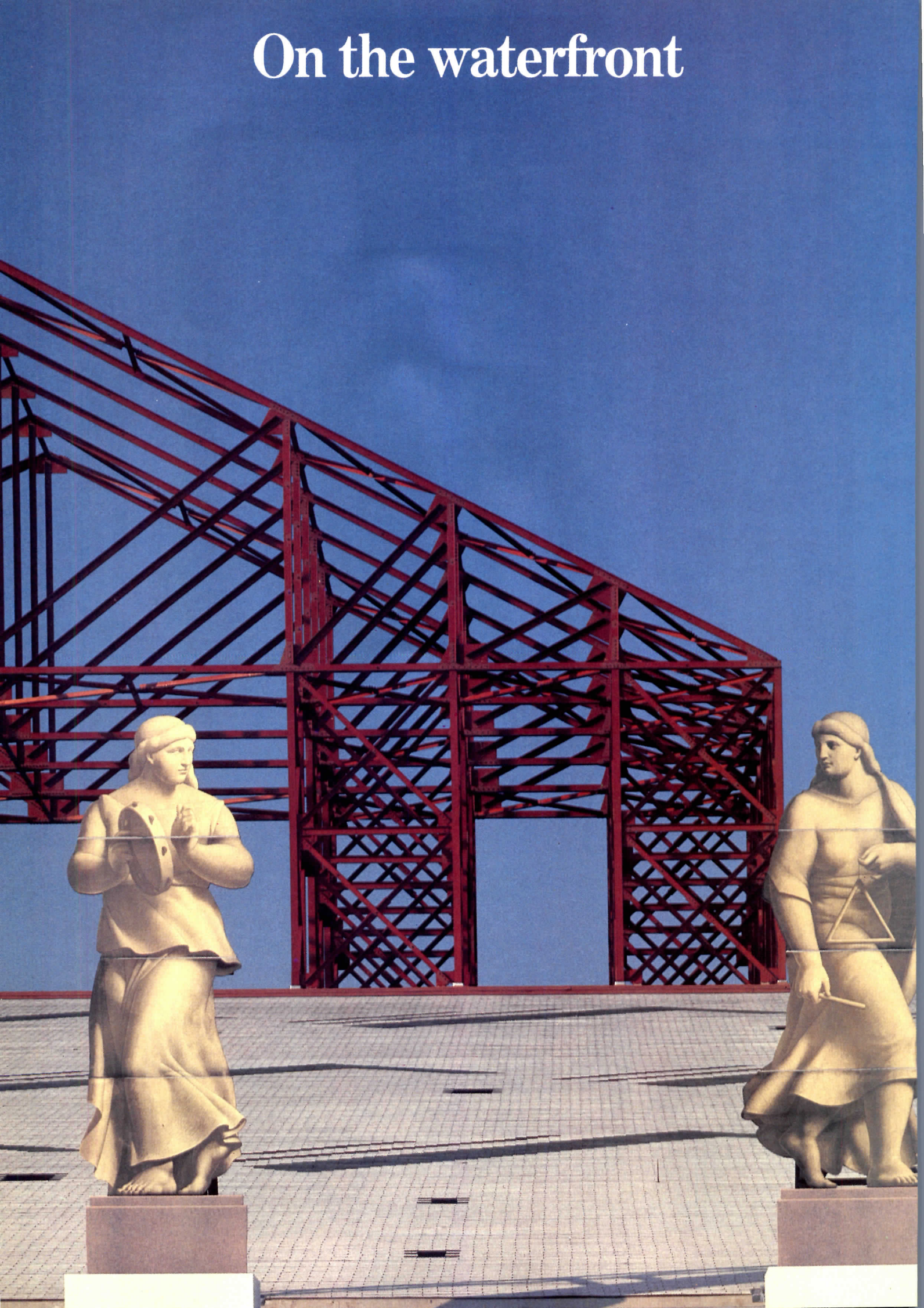
Foote's own shibboleth, though—play with light and transparency—is indulged: openings in the corridors marching to the rear wall converge on tiny oculuses and tinier attic windows; from a third-floor bridge (top) matched, dentil-like windows look out to Andrus Field and in to the facade that once fronted it; in the reference room, students in suspended, glass-caged reading rooms (above) survey the field through a grid layered against the outer windows, with side glances to the atrium. The multiple vantages framing it also heighten the theatrical impact of the classical facade. Intended for viewing from afar, its rough-hewn details acquire at 6 feet (or 16) a surreal grandeur oddly combined, as an admiring recent graduate notes, with intimacy: "You can walk through its windows and stroke its marble."

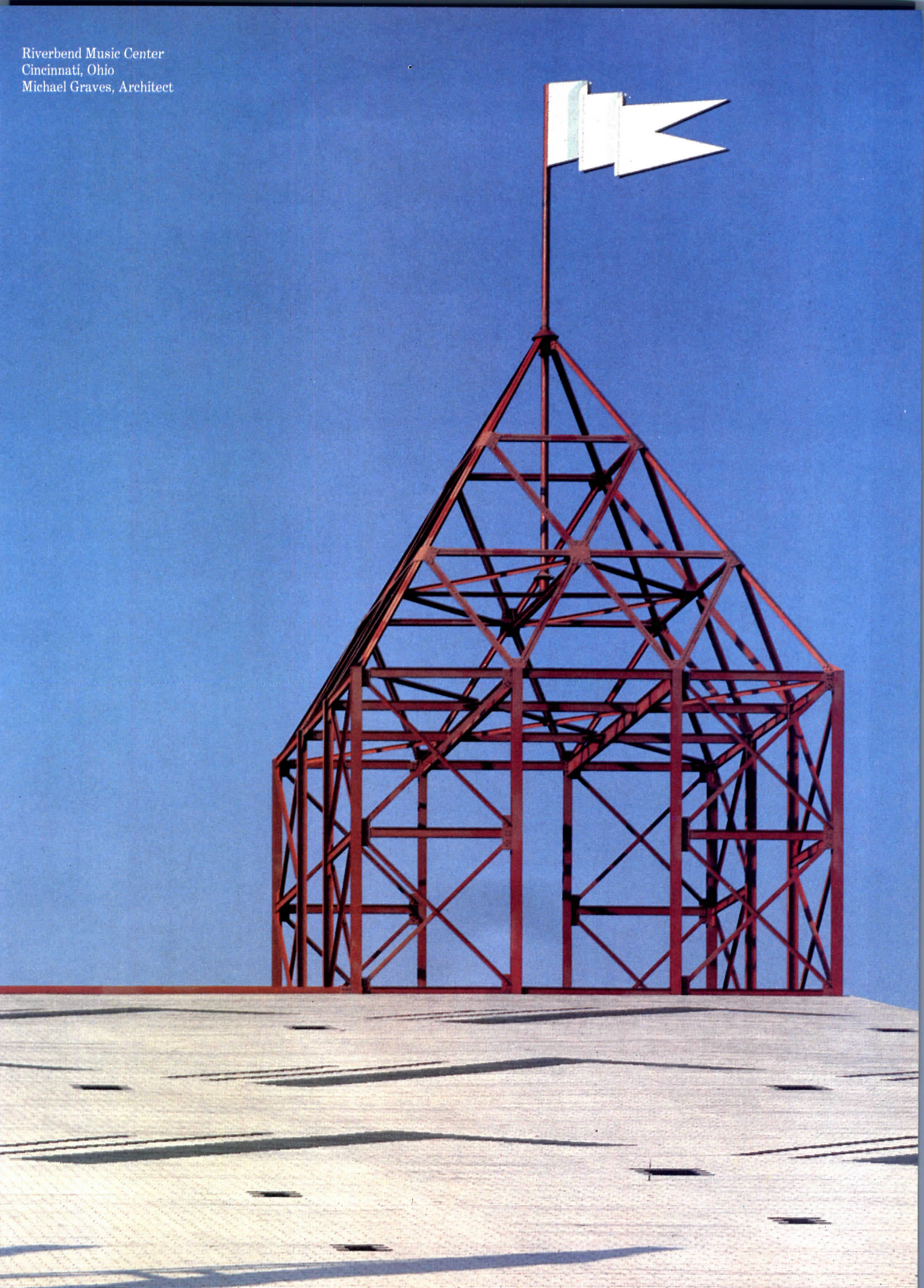
"The trick," Foote says, "was to make the old building more efficient so the new one could be smaller." The architects did, and it is—by half the college's first space estimate. The greater trick was to do so (and also revamp the mechanical systems) while preserving the important period rooms—a feat achieved "by shuffling the smaller pieces" to rationalize their organization, using found space wherever found, and exploiting the high ceilings with such devices as lofts in the microforms department and rooms-within-rooms in the special-collections area (ground floor plan). Many of the spaces needed only cosmetic work—"repairs and a coat of paint," according to Foote, who in fact stitched them together with carefully thought out and beautifully executed transitional details—but the more splendid rooms were fully restored. Memorial Hall, the imposing reception room (opposite), for example, was rescued from years of grime obscuring its ornate elegance, a maze of shelves and tables blocking the circulation desk (now relocated), and the crowning indignity of a copier stuffed in a corner once graced by a palm. The more sedate Smith Reading Room (above right) was similarly scrubbed and polished and painted in modulated tones of rose to set off white trim and "used" tables and lamps refurbished and joined by new seating. The consistent attention to detail is evident even in the basement, where the old foundation is exposed in newly encircling corridors, and a piece of the balustrade removed when the windows of the original classical facade became doorways adorns the windowed wall between the periodicals reading room and the technical services area (right).



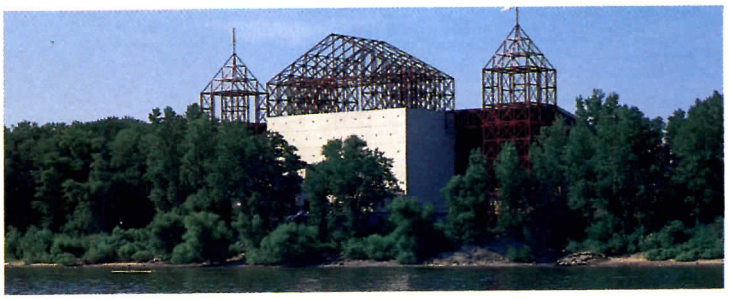
Olin Memorial Library
Wesleyan University
Middletown, Connecticut
Owner:
Wesleyan University
Architects:
Perry, Dean, Rogers & Partners—Steven M. Foote, principal-in-charge; Frederick K. Read, project architect; Janet Stegman, Martha Pilgreen, Bruce Hutt, project team
Engineers:
Boston Building Company (structural); Dubin-Bloome Associates (electrical)
Consultants:
Fisher & Marantz, Inc. (lighting); Cavanaugh-Tocci (acoustics); Wolf & Company (cost estimating)
General contractor:
The E&F Construction Company

On the waterfront





Riverbend Music Center
Cincinnati, Ohio
Michael Graves, Architect



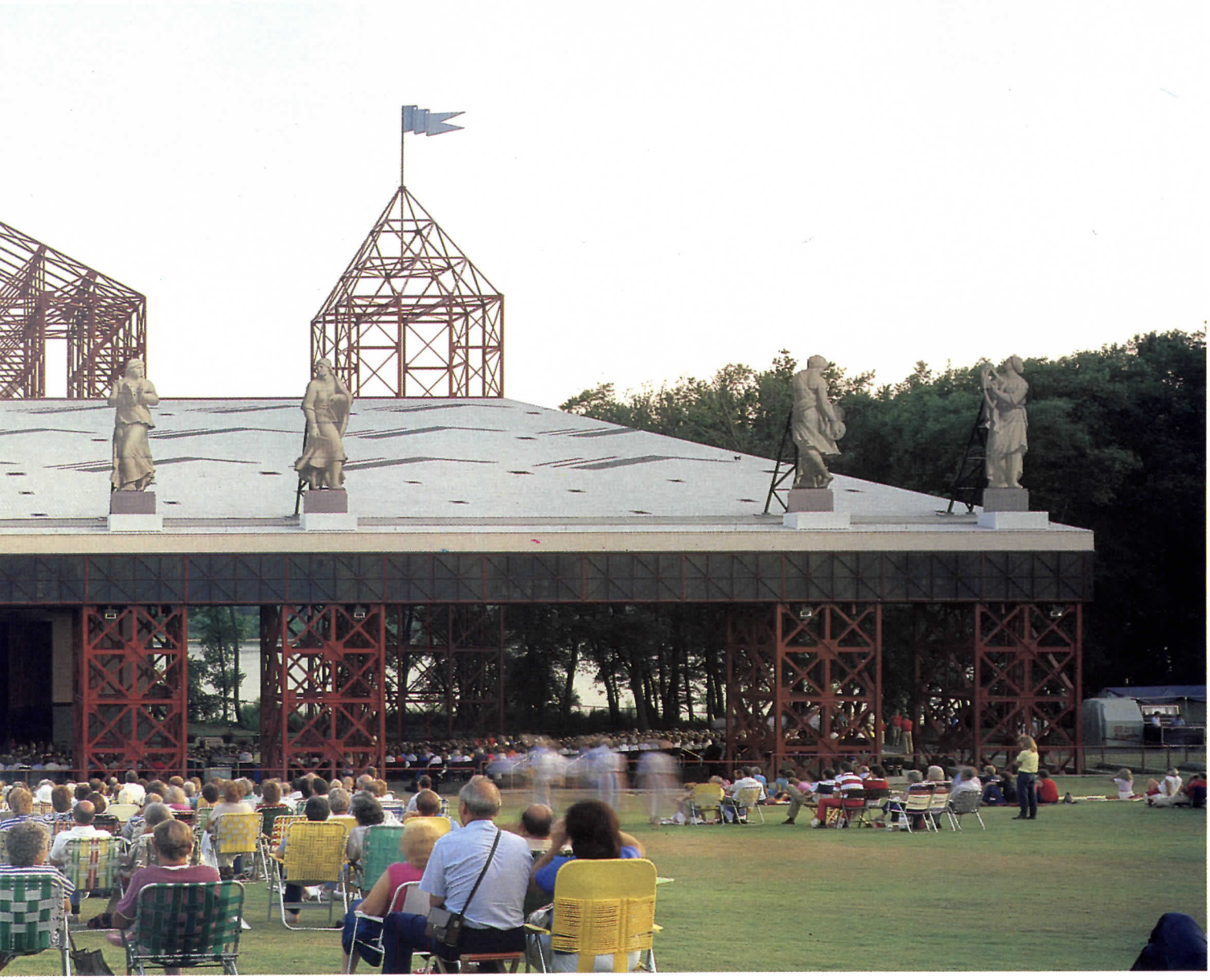
©Paul Warchol photos

On a spring day in Cincinnati, Michael Graves is more than likely to find the Riverbend Music Center under water. No matter: By early summer the 5,000-plus plastic seats will have dried off, the dressing-room windows will have been unboarded, and the electrical and sound-system wiring (94 miles of it) will have been lowered from the ceiling in time for the reopening of the summer home of the Cincinnati Symphony Orchestra. The siting of Riverbend on a flood plain was no accident; in fact, the 15-acre lot along the Ohio River was donated by a local philanthropist, who envisioned the swampland transformed by an open-air music hall. Located 13 miles east of downtown on Old Coney Island, the pavilion replaces an amusement park that in its heyday had rides and attractions to rival its East Coast namesake. In addition to hosting a brief season of orchestral concerts, Riverbend provides a temporary spotlight to performers ranging from Jean-Pierre Rampal to Linda Ronstadt, Pat Boone to the Eurythmics, and Liberace to Pete Seeger—a lineup much in the spirit of the "come one, come all" extravaganza that once stood on the same ground. Riverbend's program offers something for everyone, and its architecture is equally eclectic.

The challenge of waterproofing the pavilion and counterbalancing the sonic loss experienced during alfresco performances were met without apparent compromise to Riverbend's fanciful imagery. (For details on Riverbend's acoustical design see pages 130-133.) Set into a grassy hillside that supplies additional room for spectators, and bounded by a 660-foot-long colonnade (right), the Riverbend pavilion looks like some castle out of a fairy tale. Having graduated from the University of Cincinnati, Graves was particularly in tune with the milieu. Influenced by the forms of the truss bridges spanning the Ohio River and the Victorian steeples of Music Hall, the orchestra's permanent downtown home, Graves's architectural "references" at Riverbend are unusually to the point. The painted concrete box, framed by latticed towers and capped with steel flags, is right at home in the idyllic waterfront setting. "It's not a controversial project," admits Graves, perhaps with welcome relief, since for the most part his work has met with anything but ready acceptance. But for those who may fear, or rejoice, that Graves's penchant for architectural storytelling has dulled, the figures on the roof will offer evidence to the contrary. Unwilling to sacrifice the "facade" to the basic necessities of an open-air pavilion, Graves made the enormous roof a decorative backdrop for eight 20-foot-high "statues." The result is a false front more typical of a Western movie set than a theater for live-audience performances, which

The J. Ralph Corbett Pavilion at the Hulbert Taft Jr. Center for the Perfoming Arts, as Riverbend is formally called, was named for the principal contributors to the building fund. The former is a Cincinnati entrepreneur, who made his fortune on a patented door-chime and was perhaps eager to repay his debt to the music business; the latter is a local philanthropist and a descendent of our 27th president.

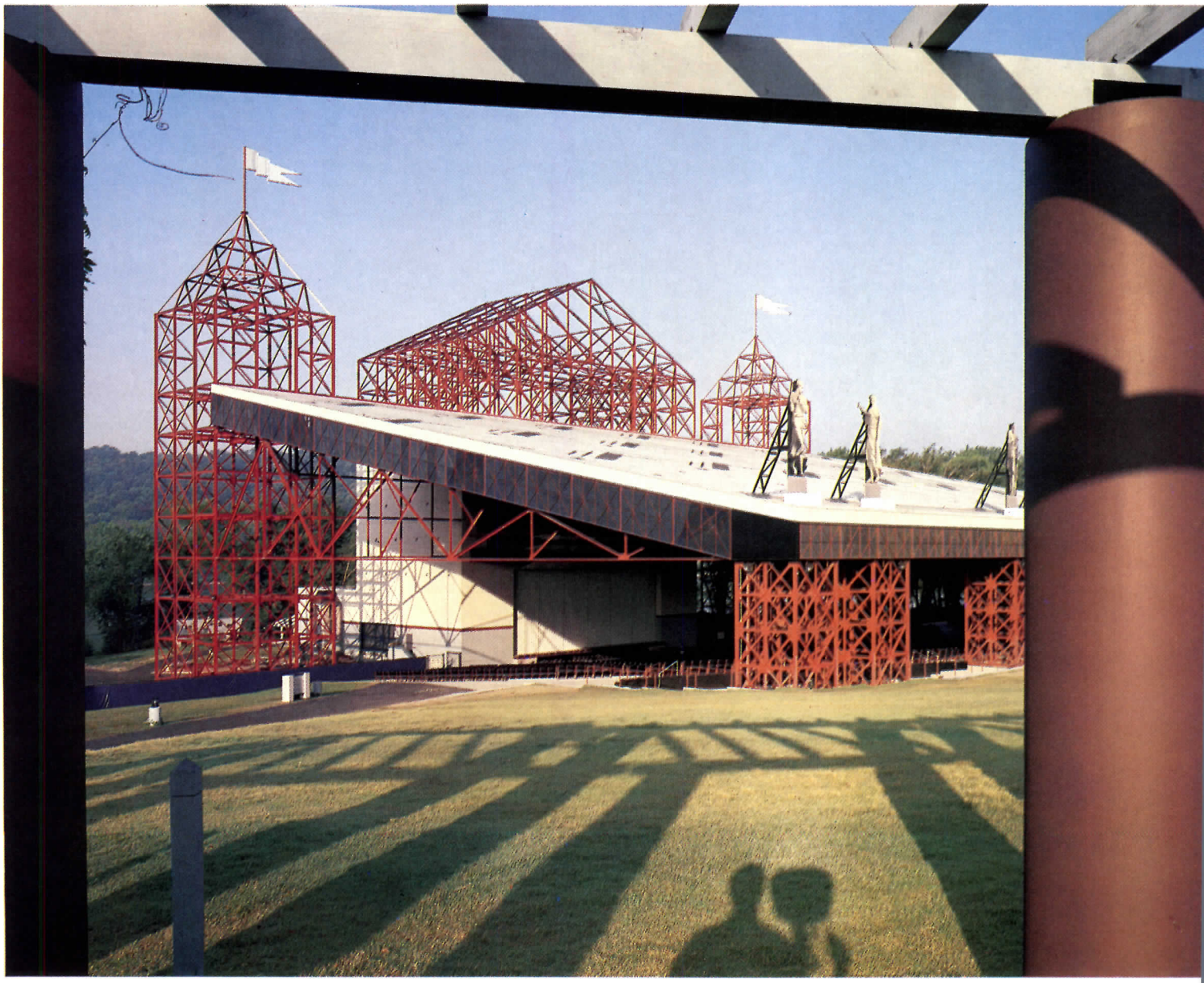
Located on a bend of the Ohio River, the pavilion was designed to withstand spring's rising waters. The concrete block (left), which contains generous-size dressing rooms and offices, forms a retaining wall to the eroding shores. On more popular nights, the audience is spread from the front lawn to the back water, where people anchor their boats for a free sampling of the evening's program.

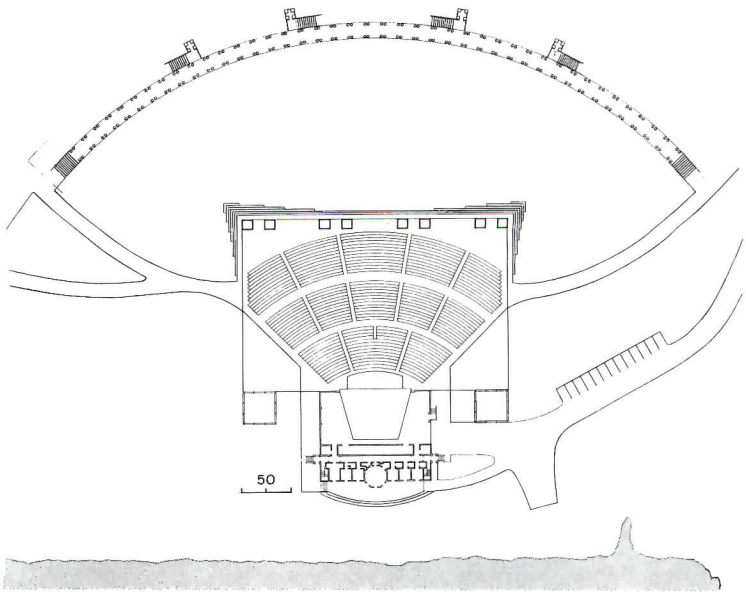


supplements the pavilion's narrative potency. Inspired by 18th-century *grisaille* paintings, whose seemingly full figures fooled even Graves on a recent visit to a Bavarian church, the architect enlisted New York artist Edward Schmidt to design billboard-like sculptures that would stand, inexpensively, as symbols for the program. "I know what three-dimensions cost," insists Graves, who also knew that the modest $7.5-million budget did not have what it took. After dismissing the idea of modeling the cutouts on composers (prompted by the Cincinnati Symphony Orchestra board's inability to agree on exactly *who* the top eight composers of all time were), or on instruments, Graves and Schmidt decided to create their own version of the musical muses. Schmidt's designs were translated into elaborate silkscreens that were mounted on porcelain enamel panels by printmaker John Nichols. Ancient-style instruments in hand, the octet strike suggestive, close-heeled *contrapposto* poses, and their columnar shape recalls the caryatids supporting the Erechtheum's Porch of the Maidens (in this case, however, the draped female figures hold up only air). Whether the evening's musical fare is classical, "easy listening," or hard rock, the rotund ladies march along the cornice line, stomping to a distant beat of their own making. *Karen D. Stein*

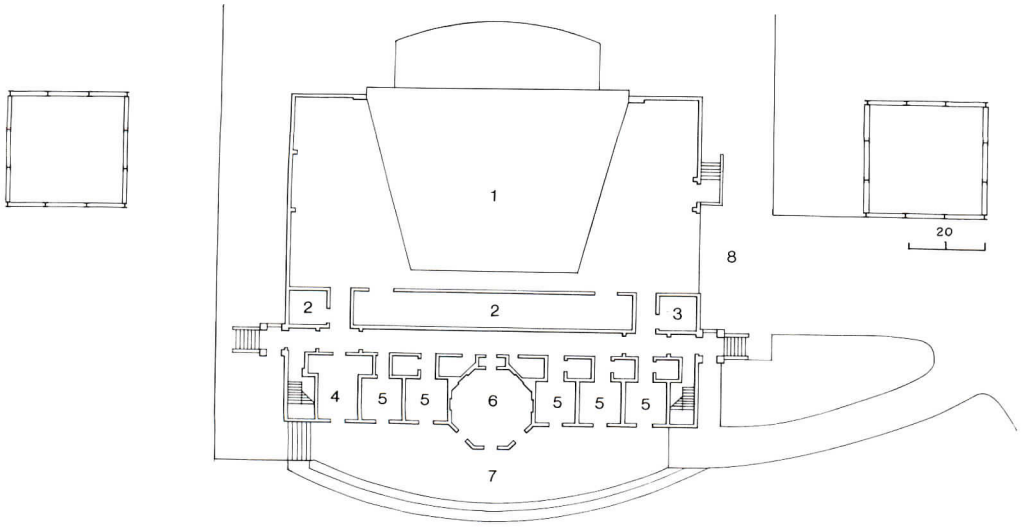
Although Riverbend celebrated its official opening on July 4, 1984, the pavilion was not entirely complete until July of this year, when the eight 20-foot-high figures were finally placed on the roof. The "statues," along with the 660-foot-long semicircular colonnade that forms an end-piece to the grassy berm, contribute to Riverbend's stylistic cacophony. Concession stands, public bathrooms, and offices, entered from the parking lot, are housed inside the pergola, providing a humorous twist to Graves's classical reference. The front lawn can accommodate over 10,000 spectators (in addition to the 5,000-plus seats under the roof), who come well-prepared for an evening of entertainment with folding chairs and picnic dinners in tow, and its contours mimic the controlled slope of an indoor performance hall.

Although Riverbend may conjure up visions of ephemeral outdoor tents, don't let the imagery fool you. The open-truss steel columns and towers, which increase the opportunities for river views, and the flat statues are decidedly permanent. However, the castle-like assemblage set into a lush backdrop does invite fantasy, as our photographer, who couldn't resist being immortalized in the sweeping panorama, will attest (below).





Riverbend Music Center
J. Ralph Corbett Pavilion
Hulbert Taft Jr. Center for the Performing Arts
Cincinnati, Ohio
Owner:
Cincinnati Symphony Orchestra
Architect:
Michael Graves, Architect—Michael Graves, principal-in-charge; Thomas Hanrahan, job captain; David Teeters, project manager; Karen Wheeler Nichols, associate-in-charge; Yossi Friedman, Nick Gonser, Robert Marino, Victoria Meyers, Anita Rosskam, Steven Sivak, and Keat C. Tan, project team
Associated architects:
Carl Strauss and Associates—Ray Roush, project manager
Engineers:
DeSimone Chaplin and Associates (structural), Lorenz and Williams (mechanical/electrical/and civil)
Consultants:
Christopher Jaffe (acoustics), Roger Morgan Studio (theater)
General contractor:
Frank Messer and Sons—Peter Strange, project manager
Statues:
Edward Schmidt (artist); John Nichols Printmakers (fabrication)



1. *Stage*
2. *Storage*
3. *Office*
4. *Green room*
5. *Dressing room*
6. *Lounge*
7. *Terrace*
8. *Loading dock*

Sounding out Riverbend

Riverbend Music Center
Cincinnati, Ohio
Michael Graves, Architect

©Paul Warchol photos

By Mark Holden

Michael Graves's pavilion (preceding pages) is not only a viable, successful concert hall for the Cincinnati Symphony Orchestra but also a multipurpose, 5,000-seat vehicle for the Cincinnati Opera, touring Broadway productions, as well as country-and-western and rock-'n-roll concerts. Jaffe Acoustics, Inc., Riverbend's acoustical consultants, brought to this handsome new music center lessons learned from its work at Blossom Music Center, Concord Pavilion, Ravinia, and other outdoor pavilions. Mark Holden, a principal in the firm, describes the design of Riverbend as the first fully integrated, high-tech outdoor multipurpose performing arts pavilion using ERES (electronic reflected energy system), while discussing the center's other acoustical applications.

Traditional symphonic music was written for and performed in "live" reverberant rooms. The liquidity and resonance of traditional concert halls enhance the music experience for audience and musicians alike. Unfortunately, that same wonderful environment, which creates warmth and resonance in symphonic music, can cause havoc with amplified performances. High power speakers can fill the reverberant space with sound energy, creating a boomy, muddy performance instead of the tight, crisp, modern sound one experiences in recordings done in studios. The requirement of a variable acoustic environment for symphonic, operatic, and amplified performances within the confines of an outdoor, seasonal shed required imaginative solutions.

The key elements required for symphonic performances are reverberation, warmth, and early reflections in a subtle balance. A different balance, one with less reverberation and warmth, is needed for popular programming. The variability is achieved at Riverbend through a combination of physical acoustics and the ERES electro-acoustic system. ERES is not amplification. It does not affect the direct sound from any source on stage. Rather it produces three-dimensional tuned reflections emanating from a multitude of directions identical to the "natural" reflection that would occur were the real surfaces of a concert hall actually there. For example, early reflection speakers are affixed to the underside of a catwalk (photo above). From these devices, carefully delayed, shaped replicas of the direct sound are produced, much as a large overhead sound reflecting surface weighing many tons would provide. (Such a reflector would be more expensive and would lack the fine adjustment capabilities possible with calibrated controls.)

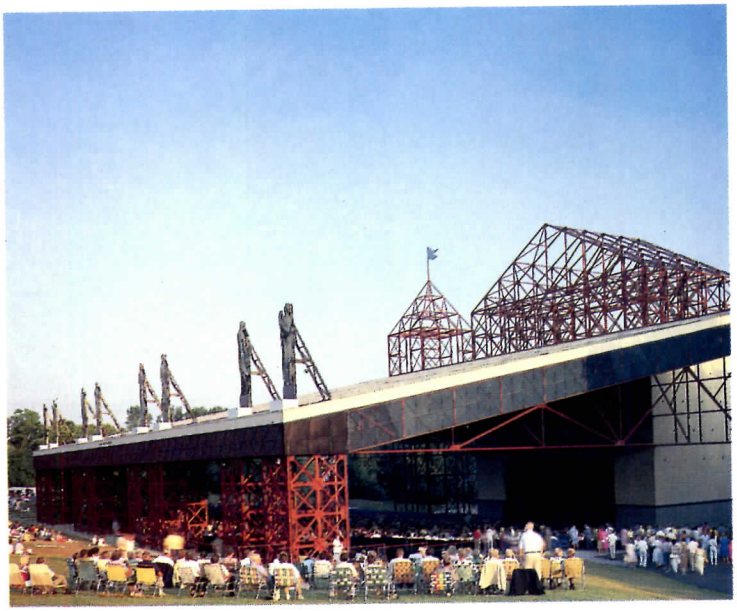
In effect, ERES creates an invisible analogy of a smaller, narrower concert hall of carefully planned characteristics within the Riverbend pavilion. Early reflections are provided simulating the surface sizes, shapes, and materials characteristic of the finest halls. Warmth is added, analogous to halls such as Carnegie, where low frequencies bloom and increase in level after the first 60 milliseconds, then gradually decrease in level after the first few hundred milliseconds. Reverberation, less than optimal in a space with no side or rear walls, is augmented providing liveness and body reminiscent of the great concert halls. With ERES off, the pavilion's acoustics are more sympathetic to amplified events.

Critical to any musical performance facility today is the sound reinforcement system, particularly at a pavilion where the lawn audience's (10,000+ people) entire experience comes via the system. Riverbend's sound system was custom designed to meet not only the widely varying program but also the harsh condition of yearly floods (50-year flood levels 30 feet above the stage!).

The reinforcement system within the pavilion was designed for a range of uses from subtle amplification of soloists to heavy metal rock 'n roll. It consists of six primary speaker clusters mounted on the catwalks for ease of service. Each cluster is tri-amplified with the addition of sub low frequency (SLF) supplements for a total of 1600 watts each. Because of the flood conditions, all amplifiers are located at the catwalk level along with their connectors and power (plan diagram page 133). The main sound reinforcement console position is semipermanently located at the pavilion rear. At season's end, all sound cables retract into the ceiling, safely above the ice floes and logs.

The lawn system is similar to the pavilion system in concept: 12 tri-amplified speaker arrays with sub low frequency supplements are located behind the sound transparent grilles and roman crosses that comprise the pavilion fascia (lower photo, page 132). Most listeners are bathed with sound from three or more arrays because of their tight spacing along the fascia. This creates more than extra sound punch for the lawn; it tends to enlarge the apparent speaker location by providing multiple replication of the image at the listener, much as ERES reflection patterns tend to "fatten" symphonic sound.

Now in its third season, Riverbend has held almost every type of musical performance for which it was acoustically designed, and has turned out to be an acoustical, as well as a popular success.



To create an "electronic architecture" where an architecture of walls could not exist, Jaffe Acoustics developed ERES (electronic reflected energy system). The ERES at Riverbend employs six tiny flush-mounted microphones, two at the rear of the concert enclosure for chorus, two at the stage front for overall balance, and two in the forestage reflectors for soloists (plan diagram, opposite). Signals from these devices are processed, shaped, and set at precise calibrated levels. Outputs are sent to either the early reflection speakers on the catwalks and at the pavilion rear, or to the warmth and reverberation sections in the stagehouse where a patented reverberation device creates multiple replications of the input signal, shaped to augment the pavilion's own reverberation for liveness, liquidity, and immersion. (Here, reverberation is defined as the time for sound to diminish by 60 decibels). This state-of-the-art system provides early reflections by simulating surfaces correctly positioned for ideal reflections in all parts of the pavilion, thus augmenting clarity, articulation, and brightness. In compensation for the pavilion geometry, ERES provides the tonal "body," richness, and the bloom of the bass tones, which together are critical to a positive symphonic experience. The cohesion and majesty required for symphonic music was developed through coupling the reverberation in the concrete stagehouse with a lightweight fiberglass concert enclosure. In addition, the roof of the pavilion was made of 3-inch-thick wood decking for superior sound reflection. To solve the problem of providing a long reverberation time for symphony and a shorter one for amplified music, permanent sound absorption panels were affixed to the rear portion of the ceiling, and reverberation augmented by the ERES was utilized. When the ERES is on, the reverberation time is increased by approximately four-tenths of a second. Body and richness of bass tone (warmth) must develop within the space. Late-arriving low-frequency energy is produced in the concrete stagehouse volume above and around the concert enclosure and augmented through the ERES warmth system. Early reflections (sounds received by the ears during the first 30 thousandths of a second after the arrival of the direct sound) contain information essential to definition, articulation, and intelligibility of music and speech. If these reflections are not present, or occur too late, music will be dull and lifeless (even if "loud" enough). In the pavilion, early reflections are developed by the concert enclosure, the suspended forestage acoustic reflectors and the pavilion ceiling. The physical immensity of a 5,000-seat pavilion precludes the possibility that surfaces will deliver these early reflections to all seats at correct time arrivals. Therefore, the ERES early reflection system was employed to provide those reflection patterns that were lacking.

Riverbend Music Center
J. Ralph Corbett Pavilion
Hulbert Taft Jr. Center for the Performing Arts
Cincinnati, Ohio
Owner:
Cincinnati Symphony Orchestra
Architects:
Michael Graves, Architect; Carl A. Strauss & Associates, associated architects
Acoustical consultants:
Jaffe Acoustics, Inc.—Chistopher Jaffe, principal; Mark Holden, principal and project consultant; Gregory Kacherovich, concert enclosure designer; Marc L. Beningson, sound system project consultant; Chuck McGregor, sound system designer; William Lobb, ERES designer, Louise Frymann, designer

INITIAL TIME DELAY GAP

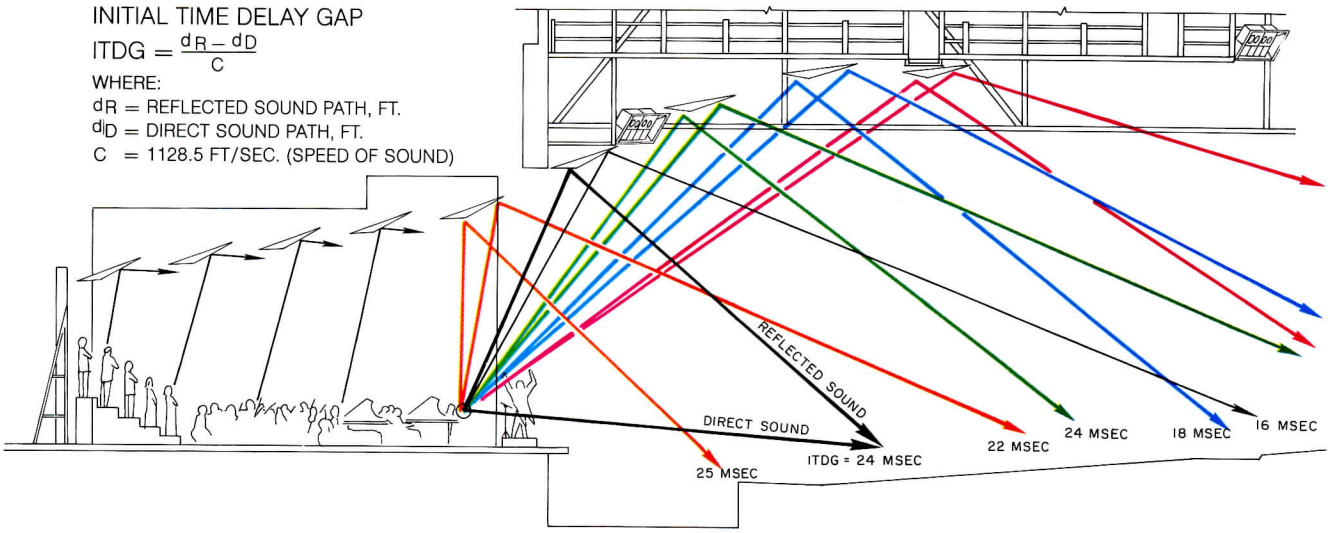
$ITDG = \frac{d_R - d_D}{C}$

WHERE:

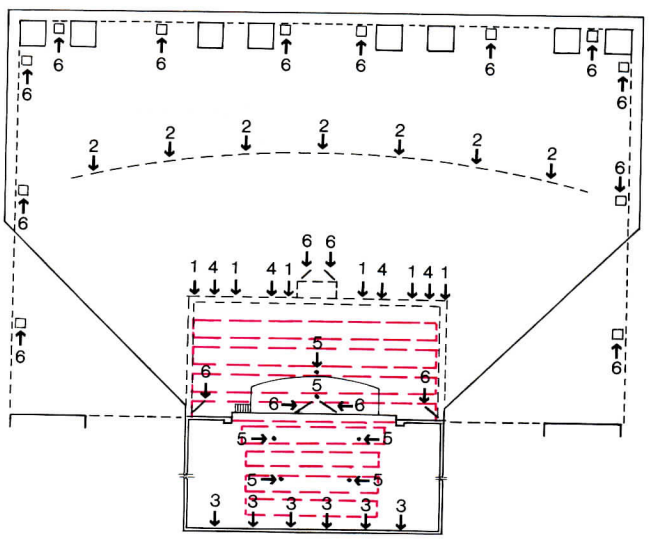
d_R = REFLECTED SOUND PATH, FT.

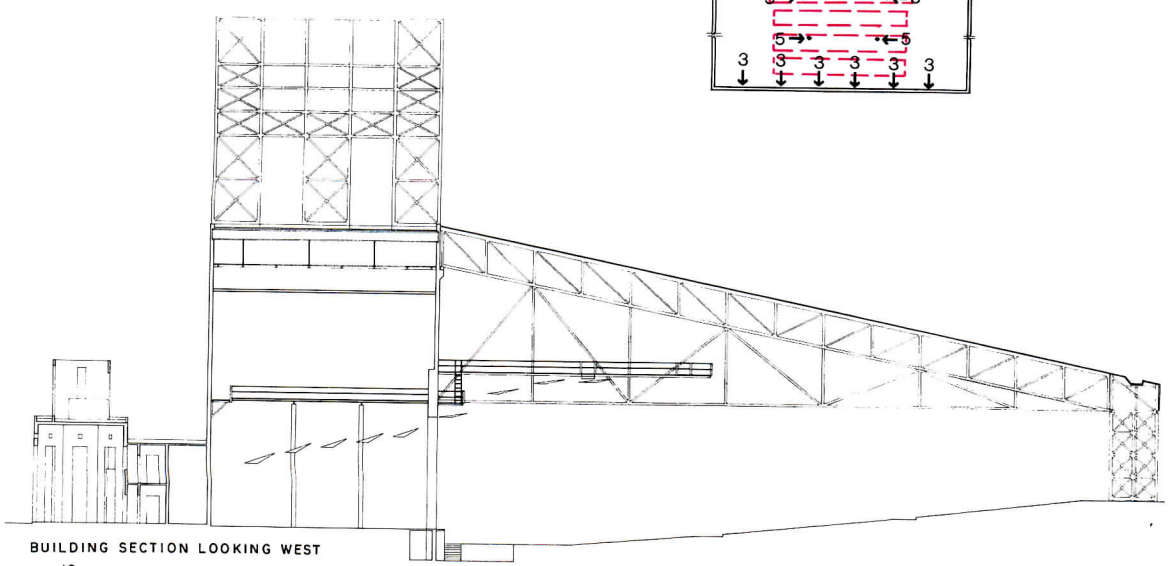
d_D = DIRECT SOUND PATH, FT.

C = 1128.5 FT/SEC. (SPEED OF SOUND)



1. *ERES microphone*
2. *Early field speaker (ERES)*
3. *Late field speaker (ERES)*
4. *Sub low-frequency speaker (ERES)*
5. *Implantation microphone (ERES)*
6. *Cluster-mounted amplification speakers*





BUILDING SECTION LOOKING WEST

10

Acoustics: handcrafted in Jamaica

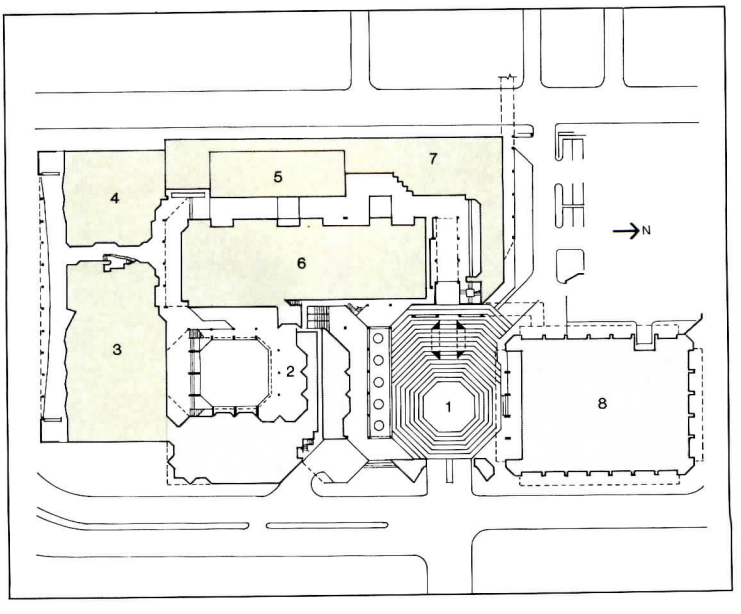
Jamaica Conference Centre
Kingston, Jamaica
Patrick Stanigar, Architect

By Mark Holden

The bustling city of Kingston on the Caribbean island of Jamaica is the economic, industrial, and governmental heart of this nation of 2 million. While famous for being the birthplace of reggae, Kingston hasn't the white beaches, waterfalls, and nightlife to attract visitors and foreign currency. The Urban Development Corporation of Jamaica (UDC) vied long and hard with larger and more established nations to attract a new body of the United Nations, the Seabed Authority, to the island. The architect in charge of the project was the U. S.-trained, UDC staff architect, Patrick Stanigar. Stanigar and the UDC staff architects and planners designed a showcase of Jamaican art and crafts while at the same time meeting the complex needs of a U. N. international lawmaking body. My firm, Jaffe Acoustics, Inc., did the acoustical design for all the simultaneous interpretation systems and acted as consultants for the many public and technical spaces.

Of course, central to the conference center facility are the conference rooms themselves. The conference hall (page 136) is the largest space with the most extensive facilities. In addition, there is a 556-seat conference room, and three meeting rooms (page 137) each of which can accommodate 156 persons. All of these spaces have state-of-the-art, six language simultaneous translation facilities, sound-isolated interpretation booths, and control rooms for complete system operation. The largest meeting room, known as the bamboo room (page 137), is the most popular of the facilities. Privacy and confidentiality are critical to many of the sensitive meetings held in the conference center. Sound isolation doors, common in this country, are expensive and rare in the Third World. As a result, we designed heavy wood doors sealing all acoustic vestibules at every conference room entrance. In these rooms and elsewhere in the building we used brightly painted woven wicker baskets containing loose bat fiberglass stuffed in garbage bags to provide efficient full frequency sound absorption. This acoustic basket concept was used in all corridors, the cafeteria, and private dining spaces and, in a flattened version, in the harbor lounge.

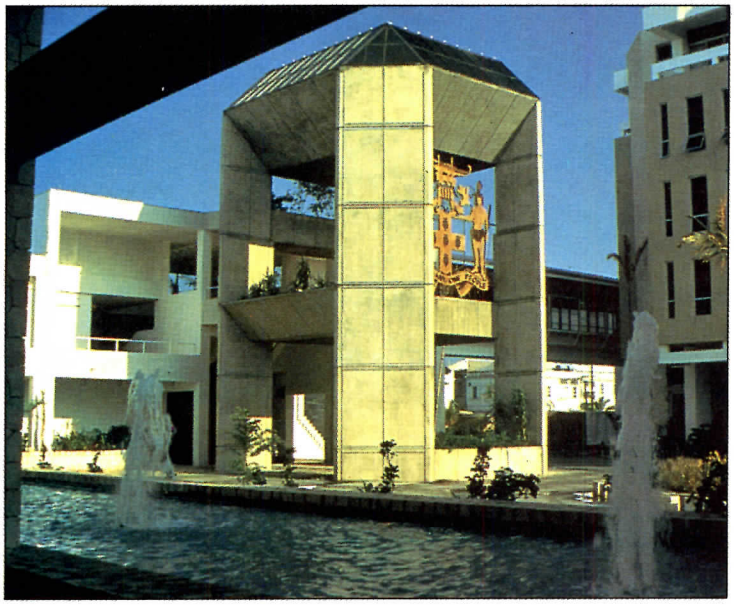
As these examples illustrate, it was clear to us that traditional solutions to providing acoustic control were too expensive, unavailable, and most importantly, not part of the overall concept of making the space uniquely Jamaican in character. The strong desire on the architect's part to use locally available materials and crafts such as bamboo, wicker, reeds, and limestone, required rethinking the formulae for room acoustics. The results, described on the following pages, are a unique blend of high-tech acoustical concepts carried out through low-tech local craftsmanship, a happy combination responsible for the building's rich playfulness.

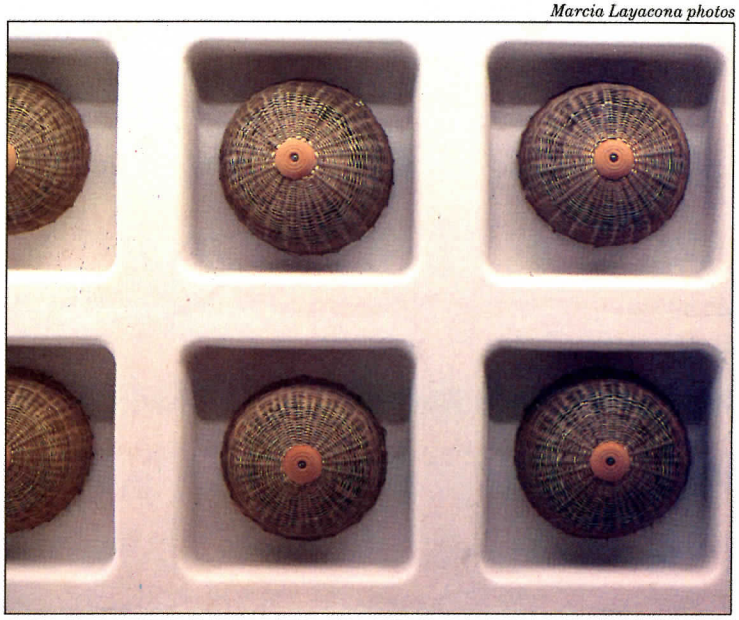


Site plan:

1. *Entry court*
2. *Dining area*
3. *Conference hall*
4. *Conference room*
5. *Caucus rooms*
6. *Meeting rooms*
7. *Support services*
8. *Secretariat*

Marcia Layacona photos



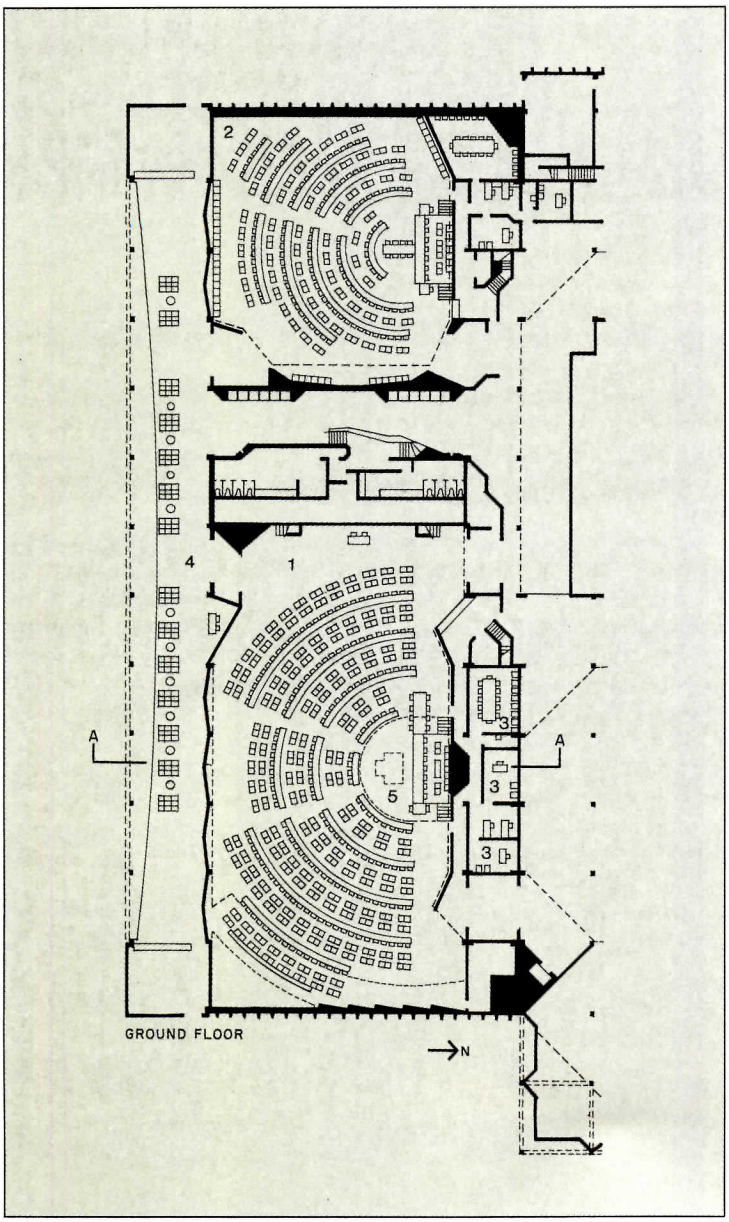


Treatment of the large public circulation and gathering places typified Jaffe Acoustics' low-tech approach. The concrete waffle slab ceiling, concrete walls, and ceramic tile floors required acoustic treatment to eliminate the boomy, cave-like sound. A common solution, the installation of acoustic tile, seemed inappropriate. Taking a cue from a wicker wastebasket Jaffe developed the "acoustic basket."

Wicker baskets, containing lightweight black plastic garbage bags stuffed with fiberglass were fixed to the center of the waffle slab coffers with stainless-steel straps and large handcrafted ceramic washers (top right and bottom left and right photos). The coffers around the sea of baskets reflect sound into the baskets where it is then absorbed. Shown at top left is the entrance court.

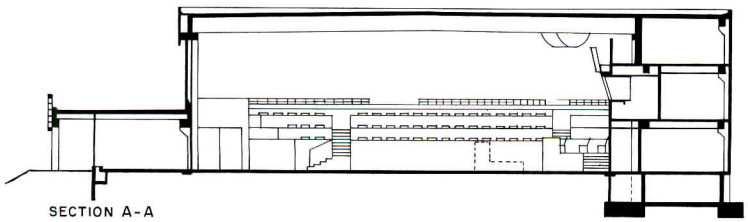
Main conference block:

1. *Conference hall*
2. *Conference room*
3. *Support services*
4. *Delegates' lounge*
5. *Portable stage*



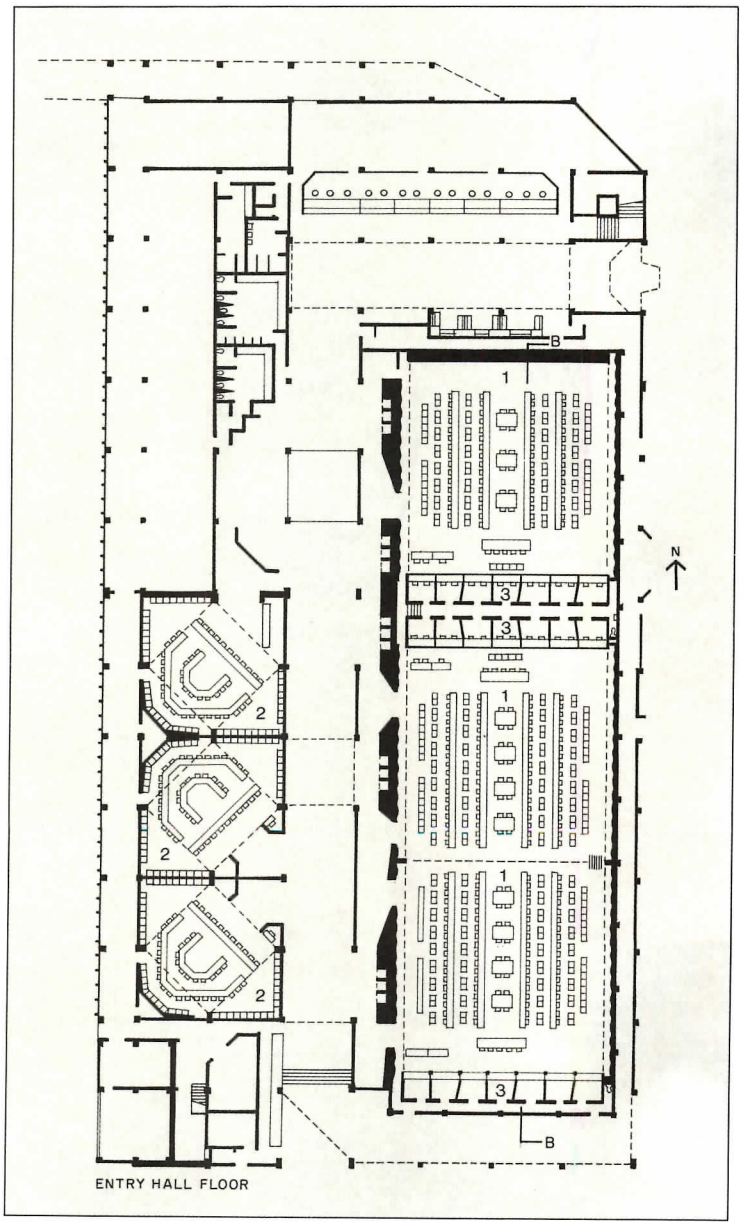
Accommodating up to 900 persons, with 241 delegates at desks, the conference hall (this page) has simultaneous translation systems for six languages and an electronic voting system, both custom designed by Jaffe. In addition to the podium, there is a portable circular stage, which is used for dramatic, music, and dance programs. Overhead acoustical reflectors provide early sound reflections to the seating area for presence and clarity while sound-absorptive fiberglass material placed on the rear walls behind giant 4- by 10-ft hand-woven wicker panels, control reverberation. The bamboo room (opposite page) and the other two meeting rooms were created within an existing concrete, barrel-vaulted warehouse on the site. To minimize destructive sound focusing from the curved vaults and to optimize the acoustic environment for ease of intercommunication required sound-absorptive materials on the underside of vaults.The use of 3-to-4-in. diameter bamboo with 2-to-3-in. gaps, makes the undulating bamboo ceiling sound transparent but appear solid. This allows sound penetrating between stalks to be partially absorbed by the two-inch thick absorptive material on the vault surfaces. Because the sound absorption does not cover 100 percent of the vault, but rather is patched 50/50, diffused reflected sound returns through the bamboo evenly, providing a warm room sound to match the warm golden bamboo ceiling. The side walls are bent mahogany plywood covered with macramé hangings. The plywood not only works as a sound diffuser, eliminating flutter echoes from parallel side walls, but also provides low-frequency sound absorption.

Jamaica Conference Centre
Kingston, Jamaica
Owner:
Urban Development Corporation (UDC)
Architects:
Design architects of the UDC: Patrick Stanigar, project architect; Hester Rousseau and Alison Morris, interior design
Mc Morris Sibley Robinson—supervising architects
Acoustical consultants:
Jaffe Acoustics, Inc.—Mark Holden, principal and project consultant; William Lobb, sound system designer; Louise Frymann, designer
Engineers:
Hue Lyew Chin (structural); ADeB Consultants (mechanical and electrical)
Kitchen consultants:
Cini Grissom Associates, Inc.
Quality surveyors:
Stoppi Cairney Bloomfield
Construction programming:
Robert Mallasch
Contractors:
Marley & Plant Ltd.

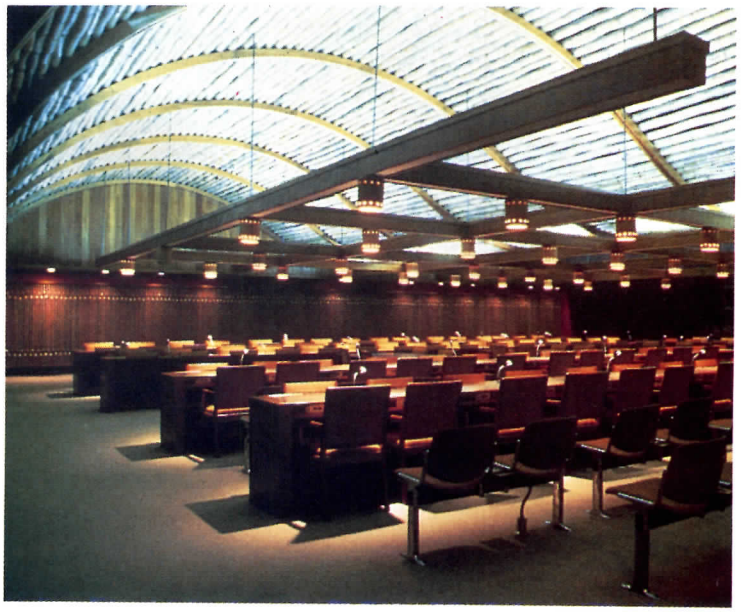


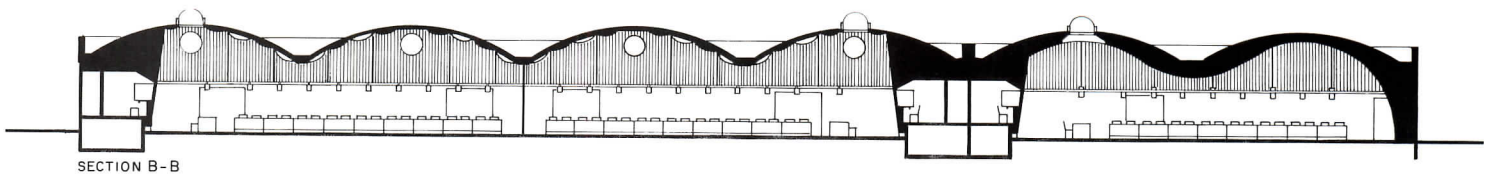
Entry hall plan:

1. Meeting room
2. Caucus room
3. Interpreters' room



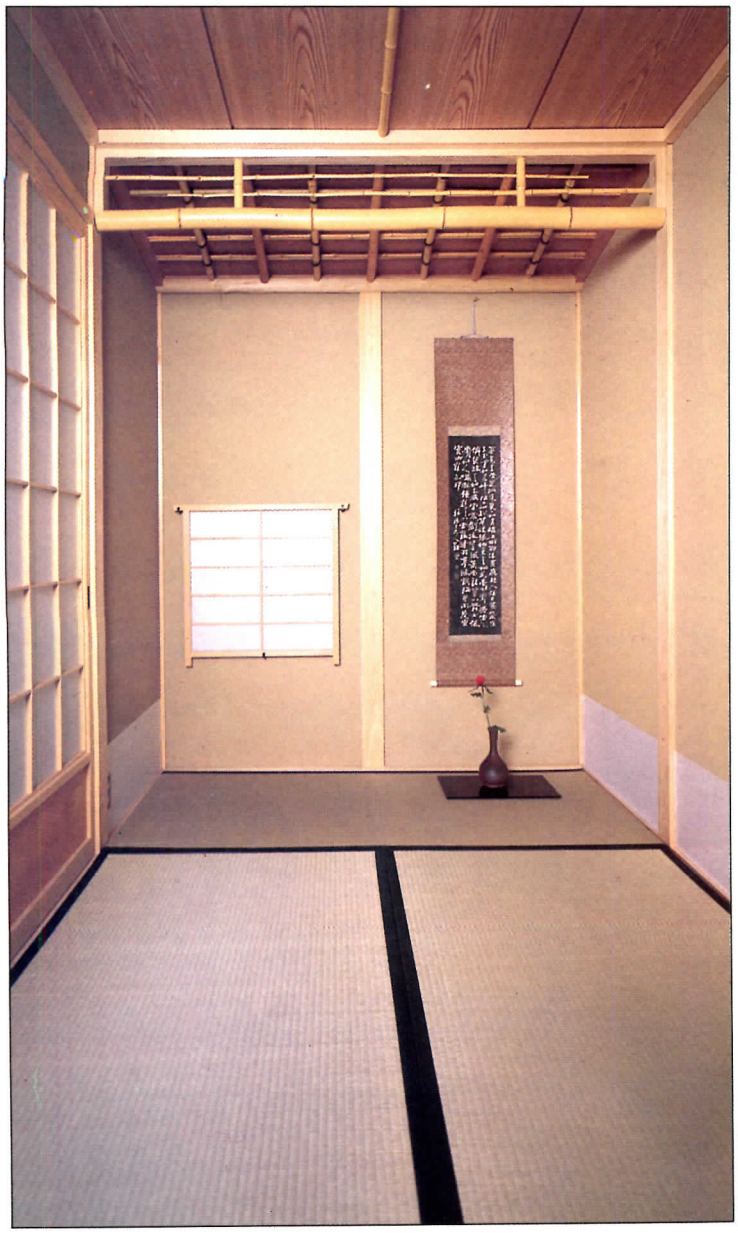
ENTRY HALL FLOOR

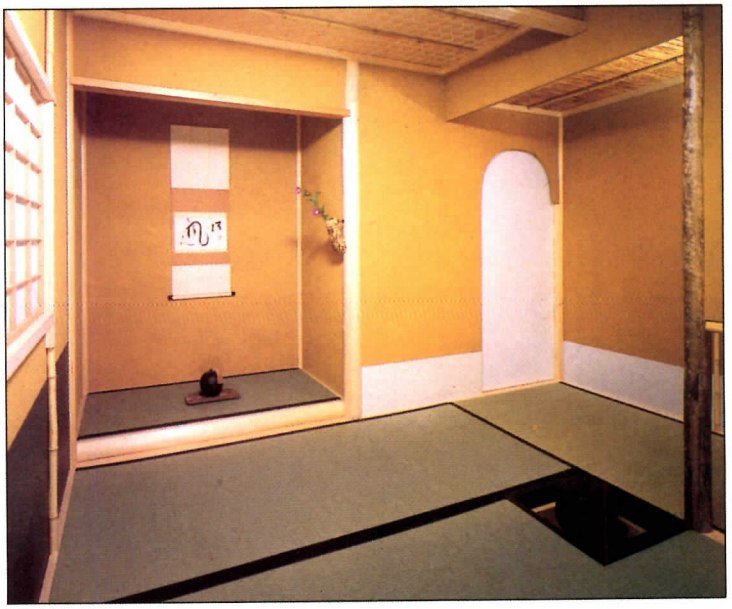



SECTION B-B

New products

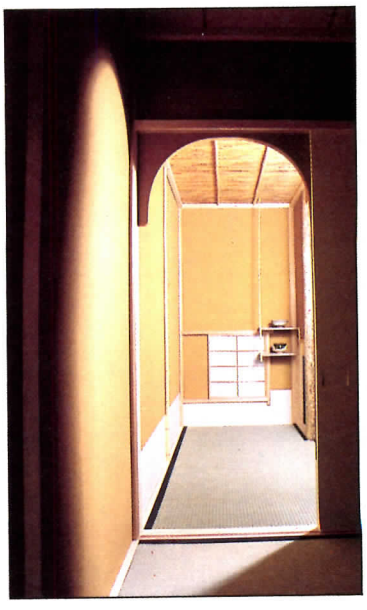
For more information, circle item numbers on Reader Service Card





Tea is served
When you hear the splash
Of the water drops that fall
Onto the stone bowl
You will feel that the dust
Of your mind is washed away.
Sen Rikyu, 16th-Century Japanese Tea Master

Designed with the ancient precepts of *Chado*, the Way of Tea, in mind, the *Space of Nippon* prefabricated, portable tea rooms (shown above) are decidedly 20th-century adaptations of the sacred *Chashitsu* (tea room). Although Japan's first tea seeds were brought from China in 805, it was not until the mid-15th century that *Chanoyu*, as the Japanese tea ceremony is called, actually began to be practiced. Performed in a small, bare room, the ritual exhibits the four virtues set forth by Sen Rikyu, Japan's renowned tea master. These virtues—*Wa* (Harmony), *Kei* (Respect), *Sei* (Purity), and *Jaku* (Tranquility)—represent an integral part of the ceremony, the central point being not so much the drinking of the frothy, green liquid as attaining a feeling of serenity. The simple design of the tea rooms also adopts these same principles. The *Chashitsu* is bare, with the possible exception of a seasonal flower arrangement, hanging scroll, or simple ornament in a *tokonoma* (alcove). The *Space of Nippon* rooms are available in six models; may be ordered in custom colors and sizes and with special options; and can be adapted to an existing room or entryway. An outdoor model for patios or gardens is also available. *Kan*, a 3-mat room (top left), is the smallest model and features a *tokonoma*-ceiling made of a bamboo-rod lattice over a woven pattern of narrow cedar strips. Two sliding, wood-lattice doors covered with a layer of rice paper serve as the entryway for both guests and master. *En* (top right), the largest model with six mats, may be specified with an optional veranda or sunken sitting well. *Kū*, another 3-mat room (bottom right), features an alcove, a separate arched entryway (left) for the tea master, a *tsuridana* (hanging shelf), and a central pillar of Japanese cedar. This model also features a *daimegiri*, or three-quarter host's mat, that is typical of the *soan* (thatched hut) style of architecture. The *Space of Nippon* tea rooms combine the raw materials, natural lighting, and spirit of design that Sen Rikyu himself would perhaps be happy to serve in. Fuji Group America, Inc., Los Angeles. *Eileen Gabriele*
Circle 300 on reader service card



What's so different about this metering faucet?

It works!

The Bradley 90-75

Until Bradley designed the 90-75, savings from metering faucets seldom outweighed the headaches.

Faucets that turn off too quickly or stay on too long, sprays that either splash or dribble, maintenance that never seems to end – the Bradley 90-75 has eliminated these headaches once and for all. It works!

Unlike many faucet designs that severely restrict an orifice to vary their metering cycles, the 90-75 utilizes a generously sized bypass orifice and variable piston stroke. The orifice is protected from waterborne sediment by two filters; one at the stop and one within the cartridge. This unique configuration assures consistent timing – at water pressures from 20 to 100 psi.

All working parts, including the flow control, are contained in a compact cartridge. Because it's hidden inside the faucet, the cartridge can't be removed by vandals. Yet if maintenance is ever needed, a new cartridge can be popped into place in seconds – just about as easily as you'd change a flashlight battery.

The 90-75 keeps a reliable rose spray pattern, thanks to a unique self-cleaning feature. Every time the faucet is turned on, water pressure forces a rubber diaphragm inside the spray former to "flex" off any mineral deposits. So the nonsplash action *stays* nonsplash.

Easy to adjust, the 90-75 can be set for cycles from 5 to 20 seconds by turning a screw – without turning off the water.

And because it's so easy to activate, the 90-75 meets all barrier-free codes.

These are just a few of the ways our 90-75 meters water better. Find out the rest by returning the coupon, by calling 1 414 251-6000, or by contacting your Bradley Representative.

Bradley 90-75 is a trade name and not an ASHRAE designation.

Bradley CORPORATION

We get the job done better.

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I'd like to know more.

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- ☐ Have a Bradley representative call to show me how the 90-75 works better.

Name/Title _____

Company _____

Address _____

City _____ State _____ Zip _____

Telephone _____

Return coupon to: Bradley Corporation, Dept. AR102 Fountain Blvd. Menomonee Falls, WI 53051.

How laminated tough design problems

The architects wanted a distinctive glazing. An appearance that would set their building apart. But that wasn't all they wanted. They also

Anaheim Hilton & Towers. Building design: Sun Cal Inc.

needed the glazing to effectively screen solar heat and the damaging effects of UV radiation on draperies, carpeting and upholstery. Tough challenge? Yes, but there was even more. The glazing also had to deliver the safety performance essential in a large, busy hotel.

The answer turned out to be easy. Laminated glass with a Saflex® interlayer.

When the building is mostly glass, you want the most beautiful glass you can find.

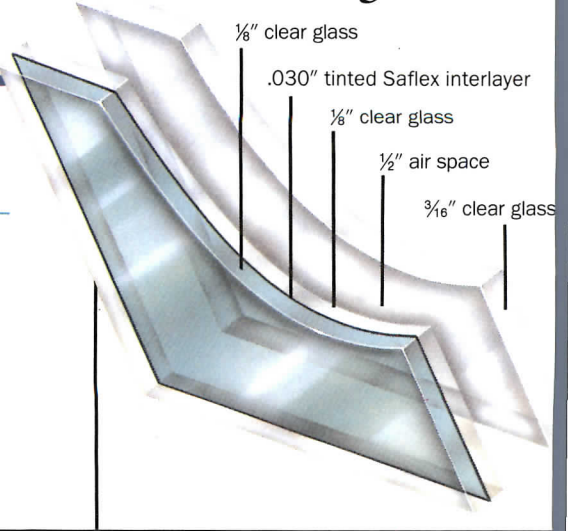
Beautiful? It was an unusual, distinctive shade of blue. And only one glazing—laminated glass with

tinted Saflex interlayer could match the desired color.

Controlling costs by controlling the sun.

Add up cooling costs and replacement of sun-faded furnishings, and you've got a sizeable expense.

Anaheim Hilton Glass Configuration



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©Monsanto Company, 1985

glass solved three for the Anaheim Hilton.

Laminated glass not only controls heat gain but screens out the effects of UV radiation as well. The solar performance that laminated glass gives in the insulated configuration at Anaheim Hilton & Towers is shown at right.

PERFORMANCE CHARACTERISTICS OF INSULATED CONFIGURATION AT ANAHEIM HILTON	
Visible Transmission	25%
Solar Transmission	29%
Ultraviolet Transmission	0.1%
Shading coefficient	0.55
U-Value	0.55
Heat Gain Reduction versus ⅛" Monolithic Clear Glass	48%

Circle 66 on inquiry card

Glass and safety have to be considered together.

The risk of impact with glass can be high in a hotel like the Anaheim Hilton & Towers which bustles with people on the go. But with laminated glass, the danger of injury from broken glass is minimized. Laminated glass has the unique characteristic of remaining integral if broken because of the adhesion of the glass to the interlayer.

If you have a design challenge for laminated glass or want more information, call 314-694-5450 or write Monsanto Polymer Products Company, 800 N. Lindbergh Blvd., Dept. 804, St. Louis, MO 63167 for a laminated glass brochure.

Laminated Glass.
The more challenges you have, the better it works.

Monsanto

SAFLEX®
PLASTIC INTERLAYER

Walker's new Triple-Service Afterset cuts the initial cost of an infloor system by up to 20%.*

*Percentage shown is the average share of total roughing-in cost for cellular raceway, in Walker's experience.

A Walker infloor system for PL (power, lighting, electronics, con cations) distribution can be the k providing the wiring capacity, fle and aesthetic appeal which busi expect from today's "intelligent" b Until now, approximately 20% of initial cost of these systems was by a network of preset inserts (ir prior to the concrete pour to allo to services at specific points).

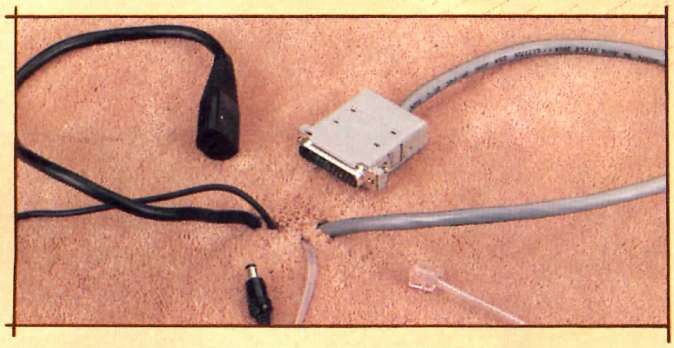
The development of our uniqu Service Afterset offers a way for developers and owner-occupant save on initial costs and still mai the inherent advantages of both

3-service access in a single recessed unit— a Walker exclusive.

Double-duplex capability.

Installs in core drilled hole af concrete is po

Shown installed on Walkerdeck™ cellular deck for steel construction.



Activation can be completely hidden, with only wires showing.

ll and Walkerdeck systems. e-Service Afterset is installed crete is poured, even after aid. **Cost savings are realized lling aftersets only when re service activations are** instead of making the larger estment for a complete system s. This option allows you to plan ding's PLEC distribution with te preset system, complete ystem, or a combination of both. **afterset offers recessed e activation in a single unit.** s Triple-Service Afterset is to bring services out of the floor from a recessed activation which can be completely hidden under carpet or fitted with flange rings which are flush with carpet or tile. So installing or relocating service activations has no adverse effect on interior aesthetics. All three services (power, data, telephone) are accessed from the same unit—a major advantage when compared with other products which require separate above-floor fittings for each service.

If initial cost has stood in the way of giving your building the most capacity and the greatest flexibility any PLEC distribution system can offer, find out more about the new Walker Triple-Service Afterset. Our infloor systems are already matching the complex needs of the "intelligent" building. Now they can also offer a more attractive match with your bottom line.

Contact us: P.O. Box 1828, Parkersburg, WV 26102. (304) 485-1611.

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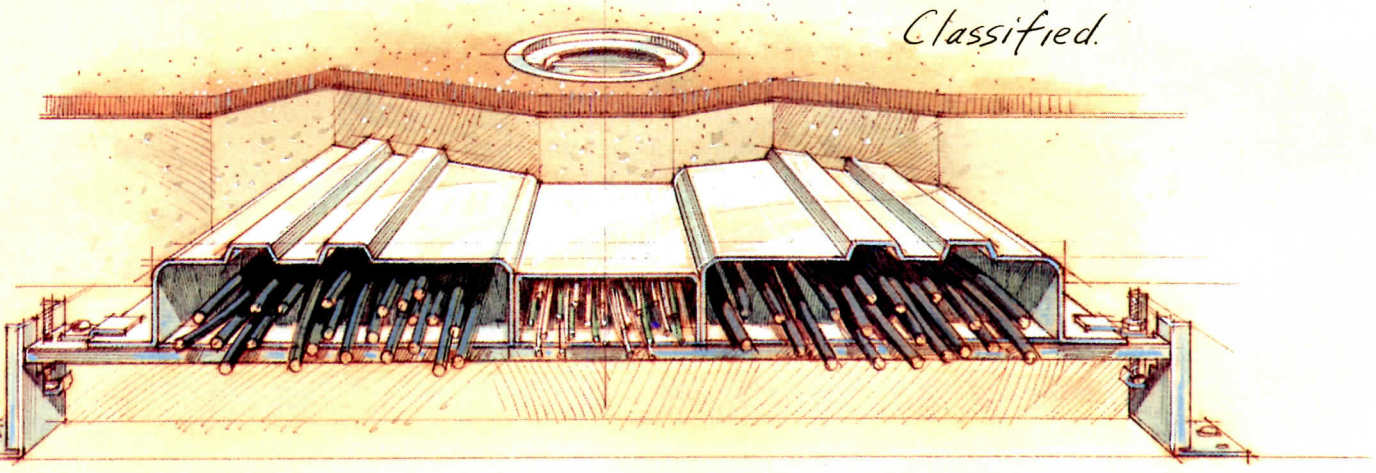
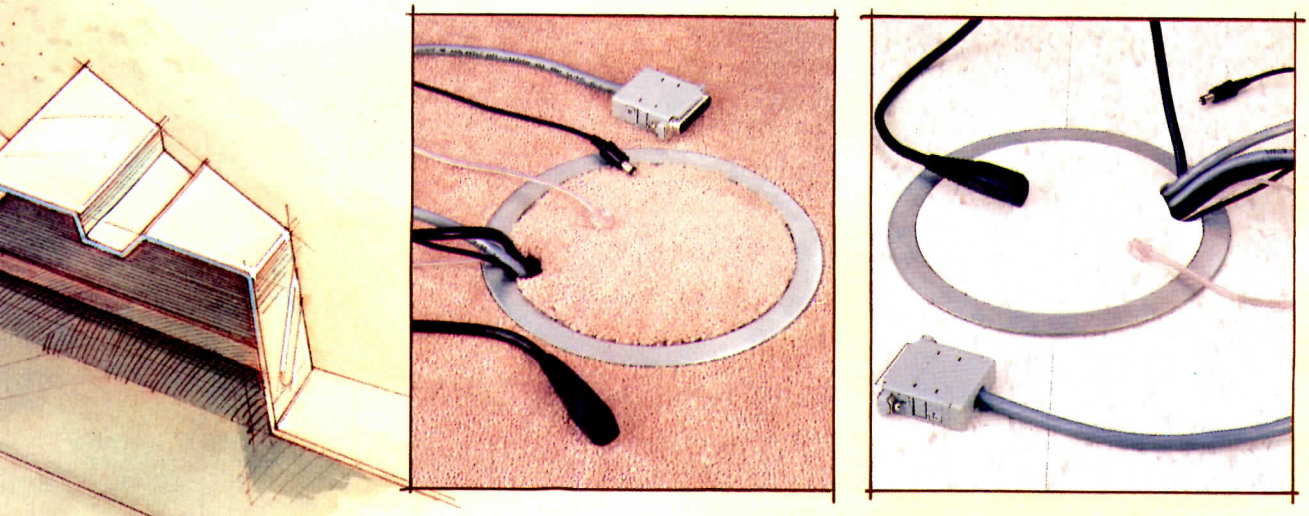
Also compatible with Walkercell™ cellular raceway for slab-on-grade or reinforced concrete construction.

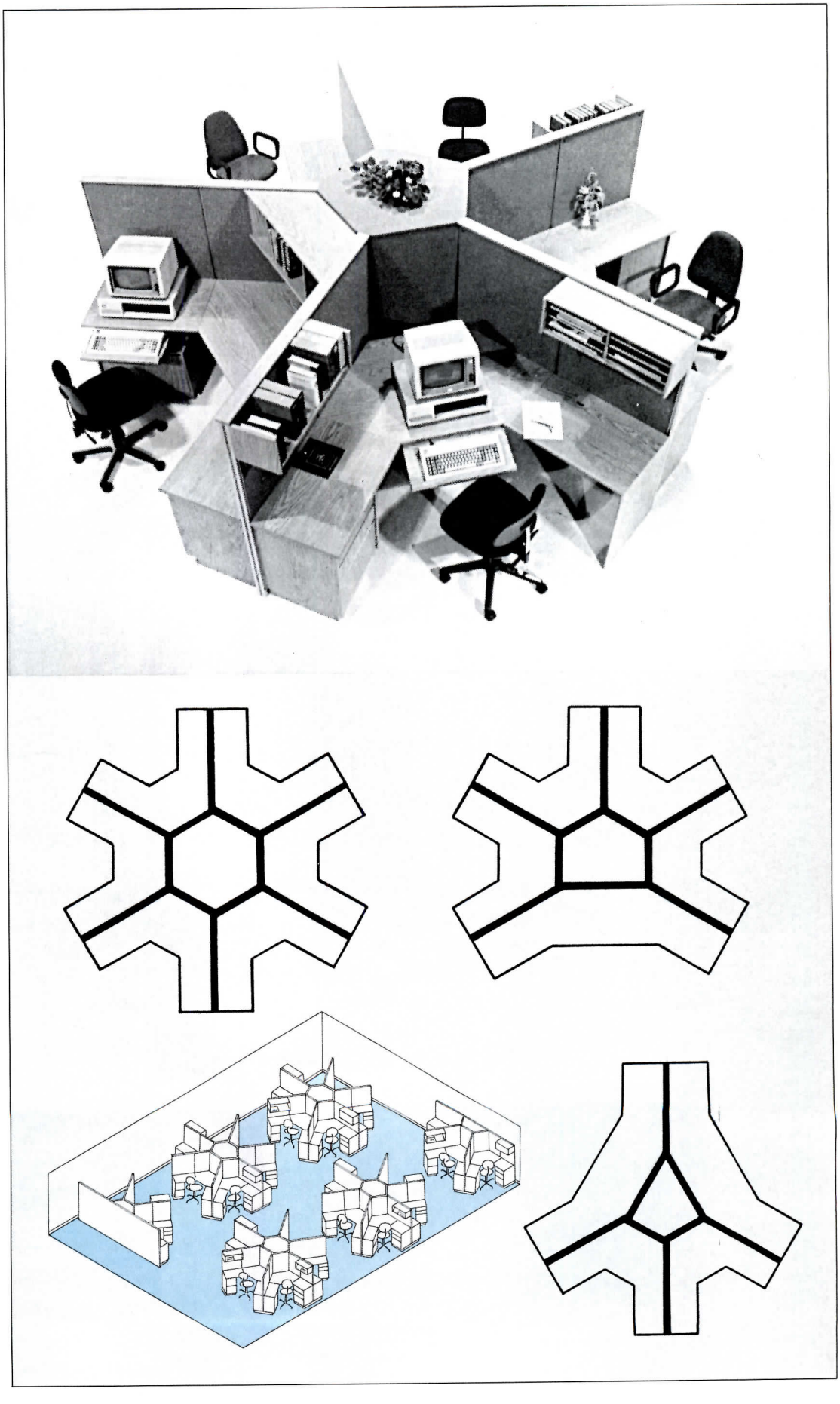
U.L. Listed and Classified.



Flange ring may also be used, fitting flush with carpet or tile.



Round and round
CenterCore's *Spacemakers* line of open-office systems addresses several of the most pressing problems facing automated offices today—efficient use of space, wire management, and improved air quality. According to the manufacturer, the use of circular configurations can reduce required square footage by 40 percent and increase the size of actual work surfaces by up to 75 percent as compared with conventional rectilinear systems. The *Spacemakers* line is available in a variety of configurations, designed to serve three or more persons, including the *Penta Pod* (top right), *Pod, Four Plus One,* and *Tripod Plus Two* (clockwise bottom). These units may be specified in oak, walnut, cherry, and almond, and can be ordered in sound-absorbing fabrics. Additional options include 48- or 60-in. walls, adjustable keyboard drawers, and storage shelves and cabinets. Since all wiring, including dedicated computer lines, telephone lines, and electrical wiring, is done through the central core, each unit exists in an electronically independent state. This independence, in turn, allows equipment and wiring to be adjusted at a single workstation without disrupting the entire office. Designed in part to avoid the effects of "passive smoking," the *Spacemakers* line also features an air filtration system called *Air Flow Plus.* According to Mike Martin, CenterCore's executive vice president, this system goes a step beyond conventional hvac systems in that it actually removes mircroscopic particles from the atmosphere. Each workstation is equipped with a fan that draws the air into the central core. Once there, a filtration system containing electrostatically charged fibers attracts the microscopic particles and removes them from the atmosphere. In addition to making the working environment more comfortable for workers, the filtering of dust and smoke is also said to help protect sensitive computer hardware. The *Spacemakers* line of open-office systems with *Air Flow Plus* helps architects and interior designers "round a new corner" in office specifications. CenterCore, Inc., South Plainfield, N. J. *E. G. Circle 301 on reader service card*



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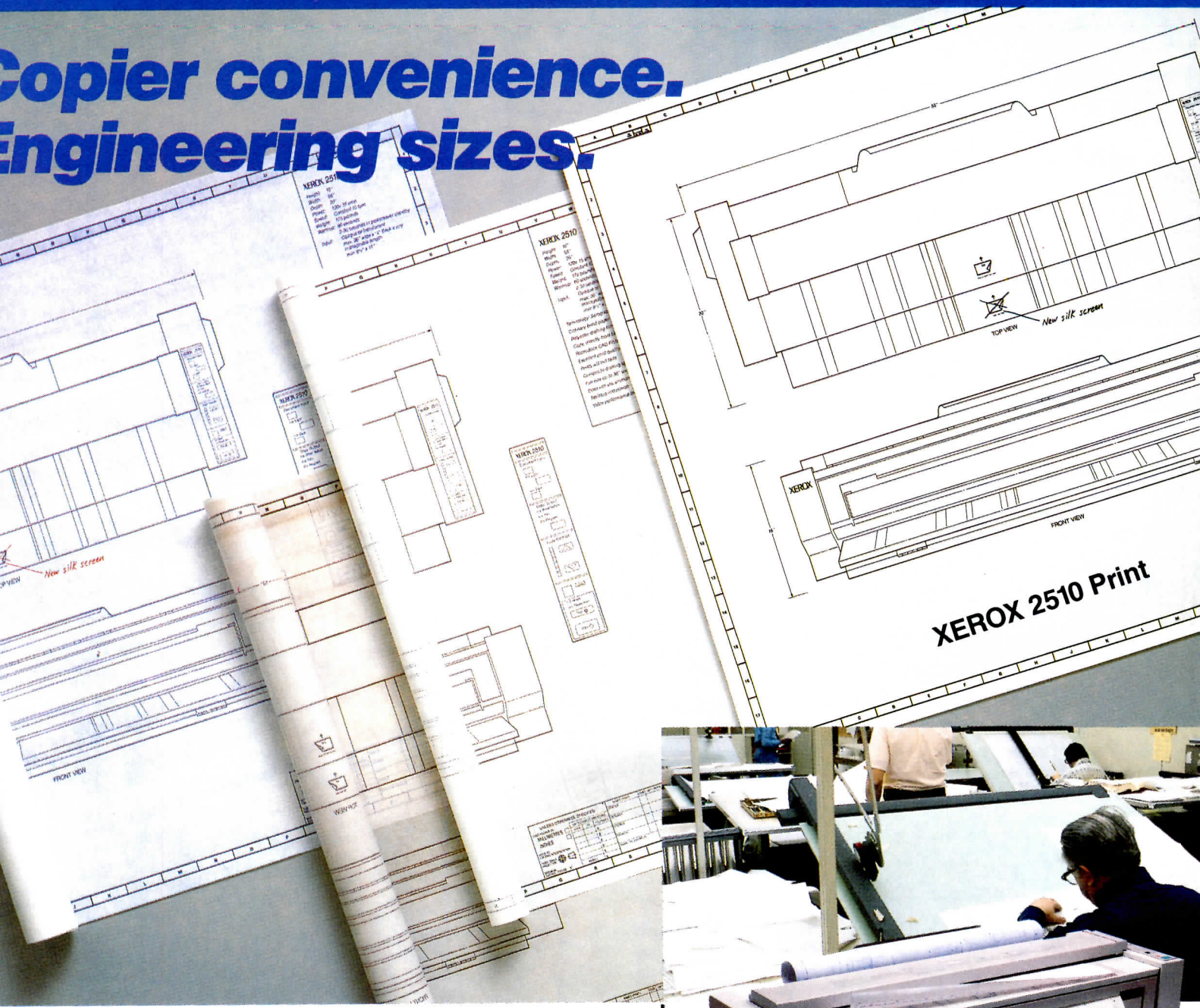

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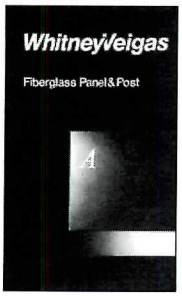
AR10

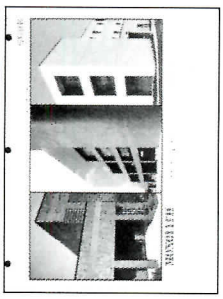
Product literature

For more information, circle item numbers on Reader Service Card



Sign system
Illuminated and nonilluminated fiberglass signs designed for interior and exterior applications are described in a 60-page product binder. Also included in the literature is information regarding screen-printed plaques, dimensional graphics, and directories. Whitney Veigas Architectural Products, Inc., Randolph, Mass.
Circle 400 on reader service card

Building system
A 4-page design guide features the *Thermastructure* building system, composed of interlocking load-bearing insulation panels. The brochure includes a detailed product description, structural and fire resistance data, dimensional diagrams, and drawings of typical connection details. Radva Corp., Radford, Va.
Circle 401 on reader service card



Ceramic-coated products
A 4-page color brochure describes the relative costs and benefits of the *Millennium Collection* of shale-bodied, ceramic-coated products with comparative exterior wall types. Included in the comparison are granite, marble, metal panels, limestone, glass, and precast concrete. Stark Ceramics, Inc., Canton, Ohio.
Circle 402 on reader service card

Seating
The manufacturer's line of office seating, designed to control static electricity, is described in a 6-page color brochure. The *ESD*—electrostatic discharge—option is said to allow the chairs to act as conductors of the static electricity that might damage sensitive electronic equipment. Steelcase, Inc., Grand Rapids, Mich.
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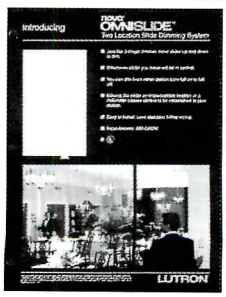
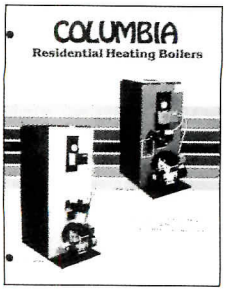
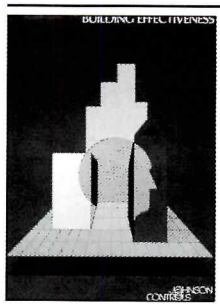


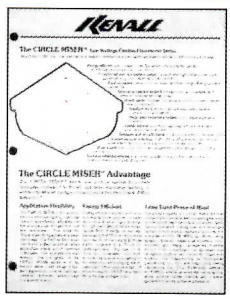
Dimming system
A 4-page color brochure describes the *Nova Omnislide* incandescent wallbox dimming system. The system is said to provide dimming from two locations with the movement of the slider at either location. The system uses standard 3-way wiring and is available in four models. Lutron Electronics Co., Inc., Coopersburg, Pa.
Circle 404 on reader service card



Heating boilers
Residential heating boilers are highlighted in a 4-page color brochure. The guide defines a line of oil-fired, steel, hydronic units and describes the features and benefits of the line's *TE* and *GEM* series. Cutaway sections and installation information are also included. Columbia Boiler Co., Pottstown, Pa.
Circle 405 on reader service card



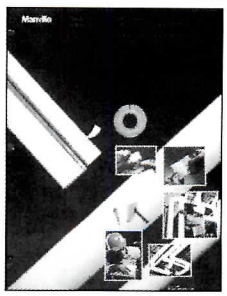
Leasable buildings
A 4-page brochure, based on research by BOMA, describes the manufacturer's building solutions to tenant expectations. The points described include: quality repair and maintenance, temperature control, security, building flexibility, energy efficiency, air quality, and interior lighting. Johnson Controls, Inc., Milwaukee.
Circle 406 on reader service card



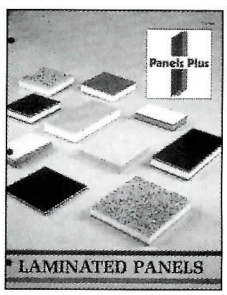
Fluorescent fixture
A 2-page brochure features the manufacturer's *Circle Miser* low-wattage fluorescent fixture series. The literature includes a detailed product description, dimensional sideview diagrams, photometric data, ordering information, and a maintenance-cost record. Kenall Manufacturing Co., Chicago.
Circle 407 on reader service card

Security system
The manufacturer's building security and access control systems are featured in an 8-page color brochure. The literature is divided into three sections reviewing: consultation and planning; system design and testing; and hardware modification and detailing. Architectural Control Systems, Inc., St. Louis, Mo.
Circle 408 on reader service card

Hardware
The *HG Series* of pull and push/pull door hardware combinations is highlighted in a 4-page color booklet. The booklet includes photographs, dimensional diagrams, and detailed descriptions of several available models. Also described are optional finishes and fastening details. Hiawatha, Inc., Bloomington, Minn.
Circle 409 on reader service card



Pipe insulations
A 36-page catalog features the manufacturer's *Micro-Lok* line of fiberglass pipe insulations for commercial, residential, and industrial air-conditioning and heating systems. The catalog includes product descriptions, application recommendations, specification data, and installation methods. Manville, Denver.
Circle 410 on reader service card



Laminated panels
Ultra-Board building boards, standard insulated panels, and veneer panels are reviewed in a 4-page brochure. The literature includes information regarding the manufacturer, as well as detailed descriptions of the panels' core and facing materials. General specifications are also included. Panels Plus, Independence, Mo.
Circle 411 on reader service card

SHINING SUCCESS.

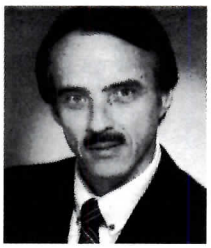
The assignment: Remodel a family den to create an Eighties-right multimedia entertainment center for an active family of four.

The media: WILSONART Brand Decorative Metals and Color Quest™ Decorative Laminates.

The designer: Gerald Tomlin, ASID, I.E.S., Dallas, Texas.

Tomlin comments: "WILSONART Polished Natural Aluminum served this space well, minimizing the bulk of storage units and adding grace instead of heaviness.

"I wanted to create a sleek, but comfortable feeling throughout this space. The family — a businessman, his athletic wife, a college-age son and a high school boy — needed a room that could go easily from family workout center to business client conference area to social center for the boys, without changes. WILSONART gave me the solution."



Gerald Tomlin

Gerald Tomlin, ASID, I.E.S.
Dallas, Texas

Throughout the room, WILSONART Polished Natural Aluminum adds light play, from the recessed bases of couch and cocktail table to half columns on shelves. The metal provides a shimmering aura for wall-hung bar and TV-computer desk units.

To continue the neutral color scheme and easy maintenance of Tomlin's plan, he chose to line the cabinet interiors in WILSONART Dove Grey decorative laminate.

The results: Very pleased clients, with a room which now supports a purely Eighties family lifestyle.

HOTLINE:

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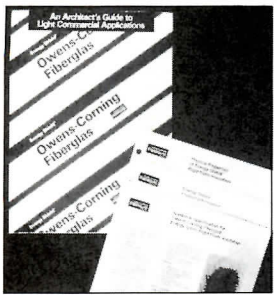
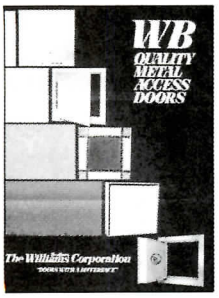
Product literature *continued*

For more information, circle item numbers on Reader Service Card



Rigid foam insulation
An information package entitled, "An Architect's Guide to Light Commercial Applications" features the manufacturer's *Energy Shield* foam insulating sheathing. The literature includes architectural drawings, a physical property sheet, and a product guide in specification format. Owens-Corning Fiberglas Corp., Toledo, Ohio.
Circle 412 on reader service card



Access doors
A 6-page foldout brochure features the manufacturer's line of metal access doors intended for various applications including drywall surfaces, plastered surfaces, and acoustical tile. The brochure includes detailed diagrams and charts highlighting construction features. The Williams Brothers Corp., East Moline, Ill.
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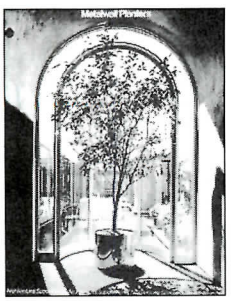

Planters
The manufacturer's *Metalwall Planters* are described in an 8-page foldout brochure. The literature includes a selection of floor, tabletop, wall-mounted, and hanging planters. Product features and benefits are reviewed, along with available finishes and ordering information. Architectural Supplements, New York City.
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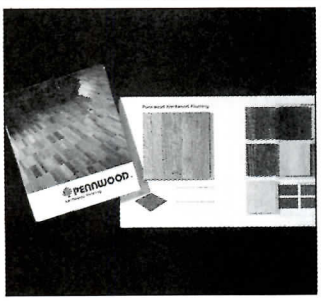
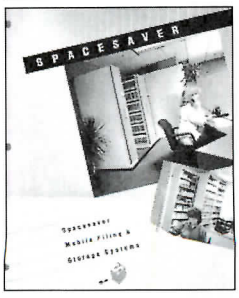
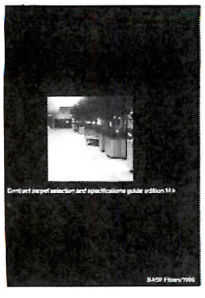


Hardwood flooring
Pennwood hardwood flooring is featured in a sample folder which includes tiles, technical data, maintenance information, and specifications. The folder is designed to be a resource for architects, designers, and specifiers. PermaGrain Products, Inc., Media, Pa.
Circle 415 on reader service card



Filing systems
An 8-page color brochure reviews the manufacturer's mobile storage and filing systems. The brochure details five basic configurations, including file centers between workstations, file centers designed for multiple workstations, and files as dividers between departments. Spacesaver Corp., Fort Atkinson, Wis.
Circle 416 on reader service card



Contract carpet
The manufacturer's 1986 contract carpet selection and specification guide contains photographs and specifications for a selection of 114 contract broadloom and carpet tile lines from 49 manufacturers. The guide also describes the *Zeftron* and *Zeftron 500* nylon yarn systems. BASF Corp. New York City.
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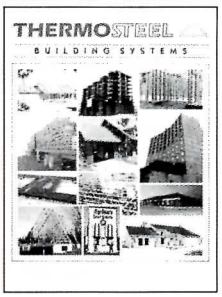

Building components
A 2-page color brochure describe the manufacturer's light-gauge structural-steel building components for single-family an multifamily buildings, as well as commercial and multistory complexes. Thermosteel of Missouri, Inc., Strafford, Mo.
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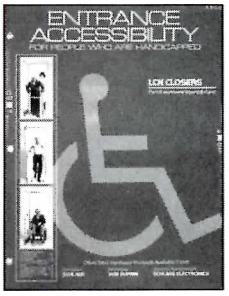
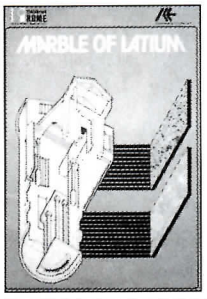


Handicapped entrances
A 16-page catalog includes information on designing entran accessible to the handicapped an product information on a line of handicapped-related door control products. Also included are suggested specifications, drawin and application photographs. LC Closers, Div. of Schlage Lock, C Princeton, Ill.
Circle 419 on reader service car

Sprinkler system components
A 6-page brochure reviews the manufacturer's *XL, SK10,* and *SK40* steel sprinkler pipes, condu and supplemental components. T brochure describes the pipes' physical properties, corrosion resistance, joining methods, test results, classification ratings, an available sizes. Allied Fire Protection, Harvey, Ill.
Circle 420 on reader service car



Marble
A 10-page booklet features the *Peperino* and *Perlato* marbles recently being imported to the U from the Latium region of Italy. The booklet provides a descriptio of the historical development of marbles, as well as a detailed analysis of their physical propert R.O.M.E Consortium, Italy.
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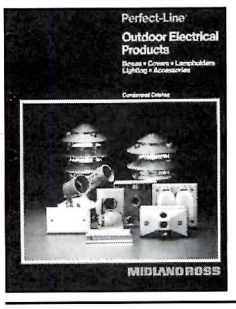

Outdoor electrical products
The *Perfect-Line* line of weatherproof outdoor electrical products is reviewed in a 16-pag color brochure. The literature illustrates and describes electric outlet boxes, covers, lighting fixtures, and accessories for wet locations, damp locations, and w locations with closed covers. Midland-Ross Corp., Pittsburgh.
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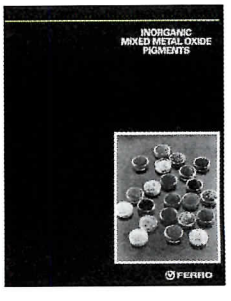

Metal oxide pigments
A 4-page booklet includes a colo chart with 36 of the manufactur inorganic, mixed metal, oxide pigments. The pigments are said be nonmigratory and compatible with most thermoplastic and thermoset resin systems. The co chart includes sample masstones and letdowns. Ferro Corp., Cleveland.
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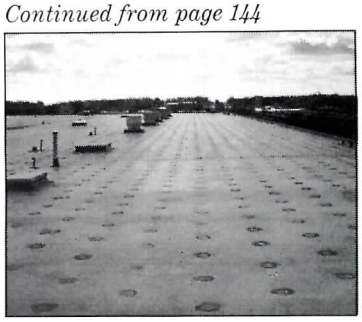
Continued from page 144

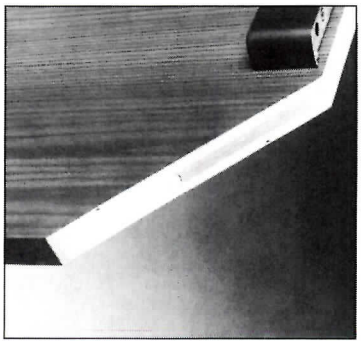


Roofing assembly
The *HEX Assembly* is a computer-designed, mechanically attached method of single-ply roofing application. Recommended for use on most commercial and industrial buildings, the assembly goes down in a hexagonal pattern. Each fastener and plate is covered with a round seal of uncured *Neoprene* rubber and butyl tape. American Hydrotech, Inc., Chicago.
Circle 302 on reader service card

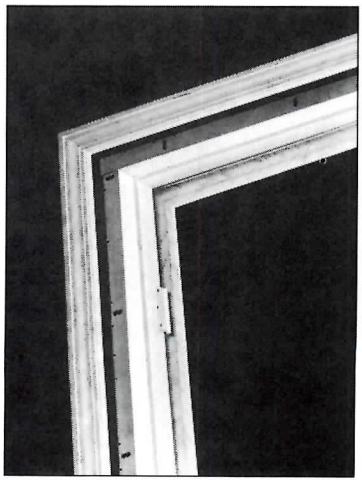
Doors
The manufacturer's *Diamond Madison* four-panel, exterior wood door is available in pine or fir with either single-glazed or insulated glass. The door features raised moldings around all panels and glass and 1/4-in.-double beveled hip raises designed to accent the panels. Morgan Products, Ltd., Oshkosh, Wis.
Circle 305 on reader service card

Copier
The manufacturer's *2510* engineering copier produces prints on vellum or polyester film, as well as paper. Engineering drawings, diazo prints, sepias, blueprints, and two-sided or mounted originals up to 1/8-in.-thick can be reproduced. Copies can be made of originals up to 36-in.-wide. Xerox Corp., Rochester, N. Y.
Circle 306 on reader service card

Sink
The *Galaxy* self-rimming double-basin sink measures 33- by 22-in. and may be specified in six colors. The larger basin measures 19- by 15- by 7-in. and the smaller one measures 9- by 15- by 10-in. Villeroy & Boch (USA), Inc., Pine Brook, N. J.
Circle 307 on reader service card
Continued on page 153



Drafting tables
The *Futur-Matic T/C Naturalist* drafting table features a solid wood core, basswood veneer drafting top, and black steel end cleats. The oak veneer-laminated bases are available with black accent hardware, and straight or angled solid oak legs. Two 3-wire grounded outlets and adjustable floor levelers are also included. Mayline Co., Inc., Sheboygan, Wis.
Circle 303 on reader service card



Door frame
The manufacturer's *Woodbuster* steel door frame is constructed of 22-gauge electro-galvanized cold rolled steel. The frame features an adjustable strike, a pair of brass-finished hinges, and adjustment slots to provide proper alignment of the frame to the door. The frames are available in several sizes. Timely, Div. of S. D. S. Sales, Inc., Pacoima, Calif.
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Some designs are hard to live with.

Expecting comfort and safety, when you accept the lowest bid on the design of a building's internal systems, can leave you hot and cold at the same time. Because that design affects your project's construction efficiency, long-term operating reliability and maintenance costs, you should call on the expertise and experience of consulting engineers. You'll get workable, manageable, creative solutions and the quality design assurance that responds to your specific needs, while it amounts to less than 1% of the project's total lifetime cost, come rain or shine.

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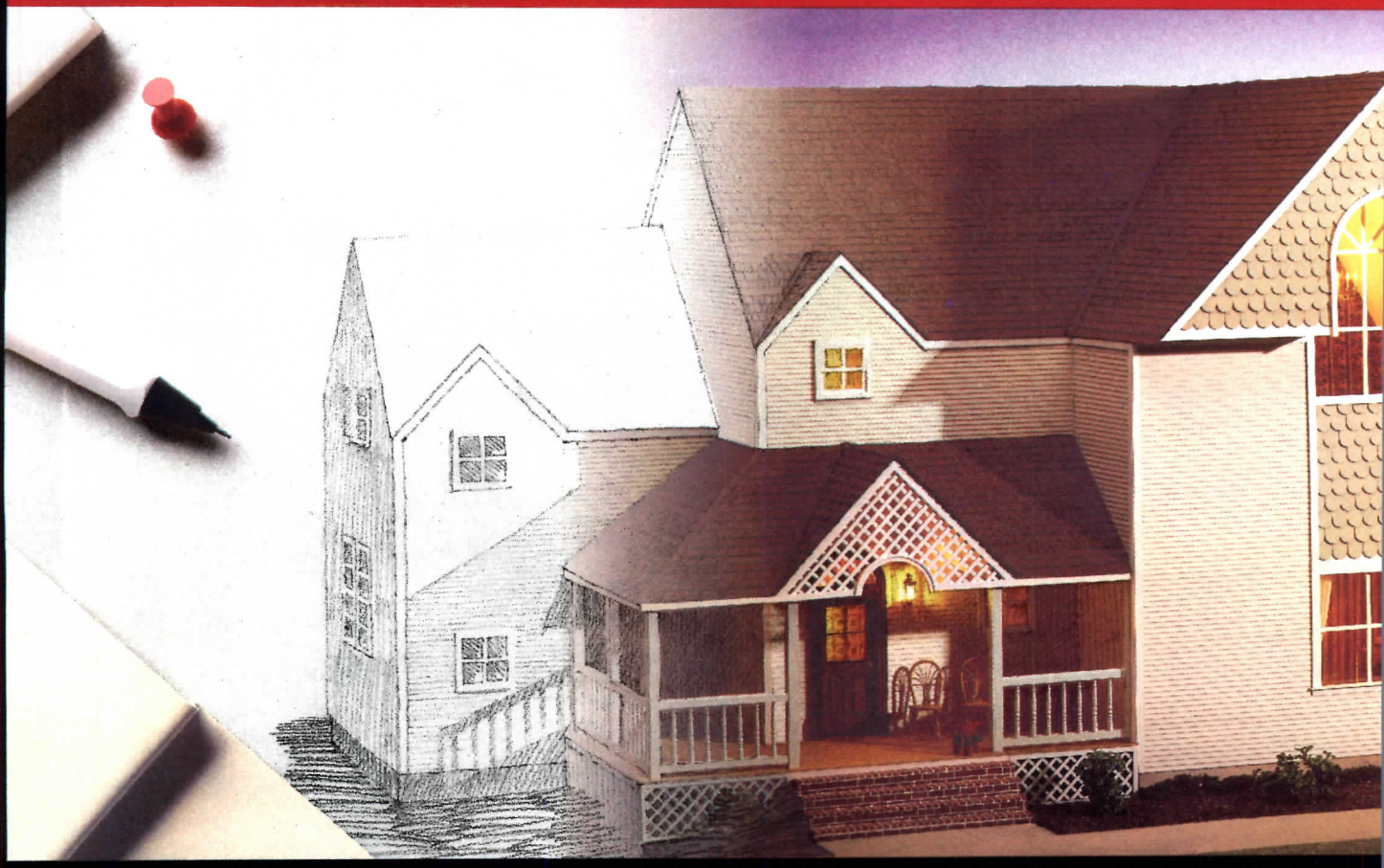
Introducing Restoration® Vinyl.

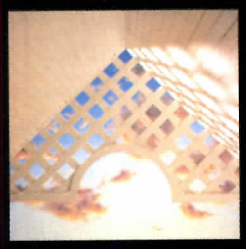


Everything You Thought Vinyl Could Never Be.

Used to be, vinyl siding looked like, well, vinyl siding. Most architects probably thought that this would always be the case. Not so.

Now there's Restoration solid vinyl siding. Restoration looks like real painted wood. You have to see it to believe it.

Budget and aesthetics often pull at a design from opposite directions. When a client not only wants the appearance of painted wood, but also the economy and durability of vinyl, Restoration solid vinyl siding provides the balance. It has all of the advantages of vinyl – lower cost, durability, low maintenance; plus all the aesthetic advantages of real wood.



The Restoration Collection includes beaded panel and lattice.

Faithfully detailed window moldings, trim and this extra-wide corner post.

Through sophisticated technology we've achieved a smooth low gloss finish on a panel that's guaranteed to last a lifetime.* To provide flexibility, we've created the Restoration Collection, a full line of architecturally accurate vinyl accessories.

For more information on the entire Restoration Collection, call *1-800-521-9020 (in Michigan, call 313-386-0800).*

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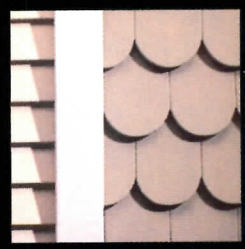

Restoration Collection Great Shapes.

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This Old House

As seen on "This Old House."

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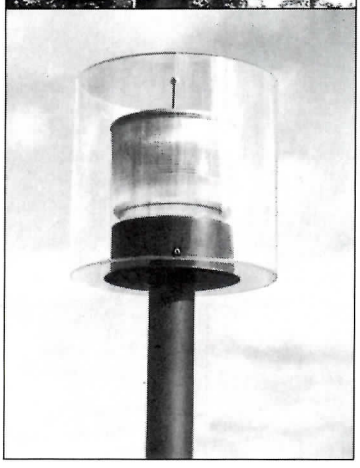
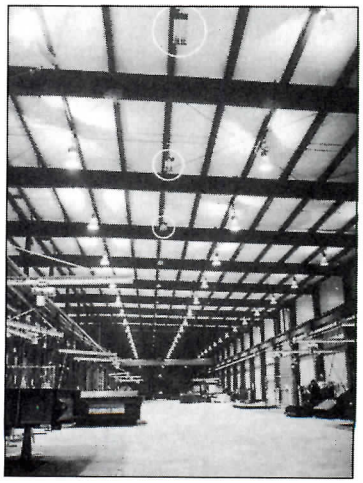
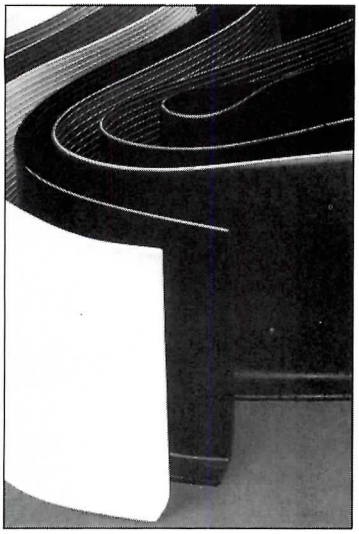
Continued from page 151



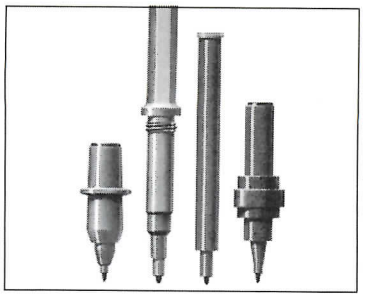
Outdoor lighting
The manufacturer's post-top lighting fixtures are designed for campuses, industrial complexes, and other outdoor locations. The post-mounted lighting system is available with a variety of shrouds, housings, and mounting posts. The system's basic design component is a one-piece, two-chamber polycarbonate lens housing. Crouse-Hinds Lighting, Vicksburg, Miss.
Circle 308 on reader service card



Infrared heaters
The *Solarbeam* electric quartz lamp infrared heaters, designed to heat high bay buildings, may be positioned as easily as flourescent lights, according to the manufacturer. The units require no venting and are equipped with solid silver butt contacts. The heaters are available in 1 to 5kW models. Aitken Products, Inc., Geneva, Ohio.
Circle 309 on reader service card



Cove bases
The manufacturer's line of vinyl cove bases is available in eight colors and features an additional wear layer said to prevent cracking. The bases are available in three sizes: 2 1/2-in. cove base and no toe, 4-in. cove base and no toe, and a 6-in. cove base. Roppe Rubber Corp., Fostoria, Ohio.
Circle 310 on reader service card



Plotter pens
A series of plotter pens includes four fiber-tip models designed for all general-purpose plotting applications. Each pen is molded in plastic to fit specific plotter pen blocks without requiring an adaptor. The tips are designed to minimize deterioration and line variation. Koh-I-Noor Rapidograph, Inc., Bloomsbury, N. J.
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Continued on page 160

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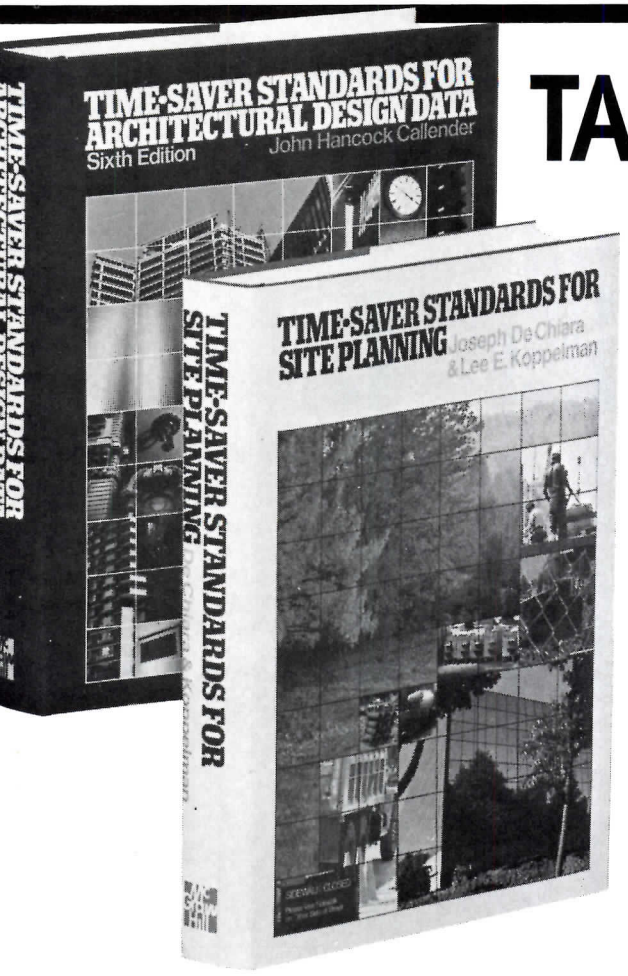

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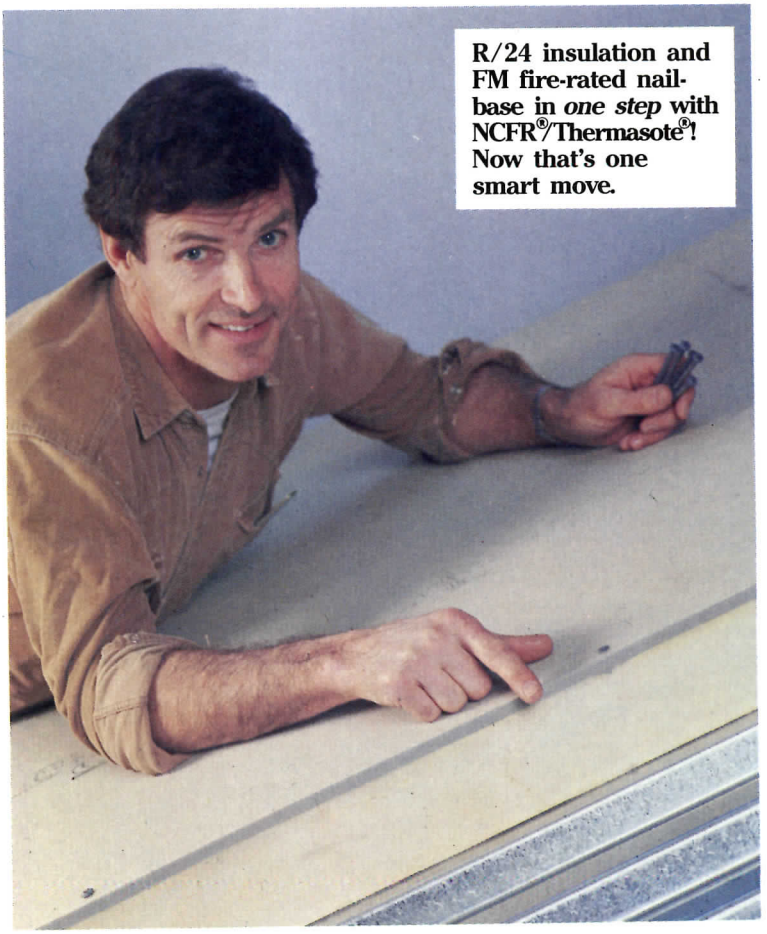

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Manufacturer sources

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Pages 90-95
Washington Court
James Stewart Polshek and Partners
Pages 90-92—Face brick: Beldon-Stark. Cast stone: Steindl. Ground faced block: Plasticrete. Terra cotta: Ludowici-Celedon. Exterior doors and windows: J. Zeluck, Inc.
Page 93—Pyramid skylights: Fisher Skylights, Inc.; Naturalite, Inc.
Pages 94-95—Fireplace: Heatilator. Locksets: Schlage; Omnia. Hinges: McKinney. Operators: Rixson-Firemark. Exit devices: Von Duprin. Cabinetry: John Langenbacher Co., Inc. Interior doors: Paniflex Corp.

Pages 96-99
Corcoran at Georgetown
Arthur Cotton Moore/Associates, P.C.
Pages 96-97—Glazing: P. P. G. Wood windows: Camden Window and Millwork Co. Aluminum-framed doors and windows: Architectural Window Systems, Inc. Glass doors: Falconer. Wood doors: SUNDOR. Rolling doors: Overhead Door Co. Brick: Glen Gery; Cushwa. Built-up roofing: Owens-Corning (Derbigum). Sheet roofing: W. R. Grace (GRM). Sheet metal: Vincent Brass & Aluminum Co. (Colorclad). Custom flashings: Myer Roofing.
Pages 98-99—Sliding doors: Architectural Window Systems, Inc.

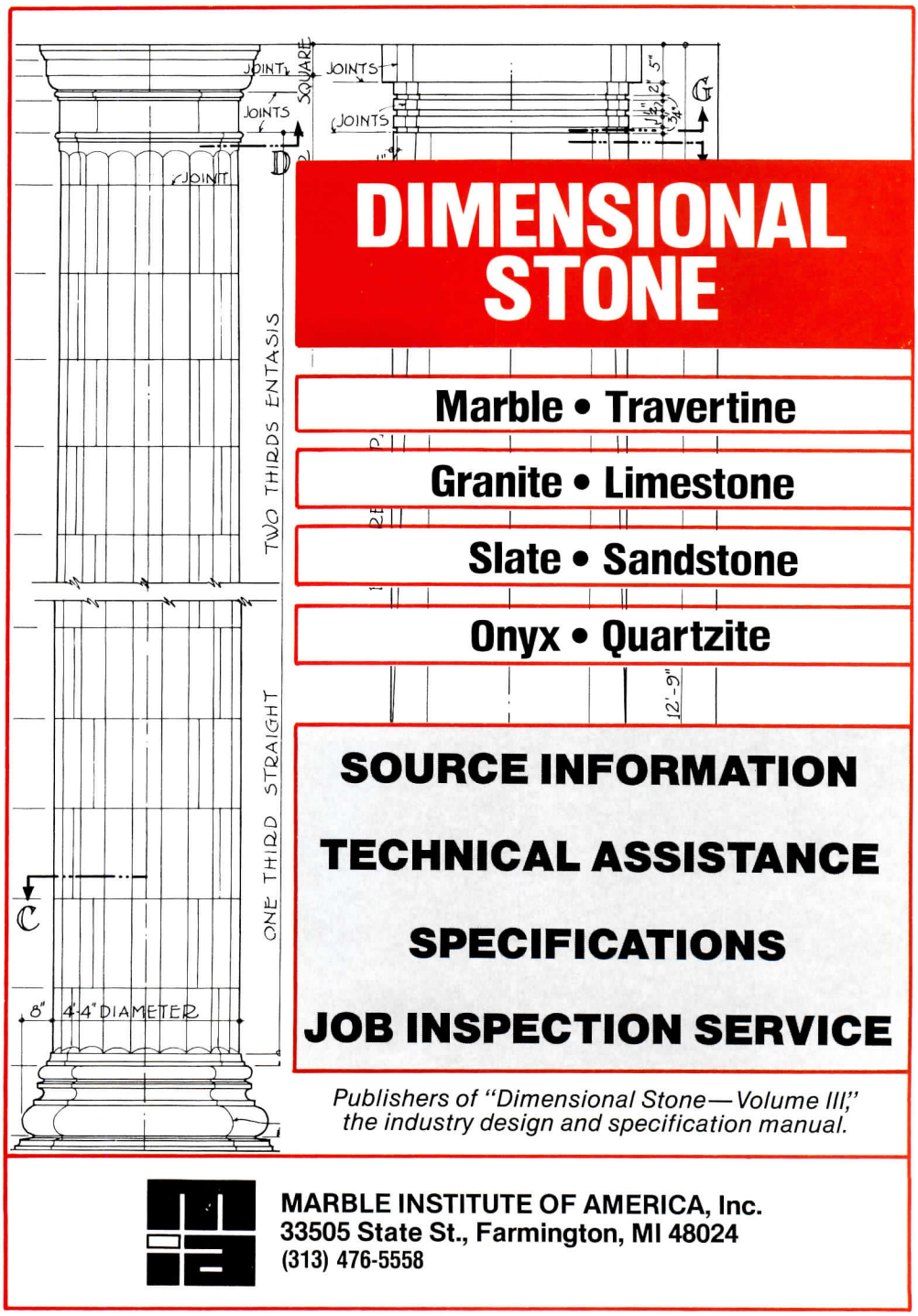
Pages 100-103
Prospect Point
Robert A. M. Stern, Architect, in association with Martinez/Wong Associates and Wheeler/Wimer
Pages 100-102—Tile paving (throughout): Del Piso. Windows, doors and storefronts: custom by architects, fabricated by Tweed & Gambrell.
Page 103—Wall lights and wrought iron railings: custom by architects, fabricated by International Iron.

Pages 104-111
Hughes Aircraft Headquarters
Skidmore, Owings & Merrill/ Los Angeles
Pages 104-107—Glass: Asahi Glass. Window wall and entrances: P. P. G. Industries, Inc. Granite: Carlos Campolonghi SPA (Gregio Pearl granite). Panel system: Blaesing Granite Co. Roofing: American Hydrotech. Skylights: P. P. G. Industries, Inc. Custom-painted railing: Washington Iron Works Inc. Sculpture: Rafe Affleck. Site lighting: Kim; Hydrel. Entrance doors: P. P. G. Industries Inc.
Pages 109-111—Downlights: Omega; Lightolier; Holophane. Paints: Dunn-Edwards. Granite flooring: Carlos Campologhi, SPA; Cold Spring Granite; Blaesing Granite Co. Escalator: Westinghouse Elevator Co. Elevators: Fujitec America, Inc. Acoustical tile ceiling: Armstrong. Suspension grid system: Hackett Environmental Systems. Stair/hall carpeting: Miliken. Recessed downlights: Omega; Lightolier. Sprinkler heads: Viking. Tree planters: Custom. Terrace planters: Planter Technology.

Pages 112-115
Countryside Montessori School
David Furman/Architecture
Siding: Shakertown. Brick: Cherokee (Cape Fear Gray). Concrete block: Metromont Split Face (Georgia Cream). Roofing: GAF (Sentinel Weathered Gray). Play equipment: Childscape. Trim paint: Devoe (Moonbeam). Stain: Benjamin Moore (Moorwood Sea Gull Gray). Resilient flooring: Natural Vinyl Floor Co. (Colormates).

Pages 116-123
Olin Library, Wesleyan University
Perry Dean Rogers & Partners
Pages 116-119—Brick: Kane-Gonic (water struck Harvard Blend full range). Steel-framed windows: Hope's Windows. Stone: Indiana buff limestone. Roof: Carlisle (EPDM ballasted system).
Pages 120-122—Skylights: SuperSky Products Inc. Cylinder lights: Lightolier. Reading table lights: Custom, fabricated by Nessen. Carpeting: Lee's. Uplights: Atelier International. Wing chairs: Hickory Business Furniture (#5311-30). Library stacks: Aetna Stack. Index, book shelves and study carrels: custom by architects, fabricated by Eastern Millwork. Ceiling: U. S. G. Downlights: Lightolier; Edison Price. Interior windows: Eastern Millwork.
Page 123—Paints: Benjamin Moore.

Pages 124-129
Riverbend Music Center
J. Ralph Corbett Pavillion
Hulbert Taft Jr. Center for the Performing Arts
Michael Graves, Architect
Pages 124-127—Asphalt shingles: Johns Manville. Upward-acting doors: Moeschl Edwards. Aluminum windows: Arch Metal System. Paints: Tone Crete. Handrails: CHC Manufacturing. Seating: Standard American Seating. Acoustic panels (stage): Ecological Specialties. Theater curtain: Hoffend. Lighting fixtures: Stonco. Floodlighting: Crouse Hinds. Theater lights: Rambusch; Colortran.



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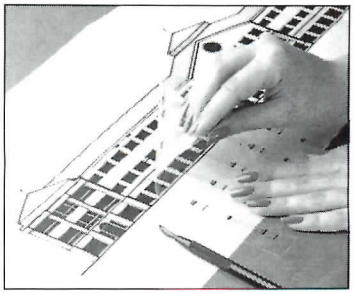

Transfers
The manufacturer's *I. N. T. Custom Transfers* can be created from original drawings on Mylar, vellum, or CAD/CAM output, and are available in selected colors. According to the manufacturer, architects can rub down dry transfers of their own construction details, title blocks, and logos. Letraset USA, Paramus, N. J.
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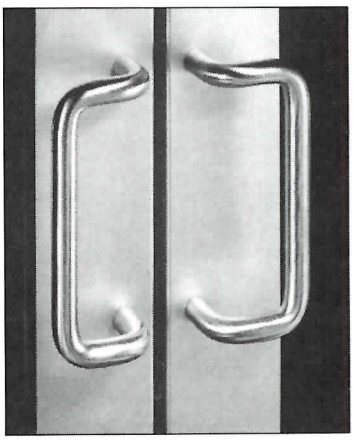
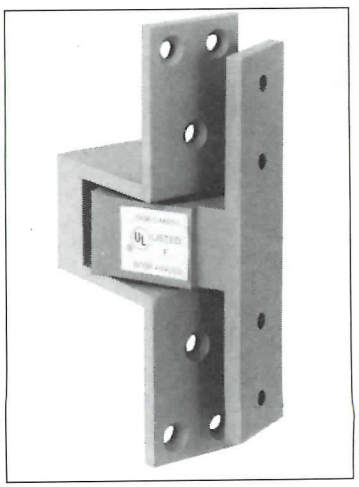


Hardware
The *Architects' Classic Hardware* series features a concealed fastening system implementing a dual-cone attachment stud. The series is available in straight or 90-deg. offset pulls with 9- and 15-in. on-center attachments. The hardware is available in a variety of finishes and colors. Kawneer Co., Norcross, Ga.
Circle 313 on reader service card



Hinges
The manufacturer's pocket pivot hinges are said to provide wider, less cluttered corridors, less dirt accumulation, easier maintenance, and a lower susceptibility to dents and bruises caused by traffic. The hinges are available in a variety of finishes. Dor-O-Matic, Chicago.
Circle 314 on reader service card
Continued on page 161

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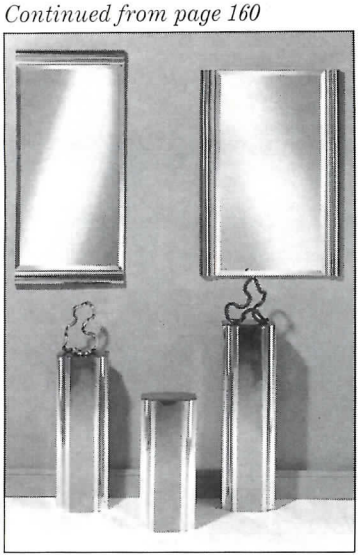

Pedestals and mirrors
The *Radio City* collection of pedestals and mirrors, designed by Lawrence Peabody, FASID, combines smoked chrome and polished brass. The mirrors are handcrafted using 1/4-in. beveled float glass with parallel metallic accents. The pedestals incorporate concave brass corner accents and smoked chrome panels, and are available in various sizes. Autumn Guild, Easthampton, Mass.
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Acoustical shells
The manufacturer's pre-engineered acoustical shells are constructed of molded fiberglass-reinforced gypsum and feature built-in lighting, an omni-directional tri-caster base, and leveling casters. Designed for renovations, historic restorations, or new construction, the shells may be customized to match any architectural styles. Wenger Corp., Owatonna, Minn.
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Oak receptacles
The Oak Collection of litter receptacles, planters, and benches feature kiln-dried, solid red oak exteriors. The units are available in 14- and 25-gal. capacities, and may be combined to form in-line or corner resting areas. All units are stained and sealed with light urethane varnish. Clean City Squares, Inc., St. Louis.
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Continued on page 162

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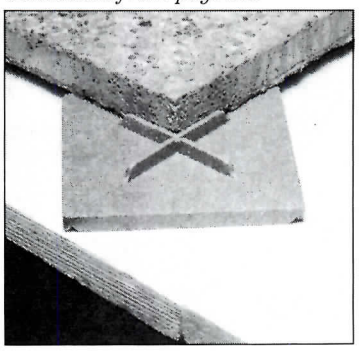

Concrete pavers
The *PaverMate* lightweight, polystyrene pedestal is said to provide consistent below-surface drainage for concrete paving blocks. According to the manufacturer, by supporting the blocks above the substrate and creating uniform spaces between pavers, the system reduces damage to waterproofing and insulation layers. GeoTech Systems Corp., Sterling, Va.
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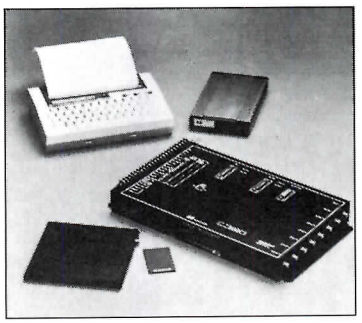
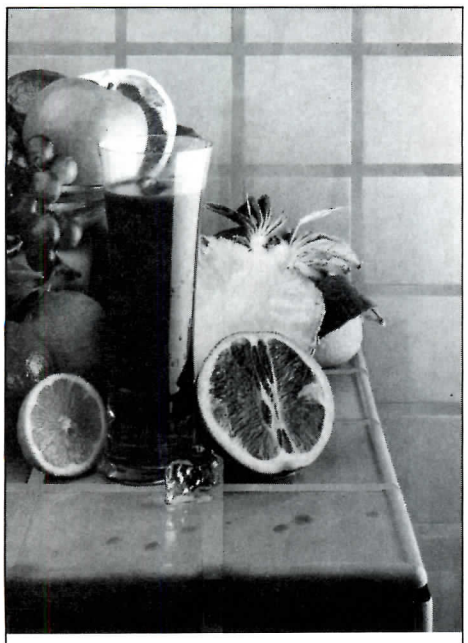


Access control systems
The manufacturer's multidoor electronic access control system is available in two models. The *804S* model can control up to four doors and monitor 16 alarm points and the *808S* model controls up to eight doors and monitors up to 32 alarm points. Authorized access is gained by presenting a credit card-sized command key within inches of a passive sensor. Schlage Electronics, Santa Clara, Calif.
Circle 319 on reader service card

Software support
The manufacturer's high-resolution color graphics controller is designed to work with *Autocad* and *MS/Windows* packages. The *Prism* hardware/software combination includes a port that allows the direct connection of a mouse, digitizer, or local printer. Modgraph Inc., Concord, Mass.
Circle 320 on reader service card
Continued on page 163



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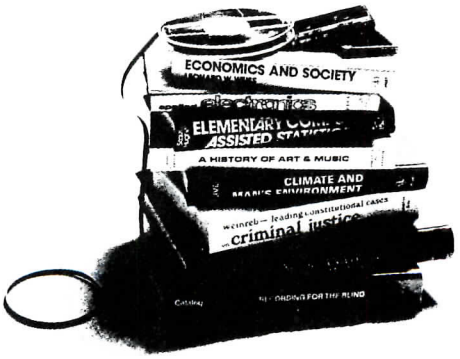

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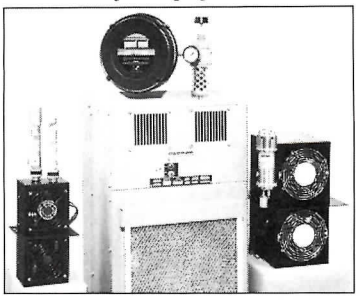

Cooling systems
The manufacturer's line of enclosure cooling systems operates using only compressed air as its power source. Both thermostatically controlled and continuous operating versions are available. The units incorporate a system featuring built-in sealing and relief valves. Vortec Corp., Cincinnati.
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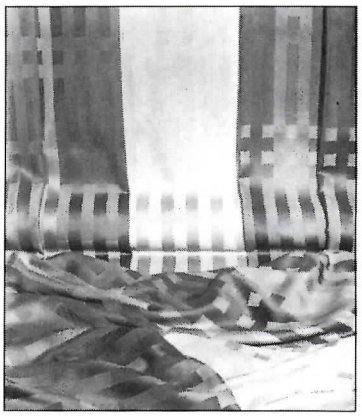

Fabric
Mandarac is a 100 percent wool, satin-weave jacquard imported from Great Britian. The fabric features a geometric basketweave design in three multicolorways. It is 60-in. wide with a 66-in. repeat. Kirk-Brummel Associates, Inc., New York City.
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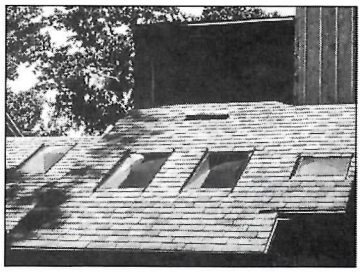
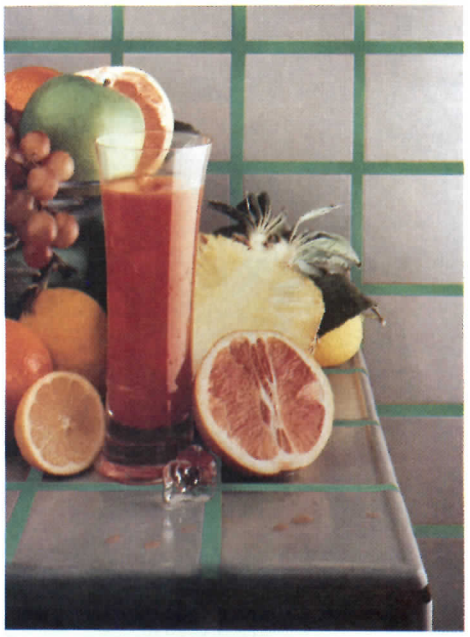


Skylight system
The manufacturer's *Standing Seam* skylight system, designed for residential, commercial, and industrial use, may be installed on metal, shake, flat tile, asbestos, or slate roofs. The system features continuously formed 1 1/2-in. to 2 1/2-in. vertical risers angled at 90 deg. on both outside edges. The double- or triple-glazed skylights consist of *Lexan* polycarbonate sheet. Kenergy Corp., Orlando, Fla.
Circle 323 on reader service card
Continued on page 164



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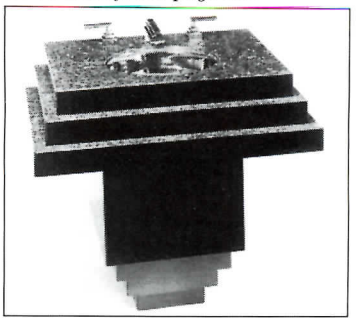

Vanity
The *Acapulco Vanity*, designed by Stanley M. Paul, may be specified in a selection of granite, marble, or onyx. The unit is available in 24-in. by 36-in. or may be custom sized. The under-counter basin is bright silver and measures 14-in. by 17-in. Paul Associates, New York City.
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Patterned carpet
The *Vendome and Persian Dynasty* collections of patterned carpet were designed in Paris for the hospitality market. The two collections comprise a total of 10 patterns and two borders and may be specified in 390 custom colors and 1250 custom patterns. Durkan Patterned Carpet, New York City.
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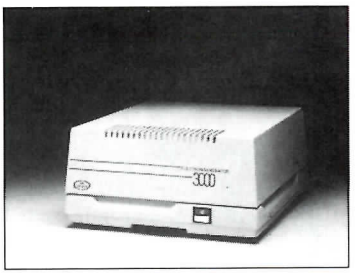

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The *Electron Generator 3000* indoor air purification system consists of a high-power generator of electrons that is housed in a small unit suitable for installation on either walls or ceilings. It is 6-in. high, 13 1/2-in. wide, and 14 1/2-in. long, and weighs 14 lbs. Air Physics Corp., Northfield, Ill.
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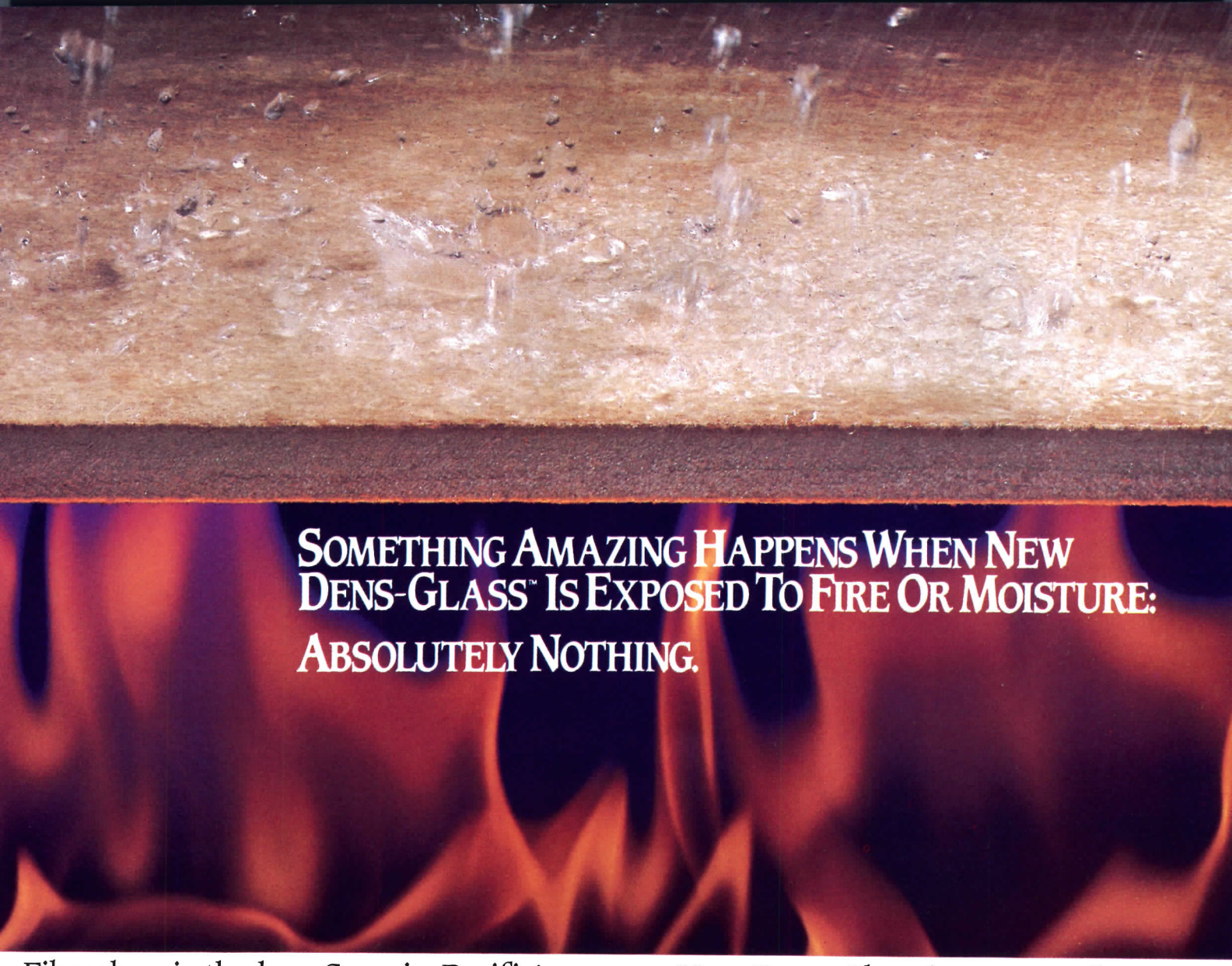

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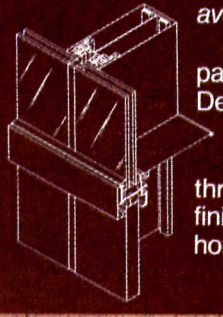

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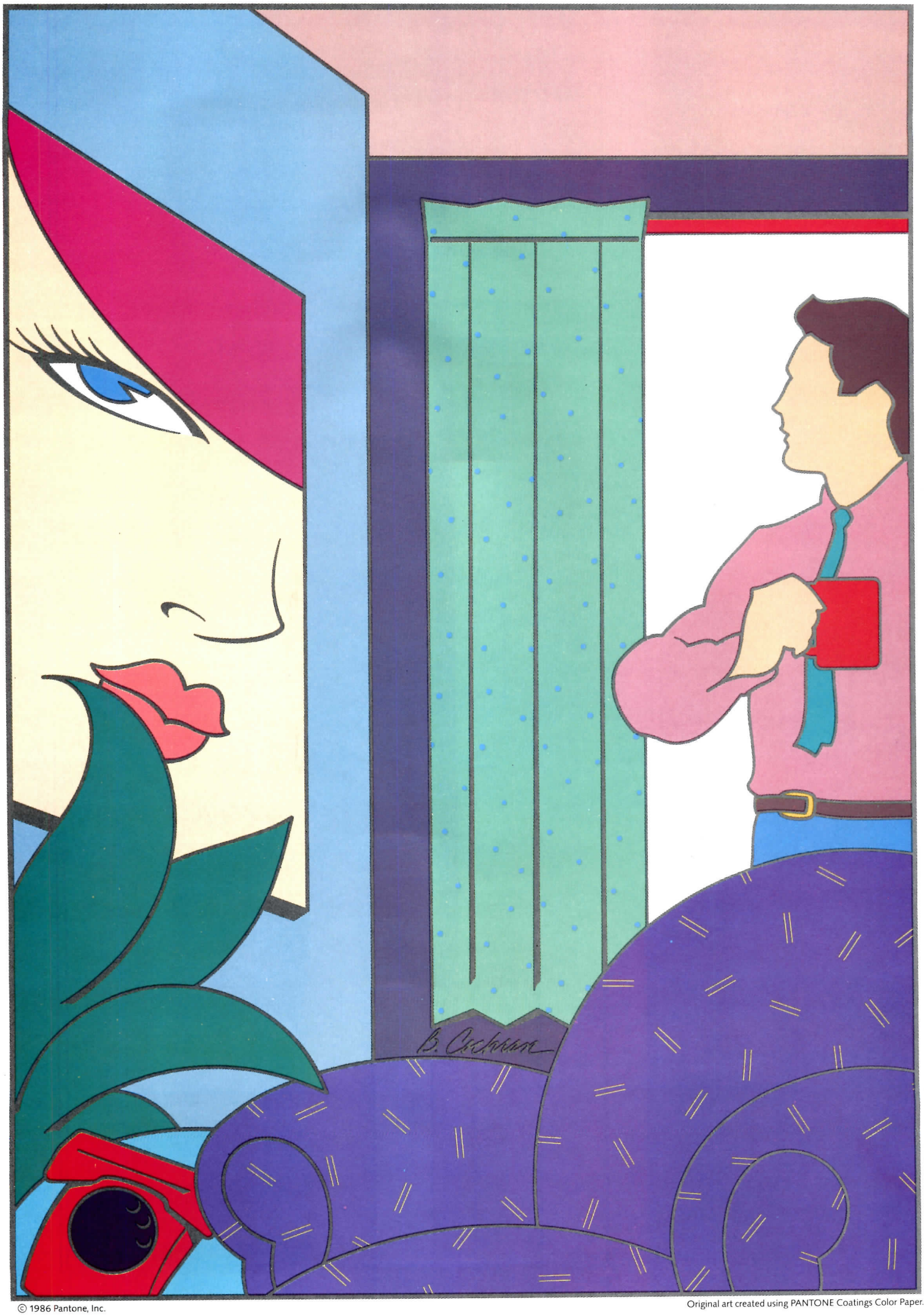

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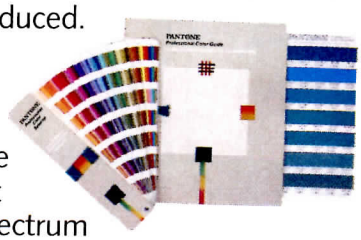

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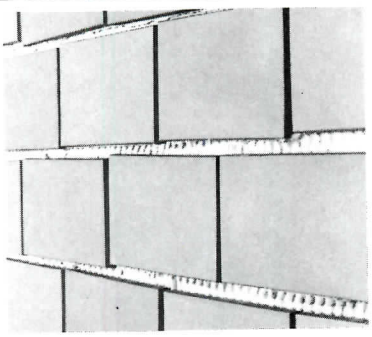

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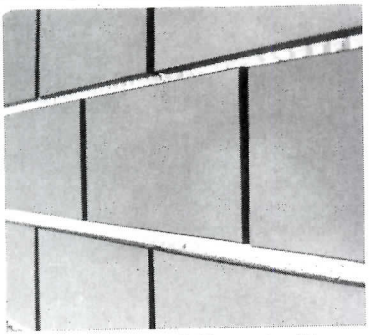

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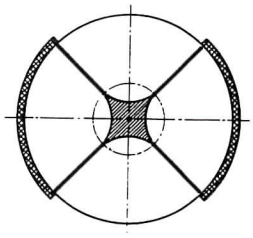
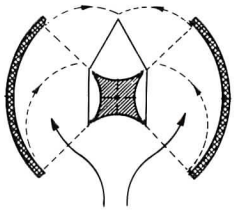
The Cirkel-Line Entrance brings entryway design to the threshold of a new era. Impressive in scale, appearance and performance, it is the kind of product you would expect from a quality-conscious company such as Haven-Busch.

Available in diameters up to 16 feet, Cirkel-Line eliminates in most cases the need for additional emergency doors. Its wings fold out to provide two traffic lanes whenever needed. At all times, two of the wings are in contact with the inner wall of the entrance, keeping outside air where it belongs— outside. Stack draft is significantly reduced with Cirkel-Line, and the option to heat and cool the air inside the entrance to building temperature is available. A motor drive with detectors rotates the door to the speed of traffic. If someone stops moving, so does the door.

As for aesthetic considerations, Cirkel-Line offers a clean, European styling combined with almost unlimited possibilities for finish materials and colors. Come and stand at the threshold of new entrance design possibilities. The view is wonderful.



During normal operations, two wings are always in contact with the entrance's inner wall.



In emergencies, all four wings can be folded as shown to clear two traffic lanes through the entrance.

For a free brochure on the Cirkel-Line Entrance, contact us at Haven-Busch Company, 3443 Chicago Drive S.W., Grandville, Michigan 49418/(616) 532-3641/ Telex 292-879/Telecopy 532-7585.

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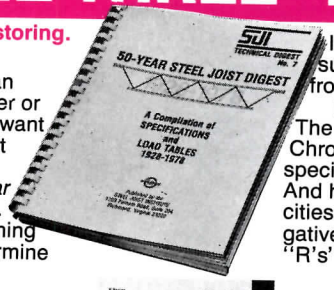

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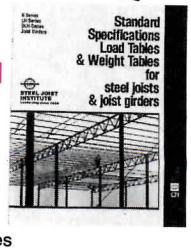

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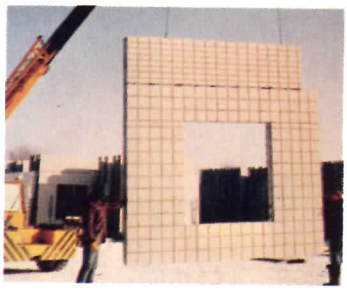

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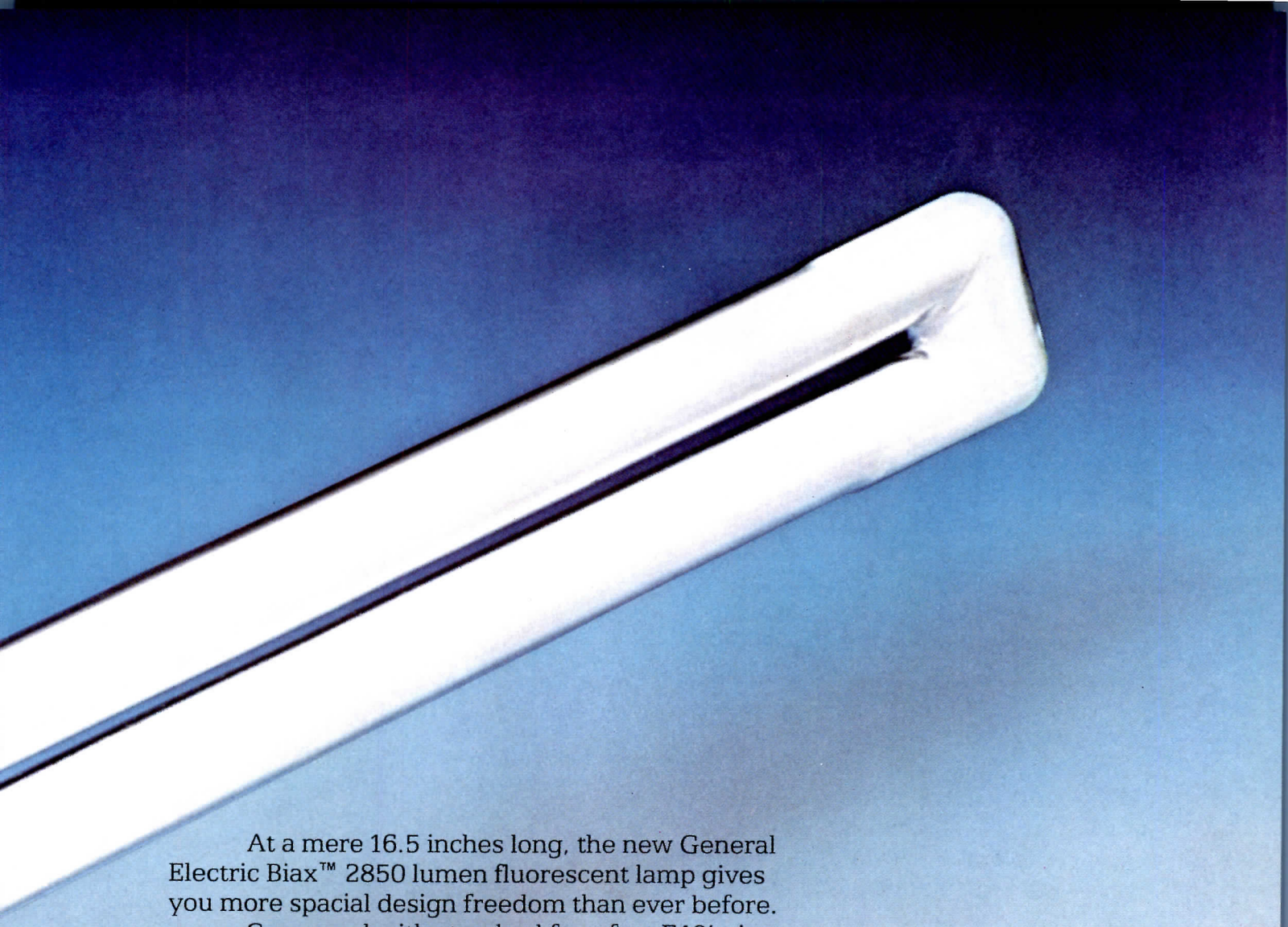

At a mere 16.5 inches long, the new General Electric Biax™ 2850 lumen fluorescent lamp gives you more spacial design freedom than ever before.

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The compact configuration of the GE Biax 39-watt lamp produces a full 2850 lumens of good color-quality fluorescent light, in a lamp one-third the overall length of conventional linear fluorescents. And it offers a long-rated average lamp life of 12,000 hours.

The 2850 lumen lamp represents only the first in a complete family of GE Biax fluorescents, which will range from an 8.4-inch version to 22.3 inches. So you'll have even more lighting and spacial design flexibility as this line of lamps continues to grow.

Call your Lighting Specialist at the local GE Lamp Sales Office or your fixture manufacturer and discuss your lighting applications, concepts and designs with them. They can help you make a brilliant reduction on your own.

We bring good things to life.

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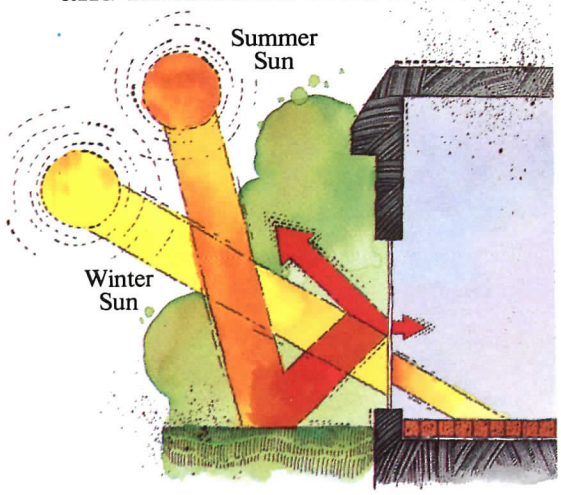
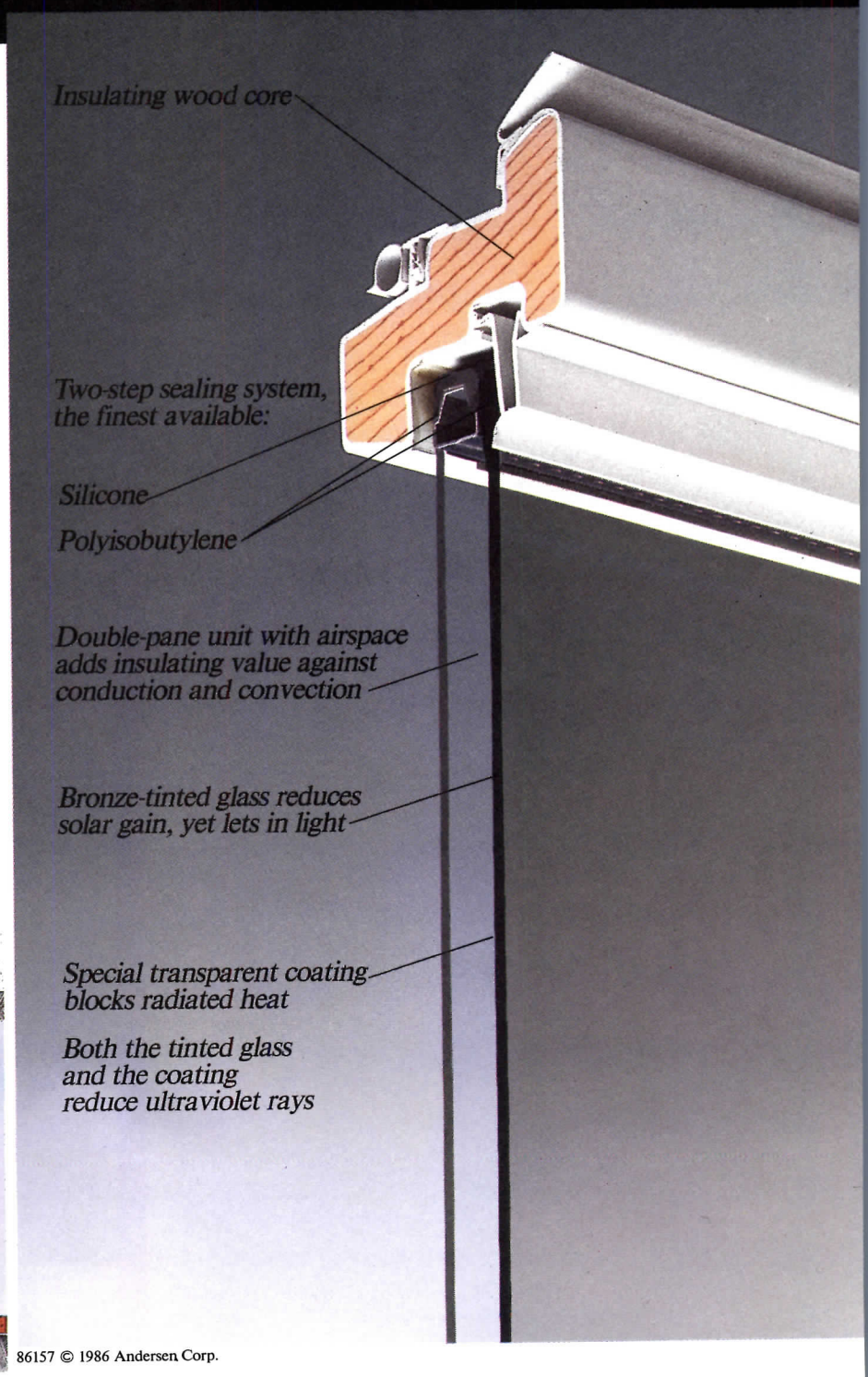
Until now, about the only way you could reduce the heat of the sun was with windows that also reduced the *light* of the sun. That made for buildings that looked like mirrors on the outside, and a bit like caves from the inside.

Now, Andersen has developed a window that reduces the sun's heat 2½ times better than ordinary single-pane glass, yet it lets in twice as much light as mirror-like reflective glass.

ANOTHER DESIGN OPTION, WITH WINDOWS THAT WORK.

Andersen® High-Performance Sun windows don't have the impenetrable and inscrutable look of most reflective glass. Yet for all their effectiveness against heat gain, they are able to provide more natural light, too. And, unlike most windows you find in commercial buildings, ours open and close.





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BETTER LOOKING FROM OUTSIDE. BETTER LOOKING FROM INSIDE.

These Andersen windows have a soft bronze tint that looks handsome from th outside, yet it doesn't distor colors for the people lookin out. In fact, it makes these colors look much richer. Th greens are greener and the blues are bluer.

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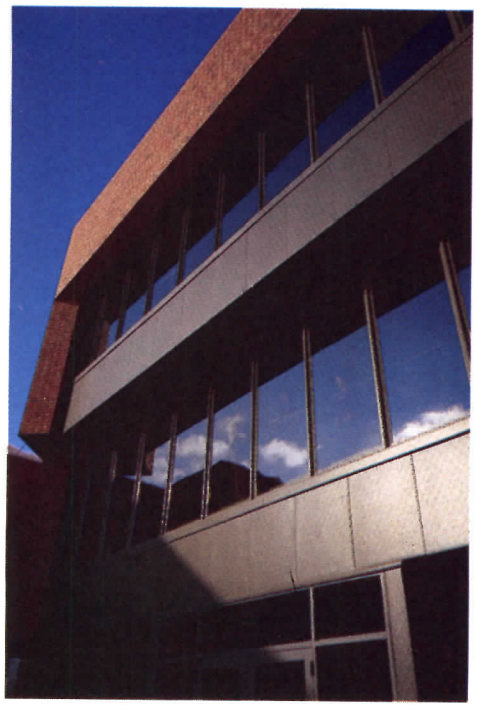
It takes a truly remarkable window to control the awesome power of the sun. We call it the Andersen High-Performance Sun window. You can find out more about *what's* available and *how* it works by calling your Andersen distributor. And by consulting Sweet's File 8.16/An. Or write Andersen Corp., Box 12, Bayport, MN 55003.



PLANTS FLOURISH, COLORS FADE LESS.

One more wonder. This indow filters out 88% of e ultraviolet rays that fade brics, yet there's still plenty of visible light for people and plants to flourish. Add to all that two more pertinent points: these windows are eminently affordable and readily available off the shelf.

Come home to quality.

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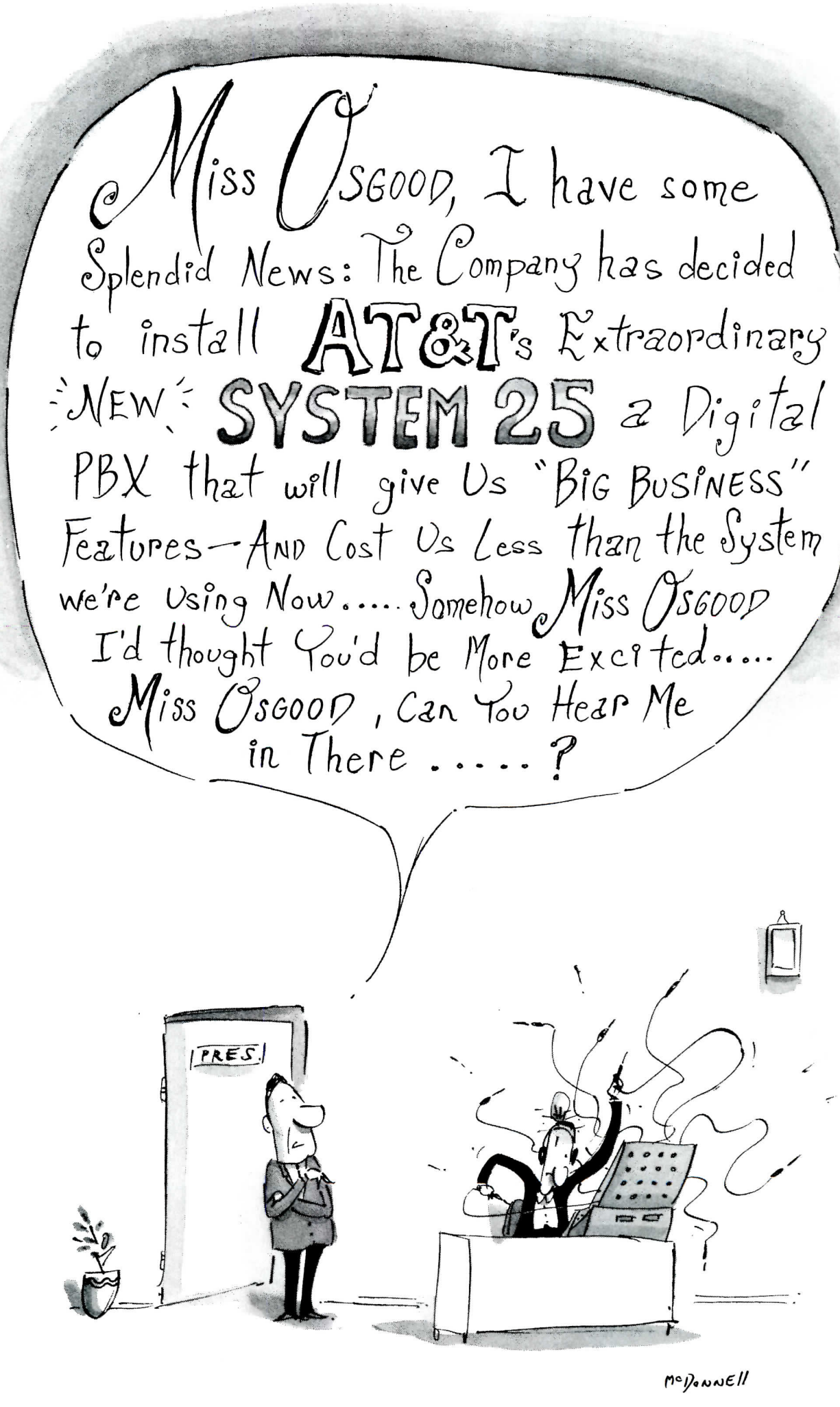
Miss Osgood, I have some Splendid News: The Company has decided to install AT&T's Extraordinary NEW SYSTEM 25 a Digital PBX that will give Us "Big Business" Features—And Cost Us Less than the System we're Using Now..... Somehow Miss Osgood I'd thought You'd be More Excited..... Miss Osgood, Can You Hear Me in There.....?
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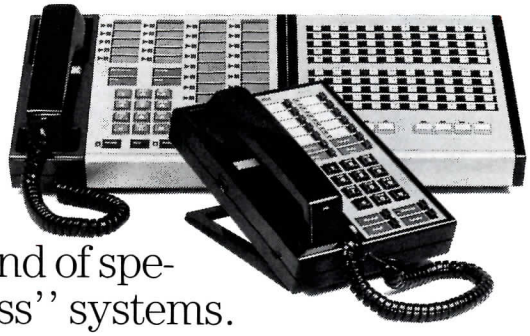

Not to mention the state of Miss Osgood.

System 25—from AT&T's Small Business Connection—is an instant solution to outmoded, over-the-hill equipment. It can give any company with 20-150 telephones the kind of special features once found only on "big business" systems. For instance, callers can reach everyone in your business without going through the receptionist. Its unique Personal Dial Code allows your calls to follow you around from office to office. And you can activate the code from any location on your route.

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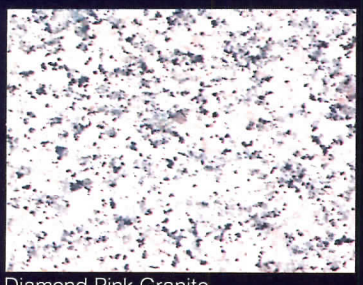
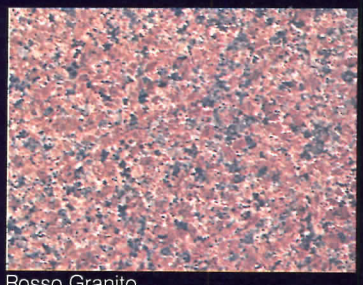
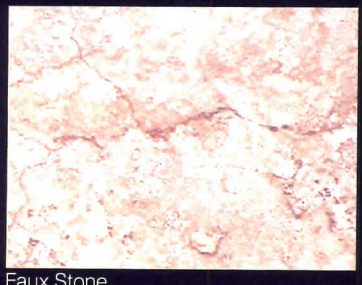


Diamond Pink Granite

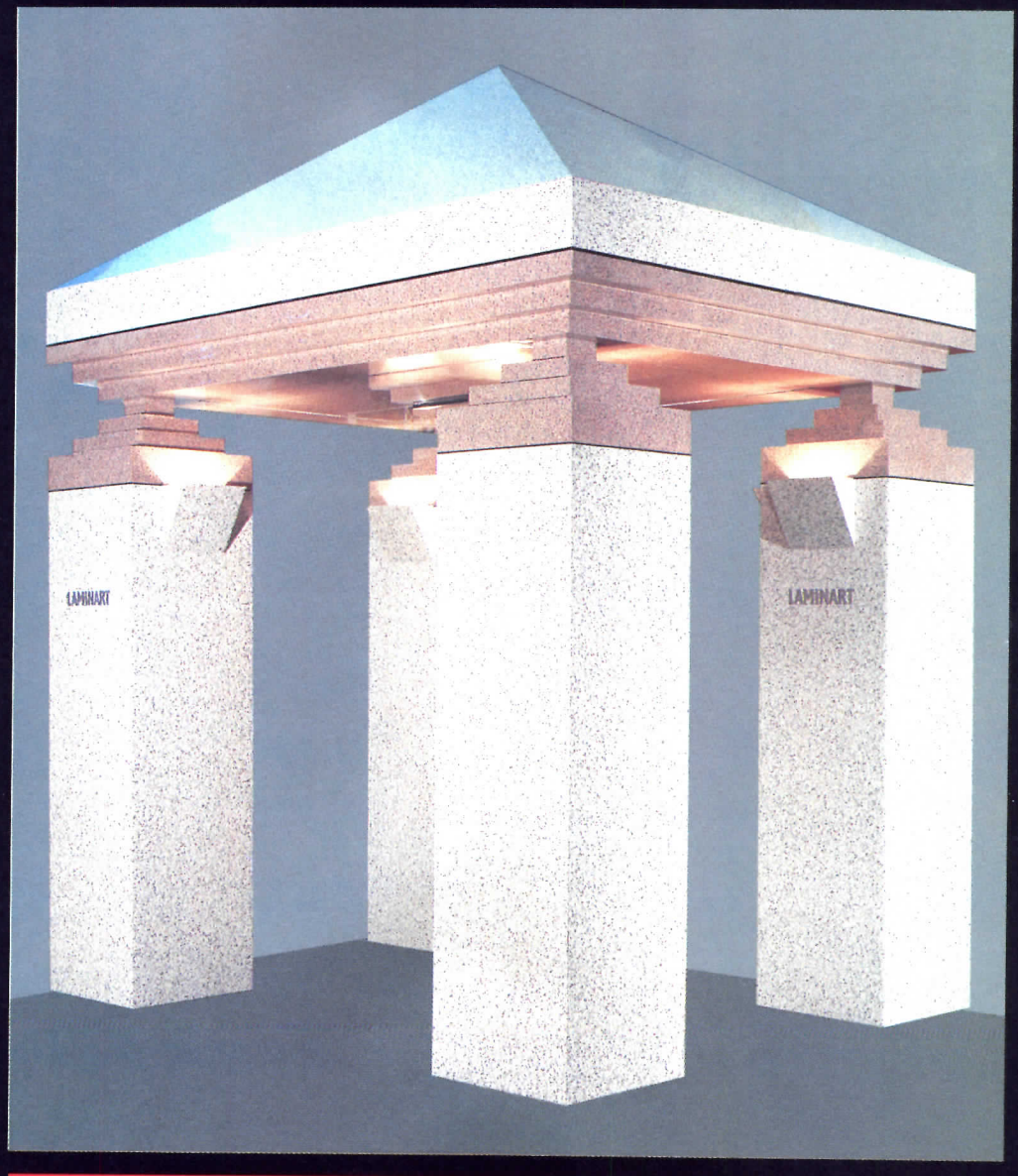


Rosso Granito



Faux Stone

Moonstone



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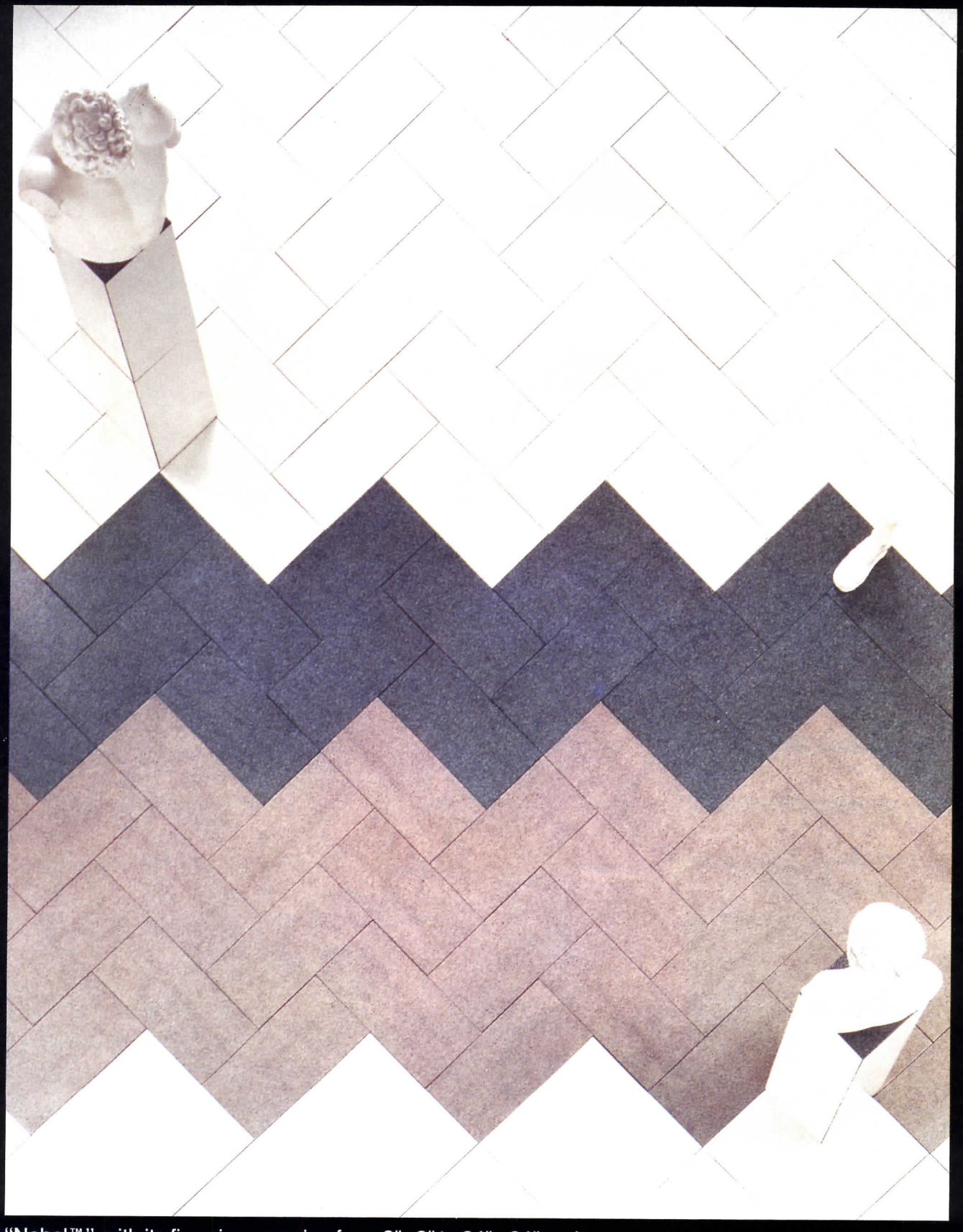

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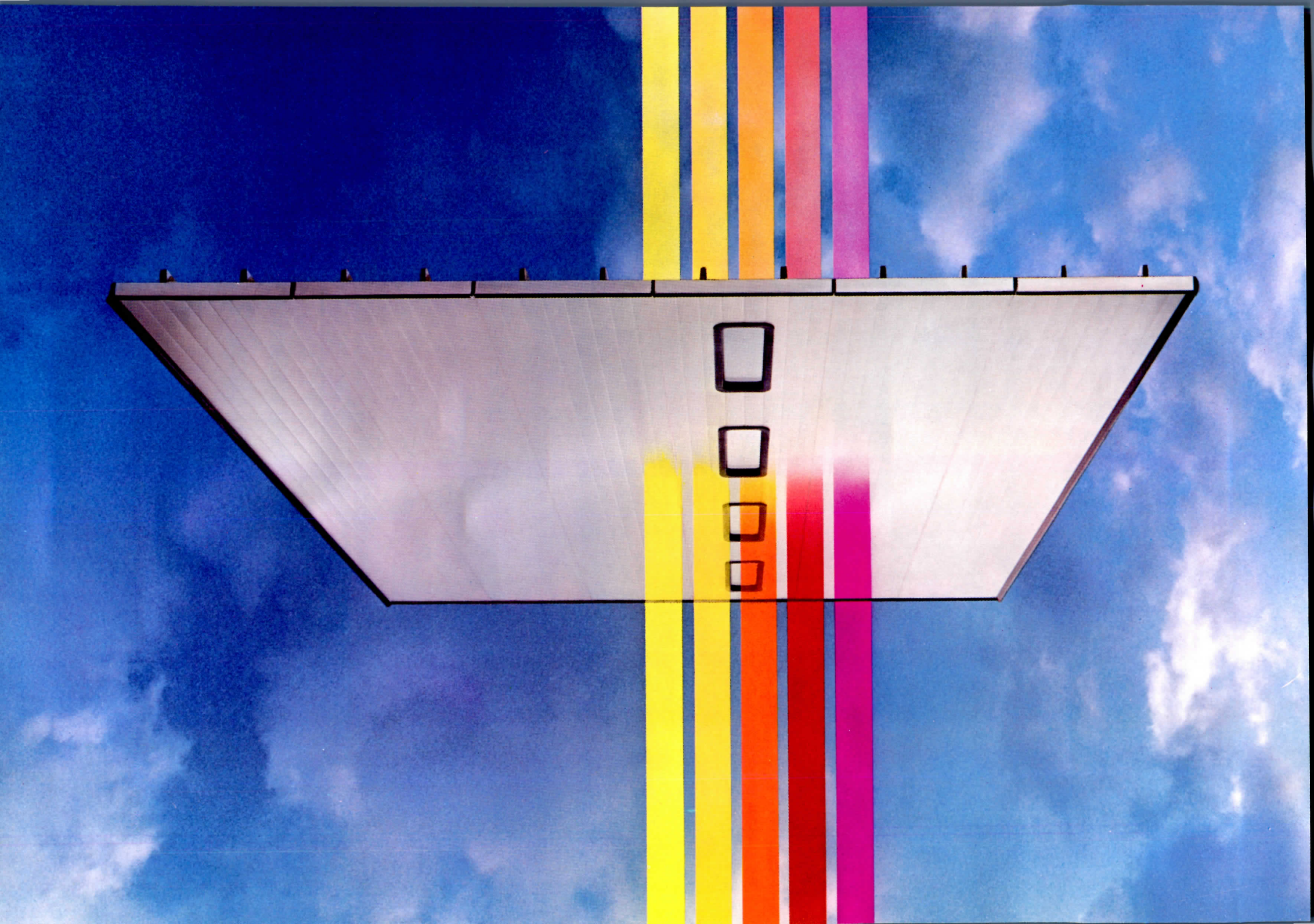

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Lots of traffic through your doors is generally a good sign in the world of business. But when heat and cold come to call, your doors – especially your insulated overhead sectional doors – shouldn't let them in.

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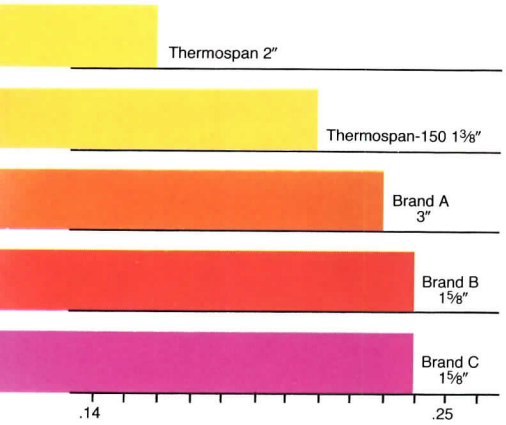
Thermal (U_C) Test Results



All doors tested were 10′-2″ x 10′-0″ no-glass doors installed to manufacturer's specifications.

The independent testing service and the test procedure were recommended by the National Association of Garage Door Manufacturers.

The Wayne-Dalton Thermospan-150 1⅜″ door also allowed less heat transfer than the competitive doors, including one 3″ door.

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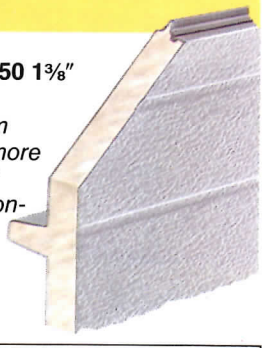
Thermospan 2″
Top of the line. At least 43% more energy efficient than other non-Wayne-Dalton doors tested.

Thermospan-150 1⅜″
Competitively priced, premium door features, more energy efficient than the best non-Wayne-Dalton door tested.



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Polystyrene glued-in block insulation. Various moldings and end caps bridge thermal break.

Brand B 1⅝″
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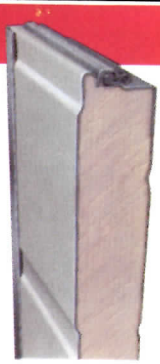

Brand C 1⅝″
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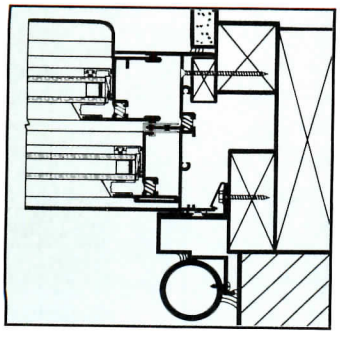

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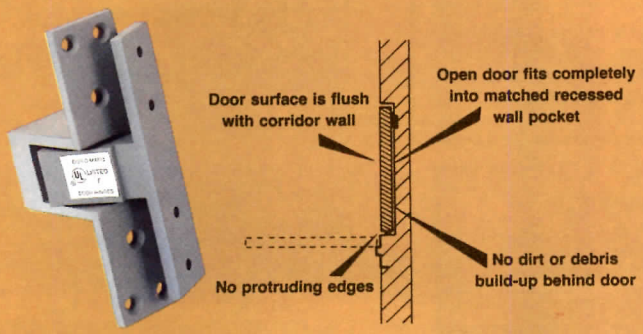

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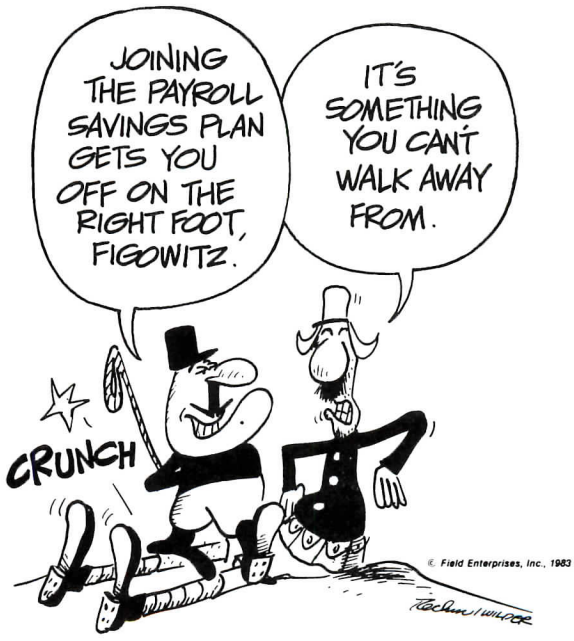

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Design Professionals predict the future

AFTER ELECTRONIC SWEET'S DEMONSTRATIONS AT FOUR MAJOR INDUSTRY SHOWS, NEED IS SEEN FOR MANUFACTURER CATALOGS TO REFLECT FUTURE SELECTION HABITS.

Following demonstrations at AIA, CIS, A/E/C Systems, and Electric '86 shows, 437 design professionals completed questionnaires regarding their evaluation of Electronic Sweet's impact on product search when launched in '89. Highlights of importance to manufacturers:

—Over 4 out of 5 say Electronic Sweet's will be "extremely" or "very" useful to them.
—98.2% feel it's "very easy" or "easy" to use
—Almost 9 out of 10 will use it on over half of their searches in Sweet's, and 1 out of 2 will use it on three quarters of their searches in Sweet's.
—Stated another way, firms whose catalogs don't reflect Electronic Sweet's selection programming criteria may lose up to 60% of referrals to their products.

With launch of Electronic Sweet's set for 1989, Sweet's Sales VP Chuck Nash emphasizes importance of manufacturers to participate now in working with Sweet's in programming criteria. Only Sweet's customers can input search criteria, giving them a competitive edge by having their key product features written into the program.

Manufacturers are urged to request free consultation with Sweet's catalog design professionals ASAP.

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Over 100,000 expected at CONEXPO® 87

ENR PUBLISHER HEADS SEMINAR COMMITTEE FOR CONSTRUCTION MACHINERY SUPERSHOW; NOV. 13 IS AD CLOSING FOR ENR PREVIEW.

Las Vegas Convention Center is Feb. 21-26 site of exposition held every 6 years by Construction Industry Manufacturers Assn. (CIMA).

Exhibit expected to exceed 1,000,000 sq. ft. for latest technology, including machinery, robotics, electronics, and outdoor demos of equipment at work. International scope of show is reflected in IRF Symposiums simultranslated into French, Spanish, Chinese, Arabic.

New feature: comprehensive seminar program (English only), with ENR Publisher Dave McGrath heading up seminar committee. Thirty six lectures fall into 5 categories, from technical to marketing.

ENR preview coverage of CONEXPO 87 begins in Dec. 11 issue. Coverage to continue in Feb. 12 issue, to be distributed at show. Follow-up coverage to appear in Feb. 26 and March 5 issues.

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New Dodge Software

"REMODELING/RETROFIT ESTIMATOR" PROVIDES "COST-BY-ROOM" PROGRAMMING FOR RESIDENTIAL AND COMMERCIAL JOBS; KEY FACTOR IS DODGE DATA BASE.

With renovation currently accounting for about 50% of the construction market, accurate estimates in the segment take on added importance.

New "Remodeling/Retrofit Estimator" software covers spectrum of categories from site to roofs, with 697 different renovation tasks. Dodge Data Base includes labor/productivity/materials costs broken out for 720 local geographic areas in U.S. and Canada and is updated semi-annually.

Floppy disk is IBM PC-compatible. Fast, accurate program is enhanced with flexibility to over-ride Dodge cost data with estimator's own numbers. Demo disks available for $25.

Another "First" from Dodge: The 4 Dodge Cost Data Publications covering "Assemblies," "Unit," "Square Foot," and "Heavy Construction" costs are now available in both book and diskette formats.

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* * * * * * * * * * * *

"Must-see" from EC&M

1987 NATIONAL ELECTRIC CODE® SEMINARS BEING HELD IN CHICAGO AND SEATTLE: DRASTIC CHANGES, STRICTER ENFORCEMENT REQUIRE VISUAL EXPLANATION FOR CLARITY.

As part of its on-going conference program, Electrical Construction & Maintenance magazine has scheduled seminars across the U.S. to explain new articles and regulation changes in the NE Code.

Because of complexity of changes and number of new applications, emphasis will be on visual presentation, with hundreds of *diagrams, photos,*

Cont'd...

and charts. Seminars will be led by EC&M Editorial Director Joe McPartland and a blue-ribbon panel of Code specialists to clarify and answer questions. Following last month's sessions in Boston, the conferences move to Chicago, Oct. 30-31, and Seattle, Nov. 20-21.

Besides electrical-specific firms, architectural and engineering firms should have representatives attend to ensure having an "in-house expert" on regulations which will be in effect over next 3 years.

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Update on Dodge DataLine©
ELECTRONIC DODGE REPORTS TEST MARKET SEES RAPID REFINEMENTS AFTER 9 MONTHS; EXPANSION TO TO BE EXPLORED FOR '87

Currently 38 firms are testing the DataLine prototype electronic data base of Dodge Reports information in the six New England states. With input from users, Dodge is streamlining and adding features to provide customized access to information beyond even the selective capabilities of printed/mailed Reports. Using personal computers linked to phones, DataLine functions as an "electronic mailbox". Hard copy can be printed as needed.

Besides early alert on new jobs, continual tracking of jobs of special interest becomes more efficient. The menu allows quick customized searches for such categories as valuation, job phases, competitor activity, and mention of specific trades, materials and equipment. Speed of menu selections and retrieval has increased 400% since testing began in April. Downloading capability is expected by Nov.

Additional market tests will be explored in '87 with a national rollout planned in 1987 or 1988.

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ENR ON-LINE test results:
80% OF TRIAL USERS RE-SUBSCRIBE; 24-HOUR-A-DAY NETWORK PROVES WORTH AS HEADSTART JOB LEAD SERVICE FOR WORLD-CLASS CONSTRUCTION FIRMS.

Initial 6-month market test of ENR ON-LINE indicates subscribers get strong competitive edge via up-to-the-minute early leads on major national and international opportunities. Shortly after CIG made it available for general subscription, original subscribers were joined by 2 major Design/Construction firms and a General Contractor.

Key to the $16,800-per-year service is a network of 250 correspondents worldwide, plus daily updating of on-line data. News briefs and project leads are reported at very early stages, even including funding announcements of major activity to come. Info is gathered specifically for ENR ON-LINE, is targeted for major firms with marketing sophistication to take fast action on news not yet available to design/construction community at large.

In-office demonstrations available from Dodge/DRI and Dodge National Account reps.

Circle 111 on inquiry card

TAX REFORM: BACK TO BASICS

The sweeping overhaul of the nation's tax system will change a few things for the construction industry.

—Real estate tax shelters. To no one's great surprise, real estate tax shelters head the list of reforms. The pending legislation provides that depreciation on commercial buildings will be extended from the current 18 years to 31.5 years, and prohibits the use of "passive" investment losses to offset other income. For developers of office buildings, hotels, and apartments, this means that rental properties must exist by income alone—without the generous subsidy provided since 1981 when the Economic Recovery Tax Act (ERTA) allowed fast write-offs. The change shouldn't leave these construction markets at any more of a disadvantage than before ERTA, except for the temporary problem of digesting a glut of vacant buildings—the legacy of overstimulation by accelerated depreciation. The inevitable short-term adjustment: a sharp cutback of new construction until the surplus is absorbed.

—Tax free bonds. Public issues will retain their tax free status, but private bond issues will be restricted by the new legislation. Preferential tax treatment currently enjoyed by industrial development bonds, private waste treatment projects, hospitals, and even low income housing, for example, will be limited ("capped"). However, public issues for roads, waste water treatment, schools, and hospitals will remain eligible for low cost financing. The favored tax treatment of state and local government borrowing is entirely consistent with the spirit of the "New Federalism" which requires local governments to assume a greater share of domestic programs which were once the domain of the Federal government.

One benefit of the new legislation will be to take the recent "artificiality" out of the real estate market. Viable projects—buildings that are intended to shelter people rather than income—will still be built.

—George A. Christie,
Vice President and Chief Economist

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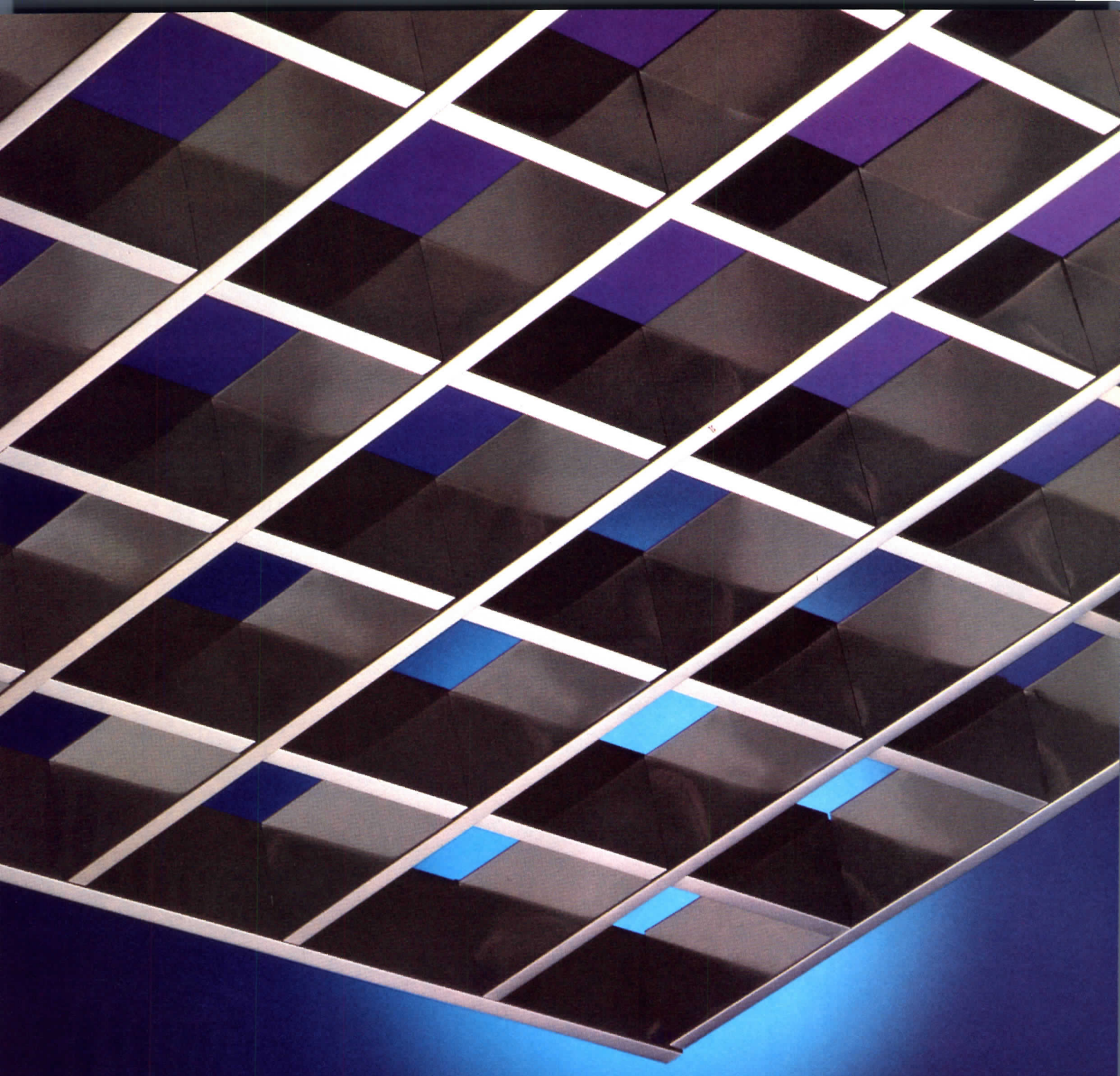

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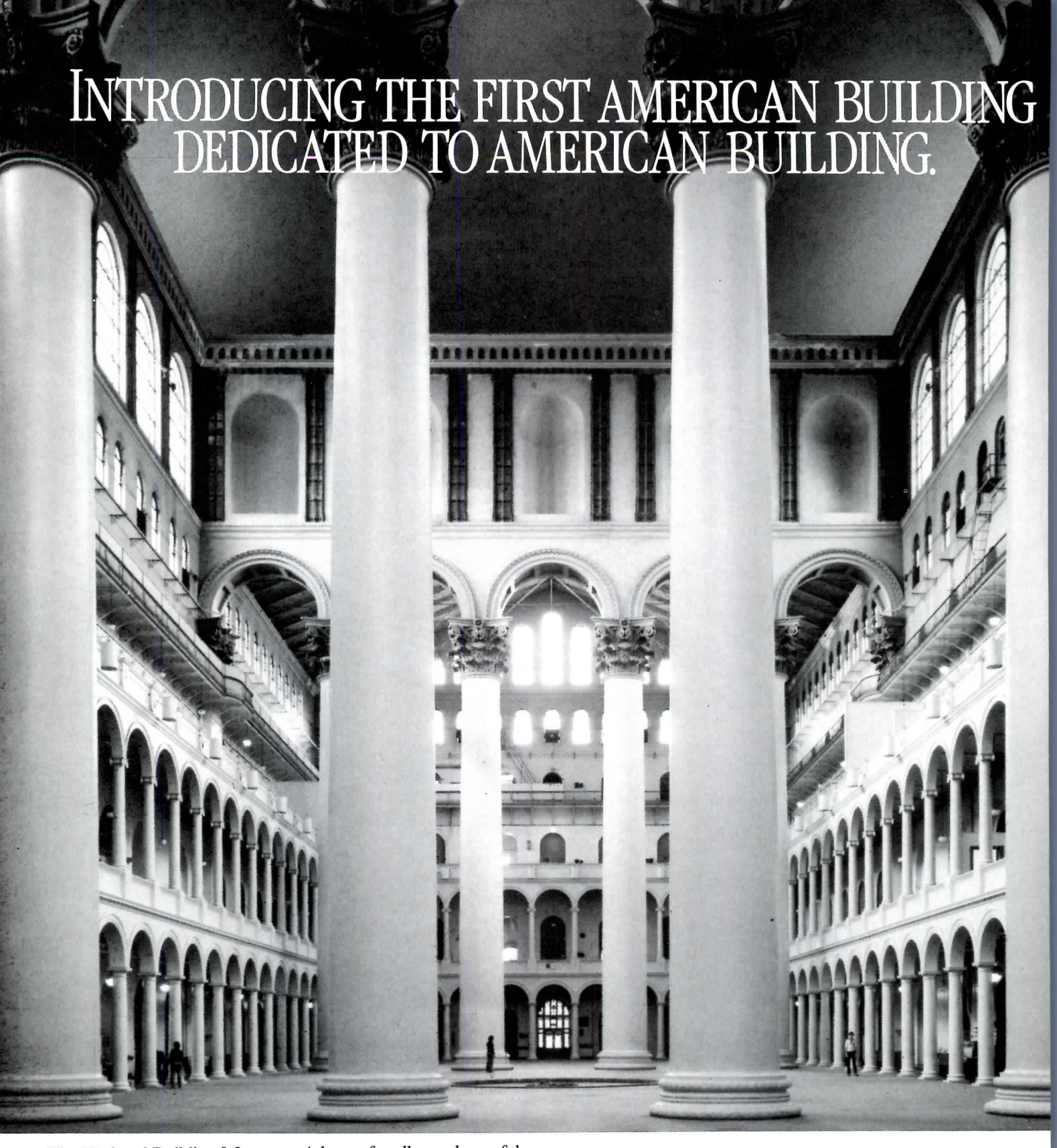

The National Building Museum. A home for all members of the building community. A place to exchange ideas, information, and opinions. A rallying point to celebrate and promote building. A center to enhance public understanding and appreciation of the building arts and sciences.

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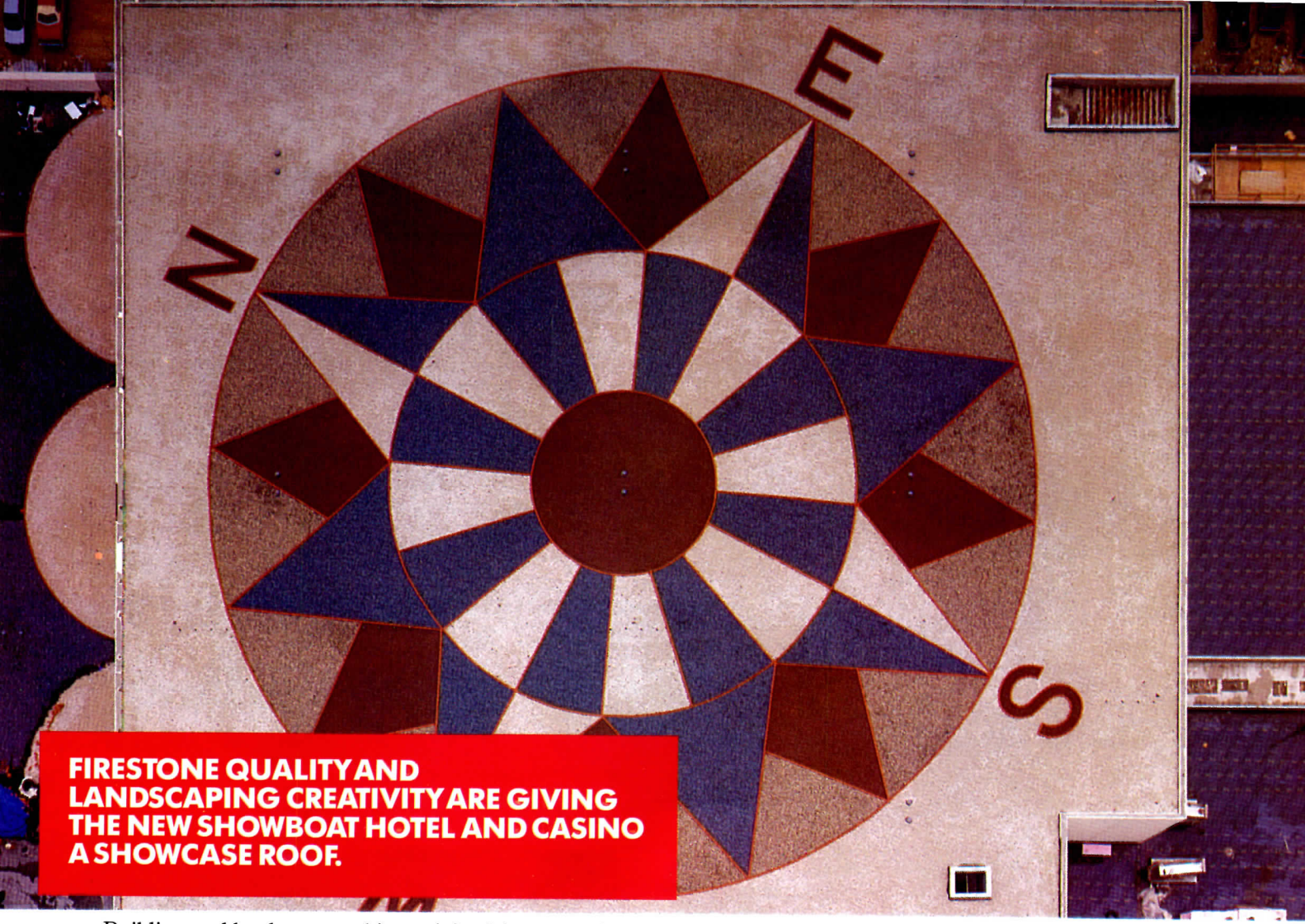

FIRESTONE QUALITY AND LANDSCAPING CREATIVITY ARE GIVING THE NEW SHOWBOAT HOTEL AND CASINO A SHOWCASE ROOF.

Building and landscape architects joined forces to give the new Showboat Hotel and Casino a roof that will stand out—even in the flamboyant world of Atlantic City casinos.

Landscape and site design specialists Cairone Mackin & Kaupp, of Philadelphia, worked closely with casino architects Martin Stern Associates, of Beverly Hills. They produced a nautical design that combines multicolored crushed stone graphics (such as the compass rose above) with live plantings, trellises and other traditional garden landscaping elements.

Underneath it all went a 45 mil Firestone RubberGard® EPDM roof and Firestone-supplied Foamular® insulation, the value-engineered recommendations of Thomas Roofing & Sheet Metal Co., the Atlantic City contractor for the job. "It would have been prohibitive to put down a built-up roof—more labor, more materials," said Mike Thomas, of Thomas Roofing, explaining why he chose Firestone EPDM.

Dave Rudzenski, the Martin Stern field rep on the job, agreed. "I personally feel it's a better product. Much easier to work with. And the life is long."

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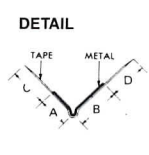

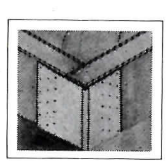

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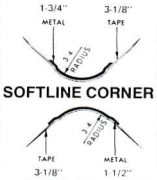

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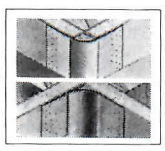

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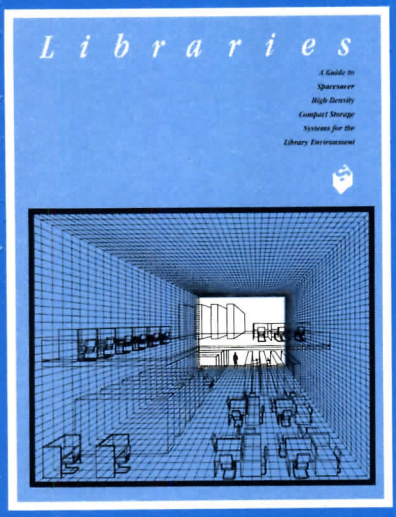

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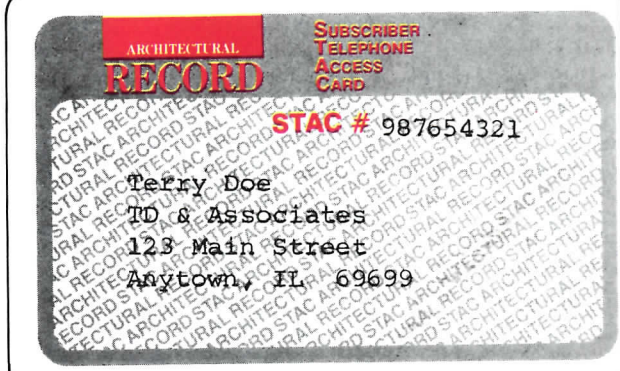

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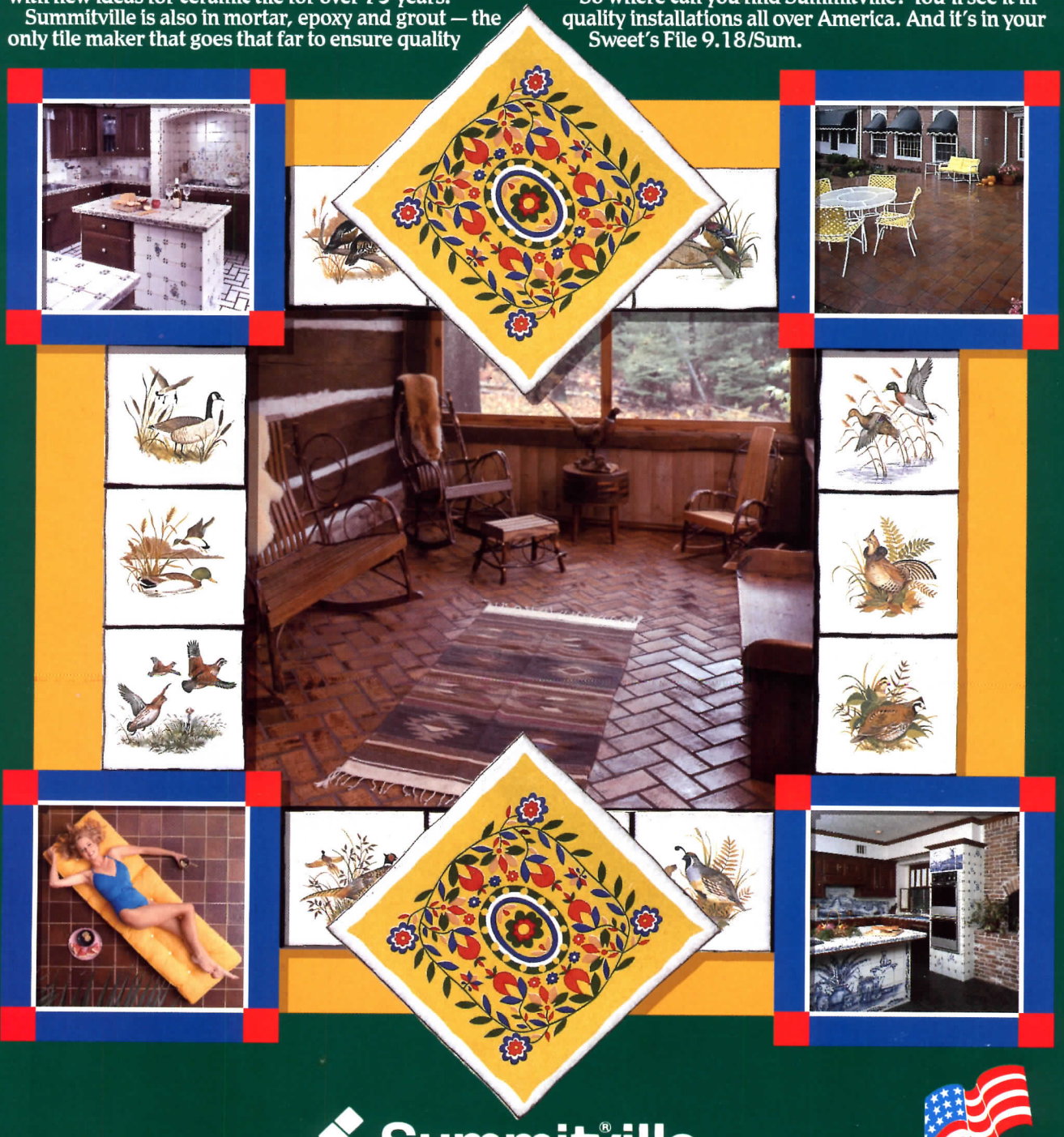

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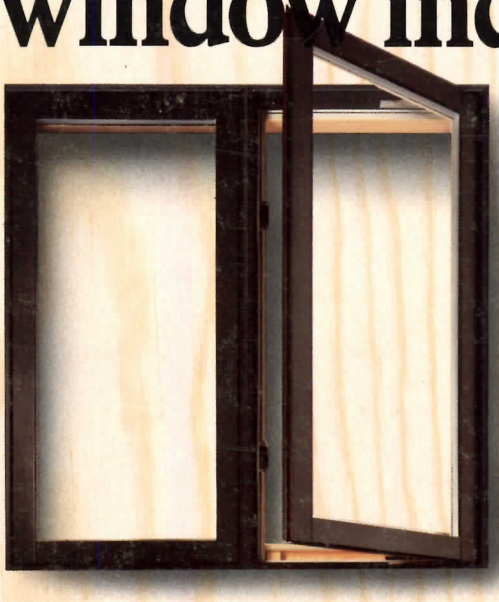

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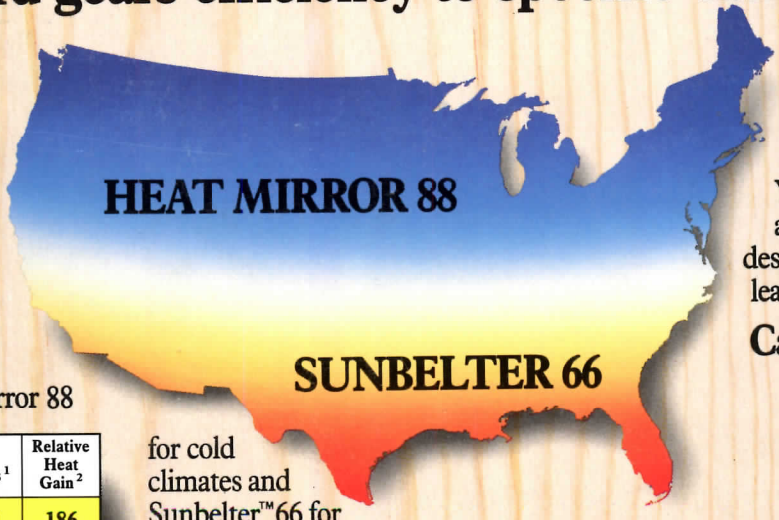

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