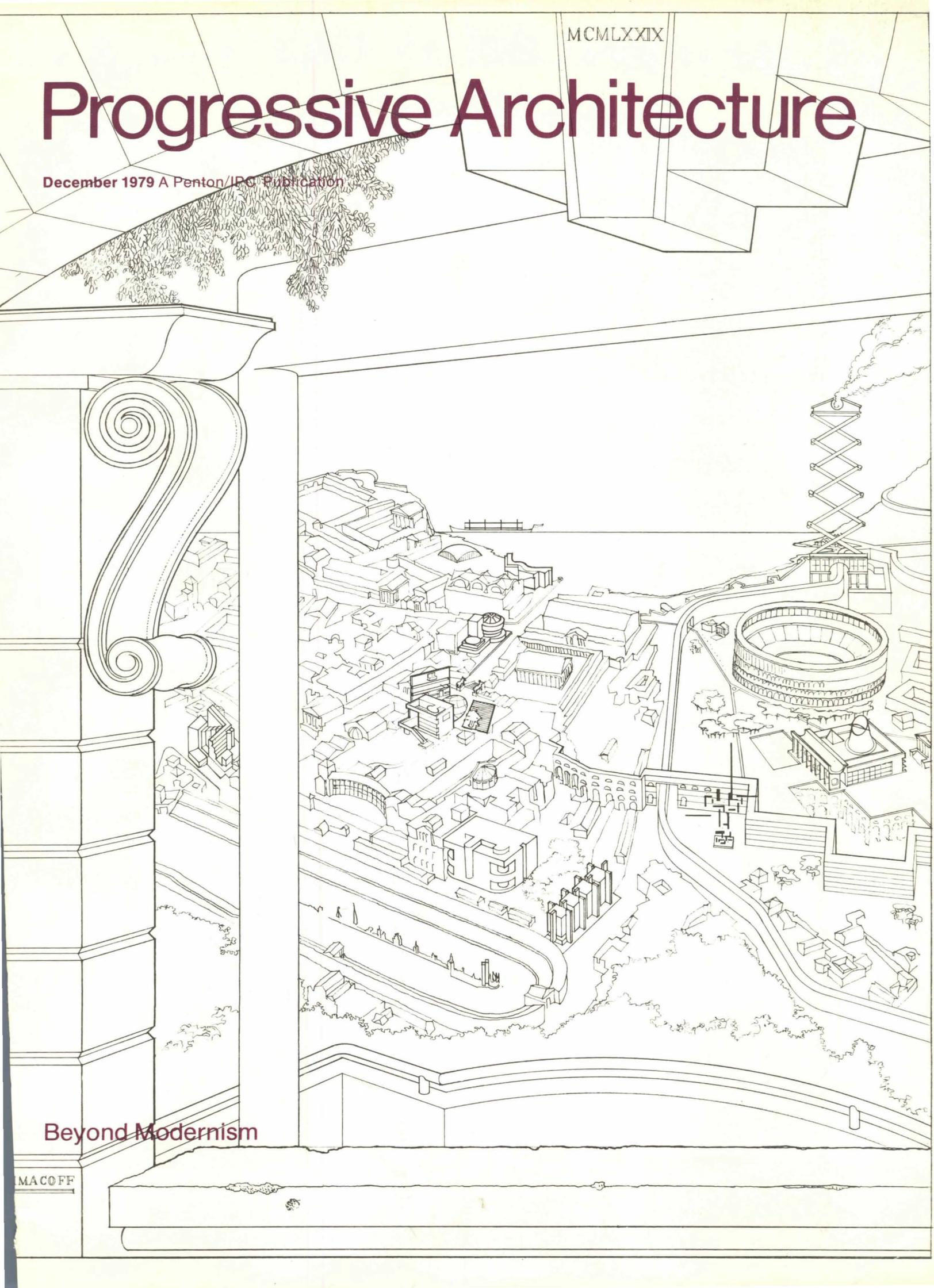


MCMLXXIX

Progressive Architecture

December 1979 A Penton/IPC Publication



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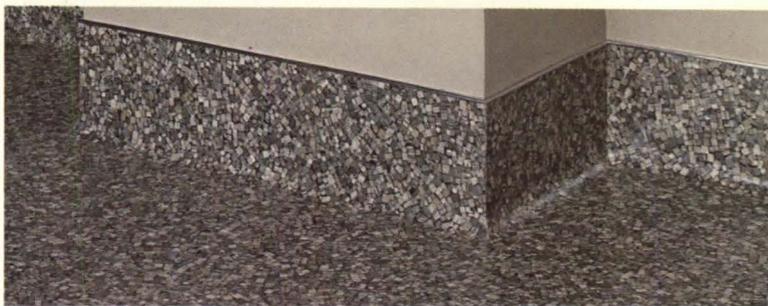


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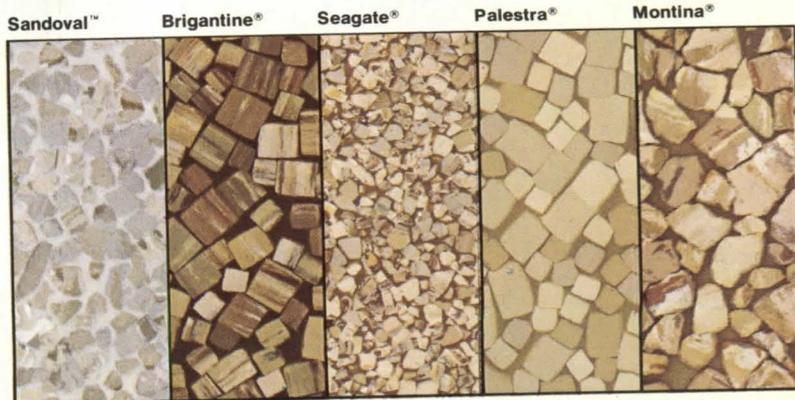


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Progressive Architecture

8 **Editorial: Ethics VI—Looking good**

Architectural design

49 **Playing with a full decade**

Fragmentation often seemed to be the result of architecture's attempt to go beyond Modernism during the 1970s.

56 **Book of lists**

We've got them on our list: most published projects, most popular phrases, most written about architects, most controversial buildings of the 1970s.

60 **Within the walls of Modernism**

In the Bel Air area of Los Angeles, Eugene Kupper's design for the Nilsson house explores and develops both Modern and pre-Modern ideas.

66 **Layers of meaning**

Arquitectonica's design for the Spear house in Miami is both rational and surreal, an intriguing house shaded from red to pink at different planes.

72 **Little house off the prairie**

Designed by Mark Simon of Moore Grover Harper, the Crowell house in Vermont nestles into the hillside for energy saving. By Martin Filler.

76 **Extracting and recombining elements**

Avant-gardist Hans Hollein designed elegant interiors for the Austrian Travel Agency and the Perchtoldsdorf Townhall. By Mark Mack.

84 **Does Post-Modernism communicate?**

Twenty architects and twenty accountants reacted quite differently to 24 Modern and Post-Modern buildings. By Linda Groat and David Canter.

88 **Beyond fragments**

An architectural framework is needed to bring together disconnected elements of the Post-Modern period into a coherent whole.

Technics

91 **Specification clinic: Some afterthoughts about addenda**

92 **Designing the moving experience**

People movers operate vertically, horizontally, or at angles to take us within or between buildings comfortably and, usually, quickly.

Departments

12	Views	113	Annual index
25	News report	120	Job mart
41	Report from Dacca	126	Directory of advertisers
44	Calendar	127	Reader service card
103	Products and literature		Loose subscription card, U.S. and Can. issues

Cover: Looking back to the past: a view out of a double frame to an architectural landscape of *Modernism's* monuments. Drawing by Alan Chimacoff commissioned especially for P/A. See January Views for key to buildings.

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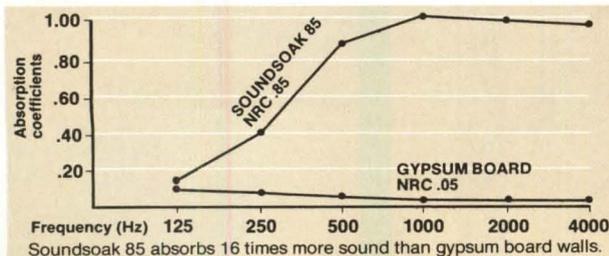
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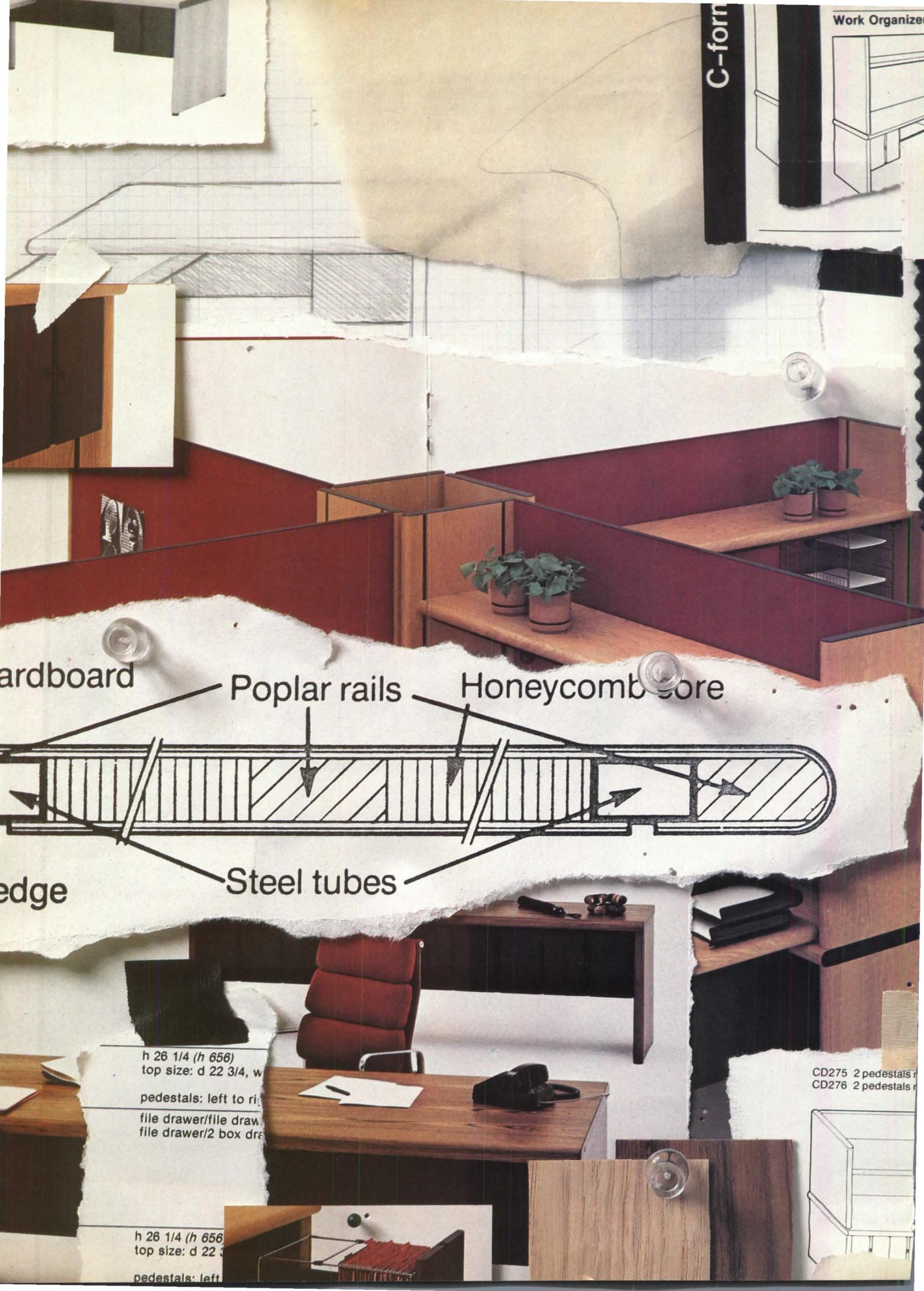
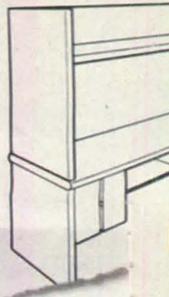
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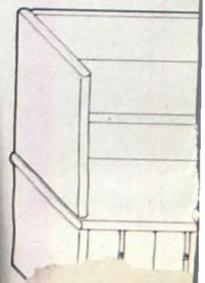
h 26 1/4 (h 656)
top size: d 22 3/4, w

pedestals: left to right
file drawer/file drawer
file drawer/2 box drawers

h 26 1/4 (h 656)
top size: d 22 3/4

pedestals: left

CD275 2 pedestals
CD276 2 pedestals



h 62 (h 1550)
top size: d 22 3/4, w 70
with knee space; two shelves

left pedestal

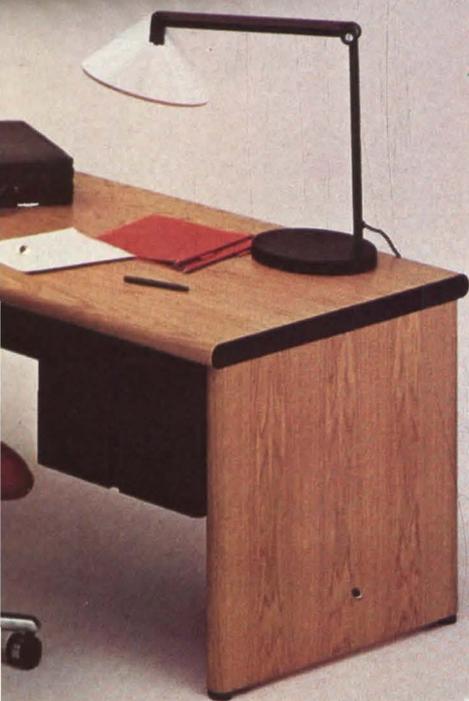
CD331

file drawer
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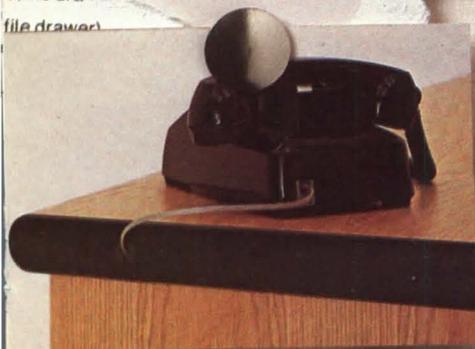
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Ethics VI

Looking good

December 1979

Everybody agrees that the architect, or any design professional, has aesthetic obligations to society. Practical solutions are indispensable to competent design, of course (P/A Editorial, Aug. 1979), but the aesthetic components make it architecture. These statements are obvious to the point of being truisms, yet once we try to define the architect's aesthetic obligations, we enter an area of little agreement.

The relationships between aesthetics and social responsibilities are highly complex, and are now undergoing thorough reexamination. To dip into recent writings on the issue is to realize the impossibility of reviewing current arguments in a matter of weeks, much less digesting them on a single page. What follows is going to be impressionistic, incomplete, and without footnotes.

While the Modern Movement reigned, there was one overriding ethical mandate, elevated to a moral imperative. Modern architecture expressed, by definition, the *spirit of its times*. Implicit in its writings and landmarks were beliefs in evolutionary progress, social equality, economy of means. There was an underlying belief in universal order, though that was counteracted at times by a desire to shatter the preexisting order or by visible reactions against totalitarianism.

Although Modern buildings were intended to express their *functions*, the only function stressed consistently was that of the building's structural system. Critics of Modern Architecture challenged its lack of symbolic content, its tendency toward undifferentiated regularity, and its obliviousness toward any sense of place. These failings were seen to be not just aesthetic, but to be socially demoralizing as well.

As the doctrines of Modernism dissolve, a revised set of aesthetic objectives seems to be coalescing around the objective of *coherence*: the environment is to be given not just order, but the kind of differentiation

and symbolism that will make it readable to its users. Any formal devices, including those borrowed from history, are ethical if they clarify the organization or identity of the building or its context. Today it is the spirit of place that must be nurtured, in the face of threatening homogenization; the spirit of the times, we now realize, is apparent even in revivalist efforts, so we see less need to express modernity, as such.

Most of us now sense a public need for more sensuous stimulation—a greater range of color, texture, pattern, and form than Modern Architecture typically offered, not to mention the associative, symbolic elements it never openly permitted. In a diverse society, it may be more valid ethically to reinforce diversity through design than to impose a tasteful consistency.

We sense, too, that it is usually socially preferable to alter the environment incrementally, avoiding the traumatic large-scale projects that embodied the dreams of the earlier Modern Movement. Incremental changes bring into play the juxtaposed contributions of successive eras—now seen by most of us as equally valid—and permit plans to be adjusted through the feedback of public responses.

The matter of public response raises an overriding question: What are the aesthetic needs of the public? (The public is not, of course, homogeneous; we must assume that, for any project, we can identify a segment of the public most affected by it.) The behavioral sciences should be able to answer such questions. In fact, however, the contributions of perceptual, psychological, and sociological studies to architecture have been small and fragmented. With or without the tools of behavioral science, the architecture profession has a very real obligation to test, in some way, the public reception of its aesthetic efforts. (For a report on some modest but revealing research, see pages 84–87.) And it has an equally serious obligation to increase

the public understanding of design issues—through works that are visible design lessons and through deliberate educational efforts. (Yes, "architecture appreciation.") There can be no great architecture unless it is valued by clients and public authorities.

In the absence of reliable guidance from scientific studies, we continue to rely for design concepts on the age-old sources: historical precedent and inspired intuition. Traditionally, concepts so generated have been fed into a development of appropriate architecture through trial and error. The process worked brilliantly for ancient civilizations, but we would like to find reliable answers in periods of years, not millennia.

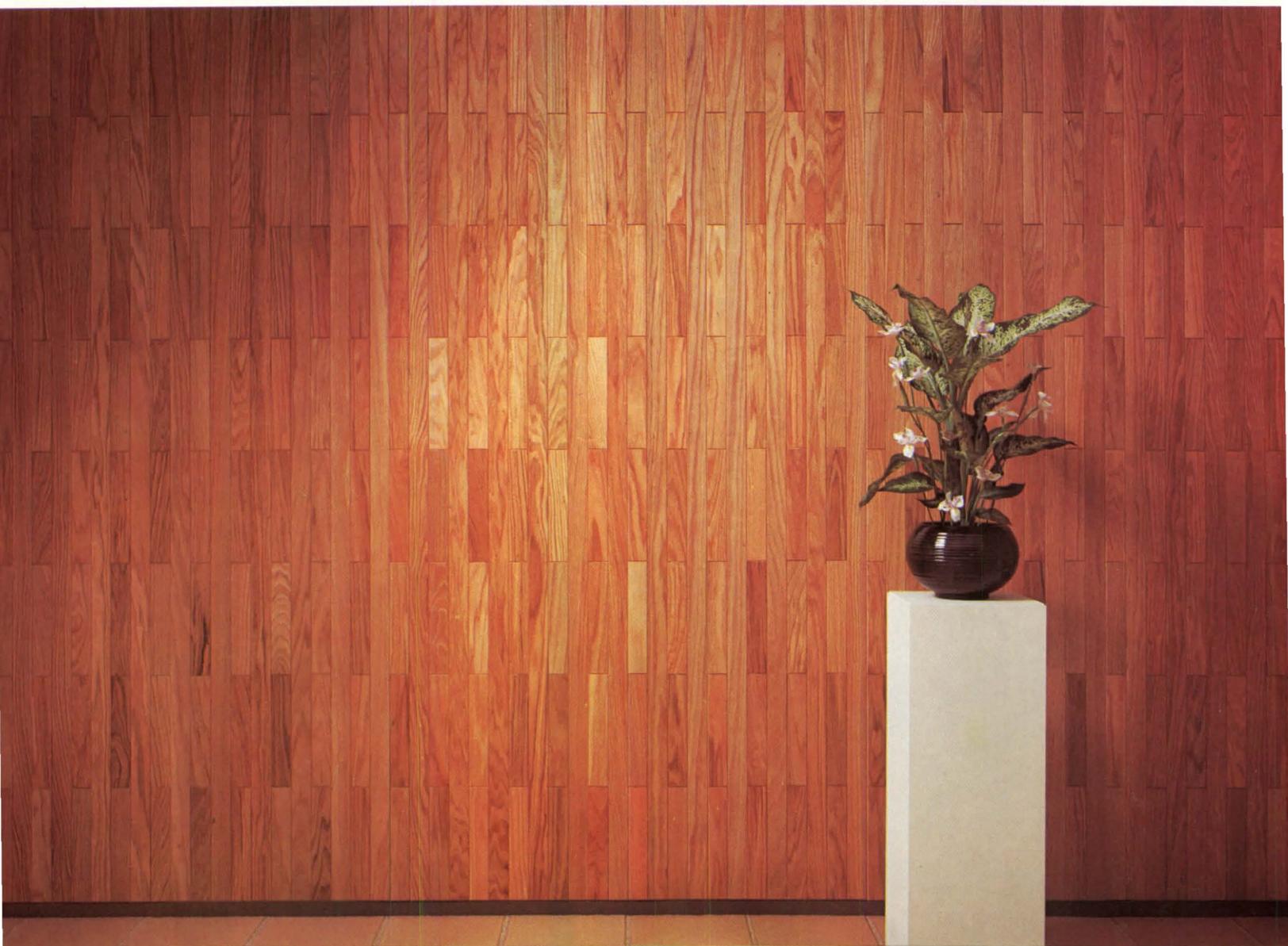
At any rate, we cannot proceed unself-consciously, as ancient cultures seem (at least to us) to have done. We cannot avoid intellectualizing about aesthetics and ethics and the pitfalls that entails. A quote from a recent letter by Dean Robert Geddes of Princeton identifies the dangers: "On the one hand, there is *moralism*, the view that the primary role of art is as a servant of morality, and, on the other hand *aestheticism*, the view that art is autonomous, exists for its own sake."

"I believe," Geddes continues, "that the extremes must be avoided, that the *interaction* of ethic and aesthetic is the essence of architecture. Aesthetic experience heightens our consciousness, increases our perceptual awareness, helps us come alive. That is the moral good, the ennobling influence of architecture seen as the image of the good."

When this ethical-aesthetic interaction is resolved really well, we recognize it. It looks very, very good.

John Morris Dipert

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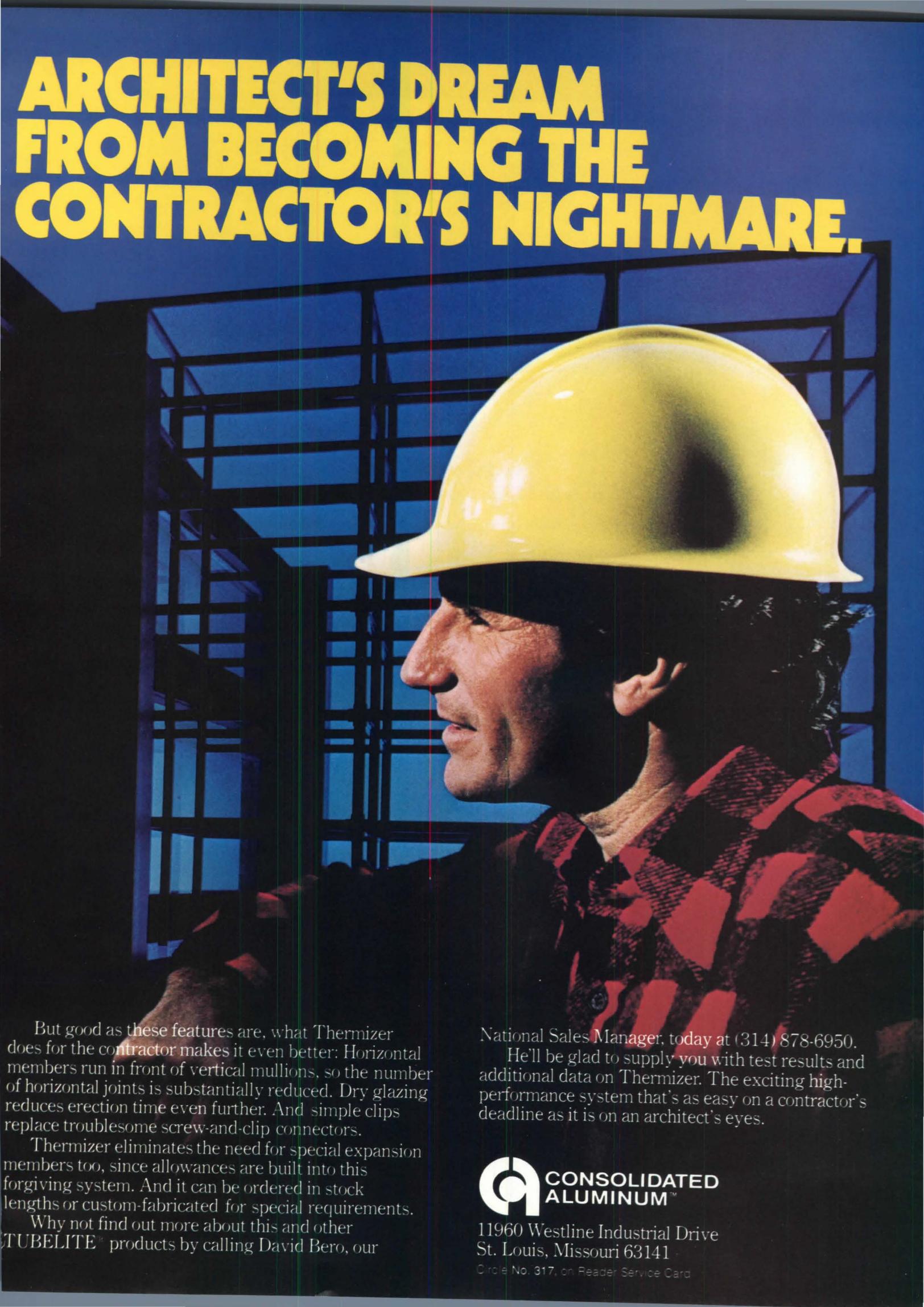
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Views

R/UDAT's roots

Suzanne Stephens' description of the AIA's R/UDAT program (P/A, Oct. 1979, pp. 72-75) gave an excellent impression of the present. A review of its origins may also be instructive.

Having acquainted the AIA membership with the meaning of "urban design" through the book which Paul Spreiregen put together, and the three Short Courses across the country under the leadership of Kenneth Brooks, the AIA

Urban Design Committee determined that the next objective should be to get their colleagues actively involved in their own communities. The first requirement therefore was that a request for a team had to be initiated or sponsored by the local chapter of the AIA. The chapter had the privilege of defining what the problem was that the team would be asked to help with. They also had the responsibility for coming up with the necessary expense money and for getting the written endorsement of the political, community, and business leaders who were most active in the problem area.

As a result, a team would come to town and find an important audience which was already rather receptive and well-motivated. One of the dynamics of this format has been a team's ability to get diverse community groups sitting around the same table in a way that would not

happen ordinarily and that probably could not be arranged by a paid professional consultant.

At the beginning, we were apprehensive about being accused of job-stealing. We wrote rather modest reports, without sketches, usually recommending a "plan for planning" and the hiring of professionals. (I am supposed to have originated the program and actually led the first five teams plus two others.) But as the program became more popular, it became more sophisticated in presentation, in public relations, and in team composition, under the subcommittee leadership of Henry Steinhardt, Larry Melillo, and finally the super-energetic Ron Straka.

My guess is that the original objectives are still valid and that the program has promoted an increased respect for urban design in the respective communities, whether or not the particular team recommendations have been followed.

*Robert S. Sturgis
Former chairman
AIA Urban Planning and Design Committee
Cambridge, Ma*

With respect to land

The cover and editorial of the October 1979 issue were extremely misleading as to what was contained inside. The cover indicated that you were going to discuss exterior spaces. Your editorial led me to think that the issue might be devoted to a new "land ethic" for architects. I found neither in the issue, and I was, frankly, disappointed.

I found the editorial to be excellently written, full of forceful statements, and very pertinent to architects. Landscape architects for years have had the endearing respect for the land which the editorial espouses. It would be nice if a few more architects and planners came to appreciate the effects their efforts have on the landscape.

I challenge your magazine to have a regular column or annual issue devoted to sensitive land-planning philosophies and projects. I think this is long overdue, and would be of great benefit to design professionals in several areas of expertise.

*Robert A. Fraser
Associate Professor
Landscape Architecture
Virginia Polytechnic Institute
and State University
Blacksburg, Va*

[We agree fully with the reader that land policy is a crucial issue, one that we should consider for more extensive examination in P/A. We are disappointed, however, that he seems not to have recognized low-rise, high-density housing itself as a responsible land use device, nor to have seen our R/UDAT article as pertinent to that same subject.—Editors]

'Housing revisited' reviewed

I did a little arithmetic from your "Housing Revisited" story's stated financial data on Manhattan Plaza (P/A news, Oct. 1979, p. 26). The rentals of \$150 per room appear to demand \$525 monthly for the typical one-bedroom (3½ rooms) apartment, of which the tenant is asked to pay "up to" 25 percent of income. I don't know what the average income of a typical unemployed or underemployed actor, dancer, or [continued on page 14]



St. Mary's College, C. F. Murphy Assoc., Architects, Keith Palmer, Photographer.

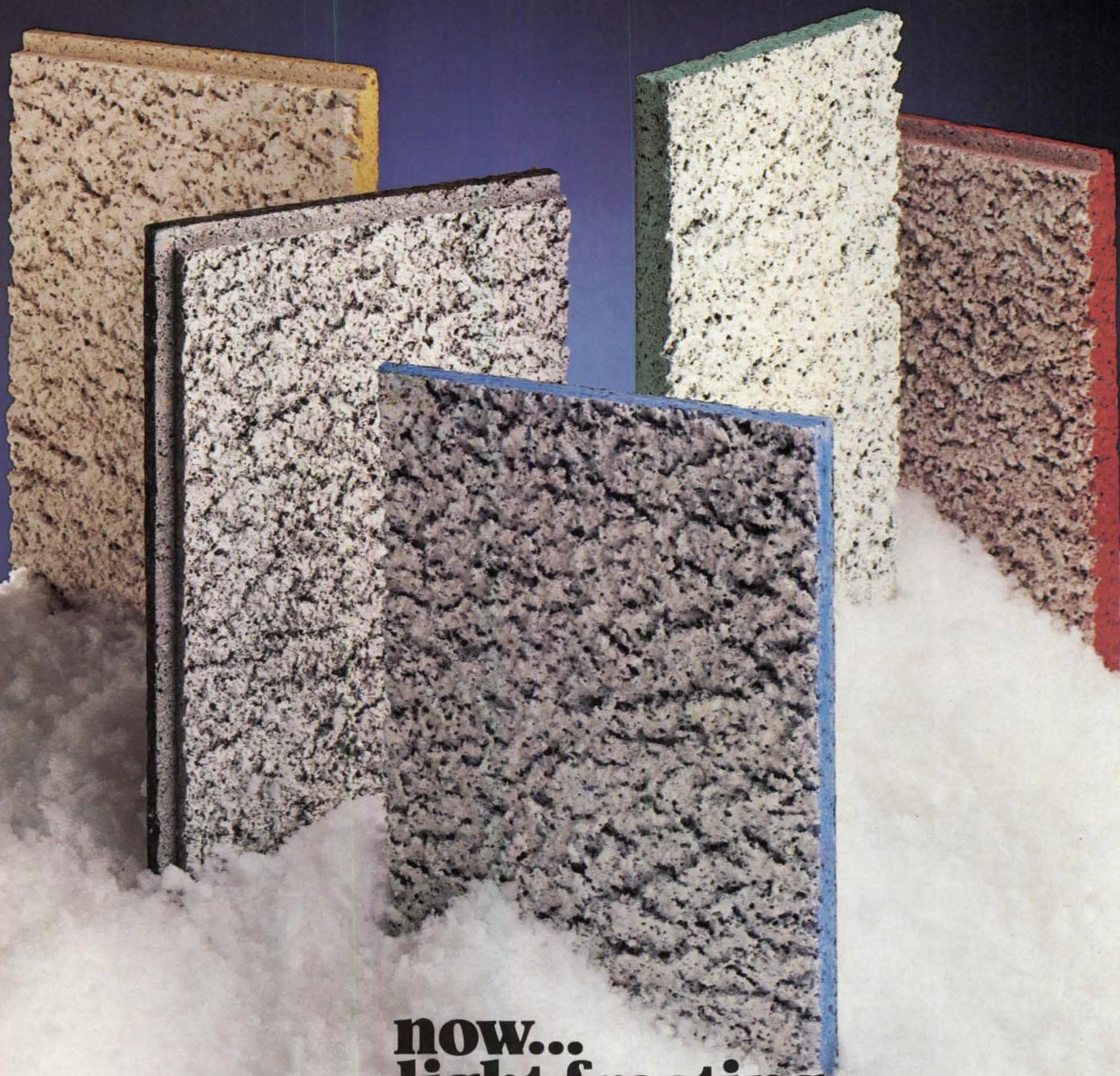
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Views continued from page 12

musician is, but if it were \$5000 annually, his or her share of the rent would be approximately \$100 per month, leaving HUD and its Section 8 program to pay the \$425 difference. If his income and rent share were doubled, it would still leave subsidy of \$325 per month.

Do you feel the intent of the Section 8 program was to provide housing at this cost to the general public? What percentage of the U.S. tax-paying unsubsidized families would you estimate are able to pay \$525 per month? Do you, yourself, pay that much rent or mortgage payment?

You might also have included in your story the total income that these tenants are permitted to

earn before their subsidy is eliminated, and they are required to pay the full \$525 market rent. Your sentence, "So far, residents are enthusiastic and very few people have left, but about ten percent of the units are at market rents," should be saved and reused any time in the future you revisit Manhattan Towers. I suspect you will be able to use it intact.

It is bewildering to see what our goal of "safe, clean, decent housing" has been perverted to mean.

James P. Gallagher
Associate & Director of Public Affairs
Smith, Hinchman & Grylls Associates
Detroit, Mi

[New York's rents are a great deal higher than most of the rest of the nation's. Any federal program must recognize this and not attempt to

apply blanket standards derived from national statistics. Moreover, as the article points out, Manhattan Plaza is not simply another low-cost public housing development, but a project whose social and economic benefits have considerably improved the safety, decency, and cleanliness of the entire area west of Times Square. P/A feels that such urban renewal considerations are legitimate goals of any public housing program.

A tenant earning over \$13,700 or a couple earning over \$15,700 is not eligible for a subsidy. And unfortunately, yes, those of us who live in the city pay proportional rents.—Editors]

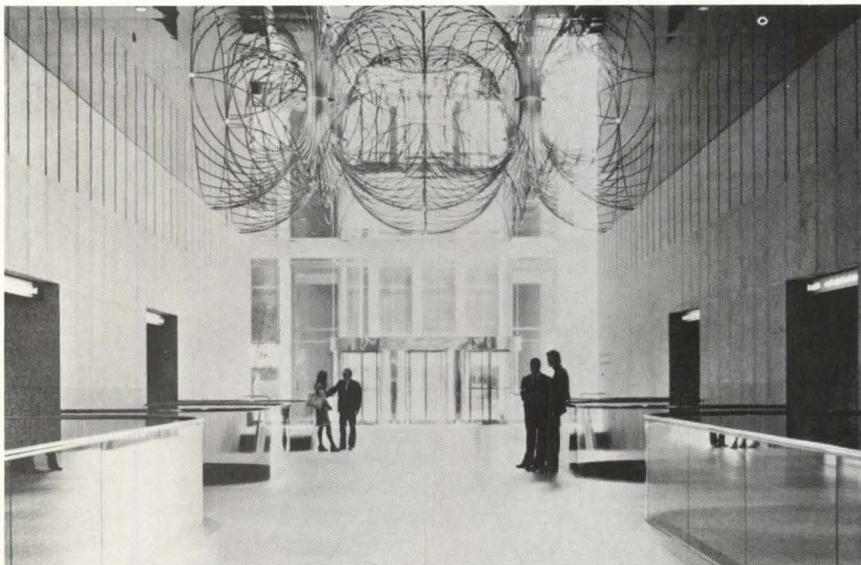
Credit corrections

Mrs. A. Quincy Jones informs us that the 1969 National AIA Firm Award went to the firm of A. Quincy Jones & Frederick E. Emmons Architects, a partnership formed in 1950 which lasted until Mr. Emmons retired at the end of 1969. Mrs. Jones also points out that her husband was a supporter, but not the founder of the USC Architectural Guild. The Annenberg estate is located in Palm Springs, Ca.

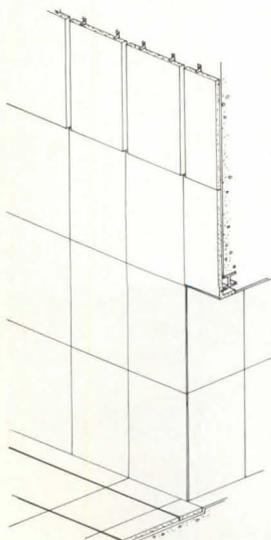
David Todd & Associates should have been credited as associated architects for Marcus Garvey Park Village (P/A, Oct. 1979, pp. 50-53). The Todd firm was credited in our earlier article on the design of the project (P/A, Dec. 1973, p. 62), making its omission here all the more embarrassing. David Todd & Associates were also architects for Manhattan Plaza (P/A News report, Oct. 1979, p. 32).

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First International Building, Dallas, Texas
Architect: Harwood K. Smith and H.O.K., Dallas, Texas
Photo courtesy Form & Function Magazine.



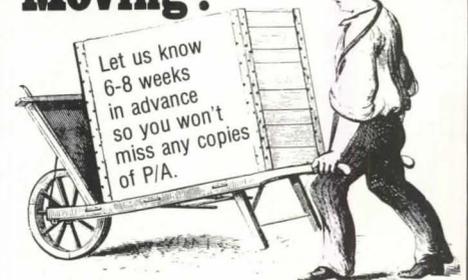
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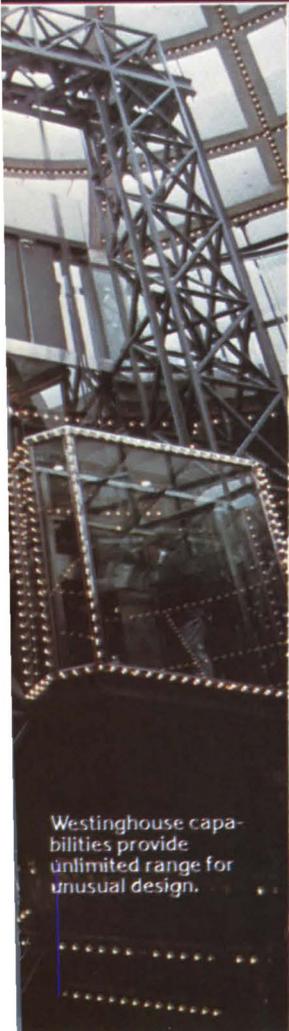
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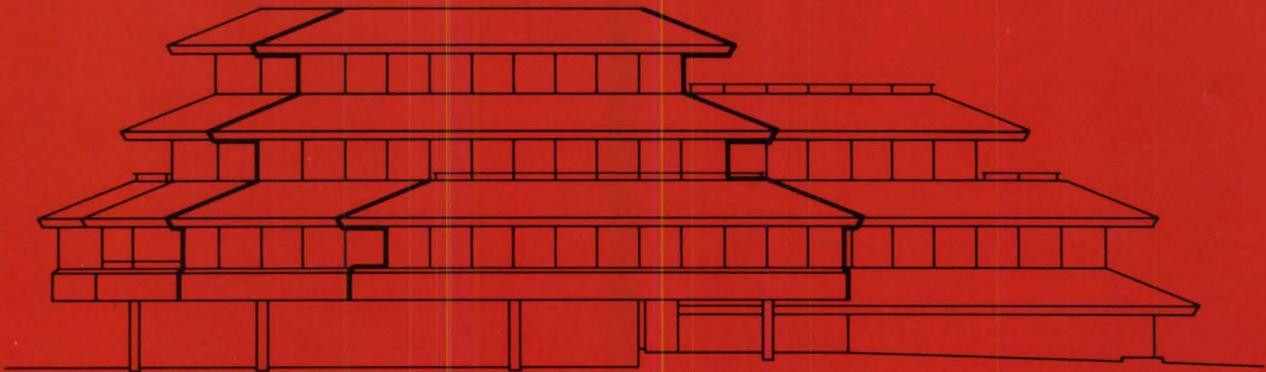
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Roofscaping



**REPORT
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Return of the Wooden Roof

Fire retardant shingles and shakes put natural wood back on top

Where roofing is part of the visible facade, its color, texture, and character become critical criteria.

Wood is often the aesthetic choice—especially if the context is rustic or residential—and, lately, wood has become an eminently practical choice as well.

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COLORADO

Outside Denver, near the foothills of the Rockies, a major office complex is taking shape amid quiet residential surroundings.

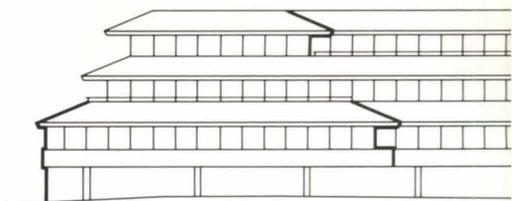
An Office Park of 17 buildings is the initial phase of Denver West, a 600-acre master plan which will also include regional and community shopping centers, hotel-restaurant facilities, an auto sales and service center, single-family and multi-family residences.

Architect Earl Freels has developed a campus-like visual theme in keeping with the character of nearby residential neighborhoods. No structure in the complex is higher than three stories, and the office buildings have residence-style pitched roofs covered with red cedar shakes—all told, roughly nine acres of shakes for the Office Park alone.

"The roofscape emerges as one of the most important elements in our basic architectural approach," notes Freels. "A choice of flat roofs would conflict with the conceptual imperative—that of relaxed informality."

The NCX fire retardant treated shakes are applied over plastic coated steel foil, thus qualifying as a Class "B" installation.

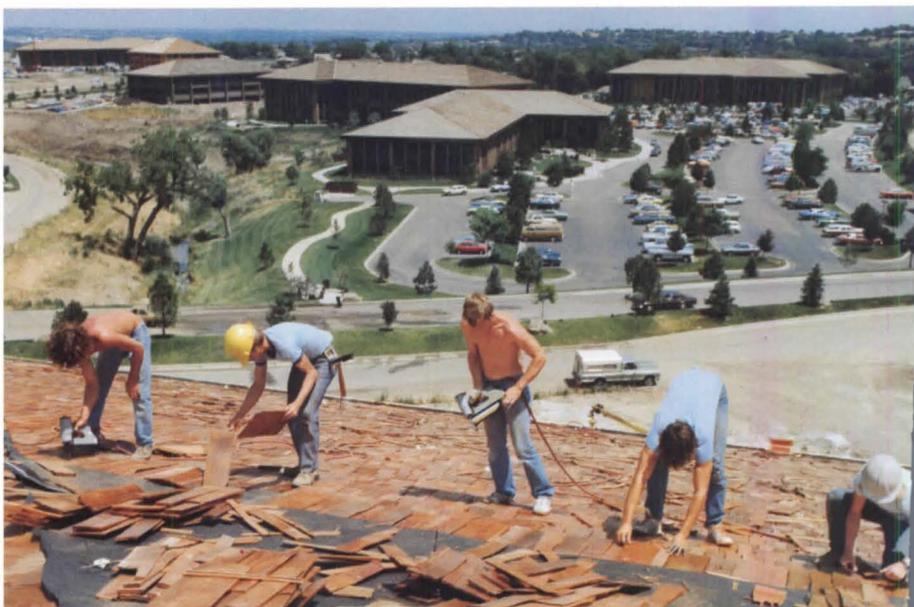
Architect: Earl A. Freels, AIA

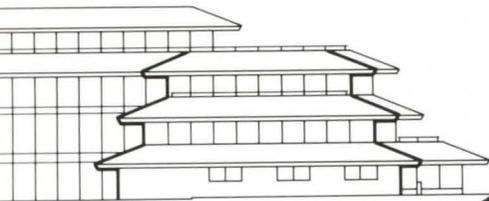


CALIFORNIA

In Larkspur, Marin County, a wooded hill overlooking the Bay lost its natural peak when its spire crown—set in a framework of surrounding stands of oak—was leveled for development

Now, the re-contoured hilltop has been dramatically replaced by cedar—not trees, but the sloping cedar rooflines of the new Wood Island office complex.





Instead of showing vertical walls and a hint of roof, the two all-wood structures of Wood Island are dominated by slanting rooflines and six-foot overhangs.

"The roof shapes were developed as a series of stepped-back cedar shingle slopes," says project director Hal Edelstein, "creating building profiles which cascade into the surrounding native oaks, in effect visually restoring the original configuration."

Roof shingles and shingle siding were pressure-treated with NCX fire retardant chemicals and applied over plastic coated steel foil.

Architect: Gensler & Associates Architects



Advance

Roofing or re-roofing, s membrane simplifies th

A watertight roof may be the most taken-for-granted part of a building. But that doesn't make it easy—especially not when you're dealing with sloped, curved, and vertical parapets. A relatively new solution from Koppers is now helping architects solve this problem and save installation time as well.

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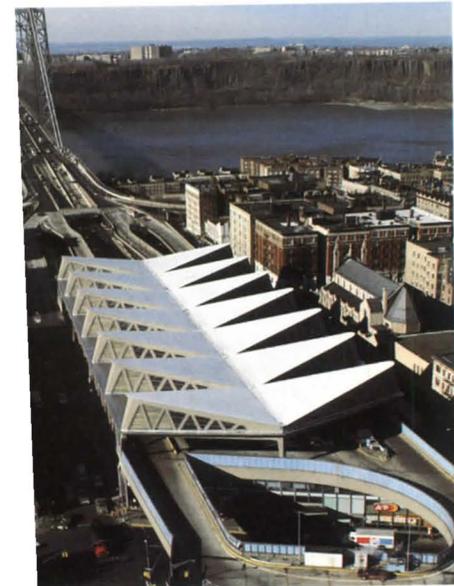
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Tough Terrain

Pressure-treated wood piling and poles overcome steep slopes and sandy subsoil



Apartments on Piling

At Thunderbolt, Georgia, east of Savannah, a new luxury apartment complex called River Crossing Apartments takes advantage of the scenery along the Wilmington River.

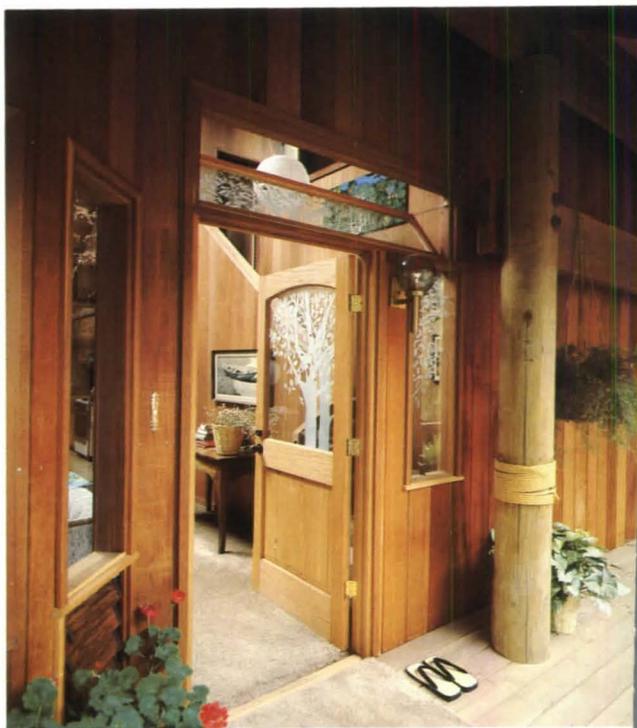
But first, the developers had to solve some riverside soil problems. Six of the buildings on high ground and adjoining slopes could be built on reinforced concrete turned down slabs. Nearer the riverfront, however, test borings showed 6 to 16 feet of medium to dense sand, underlain by a layer of highly flocculated clay and a bearing strata of medium sand.

Solution: timber piles for a firm foundation, and pressure-treatment with creosote from Koppers to protect the piles. Pressure-creosoted wood resists the attack of insects, soil acids, alkalies, and fungi.

Three apartment buildings, a clubhouse and swimming pool were designed for foundation support using 365 Southern pine piles in 35 to 45 foot lengths. Support structural beams are two feet above ground level, and the perimeter piling is skirted in cedar to blend with the cedar-stained buildings. The clubhouse stands on piles extending 15 feet above ground to provide a view of the river valley.

For information on pressure-creosoted piling and poles, check the coupon.

Architect: Vann/Bazemore & Associates



Houses on Poles

Perched on a steep slope in the San Rafael Hills of Glendale, California, is Pole Houses of California's latest pole house design, the Homestead.

Its structural frame consists of exposed timber beams and 10 poles, planted 5 feet deep and resting on concrete bases. Because of the pole-type construction, it was possible to leave the surrounding pine, sycamore, and oak virtually untouched and to eliminate the high cost of hillside excavation and retaining walls. The poles provide both foundation support and roof support, and they have the added advantage of resiliency to withstand earth tremors.

The Homestead received the Home of the Year award in a recent Pacific Coast Builders Conference competition—the 17th design award for the Pole House company, headed by Gordon Steen. Like the firm's previous Pole House designs, the Homestead is built almost entirely of wood, left unpainted and unstained.

For protection against decay and termite attack, the poles, beams, rafters, and decking were pressure-treated with Wolman® preservative chemicals from Koppers. Deeply pressure impregnated in the wood, Wolman preservatives are fiber-fixed, so they resist leaching and maintain thorough protection for decades. Check the coupon for details on Wolmanized® lumber and poles.

Designer: Gordon Steen

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Fast-track schedule and large bays call for steel framing

The project:

American Cyanamid Corporate Headquarters Expansion, Wayne, N.J.

"Steel framing was critical to the fast-track construction sequence we used on this project," says Robert Schofield, architect, Schofield/Colgan, Nyack, N.Y. "We were able to select the primary framing members, bid, and order the steel before every design detail was worked out. This allowed us to get construction under way before all the working drawings were completed.

"Furthermore, we decided that steel was the most appropriate framing material for the spacious 30 ft x 30 ft bays required."

Electrified steel deck for flexibility

"Our client wanted an underfloor electrical and telephone distribution system similar to the existing headquarters building on the site," comments Alger Ross, P.E., Edwin M. Ragold Associates, consulting engineers. "We find that a blend of composite cellular and non-cellular steel deck on steel beams is a very economical and functional way of meeting this requirement.

"The alternative to this system would have been a poured-in-place or precast concrete floor system with cellular deck on top of the structural slab. Since a cellular electrical distribution system was required, it was more economical to support a cellular steel deck directly on steel beams and to make the deck and slab one structural unit."

Built into the hillside

The owners did not want the new building to compete visually with the original structure. Accordingly, the new structure is situated so that only the penthouse reception area is visible from the entrance plaza. The top office floor is connected to the lowest floor of the original building by means of an underground passage beneath the plaza.

The structure is subdivided into terraced blocks, so that the form relates to the sloping hillside. The exterior is treated with a sun

screen to reduce cooling loads, while at the same time allowing views of the surrounding woods.

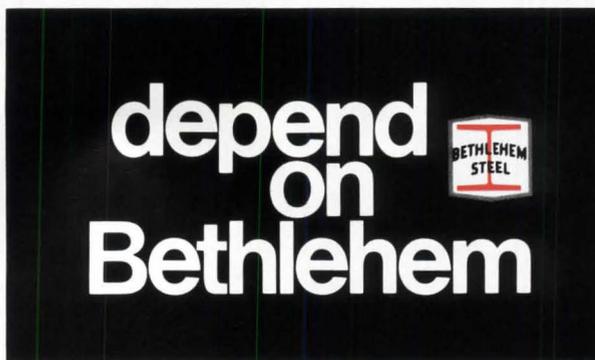
Office space is planned on a module of five feet by six feet and can be adapted to either open space planning or individual private offices.

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Steel framing is well suited to fast-tracking. It offers great design flexibility, enabling a project to "get off the ground" quickly.

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Some 1,100 tons of A36 steel were used in the construction of the West Headquarters Building. The steel frame simplified the many connections required for the precast concrete exterior, as well as installation of the mechanical and electrical systems. The 162,000-sq-ft office building, located on a hillside across an entrance plaza from the original headquarters building, provides modular office space for 650 employees.

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News report

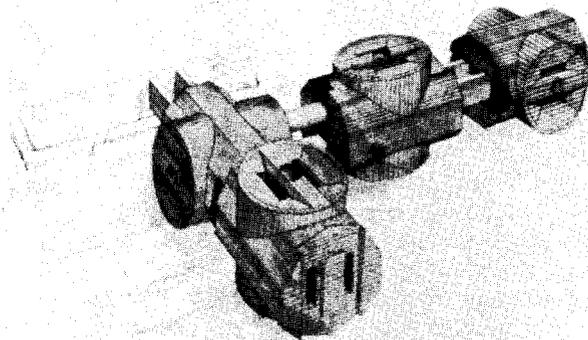
The Plug's revenge on the museum

When Venturi and Rauch designed their addition to the Allen Memorial Art Museum at Oberlin College, Oh, they utilized a work of art already on the site—Claes Oldenburg's sculpture "Three-Way Plug"—to play up key themes of the building (P/A, Oct. 1977, pp. 50–55). By moving the Plug so that it was diagonally opposite the pop Ionic column that supports a lopped-off corner of the addition, Venturi linked his structure visually and thematically to its content (contemporary art) and context.

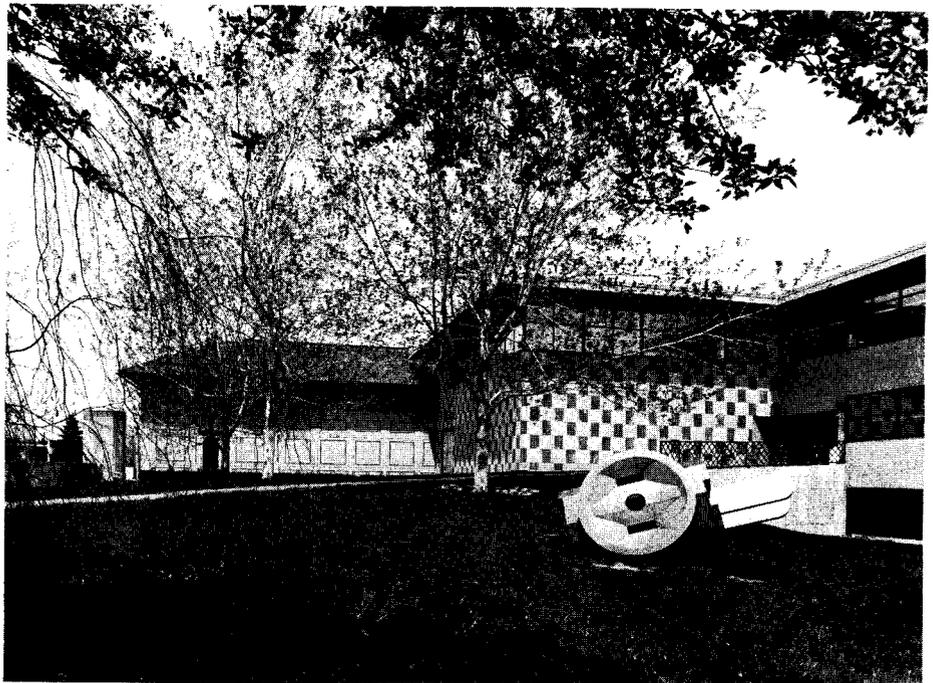
But treating a sculpture as a found object may have unexpected side effects. In the best Venturian style, Oldenburg has now come up with an alternative duck to Venturi's decorated shed addition. Oldenburg's "Alternative Proposal for an Addition to the Allen Memorial Art Museum" is a contemporary sculpture—specifically, an assemblage of four Plugs. In spite of, and through, the obvious differences, the Plug structure bears an intriguing resemblance to the Venturi building. Considered as a metaphoric image of the built addition, Oldenburg's plug-in solution implies a tongue-in-cheek comment on Venturi's "appropriate" architectural response. Completing the parody, Oldenburg reduced Venturi's building to the size and present status of the Plug sculpture.

Oldenburg has proposed and built a museum-as-sculpture (or sculpture-as-museum) before; the constructed Mouse Museum, which toured the country last year, is probably the best known (P/A, Dec. 1978, p. 30). He has also proposed a single Plug as a structure. The unique wit in the scheme for Oberlin, however, lies in the transformation of sculptural punnery into architectural parody; the assertion that between art and museum, the thing contained is bigger than the container.

[News report continued on page 26]



Oldenburg's proposal reverses the roles of sculpture and museum, using Venturi's architectural parti as a found object in the same way that Venturi exploited the Plug.



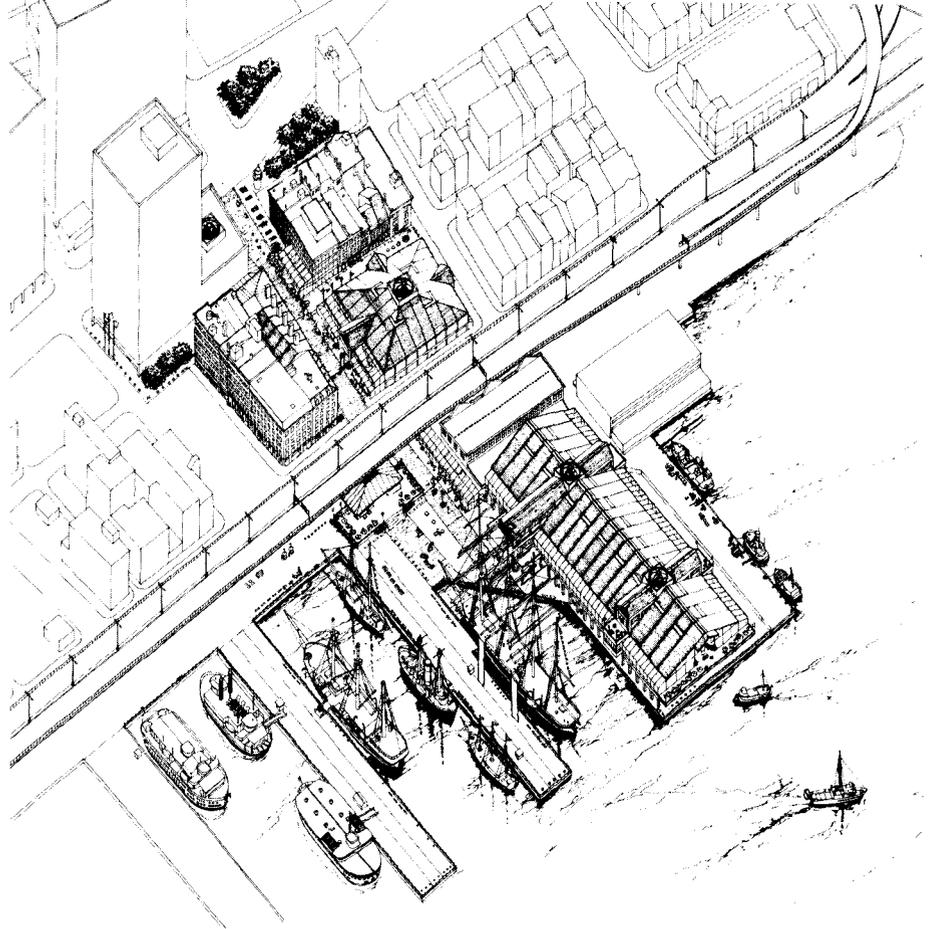
South Street Seaport: son of Quincy Market

The recently announced plans for a major commercial development for New York's South Street Seaport involves the city, state, a private, nonprofit museum, and a commercial developer in a development package which may advance urban development mechanisms—the subtle negotiating of private profit and public benefit—but takes urban design—the physical outcome of those negotiations—a step back.

The South Street Seaport Museum's idea was to engage the Rouse Co. of Columbia, Md, to create a development whose commercial success would guarantee the future of the institution, thus assuring the preservation of the historic properties leased by the museum from the city. This piece of innovative thinking will have great economic benefits for Rouse, the museum, and the city, in that order. But the physical plan includes a 900,000-sq-ft office/hotel tower and two retail pavilions (in the Design Research style that architect Ben Thompson's previous work has made almost as ubiquitous as McDonald's golden arches) which may well overwhelm the incremental, sensitive preservation and revitalization of the area that the museum has been sponsoring over the last six years.

The agreement, announced Sept. 26, calls for Rouse to invest \$60 million in the construction of two new retail malls, to be designed by Benjamin Thompson & Associates of Cambridge, Ma. The state Urban Development Corporation (UDC) and the city are to invest \$28 million: \$10 million for the construction of a platform between Piers 17 and 18 on which one of Rouse's pavilions will be erected; \$16 million for the restoration of the state-owned Schermerhorn Row and "Museum Block" (leased by the museum from the city) and the Fulton Fish Market building. The architect for Schermerhorn Row restoration is Jan Pokorny; those for Museum Block are John Beyer (of the New York firm of Beyer, Blinder, Belle & Bland) with Robert Meadows. No architect has been selected for the Fish Market. City funds will also pay for street repairs, and an additional \$10 million will be required for distribution of services and space furnishing.

An adjoining block, the receiving site for the air rights of the Seaport, a designated Historic District, will be leased by the city to Rouse and the New York real estate firm of Cushman/Wakefield for the construction of a \$100-million mixed-use tower with an FAR of 21, for which no architect has been named.



Rouse proposal for the Seaport adds two Thompson-designed pavilions, an office tower.

The complex financial arrangement should net the museum increasing annual revenue (\$1.5 million in 1984, \$3 million by 1990), of which the city will get some as payment in lieu of taxes. The major difference between this arrangement and MOMA's proposed TCR (P/A, Feb. 1979, p. 21) is that here the city, not the museum, owns the property, which forestalls the sort of legal obstacles that eventually led MOMA to sell its air rights rather than assume the role of developer.

The museum has been trying since 1973 to assemble a development package for the area that would revitalize it commercially, preserve its character, and above all, pay off loans for the \$15-million worth of historical buildings it purchased and gave to the city at that time. The museum has meanwhile encouraged artists to move into Schermerhorn Row, which the state had acquired with the intent of creating the never-realized New York Maritime Museum. These moves were, says John Hightower, president of the museum, "holding actions to protect the area from the tail end of the late 1960s building boom in Lower Manhattan." These actions had to be undone in 1977, when Rouse became interested, to consolidate the property. Threatened with eviction, the artists in the block organized and fought successfully for the right to stay (though their rents will increase substantially).

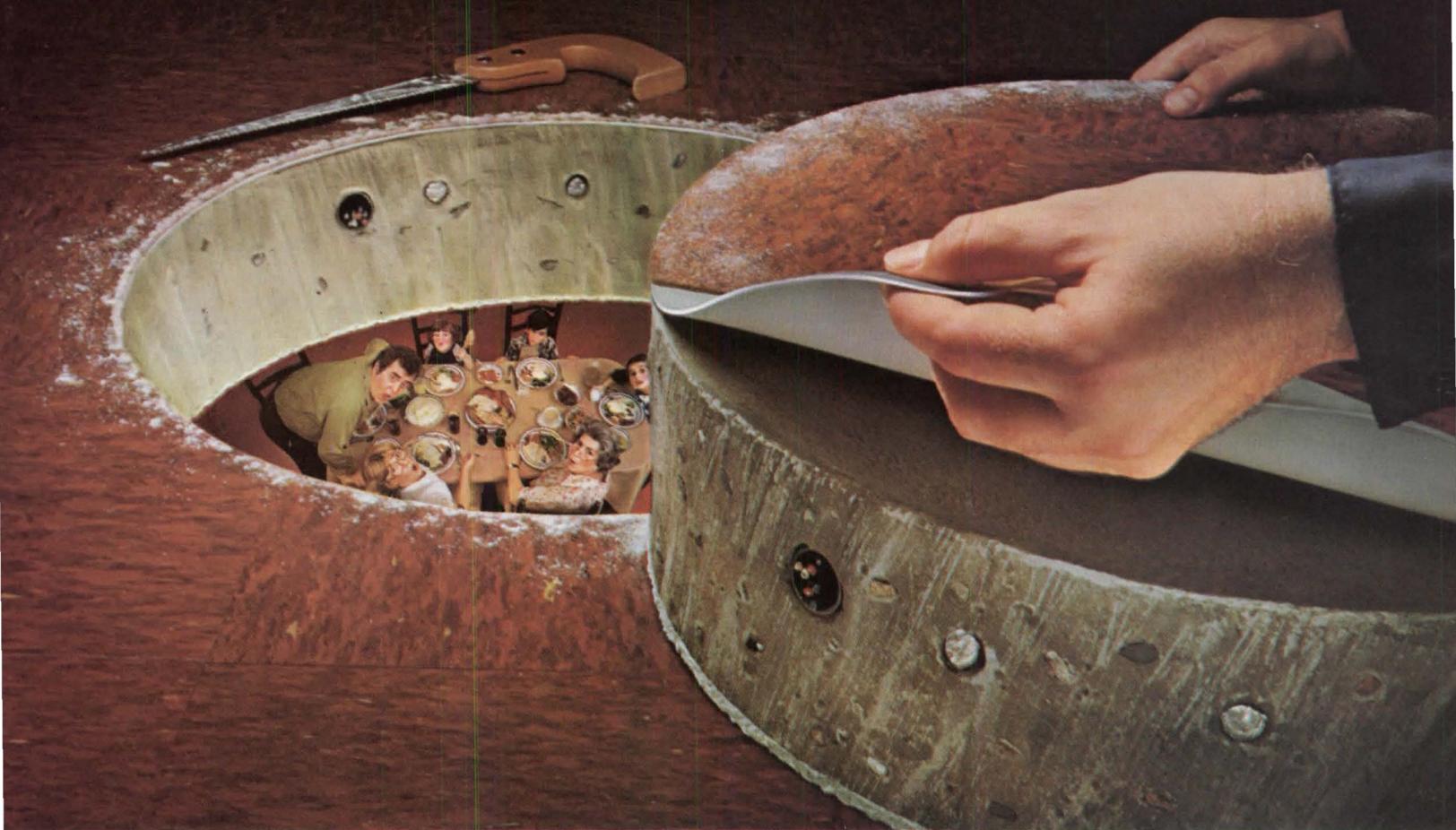
The objections raised by the area's fishmongers to the closing of Fulton St. to trucks and the proposed demolition of the existing fish stalls in the Fulton Market block have been countered (though not

placated) by the inclusion of a "working pier" next to Rouse's pier pavilion and the promise that Rouse's Market pavilion will incorporate the fish stalls. The fishmongers are understandably worried, however, that development of the area will force them out of the privately owned properties flanking the site. So far, the Seaport Museum's proposal to designate a Special Zoning District to preserve the fish businesses in privately owned buildings along South St. has met with mixed reactions from the city.

New York should be grateful to the stubborn fishmongers, artists, and old buildings. Without the "problems" they create, the Rouse scheme would produce an urban shopping mall too much like others. Thompson's design for the two retail malls is distinguished from his Quincy Market design in Boston or Harbor Place in Baltimore only by the intrusion of the fish stalls on the South St. façade of the Fulton Market building. His sketches for the two-story-high glass sheds (one long, one square), each with a central circulation aisle and opened cupolas, copy an image whose success has made it dangerously formulaic. The Quincy Market design, one could argue, was in some way an extension of the original architecture (P/A, Jan. 1975, p. 61), but to impose the same design on South St. ignores the particular character of the area.

The executed portions of Beyer and Meadows' project for Museum Block, all restorations, are simple and well-designed, but their sketches for the infill structure on one corner seem less interest- [News report continued on page 30]

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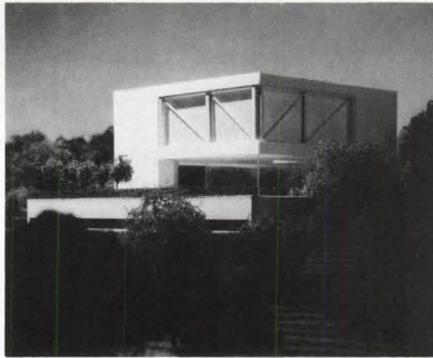
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ing. Further comment on the rest of the restorations, at this point, would be mere speculation.

The Seaport today, thanks to the museum and the fish market, is seedy, smelly, and seductive. If the area needs economic upgrading, commercial revitalization, its new character, its social and architectural profile, should be, if not as romantic, at least as fascinating. Rouse's plan does not offer that. One can only hope that the museum will continue its activities around the shopping center, saving the other old structures in the area with its new income, and that the 12 million shoppers expected to crowd the malls yearly will not drive the fish away.

Expanding Embassy Row

Washington, DC, has long had a major problem. As the nation's capital, it must house the embassies of the many nations with which the U.S. maintains diplomatic relations. But the city is concerned about the growing encroachment of these diplomatic missions into residential areas.



SOM's design for Kuwait, hard-line International.

Defying State Department opposition, Mayor Barry recently signed legislation banning any more chanceries (embassy of-fice buildings) from low- and medium-density residential areas.

One solution to this problem was suggested years ago; an International Center or embassy enclave on land several miles from Downtown. The original concept was prepared for the National Capital Planning Commission by landscape architect Edward Durell Stone, Jr., a decade ago. Now, construction is soon to start on five embassies. The five are featured in an exhibit at the AIA's Octagon (1799 New York Ave., NW, Washington, DC) through December 30. They are Bah-

rain by The Architects Collaborative of Cambridge, Ma; Ghana by Brown & Wright of Washington; Israel by Cohen & Haft, Holtz, Kerxton & Associates of Silver Spring, Md; Kuwait by Skidmore, Owings & Merrill of New York; and Yemen by the Georgetown Design Group of Washington. The exhibit includes models, plans, and photos.

Four of the five attempt to translate their country's traditional native architecture into contemporary design. In most cases, this means lots of arches. The one exception is Kuwait, and it is perhaps the most successful. An International Style structure, it is a square raised one story off the ground and covered in stainless steel and glass. A three-story-high interior court is covered with an Arabian-looking grille.

The 31-acre site has lots for 14 embassies, with 12 acres set aside for an international organization, but that land may become embassy sites also. This enclave may relieve some of the problems caused by increasing numbers of embassies (there are now 140, three times the number before World War II), but the result threatens to resemble another John F. Kennedy International Airport; instead of each airline doing its own thing, each country will. [Carleton Knight, III] [News report continued on page 34]

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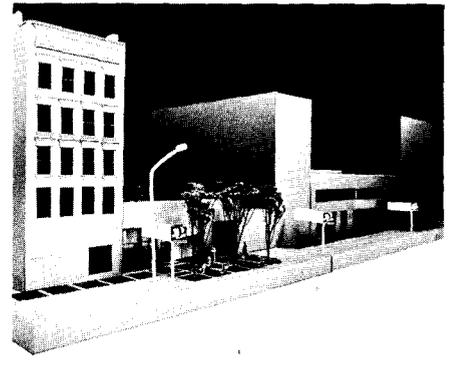
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Forty-Second Street changes its spots

The fate of New York's West 42nd Street—that wide boulevard stretching from Fifth Avenue through Times Square to the Hudson River which represents New York's glory and its grime—is crucial to the shaping of the city's image and economy. The blocks between Sixth and Twelfth Avenues have been a testing ground for urban renewal policies and mechanisms since the creation of the 42nd Street Redevelopment Corporation in February 1973.

Founded on the theory that the performing arts—traditionally the industry of 42nd Street—can again make economic sense

Richard Haas gateway murals for Dyer Ave. and the Meyers-Schiff project for Theater Row #2, two increments that should have great impact.

there, the Corporation is endeavoring to take run-down properties and make them assets to the city. As a Local Development Corporation, they have taken advantage of the legal privileges granted to an LDC to free for development properties with large tax arrearages.

Theater Row

The performers' housing complex called Manhattan Plaza (P/A, Oct. 1979, pp. 32 and 36) anchors the street between Ninth and Tenth Avenues on the north side. On the south side, it is complemented by The-

ater Row, a two-phase project to turn a stretch of dilapidated brownstones on this block into small theaters, restaurants, and commercial space.

Theater Row should be acclaimed as one of the greatest little victories of recent New York urban renewal. In the first phase of this incremental development, a \$1.1-million project completed in May 1978, five brownstones were made into five off-off-Broadway theaters with ten floors of rehearsal and office space above, by the architects of Manhattan Plaza, David Todd & Associates. The second phase, currently in working drawings, includes a project designed by the New York architectural firm of Meyers-Schiff to put on the block [News report continued on page 38]

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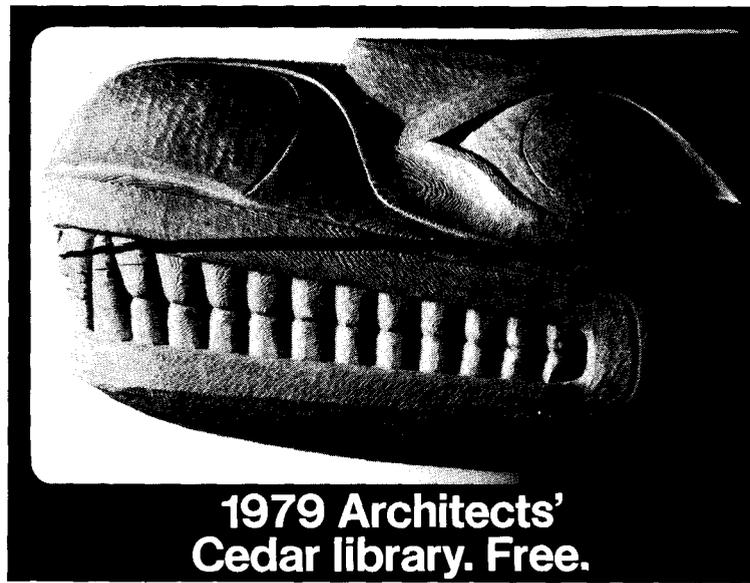


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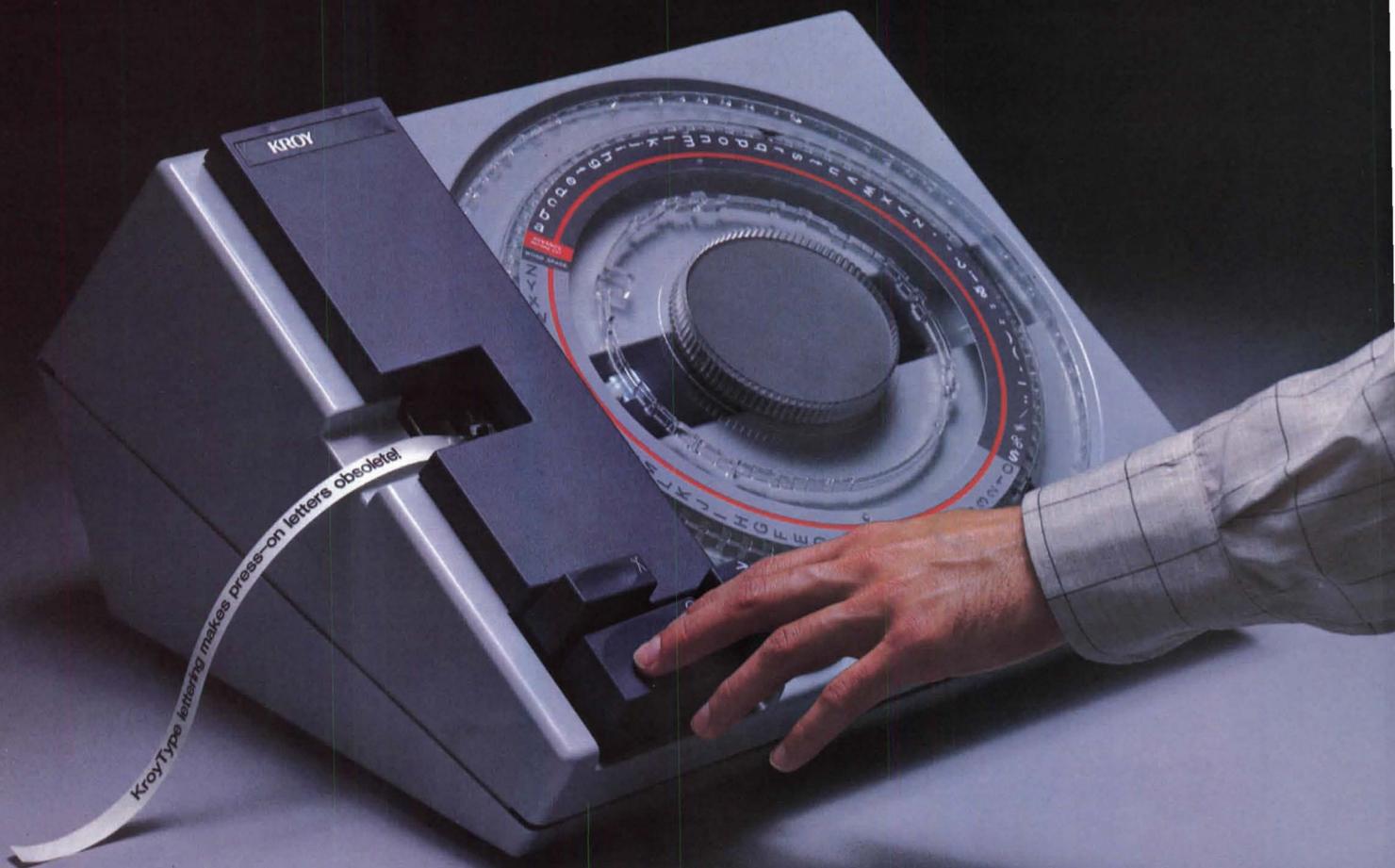
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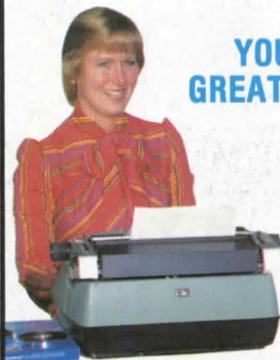
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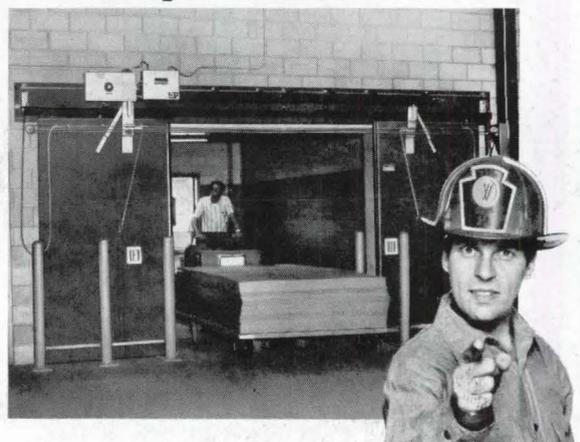
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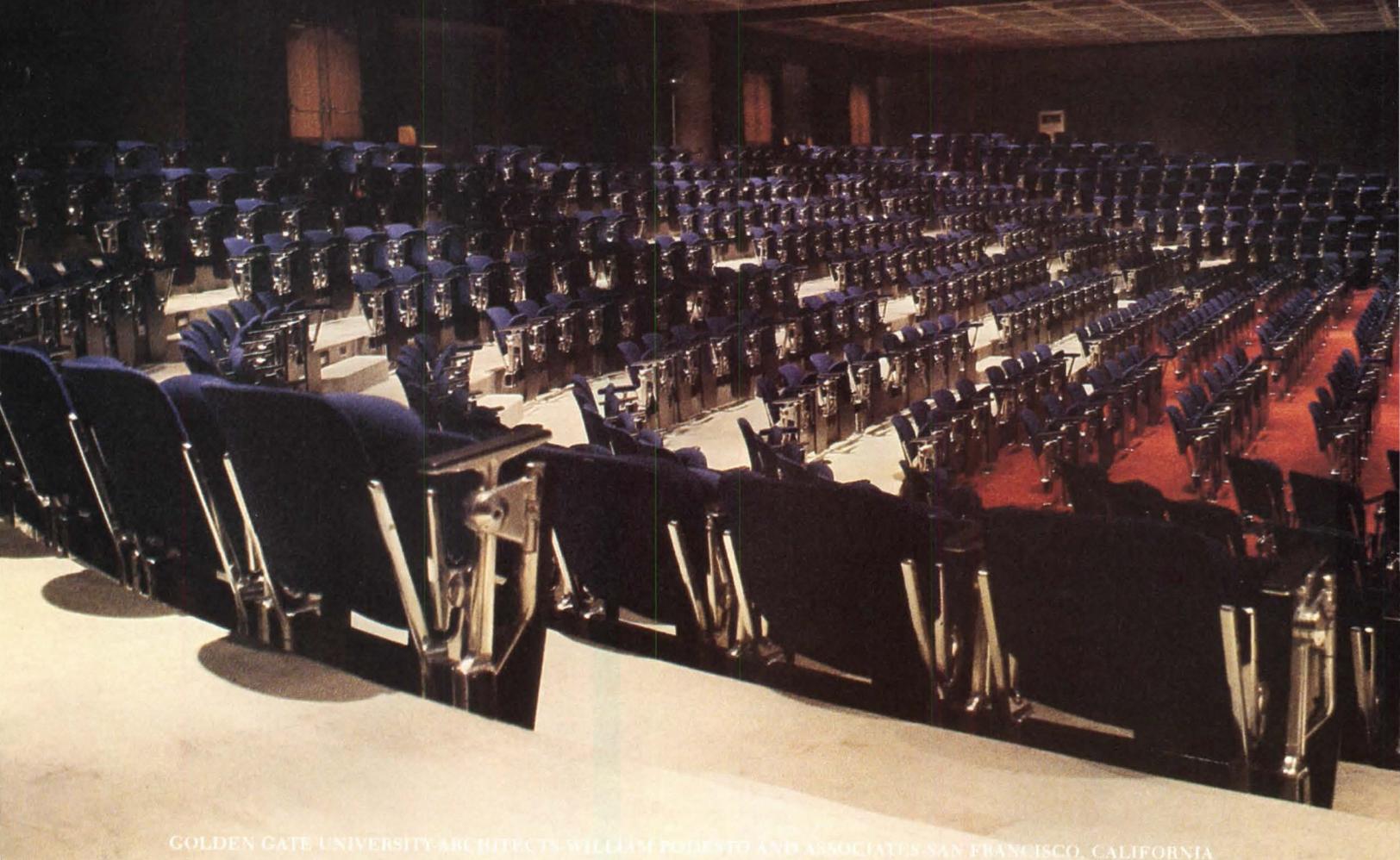
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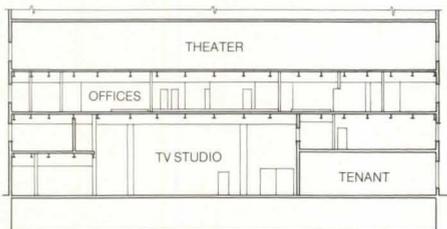
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The feature piece of Phase 2, however, is a renovation of the West Side Airlines Terminal for over \$1.2 million by the New York firm of Hardy Holzman Pfeiffer. The lower three floors of the building are destined to become the studios of the National Recording Studios, Inc., while the top floor is tentatively planned as a 600-seat theater. The exterior is simply to be refurbished, while the waiting room on the ground floor will also be preserved as a two-story space with recording studios and equipment inserted. The project will enter construction in late 1979 and National will occupy its new studios in mid-1981.

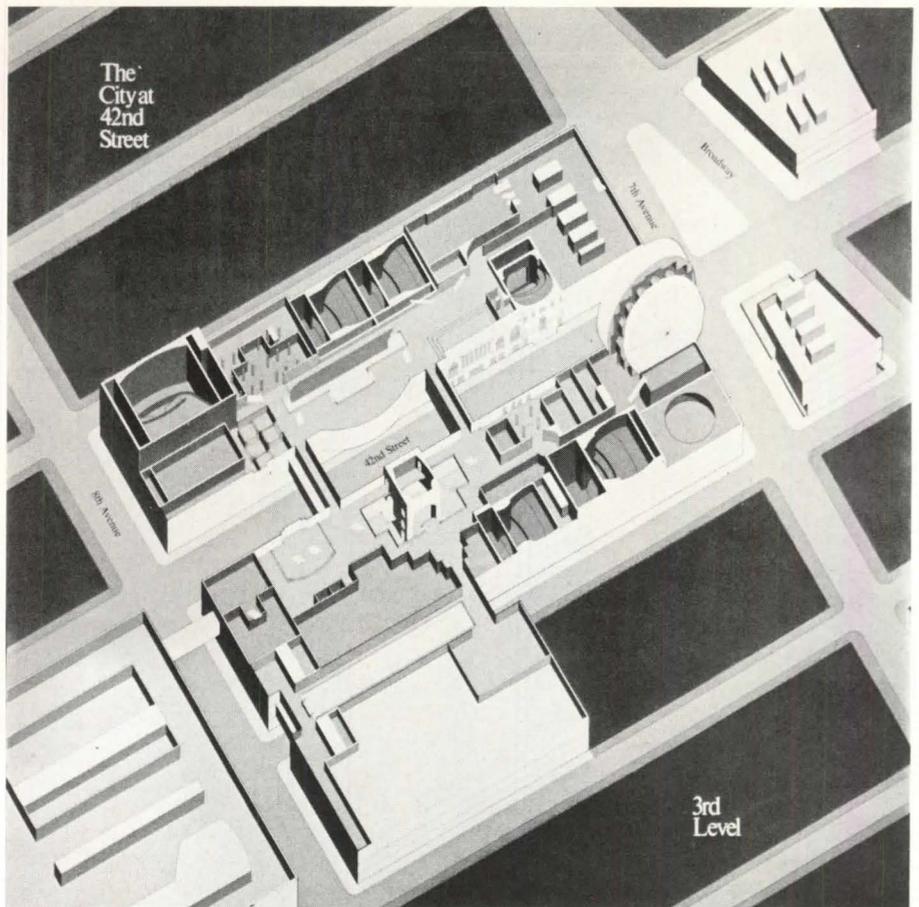


Section West Side Terminal

The City at 42nd Street

An incremental approach proved more difficult and costly to implement on the Seventh to Eighth Avenue block of 42nd, presently the hotbed of the porno district. A "cathartic" proposal developed by "The City at 42nd Street," an offshoot of the 42nd Street Corporation, envisions the development of some 3 million sq ft of air rights on the two blocks flanking this stretch. A master plan by Richard Weinstein, vice-president of design for the "City," with architect Jaquelin T. Robertson and the New York firm of Davis Brody & Associates as architectural consultants calls for three air-rights office towers encircling the cleared site of One Times Square, and a fashion mart on Eighth Avenue spanning 41st Street. Between would lie a lower structure housing a cultural communications and exhibit center. Pedestrian bridges are planned to span 42nd Street at the second-story level. Five theaters on the block, including the recently landmarked New Amsterdam, are to be restored for reuse; the façades of the others will be incorporated into the structure.

The project includes about \$40 million in federal funds for property acquisition, \$100 million in private, long-term financing, and about \$50-\$60 million from a likely tenant, Equitable Life Insurance, and other corporations to sponsor exhibits. Several developers have expressed an interest,



Axonometric section

but the fate of the project is still in question.

From an urban design point of view, the project is to be welcomed if it replaces the present dump with a structure of some architectural merit, which is carefully and intimately related to the street. But features like pedestrian bridges suggest the danger that it will be realized as an introverted mall with barren street frontage. That might well kill the activity that the 42nd Street Corporation has done so much to promote. There is also the question of the city's political and economic commitment. As Richard Rosan, director of New York's Office of Development, said recently at a forum on the project: "The city tends to start but never finish large projects." Large-scale development means large-scale problems and risks.

Other pieces

Some of the smaller but more visible projects going on under the aegis of 42nd Street should have very positive effects. The fabulous former McGraw-Hill building, designed in 1931 by Hood, Godley & Foulhoux, was designated a landmark in mid-September. Plans are underway for a restoration of the Moderne ornament on the exterior, and for a renovation of the interior into "class A" office space in an open-plan loft style. The developer intends to market it as a designer's building.

In a \$350,000 street-improvement proj-

The City complex: two relatively low malls, containing new and restored theaters, retail space, and exhibits; a two million-sq-ft fashion mart spanning 41st Street, and three one million-sq-ft air-rights office towers.

ect, a ten-story mural by artist Richard Haas is planned for the façade of the Crossroads Building at Times Square. The trompe-l'oeil architecture of the mural is a copy of the original sumptuous Italian Renaissance façade of the Times Tower, located just to the north, obliterated by a 1960s refacing. A pair of Haas murals will flank Dyer Avenue where it meets 42nd Street as well.

All together now

The renewal package for 42nd Street is a carefully measured mix (at least in theory) of short- and long-term projects, money-makers and money-losers, social, architectural, and economic goals. How much the admirable aims of the plan will be compromised in the execution remains to be seen. Upgrading without sterilizing is a delicate task, especially in an area seething with such activity. So far the priorities of the street, the pedestrian, the public, have dominated; it is to be hoped that the larger pieces will not force a shift in priorities toward introverted blockbusters and private profits.

[News report continued on page 41]



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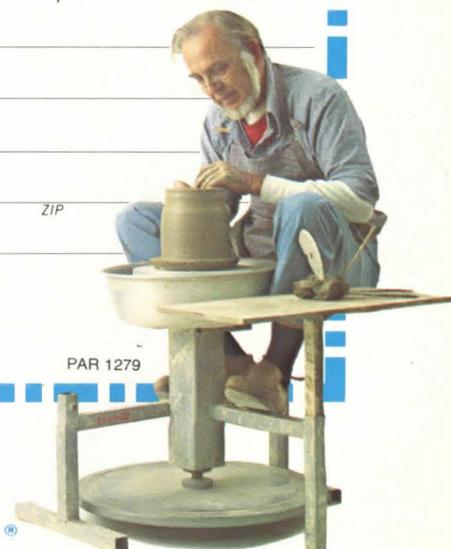
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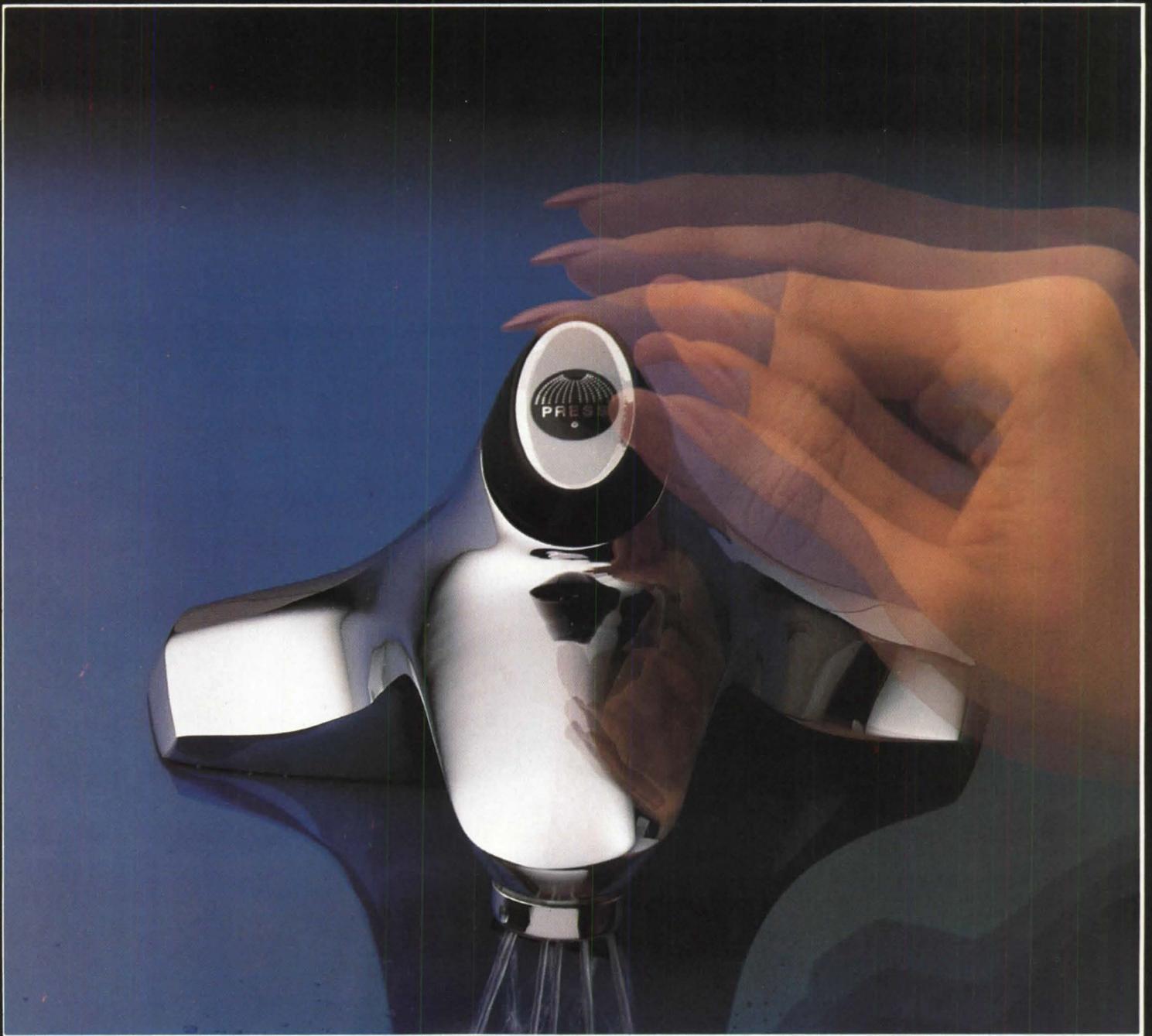
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Report from Dacca

Kahn's Assembly building

A Citadel for Assembly is what the late Louis Kahn called his National Assembly building designed for Dacca, Bangladesh some 15 years ago. An abandoned citadel, it seems today—looming above the red-brick housing he also constructed for ministers and civil servants of what was then Pakistan's "Second Capital" in the east. Vast blank surfaces of concrete wall have enormous circles and triangles cut into them; bastionlike cylindrical towers have high, narrow slits for protected entry.

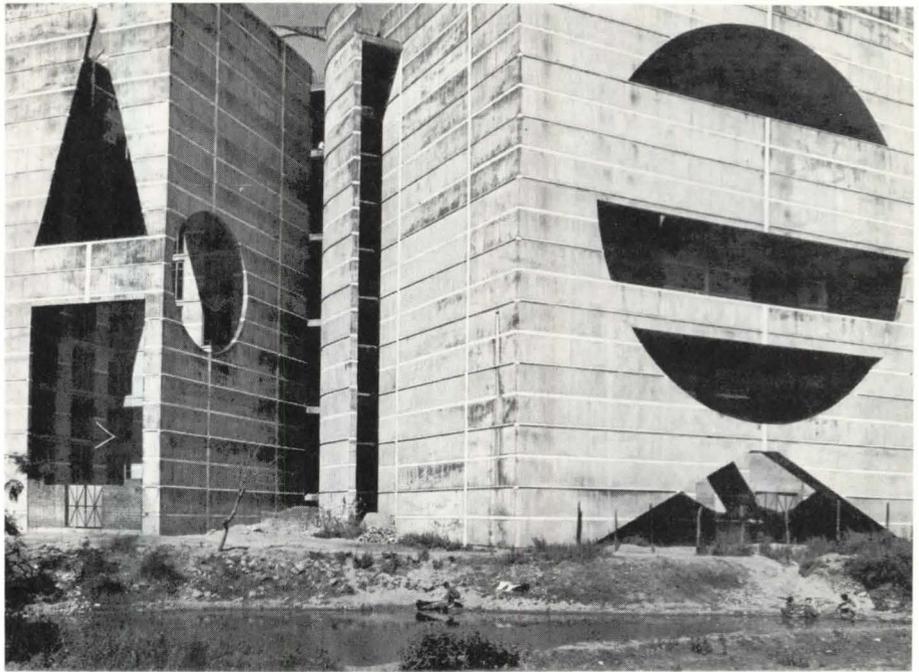
The citadel metaphor reveals paradoxes in the design. The obvious paradox is the notion that democratic government should be housed in a citadel, but a second paradox is the image of abandonment the "castle" projects today, when its functional and symbolic role was certainly *not* to portray neglect. Third, on a more tangible level, it seems paradoxical that Kahn should have sufficiently respected local traditions and production capacities to introduce a new, sturdier type of brick into local use (for the residences), yet embark upon an orgy of exposed concrete for construction of the Assembly building.

Normally it is a rather presumptuous, risky affair to judge a building before it is completed. But in the case of a capitol that appears to be deteriorating as fast as it is being constructed, one might wonder how it will look when finished.

The Assembly in Dacca baffles the eye and mind on the interior in a different manner than on the exterior. Inside one is caught up in Piranesian spaces, labyrinthian passageways, ramps, bridges, and shadowy perspectives. Above all, the inflated scale of the cut-out forms and cavernous spaces makes one uncertain of their ultimate function. From outside to inside, the building is a series of thin, rough concrete screens, giant masks with foreboding apertures.

Setting aside a distant bureaucracy's grandiose idea of what a capitol should look like, Kahn had his own rather enigmatic conception of modern-day monumentality, influenced in part by the ruined vestiges of Roman antiquity he studied during a stay in Rome in 1951. Kahn's "poetic" treatment of the structural wall of masonry or concrete seems in some ways closer to the indigenous architectural expressions of power than Arne Jacobsen's "high-tech" glass-box Assembly building in Islamabad.

However, monumentality is not necessarily synonymous with a choice of materials, nor with the patina a building acquires in aging. But in Dacca, Kahn



Kahn's exposed concrete geometry, rather the worse for wear, is a paradoxical monument.

took an ambiguous, even cruel, attitude towards materials and their appropriateness in place and in time.

The strips of white marble which criss-cross the concrete walls horizontally and vertically, inside and outside, occur at approximately five-foot horizontal intervals, set into the concrete at those difficult-to-control and potentially unsightly joints between successive pours of concrete. Admirable pragmatism. Moreover, the distances separating the bands were calculated in part to accommodate varying execution times and availability of materials. (Cement and marble were imported from West Pakistan.) A revealing detail, nevertheless, in the context of weathering, is that while alternate horizontal strips have a protruding lip to throw rainwater down the façade in a more or less uniform way, they all stop short of intersections and corners, as though the architect consciously sought to control the inevitable disfiguration of his concrete masks, but didn't push his analysis far enough.

As people in the industry will tell you, the principal characteristic of concrete, a synthetic and monolithic material, is its porosity. It is the major inconvenience in the weathering of exposed concrete, particularly when high standards of control are not met. The resulting stains arise from the accumulation of micro-organic growth (moss, lichens) and dust. Why then did Louis Kahn, whose Mellon Center for British Studies at Yale University was designed with impeccable columns and beams of prefabricated concrete, resort to exposed concrete in a climate with rapid fluctuations in temperature and 120 inches of rainfall annually—knowing full well that both brick and concrete traditionally re-

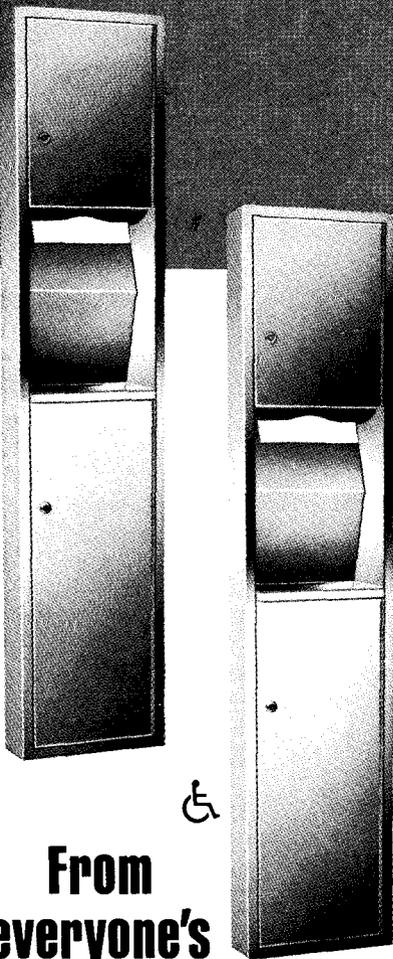
ceive some kind of exterior finishing against the elements?

Kahn was influenced by two architectural fads current when the Assembly was conceived and building begun. Rough concrete brutalism had been made popular by Kahn's predecessor in India, Le Corbusier, who argued that exposed concrete was a noble material and that the imperfect textural surfaces obtained with crude wooden formwork enhanced architectural interest. Kahn tried using such specially crafted forms (with interesting patterns, gaps between the slats, etc.) for the Assembly but had to abandon such technical playfulness due to costly breakage by local workers. On the other hand, there was the then-current faith that concrete needed little or no maintenance. Indeed, Le Corbusier had told the mill-owners' syndicate in Ahmedabad that their building would need no particular upkeep—advice which explains its present poor condition.

It is time for architects and industry to give up propagating exposed concrete as the universal, all-purpose and inexpensive material of Modernist architecture, especially for prestige-conscious developing countries like Bangladesh, and concentrate on providing buildings that don't deteriorate almost as fast as they are built for lack of maintenance. Only when the architect considers local means of production in his design will an authentic contemporary (and perhaps monumental) architecture emerge. [Brian Taylor]

Brian Brace Taylor, a former editor of L'Architecture d'Aujourd'hui, is an American architectural writer and historian in Paris.
[News report continued on page 42]

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News report continued from page 41

Conferences

International Urban Design Philadelphia, Pa Oct. 17-20

Sponsored by the Institute for Urban Design, this conference coincided with the first issue of the Institute's bimonthly journal: *Urban Design International*. Despite the more ambitious title and the participation of Europeans, in many ways this was not a first meeting but a follow-up on the National Urban Design Conference held in New York last year (P/A, Dec. 1978, p. 32).

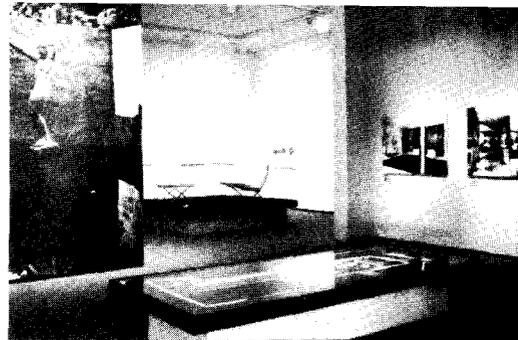
That first assembly was a forum in which goals were stated and programs proposed. This gathering was an opportunity for assessing those goals and the means employed to achieve them. Where that first conference asked, "What is to be done?" this review asked "How?"

The keynote speeches by practitioners in both the public and private sectors—Lord Llewelyn-Davies, William Porter of MIT, John Gallery of Philadelphia and others—evinced a new humility in a field with a strong tradition of megalomania, a growing pragmatism in a profession inherently utopian. "The urban designer's responsibility is to define the best means and tools for a specific situation," said Llewelyn-Davies, adding significantly, "but this is dependent upon the political will of the community. It's no use planning beyond your political will."

This theme dominated the two days of speeches and seminars. Community participation was a key element in all of the projects described, from Denise Scott Brown's presentation of Venturi & Rauch's preservation project for Miami Beach (P/A, Nov. 1979, p. 21) to Weiming Lu's presentation on the Lowertown Redevelopment Corp. in St. Paul.

Along with this reassessment of urban design goals and the methods by which they are set, a parallel reevaluation of the tools used in implementing these goals was evident. Many speakers described mechanisms instituted to set up the public and private partnerships in which developers' profit-oriented ambitions could be channeled so that not only the economic effects but the physical and social aspects of the project would be beneficial to the existing community.

Basic questions—Who is the urban designer? What is urban design?—were answered in terms of action, not theory. As Lu summed it up: "Implementation is the key now." Urban designers seem to have fully realized that their skills of design, now well developed, will prove useless without similarly sophisticated means of putting them into effect.



Barcelona Pavilion installation.

50th anniversary of Barcelona Pavilion

Although open for only seven months in 1929, Mies van der Rohe's Barcelona Pavilion is considered a hallmark of the International Style—as is the furniture Mies designed for the pavilion—the famed Barcelona chair and ottoman.

As a tribute to the 50th anniversary of the Barcelona Pavilion, the National Gallery of Art in Washington, DC, had an exhibit (Oct. 14-Dec. 2) planned by Ludwig Glaeser, curator of the Mies van der Rohe Archive of New York's Museum of Modern Art.

The exhibition, made possible by a grant from Knoll International, Inc., which now manufactures the Barcelona chair, featured a superb model of the pavilion created by Fujikawa, Conterato, Lohan & Associates of Chicago, formerly the Office of Mies van der Rohe. According to Glaeser, this model "tells us what the colors were for the first time." There was a green hue to much of it. The show, consisting mainly of plans and photographs, illustrates the pavilion's origins in the de Stijl movement and describes how Mies used the pavilion plan in his later house designs.

A highlight was a Barcelona chair and ottoman, built in Berlin in 1930, lent by Philip Johnson. Knoll recently had the cushions restored in the original white kid.

A premiered film on Mies by his daughter Georgia includes magnificent photographic essays on a number of Mies' buildings (one on the Farnsworth house is positively lyrical) and interviews with Mies. Though the film is a little long, it demonstrates Mies' concern that architecture should be a fundamental expression of civilization. [Carleton Knight, III]

Western winners for Cedar Shingle awards

Four First Awards and ten Merit Awards were presented in the 1979 Red Cedar Shingle and Handsplit Shake Bureau AIA Architectural Awards program.

Of this year's winners, ten were from California and four from Washington State—indicating, perhaps, that cedar shingle plays a much greater part in the Western vernacular tradition. The four First Awards went to: Roger H. Newell of Seattle, for the Mackey residence; The Architects, Inc. of [News report continued on page 44]

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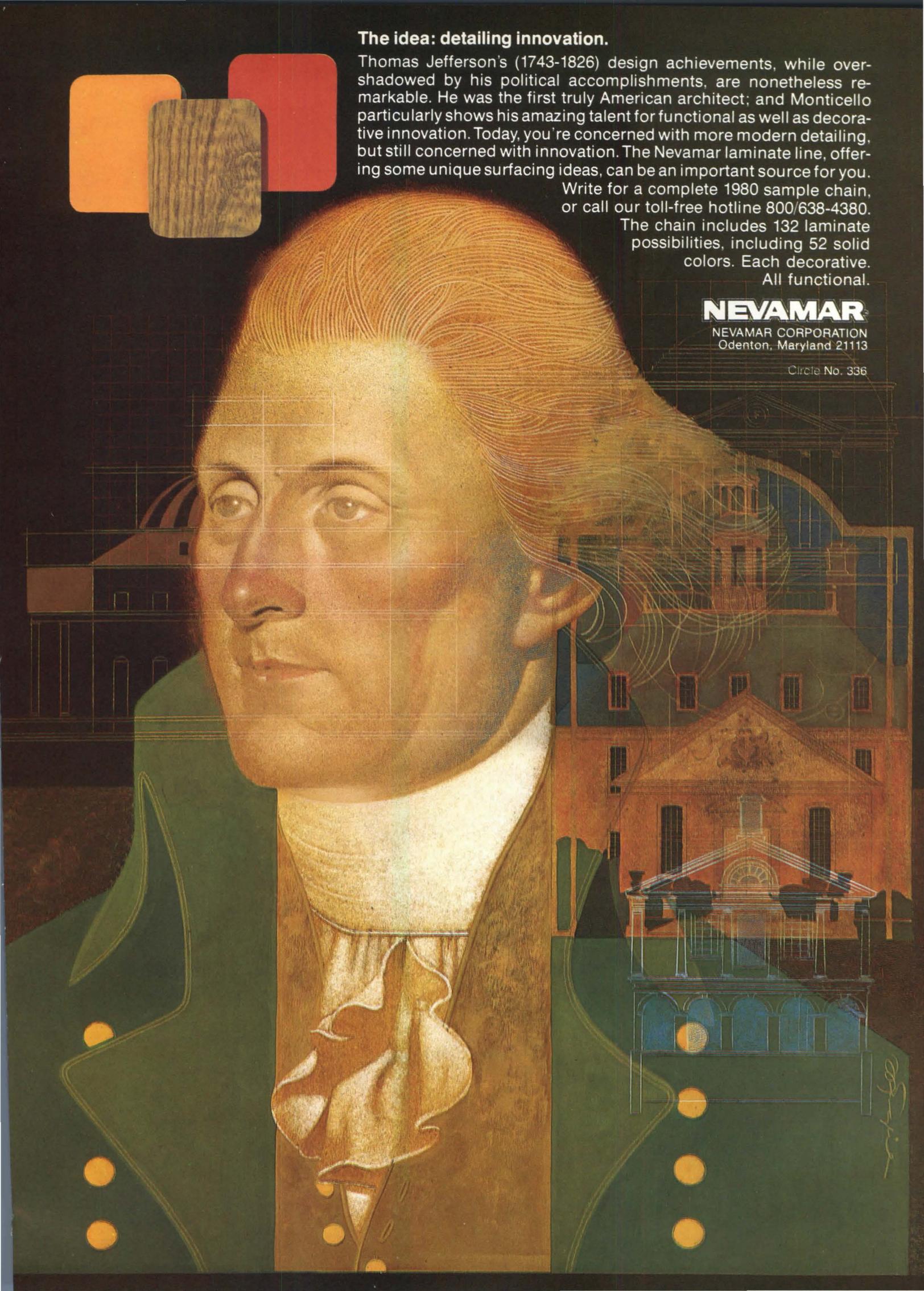
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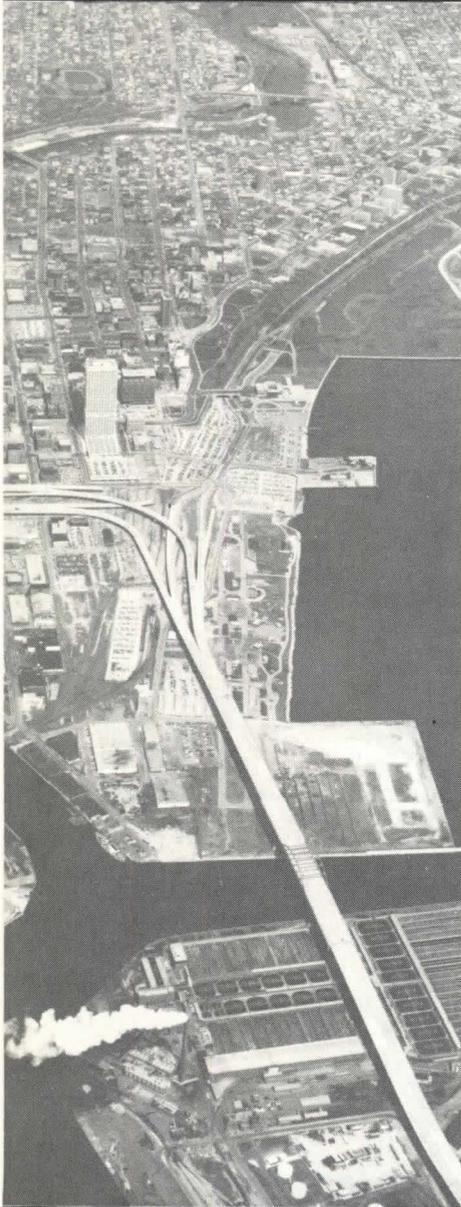
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News report continued from page 42

Cleveland, Oh, for the Hidden Harbor Restaurant in Pompano Beach, Fl; Short & Ford, architects of Princeton, NJ, for the restoration of the Mansion of Sandanwede, in Massachusetts; Daniel Solomon & Associates, San Francisco, for the Pacific Heights Townhouses, San Francisco (see P/A, Oct. 1979, pp. 54-59).

Calendar

Conferences

Dec. 2-7. International conference on Housing. Miami, Fl. Contact: Florida International University, tel (305) 552-2500.
Dec. 2-8. Interbuild '79. Birmingham, U.K. Contact: Suite 1002, 1625 Eye St., NW, Washington, DC 20006.
Dec. 3, 5, 7. Three public meetings, in Washington, DC, Denver, Co, and San Diego, Ca, respectively hosted by DoE and other building agencies to generate public response to a proposed Model Document for Code Officials on solar heating and cooling of buildings. Call: Trinity University Continuing Education (512) 736-8311.
Dec. 16-22. Fifth World Conference of Engineers and Architects in Israel. Tel Aviv, Israel. Contact: Israeli Tourist Administration, 350 Park Ave., New York 10001.

Competitions

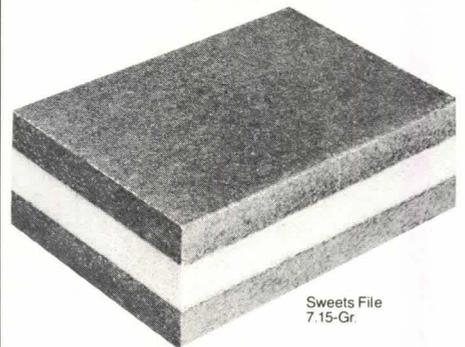
Dec. 13. Deadline for submissions to the AIA's Library Buildings Award program. Contact AIA, 1735 New York Ave., NW, Washington, DC 20006 for entry forms.
Jan. 30. Registration deadline for "Design and Energy," a passive solar competition sponsored by the ASCA, DoE, and the Brick Institute of America. Contact: ASCA, 1735 New York Ave., NW, Washington, DC 20006.

Exhibitions

Oct. 26-Jan. 6. "Sculpture and the Federal Triangle." National Collection of Fine Arts, Washington, DC.
Nov. 8-Jan. 13. "Devastation/Resurrection: The South Bronx." Bronx Museum of Arts, New York.
Nov. 10-Dec. 21. "Johnson/Burgee projects: photos by Richard Payne." Blaffer Gallery, U. of Houston, Houston, Tx.
Dec. 4-Feb. 3. "Furniture from the Cooper-Hewitt collection," Cooper-Hewitt Museum, New York.
Dec. 12-March 5. "William and Mary and their House; the Dutch Royal Collection: 1528-1979." Pierpont Morgan Library, New York.
Dec. 13-Feb. 10. "Buildings for BEST Products." Museum of Modern Art, New York.

[News: Eleni Constantine except as noted]

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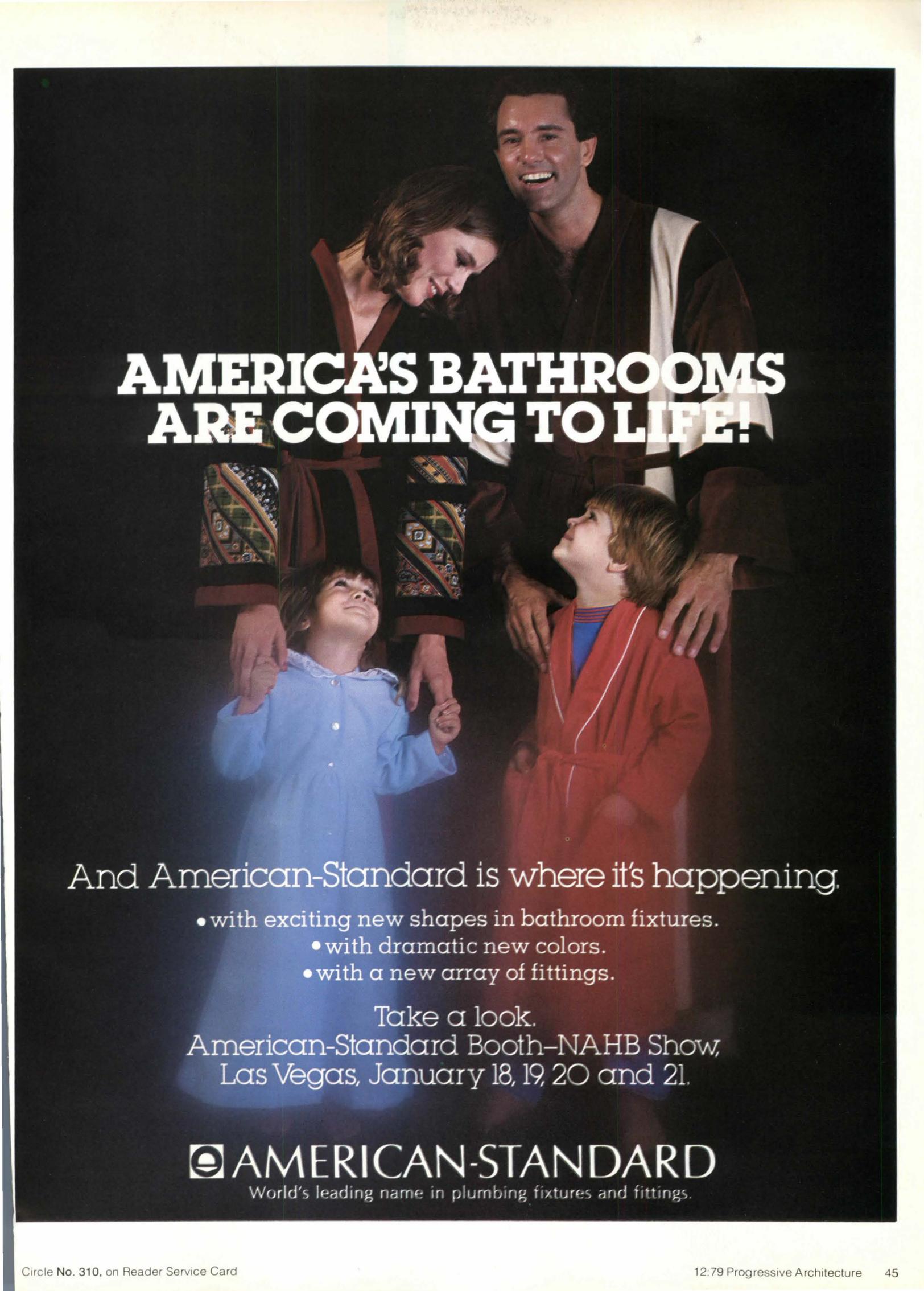
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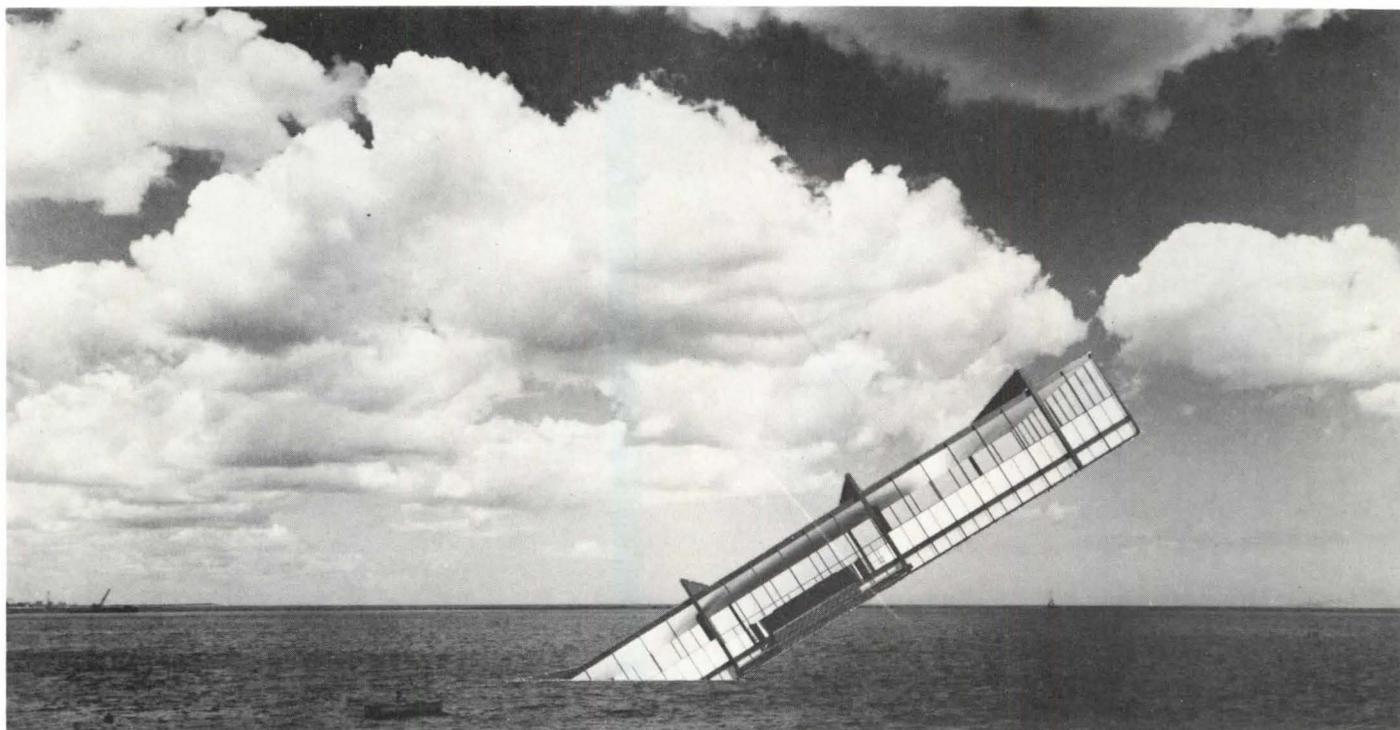
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Playing with a full decade



Courtesy Stanley Tigerman

Looking back at 1970s architecture and its attempts to go beyond Modernism we come away with a sense of incoherence and fragmentation. Underneath the surface, however, some patterns are beginning to emerge—or so it seems.

We pun about playing with a "full decade," but we do not mean playing with a "full deck" architecturally speaking. This issue is not about Energy. It is not about social concerns, or designing for the handicapped, or any of the other consciously valued issues that captured the attention of architects during the 1970s. It is only about the darker reaches of the architectural psyche—those obsessions that creep up on us and erupt every so often in puzzling, disturbing, but seductive ways.

Yes this issue is about *aesthetics*.

Ism-isms

The decade has been known for its various *isms*, all brought together in the handy catch phrase "pluralism." Pluralism, as a label, *controls* this surface discontinuity. It suggests there is some order in the disorder, in the proliferation of different architectural approaches.

The act of naming the unnamable reflects a broader *taxonomic* urge. Much of what has gone on in design in the 1970s—both in form-making and form-commentary—has been intensively subjected to this traditional process whereby things that resemble each other are grouped together, and separated from physical images that they do not look like. This method was probably most effective

as a way of comprehending the unknown in the 16th Century before the studies of biology and physics—to name two fields—made it conceivable that things could resemble other things by linkages not visible to the eye and by patterns other than similarities and differences in surface appearance. But the method cannot take us far enough now. Thus handy labels, like pluralism or even "Post-Modernism," are to be distrusted, even if convenient.

You could say another familiar theme threaded through the 1970s—known always as "dualism." The stress on polarities seemed especially severe at some points: architects talked about work that was "escapist" versus "real," "poetic" versus "pragmatic," "formal" versus "functional," etc. Whatever the label, the commitment to architecture as a science that can be

Beyond Modernism

measured and quantified remained as one belief system; the commitment to architecture as an art, a qualitatively determined cultural product, was posed as the other. Despite current questioning about scientifically based issues of energy conservation (P/A special issues Oct. 1971, May 1975, April 1979), or research in areas like barrier-free architecture (P/A, April 1978), *publicity* about architecture in the 1970s seemed to concentrate on its visual and kinesthetic properties.

Can we say this overt interest in *form* was a central obsession of architectural culture and not the bias of a few magazines trafficking in seductive images? Few can deny the incredible attention given to formal issues not only in magazines (both specialized and general-interest), but also in lectures across the country, in exhibits, and in symposia. This dominance of formal issues in the field of architecture assumed the shape of a "cultural production," to borrow the term Dean MacCannell uses to analyze the phenomena of sightseeing in his book *The Tourist, A New Theory of the Leisure Class* (Schocken, New York, 1976).

Other factors

Of course the economic climate in the 1970s can explain much about the creation of a context in which theory and form-oriented preoccupations would surface. The inflation/stagnation pattern of economics that curtailed construction early in the decade is frequently cited as the factor that allowed so many architects time to think and draw. At the same time, needing some form of income, architects had to withdraw from pro bono advocacy design work, paralleling the government's reduced role.

Economics aside, the creation of an intellectual climate was critical for the generation of a "cultural production." The East Coast, particularly New York City, economically disintegrating, intellectually bubbling (sometimes festering), provided the locus for the intersection of people wanting to investigate and talk about these issues. (For more details see the "Polemical-theorist," P/A, May 1977, p. 68, and for an account of the earlier periods leading up to the 1970s, see *Supermannerism* by C. Ray Smith, New York, E. P. Dutton.) Such cultural activity triggered architects in other cities to look at their situations: Chicago, Los Angeles, and San Francisco architects began to rally with their own organized forms of discussion and investigation.

The institutionalization of these explorations was performed quite deliberately by The Institute for Architecture and Urban Studies. Under the direction of Peter

Eisenman, the Institute, vociferously accused of being hermetic, arcane, and esoteric, drew Europeans, English, and Argentinians of intense persuasion into its confines. The critical climate was being shaped; it provided a model. The appearance of *Oppositions*, the Congressional record of its investigations, lent a proper sense of permanence.

Architecture as a subject newsweeklies could latch on to would not have grabbed the limelight in this decade had it not been for the theatricality of such architects as Philip Johnson, who made the cover of *Time*, or younger architects like Charles Jencks and Robert Stern. They showed a special knack for campaigning, creating slogans, and in general warming up the audience by espousing use of wit, historical allusions, and ornament in architecture. Without histrionics, the architectural investigations would have continued, but the world at large might not have noticed. Another condition, however, was important for the cultural domination of architecture as an art form. That requisite condition was an underlying *malaise*, the disenchantment with Modernism.

Modern, modernism, modernity

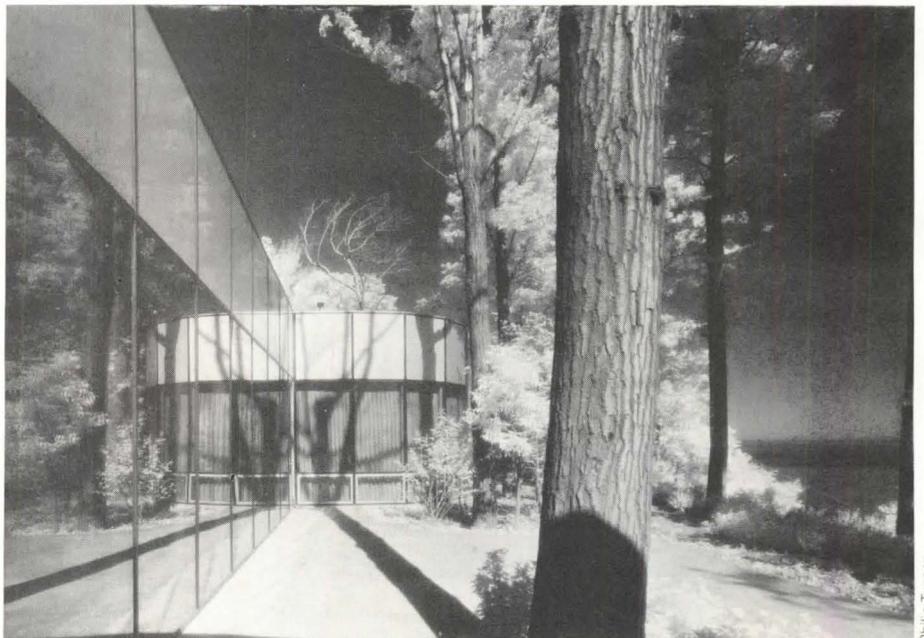
The word "modern," with or without suffixes *ism* or *ity*, has been subjected to varying usages and connotations, all of which can lead to confusion.

Modernism in *all the arts* has been characterized by the acceptance and expression of fragmentation as an aesthetic condition, on chance rather than certainty, on serial composition rather than pyramidal or hierarchical ones, on episodic rather than unified structures, to repeat points

Anthony Vidler has made in *Oppositions 9*. Interestingly, Vidler argues that since Modern Architecture clung to a basically classical *humanist* stance by remaining a *social art*, it did *not* actually espouse "Modernism." Not until recently, when architects began to doubt architecture's effectiveness in creating a utopia, did they turn to artists' definition of "Modernism," Vidler maintains. They began to examine the medium itself, to analyze architecture as a technique. One offshoot of this "Modernist" endeavor is the exploration of architecture as a discipline with its own system of meanings, rules that only refer to these "autonomous" conditions.

"Modernism" in the larger, artistic sense shared similar features with the general social category of "modernity." In *The Tourist*, "modernity" appears as disorganized and "alienating, wasteful, violent, superficial, unplanned, unstable, and inauthentic." In fact, MacCannell argues the "instability" and "inauthenticity" are requisite to "modernity." "Reality" and "authenticity"—found elsewhere in the past or primitive cultures—provide the motivating forces for a search that characterizes the modern condition. Like tourists, the current generation searches for "reality" and "authenticity" in its architecture and in its understanding of architecture—an authenticity and reality we feel was eventually lost as architecture succumbed to modernity. Paradoxically "Modern Architecture" was supposed to supply those qualities lost to "modernity."

One feature of "modernity," MacCannell adds, is that social life constantly changes, reorganizes, and subdivides in complex ways. *Differentiation* among society, social



On the next three pages are memorable fragments or images from certain formal explorations. Above, Don House, Stanley Tigerman, 1976.

Philip Turner

classes, and ethnic groups constitutes our modern totality. We try to transcend it; at the same time, however, we thrive on this differentiation.

The 1970s were similarly marked by a search for a way of making architecture that would reflect a *consensus* between architects and the persons experiencing it, an architecture that would embody the demands and desires of both. The results substantiate MacCannell's opinion: "To suggest in the first place that culture rests on a consensus reveals, it seems to me, a profound misunderstanding of culture and society."

Yet to accept differentiation as a condition suggests limited possibilities for a sense of integration that can fuse social life with architectural form. A unifying connection could overcome the sense of alienation that typifies the modern character. This alienation, cultural historians and critics such as Christopher Lasch contend, links with a narcissism that particularly describes the decade's social character.

The narcissistic impulses became more apparent in the 1970s, Lasch explains, because of cultural and institutional transformations evolving over the last 30 years. The proliferation of images and the cult of consumption appear as two prominent manifestations.

The physical results of these manifestations can be seen in the fantasy worlds created by John Portman to serve as hotels for travelers and tourists, in theme restaurants, amusement parks, and in shopping malls like Pier 39 in San Francisco. Nostalgia, marketed as a commodity, is not the same thing as a true interest in the past: It sells anyway.

Schamberg Pavilion, Richard Meier, 1977.



David Morton



Edward Sioecklein

Lang House, Stern & Haggmann, 1975 (above), Shezan Restaurant, Gwathmey Siegel, 1976 (below).



Norman McGrath

Beyond Modernism

The return of history

Nostalgia accounts, to some degree, for the "recovery of history," another prime architectural obsession of the 1970s. This search into the past did not begin ten years ago. As a reaction to Modern Architecture's progressive clean-slate approach, the historicist impulse forms a motif that occurs and recurs throughout the last five decades. Paradoxically, just at the moment when Modern Architecture came to prominence in this country as part of the post-World War II building boom, the historicist strains began surfacing more virulently than before—latently in the classicizing compositions of Mies van der Rohe at IIT, for example, and blatantly in the gothicizing tendencies of Minoru Yamasaki. These surface subversions, however, were to be accommodated in the 1950s within the modernist code as overlays on a gridded plan or column-and-beam frame; they were not seen as fractures in the "language" of Modern Architecture.

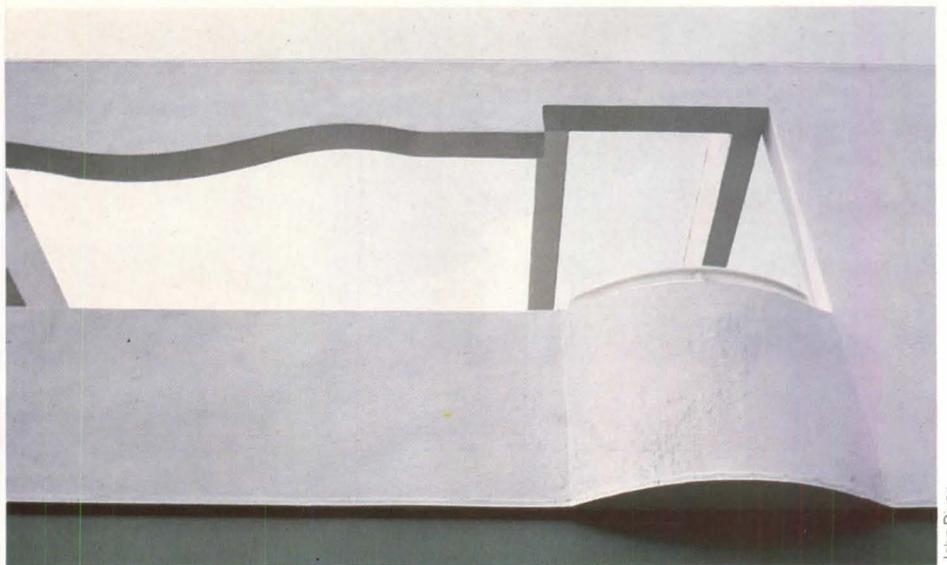
Robert Venturi's *Complexities and Contradictions in Architecture* (New York: Museum of Modern Art, 1966) brought into relief this urge for recovery of past architectural modes. The book could thus be interpreted as a timely polemic against "modern" architecture, serving as an important cynosure for the awakening historical consciousness.

The return of language

The essays *Meaning in Architecture*, edited by Charles Jencks and George Baird (New York: Braziller, 1969), are not talked about in the same way as *Complexities*. Yet for many the book served as the kick-off of the recognition that *semiotics* had a position to play in the architectural ball game. The book suffered from too much optimism about how far the analogy between linguistics and architecture could be taken. Nevertheless it focused attention on the problem of the acceptance of architectural form by an audience broader than those trained specifically for its appreciation.

Thus the book identified another obsession that marked the 1970s, "the return of language." The idea of architecture as a *communicating object* was being given more and more currency. The notion of communication also pervaded the larger cultural sphere where systems-oriented concepts (cybernetics), commercially oriented ones (advertising), and philosophically oriented ones (linguistics) all had entered public consciousness.

Strangely enough, a parallel between the socially based advocacy movement in architecture in the late 1960s and the

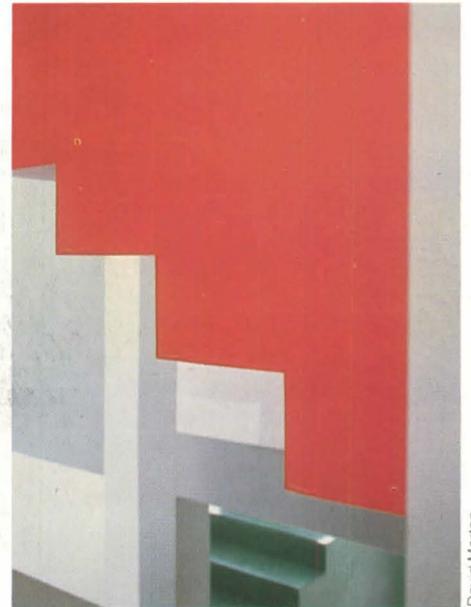


Benacerraf Addition, Michael Graves, 1969.

House VI, Peter Eisenman, 1977 (below).



Brant-Johnson House, Venturi & Rauch, 1977 (above), Kresge College, Charles Moore, 1974 (below).



search for formal means to infuse architecture with content exists as part of this obsession. When social planners urged taking user needs into account, they weren't just focusing on social livability patterns. Much of what was being called to task concerned the inability of architecture to communicate a sense of place to its users and to connect in some way to their particular experience.

Robert Venturi and Denise Scott Brown have long propounded the basic connection between the socially based design, the "return to language," and the interest in form. Still, social planners and formally oriented architects continued for the most part to remain at loggerheads during this last decade. Because social planners considered an interest in form socially irresponsible, Scott Brown has pointed out (*Oppositions 5*) they refuse to see architectural form as a tool of *symbolic communication*. Thus they continue to fall prey to unconscious formal prejudices.

Effective use of a communication process requires an *awareness* of its operations. Because architecture is a cultural product, it can be taken apart as a system of signs of accumulated references and associations. Trying to design within these constraints calls for a certain self-consciousness on the part of social planners and architects. But this trait can turn in on itself by making an architectural artifact too "knowing." Charles Moore's Piazza d'Italia (*P/A*, November 1978, p. 81), for example, ended up as one of the most controversial projects *P/A* published in the 1970s despite its "multivalent coding." It was blamed for being too erudite and too blatant in its references—at the same time.

Whether one invokes the *semantic* model or the *syntactic* one—or both—as appropriate to architecture, the linguistic analogy still raises hackles. Part of the problem comes from a reluctance to try to see architecture as any different from the functionally and structurally determined Bauhaus model. Part of it (justifiably) comes from the fact that one-to-one correlations don't work perfectly here. The particular way architecture is perceived and experienced makes it different from spoken and written language. Close comparisons end in simplification and reductivism—two of the foibles for which we blame Modern Architecture.

Confronting kitsch

The problem of kitsch in the 1970s has been exacerbated by the return of language. Seeking the architectural "sign" that provokes a familiar association has encouraged the proliferation of debased and watered-down gestures; avoiding this dissolution is tricky. Basic to the operation, Jorge Silvetti explains (*Oppositions 9*), a *transformation* must take place in the "bor-

During the 1970s, specific architectural elements appeared with significant influence. Certain ones, shown on the preceding pages, were part of the work of the most "formally conscious" architects of the decade. They became fragments that started cropping up with some regularity in the work of other architects, usually working on a restrictive (i.e., small-scale) level. Other elements executed by "mainstream" architects began to proliferate on a grand scale throughout the U.S. Some had been "high-design" images from previous decades (e.g., an Ed Barnes shed roof); others, like a Portman atrium, were spawned during the decade in which they proliferated. On these pages you will find screen walls, moldings, pipe railings, painted ducts, serrated skylights, shed roofs, notched high-rise towers, and other elements that lent their imprimatur to the decade.



Norman McGrath

Symphony Hall, Denver, HHPA, 1977.



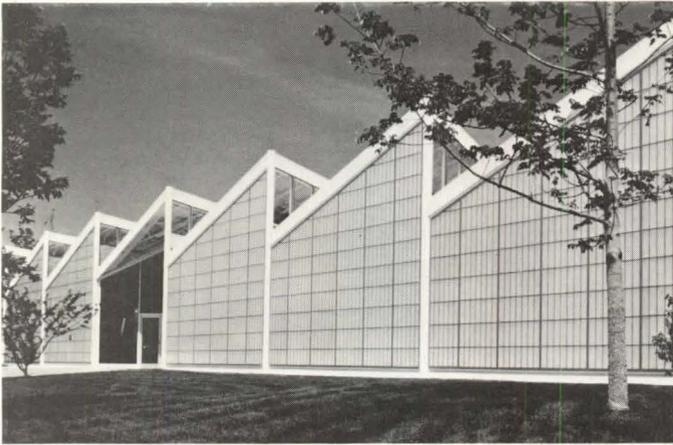
John Dixon

Simon Fraser University, Arthur Erickson, 1972 (above), Pacific Design Center, Gruen Assoc., 1978 (below).



John Dixon

Beyond Modernism



Keith Palmer

Michigan City Public Library, C.F. Murphy, 1978.



Deer Isle Camp, E.L. Barnes, 1962.

rowing" from other historical codes. Architecture can either reproduce elements from the known styles (e.g., a column from classical architecture) or it can absorb and *transform* them. If the transformation is achieved through juxtaposition of elements for ironic effect, Silveti warns, the mode—irony—may turn out to be just another form of *re-presentation*. Architecture requires a "criticism from within" that uses architecture, not words, to discover *latent* properties of a code not necessarily perceived in the original situation. The result, Silveti writes, opens up a "poetic dimension."

Context/contextualism

One of the central points of discussion in the talk about language in this or other areas pertains to what gives a certain element "meaning." Is it inherent in the "word," or the "architectural element," or in the relationship to its place in the sentence or composition? Diana Agrest and Mario Gandelsonas early contended that the *relationship* between *signs* in architecture gives a work its particular meaning (see *Oppositions 1*). If we look to other disciplines, such as biology, we see similar arguments. Gregory Bateson in *Mind and Nature* (New York: E.P. Dutton, 1979) makes a case for the interaction of elements: "Without context, words and actions have no meaning at all. This is true not only of human communication in words, but all mental process of all minds, including that which tells the sea anemone how to grow and the amoeba what he should do next."

The seizing of an element from one context and placing it within another involves a *metaphorical* operation. If an architect like Michael Graves takes an element—a column—from one architectural code—e.g., a Classical one—and places it in a new project, our perception of its meaning is colored by a *simultaneous* picturing of



Richard Payne

Pennzoil Building, Johnson/Burgee, 1974.

the similarities and differences occurring from the displacement. This appreciation requires a "stereoscopic vision," Paul Ricoeur tells us in his essay "The Metaphorical Process" (*On Metaphor*, University of Chicago Press, 1979), where he uses a metaphorical term borrowed from *spatial depth perception* to describe the *literary* operation. Through metaphoric modes we can make connections to architecture of the past and to other "forms" of social existence.

So why are the results of the metaphorical so fragmented? Why does the act of making architecture resonate with meaning lead as easily to eclecticism, pastiche, and kitsch? The 1970s did not resolve these questions. It did focus attention, however, at least on the operations, and in so doing arrived at some interesting and sometimes splendid fragments (as well as some fiascos). These bits and pieces,

these shards, carry special beauty for those of us (tourists) sifting through the ruins of Modern Architecture. They suggest the possibility of developing an aesthetic construct with further investigation. Research may still yield a not yet visible unity. We may still find that architecture to provide us with the totality.

Architecture as bits and pieces

In the meantime we collect in the following pages a few examples of architecture being created by some architects who show promise of exploring these issues in interesting ways in the 1980s. Right now they are concentrating on certain themes or fragments that come out of Modernism: Eugene Kupper has explored the combining of archetypal domestic forms with a modernist play on layering spaces; Architectonica has investigated an enriched Modernism of receding planes of varying permeability transformed through the use of color. Mark Simon of Moore Grove Harper turns toward the technical aspirations of Modernism in designing an energy-conserving house buried underground. The forms he uses, however, deliberately draw from the vernacular and historicist modes often associated with the "Post-Modern" idiom. Hans Hollein explores Modernist notions of ambiguity and dissonance through deploying familiar architectural elements ("post-modern") in space in his Austrian work (p. 76).

What about "Post-Modernism"? It has served a certain purpose in getting the public interested in architecture, but more work needs to be done to reach that audience adequately. At least that is what is implied by the study we publish, "Does Post-Modernism Communicate?"

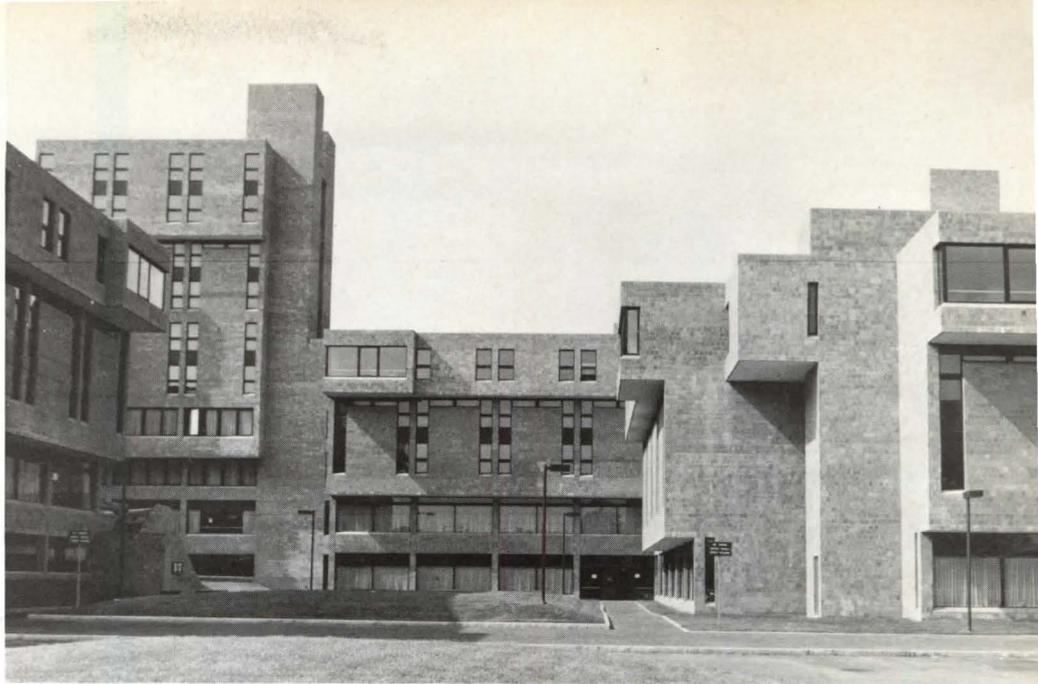
Lest we be accused of leaving the readers dangling about what we mean by "Beyond Modernism" (beyond, that is, the 1970s), we attempt to address that question in the conclusion. [Suzanne Stephens]

Kathleen Kershaw and Peter Dodge



The Cannery, Joseph Esherick & Assoc., 1965.

John Dixon



SUNY Buffalo, Davis, Brody, 1977 (above).

United Nations Plaza, Roche-Dinkeloo, 1976 (below).



Bonaventure Hotel, John Portman, 1978 (above).

Gwathmey House, Gwathmey, Henderson, 1966.

Wayne Thom



John Dixon



Book of Lists

You can tell a lot about a certain period through itemization of goods consumed, wars waged, population ages or even best-selling books. In this light, P/A compiled its own lists.

During the 1970s we have often heard the plaint, "Why do you only publish Michael Graves, Peter Eisenman, or Richard Meier?" We decided to go back and find out just what firms *did* appear most in P/A during the decade.

Firms published most

Progressive Architecture: Firms published most often in the 1970s

Firm	Times	Pages
*Charles Moore (and affiliates)	14	70
Venturi & Rauch	14	61
CRS	12	49
Hardy Holzman Pfeiffer	10	45
Mitchell/Giurgola	10	42
SOM (all offices)	9	42
Michael Graves	6	50
Stanley Tigerman	6	25
Gruen Associates	5	34
*Charles Moore and Moore Grover Harper	7	29
MLTW/Moore Turnbull	7	41

Architectural Record: Firms published most often in the 1970s

SOM	24	92
CRS	22	76
HOK	21	54
Charles Moore (and affiliates)	18	66
Kaplan & McLaughlin	17	41
Paul Rudolph	16	79
TAC	16	73
Edward L. Barnes	15	85
Richard Meier (ahah!)	15	63
John Carl Warnecke	14	55

The study, carried out by P/A's Cynthia Ficker, tabulates both the *times* a firm appeared in a feature article and the *number of pages* the published work received. P/A Award Program publications merit their own list.

With these results in hand, we could not resist comparing them to those of *Architectural Record*, or comparing the Awards Program winners from P/A (for projects) with those given by the A.I.A. (for built work).

Nor could we resist including a list of the buildings published in P/A that proved the most *controversial* in the last ten years. This list, difficult to measure quantitatively, was compiled from Letters to the Editor. The letters had to focus on a particular building, not a subject such as "women in architecture" or "energy conservation" (both of which received enormously positive responses anyway). Second, the letters had to display some position *contra* the one stated by the architect in his or her design, or the one held by the author of the article, or even ones put forth by other letter writers. Obviously, the P/A Awards program was not included here, since its results are predictably controversial.

Because favored vocabulary gives as good an indication as lists of the concerns of a time, we include lists of words (next page) we think carried the greatest pur-

Firms awarded most

P/A Awards Program: Most frequent winners 1970-1979 (not January, 1980).

Firm	Times
Michael Graves	5
Don Hisaka	4
C.F. Murphy	3
Cambridge Seven	2
Jorge Silvetti	2
Peter Eisenman	2
TAC	2
DMJM	2
SOM	2
CRS	2

AIA Awards Program: Most frequent winners

SOM	5
I.M. Pei	5
C.F. Murphy	3
Hardy Holzman Pfeiffer	3
Philip Johnson & John Burgee	3
Richard Meier	3
Marcel Breuer	3
Harry Weese	3
Mitchell/Giurgola	3
Ulrich Franzen	3

suasiveness during the 1970s. And since the 1970s were so clearly marked by a sense of historicism, the most commonly referred to *historic allusions* are also included (opposite), based on P/A's own commonly agreed-upon assessment.

The 1970s in the U.S. have been characterized by incremental urban planning: urban designers and architects address specific areas, fragments of the urban fabric, rather than construe some "unrealistic" totally new whole. Rehabilitation is the key word. Yet theoretical investigation on the *urban scale* continues. Quite different from the images of the 1960s such as those of Archigram, Paolo Soleri, or Kenzo Tange, these new urban visions would seem just as polemical. Rather than assuming a clean-slate approach to urban planning, they seek to develop urban "typologies" based on the past formal structures of cities, architecture, and nature. Many, like Emilio Ambasz' community for a Cooperative of Mexican-American Grape Growers, involve a strong social program as well.

The images shown here (pp. 58-59) are only some of the strong, postulative visions of the future that have evolved over the last ten years. They are important, for they look on architectural fragments as part of a language that can coalesce into a coherent (urban) whole. [Suzanne Stephens]

P/A's most controversial subjects

Most controversial buildings (in order of rating):

Piazza d'Italia	Nov. 1978	August Perez, Charles Moore
Yale Center for British Art	May 1978	Louis Kahn
House VI	June 1977	Peter Eisenman
Auraria Learning Center	July 1978	C.F. Murphy
Pearl Palace	June 1977	Taliesin Assoc.
Bronx Development Center	July 1977	Richard Meier
Pembroke Dormitory	Feb. 1976	MLTW/Moore, Lyndon, Turnbull
House III	May 1976	Peter Eisenman
Douglas House	July 1975	Richard Meier
Penn State Faculty Club	Oct. 1977	Venturi & Rauch

Most controversial project:

AT&T	June 1978	Johnson/Burgee
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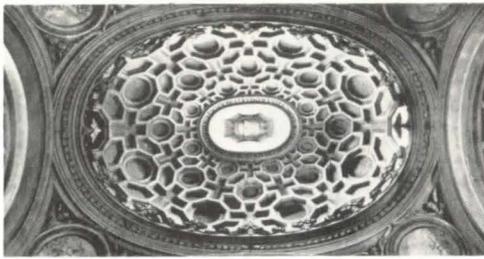
Most controversial article (general):

On Reading Architecture	March 1972
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Most controversial architect:

Peter Eisenman, who has been published only three times in the last ten years, excluding the Design Awards program, but has a batting average of 1000 for making "the most controversial list" with each publication—see House VI, House III, and "On Reading Architecture."

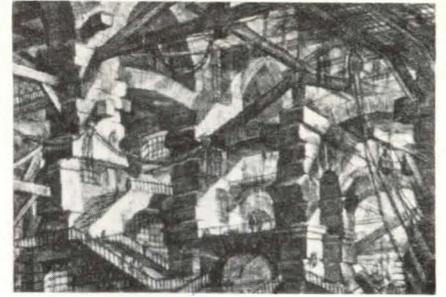
Fragments of history



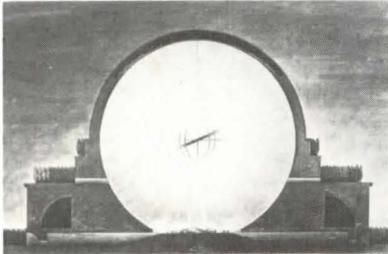
Borromini, San Carlo Alle Quattro Fontane, 1641.



John Soane, breakfast room Soane Museum, 1812.



"I Carceri," G.B. Piranesi, 1743.



Cenotaph for Newton, E.L. Boullée, 1784.



Villa at Garches, Le Corbusier, 1927.



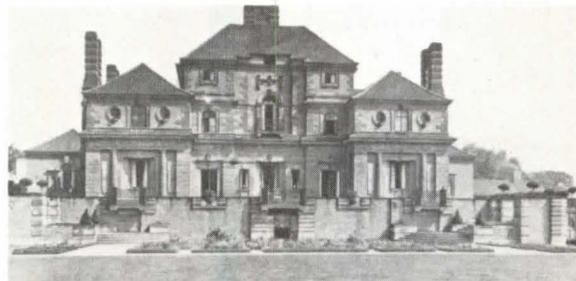
Adolf Loos, Chicago Tribune column, 1922.



Stratford Hall, anonymous, c. 1725.



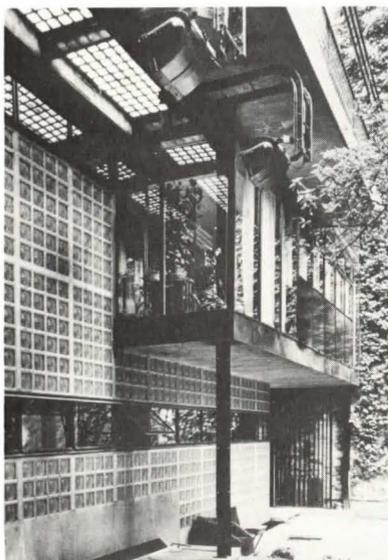
Kent House, Bruce Price, 1886.



Heathcote, Sir Edwin Lutyens, 1906.



Pyramid, Mauperthuis, C.N. Ledoux, c. 1783.



Maison de Verre, Pierre Chareau, 1933.

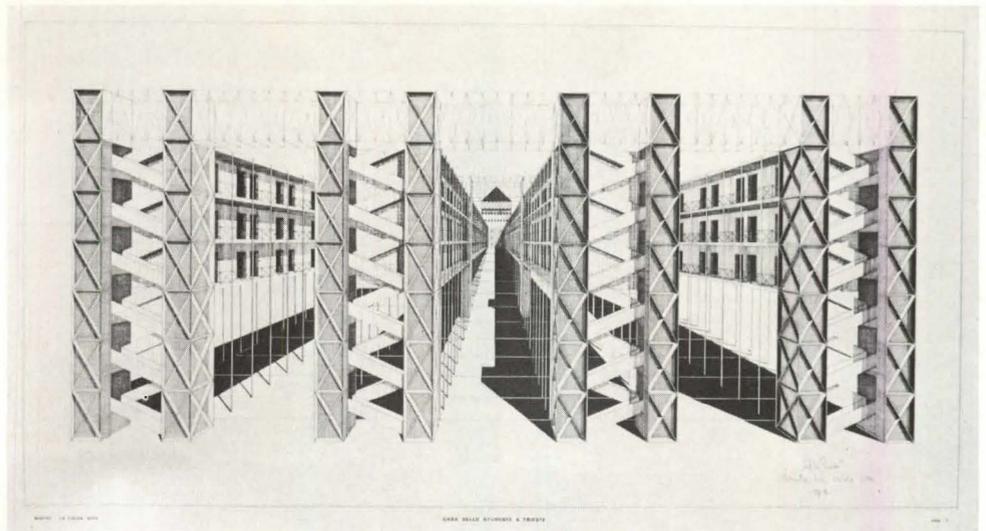


Villa Foscari, Palladio, pre-1560.



Illustration of "Primitive Hut," for Abbé Laugier's 1755 Essay on Architecture.

During the 1970s certain fragments of the past were cited frequently as visions or influences behind many designs. While this grouping cannot be all-encompassing, the allusions on this page did occur again and again.



Urban visions: Aldo Rossi's Analogous City, 1975 (left); Student Housing in Trieste, 1977 (right).

Stacking the decade verbally

"When I use a word," said Humpty Dumpty, "it means exactly what I choose it to mean, neither more nor less."

"The question is," said Alice, "whether you can make a word mean so many different things."

"When I make a word do extra work like that," said Humpty Dumpty, "I always pay it extra."

—from *Through the Looking Glass*, by Lewis Carroll

A certain elite of words rules each decade. The words used by architects and critics in the 1970s to discuss architecture reveal their beliefs and concerns. The 20 "buzzwords" listed below from the respective camps of "art" and "science" are key words in the constantly metamorphosing formalist and technocratic ways of talking, or modes of discourse, if you will. [Eleni Constantine]

Formalist

typology. It takes all the running you can do to keep in the same place with this one. When we last saw it, it meant the idea of an abstracted formal structure, defined by a fundamental geometric image infused with a historically determined significance. Clearest use so far: "He's not my typology."

metaphor. Allusion of grandeur. For best results, add "metonym" and serve with "meaning."

metonym. When a hearth becomes a home.

semiotics. The study of signs.

semiology. The study of semiotics: e.g., Post-Modernists find anti-semiotic jokes offensive.

dialectic. Polite term for a knock-down drag-out fight.

bricolage. Fragmented typology reassembled to reveal the Hidden Significance no one (before you) ever saw.

allusion. Test of the viewer's sensitivity to polysemic metaphors and metonyms.

syntax. Why meaningless would a building this sentence like be.

syntagm. When what you thought was an ornamental molding falls off a building and turns out—surprise!—to have been structural, the correct response is: "So it really was a syntagm, not a morpheme after all."

posit. Assert as fact what you can't prove.

notion. Infradig for idea, concept, principle, or theme.

condition. This word is to "element" what "notion" is to "idea"; e.g., "the bookcase condition."

inform. What notions do to consenting conditions.

domain. Sphere of wished-for influence.

polemic. Opinions you disagree with.

address itself. Best ignore buildings that do this in public.

hermetic. Anything the reader has to look up.

episodic. Spaces designed synchronically, experienced diachronically.

poché. A tricky one. Originally the shaded-in portions of a plan, now used for the solid mass from which space is carved; e.g., "I prefer my eggs pochéed."

synchronic/diachronic. Properly or improperly used, these will confer cachet on any historical or linguistic argument.

contextual. Rationale for a liberal belief that one must learn from Levittown as well as Lutyens. Spurred by a secret fear that someday your work may be saved only for being "contextual."

Technocratic

pluralism. Euphemism for confusion.

process. Used for "working something

out" to imply that it is structured and democratic.

maximize. Verb used to make the solution appear actively optimal.

optimize. Verb used to give the impression that the solution actively maximizes pluralistic benefits.

address. Promise to pay full attention to, tomorrow.

user needs. A socially relevant way to define a building's program.

social relevance. Quality a building has that responds to user needs.

intervention. A tampering or interruption that intends to maximize, optimize, and address user needs.

seminal. Adjective to describe something which you want to say was "first" but you know that's not quite true.

gentrification. British planning term for the forcing out of an established lower-class community by upper-class "pioneers." Used in the U.S. for the consequent "upgrading" of the area.

interface. Noun made into verb, used when "to connect" sounds too simple.

impact. Noun made into verb, used when "to influence" sounds too simple.

infrastructure. Demoted from its Marxian significance to mean pipes and wiring in a building, sewers and transportation in a city, or the hidden complexities in any bureaucracy.

synergistic. Bucky Fuller term for $1 + 1 = 3$. Used in developese, $1 + 1 = 1$.

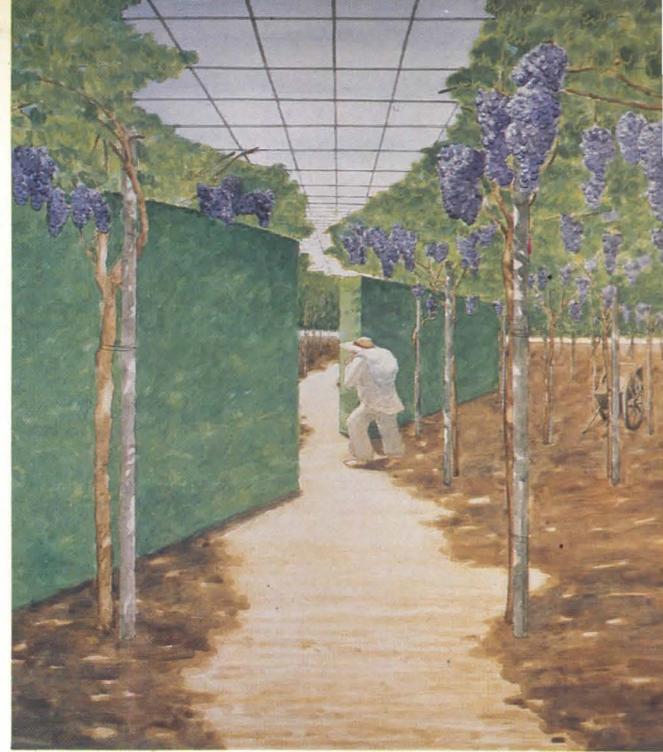
holistic. "Whole" plus suitable suffixes. Spelled with a "w" by the gauche.

context. Why high-rise buildings in low-rise areas have irrelevant cornices on the fourth floor.

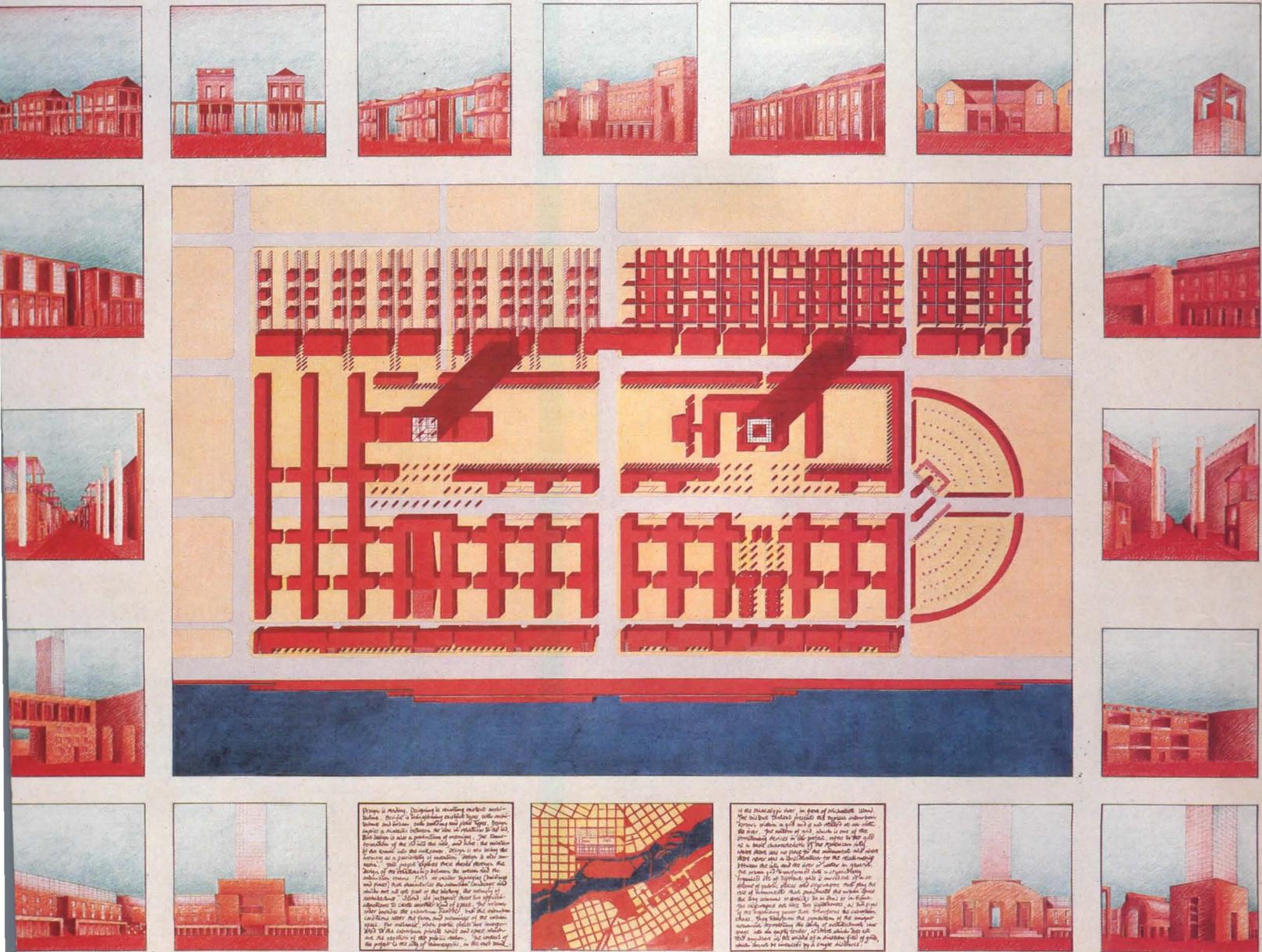
amenity. Developers' pacifier for the public. Definitely the fuzzy end of the lollipop.

cognitive. Adjective to describe something you'd like to defend as value-free.

celebrate. Term used to engender interest in a cliché-ridden subject.



Rem Koolhaas' Hotel, 1976 (left, above); Emilio Ambasz' Cooperative, 1976 (right); Diana Agrest and Mario Gandelsonas' Minneapolis plan, 1979 (below).



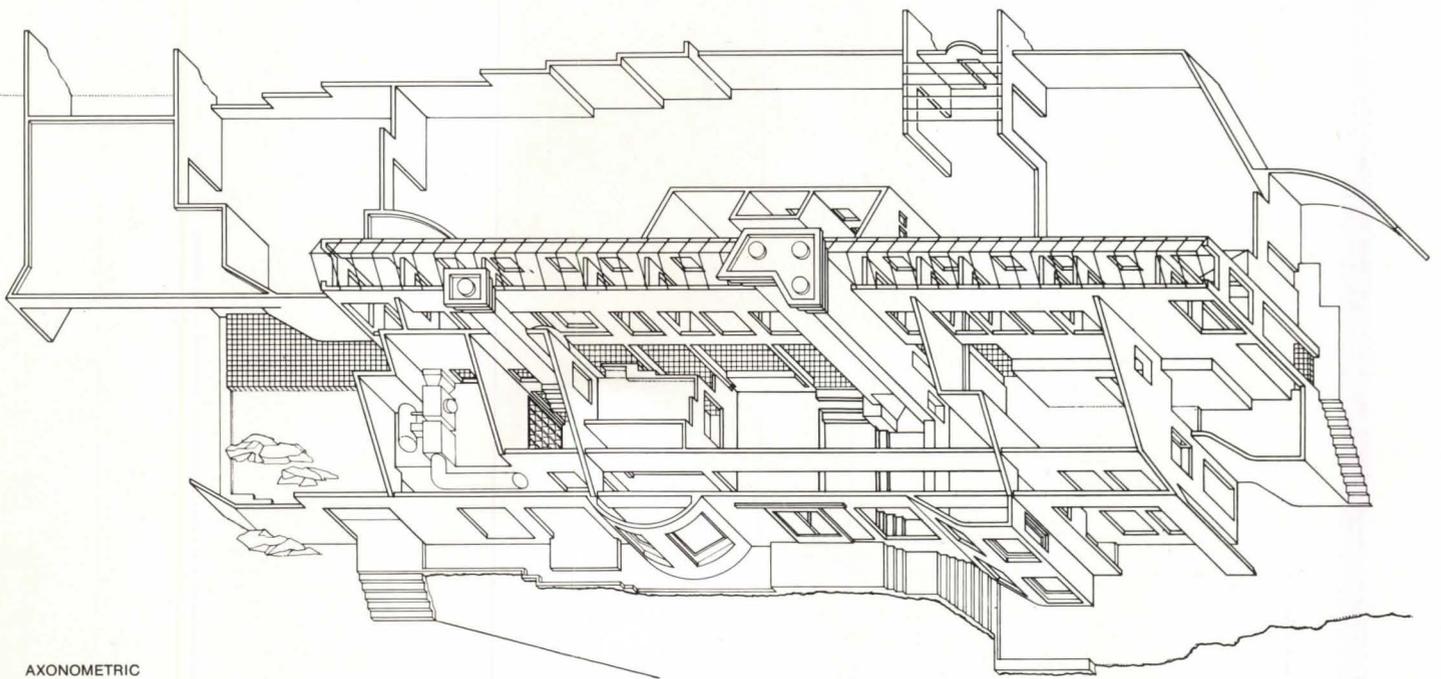
Steps in making. Discussion is essential, especially in the early stages. The architect must be able to explain the reasons for his decisions and to be able to justify them. The architect must be able to explain the reasons for his decisions and to be able to justify them. The architect must be able to explain the reasons for his decisions and to be able to justify them.



It is the architect's duty, in the face of the city, to be able to explain the reasons for his decisions and to be able to justify them. The architect must be able to explain the reasons for his decisions and to be able to justify them. The architect must be able to explain the reasons for his decisions and to be able to justify them.



Within the walls of Modernism



AXONOMETRIC

Modernist and pre-Modernist ideas are explored and developed in this house by Eugene Kupper with some success.

During the 1970s, some younger architects continued to work on the Modernist vocabulary to see what it might still offer. Through salvaging certain principles, revising others, and introducing new ones, they began to establish a direction. Such an investigation suggests the possibility that new rules may develop, allowing a renewed and expanded language of architecture to evolve.

In its way, the house shown on these pages illustrates this type of search. It can't be considered an architectural "paradigm" or model of revitalized Modernism, because the design lacks the resolution that announces a new proposition. As an exploratory device, however, it yields some intriguing moments along the way. By manipulating bits and pieces of

several vocabularies—both Modern and pre-Modern—with intelligence and wit, the architect, Eugene Kupper, points to certain paths worthy of further attention.

The clients, the very successful popular singer-composer Harry Nilsson and Una Nilsson, a designer from Dublin, had selected a prominent hillside site in the bucolic-chic Bel Air section of Los Angeles on which to build their house. Both clients and architect felt the house should conform to that cultural and physical context. In other words, the design was to express a public quality in its proportion and scale, but not overwhelm the landscape. The couple, who are casual, informal, and ebullient, wanted a house to lounge around in—one that, Kupper explains, "indulges in private whimsey, personal appetite, desire for complexity and idiosyncrasy." Kupper felt impelled to respond to the clients' needs, desires, and fantasies, as well as to treat the design as part of an architectural investigation. Given the house's size—

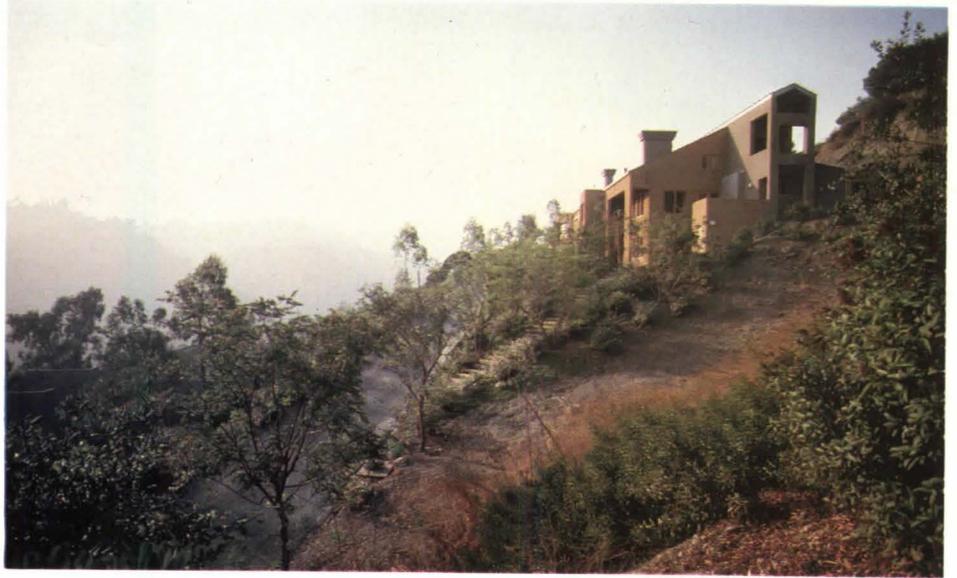
5000 sq ft—there is a lot of room in which all this can take place.

Spatial organization

A colonnade 130 ft long forms an axis stretched north and south across the ridge of the hill. This gallery becomes the strong organizing element in the expression of the split between public and private spaces, easily identified by virtue of its height and its metal gable roof. The public areas on one side of the house face downward toward the surrounding hillside homes. The private spaces open onto the secluded upward part of the slope to allow "things to get a lot crazier, a lot more personal," explains Kupper, about the architecture.

Spaces within the house range from small scale to large, and are treated straightforwardly and playfully, monumentally and intimately. The public areas—dining, living, music, and game rooms—occupy a longitudinal portion of space defined by layers of walls punctured or

Two tones of integrally colored stucco tinge the walls of the house stretched from north to south across the slope of the hill in the Bel Air section of Los Angeles. At the entry (below), a bell-tower-like porch at one end of the 130-ft-long, 24-ft-high gallery evokes associations with vernacular and classical types of architecture.



Nilsson House

etched away to form framelike structures within the house's shell.

The Modernist-organic development of the open plan provides a platform for some extra (fancy) footwork. Kupper creates two parallel paths of circulation, one formal along the horizontal axis, the other "soft" along the western edge, loosely mimicking the formal side. These two circulation elements border the living areas, which are further differentiated by the changes in ceiling heights and floor levels. They unfold episodically in steps down the incline of the ridge. But moving bumptiously, these living spaces flow out then turn back at points to form compressed spaces like the fireplace nook or the music mezzanine, before finally sliding away to the game room under the main level. The game room itself ends emphatically in a tiny "closet"—a soundproof studio where Nilsson can go and compose.

Modernism's manipulations

The layering of walls through the house follows the longitudinal lines established by circulation routes and living spaces. But Kupper takes the wall beyond its Modernist role as a plane that defines and partitions space. He investigates the evolution of the wall as a two-dimensional element that gave way to a series of *layers*. These layers involve a play of screen walls—freestanding planes with large portions carved out—and walls that have been dematerialized further into framing elements.

Both interior and exterior walls open spaces dramatically to view and signify the change in internal functions. For example, the exterior (west-facing) wall weaves in and out, advancing and receding in layers, bulging and thickening here, flattening and thinning there, in tempo with the character of activities taking place inside. Screen walls define exterior spaces along the eastern elevation. Exterior and interior walls may also read as freestanding massive cores, like the wall enclosing the projection booth at one end of the living room. In the case of the gallery, walls as framing elements form the double-height space: the upper portions recall medieval apertures overlooking the living "hall"; second-story shuttered windows elsewhere continue the association. The 24-ft-high gallery itself forms a volume that seems analogous to a three-dimensional "wall"; the sort of organizing element to which other spaces attach—a notion seen most dramatically proposed by John Hejduk in the Bye House (P/A, June 1974, p. 98).

The handling of the floor and ceiling surfaces further modulates the spaces—exposed ridge and rafters and tiled floor in the gallery; *inclined wood-sheathed* ceil-



From the entrance one sees the living room through the colonnade (above); platforms in living room (below) spill down to fireplace nook with music mezzanine above, game room below.



ing and carpeted platforms in the living areas; the low, flat soffit of wood joists and carpeted steps of the perimeter path.

History assimilated

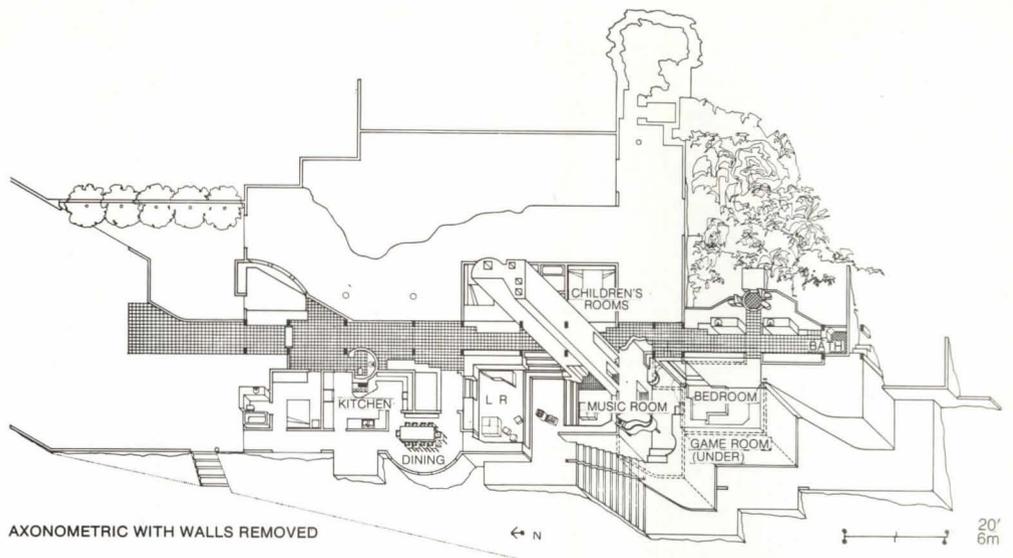
Throughout the house, modern vocabulary is balanced with references to architecture of traditional, even archetypal, modes. Materials like the stuccoed planar surfaces of course bring to mind the vernacular architecture of sunny climates. But the references are even more extensive and richer. The gallery with its gabled roof, the colonnade slicing through the house, the bell-tower-like portal at the entrance, the porches, the interior windows, the upper gallery openings, are all elements distilled from familiar fundamental forms of architecture. "Architecture can create memory as well as appeal to memory," comments Kupper, who introduced these elements not as "quotes" from past historic styles, but as "references." He keeps constantly in mind the schematic image of "house" that forms part of our collective as well as individual consciousness.

By lifting elements out of their classical or vernacular context and inserting them into this new one, Kupper is performing a metaphorical operation. The colonnade, removed from its historically "public" position, gives the house its "mocking grandeur" as well as generating a strong, poetic resonance. Instead of conforming to a traditional regular spacing, the column elements change rhythm. Thus, their irregular positioning punctuates the changing functions and activities of the adjoining spaces.

Color defines spaces, too, but not according to "color-coding" procedures that operate so frequently these days. Kupper wanted to introduce color for its ambient quality—or, as he put it, to enhance the "dynamic in which spaces unfold . . . to use an old-fashioned word, mood." Mood, or the different attitudes one senses moving through the house, affects the sense of "narrative," the story told by these spaces that Kupper seeks to instill.

Architectural precedent

Like most architects, Kupper does not want to be linked automatically with the architects whose work his house brings to mind, such as Luis Barragán, Aldo Rossi, and Charles Moore. Still one would have to consciously suppress automatic associations with Barragán as one studies those abstracted, unadorned surfaces and earth-tones of the stucco or the simple use of stained wood to emphasize ceilings and doors. Aldo Rossi's distillation of structural forms, such as the column and beam, and his introduction of archetypal and vernacular elements, such as colonnades, gables, and massive walls, also materialize before the mind's eye.



Stepped profile of projection booth at one end of living room provides seating.



Nilsson House



Double-height spaces have upper interior windows in bathroom (above), kitchen (below).



Like Charles Moore, Kupper has taken the freestanding planes deployed through space in the Modern idiom and has restated them as *wall*. Like Moore, he punctures them and carves them until they read as wall and column, wall and beam, beam and column—an exploration Barragán even more precisely conducts with immaculate results. And like Moore, Kupper uses architecture to comment on its (architecture's) own contrivances. Bedrooms are demarcated in the hallways by a sculptural fluting in the wall that mimics in the upright or vertical plane the setbacks of the horizontal levels of public spaces. The entrance door panels are raised wood; at the end of the hall, another door has its wood panels recessed. Kupper plays with proportions, too. The gable roof is tiny for the majestic height of the gallery; the entrance door is an unexpected 9 ft tall instead of the usual 6 ft-8 in.; the width 5 ft instead of 3 ft. A very narrow slitlike opening next to the fireplace in the living room turns out to be a means of egress.

Humor pops up continually like a lingering refrain. The front porch reads as a grand entrance, but its axis terminates in a bathtub; on the other side of the wall, is another porch—this time inaccessible.

Commentary

Kupper shows in this house that he is capable of inventive architecture by his attention to fragments and the poetry he can force from them. Many of the assembled elements and spatial enclosures—such as the gallery or the wall treated as screen, frame, or mass—are brought off with splendid effect. The most poetic inclusion is without doubt the colonnade, forming as it does a strong, unifying element from which spaces drop away. Even with the uneven placement of the columns, the colonnade doesn't lose its identity. The western elevation, however, reflecting the irregular syncopation of the "soft" circulation and the public spaces within, is allowed to become a little too loose and complex. From the outside it begins to look ambiguous and quixotic. And as the elements in the entire design are being pulled apart and reassembled, sometimes too much is put back in. Kupper inserts one reference too many, one punctured plane too many, one too many levels.

In addition, the parallel zones of longitudinal spaces extending from north to south read too much like the racing lanes at a swimming meet. Because one enters in the longitudinal direction, one is aware of the layering of spaces, and access is clear. There is missing, however, an inevitable intersection to give the experience more drama. Similarly, the narrative theme is important in the way spaces of the house unfold with different beats and tempos, a straightforward expansion tempered by

surprises. In a strong sense, it is a very Modernist narrative—without a plot. The main problem is that for all the big and small moments, tensions, and oppositions, there is no denouement.

Asking architecture to provide a denouement may seem beside the point, except a lot is going on in the house. One misses a centralizing locus of energy. The living room would be the logical point, if its rippling course down the slope, its ebbing away of space, did not prevent that concentration from occurring.

This criticism has nothing to do with the way spaces are lived in and experienced by their inhabitants, and therefore is irrelevant to those considerations. It does affect the house as an architectural statement, however—as a *proposition* for the making of architecture.

The house is still in some strange architectural transition. Taken as a set of principles with implications about the future, the house lacks that intrinsic cohesion resulting from some sort of "genetic" prescription. It is hard to say what this is, but it would formally explain and predict the sort of architecture that will be able to come from this experimentation. To expect the Nilsson house to qualify as some sort of Barcelona Pavilion is naïve. But *not* to ask that serious architectural investigations and designs with the pretensions of this one be measured on these terms is to ignore the meaning of this kind of effort.

Still if it does not provide us with a condensed text, it presents in effect dance *notations*—where some steps are nicely worked on and put into stunning combinations with others. A strong choreography could emerge. The use of vernacular materials, archetypal forms, and certain Modernist principles indicates that the synthesis and development of these manipulations promise yet to take us "beyond Modernism." [Suzanne Stephens]

Data

Project: Nilsson House, Bel Air, Los Angeles, Ca.

Architect: Eugene Kupper.

Client: Harry and Una Nilsson.

Site: 4.5 acres, irregular land on east slope of a north-south canyon with 400 ft drive down to the city street.

Program: design 5000-sq-ft house for family of four, live-in help.

Structural system: wood frame with steel reinforcing members, floors, and walls.

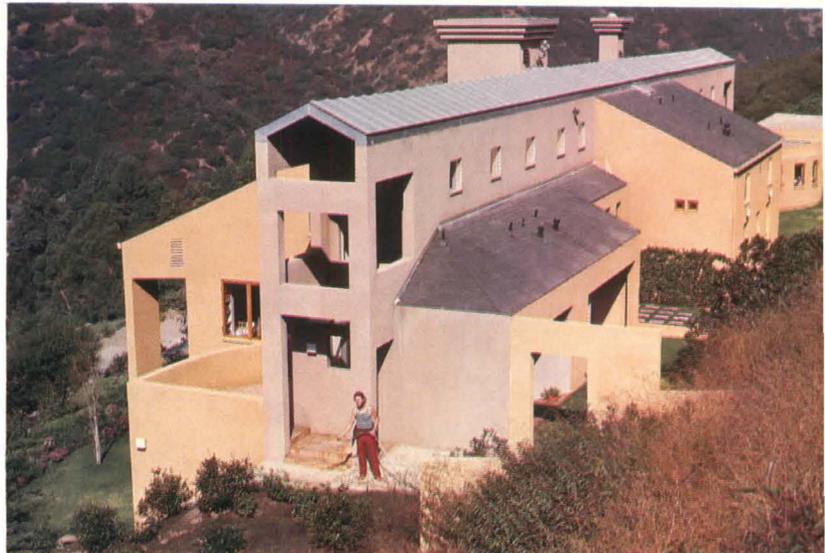
Major materials: colored (integral) stucco wall surfacing, wood framing, windows, doors, ceiling; metal roofing and shingling.

Mechanical system: three-zone, forced air HVAC.

Consultants: Eugene Kupper with Pamela Burton, landscape; Kurily & Szymanski, structural.

Costs: approximately \$70-75 per sq ft.

Photographs: Tim Street-Porter.



Screen walls on private upper portion of slope define courtyards (above left and below); the south end of the gallerylike axis (above right).



Layers of meaning

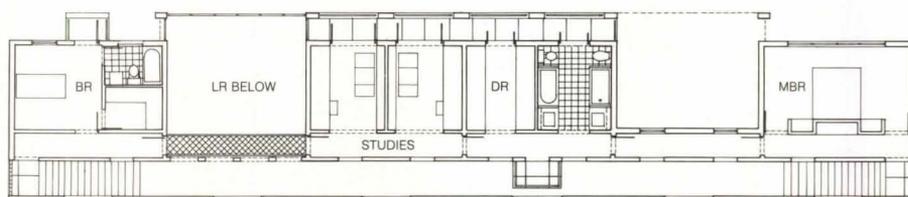
Rationalism meets Miami Moderne, surrealism goes with gracious living among the planes of a bayfront house designed by Arquitectonica

To the rather conservative residents of its neighborhood, the front of this house is a scandal, so disturbing that the local design review board required a grove of trees to screen it from the street. To the visiting critic, the same façade presents a set of enticing clues to the formal systems and allusions that the house embodies.

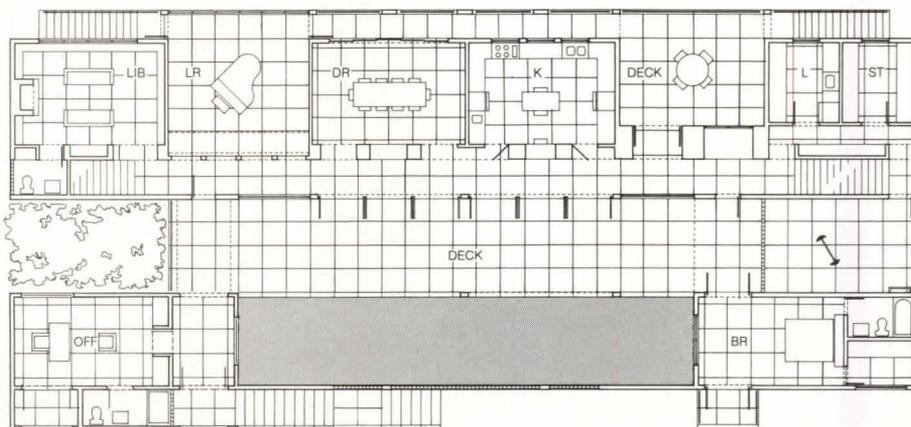
Approaching the house through the grove, one is confronted with three planes of wall, in sequential colors, extending 115 ft across the site. They proceed from a foreground plane painted an unreal red and split into dreamlike fragments, through a continuous rose-colored plane with rather enigmatic openings, to a taller pink plane partially visible beyond, with a row of identifiable windows. Only this last plane looks like a proper wall for a house, and it is the front wall of the house proper.

The penetrations in these wall planes play an intricate game with symmetry and evoke some low-keyed allusions. The approach along the central axis of the house points directly toward a luminous blue swimming-pool porthole. This circle and the symmetrical composition of glass-block areas above it (recalling both "Palladians" and "picture windows") state a Miami vernacular theme. The varied openings through the two forward planes are arranged with rigorous symmetry, but that order is obscured by their occurring in two planes with an asymmetrical overlap. In the tall rear plane, the six uniformly spaced windows leave a stretch of blank wall at the axis of symmetry; they also align, across the intervening layers, with the row of palms along the front.

The central point in front of the pool [text continued on page 70]



SECOND FLOOR PLAN

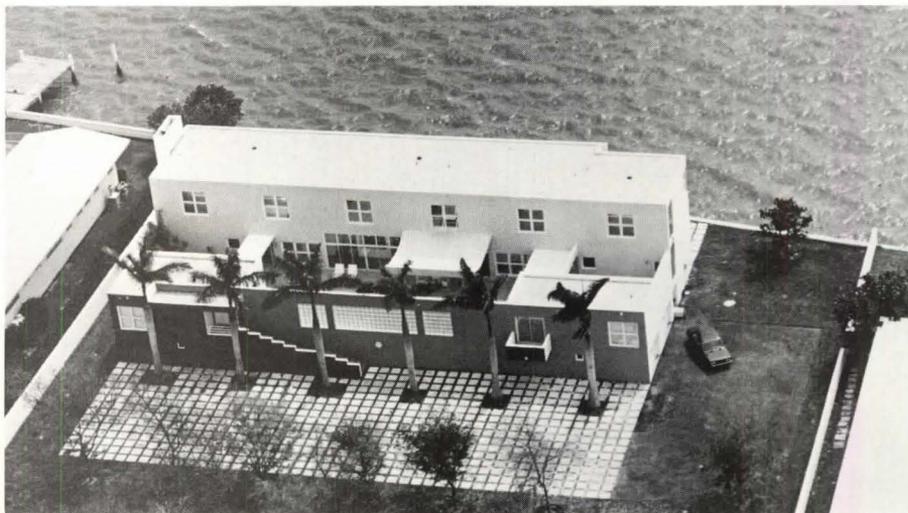


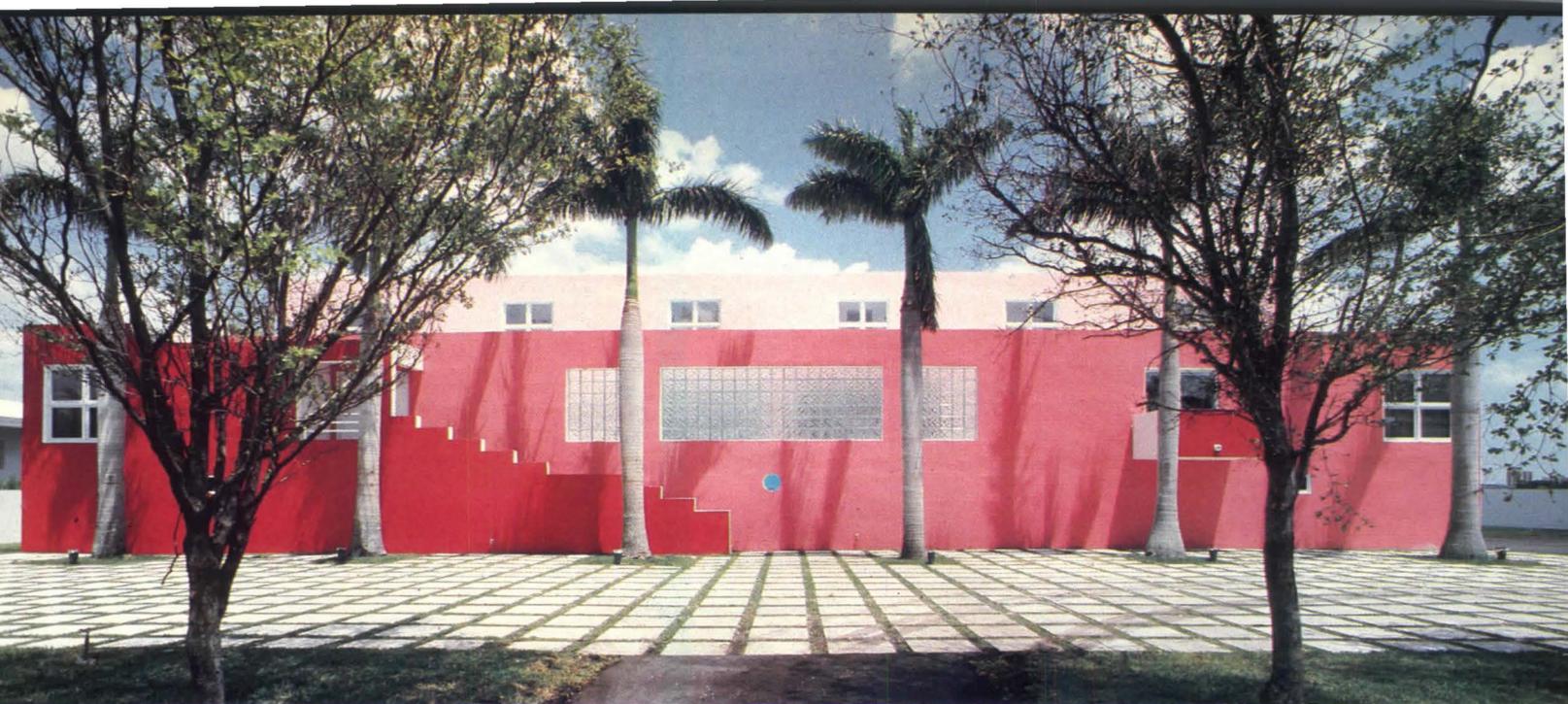
FIRST FLOOR PLAN



Front of house (top, opposite) reveals layers of wall planes that organize it (plans above). Entrance sequence begins at porthole in center of façade; from there, stairs rise to entry

doors; then one passes pool and deck zones (opposite, bottom) to motel-style door of house proper. Grid patterns of paving and glass block lead to gridded window framing view of bay.





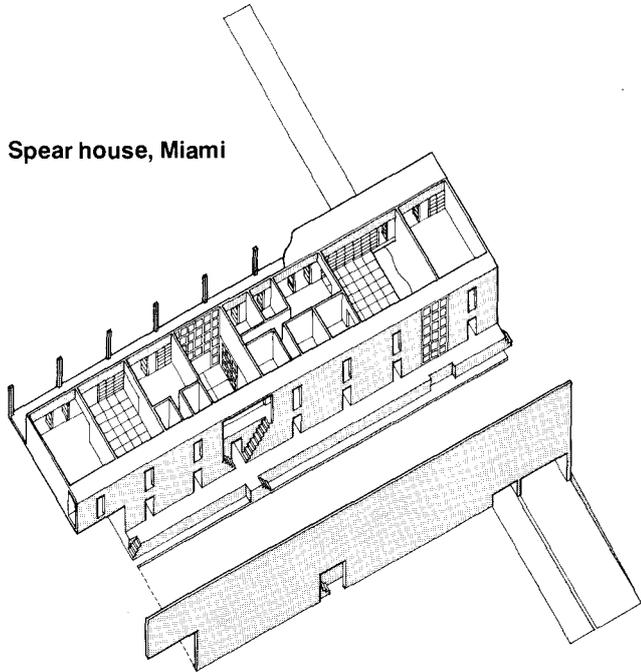
Spear house, Miami

Inside the house, main corridor (below) is a space 4½ ft wide, 18 ft high, and over 100 ft long: With operable windows and white walls, it serves to modulate natural light and ventilation; doors open to west onto pool deck (below right), from which elements of street front image are seen; fragment of wall plane supports nylon net canopy (retractable on sailboat hardware). Along opposite side of corridor are rooms of traditional spatial character, such as library (right). Bay front of house (top, opposite), in palest shade of exterior color, is large in scale and has complex arrangement of openings reflecting interior functions. (Some second-floor rooms project farther east than published plans indicate.) Bayfront balconies reiterate spatial module of main interior corridor.





Spear house, Miami



EXPLODED AXONOMETRIC OF EARLIER SCHEME



porch is, in fact, where one enters—not by going straight ahead, but by climbing the stairs to the left, plainly identified by their stepped parapet, to an entrance porch which indicates the domestic scale of spaces within. In words, this all sounds too contrived; on the site it seems almost effortless.

Though this house disturbs the neighbors (all the more so because the owners are long-time residents of the area), it is similar, in basic ways, to most of the surrounding houses, stucco-clad volumes that extend as close as the law allows to the boundaries of their expensive sites. Its symmetry comments on the plantation house pretensions of some—substituting a porthole for a pedimented doorway—while its fragmentation of planes comments on the laid-back asymmetry of others. A 1976 flood control law prevented this house from hugging the ground, as those around it do: the first occupied floor had to be 11 ft above grade. (The garage is tucked under one end.) Zoning limited total building height to 30 ft, but forward portions of the house were made lower out of deference to neighbors.

Earlier Koolhaas/Spear design

A previous scheme for the same clients and site, designed by Remment Koolhaas and Laurinda Spear, won a P/A Award (Jan. 1975, p. 46). That more ambitious design (top left) was praised by juror Peter Eisenman for being "a-stylistic" and "iconic"—also for thumbing its nose at its neighbors. "It's so much at the edge of absolute disaster," mused juror Eberhard Zeidler, "yet it has such fantastic poetry." That scheme was shelved, and when the clients later decided to build, they turned to Spear and Bernardo Fort-Brescia, two of the five young founders of the firm Architectonica (which has since won a P/A Award for the Babylon apartment building, Jan. 1978, p. 83).

Several elements of the previous scheme survive, with revisions. The layers of wall planes crossing the site, originally to be made of various materials—stone, louvered doors, glass block—were reduced to stuccoed walls, differentiated by color. The tall transverse corridor survives, now with stairs at both ends that emphasize its surrealistic proportions; the elimination of atriums and other alternate connections between rooms reinforced the connecting role of this corridor; the pool, which pierced dramatically through the earlier design, now runs parallel to the layers in a sheltered location that makes it more private and comfortable.

Modernism comes full circle

It is easy to see a formal kinship between this house and the current work of Italian Rationalists such as Rossi and Aymonino. There are the simple geometric shapes, with blank surfaces and punched openings; there is the insistence on wall-supported structure—with stub walls substituted where columns would logically occur; there is the marking of surfaces and openings with grids, even on the exterior ground plane, and the use of ageless iconic elements such as the canopy and the row of palms.

Although the architects are quite aware of parallels, Laurinda Spear reports that they never viewed the Rationalists as a source. Their conscious source is the vernacular of the Miami area—one of the few parts of the country with a vernacular based on Modernism. To some extent, this local style is a common-sense outcome of stuccoed concrete block construction; stylistically, however, it is part of a Mediterranean and Latin American popularized Modern of the 1930s that owed much to the first generation of Italian Rationalists.

The notable exception to this stylistic genealogy is the color treatment. The systematic gradation of color—used to code

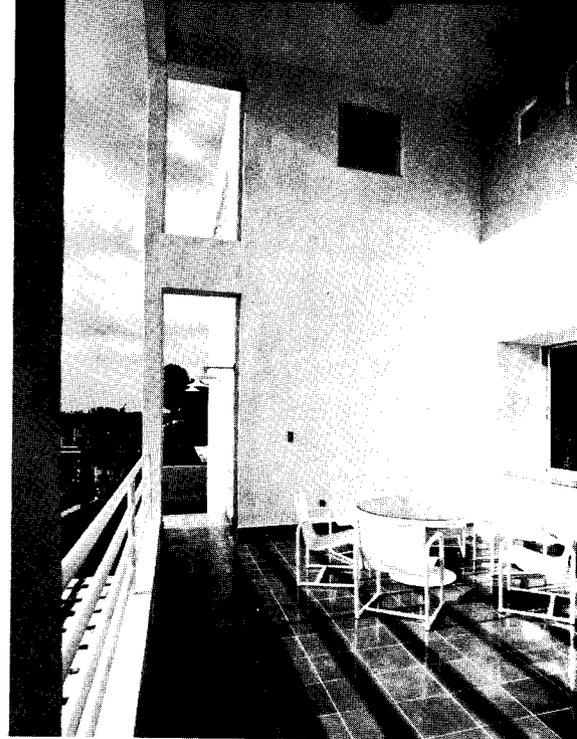
the planes as different materials did in the earlier design—is not a device found in Rationalist work. Conceptually, such a use of color undoubtedly derives from painting and graphics (Albers, Bayer, et al), but the range of colors used here also appeared earlier in La Muralla Roja by the Taller de Arquitectura in Barcelona (P/A, Sept. 1975, pp. 68–75). The Taller work also shows discontinuous planes, split along the stepped edges of stair parapets, the way the discontinuous front plane of this house is split. The strengths of the house, however, lie in its multivalent allusions: the stair parapet can also allude to a feature of Miami Moderne which—particularly juxtaposed with an elevated porch and cantilevered balcony—suggests more remote precedents in the local "Spanish Colonial."

The colors, too, can as well be related to Miami pinks and the deeper roses of the Caribbean islands: it could be argued, in fact, that these colors are more appropriate here—in this landscape and at this scale—than in towers on the rugged Spanish coast. The strong wall colors, it should be noted, are confined to the exterior. Interior walls are white neutral backgrounds throughout, sometimes acquiring a pinkish blush by reflection.

For all of its formal intentions, the house is remarkably livable. Family rooms are of traditional scale; thickened walls ("poché") such as the one along the east side of the main corridor, are used as convenient cabinets and pass-throughs. Sunlight, entering only from east and west, is well baffled and bounced. All openings have operable sash or doors, and ventilation through the narrow building is so effective that air conditioning is rarely used during Miami's notorious summers.

Complex as the house is formally, there is a certain restraint. The strongest colors appear on the broadest planes, not in the denser compositions of the interior or the bay front. Window and door trim, railings,

Two-story living room (opposite page) occupies place of "atrium" in earlier Koolhaas/Spear design (far left), now has qualities and social function of a Tudor style "hall." Family life goes on in modest-scaled rooms such as library (shown earlier) and dining room (right). Tall bayfront porch (far right) offers sunshine at breakfast, shade in the afternoon; on east façade (below right) its two-story opening is symmetrical counterpart to that of living room.



etc., are generally unobtrusive. Where allusion is introduced—in the front stair parapet or the door to the house, for instance—it is witty and not overly specific. The design is cerebral, but not too cerebral to be sensuously rich. The building is a provocative design statement, but a fully realized house as well.
[John Morris Dixon]

Data

Project: house for Dr. and Mrs. Harold C. Spear, Miami, Fl.

Architects: Arquitectonica, Miami, Fl; Bernardo Fort-Brescia and Laurinda Spear, project designers; Joseph Farcus, consulting architect. A previous design by Remment Koolhaas and Laurinda Spear for the same client and site won a P/A Award (Jan. 1975, p. 46).

Site: last two vacant lots in a suburban area of Miami, on Biscayne Bay, approx. 170 ft square; code set maximum building height at 30 ft, 1976 Federal Flood Criterion set first living level 11 ft above mean sea level.

Program: one-family house including four bedrooms, pool (for exercise swimming), terraces; 5400 sq ft total (terraces counted at ½) plus 1600-sq-ft garage and storage.

Structural system: reinforced concrete columns and beams on concrete pilings; concrete block walls.

Major materials: smooth stucco exterior walls, painted; painted plaster interior walls, cement ("Cuban") tile floors; off-the-shelf aluminum doors and projecting sash.

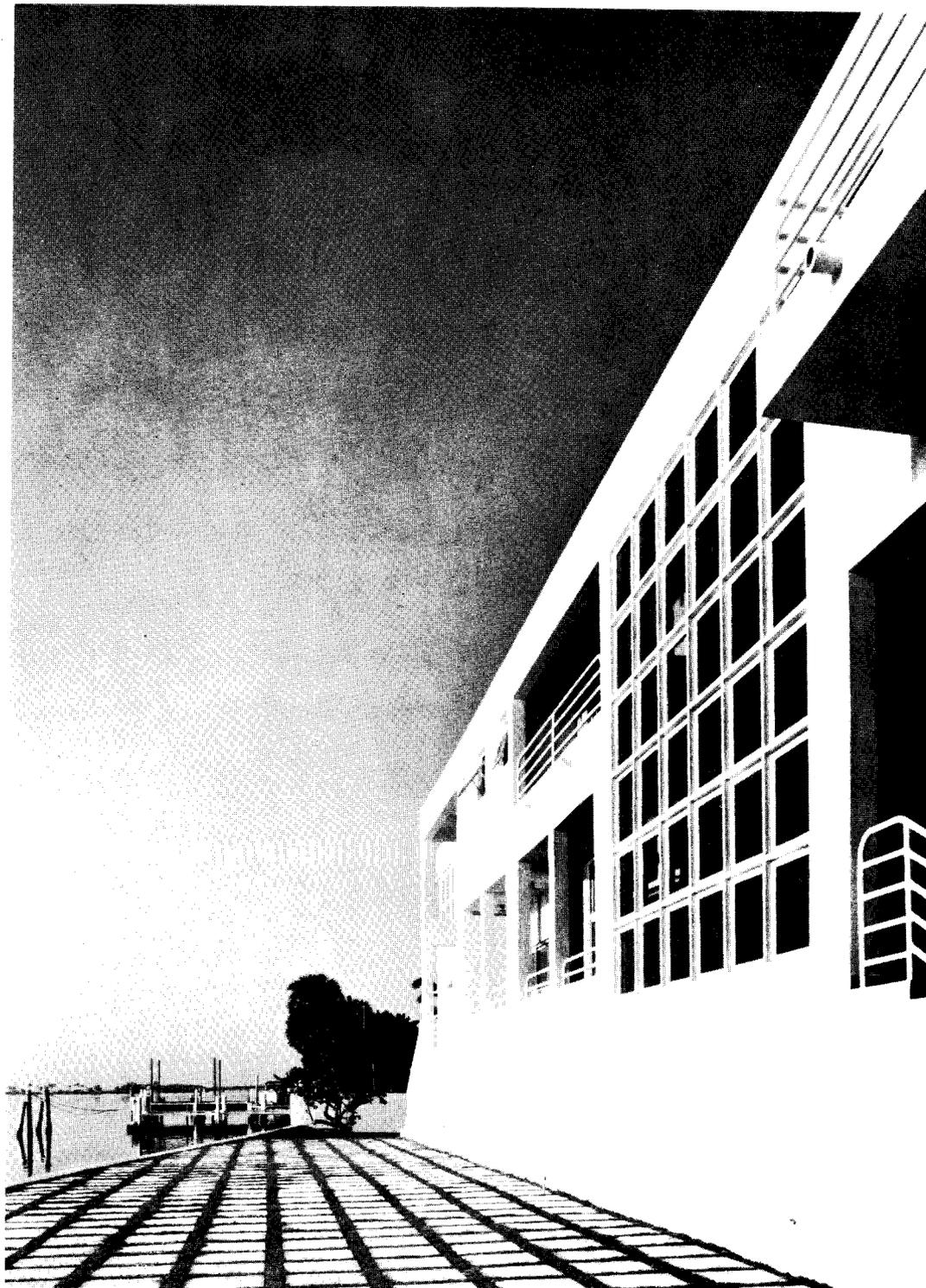
Mechanical system: water-to-air heat pump for heating and air conditioning.

Consultants: structural, Clemente DiFillippo; mechanical, Sasnett Associates; interiors, Suzanne Bowmall, with Fort-Brescia and Spear.

General contractor: B. Wayne Anderson Construction; landscape contractor, Bert Newcomb Landscape and Tree Service.

Costs: \$277,000 (actual, 1978) including site work interior finishes, fees; \$44.67 per sq ft (garage and storage calculated at ½).

Photography: Robert Lautman.



Little house off the prairie

Martin Filler

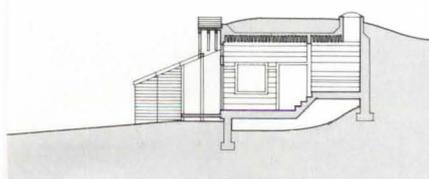
Mark Simon of Moore Grover Harper designs a small vacation house that recalls vernacular design traditions while considering energy efficiency, a combination of formal and practical concerns that is rare and encouraging.

Some students never outgrow their teachers. Rembrandt, for example, left a whole school of followers, most of whom continued to imitate their Master's style of the time at which they studied with him, painting "Rembrandts" of 1640, or 1645, or 1650 for the rest of their lives—while he, of course, continued to change and to grow. The same often happens in architecture, too. For the past two decades, first at Berkeley, then at Yale, and now at UCLA, Charles Moore has taught hundreds, if not thousands, of architecture students. Not surprisingly, many of them have gone on to turn out less-than-satisfactory pastiches of Moore's familiar design motifs; the supergraphics, saddlebags, and serial light bulbs still pour forth even though their great exponent has for the most part abandoned them.

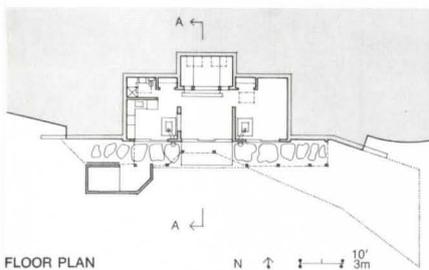
Breaking away

One former Moore student who has managed to come up with valid, successful departures from the Moore method—while clearly deriving from it—is Mark Simon, an associate in his old teacher's Connecticut firm, Moore Grover Harper. Since Moore's move to California in 1975, his East Coast office has developed a special interest in energy-efficient design and has probed a number of active and passive energy alternatives to a degree rarely seen in high-style architectural practices. Much too

Author: Martin Filler, a former associate editor of *P/A*, is now the associate editor of *House & Garden*.



SECTION A



FLOOR PLAN

infrequently are energy-conscious architects concerned with aesthetics, while those concerned primarily with architectural form are no more likely to consider the implications of energy efficiency. But we can have it both ways, as this effort clearly shows. Its integration of those concerns points encouragingly to further examples in the decade to come.

In loco parentis

The Crowell house was designed by Mark Simon for his mother and stepfather, and as such it is another installment in that time-honored tradition of young architects building for their close relatives. Frank Lloyd Wright's first commission was the Hillside Home School of 1887, which he designed for his maiden aunts. More recently, Charles Moore, Robert Venturi, Richard Meier, Charles Gwathmey, and many others have designed houses for their parents. "My mother is full of romantic notions," says Simon, "and at first she wanted a windmill." But the site for the house is particularly unsuited to that conceit. Atop a high hill that is a local attraction because of its spectacular views, the land affords a panorama of a 60-mile

stretch of the Green Mountains, from Killington to Mt. Mansfield.

Simon decided to make the house as recessive as possible, so as not to intrude upon what he feels is a public trust. He, like Wright, believes that a house should not be built on the crest of a hill, but rather should be nestled into its brow. Simon turned for inspiration to the sod houses of the American prairie during the 19th Century and came up with a solution that suited him well in terms of both image and function. The house at first appears to be much larger than the tiny thing it really is; nor are we much fooled by its knowingly homespun airs. It is more akin in spirit to Bob Dylan's romantic-nostalgic *John Wesley Harding* album than to the authentic voice of the old American West.

But it seems quite right, nonetheless, and its particular charm saves it from the nasty, bunkerlike appearance of so many other earth-berm houses. A simple little gable over the door—centered with an oval oculus copied from a local Victorian house—signifies shelter and welcome in a most human way. Entered through sliding glass doors beneath that playfully off-center pediment, the house inside is nothing more than a square central room, which leads off on one side to a kitchen, on another to a raised sitting-sleeping alcove, and to a separate bedroom on the third. It's all extremely simple, but without being shaggy. Shaker pegs are studded around the walls of the house for storage, typifying the basic, yet design-conscious feeling of the place that spares us the excesses of the woodbutcher's "art."

The weather outside is frightful

Questions of context aside, the decision to build a berm turned out to be a very intelligent one, for temperatures on the hillside can drop to 25 or 30 F below zero during the winter. The successful measure of the insulation of earth above and around



the house can be seen in the fact that, even without heat, the temperature inside the Crowell house has never dropped below 31 F above zero, an enviable "Delta T" (difference between indoor and outdoor temperatures) of some 50 to 60 degrees. Not that it was easy—or cheap.

The ground there in winter can carry two times its normal weight in melted snow, plus additional snow and ice on top of that, so an extraordinary amount of structural support—both steel and concrete—was needed. To prevent dampness, Simon specified sand barriers sealed with coal-tar pitch, resistant to the frost that can cut like a knife blade of crystals through conventional polyethylene membranes. All this added substantially to the house's cost, but the owners feel that it was worth it. Facing southwest, its two interior walls acting as heat sinks, the house has remarkable heat-retention properties and uses relatively little fuel: even by November, the only heat needed comes from oil lamps. Later, its two wood stoves suffice without difficulty.

Mark Simon speaks of his delight in living "at the edges of things;" his own house in Connecticut faces the water. He recalls waking up one morning in the Crowell house, the Green Mountains in the distance shrouded in fog, their peaks rising up out of a sea of clouds. That exalted view seemed even more so when he realized that it was being seen from a house underground—a paradox of almost Eastern simplicity. Designers who can take into account with equal interest and skill the dual imperatives of function and image are needed more than ever now. As always, they will be the ones living at—and pushing beyond—"the edges of things." □

House (top and right) is fronted by a narrow porch and Victorian-inspired gable, centered with an oval oculus.



Crowell house

Data

Project: Crowell house, Washington, Vt.

Architect: Mark Simon, AIA.

Site: 15.5 acres on hill in rural Vermont.

Program: small, energy-efficient vacation house.

Clients: Joan and David Crowell.

Structural system: steel-reinforced concrete foundation and walls, 2 x 4 stud wood frame.

Major materials: wood exterior and interior walls, floors, and ceilings, coal-tar pitch roof.

Mechanical system: wood stoves.

Consultants: Spiegel & Zamelnick, engineering.

General contractor: Carl Pepperman.

Costs: withheld at request of client.

Photography: Robert Perron.



Interiors (above and opposite) share open feeling and overlook the porch (below).





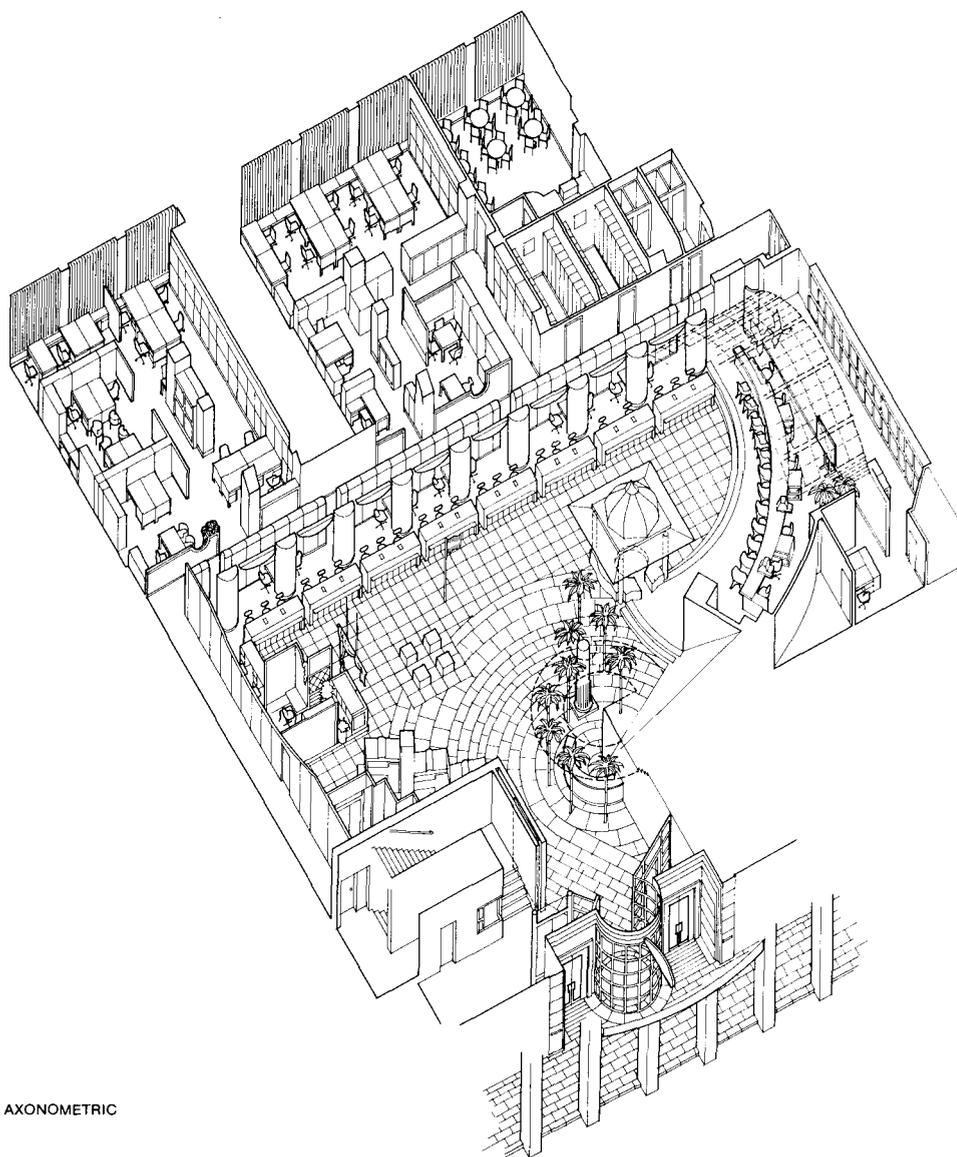
Extracting and recombining elements

Mark Mack

Austrian avant-gardist Hans Hollein's latest interiors employ lush, elegant materials in an ingenious exploration of the qualities of transformation.

"I don't spread the butter on the bread evenly," says Hans Hollein, not referring to Viennese culinary protocol, but to the underlying strategy and magic in his recent designs for the Austrian Travel Agency in Vienna and the Perchtoldsdorf Townhall on Vienna's outskirts. The path he has traveled to arrive at his present architecture has been a long one. During the 1960s, although his work fit snugly into the media-oriented, technological vision touted by Archigram and Superstudio, he extended the narrow confines of that concept. In his design for the Milan Triennale in 1968, Hollein provided a sequence of environments—snowstorm, isolation, crowdedness—for each viewer to experience. A similar attitude prevailed in his "Spray for Environmental Changes," also in 1968, and his concept of "Architecture as Pill," each one to simulate architectural sensations. Subsequently Hollein established a reputation as a designer of small-scaled, beautifully sculpted shops. The conceptual superiority and sophisticated workmanship of these designs have earned him international acclaim.

The shift from his technological and futuristic programs of the 1960s to the present can be traced to Hollein's design for the Austrian Pavilion at the Venice Biennale executed in 1972. The design elegantly epitomizes his belief that archi-

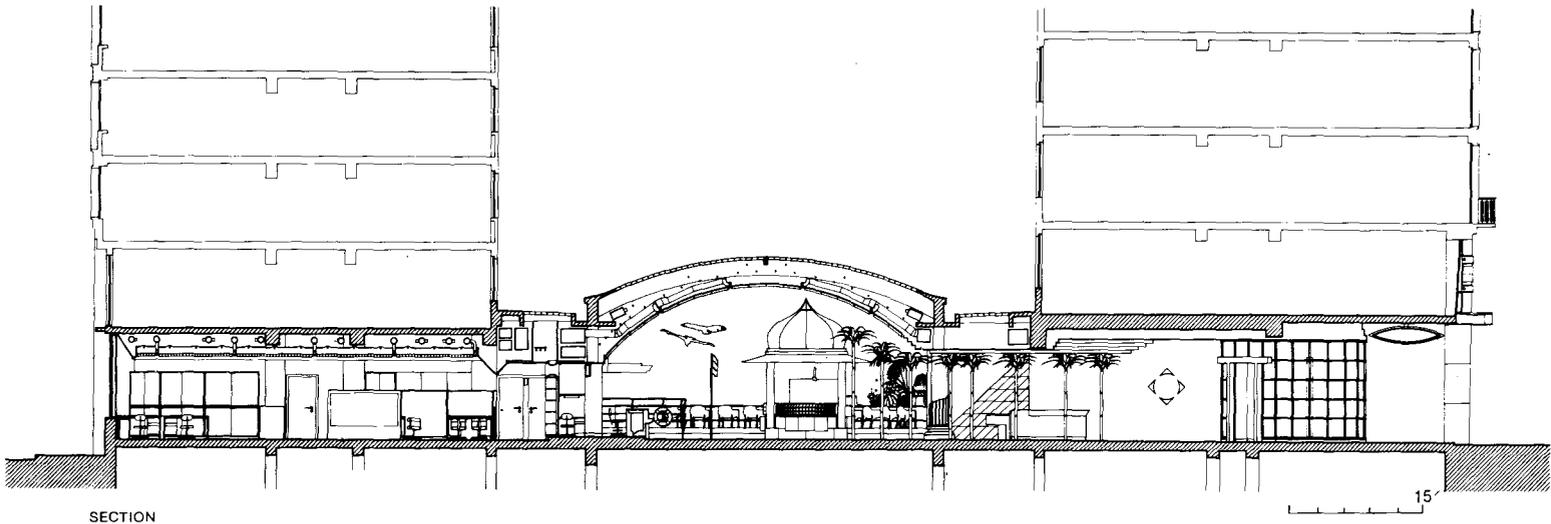


Images of faraway lands are evoked in Hollein's Austrian Travel Agency through metal palm trees, quoted from Nash's Brighton Pavilion, a Greek ruin, a pyramid, combined with symbols of transportation from cars, railroads, airplanes, and ocean liners.

Author: Austrian-born Mark Mack worked for Hollein from 1971–73. He now practices with Batey & Mack in Yountville, Ca, and is editor of *Archetype*, in which the full text of his recent interview with Hollein will appear in spring, 1980.



Interior design: Austrian Travel Agency



SECTION

texture is "ritual and the preservation of body temperature." With the gripping primitivism of archetypal objects—coffin, sanctuary, raft—Hollein intentionally seeks to penetrate architectural and cultural layers. The result is a multilayered object susceptible to individual cultural and intellectual capacities. It cannot find a comfortable niche either in "rational typologies" linked to the religious and cultural history of man or in Post-Modernist eclectic allusions. Hollein comments, "The pavilion, for instance, is a typological element which can be and has been used throughout history and throughout all cultures in a very specific way. It is completely unimportant if this is an Indian pavilion, a pavilion of a 19th-Century Viennese garden, or a folly in the form of a small Greek temple. The typology is very important; there are many possible uses. Of course there are conscious overlays of many different intentions, and this is what I have been working for: an architecture which has multilayered elements. Each viewer has a different educational background and different sensibilities; each discovers different things to enjoy in this architecture. On one level, it is very populist, but, on the other, there are many concealed aspects which one can penetrate at will."

Hollein offers a functional and metaphorical spatial organization with a semantic content, in direct contrast to the stage-set architecture of Charles Moore and Michael Graves and the austere minimalism of Aldo Rossi's built work.

Archetypal images

The Austrian Travel Agency in Vienna sits in a strategically significant site opposite the famed Opera House, one of the earliest and most important buildings on the great street of Imperial Austria, the Ringstrasse. With its nonbombastic historicism, the Opera is the perfect foil for Hollein's design for the semigovernmental agency

which owns and manages hotels and state gambling casinos. The agency occupies the ground floor, interior court, and adjacent areas of the Opernringhof building—a typical Viennese four- to six-story office complex with an open interior courtyard. To meet the agency's expanded program, the new design had to accommodate currency exchange, information center, and administrative offices, in addition to the normal travel agency operations.

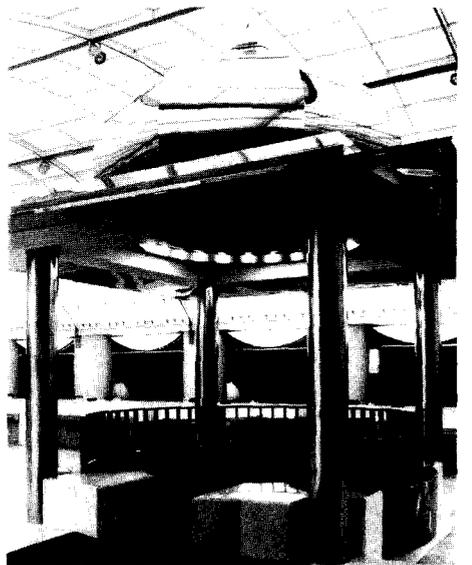
The architect's *scenario* of iconographic, metaphoric, and associative elements and primary types is developed within a neutral hall buttressed by exchangeable and repetitive elements, such as a vaulted skylight, a series of real and fake columns, and free-standing desk formations. The hall includes the former interior court and covers it with a twin-level glass roof reminiscent of Otto Wagner's *Postsparkasse*, also in Vienna. Hollein separates the structural system from the purely optical one in the two layers of glass, ingeniously fitting air-conditioning outlets and lighting tracks into the thin joints of the interior soffit.

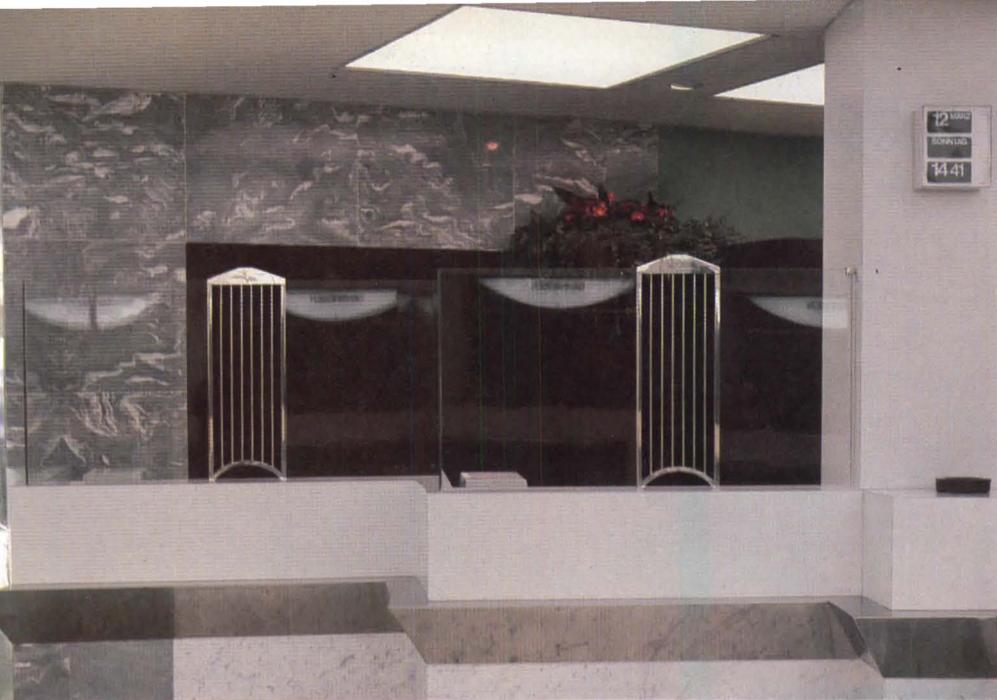
Palm trees, symbolizing paradise, vacation, and sun to winter-stricken Austrians, are transformed into sleek, shiny objects. A similar concept underlay Hollein's exhibition designs for the Triennale, the Paper exhibition, and his recent show at the Cooper-Hewitt, "Man Transforms." The transformation of objects by altering their material properties results in exploratory modes of association and avoids degeneration into decoration or theatrical backdrop. Plaques with literary quotations, such as John Nash's comment on the palms at the Royal Pavilion in Brighton, provide another level of experience.

The marble floor of the spacious hall displays inversions of archetypal elements, especially images associated with travel. A broken Greek column gives way to a shiny steel tube, which in turn sup-

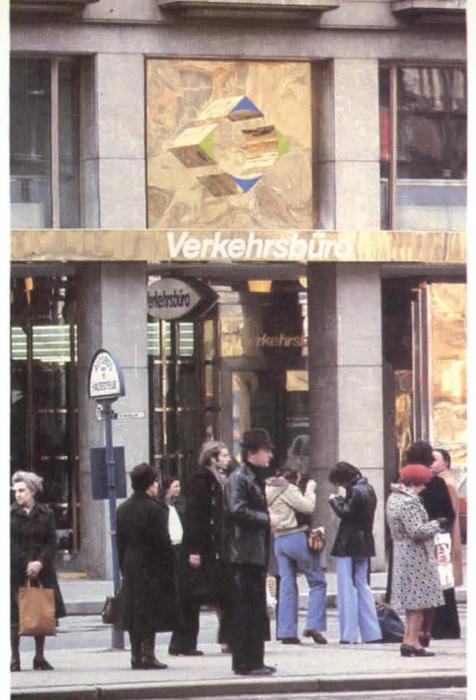


Hanging curtain and stage set mark the theater ticket desk (top). Metal palm trees line the information booth (above). Lounge seating is provided under an Indian pavilion (below).





Rolls-Royce grilles (above); exotic images (below).



Façade.

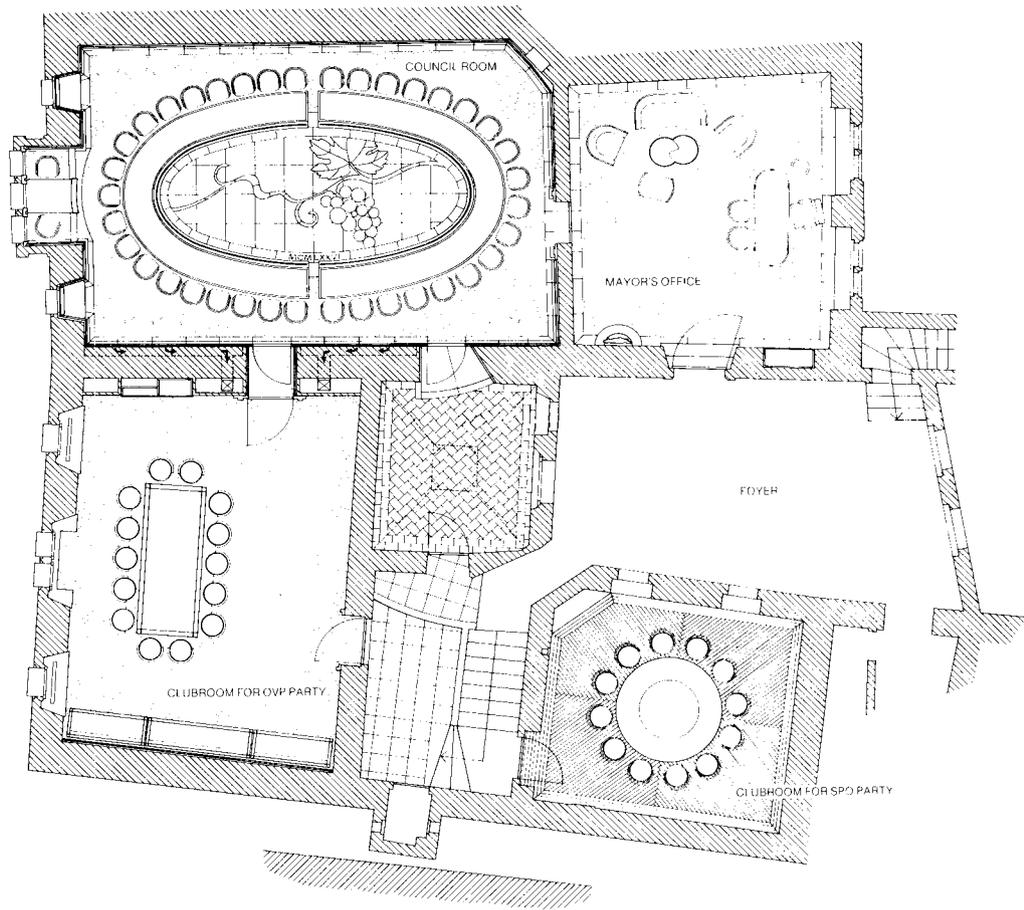


Interior design: Austrian Travel Agency

ports the ceiling under which a pyramid disappears into the wall. An Indian pavilion rests on a solid marble base; eagles soar against a painted sky; airplane wings and ocean liner railings signal the various booking desks. The Austrian flag, frozen in acrylic, and the Rolls-Royce grilles on the cashier counter are objects consciously arranged so as to disrupt potentially neutral and homogeneous space.

Both utilitarian desks and loaded and layered objects can accommodate future changes in the client's program without sacrificing the concept of the whole. While Hollein deliberately uses expensive and noble materials in dominant places, the majority of furnishings and built-ins are rather standard and only moderately expensive. Imperial Vienna had a similarly hierarchical attitude towards design.

The design technique and philosophy found in this project are maintained in the smaller branch offices around Vienna. The architect provided a 300-page manual of visual imagery to guide the planning and design of future branch offices. This method, relying on repeated associative and archetypal images, is intended to reduce planning time and achieve continuity without monotony.



PLAN

10





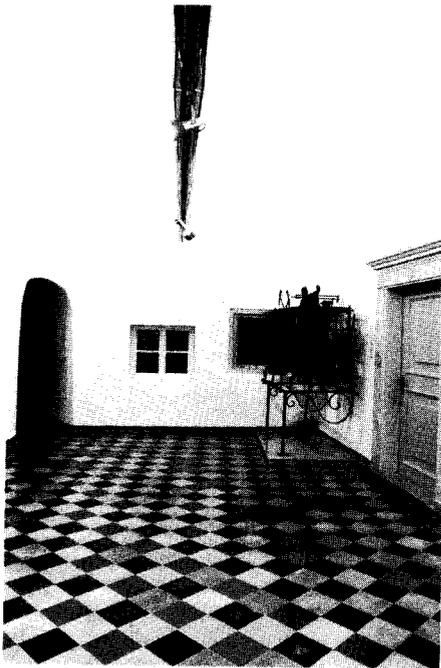
While Hollein's Retti shop (1965) gracefully ages as a monument to the sculptural era of architecture, we find the new design reflecting a conscious rejection of an architecture of mindless cubic feet. It is not an indulgent rediscovery of the past but an offering of a path out of the jungle of homogenized and international repetitiousness. He penetrates the all-encompassing definitions of Post-Modernism to follow his own path, a path lined with glistening monuments in the grayness of Vienna's urban fabric.

Sophisticated intervention

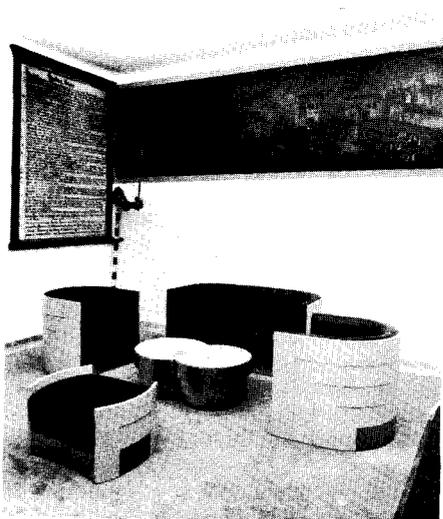
The design for the Townhall in Perchtoldsdorf, a small wine-cultivating town on the outskirts of Vienna, carries forward similar concepts. Hollein draws upon his

experience with interiors for Siemens in Munich (1969-72), where he worked with a mixture of remodeling and new construction within a fixed perimeter. At Perchtoldsdorf, a new city ordinance required a meeting place for an enlarged council with access for press and public. The decision to adapt the medieval hall rather than to build new led to an ingenious and sensitive achievement in historic preservation.

Within the meeting room the changes could be made only in the floor and the lower portions of the walls, since the upper wall portions and ceiling bear frescoes from the 17th Century. The solution is an elegant, tactile, and sophisticated interplay between old and new. The additions display great technical competence and originality. In the council room, the mem-



Hollein adapted the council room (right) of Perchtoldsdorf's medieval townhall from 12 to 37 seats, introduced new furniture and lighting in the mayor's office (top and below), foyer (above), and party clubrooms (left). Hollein designed tube chair for the project.



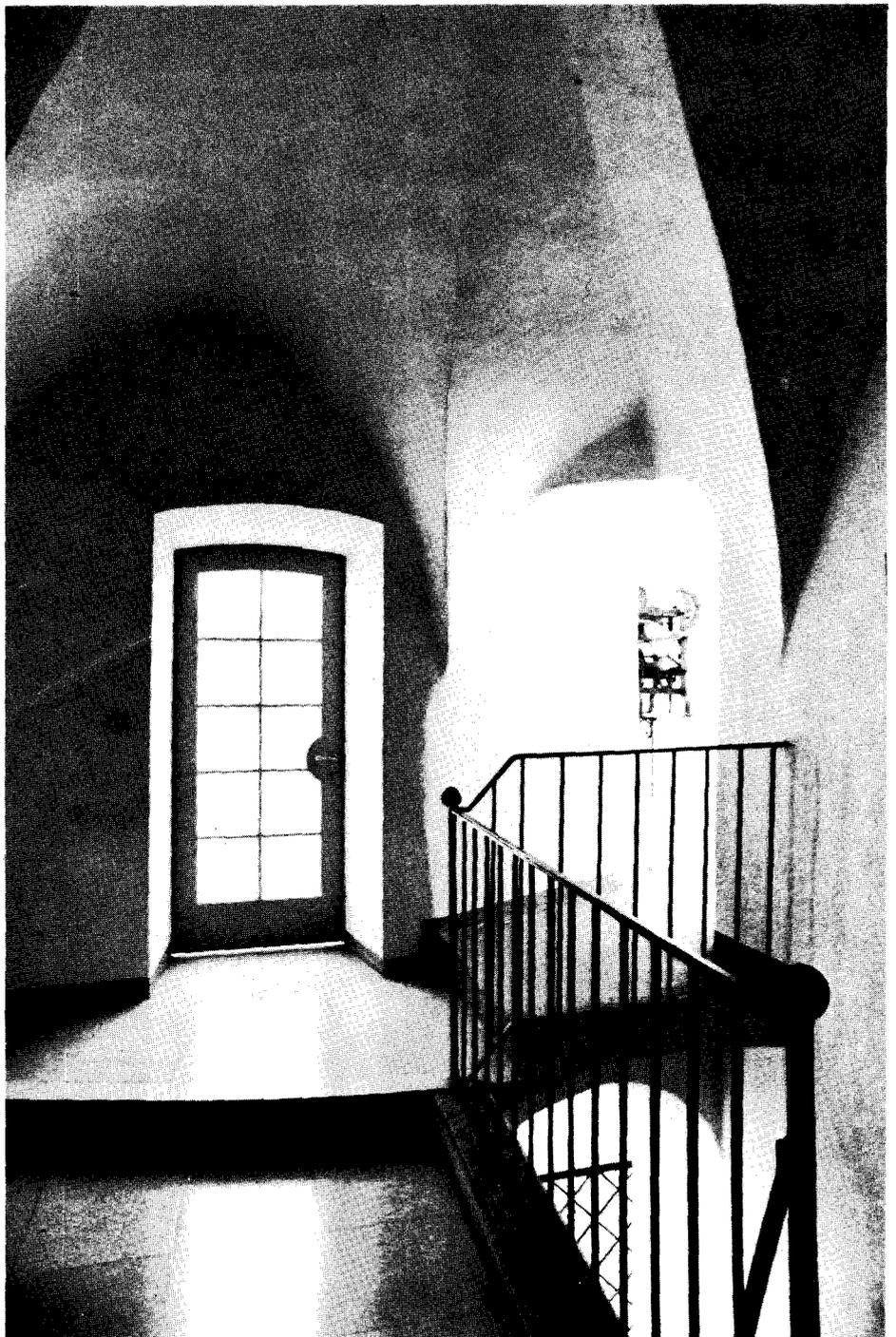
Interior design: Perchtoldsdorf Townhall

bers' chairs, specially designed for this room, are equally distributed around an oval ring table which contains an intarsia. The air-conditioning system is worked into the table and into the new wall portion. This lacquered wooden wainscoting wraps the narrow room with care and provides a scalloped border for the fresco portraits. A metal molding, allowing plans and other display material to be hung magnetically, finishes the new section with Baroque playfulness. Access for the public and the press is through invisible, flush-set doors. Their presence is betrayed only by the reverse curve in the metal crescents along the wall. The symbolically significant entrance to the mayor's office directly opposite his chair is left alone. The former "Rauchkuche" (smokehouse) serves as foyer and cloakroom. Also renovated were an office for the mayor and clubrooms for the two major political parties. In these rooms, a balance of custom and standard furnishings and existing elements, such as window seats, creates a sense of comfortable control. Hollein's strategy of spreading the butter unevenly in connection with the successful merging of old and new accounts for this convincing design. The client should also be credited, for he did not shy away from the complications and cost of inserting new requirements into a historic envelope.

The rapid turnover of business in America promotes rapidly built spaces and material hollowness, whether rented or owned. By contrast, Hollein's early shops, as well as the travel agencies, are built to last, with expensive and durable materials and a tactile tension possible only in a city where businesses last.

While planned and unplanned obsolescence manipulates clients in America, Hollein also works within cultural constraints. His work is thereby involuted, still finding its references within the limited offerings of Viennese sensibilities. For obscure reasons, Hollein has difficulty obtaining large commissions in his homeland. He views himself as an international architect, and indeed he had to go abroad for his largest project to date, a museum for Moenchengladbach in Germany.

Although he still exerts masterful control over his own work, both cheap and expensive imitations are sprouting up elsewhere, diluting his formula and introducing a mechanism of its destruction. Nonetheless, Hollein's ritualized architecture offers metaphors that are complex rather than blatant, aiming at a symbiosis of art and architecture. To the extent that he is successful in this endeavor, his is not drawn architecture but architecture that is built into space. □



Data

Project: Austrian Travel Agency, Vienna.

Architect: Hans Hollein; Gert Michael Mayr-Keber, Franz Schonhaler, Wolfgang Schofl, Jerzy Surwillo, collaborators.

Program: customer service and administrative offices for semigovernmental agency.

Client: Austrian Travel Agency.

Major materials: marble, bronze, aluminum, Formica, acrylic, frosted glass, mahogany, fir.

Photography: Franz Hubmann, Jerzy Surwillo.

Data

Project: Townhall, Perchtoldsdorf, Austria.

Architect: Hans Hollein; Franz Madl, collaborator.

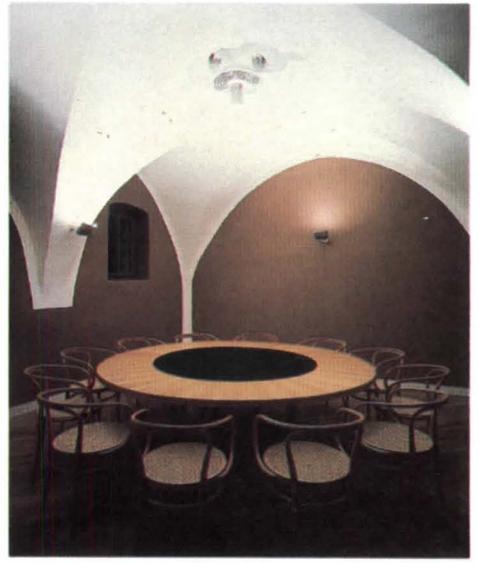
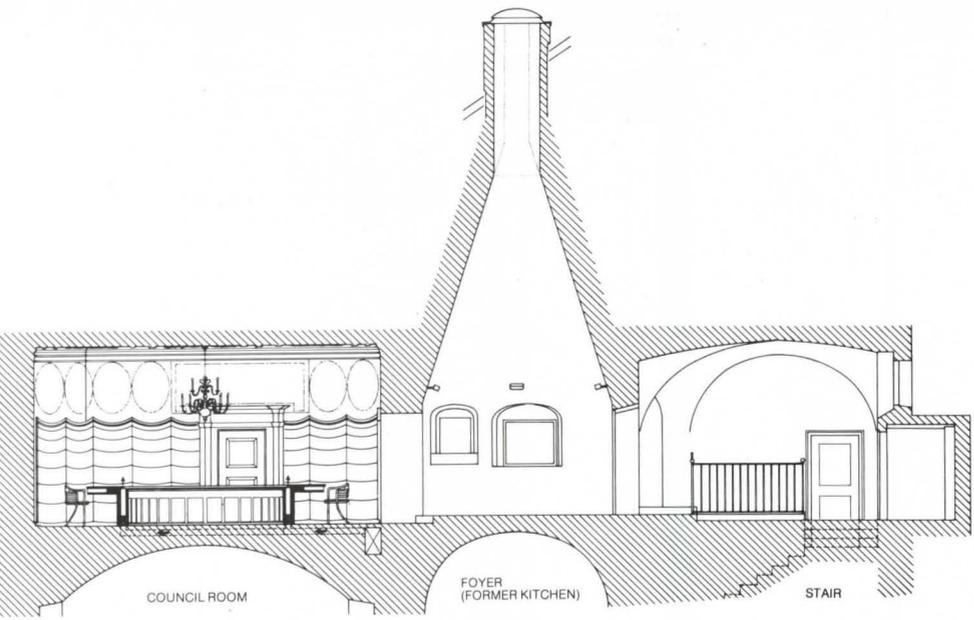
Program: remodeling of medieval town hall for

larger council meetings and updated mechanical systems.

Major materials: painted wood walls trimmed with metal, topped with stucco; wall-to-wall carpet except for marble space within council room table.

Photographs: Jerzy Surwillo.

Light is worked into the new wainscoting and air conditioning into the oval table of the remodeled council room while many of the 17th-Century details are restored (right). The door to the mayor's office is accommodated through a simple reverse curve (left side of picture). Party clubroom for the Socialist Party with new furniture (above right). Former smokehouse becomes the foyer (above).



SECTION



Does Post-Modernism communicate?

Linda Groat and David Canter

In a research study, 20 architects and 20 accountants of similar backgrounds were tested on what the images of Modern and "Post-Modern" architecture meant to them—with intriguing results.

Times of radical change tend to be promising and invigorating—but also treacherous. So it is, too, with architecture at the threshold of the 1980s. Some of the most promising work in design—and the riskiest—is being done by those architects who are making a conscious attempt to manipulate not only form but also the meanings evoked by that form. Any number of architects and critics have already put forward numerous arguments for considering the role of meaning in architecture. And although the key words in their arguments—semiotics, the language of architecture, architectural or visual meaning—may vary, the general principle is the same: an essential aspect of people's interaction with buildings is the meanings they associate with those buildings; therefore, good design should encompass a conscious manipulation of intended meanings.

This is a necessary and significant contribution to the theory of architecture, but it is not an easy one to put into practice. Do we really know, for instance, that combined references to Palladio and Art Deco will not be perceived as a confusing, jum-

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bled eyesore? The assumption that historical allusions will be understood and appreciated may be little different from the Modernist faith that purity of form would be appreciated as such. Serious mistakes are inevitable if the assumptions made about meanings conveyed by particular formal elements are wrong. We could end up in 10 or 20 years with a lot of white elephants, in much the same way that we have now inherited some much-disparaged relics of the Modern Movement.

This set of concerns led us to undertake in 1978 an empirical study of the meanings perceived in Modern and Post-Modern buildings. The specific intent of our study was to test two salient points of the Post-Modernist argument: 1, that architects and laypeople have different sensibilities toward architecture, and 2, that Post-Modern buildings, having been designed to appeal to these two sensibilities, do in fact manipulate meanings successfully. These two issues, which ultimately set the structure of our research procedures, were identified through a careful review of the relevant literature, particularly the work of Charles Jencks, who has written the most extensively on the subject.

To put this research study into proper perspective, we should mention that it is the first reported study to investigate assumptions of perceived meanings in specific architecturally "significant" buildings. It is also the first architectural research to test the responses of practicing professionals—in this case, a group of 20 architects and a group of 20 accountants—rather than students.

Sorting for meaning

Since we wanted to test the Post-Modernist argument that different meanings might be important to different groups of people, we tried to find a way to discover which concepts or ideas were important to each participant. Rather than

develop a questionnaire or checklist based on concepts of importance to us, we devised what we call a multiple sorting task, which allowed each respondent to sort a set of building photos into groups according to any criterion. There was no restriction as to the number of groups formed, the number of buildings in a group, or how many times the set of photos could be sorted. After each sort, the participant was asked to label both the criterion by which the buildings had been sorted and the categories that had been formed. Thus the criterion given was taken to be a concept of importance for that individual; and the category labels were taken to be the meanings associated with all the buildings in that group.

One advantage of the sorting technique is that the resulting data can be analyzed at various levels of sophistication. On a very basic level, the task provides an effective way of structuring participant interviews. People who normally find it difficult to articulate their ideas on architecture often find it helpful, even revealing, to be asked to categorize buildings. Usually even their casual comments provide insights of great potential value to the architect. And, in addition, more sophisticated statistical analyses can help to reveal less obvious, but equally significant issues of relevance to design.

Our results, as it turns out, provide a potentially stimulating challenge for the practice of a truly non-Modern architecture. The major findings can be summarized as follows: The argument for designing buildings to appeal to different architectural sensibilities is a valid one, but only a small proportion of Post-Modern buildings manage to do that successfully. Both aspects of these results—the existence of both professional and popular codes and the failure of certain Post-Modern buildings to manipulate them well—have significant ramifications for architectural practice and

Reactions to Post-Modern buildings

In the authors' investigations, 24 modern buildings were selected to be analyzed through photographs by accountant and architect subject groups. Buildings were selected to fit three categories: Modern, Transitional, and Post-Modern. While reactions to those of each category were sought, the investigators were particularly interested in determining whether or not the subjects viewed Post-Modern buildings as fulfilling their intentions of being multivalent, accessible, and enjoyable to a wide range of tastes. They also wanted to know which works were good models of Post-Modern buildings. A listing of the Modern and Traditional buildings follows this summary of reactions to the Post-Modern buildings.

Lang House. This private residence was the least successful as a Post-Modern building. Its historical references were not perceived by the accountants, most of whom seemed to dislike it actively, and who as a group ranked it last (24th). The architects were more charitable; although they did not seem to find the house multivalent, in the end they ranked it 15th.

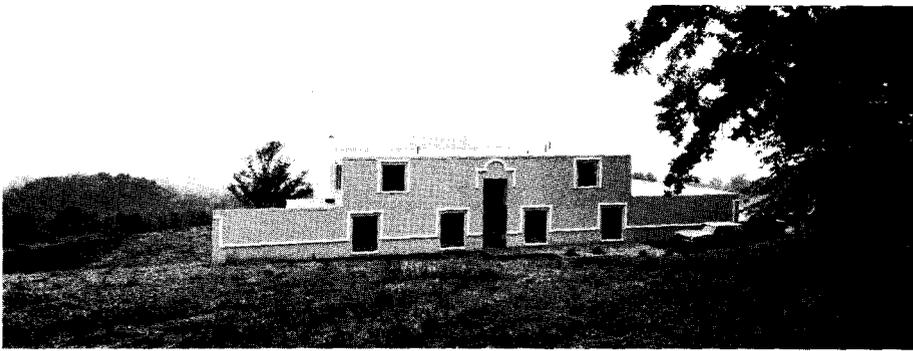
Guild House. This housing for the elderly achieved some success in that its conventional style was appreciated by the lay group, and it was appreciated by both groups as being relatively unique. Its function was consistently misread by the accountants and sometimes even by the architects. In the end, however, the accountants ranked it in 22nd place and the architects in 19th.

Brant House. This private residence was not well understood by the nonprofessionals nor was it appreciated by the professionals. Its historical allusions were not perceived, and its

function as a residence was infrequently understood. Neither group found in it a unique or complex set of meanings. It was ranked 19th by the accountants and 23rd by the architects.

Byker Wall. This government housing scheme in England achieved only limited success. Although its function was generally understood, and it seemed successfully multivalent with both groups, in the end it was ranked 23rd by the accountants and 14th by the architects.

La Muralla Roja. This apartment complex in Spain assumed a rather ambiguous relationship to the requirements of Post-Modernism. While the accountants understood its function, they neither seemed to find any particular value in it nor did they completely reject it by ranking it in 14th place. The architects found it more successful as a Post-Modern building and ranked it 6th, but this in itself would still not make the complex a particularly successful model of Post-Modernism.



Lang House



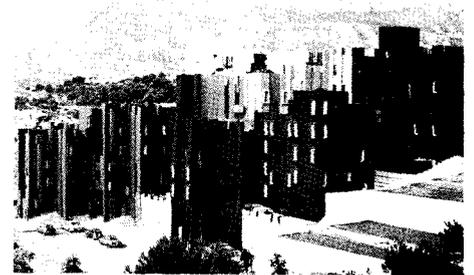
Guild House



Brant House



Byker Wall



La Muralla Roja

Credits: Lang House, Washington, Ct, 1975, Robert A.M. Stern and John S. Hagmann, architects. Photo: Ed Stoecklein. Guild House, Philadelphia, Pa, 1960-63, Venturi & Rauch, architects. Photo: courtesy Venturi & Rauch. Brant House, Greenwich, Ct, 1976, Venturi & Rauch, architects. Photo: courtesy Venturi & Rauch. Byker Wall, Newcastle-upon-Tyne, England, 1974-78, Raiph Erskines Arkitektkontor. Photo: Roger Trancik. La Muralla Roja, Sitges, Spain, 1975, Taller de Arquitectura. Photo: Geoffrey Broadbent.

A study of meaning

are therefore important to consider in some detail.

Architects and nonarchitects

The most obvious point to make about the differences between architects and nonarchitects in their interpretations of the built environment is simply that the differences are so consistently evident. The many and complex ways in which the architects' conceptions differed from those of the accountants practically oozed out of our research results in all directions. For example, architects and accountants frequently tend to use different criteria in evaluating buildings and often hold very different opinions of the same building; also, architects seem to employ a greater range of evaluative criteria and a more complex set of specific judgments. Most likely, as the results of previous research suggest, these differences are due primarily to the architects' specialized training and professional experience. But the impact of these different sensibilities is the same no matter what the source; architects are not likely to design effectively if they rely only on their own experience of environments as a model.

Given the number of significant differences between architects and nonarchitects, it should not be surprising that some notable Post-Modern buildings do not actually seem to operate on both the professional and the popular levels. This conclusion is derived from comprehensive analyses of the 40 participants' responses to single color photos of 24 buildings ranging from Modern to Post-Modern—as labeled by recognized architectural critics. Previous studies have already established the validity of simulating environments in this way, so there is every reason to believe that these responses to representative photos can be taken as approximating the responses to the real thing. We therefore feel confident in suggesting that there seem to be some common patterns in the way that the eight Post-Modern buildings in our study have been interpreted by the nonarchitects.

Nonarchitects and Post-Modernism

The first point—and this is the good news for Post-Modernists—is that these buildings do seem to be more successful than Modern buildings in evoking unique sets of associations. But the bad news is that these associations are not necessarily the ones intended by the architects. In some instances, the perceived meanings are contradictory to the original intent, just as critics have claimed is the case for Modern buildings. A specific example of this tendency is represented by Venturi & Rauch's

Guild House. This building stood out from the others on the basis of meanings attributed to it. Yet one of the more typical comments about it was "It must be transient housing or a motel with a sign like that." References to brick row houses or any other intended allusions were never considered by the nonarchitects. It is probably fair to say that for some of the participants this building was interpreted as "ugly and ordinary" (as Venturi intended), but without any redeeming complex or contradictory meanings.

Second, we also found that Post-Modern buildings are not necessarily preferred over Modern buildings. In fact, the set of Post-Modern buildings in our study tended to be categorized toward the extremes, being either the most-liked or, more often, the least-liked buildings. Another related pattern, of even more significance for the practitioner, was the tendency for the participants to disagree strongly in their preferences for and/or dislike of certain Post-Modern buildings; there was considerable disagreement among individual accountants as well as between the accountant group and the architect group.

The potential of Post-Modern buildings to engender controversy and extremes of judgment suggests that designing with an intent to manipulate meaning can be risky business. To be sure, there are outstanding successes: Hillingdon Civic Centre and the Butterworth house were revealed by our research as such. But there is as well considerable likelihood for failure, and, unfortunately, those who are most likely to suffer from that are not the architects. Several buildings, including Guild House, Byker Wall, the Lang house, and the Brant house, seemed to be considered unsuccessful in some respects.

One way of at least minimizing failure in future attempts to design meaning into buildings is to generate, and subsequently design in accordance with, some basic principles regarding the perception of meaning in architecture. The three principles described below are offered only as a starting point. However, even with future additions and revisions, they must remain general rather than specific; for the goal is not to develop prescriptive rules for form, but to provide aids to the design process.

Three design principles

A major concern of nonarchitects is that a building design seem appropriate to the building type and use.

Among nonarchitects, the most common and immediate response to a building seems to be: what is it? This prevalent concern for identifying building type was not shared by the architects, however, and is therefore one of the most significant differences between the two groups. At face value, this suggests that it would be pref-

erable to design buildings to ensure that the type is easily identifiable; but in reality the appropriateness of a building form to its actual use seems to be more important. For example, one accountant, who remarked "How sad, what an uninviting city hall," identified Boston City Hall as a civic building, but nevertheless obviously considered it a failure. In this case, in order to be considered appropriate as a city hall, the building needed to be seen as inviting.

Interestingly, a particular form may be viewed either favorably or unfavorably depending on the appropriateness of its function. A number of accountants reacted positively to the Johnson Glass House while assuming it was a park pavilion or an information booth. One who inquired about its use, however, responded, "Who'd want to live in a glass house?" Another telling example is the response to Hillingdon. Many accountants responded positively to it without knowing whether it was a college building, shops, or housing. Still, the building appeared to them to be so eminently appropriate for any of these purposes that it seemed hardly to matter whether they could identify the precise use.

The point of these three examples is simply that if a building is interpreted as being appropriate to its purpose, then it has a good chance of being considered successful.

A building in the historicist mode is more likely to be appreciated and understood by nonarchitects if it can be interpreted as relating to a single stylistic tradition.

The only buildings which attained almost unanimous appreciation, even fascination, among the nonarchitects were Hillingdon and Butterworth. And this was not due to the mistaken belief that they were genuinely old buildings. Rather, they seemed to be appreciated for relating to a specific stylistic tradition that could be understood, if not labeled.

A contrasting example is that of the Lang house, which was almost unanimously rejected by the nonarchitects. Although the reasons for this antipathy are not entirely clear, it was evident that the combination of the moldings, proportions, color, and general appearance did not evoke any pleasing associations relating to any particular architectural style. It would seem, then, that subtlety of eclecticism may be missed by, and frequently alienating to, the general public.

The buildings nonarchitects find most appealing may be those that many architects consider the least serious architecture. Hillingdon and Butterworth convey intended meanings and a richness of associations to the nonarchitect group; however, those architects who isolated the two as being significantly similar in some respect described them in the following terms: perverse, purposefully irrational,

Butterworth House. This was an extremely successful house in the eyes of the accountants, who generally liked its traditional style, understood its function, found a unique pattern of meaning in it, and thus ranked it in 2nd place. In ranking the house 9th, the architects liked it only moderately and were less inclined to see complex meanings in it. However, if they would be more willing to emphasize the lay code in their approach to design, this house would be a very successful model for Post-Modernism.

Hillingdon Civic Centre. This borough hall outside London was the only building in the Post-Modern group to be well-liked and appreciated by both subject groups. It was ranked 1st by the accountants and 4th by the architects. The building's references to traditional styles seemed to work so well that even a few architects thought it was an older building. It also seemed to evoke a relatively unique pattern of meanings, although its correct function was not always perceived. (It is believed that this is due more to the photograph used, which does not show the building's most "telling" signs of

function, than to anything in the building itself.) In view of its high ranking by both groups, it would seem to be the most successful model for a Post-Modern building.

Notre Dame du Haut. This classic by Le Corbusier was the architects' unanimous favorite, but its position with the accountants was more ambiguous. Its function was frequently misunderstood, and its meaning was not considered particularly unique, which finally put it in 9th place. Nevertheless, some of the accountants truly loved it, while others were troubled by it. This suggests that if the context of the building were understood, it might be considered more favorably, and that it might provide a potential model for Post-Modernism, but perhaps only in special circumstances.

The Modern buildings surveyed

Chapel, Illinois Institute of Technology, Chicago, Il, 1952, Mies van der Rohe, architect. Kneses Tifereth Israel Synagogue, Port Chester, NY, 1956, Philip Johnson, architect. Lake Shore Apartments, Chicago, Il, 1949-51, Mies van der

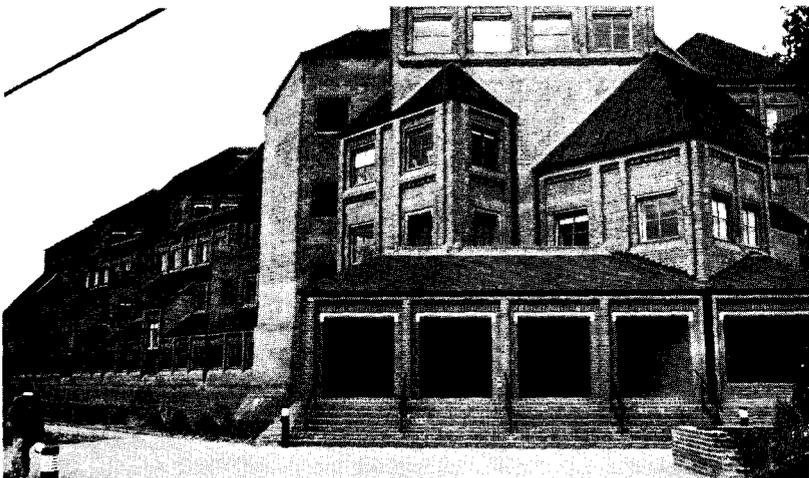
Rohe, architect. Unité d'Habitation, Marseilles, France, 1946-52, Le Corbusier, architect. City Hall, Tokyo, Japan, 1952-57, Kenzo Tange, architect. Civic Center, Chicago, Il, 1964, C.F. Murphy, architects. Glass House, New Canaan, Ct, 1947-49, Philip Johnson, architect. Breuer House, New Canaan, Ct, 1947, Marcel Breuer, architect.

The Transitional buildings surveyed

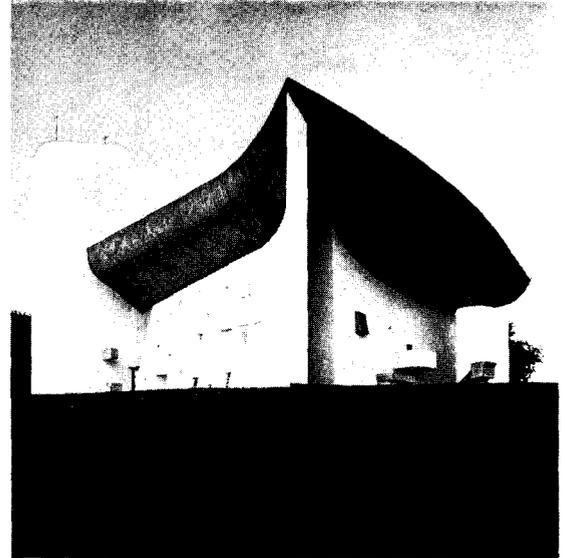
City Hall, Boston, Ma, 1964-69, Kallman McKinnell Knowles, architects. Senate, Secretariat, and Assembly Building, Brasilia, Brazil, 1958-60, Oscar Niemeyer, architect. Crawford Manor, New Haven, Ct, 1962-66, Paul Rudolph, architect. House VI, Cornwall, Ct, 1977, Peter Eisenman, architect. Unitarian Church, Rochester, NY, 1959-62, Louis Kahn, architect. Marin County Civic Center, San Raphael, Ca, 1959-64, Frank Lloyd Wright, architect. Air Force Academy Chapel, Colorado Springs, Co, 1959, Skidmore Owings & Merrill, architects. Church of Vuoksenniska, Imatra, Finland, 1957-59, Alvar Aalto, architect.



Butterworth House



Hillingdon Civic Centre



Notre Dame du Haut

Credits: Butterworth House, Starksboro, Vt, 1973, Turner Brooks, architect. Photo: courtesy Turner Brooks. Hillingdon Civic Centre, London Borough of Hillingdon, England, 1974-77, Robert Matthew, Johnson-Marshall & Partners, architects. Photo: Linda Groat. Notre Dame du Haut, Ronchamp, France, 1950-54, Le Corbusier, architect.

contextual, and whimsical. Two other buildings frequently rated highly by the accountants—Frank Lloyd Wright's Marin County Civic Center and Alvar Aalto's church at Vuoksenniska—were described in combination with the first two by another architect as being "an emotional response to architecture."

These three principles, it seems, offer the practitioner some insight into the layperson's interpretation of contemporary architecture, yet their potential as effective design guidelines is evidently very limited. Scores of issues—from the relation of inte-

rior to exterior, interior spatial arrangements, color, materials, and so on—remain beyond the scope of these few points. And, as stated earlier, to develop rules of form would be not only impossible, but completely undesirable. Ideally, then, how can the sensitive practitioner act to moderate the tension between the architect's desire for poetic license and the need for consistency in architectural language? We are suggesting an interactive process, such as the sorting task, whereby the discourse between people (architects and nonarchitects) ultimately modifies the con-

ceptions originally held by the individuals concerned.

In summary, we would argue that the chief value of the Post-Modernist position lies in its exploration of the meanings and associations inherent in architecture. But continued experimentation with formal vocabularies, though important, is not enough. What is necessary, as well, is a realization of the conceptual contribution that clients, users, and the public—as well as architects—can make in the process of giving buildings (or all places for that matter) meaning. □

Beyond fragments

"I loved the reductionism of your smile and the somnambulism of your endless pronouncements . . . I can only say I'm sorry, Modernismo, even though this is good-bye and your reductionism is not what invigorates me now."

"Arrivederci, Modernismo," Carter Ratcliff, 1974 (from *Face of the Poet*, exhibit catalog of Alex Katz)

"What I had not realized before, what had escaped my notice these many years, that not only is less more, but that more is more too. I swooned, under the impact of the ethical corollary."

"Grandmother's House" short story by Donald Barthelme

The touristic metaphor introduced at the beginning of the issue is apt for describing the decade. Sightseers all, we tour the shards and overturned stones of architecture sifted and uncovered during the 1970s, looking for meaning, the text that will tell us what sort of architecture or architectural truth can emerge. In the same vein, this issue of *P/A* becomes a touristic enterprise, searching, sifting, trying to describe an archeology of the recent past.

Architecture is the physical representation of society and social relationships. In *The Tourist*, Dean MacCannell argues that *differentiation* pervades society and social relationships as part of the modern condition. For his part, architect Robert A.M. Stern also maintains that *differentiation* characterizes the sensibility known as "Post-Modernism." In an exegesis on the subject written for the forthcoming premier issue of *The Harvard Architectural Review*, Stern further explains how this sensibility affects architecture: "In its inclusiveness, traditional Post-Modernism does not propose an independent style; it is a sensibility dependent on forms and strategies

drawn from the Modernist and the pre-Modernist work that preceded it, though it declares the obsolescence of both."

The proliferation of fragments during the 1970s produced what general audience magazines referred to as a "new architecture." Whether you prefer to view the fragments as variants of Modernism, or aspects of the "Post-Modern" sensibility, it is difficult to believe the metamorphosis for a new architecture has actually taken place. No radically different conceptions of space or ways of generating form have developed, so far, behind the replenished façades of "Post-Modern" architecture. A theory has yet to emerge. Attitudes, attributes, principles, or sensibilities give us the *state of mind* for developing that theory, but not the theory itself. Thus we incorporate freely the qualities of the "both-and": free flowing space and discrete rooms; structural grids and pochéed walls, abstract planes and ornamental surfaces, asymmetrical compositions and axial formal plans.

If we accept the diversity in expression in 1970s architecture, which ranges from rectangular reflective glass buildings to yellow, curvilinear stuccoed houses, as being a condition of our time, we are still left with a dilemma. This dilemma pertains to the *absence* of criteria. Modern Movement architecture, because of its monolithic set of principles, its formal framework emanating from that, *and* its "ethical corollaries," did not have to face this dilemma. But how do we judge? Saying everything is "a matter of taste" only begs the question about architecture's responsibilities, and leaves us without *grounds* for choice.

The taxonomic method has, in a sense, been employed in place of criteria. As fragments float around us, we attempt to find visible conjunctions and linkages, put them into categories, and give them

names to explain why they have a right to be there. We use words to control the fragments. But it turned out in the last decade, they often controlled us. For as images and elements proliferated, they lost their aura and their content.

The problem begins in two conditions: the larger one belongs to modernity in general: the speed with which objects are replicated and the information about them disseminated.

The second condition is "mental": our embracing of "eclecticism" as a design approach. Commenting about the reliance of "eclecticism" as a strategy in anthropology, Marvin Harris (in *Cultural Materialism*, Random House, New York, 1979) points to its popularity for understanding the cause of differences and similarities among societies and cultures. He faults, however, its effects: solutions remain unrelated to each other without any coherent set of principles. Because it encourages too many hypotheses, instead of too few, it impedes the production of a "corpus of theories" characterized by "parsimony and coherence."

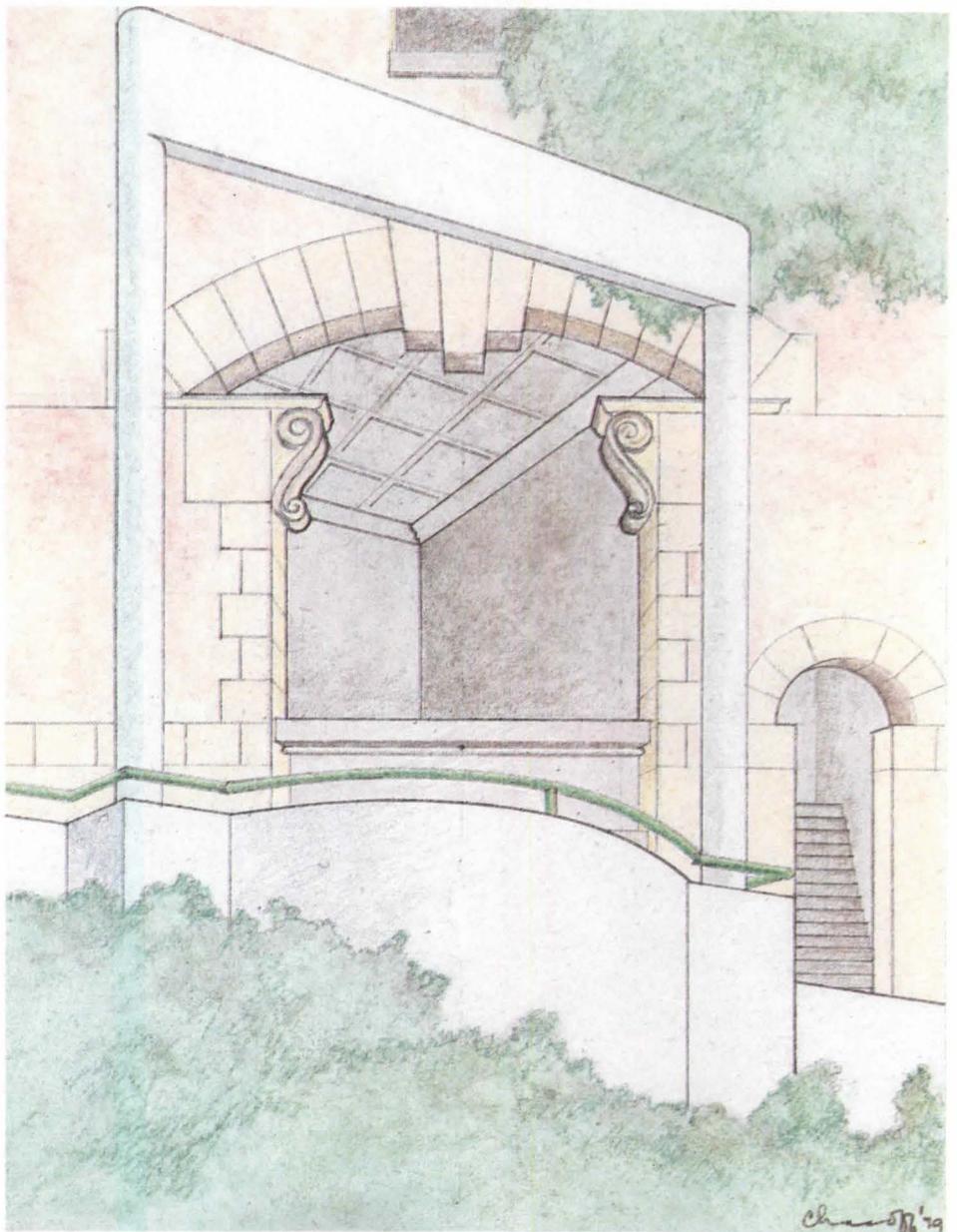
Within the "architecture culture" a strong argument is given for "eclecticism" or inclusiveness of past architectural modes to return content or meaning to architecture. At the same time, many of its proponents insist that "there are no rules" for the combinations of elements and images. This statement presents a paradox of intent: Meaning depends upon context; a context has a structure or framework. Frameworks are put together by rules for their arrangement—like any language. The plucking of known familiar elements from one context (from a past historical style) and placing them in another, does not guarantee the metaphorical operation will work—that "meaning" will automatically emanate from the act. Too often fragments

are installed indifferently in various contexts with no attention paid to local circumstance. Cut adrift, their meanings are further diluted.

Not confronting the responsibility of forming a framework or grammar that can adequately incorporate the various elements, or even *exclude* some, only compounds the problem. Narrow ideologies become the attractive recourse. The two poles of narrow ideologies and eclectic strategies do not promise to satisfy formal requirements for the difficult issues confronting architecture in the decades to come, as new building types emerge, new materials and techniques develop, ways to handle energy appear, or as new types of urban settlement occur.

In order for this past decade's "sight-seeing expedition" into architectural form to end with some profound sense of discovery, more searching will have to take place. The new principles or attitudes are merely indices revealing that certain obsessions, like the belief in architecture's communicating role or in the value of history and memory, still retain a strong hold.

While erupting on the surface, the obsessions are waiting to be channeled and directed through the force of desire and intelligence. They can be worked on to rebuild the language of architecture into a coherent totality, one that can be used part and parcel in multiple circumstances. In other words, a living language could be constructed that includes history, includes Modernism, but is capable of transforming and being transformed, capable of offering selectivity, with an understanding of how and why it operates. Without this framework, architecture will keep producing fragments—not totalities—fragments that dissipate as glittering but evanescent apparitions and mere surface seductions. [Suzanne Stephens]



View from the architectural landscape of the past toward the future. Drawing by Alan Chimacoff.

Both Styles Now: A song of fond farewell

Columns, walls, the free plan grew
A sense of space à la Corbu
A bit of Mies and Rietveld too,
I looked on plans that way . . .
But I have changed; I now make rooms,
Discrete space now has come to bloom,
Poché now sings the major tune,
I think it's here to stay.
*I look on plans from both sides now,
From sparse to dense, Thru all events,
It's plans' delusions I recall
I really don't know space at all.*
Ribbon windows, free façade,
Flat surfaces so taut and hard,
Relationship 'twixt house and yard,
I looked at walls that way . . .
They leaked and spalled, let in the sun;
Implicit depth was all the fun;
They lacked the substance and the sum
Of niche and wall in play

*I see façades from both sides now,
Both out and in, Thru thick and thin;
The depth's illusion I recall,
I really don't know walls at all.*
Terragni, Mies, Frank Lloyd and Corb,
I picked and chose 'til I was bored.
From Borromini, Soane I hoard
Some stylish moves and ploys.
Collaging them to suit my taste,
What once was crime's no longer waste;
Post-Modernism isn't chaste,
The purists it annoys.
*I look on styles from both sides now,
From pre and post, From then and now,
It's style's allusive qualities
That questions all Moderne's decrees.*

Words: Alan Chimacoff, Thomas Schumacher
Music: "From Both Sides Now" by Joni Mitchell



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Some afterthoughts about addenda

Walter Rosenfeld

A key task in the bidding process is formulating addenda. Clear form and content are vital to important corrections.

Like the other contract documents, addenda serve several functions between the bidding period and building occupancy, and they are used differently by a variety of participants in the building process at different times. This variety of functions and users is important in determining the form as well as the content of addenda, and significantly influences the characteristics of addenda in common use.

"An addendum is a document that is added to original construction documents during the bidding period to clarify, revise, add to, or delete from the original construction documents or previous addenda," according to Chapter 9 of the CSI Manual of Practice, "Changes to Contract Documents." The architect issues addenda "to correct errors or omissions in the drawings and specifications, clarify questions raised by bidders, or issue new requirements, including decisions to decrease or increase the scope of certain work."

During the bidding phase, addenda are addressed primarily to bidders and sub-bidders, but suppliers also check addenda for changes in material requirements. While the owner's lawyers and funding agency officials examine each document for changes which may affect bidding procedures, the architect's consultants, often major contributors themselves to addenda, review proposed items to help coordinate their work. The effect of these needs during bidding is to require separate binding of each addendum for distribution to those who already have the other contract documents, and, perhaps, punching of holes in the addendum to facilitate insertion into their project manuals. Drawing and specification changes need careful separation, and the arrangement of items in page-by-page and drawing-by-drawing sequence serves to aid users in locating items.

Although addenda are issued to revise the original documents before the contract is awarded, they are far from obsolete once bids are received. As the emphasis turns toward construction, new users appear on the scene, and previous users take on new roles. Their interests must be anticipated so that the document will be most useful during the construction phase.

Clearly, the contractor, his subs, and suppliers continue to need the information the addenda contain in order to carry out their new contractual obligations. So do the project representative and the job supervision staff from the architect's office. Reviewing addendum items is particularly important when checking shop drawings and manufacturers' data. Then, too, should con-

tention arise, the various parties' lawyers will examine these same items again.

Cross-referencing of addenda to the original documents by page-turning is far less convenient than posting the changes, the common practice of most users in the field. Consequently, addenda are often cut apart and portions pasted on the page or drawing where they apply and where they are less likely to be overlooked or lost. For this reason it is good practice to use colored paper for addenda, making the items stand out when posted. And while the original project manual may be printed on both sides of the page to save space and weight, addenda are never done that way, since one-side printing is essential for cutting and posting. Another good practice is to attach a newly issued specification section to the addendum as an appendix rather than incorporating it as an item in sequence. Now the specification section can be separated out and inserted as a whole in its proper location in the project manual.

If the several addenda are each printed on a different color paper, identification of the source or timing of any item becomes easier, since some of the parties will still be working from the bound addenda while others will have theirs already posted. In an arbitration or court proceeding, for example, an addendum would be introduced as a complete, unaltered document, while at the job site, the contractor's and the architect's copies will be pasted up early on.

The Manual of Practice concedes that: "In practice, changes constitute a relatively small percentage of the work, especially considering the number of possible errors, omissions, additions, changes of mind, and updating of methods or materials that could influence the course of construction." While automation of production may decrease the number of specification errors and thus minimize the size of a typical addendum, the necessary speed with which contract documents are often produced almost guarantees the persistence of the addendum as a tool for dealing with the inevitable changes. Thinking about the multipurpose nature of the document and its various users will help in preparing more usable addenda whenever they are needed.

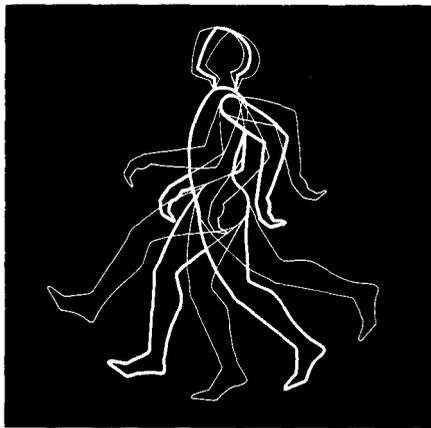
Walter Rosenfeld, CSI, is head of the Specifications Department at The Architects Collaborative in Cambridge, Ma.

Designing the moving experience

Moving people vertically, horizontally, or at angles can be done mechanically. Machines add speed, beauty, and safety for eyes, feet, and everything between.

The average person walks at the rate of 3 mph. At that speed, one can start and stop with ease and distinguish close objects as well as those at a distance. We are humanly capable of self-propulsion five times faster than that using considerably more energy. We would need to run about 15 mph to run a four-minute mile. Clear concentration and perception of buildings at that pace is difficult. Machinery designed to accommodate a standing pedestrian does not safely travel horizontally at speeds much in excess of ten times walking speed, or about 30 mph. Traditionally, escalators and moving walkways move slower than we comfortably walk. One reason is the safety involved in stepping on and off the machine. Another is the danger of sudden stops which can effectively pitch a rider forward. The slow speed of these machines does allow the rider to view the immediate surroundings comfortably with about the same acuity (if not more so) as under his or her own steam. Speeds of conventional elevators (from 100 to 1800 ft per minute) are governed by destination distance, not standing safety.

Saving time: When machinery augments our bodily means of transportation, it can alter our perception of the time elapsed. We harbor the illusion that we can "save time." When people-conveyors transport us at work, money is coupled to time: spend the most time working and the least time waiting or moving from workplace to workplace. In this context, "saving time" is saving money. Conversely, when we are not working efficiently and are being paid, we are "wasting time." We have not banked hours from the clock or tacked



time onto our life. We have simply used a machine to exercise our priorities of how and where we use our time. Nevertheless work seems positive; travel time seems negative. Hence the predominant use of mechanical conveyors of people in office buildings.

Time, capital T: Riding a machine for pleasure can have an entirely different meaning. It can amplify time in ways that any artful experience can, or even destroy consciousness of it completely. The sequence and hierarchies of events along the path can take the form of conscious composition. Like other art forms, such an experience can also glorify or amplify the expression of ideas.

Whether the ride is predominantly a "time saver" or a work of art, it must be safe, reliable, and ideally barrier-free. As obvious as this sounds, in our zeal to create speed and pleasure we can downplay the basic behavioral characteristics of the use of such conveyances. As Robert J. Bates, director of Morgantown's PRT (Personal Rapid Transit) states: "Architects are sometimes more concerned with how it looks than how it works." We are more conscious of composing spatially with the machines themselves rather than the ride.

New heights: The effects of mechanically moving people go beyond the physical conveyance itself. A historic example, of course, is the role of the elevator in the development of the skyscraper; it is physically impractical to walk up that many flights. Moving people mechanically can affect architecture in other ways almost as dramatic as the use of the traditional elevator. The circulation of people through a building is intimately related functionally to the space needed for a building, or a city. Pure circulation space and the cost of its enclosure can suffer in competition with mechanical people-conveyors. Electrical machinery can replace automobiles, streets, and parking structures within the city. There are other good reasons for mechanical conveyors:

Prolong the stay: The ideal people movement for a hotel is one which will minimize annoying delay and maximize the stay. Hotels have made good use of traditional elevators. In the last decade, triggered by architect John Portman's early successes, hotel architects have made increasing use of "observation" elevators and escalators to focus attention on sumptuous interior space and attract business.

Prolong the path: A shopping center, department store, or downtown commercial district is anxious to attract as many customers as possible. The goal is to encourage people to take the longest and most inclusive path possible, while minimizing fatigue and maximizing stops. Encouraging a level change or travel to a remote shop may take the form of a flashy observation elevator, a prominent escalator, or, on a city scale, a horizontal elevator or "people mover." Moving walkways do not perform well in such applications when the ride does not anticipate frequency of stopping for shopping. Human factors are the key. If the longer path seems unnatural, people will avoid it completely.



Edmund E. Swain/Montgomery



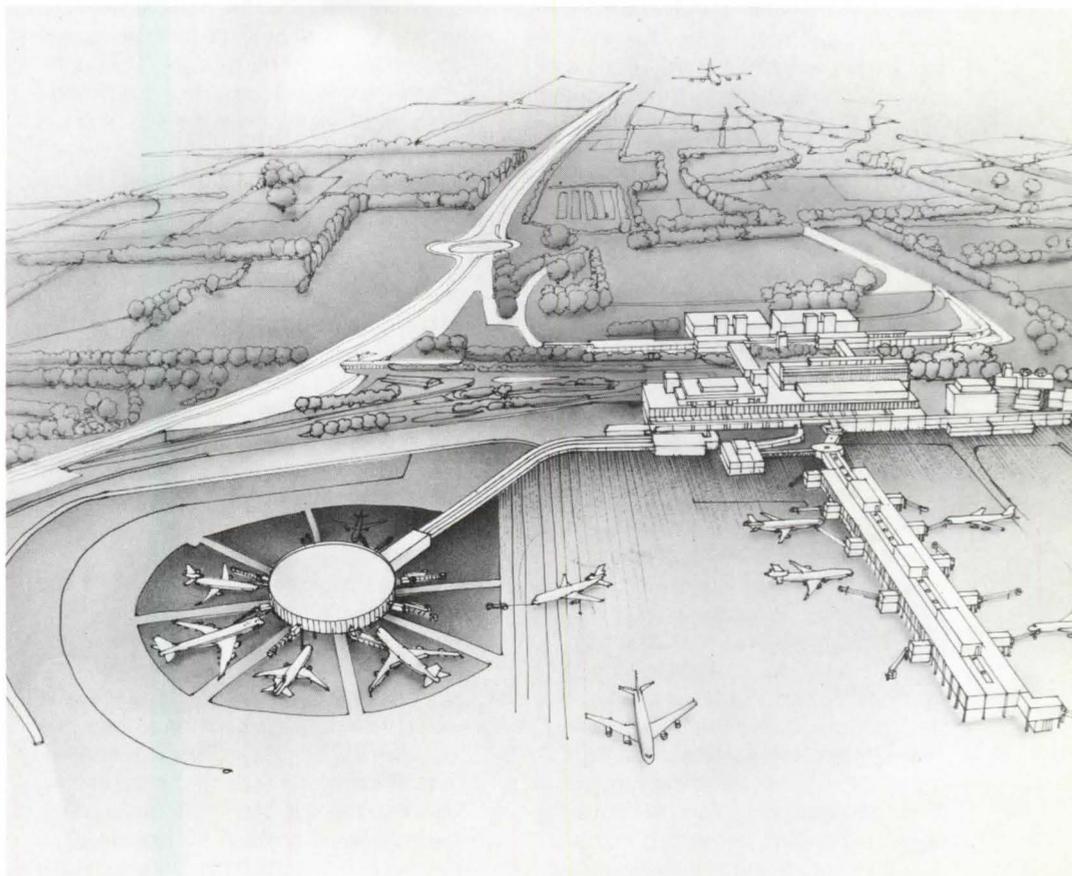
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Richard Rush

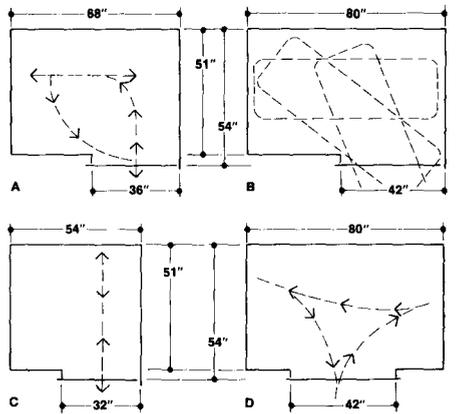
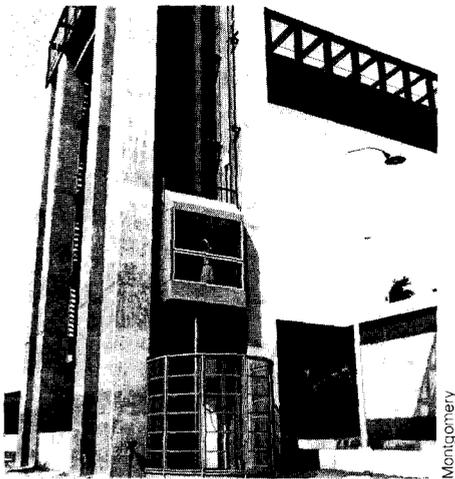


Westinghouse



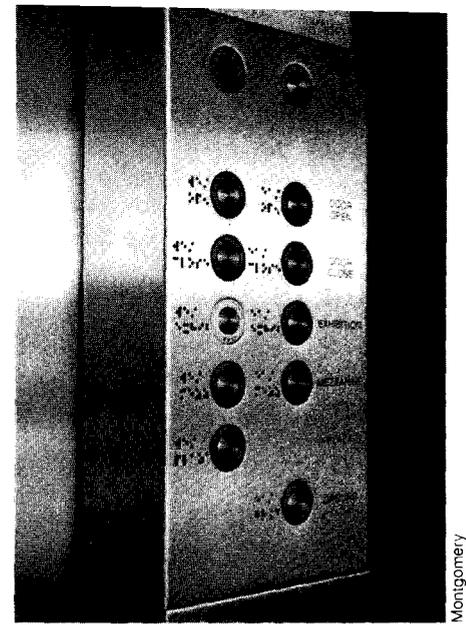
(Top left) Escalator tunnel at Detroit Science Center. (Top right) Downtown people mover for Los Angeles. (Middle) Horizontal walkway at the National Gallery. (Bottom left) Elevator at the Atlanta Hilton Hotel. (Bottom right) London's Gatwick Airport with new people-mover design.

Technics: People movers



ELEVATOR DIMENSIONING FOR BARRIER FREE DESIGN NEII

(Far left) Observation elevators used for security reasons. (Middle) Elevators planned to permit: A. turning a standard wheelchair; B. turning a wheelchair or carrying a stretcher; C. standard wheelchair in and out; D. 3-point turn in a wheelchair. (At right) Braille button code for elevators.



Shrink time and distance: For a sprawling university, the speed of class change may mean the difference between maintaining one lecture hall half full for two hours or one full hall for one hour. It could mean one large parking structure on cheap land rather than taking up valuable campus land with parking spaces. Escalators, elevators, and people-movers have all been applied to such buildings.

As transportation: An airport may encompass eight or ten different modes of transportation. The essence of an airport is fast arrival, short stay, and rapid departure for full planes. If more planes land than take off in any given hour, more space is needed at the airport. If any part of the circulation system backs up, the whole departure pattern of the planes can be affected. Train stations and transit centers in general suffer similar problems. All common methods of people conveyance are used to speed up traffic in such buildings.

Moving people vertically

The first bona fide machine for moving people in buildings was the elevator. For over a century the elevator has been constantly upgraded. Ten years ago in the April, 1969 P/A, Charles W. Lerch outlined the innovations in elevators newly inspired by tall and very tall buildings. The Hancock Center in Chicago and the World Trade Center in New York employed such ideas as the sky lobby and the shuttling of elevator service. Vertical stacking of single elevator shafts was introduced at the Trade Center. The double-deck elevator was reinvented for use in Chicago's Time and Life building. By 1974, however, Portman had sparked a new era of elevator design with his Regency Hyatt Hotel in Atlanta. Roger Yee's article in the April 1975 issue of P/A recognized the surge of interest in elevator design and the budding interest in preengineered elevators.

Of these early innovative directions, the

observation elevator has had perhaps the most dramatic impact. The flashing-lights atmosphere of the amusement park coupled with "Star Wars" visual vocabulary has produced everything from gilded birdcages to sleek sculpture.

For those who have not yet experienced the design of an observation elevator there are some ground rules. First, exposing the elevator on the outside of a building is still a tricky proposition. Weatherproofing the hoistway enclosure around the car guarantees that the lifting mechanism (the cables for a traction design) will be protected from wind and weather. Sun control can also be a problem for the exterior glass elevator. Exposing the car to the harsh environment may possibly double the total elevator cost (over a conventional design). Of course running the elevator inside the building presupposes that there is a space tall enough to keep it in view.

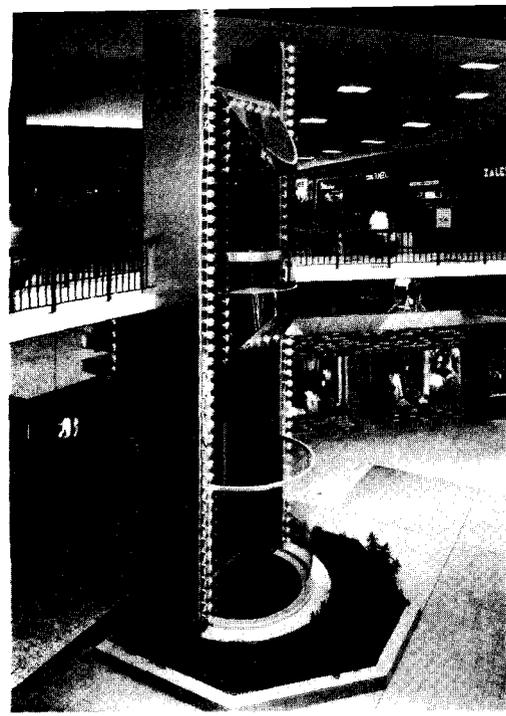
The car: Whether the elevator is hydraulic or cable driven, the car geometry can strongly influence elevator cost. Rectangles are easier to fabricate than angles but angles are cheaper than curves. The use of glass also adds to the cost. If the rear of the car is replaced by glass, weight is added. The more glass, the more weight. What was inexpensive hidden structure may become an exposed frame infilled with glass. Obviously, curved glass is the most expensive solution. All glass must be safety treated, impenetrable, and shatterproof.

Once the geometry is studied, the support of the car and machinery requirements become important. An enclosed elevator normally has its counterweight opposite the door opening. The elevator's vertical guiderails bisect the sides of the car from front to back. The door-operating machinery is mounted on the top of the car. With the rear of the car transparent, the counterweight is moved to one side. If the top and bottom of the car are visible, a

shroud is usually built to house mechanical works. The shrouding again adds more weight. If possible, the guiderails should be maintained at the midpoint of the car. If not, the hydraulic plunger or hoist ropes may be forced to operate off the centroid of the car, adding structure. Adding weight usually means increasing the size of the machinery and the running cost for the life of the elevator. The elevator car enclosure itself can range in price from \$5000 to \$100,000. The most elaborate example of observation elevator design to date is probably the bank of observation elevators which service the new Water Tower Place building in Chicago by Loeb, Schlossman, Bennett & Dart and C.F. Murphy Associates. The hoistway enclosure is glass. The car is glass (the roof as well). Even the elevator doors on the building side have windows.

The high visibility of an observation car has its advantages and disadvantages. Some elevator riders are uncomfortable in an exposed car. They tend to ride toward the door or even avoid the car entirely. An alternate elevator route should be supplied for such people. By contrast, the high visibility of these cars has made them popular in such mundane applications as parking garages. Operators have found high visibility to be a deterrent to crime. The Washington, DC subway system uses glass in cabs for this reason.

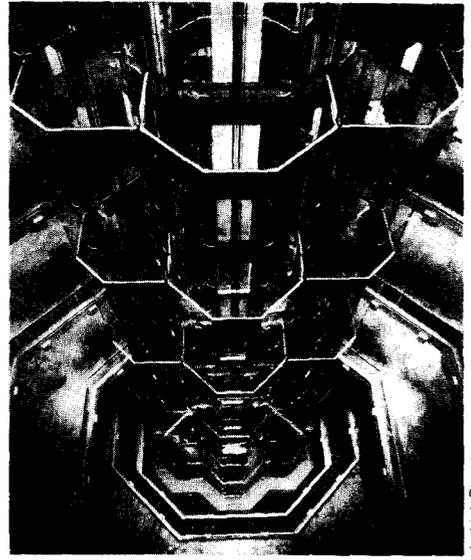
New concerns: Since 1975, there have been some new concerns in conventional elevator design. The most prominent addition has been barrier-free design. In July of 1976, the National Elevator Industry Inc. issued its "Suggested Minimum Passenger Elevator Requirements for the Handicapped." The requirements were developed in compliance with the ANSI A17.1 safety code for elevators. Most architects have come in contact with such requirements in some form by now or they will in the near future. The new designs are



John A. MacDonald/Dover

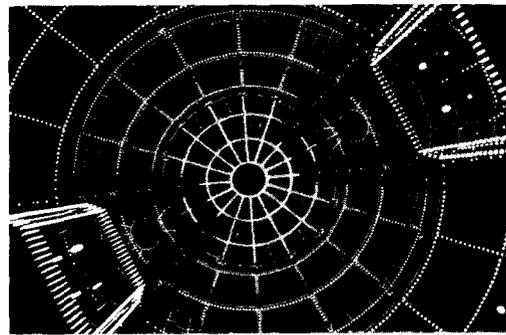


Montgomery



Hedrich Blessing

2 Observation elevators are everywhere!
1 Rolling Acres Mall, Akron, Oh. **2** Nordstrom Department Store, Portland, Or. **3** Watertown Place, Chicago, Ill. **4** Ft. Worth Tandy Headquarters. **5** Hyatt Regency Hotel, Atlanta, Ga. **6** Sparks Street Mall, Ottawa, Canada.



Westinghouse



Otis



Otis

4 affected most strongly by the new care towards wheelchair use and ambulance type stretchers. Dimensions of the car must allow room to accommodate entry and exit in a wheelchair. The door timing is delayed to allow ample access time. The buttons are lowered and hand rails are added to the rear of the car. Sound signaling and tactile characters for the blind are already becoming common occurrences in elevators for all publicly used buildings. Says Westinghouses's Alan Van Nort: "A major thrust in the last four years has been to accommodate the handicapped." Adds George Strakosch of Jaros, Baum & Bolles: "It is foolish for a future-oriented real estate developer to leave out barrier-free concerns in an elevator."

The increased elevator demand for low-rise buildings is being met by the hydraulic elevator. A hydraulic elevator has a cheaper first cost, cheaper installation, and less expensive maintenance than a traction electric elevator. It is more expensive to run, but the main problem has been the necessity of providing a deep hole to accommodate up to seven floors of hydraulic plunger. To solve this problem, Dover invented a "hole-less" hydraulic elevator. Other companies were soon to follow. Although the height limitation in this country is 28 ft, the telescoping plunger may eventually prove applicable to as many as ten stories. German versions

5 have already accomplished heights of 100 ft. Without the hole, retrofit elevator installations are greatly simplified.
Solid state: Modern electronics are now having a strong impact on elevators. Says William Foley of Otis: "Solid-state technology allows more options for little additional cost." Decisions and computations are made more quickly. Solid-state design shows up in the switches, lights, and speaker system of the car. The control system is of course affected as is the electric motor that propels it. The door system can be solid state and the safety features can achieve greater precision with solid state. What all of this means is more effective service for the elevator. Bo Wennerbom, president of Schindler-Haughton explains: "The main difference between elevators is in the controls." Electronics can account for one-third of an elevator contract. A typical programmable operating system, for example, includes: fire service, independent service, emergency power operation, handicap signaling provisions, coincident call selection, variable door times, time programs, special door operations, load bypass features, and anti-nuisance protection. The above are the standard system features for the Schindler-Haughton Gold Flight Elevator. Here are a few of the system's optional features: earthquake and vibration sensors, security service, accommodation for dis-

6 similar floors, and brown-out protection. In addition to the advantages of solid-state logic in the elevator mechanics, the computer is having its effect on system design. Industry engineers have computer access in plant as close as their telephone, and the day is not distant when the elevator salesman who visits your office will dial a number and get direct computer access, for design purposes.

Moving people on an incline
 Calvin L. Kort's May 1974 P/A article "A guide to escalator planning" discussed the conventional escalator design criteria. The escalator since then has not been immune from use as a visual statement by architects. High-tech monuments such as the Centre Pompidou in Paris express the escalator on the building's elevation as a glazed tube. The Tandy Center in downtown Ft. Worth, Tx is equally bold, crisscrossing escalators in midair over its ice rink. Such escalator verite bare-bones treatment is contrasted with the escalator in Water Tower Place in Chicago. The machinery is nested neatly into a sequence of travertine-trimmed concrete planters and fountains with little but the moving stairs to remind us the machinery is there. The ultimate in escalator illusion is the new Detroit Science Center by William Kessler. The striped tunnels become a wondrous colored ride into the building.

Technics: People movers



The graphic symbols above appear on escalator stickers. They portray the necessity to hold the handrail, attend children, and avoid sides.

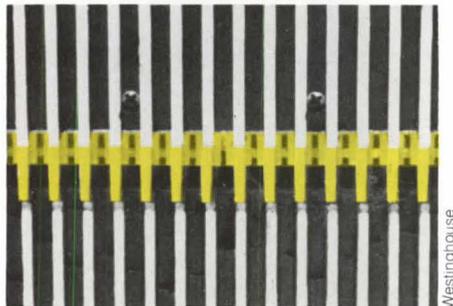
A less costly, more common approach to escalator art is the use of the glass balustrade. Five years ago the glass balustrades were a rarity. Today's increased attention has meant the common use of glass to reduce the apparent bulk of the machinery in fine-tuned interior environments. What used to be a unique item has now become universally accepted.

The translation of artistic interest from elevators to escalators is not as simple as it sounds. An elevator is ridden by a passive passenger. It can be used as both an attractor and director of motion, but the escalator must be actively ridden. Says Robert Lauer, V.P. of engineering at Schindler-Haughton: "We do not want distraction on an escalator. We want people concentrating." The reason is plain: Lauer estimates that 60 to 70 percent of the liability suits in the people-conveyor business are in escalators. About 85 percent of those accidents are due to falling. Chances are you have never been involved in such an accident or even seen one. Dr. John Fruin of the New York Port Authority explains: "Most accidents are due to inattentiveness or failure to recognize the danger of moving machinery." He estimates that only one person in five million rides or more is injured by an escalator. This figure includes children playing on escalators and misusing them. The odds are far greater that you will slip and fall elsewhere in the environment on static surfaces. The fact is, however, if a pedestrian does fall down a moving steel stair, the injury can be a dandy.

How do accidents occur: Certain types of accidents might be expected on escalators. People holding baby carriages, strollers, or wheeled suitcase carts accidentally release them and the wheeled object strikes an unsuspecting passenger from the rear. People who need a cane, inebriated people, or otherwise unsteady individuals can lose their balance; this kind



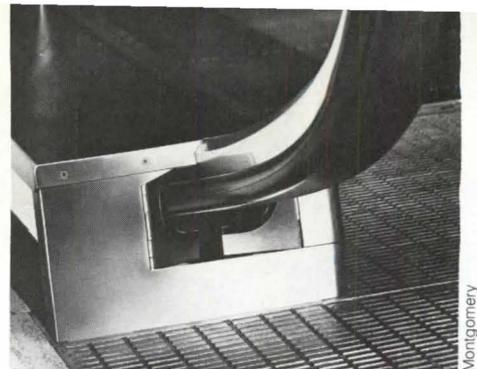
Unique safety escalator tread edge treatments.



of accident can happen on any stair.

The biggest difference between a stair and an escalator is not only that the escalator is moving but that it can stop suddenly. In the case of a power failure, an escalator stops in less than two steps. The breaking time for both upward and downward movement depends on the passenger load. A passenger who is not holding the handrail but moving downward at 120 feet per minute can be pitched forward. What most people also don't realize is that the emergency stop button at the top and bottom of all escalators also stops the machinery without warning. The escalators in the Social Security Building in Baltimore and the new Pennsylvania State Office Building in Harrisburg have been equipped with a new two-level stop. In addition to the conventional two-step distance stop, the New York engineering firm Jaros, Baum & Bolles has designed an automatically controlled stop which uses 1.5-4 ft stopping distance, with a controlled rate of deceleration.

The stop button is there, of course, to guard against someone's clothing or bodily extremities being accidentally caught in the machinery. Children are the primary problem. Parents with small children set their child on the handrail or on the steps to ride and clothes get caught. To the horror of the escalator industry, parents out shopping often tell their children to go play on the escalator. As they lean over the balustrade to look below, clothing is snagged. Then there is the tennis shoe and rubber boot problem. Children apparently get great joy out of forcing a rubber-sneakered foot to the side of the stair tread where it will squeak against the balustrade moving by it. In the process the shoe, or rubber boot, can get snagged, and the rest of the foot can be trapped with it. For this reason, matt-finished materials are discouraged at the moving tread level, and silicone spray coatings are periodically



Safety handrail doors. (Below) The stop button.



applied to the surface to decrease friction. Most modern escalators are equipped with "skirt switches" which stop the escalator if the lower balustrade or skirt is deflected inward by a shoe. The Hitachi escalator in Japan features a stair tread with raised sides which decrease the chances of accidental entrapment.

No one can guard against the accidents on escalators due to conscious misuse, but there is a role for the architect in escalator safety. Westinghouse has printed a visual warning sticker which is placed at each end of every escalator that leaves the plant. Stickers are available for all escalators. Architects may prefer to design their own. The sticker cautions passengers to hold the handrail, avoid the sides, and respect the moving parts. We should try to discourage children from playing on machinery and prohibit wheeled carts. The key is the handrail. A graphic sign is needed to depict the consequences should the machinery suddenly stop.

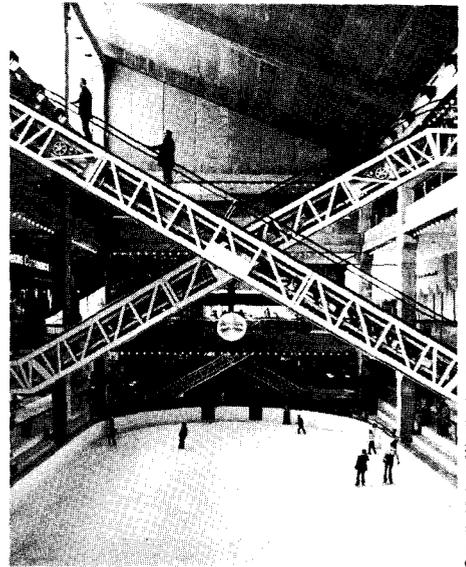
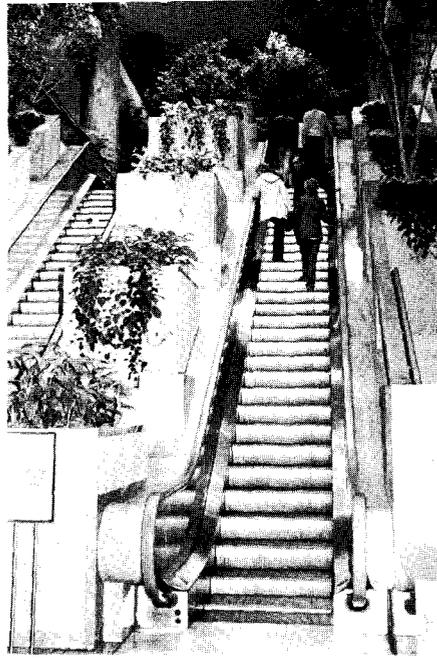
The modular escalator designs of Westinghouse have the advantage of being capable physically of increased length. The very long escalators used at the mass transit stations in Washington, DC are presently the longest in the Western Hemisphere (205 ft long). Their length is the key to the metro system of tracks crossing deep in the ground. Designers were concerned about safety. Indeed they should be. Looking down the steel trough of moving treads feels more like looking down a ladder than a stair. For this reason, extra treads are added at the top and bottom of the unit which move on the horizontal an extra few feet before descending. The rider then adjusts first to the movement and then the incline.

The width of an escalator is an architectural decision and is usually made based on the volume of traffic. Dr. Fruin has made some interesting behavioral discoveries about escalator width. Many of



Richard Rush

In a good escalator design, safety, speed, and comfort are intertwined with a nice ride. Above, the escalators at Watertower Place melt into concrete fountains and planters. An information booth is in full view for safety advantages. (Right) Escalators at Ft. Worth's Tandy Hdqtrs.



Camille Vickers/Westinghouse

them are discussed in his book, *Pedestrian Planning and Design*. In the Port Authority installations, two strangers are not likely to ride the same tread of a 48-in. escalator. Nor are Americans (unlike the British) likely to stand to one side and let faster passengers walk by. The width does have an effect. When 32-in.-wide escalators are used, off-peak passengers often leave one tread distance between them. This tendency seems partially due to slow reaction time getting on and partially to territoriality considerations. On the wider 48-in. models, people are more likely to ride successive treads. The width of the escalator therefore affects its carrying capacity, but not in obvious ways. Industry capacity figures can be misleading in design calculations. Dr. Fruin feels that the practical capacity is about 60 percent of the manufacturer's theoretical capacity.

The architect also makes other decisions which affect the safety of people on escalators. The escalator system at Water Tower Place, as described, is obviously attractive and can be a distraction, but it does keep the eyes comfortably level. At the foot of these escalators the architects have strategically placed a manned information booth. If an accident were to occur, this person has full knowledge of the stop button and can control the situation. This overview also discourages children from playing on the planters and fountains.

The very existence of an escalator is sometimes hidden. Signs direct people to their landing. Dr. Fruin feels strongly that such directional signs are only marginally effective. He prefers the escalator to be in plain view and obvious. Says Fruin: "An escalator is a visual statement of a level change. Don't hide it." Signs can have another, less obvious safety concern at the foot of an escalator. While an individual stops to read the sign, the person behind must avoid him. Says Fruin: "An escalator has no conscience." The motor keeps de-

livering people to a landing regardless of whether the space is there or not. Doors that are placed too close to the unloading escalator should not open in or should be placed far enough away (over 20 ft) so that a half-open door does not become a hazard. Obviously, adjacent banks of escalators should not require exiting people to have to cross one another's paths until the crowd has thinned significantly.

Barrier free on an incline: The wheelchair cannot be accommodated on an escalator. Manufacturers have dabbled with contraptions which will make the transition, but most people agree that the two machines are incompatible. To solve this problem, a fair amount of interest has been rekindled in the inclined elevator. The machinery can run parallel to the escalator and therefore circulation and directions within a building remain uniform for all users. Success of this solution so far has been minimal. An escalator truss was ripped out at the Washington metro for a test of an inclined elevator. The machine was later replaced by another escalator. George Strakosch of Jaros, Baum & Bolles sees a strong future, however, in the inclined elevator, and alludes to the successful combination of escalators and inclined elevators in the Swedish subway system in Stockholm. The ideal application, of course, is a steep hillside site, a solution at which the Swiss have excelled.

Moving people horizontally

Of the major mechanical options for moving people in buildings, the moving walkway has had probably the least number of applications (a walkway costs about \$1500 per foot). It also has had the fewest attempts at beautification. This situation is changing. I.M. Pei, for example, has introduced a single moving walkway to connect the new East Wing of the National Gallery to the original building in an underground corridor. There is nothing to see

in this expensive museum space but the walkway enclosure itself. Dramatically shaped and lighted, the shining surface is meant to be a work of art. An opposite attitude is shown in a walkway to be constructed at Seaworld in Orlando, Fl, a new aquarium by Homer Delawie Associates of San Diego. In this moving walkway application, the aquarium visitor will be channeled under and through a shark tank in a glass enclosure. It is essentially a glass bottom boat only the sharks are in the boat.

Accelerating walkways: The news in walkways, however, is not in shark tanks. The research is in the accelerating walkway. Thus far the conventional speeds of moving walkways have been 90 and 120 ft per minute. The limitation in speed, as mentioned, is the speed of stepping on and off the machine and the possibility of falling under quick-stop conditions. Trading speed for length also does not always work.

The world's first accelerating walkway will begin service in 1981 at Les Invalides Metro station in Paris. Overlapping plates form the moving treadway and accelerate the passenger. Boarding occurs at a speed of just under 2 mph but after 30 ft, the path is traveling at 7.5 mph, over five times the maximum speed of the conventional walkway machinery. At the end of the path, the walk again slows to allow the passenger to step off. The machinery will form a loop and thus provide a parallel service in the opposite direction. The total path length is to be 574 ft. The passenger will hold the accelerating handrail to insure safety. The French company manufacturing the system is Ateliers et Chantiers de Bretagne. The walk is called TRAX.

The TRAX system is also being studied for use in this country. The New York Port Authority is investigating the possibility of using accelerating walkways: for the current three-phase project with a 300-ft run,

Technics: People movers

the Port Authority is studying four different systems. The study will ultimately result in a test installation of one of them in the Hoboken Railroad Terminal serving New Jersey to Manhattan passengers.

An American competitor is Dean Research Corporation of Kansas City. Evolved from factory conveyor systems, the machinery consists of a series of adjacent rollers which span the walk from side to side, successively increasing in speed down the path. A great advantage of this system is the shallow depth necessary for installation. Slopes of as much as 12 degrees have been studied with prototypes. Its entrance and exit speed and maximum speed are identical to the TRAX system.

The interest in the accelerating walkway is due to increasing demand for methods to mechanically convey people horizontally on paths over 500 ft long and less than 2000 ft. Says Dr. Fruin, "We need something to fill this gap." Don't call your walkway manufacturer yet. These machines are still in their embryonic stages and are not yet practical.

The horizontal elevator: Early thoughts for horizontal conveyors turned literally to the possibility of creating a horizontal shaft through which essentially a cable car could be pulled. The idea that a passenger passively ride a moving car instead of a moving stair or walkway is of course the basis of elevator transportation. The safety problems which require such engineering genius on the accelerating walkway are reduced considerably by allowing the passenger to mount the car while it is stationary. The added advantage over moving paths and escalators is that the horizontal elevator can easily accommodate barrier-free constraints. Lower speeds and distances of less than two miles allow passengers to remain standing safely while holding on. Many of the horizontal systems include seats (more for comfort than safety) as well as air conditioning.

Most systems available today for horizontal people movers are computerized to run without a driver. They can run either for scheduled operation (like a conventional train) or on demand like an elevator. Those systems which run on demand usually use a smaller car but need a larger station. Some systems do both. The various systems available or under research today are all electric powered and most involve motors mounted on the vehicle. Some locate power rails on the perimeter of the guideway while others use a centered power rail system. The suspension of the car also varies. Three prominent examples are spring on rubber tires, hovercraft or air cushioned, and magnetic levitation. The

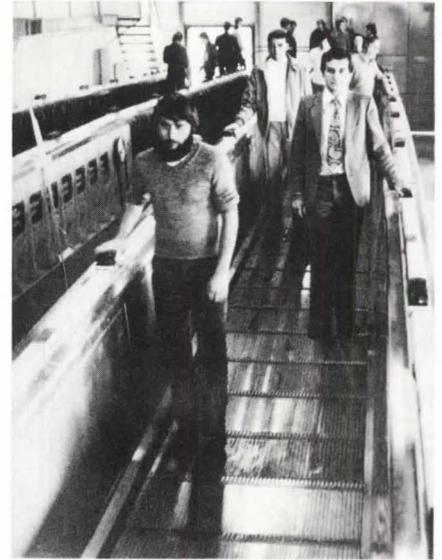
guideway itself can be designed to run above or below ground as well as at grade.

From inside a multiuse building, the doors of the horizontal elevator do not differ much in appearance from that of a vertical elevator. Coordination of the horizontal people mover with elevators, moving walkways, escalators, conventional non-moving circulation, as well as taxis, buses, planes, and private automobiles, is no simple matter. The horizontal elevator that must mesh with all of these systems must be designed into the building. The key to effective, cost-justified use of the horizontal elevator is to have the system in mind from the inception of the building design. The expense of the cars and machinery is then offset by the elimination of parking structures, minimizing the expense of tunneling and reducing air-conditioned circulation space within the building. System configuration, flow rates, and distances all have an integral effect on building design.

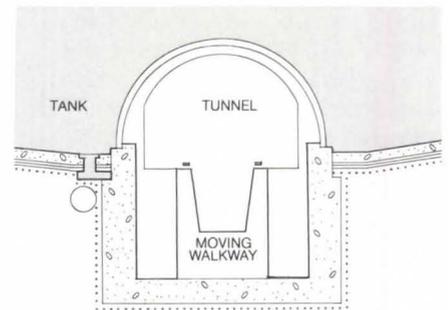
Recent history: In 1964, the city of Pittsburgh combined with its local resident and transit technology expert, Westinghouse, on an experimental project called "Skybus." Cars were developed and tested in South Park near Downtown Pittsburgh. Westinghouse applied its state-of-the-art technology obtained from large-scaled transit experience to the short distance, driverless application. Although the project was later abandoned in Pittsburgh, Westinghouse got the jump on most of the now competing companies. The Urban Mass Transit Act of 1966 stimulated interest of transportation engineers and government officials as well. Monies were designated to study the possibility of application of the technology to cities.

The most significant advances, however, in the field of horizontal elevators have been in their application to airport design. When Tampa International Airport opened in 1971, it employed the first large-scaled commercial horizontal elevator. A 1000-ft, 40-second ride on a spokelike shuttle helps reduce plane-changing time to minutes. The actual walk from the farthest corner of the parking lot to any plane never exceeds 700 ft. The speed of traffic interchange significantly reduced the waiting area and daily affects the maintenance cost of the building.

In October of 1975, another horizontal elevator began operation, this time to avoid the "horse and buggy" streets of Morgantown, at West Virginia University. The major difference was the government sponsorship. As a direct offshoot of the Urban Mass Transit Act and the formation of the Urban Mass Transit Administration, Phase I of the system was dedicated in 1972 at WVU to evaluate the potential for a people mover at an urban scale. The primary purpose is to move 18,000 students



The French TRAX accelerating walkway.

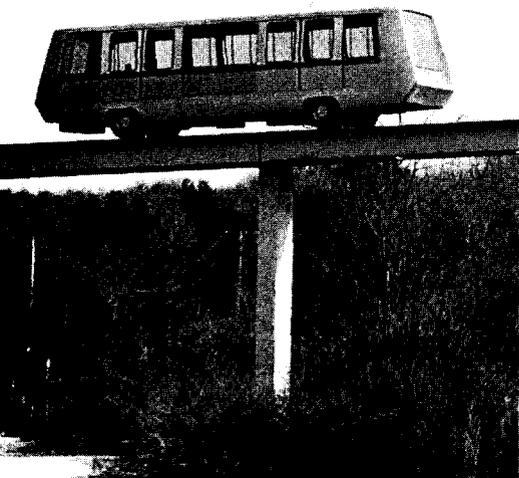


SEA WORLD SHARK TANK, ORLANDO FLORIDA

and 5000 employees about the tight-winding terrain of Morgantown. Dubbed "Personal Rapid Transit" by Dr. Sammy E.G. Elias, the designer and sparkplug for the system, PRT vehicles can operate in two modes—on a computer-arranged schedule and on a demand basis, just like an elevator. It operates primarily on a demand mode. Each car can carry eight seated passengers, 12 to 14 standing passengers and can travel at speeds up to 30 miles per hour.

The system was shut down all of the last school year to make alterations and additions. The 45 original cars were sent back to Boeing, the car manufacturer, for testing and refurbishing, and 28 new cars with improved power collectors and mechanical steering were added to the line. The route itself was lengthened, adding two and one-half stations. The design had some early problems largely due to harsh winter weather. Students are delighted with the improvements after a year of hustling to buses. The system's director, Robert Bates, is predicting renewed success. Says Bates: "This year almost tripled our sales of multifare tickets."

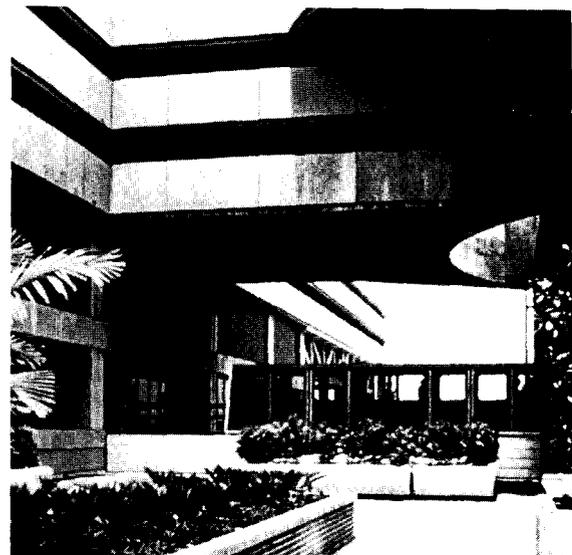
Since the pioneering efforts of Tampa and Morgantown, much of the advance in technology has come from private rather than government money. (The Morgantown PRT cost about \$130 million.) Seattle-Tacoma (Sea-Tac) International



Westinghouse



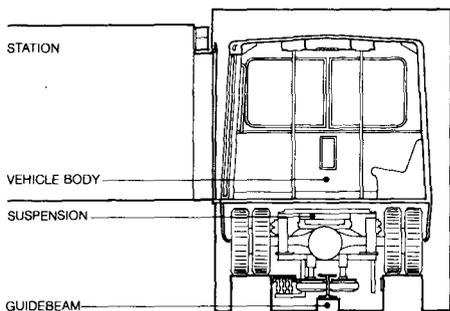
Richard Rush



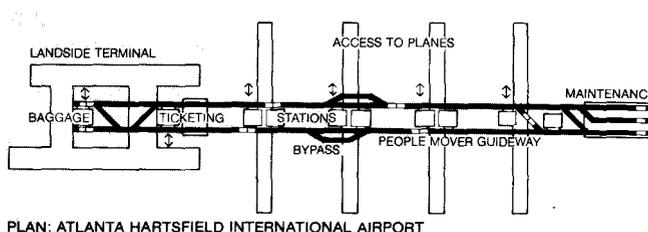
Westinghouse

2

3



CROSS SECTION: WESTINGHOUSE PEOPLE MOVER



PLAN: ATLANTA HARTSFIELD INTERNATIONAL AIRPORT

1 The experimental people mover at South Park. **2** A view of the Morgantown Personal Rapid Transit station. **3** Tampa International Airport was the first airport application of people movers. Airports have put them to good use. The Atlanta Hartsfield International Airport will open soon.

4 Airport opened in 1973 using the horizontal elevator in two sweeping loops. The Airtrans system at Dallas-Ft. Worth airport was soon to follow with an economical 80¢ per vehicle per mile operating cost. Two parallel guideways are scheduled to open this winter at Miami International Airport to connect a new satellite terminal with the main terminal area, while the Atlanta Hartsfield International Airport people mover is expected to be operable in 1980. A 1940-ft aerial version is to be operable at Orlando International Airport by the spring of 1981. Outside the U.S., use of a people mover has just been announced for the expansion of London's Gatwick Airport. Gatwick's horizontal people conveyor will mechanically shorten a 350-yard dash to less than two minutes' time.

DPM's: The government is moving towards application of downtown people movers for commercial districts. In Los Angeles, for example, the Department of Transportation has committed \$125 million to study use potential. A 2.6-mile route begins at Union Train Station, snakes through Downtown, and connects the hotel district to the new Los Angeles Convention Center. The system also will link with the San Bernardino Busway, to be of service to commuters and the Amtrak system available at Union Station. The total length of ride, end to end, will be 12 minutes. The People Mover is being directed by the

Community Redevelopment Agency of Los Angeles. Among the consultants are architects DMJM in association with Jenkins-Fleming. The DPM is to be operational by 1981. The bill for the project will be 80 percent paid by the Federal Government.

Other high-priority people-mover designs are underway in Detroit, St. Paul, Miami, and Atlantic City. Another half-dozen cities are contemplating or studying DPM potential. In short, business is booming.

Winter unknowns: Many of the horizontal people movers already in service are located in mild climates. Snow and ice represent problems for exterior use of people conveyors whether they are elevators, escalators, or horizontal people movers. The Morgantown system is probably the most experienced in this regard. Continued service over the wintry years has eliminated most of the bugs from the PRT. The new power rail installed this past year incorporates resistance heating to melt snow and ice. Both Westinghouse and Otis are actively testing their systems in snow as preventive medicine.

The additional challenge for architects using these systems is to understand their impact on design and the interrelationship with other complex means of interior transit. A people mover which is bidirectional, for example, needs no turn-around space. Adds Dr. Fruin, "People movers are very selective about what they demand

and will accommodate." Fruin believes that the batch character of elevators, for example, is a more natural match for the people mover than the continuous stream of people from an escalator.

Conclusion: At one end of the design spectrum in mechanical conveyance are the cost numbers and human function factors, both positive and negative. At the spectrum's other end is the realization that an imaginative use of a mechanical conveyor will continually entice people to use it and the spaces it accommodates. Combining both is a move in the right direction. [Richard Rush]

Acknowledgments

We wish to thank the following architects, engineers, educational institutions, government organizations, and manufacturers for their help in preparing this article: Boeing: Dean Research, George Dean; Homer Delawie Assoc.; DGA International; DMJM; Dover Corp.; Dwan; Esco Elevators; Hitachi; Jaros, Baum & Bolles; William S. Lewis, George R. Strakosch; William Kessler & Assoc.; Montgomery Elevator Co.; NEII; Otis Elevator Co.; Port Authority of New York, Dr. John J. Fruin; Schindler-Haughton Elevator; UMTA; U.S. Elevator; Westinghouse Electric Corp.; Westmont Industries; West Virginia University, Robert J. Bates, director PRT.

For product and literature information on the subject of people conveyors see p. 103.

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Products and literature

The following items are related to the Technics article on people movers. They are grouped here for the reader's convenience.

Literature

Elevator modernization system 980SA programs the elevators in a building to suit changing traffic needs. According to the company, the system senses demands, placing elevators where they are needed, thereby decreasing waiting times and improving service. The programming module fits into existing machine room space and requires no major removal of existing equipment. Otis Elevator Co.
Circle 200 on reader service card

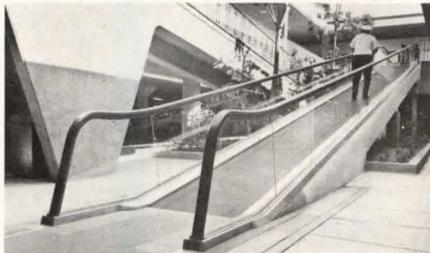
Downtown people movers called Automated Guideway Transit systems, consist of electrically propelled vehicles seating 6 to 30 passengers. The fully automated, air-supported cars, gliding along guideways above street level or within buildings, are shunted off at frequent stops. They operate either on regular schedules or, like elevators, on call. An eight-page brochure discusses the system and its capabilities. Otis Elevator Co., Transportation Technology Div.
Circle 201 on reader service card

UST Series elevators have a choice of three control systems: Simplex one-car answering "up" calls ascending and "down" calls descending; Duplex two-car, with one car stationed in the lobby and the other in an upper zone; and Varitronic, with three or more cars, dispatching cars according to demand. There are size and capacity options and a choice of ceiling, wall, and door panels. Installation information and specifications are included in a 20-page, full-color brochure. U.S. Elevator.
Circle 202 on reader service card

Elevators, escalators, power walks, ramps. Information is provided in a 24-page brochure about passenger and freight elevators—both traction and hydraulic—dumbwaiters, escalators, and power walks and ramps. Included are recommended sizes and capacities, horsepower requirements, and detail drawings that show cross-sections of installations. There are

black-and-white and full-color illustrations of typical installations. Montgomery Elevator Co.
Circle 203 on reader service card

Horizontal elevators are described in a four-page brochure that discusses vehicles, automatic controls, and guideways. Tabular information is provided on weights, dimensions, seating, capacity, and performance of models available. Vehicles with a capacity 15 to 20 times that of an automobile are said to use about five percent as much energy per passenger as a car uses. Westinghouse Transportation Div.
Circle 204 on reader service card



Passenger conveying systems Speedwalk® and Speedramp® provide smooth treadway surfaces for transportation in areas such as airports, hospitals, museums, sports arenas, and shopping centers. They operate on one level or between levels and have landings that are flush with the conveyor so that they can also be used by the handicapped. Information about power requirements, controls, materials and finishes, technical support, and operation and maintenance is provided in a four-page brochure. Westmont Industries.
Circle 205 on reader service card

Elevator and escalator planner. Updated budget estimator and planner for 1980 24K Designer Series programmable elevators and escalators covers requirements for handicapped, selection, budget pricing, aesthetics, options, maintenance/service, and design layouts. Sixteen-page brochure also includes general requirements for preparatory work by others. Schindler Haughton Elevator Corp.
Circle 206 on reader service card

Microcomputer elevator-control system Elevonic 101 is a software-based system that is said to reduce energy consumption by as much as 40 percent. It controls elevator velocity, position, direction, passenger travel and waiting time, door operation, and call assignments. The control responds to what is actually going on, not to a predetermined pattern. The system is tested and adjusted before delivery to the work site, decreasing installation time. Machine room space can also be reduced. Information about Elevonic 101 is contained in a 16-page booklet. Otis Elevator Co.
Circle 207 on reader service card

'Passenger Elevator Requirements for the Handicapped.' Sixteen-page brochure provides standards for elevators that are to be used by the handicapped, as well as other users. It is in compliance with ANSI A17.1 safety code for elevators. Specifications cover door operation and size, cab size and controls, communication

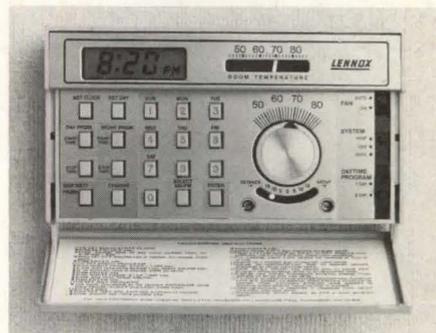
system, illumination, and other components. Copies are available, at \$2 each, from: National Elevator Industry, Inc., 600 Third Ave., New York, NY 10016.

Elevator planning guide provides cab dimensions, capacities, and pit sizes of pre-engineered passenger, hospital, and freight elevators for high-rise and low-rise buildings. Drawings show pit area, single- and two-car installations, and entrance details. Dover Corp., Elevator Div.
Circle 208 on reader service card

Other products

The Panavis audio-visual information system provides computer-controlled storage and retrieval of cassette tapes. It is a modular system that consists of video cassettes in a central library, banks of video players linking TV monitors at the viewing locations, selectors to direct loading and unloading, and a computer to control the process. The system can be used in educational facilities, cultural facilities (the system is currently in operation at the National Museum of Ethnology, Osaka, Japan), information centers, and similar installations. Marubeni America Corp.
Circle 100 on reader service card

The Timeless Collection of silk-screened wallcoverings includes 23 designs in 93 colorways, with emphasis on neutral and pastel shades. They are 27 in. wide, pretrimmed. The 47 correlated silk-screened fabrics are 54 in. wide. Manuscreens, Div. of J. Josephson, Inc.
Circle 101 on reader service card



An electronic thermostat, Model T 800 for homes, is programmable to regulate both heating and cooling cycles for a period of five or seven days. According to the manufacturer, it can replace an existing single-stage thermostat without additional wiring. Temperature settings can be varied throughout the day to meet occupants' needs and conserve energy. Liquid crystal digital display shows time. Lennox Industries, Inc.
Circle 102 on reader service card

Flexible seating for churches includes several styles of stacking chairs having wood frames and fabric upholstery. Chairs can be interlocked for continuous seating. Also available are pew seats in several styles. Sauder Manufacturing Company.
Circle 103 on reader service card
[Products continued on page 106]

Hold a meeting



in Chicago. From L.A.



Problem There's never been a construction job that didn't require some mid-course adjustments in design, schedules, or materials. And since several parties are involved, to discuss and agree to the changes, a meeting is often needed.

Which means travel costs, time lost, other projects delayed, profits eroded by reduced productivity.

Recognize that meetings are a form of communications, and you'll see ways the Bell System can help.



Time is money
—going and coming.

Solution Many architectural and engineering firms use teleconferencing to handle those inevitable follow-up problems. With significant savings in professional time, cost and trouble.

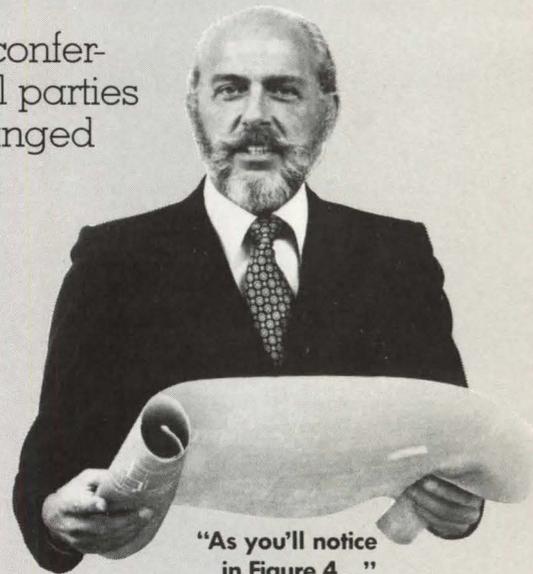
The simplest form is the conference call. One involving several parties at several locations can be arranged by an operator—or often by just pushing buttons.

With speakerphones or portable conferencing equipment, many "attend," with full give-and-take. Add facsimile machines, and you add the rapid exchange of documents, drawings, diagrams, and photos.

In any case, you've served your clients well, with ease and convenience. And travel costs go down while professional productivity and billable time go up.

If you haven't talked teleconferencing with your problem-solving Bell Account Executive lately, your company is missing something.

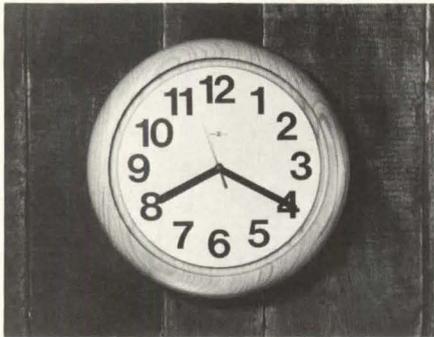
The system is the solution.



"As you'll notice
in Figure 4..."



Bell System



Contract and residential clocks in the Scultura series were designed by William Sklaroff Design Associates. The ten clocks include both wood and metal forms, with bold graphics, and all have quartz battery movements said to be accurate to within five seconds per month. Howard Miller Clock Co.

Circle 104 on reader service card

Integrated ceilings combine with lighting and air-handling components to offer energy savings for commercial installations. Called Synercon 60, the ceiling is based on a 60" x 60" module. Lighting options include a recessed troffer with 1, 2, or 3 lamps; a pendant task lighting fixture; and luminaires. Air handling can be through ducts or plenum. Armstrong Cork Co.

Circle 105 on reader service card

Margard[™] polycarbonate sheet with a silicone hardcoat is said to offer abrasion resistance close to that of glass. It also has high impact resistance and provides sound and thermal insulation, reduced vandalism damage, and low maintenance costs. It has architectural glazing applications in schools, prison and hospital windows, and storefronts. General Electric Co.

Circle 106 on reader service card

Frugalume[™] lighting fixtures provide nighttime security for unoccupied public areas. Using 55- and 35-watt, low-pressure sodium lamps, each unit provides illumination for 3000 sq ft. Lighting can be automatically switched on when regular lighting is extinguished. Voight Lighting Industries.

Circle 107 on reader service card

The high-speed diazo whiteprinter Executive III prints up to 51 in. wide, at 45 ft per minute. Three high-wattage fluorescent lamps are the light source, with the capability of producing the equivalent of a 3000-watt mercury vapor lamp. The Ammonia Arrestor system permits use of the machine without outside venting, although conventional outside venting can be used. Standard equipment with the printer are a paper-roll compartment and paper cutter. Diazit Co., Inc.

Circle 108 on reader service card

Transportation cloth, for use on bus, railway car, airplane, and other seating, offers resistance to abrasion, soiling, stains, and light. The textured-weave fabrics include Carriage Cloth[™] (80 percent wool, 20 percent nylon), Pullman Cloth[™] (60 percent cotton, 34 percent wool, 6 percent nylon), and Zeppelin (100 percent

wool). All come in a wide choice of colors. Gretchen Bellinger, Inc.

Circle 109 on reader service card

Pagepac telephone paging system makes it possible to page from any telephone without going through the operator. The page may be directed to any or all of 24 zones, indoors or out. The person being paged can respond by talking back to the speaker, without the use of buttons or switches. The system is marketed, installed, and maintained by the local telephone company. Pagepac.

Circle 110 on reader service card

Double-security lockset Protecto-Lok[®] has a 1-in. steel deadbolt for protection against burglary, yet both deadlock and keylock can be opened with the inside knob for quick exit in an emergency. The deadbolt is made of hacksaw-resistant steel rod and has a solid steel assembly protected by a heavy-duty steel cylinder guard. The lockset comes in a variety of designs and functions. Kwikset, Div. of Emhart Industries, Inc.

Circle 111 on reader service card

Energy-conserving washfountains have water-saver sprayheads that provide adequate but reduced flow of hot water, cutting water consumption by as much as 75 percent, according to the manufacturer. Handi-Tap pushbutton provides automatic valve shutoff control adjustable from two seconds to two minutes. Bradley Corp.

Circle 112 on reader service card

Architectural glazing, consisting of two panels separated by an airtight space, has interior mullions to provide a smooth horizontal exterior window line. The EFG 502 glazing system units, measuring up to 60 sq ft, are available in a wide selection of tinted and reflective glass. According to tests, they will withstand wind pressure and structural loading conditions typical in commercial building design. PPG Industries.

Circle 113 on reader service card



The Executive Posture Model Body Chair, conforming to body contours for comfort, is available armless, or with open or closed arms. Choices of upholstery include 22 vinyls, 92 fabrics, and 9 leathers and suedes in a wide color selection. GF Business Equipment, Inc.

Circle 114 on reader service card

Sunglas[®] for windows is a slightly green-tinted glass that transmits 23 percent more light single strength than 1/8-in. bronze glass. It also cuts ultraviolet rays by 22 percent, reducing the fading effects of sunlight. Increased light transmission reduces the need for artificial light. However, by absorbing, reradiating, and reflecting the sun's rays, the company says, Sunglas stops 24 percent of the sun's heat through windows. Sunglas is available in the traditional residential single-strength window glass thickness. Ford Glass Div.

Circle 115 on reader service card

Other literature



Interior signage, from individual names and department signs to directions and directories, are included in the System 2/90 six-page brochure. Sign widths are 10 to 90 in., heights are 2, 4, 6, 8, and 12 in. There are eight mounting options. Open Plan Accessories, Inc.

Circle 209 on reader service card

'Full Circle Concept of Security' brochure tells how to protect property and personnel against fire, burglary, and attack. The company's line of security products to combat these hazards is illustrated and described. Included are safes, alarms, surveillance systems, fireproof vaults, bullet-resistant barriers, and similar products. Company also offers survey and engineering services. Diebold Inc.

Circle 210 on reader service card

Plywood and paneling, in a variety of veneers and methods of grain matching are described in a four-page brochure. Information is provided on fire-retardant construction, and there is a table of fire classification data. Detail drawings show types of panel construction. Algoma Hardwoods, Inc.

Circle 211 on reader service card

Horizontal and vertical wood blinds and frames, with 1-in. or 2-in. slots, are offered in custom lengths in any of 20 standard stains. A 12-page brochure provides technical data and specifications for 1-in. blinds, with measuring and installation information. Nanik, Div. of Wausau Metals Corp.

Circle 212 on reader service card

Red cedar mansard roofs. Four-page brochure discusses mansard roof construction using Shakertown panels. Instructions, with detail drawings, provide step-by-step procedure for applying panels to such a roof. Table indicates textures available, coverage per bundle, panel size and thickness. Shakertown Corp.

Circle 213 on reader service card

[Literature continued on page 110]

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THE READING 1110

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**IS THE FIRST AND ONLY
AUTOMATIC DOOR CLOSER
THAT OPENS
PNEUMATICALLY
WITH "0" POUNDS
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rugged, dependable closer as those door closers that successfully endured the 2,000,000-cycle test under ANSI A156.4-72. It meets the opening force requirements established by ANSI A117.1 and the closing requirements of all other standards.

Get all the facts today about the Reading 1110 "Access Free"...the first and only auto-

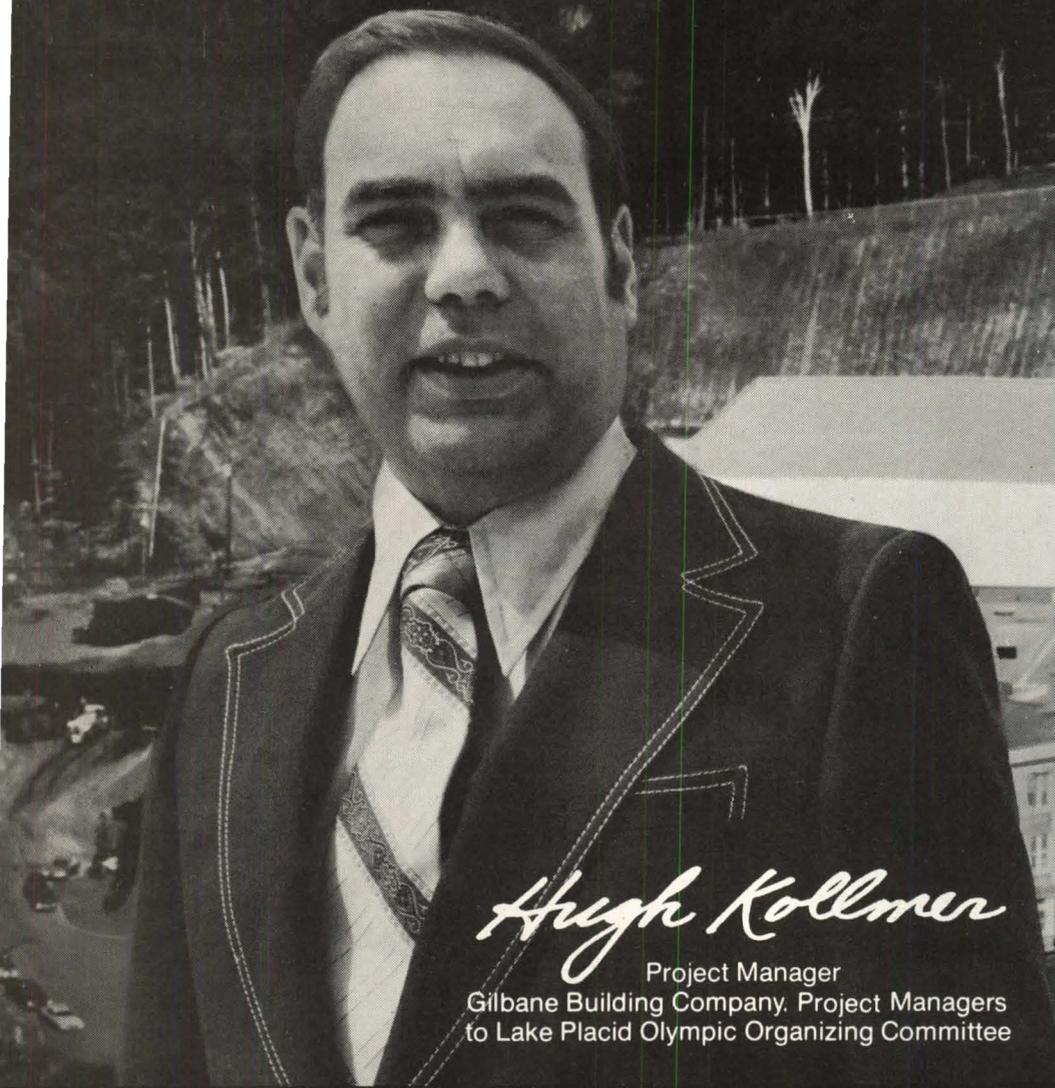
matic door closer that opens pneumatically with "0" pounds opening force. Phone (215) 267-3381 or write.



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"One of the most versatile performers at the Winter Olympics is **STYROFOAM*** brand insulation!"



Hugh Kollmer

Project Manager
Gilbane Building Company, Project Managers
to Lake Placid Olympic Organizing Committee

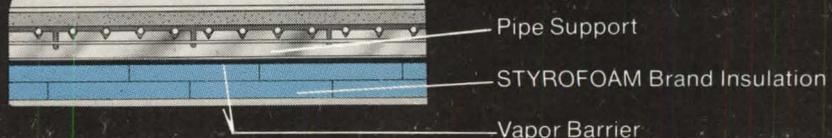
"STYROFOAM brand insulation is under, around or above virtually every structure built for the 1980 Winter Olympics in Lake Placid, New York. It was chosen because of proven performance in countless commercial and residential installations over the past 20 years.

"Sure, the architects and engineers had a choice of many other types of insulating board. But STYROFOAM brand insulation was the choice, for its long-term performance and proven value. Especially when we considered its high insulation value,



superior moisture resistance and ability to withstand severe freeze-thaw conditions over long periods.

"It's under the Bobsled and Luge Runs to help keep cooling fluid and tubing at constant temperatures which provide a more uniform surface. Four inches of STYROFOAM is under the ice in all three skating arenas, to deliver consistent surfaces and prevent freeze-thaw damage to the concrete slab. It's in the walls of all ten Athlete's Residences, in the IRMA (Insulated Roof Membrane Assembly) system for roofs of the Ski Chalet and



Hellmuth, Obata & Kassabaum, Inc., Architects for Field House and Arena



skating arenas, and was even used in retrofitting the historic 1932 Olympic Arena.

"The Winter Olympics is the place for top performers. That's why STYROFOAM brand insulation was chosen."

STYROFOAM brand insulation has also been chosen for IRMA system applications by the builders of the Lake Placid Hilton Hotel, Lake Placid Memorial Hospital and Lake Placid High School.

When you compare cost with documented long-term insulating performance, you'll discover that STYROFOAM brand insulation is actually a better value than lower-priced insulating board.

So-called bargain types like "beadboard" simply can't compare to the real value of STYROFOAM.

STYROFOAM brand insulation is the proven performer for energy savings in all types of commercial, industrial and institutional buildings. Ask your Dow representative for information about the performance of STYROFOAM at the Winter Olympics. Or write The Dow Chemical Company, STYROFOAM Brand Insulation, Dept. H58, Midland, MI 48640.



*Trademark of The Dow Chemical Company

Circle No. 322, on Reader Service Card

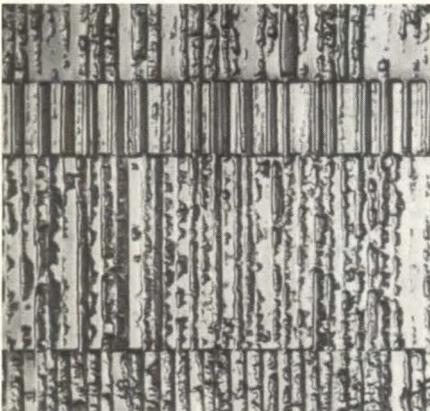
WARNING: STYROFOAM brand insulation is combustible and should be properly installed. A gypsum board interior finish should be used in commercial construction. For roofing applications STYROFOAM should be provided with an adequate protection. For specific instructions see Dow literature available from your supplier or from Dow.

'27 New Commercial Ideas in Cedar' illustrates shopping centers, schools, restaurants, office buildings, and banks where red cedar shingles and shakes were used. Photos in the eight-page brochure are in full color, and with each there is a brief description which includes architects by whom the buildings were designed. Red Cedar Shingle & Handsplit Shake Bureau.

Circle 214 on reader service card

Color selection. Brochure describes a color "library" for design professionals that includes selector book, color deck of chips, and two looseleaf binders of tear-out samples—nine of each color. Other services and materials available, such as wallcoverings and maintenance coatings, are also described. Glidden Coatings & Resins, Div. of SCM Corp.

Circle 215 on reader service card



'Embossed Metal' brochure, 12 pages, provides color photographs and drawings of embossed panels in stainless steel, copper, bronze, and clear or bronze anodized aluminum. Data and specifications are included for panels, sheets, doors, elevators, and curved walls. Typical installations are shown in color. Forms & Surfaces.

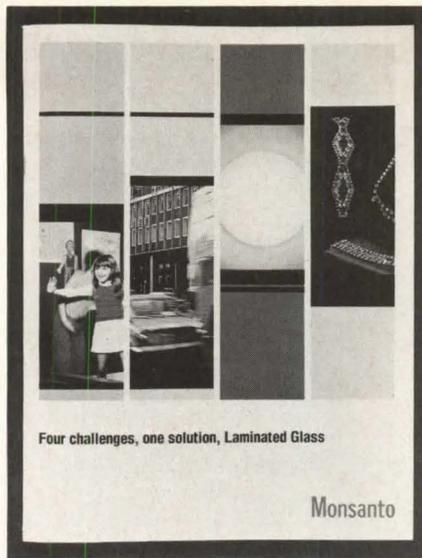
Circle 216 on reader service card

Aluminum Planar® ceiling systems, discussed in a 12-page brochure, consist of carriers suspended from conventional wire hangers into which aluminum panels are snapped. A hinge-and-latch assembly can be installed to provide access to the plenum. The system offers design flexibility, with virtually no size limitations. Panels are available in several low-gloss standard colors or custom colors subject to minimum run. Also discussed is the Plenum Mask®, a ceiling design that screens services within the plenum. Alcan Building Products, Div. of Alcan Aluminum Corp.

Circle 217 on reader service card

Chem-Trete® Silane, a weatherproofing solution for concrete and masonry surfaces, is described in an eight-page brochure. The product reacts chemically with the surface to provide liquid water repellancy while still being permeable to water vapor. Magcobar Div., Dresser Industries.

Circle 218 on reader service card



Laminated architectural glass. A 20-page, four-color brochure discusses the benefits of laminated architectural glass: safety, sound control, solar control, and security. It provides a checklist of building areas where safety glazing can be installed. Tabular data are provided for sound control, heat, and light control characteristics. Color chart shows tints available. Monsanto.

Circle 219 on reader service card

Versacor® finishes for metal buildings. A multilayer finish system, which resists corrosion, color change, and chalking and protects architectural metal, is described in a 24-page brochure. Included are details of environmental testing procedures and aesthetic considerations. Full-color photographs show typical applications of the coating on walls and roofs. H.H. Robertson Co., U.S. Building Products.

Circle 220 on reader service card

Acrylic water-reducible coatings to protect metal surfaces come in 12 semigloss finishes and two rust-inhibitive primers. Rust-O-Crylic coatings are also available for use on concrete and masonry walls, wood structures, and structural steel. Technical information about the coatings is provided in an eight-page brochure. Rust-Oleum Corp.

Circle 221 on reader service card

Calendar for 1980, designed by Massimo Vignelli and selected by the Museum of Modern Art for its permanent graphic design collection, is printed in black and white and measures 48" x 36". The calendar is being offered at \$13 by Cromwell & Co., Nashville, Tn, but is available to architects and interior designers for \$10. For a discount coupon to be used when ordering the calendar, write to: Stendig International, 410 E. 62 St., New York, NY 10021.

Windows and gliding doors. Technical booklet has a reference chart of glazing options available for windows and gliding doors. Also included in the 52-page brochure is information, with charts and drawings, on insulating values, heat gain, and air infiltration. Full-color photographs show the many window and gliding door applications. Andersen Corp.

Circle 222 on reader service card

Slide/tape talks by seven architects are listed and described in a four-page catalog. Architects and topics are: Alison & Peter Smithson, *Signs of Occupancy*; Sir John Summerson, *At Sir John Soane's Museum*; Philip Dowson, *A Question of Scale*; Nicholas Grimshaw, *Industrial Architecture*; Peter Cook, *Melting Architecture*; Richard Rogers, *Genesis of the new Lloyd's Underwriting Room*; and Cedric Price, *Technology is the Answer, but what was the Question*. A second series will be available in January. Copies of the catalog, "Architecture and Design, Library of Slide/Tape Talks" are available from: World Microfilm Publications, Pidgeon Audio Visual, 62 Queen's Grove, London, NW8 6ER, England.

Office privacy. "Taking the Guesswork Out of Office Acoustics" discusses in nontechnical terms new techniques available to analyze acoustical/speech privacy between enclosed or open-plan offices. This article describes the use of worksheets and an interactive computer program that rapidly models office layouts to evaluate accurately the acoustical implications of each design element during preliminary planning. Bolt Beranek and Newman, Inc.

Circle 223 on reader service card

Roofing brochure describes and illustrates several types of asphalt roofing shingles: Dimensional Shake, Rustic, Sol-Seal, Rustic Shake, Fungus-Resistant, and asphalt with fiber glass mat. Technical information includes drawings of shingle profiles and data about rolled products. There are full-color illustrations showing colors available for each type and houses where the products have been used. The Celotex Corp.

Circle 224 on reader service card

'Heat, Cool, and Save Energy with a Heat Pump.' How heat pumps operate to heat and cool is explained in a 16-page booklet. Schematic drawings show an installation, the cooling cycle, and the heating cycle. Tables cover typical costs of installing, and heating and cooling energy for nine U.S. cities. A glossary explains terms used. Air-Conditioning and Refrigeration Institute.

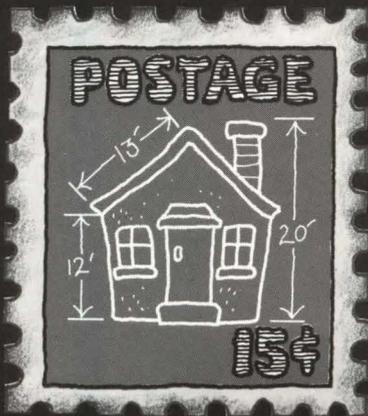
Circle 225 on reader service card

Classpak™ luminaires for schools, offices, and institutions are high-intensity discharge fixtures that provide energy-efficient virtually shadow-free indirect lighting. The luminaires accommodate high-pressure sodium, metal halide, or mercury lamps of various wattages. They can be mounted on ceilings that slope up to 15 degrees without special hardware. Johns-Manville Service Center, Holophane.

Circle 226 on reader service card

'Watergy' is a service for controlling energy costs by decreasing water losses in cooling towers and reducing water-related corrosion of both chillers and boilers. The company points out, in a four-page brochure, that corrosion not only damages equipment, but even thin deposits create an insulating layer that results in loss of heat transfer. Reducing these deposits makes both heating and cooling equipment more efficient. Nalco Chemical Co.

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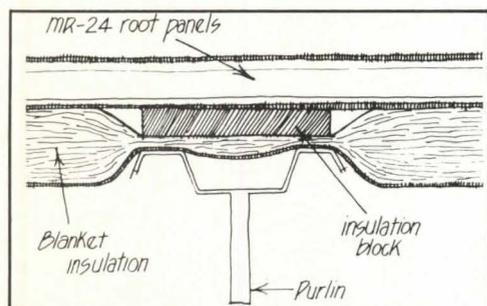
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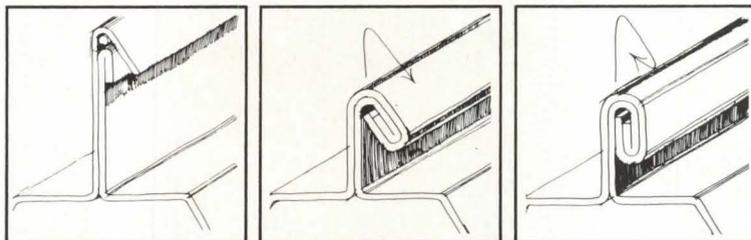


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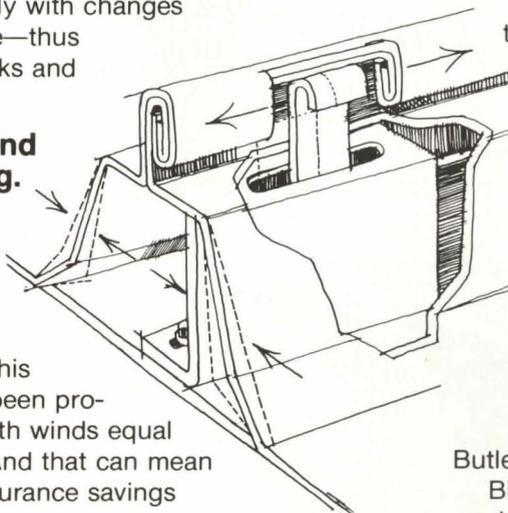
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Annual index January- December 1979

Articles are listed chronologically by subject matter followed by an alphabetical list of contributing authors and architects.

Architectural history

Review of the 70's (Sept.), pp. 130-138.
Review of the 70's: Playing with a full decade (Dec.), pp. 49-55.
Review of the 70's: Book of lists (Dec.), pp. 56-59.

Architectural research

Merchandising Architecture: The Architectural Implications and Applications of Amusement Parks (Louis Wasserman), P/A first award (Jan.), pp. 94-95.
West 42nd Street Study: The Bright Light Zone (City University of New York, Graduate School and University Center), P/A award (Jan.), pp. 96-97.
Livable Urban Streets (Donald Appleyard, Institute of Urban and Regional Development, University of California, Berkeley), P/A award (Jan.), p. 98.

Private Space: Habitability of Apartments for the Elderly (Sandra Howell and Gayle Epp, Massachusetts Institute of Technology Design Evaluation Project), P/A award (Jan.), p. 99.

New ANSI A117.1 Standard Research (Edward Steinfeld), P/A award (Jan.), p. 100.

Environments for play and child care: Case studies (Uriel Cohen, Tim McGinty, Gary T. Moore, CDC Inc. and Center for Architecture and Urban Planning Research, University of Wisconsin-Milwaukee), P/A cit. (Jan.), p. 101.

Protecting Solar Access: A Guidebook for Planners (American Planning Association), P/A cit. (Jan.), p. 102.

Planning Solar Neighborhoods (Living Systems), P/A cit. (Jan.), p. 103.

Architectural theory

Introduction: The 26th P/A Awards (Jan.), pp. 65-67.
Foster Associates (Feb.), pp. 59-64.
Introduction: The energy function (April), pp. 69-70.
Passive general conservation (April), pp. 80-83.
Active general conservation (April), pp. 88-91.
Introduction: The energy form (April), pp. 116-119.
Conclusion: Energy-conscious design (April), pp. 144-148.
Introduction: Monumentality (May), pp. 87-89.
Introduction: Small inspirations (June), p. 57.
Introduction: Corporate form-givers (July), pp. 55-59.
Introduction: World Savings & Loan Assoc.

branch banks (Aug.), p. 53.
Introduction: English architecture (Aug.), pp. 66-67.
Introduction: Review of the 70s/Preview of the 80s (Sept.), p. 129.
Review of the 70s (Sept.), pp. 130-138.
Introduction: Portfolio (Sept.), p. 139.
Preview of the 80s (Sept.), pp. 174-180.
Conclusion: Reflections on a past, projections toward a future (Sept.), p. 181.
Introduction: Low-rise housing (Oct.), p. 49.
Introduction: Preservation & remodeling (Nov.), p. 65.
Review of the 70s: Playing with a full decade (Dec.), pp. 49-55.
Review of the 70s: Book of lists (Dec.), pp. 56-59.
Meaning in Post-Modern Architecture (Dec.), pp. 84-87.
Conclusion: Beyond fragments (Dec.), pp. 88-89.

Barrier-free design

New ANSI A117.1 Standard Research (Edward Steinfeld), P/A award (Jan.), p. 100.

Bridges

Ruck-A-Chucky Bridge (T.Y. Lin International, Hanson Engineers, Inc., Skidmore, Owings & Merrill), P/A first award (Jan.), p. 68.

Commercial/shops

The Plaza Pasadena (Charles Kober Associates), P/A cit. (Jan.), p. 92.
Sunar showroom, New York (June), pp. 86-89.
World Savings & Loan Assoc. branch office, Santa Ana, Ca (Aug.), pp. 54-57.
World Savings & Loan Assoc. branch office, Santa Cruz, Ca (Aug.), pp. 58-61.
World Savings & Loan Assoc. branch office, Palo Alto, Ca (Aug.), pp. 62-63.
World Savings & Loan Assoc. branch office, Market St., San Francisco (Aug.), pp. 64-65.
Sunar showrooms, Los Angeles and Chicago (Sept.), pp. 148-153.
Esprit de Corp showroom and apartment, New York (Sept.), pp. 164-167.
The Cook's Spoon, Aurora, Il (Sept.), pp. 170-171.

Franks for the Memory, San Francisco (Sept.), pp. 172-173.
Grand Concourse, Pittsburgh, Pa (Nov.), pp. 66-69.

Editorials

Annual report to the subscription-holders (Jan.), p. 7.
Architecture executed (Feb.), p. 6.
Legacy of buildings (March), p. 7.
The energy issue (April), p. 8.
Publication rights (May), p. 7.
Testing beliefs against experience (June), p. 6.
Ethics I: Profit or doom? (July), p. 7.
Ethics II: Getting our expertise together (Aug.), p. 6.
Ethics III: Wasting not (Sept.), p. 7.
Ethics IV: Occupied lands (Oct.), p. 6.
Ethics V: Preservation for whom? (Nov.), p. 7.
Ethics VI: Looking good (Dec.), p. 8.

Educational facilities

College of Architecture expansion, University of Nebraska-Lincoln (Bahr Vermeer & Haecker), P/A cit. (Jan.), p. 78.
Jackie Robinson Middle School, New Haven, Ct (Feb.), pp. 68-72.
California's earthquake-resistant schools (Feb.), pp. 73-79.
Cary Arboretum, Millbrook, NY (April), pp.

124-127.
Legal Research Center, Portland, Or (June), pp. 74-79.

Energy

Site 1 state office building, Sacramento (California Office of the State Architect), P/A cit. (Jan.), p. 80.
Protecting Solar Access: A Guidebook for Planners (American Planning Association), P/A cit. (Jan.), p. 102.
Planning Solar Neighborhoods (Living Systems), P/A cit. (Jan.), p. 103.
Introduction: The energy function (April), pp. 69-70.
Energy law (April), pp. 71-73.
Energy economics (April), pp. 74-75.
Ralph Knowles' solar envelope (April), pp. 76-79.
Passive general conservation (April), pp. 80-83.
Earth architecture (April), pp. 84-87.
Active general conservation (April), pp. 88-91.
Interior technics: Energy-conservative lighting (April), pp. 92-97.
Active solar (April), pp. 98-105.
Principles of passive solar heating (April), pp. 106-109.
First Village, Sante Fe, NM (April), pp. 110-115.
Introduction: The energy form (April), pp. 116-119.
Pitkin County Airport, Aspen, Co (April), pp. 120-123.
Cary Arboretum, Millbrook, NY (April), pp. 124-127.
Mary Medina building, Taos, NM (April), pp. 128-131.
Downtown Airline Bus Terminal, San Francisco, Ca (April), pp. 132-133.
Energy Concept Office Building, Houston, Tx (April), pp. 134-135.
Honeywell Plaza, Minneapolis (April), pp. 136-139.
Stendig International, Inc., Edison, NJ (April), pp. 140-141.
Farm housing near Pembroke, Ga (April), pp. 142-143.
Conclusion: Energy-conscious design (April), pp. 144-148.
Solar design (Nov.), pp. 102-107.

Government buildings

Site 1 state office building, Sacramento (California Office of the State Architect), P/A cit. (Jan.), p. 80.
Minnesota Capitol Government and History Centre (C.F. Murphy Associates), P/A cit. (Jan.), p. 86.
Homage to Catalonia, Franco-Spanish border (May), pp. 90-91.
Dallas City Hall (May), pp. 102-105.
The Governor Nelson A. Rockefeller Empire State Plaza, Albany, NY (May), pp. 106-109.
North Patrol Division Facility, Kansas City, Mo (June), pp. 58-61.
Hillingdon Civic Centre, Uxbridge, England (Aug.), pp. 74-79.
State Capitol, Sacramento, Ca (Nov.), pp. 88-93.

Housing

Expedition house for the Brooklyn Museum Theban Expedition, Egypt (Esherick Homsey Dodge & Davis), P/A award (Jan.), pp. 70-71.
East Crescent Complex, Arcosanti Community, Az (Paolo Soleri), P/A cit. (Jan.), p. 81.
Farm/house, McGraw, NY (John Ostlund & Val Warke), P/A cit (Jan.), p. 82.
House 11a, Palo Alto (Peter Eisenman), P/A cit.

(Jan.), p. 84.

Farm-villa, Taormina, Sicily, Italy (Fred Koetter & Susie Kim), P/A cit. (Jan.), p. 88.

Summer residence, Elba, Italy (St. Florian & Howes Associates), P/A cit. (Jan.), p. 90.

Private Space: Habitability of Apartments for the Elderly (Sandra Howell & Gayle Epp), P/A award (Jan.), p. 99.

Active solar (April), pp. 98–105.

First Village, Santa Fe, NM (April), pp. 110–115.

Farm housing near Pembroke, Ga (April), pp. 142–143.

Apartment in New York (May), pp. 114–117.

BumpZoid additions, Connecticut (June), pp. 80–85.

Bennett apartment, New York (July), pp. 74–79.

Esprit de Corp showroom and apartment, New York (Sept.), pp. 164–167.

Art collector's residence, New York (Sept.), pp. 168–169.

Introduction: Low-rise housing (Oct.), p. 49.

Marcus Garvey Park Village, Brooklyn, NY (Oct.), pp. 50–53.

Pacific Heights Townhouses, San Francisco (Oct.), pp. 54–59.

Ghent Square Townhouses, Norfolk, Va (Oct.), pp. 60–63.

Lovett Square Condominiums, Houston, Tx (Oct.), pp. 64–67.

Housing, Shushtar New Town, Iran (Oct.), pp. 68–71.

Innovations in Housing Awards (Oct.), pp. 76–81.

Preservation in China (Nov.), pp. 74–79.

Nilsson residence, Los Angeles (Dec.), pp. 60–65.

Spear residence, Miami, Fl (Dec.), pp. 66–71.

Crowell residence, Vermont (Dec.), pp. 72–75.

Industrial buildings

Morgenstern warehouse, Los Angeles (June), pp. 66–69.

Mid-Atlantic Toyota Distributors Warehouse and Offices, Glen Burnie, Md (July), pp. 62–65.

Switching facility, Columbus, In (July), pp. 66–69.

Illinois Bell Telephone, Chicago and Northbrook (July), pp. 70–73.

Buenos Aires Color TV Production Center (July), pp. 78–81.

John F. Otto Service Center, Sacramento, Ca (Nov.), pp. 80–83.

Interior design

Prudential Insurance Company executive offices, Boston (Feb.), pp. 65–67.

Interior technics: Energy-conservative lighting (April), pp. 92–97.

Apartment in New York (May), pp. 114–117.

Sunar showroom, New York (June), pp. 86–89.

Bennett apartment, New York (July), pp. 74–77.

Designer's Saturday (Sept.), p. 85.

Introduction: Review of the 70's/Preview of the 80's (Sept.), p. 129.

Review of the 70's (Sept.), pp. 130–138.

Introduction: Portfolio (Sept.), p. 139.

FDM Productions and Evans Partnership Owners/Builders offices, New York (Sept.), pp. 140–143.

Bray-Schaible Design, Inc. and D'Urso Design offices, New York (Sept.), pp. 144–147.

Sunar showrooms, Los Angeles and Chicago (Sept.), pp. 148–153.

First Ave. Squash Club, New York (Sept.), pp. 154–155.

BEA Offices, New York (Sept.), pp. 156–159.

California Redwood Association offices, San Francisco (Sept.), pp. 160–161.

Yves Saint Laurent Enterprises offices, New York (Sept.), pp. 162–163.

Esprit de Corp showroom and apartment, New York (Sept.), pp. 164–167.

Art collector's residence, New York (Sept.), pp. 168–169.

The Cook's Spoon, Aurora, Il (Sept.), pp. 170–171.

Franks for the Memory, San Francisco (Sept.), pp. 172–173.

Preview of the 80's (Sept.), pp. 174–180.

Conclusion (Sept.), p. 181.

Perchtoldsdorf town hall & Vienna travel agency (Dec.), pp. 76–83.

Law

Landmark statutes-part II (Jan.), p. 126.

Architects' liability for construction safety (Feb.), p. 98.

Statute of limitations for fraud-based suits (March), p. 104.

Zoning variance criteria (June), p. 91.

Formula for overhead costs in delay claims (Aug.), p. 105.

Zoning changes affecting construction (Sept.), p. 213.

Resolution of contract disputes (Nov.), p. 112.

Medical facilities

Hall Mercer Children's Center, McLean Hospital, Belmont, Ma (March), pp. 76–83.

Mary Medina building, Taos, NM (April), pp. 128–131.

Carter Clinic, Roseburg, Or (June), pp. 62–64.

Mixed-use buildings

East Crescent Complex, Arcosanti Community, Az (Paolo Soleri), P/A cit. (Jan.), p. 81.

The Governor Nelson A. Rockefeller Empire State Plaza, Albany, NY (May), pp. 106–109.

Hillingdon Civic Centre, Uxbridge, England (Aug.), pp. 74–79.

Museum, exhibition and cultural facilities

Expedition house for the Brooklyn Museum Theban Expedition, Egypt (Esherrick Homsey Dodge & Davis) P/A award (Jan.), p. 70.

The Atheneum (Richard Meier & Associates), P/A award (Jan.), pp. 72–73.

San Antonio Museum of Art (Cambridge Seven Associates), P/A award (Jan.), pp. 74–75.

Fargo-Moorhead Cultural Center Bridge (Michael Graves), P/A award (Jan.), pp. 76–77.

Baltimore Aquarium (Cambridge Seven Associates), P/A cit. (Jan.), p. 83.

Minnesota Capitol Government & History Centre (C.F. Murphy Associates), P/A cit. (Jan.), p. 86.

Sainsbury Centre for Visual Arts, Norwich, England (Feb.), pp. 49–58.

National Museum of Ethnology, Osaka, Japan (May), pp. 92–97.

Sackler Wing, Metropolitan Museum of Art, New York (May), pp. 98–101.

Sunar showroom, New York (June), pp. 86–89.

Sunar showrooms, Los Angeles and Chicago (Sept.), pp. 148–153.

Esprit de Corp showroom and apartment, New York (Sept.), pp. 164–167.

Pavillon de l'Esprit Nouveau, Bologna, Italy (Nov.), pp. 70–73.

Mechanics Hall, Worcester, Ma (Nov.), pp. 84–87.

Offices

Prudential Insurance Company executive offices, Boston (Feb.), pp. 65–67.

Energy Concept Office Building, Houston, Tx

(April), pp. 134–135.

Honeywell Plaza, Minneapolis (April), pp. 136–139.

Stendig International, Edison, NJ (April), pp. 140–141.

PPG Industries world headquarters, Pittsburgh, Pa (July), pp. 60–61.

Mid-Atlantic Toyota Distributors Warehouse and Offices, Glen Burnie, Md (July), pp. 62–65.

FDM Productions and Evans Partnership Owners/Builders offices, New York (Sept.), pp. 140–143.

Bray-Schaible Design, Inc. and D'Urso Design offices, New York (Sept.), pp. 144–147.

BEA Offices, New York (Sept.), pp. 156–159.

California Redwood Association offices, San Francisco (Sept.), pp. 160–161.

Yves Saint Laurent Enterprises offices, New York (Sept.), pp. 162–163.

Interior technics: Office acoustics (Sept.), pp. 198–205.

John F. Otto Service Center, Sacramento, Ca (Nov.), pp. 80–83.

Recreational facilities

Merchandising Architecture: The Architectural Implications and Applications of Amusement Parks (Louis Wasserman), P/A first award (Jan.), pp. 94–95.

Environments for play and child care: Case studies (Uriel Cohen, Tim McGinty, Gary T. Moore, CDC Inc. and Center for Architecture and Urban Planning Research, University of Wisconsin-Milwaukee), P/A cit. (Jan.) p. 101.

Pavillon Soixante-dix, St. Sauveur, Quebec (March), pp. 70–75.

Cooper Field Bathhouse, Trenton, NJ (June), pp. 70–73.

First Ave. Squash Club, New York (Sept.), pp. 154–155.

Religious buildings

Parochial Church of Riola, Italy (March), pp. 57–63.

Monastery of St. Clare, Langhorne, Pa (March), pp. 64–69.

Restoration and remodeling

Apartment in New York (May), pp. 114–117.

World Savings & Loan Assoc. branch office, Market St., San Francisco (Aug.), pp. 64–65.

Byker Redevelopment, Newcastle-upon-Tyne, England (Aug.), pp. 68–73.

Introduction: Preservation & remodeling (Nov.), p. 65.

Grand Concourse, Pittsburgh, Pa (Nov.), pp. 66–69.

Pavillon de l'Esprit Nouveau, Bologna, Italy (Nov.), pp. 70–73.

Preservation in China (Nov.), pp. 74–79.

John F. Otto Service Center, Sacramento, Ca (Nov.), pp. 80–83.

Mechanics Hall, Worcester, Ma (Nov.), pp. 84–87.

State Capitol, Sacramento, Ca (Nov.), pp. 88–93.

Perchtoldsdorf town hall & Vienna travel agency (Dec.), pp. 76–83.

Technics

Loadbearing masonry (Feb.), pp. 86–95.

Interior technics: Resilient flooring (March), pp. 90–95.

Metrication (March), pp. 96–99.

Interior technics: Energy-conservative lighting (April), pp. 92–97.

Institutional kitchens (May), pp. 126–131.

Interior technics: Information storage and retrieval systems (June), pp. 92–96.

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Loadbearing wood construction (July), pp. 90-99.
Interior technics: Plastic laminates (Aug.), pp. 89-93.

Staining of glass (Aug.), pp. 94-99.

Interior technics: Office acoustics (Sept.), pp. 198-205.

Aerospace technology transfer (Oct.), pp. 86-91.

Preservation technology (Nov.), pp. 100-101.
People movers (Dec.), pp. 92-99.

Technics (Specifications clinic)

Masterformat (Jan.), p. 120.

Using section 01010 summary of work (Feb.), p. 85.

Specifying for long-term economy (March), p. 89.

Changed formulas and private labels (July), p. 86.

The furnishings game (Sept.), p. 197.

Interior demolition (Nov.), p. 99.

Some afterthoughts about addenda (Dec.), p. 91.

Urban design and planning

West 42nd St. Study: The Bright Light Zone (City University of New York, Graduate School and University Center), P/A award (Jan.), pp. 96-97.

Livable Urban Streets (Donald Appleyard, Institute of Urban and Regional Development, University of California, Berkeley), P/A award (Jan.), p. 98.

"Temporary Paradise: A Look at the Special Landscape of the San Diego Region" (Donald Appleyard and Kevin Lynch), P/A award (Jan.), pp. 104-105.

"Change without Loss": San Francisco Residential Zoning Study (Daniel Solomon, College of Environmental Design, U.C. Berkeley, The San Francisco Department of City Planning), P/A award (Jan.), p. 106.

Communication Devices for Southwest Corridor Project (Wallace, Floyd, Ellenzweig, Moore, Inc.), P/A award (Jan.), p. 107.

Jondi Shahpour New Community (Skidmore, Owings & Merrill, The Mandala Collaborative), P/A award (Jan.), pp. 108-109.

North-25 Development Process (Department of Planning and Development, City of Trenton), P/A award (Jan.), pp. 110-111.

Pennsylvania Ave., Washington, DC (May), pp. 110-113.

Pacific Heights Townhouses, San Francisco (Oct.), pp. 54-59.

Regional Urban Design Assistance Teams (Oct.), pp. 72-75.

Contributing authors

Balcomb, J. Douglas: Principles of passive solar heating (April), pp. 106-109.

Dunster, David: Byker Redevelopment, England (Aug.), pp. 68-73.

Eberhard, John P.: Energy law (April), pp. 71-73.

Griffin, C.W.: Energy economics (April), pp. 74-75.

Maxwell, Robert: Hillingdon Civic Centre, England (Aug.), pp. 74-79.

Morgan, William: Earth architecture (April), pp. 84-87.

Oddo, Sandra: Active solar (April), pp. 98-105.

Percy, Sen. Charles H.: Energy law (April), pp. 71-73.

Toker, Franklin K.B.S.: PPG Industries world headquarters, Pittsburgh, Pa (July), pp. 60-61.

Treib, Marc: National Museum of Ethnology,

Japan (May), pp. 92-97.

Tufts, Thomas Clark: Metrication (March), pp. 96-99.

Architects, designers, engineers, planners

Aalto, Alvar: Parochial Church of Riola, Italy (March), pp. 57-63.

Ambasz, Emilio: Farm housing near Pembroke, Ga (April), pp. 142-143.

American Planning Association: Protecting Solar Access, P/A cit. (Jan.), p. 102.

Anderson Notter Finegold Inc.: Mechanics Hall, Worcester, Ma (Nov.), pp. 84-87.

Appleyard, Donald & Associates: Livable Urban Streets, P/A award (Jan.), pp. 104-105.

The Architects Taos: Mary Medina building, Taos, NM (April), pp. 128-131.

Arquitectonica: Spear residence, Miami, Fl (Dec.), pp. 66-71.

Bahr Vermeer & Haecker: University of Nebraska College of Architecture expansion, P/A cit. (Jan.), pp. 78-79.

Barnes, Edward Larrabee: IBM regional offices, NY (July), pp. 55-59.

Becket, Welton Associates: State Capitol, Sacramento, Ca (Nov.), pp. 88-93.

Bennett, Ward: Bennett apartment, NY (July), pp. 74-77.

Boots-Smith & Associates: Switching facility, Columbus, In (July), pp. 66-69.

Bray-Schaible Design, Inc.: Bray-Schaible and D'Urso Design offices, NY (Sept.), pp. 144-147.

de Brer, Jacques: Downtown Airline Bus Terminal, San Francisco (April), pp. 132-133.

Broome, Oringdulph, O'Toole & Rudolf: Legal Research Center, Portland, Or (June), pp. 74-79.

BumpZoid: House additions, Ct (June), pp. 80-85.

Cambridge Seven Associates, Inc.: San Antonio Museum of Art, P/A award (Jan.), pp. 74-75; Baltimore Aquarium, P/A cit. (Jan.), pp. 83.

Cannady, Wm. T. & Associates: Lovett Square Condominiums, Houston (Oct.), pp. 64-67.

Caudill Rowlett Scott: Energy Concept Office Building, Houston (April), pp. 134-135; Switching facility, Columbus, In (July), pp. 66-69.

CDC Inc.: Environments for play and child care, P/A cit. (Jan.), p. 101.

Center for Architecture & Urban Planning Research, University of Wisconsin-Milw. (see CDC Inc.)

City University of NY Graduate School and University Center: The West 42nd St. Study, P/A award (Jan.), pp. 96-97.

Cohen, Stuart E. (see Sisco/Lubotsky Associates, Ltd.)

Copland Finholm Hagman Yaw: Pitkin County Airport, Aspen, Co (April), pp. 120-123.

Dagit/Saylor: Monastery of St. Clare, Langhome, Pa (March), pp. 64-69.

Daroff Designs: Prudential Insurance Co. offices, Boston (Feb.), pp. 65-67.

Dept. of Planning & Development, City of Trenton: North-25 Development Process, P/A award (Jan.), pp. 110-111; Cooper Field Bathhouse, Trenton, NJ (June), pp. 70-73.

Design Collaborative: NY apartment (May), pp. 114-117.

Devine James Labinski Myers: North Patrol Division Facility, Kansas City (June), pp. 58-61.

Diba, Kamran: Housing, Shushtar New Town, Iran (Oct.), pp. 68-71.

Dubin, Fred S.: Passive general conservation

(April), pp. 80-83; Active general conservation (April), pp. 88-91; Plant Science Building, Cary Arboretum, NY (April), pp. 124-127.

D'Urso Design (see Bray-Schaible Design, Inc.)

Eisenman, Peter: House 11a, Palo Alto, P/A cit. (Jan.), pp. 84-85.

Ellis, John (see de Brer, Jacques).

Environmental Planning & Research, Inc.: California Redwood Association offices, San Francisco (Sept.), pp. 160-161.

Epp, Gayle (see Howell, Sandra).

Erskine, Ralph: Byker Redevelopment, England (Aug.), pp. 68-73.

Esherick Homsey Dodge & Davis: Expedition house for Brooklyn Museum Theban Expedition, P/A award (Jan.), pp. 70-71; World Savings & Loan Assoc. branch office, Santa Cruz, Ca (Aug.), pp. 58-61.

Fernau, Richard & Associates: Franks for the Memory, San Francisco (Sept.), pp. 172-173.

Foster Associates: Sainsbury Centre for Visual Arts, England (Feb.), pp. 49-58; Firm profile (Feb.), pp. 59-64.

Franzen, Ulrich: Philip Morris building, NY (July), pp. 55-59.

Gehry, Frank O. & Associates: Mid-Atlantic Toyota Distributors Warehouse and Offices, Md (July), pp. 62-65.

Gillette, Richard: Art collector's residence, NY (Sept.), pp. 168-169.

Graves, Michael: Fargo-Moorhead Cultural Center Bridge, P/A award (Jan.), pp. 76-77; Sunar showroom, NY (June), pp. 86-89; Sunar showrooms, Los Angeles and Chicago (Sept.), pp. 148-153.

Gwathmey Siegel Architects: FDM Productions and Evans Partnership Owners/Builders offices, NY (Sept.), pp. 140-143.

Hammel Green Abrahamson, Inc.: Honeywell Plaza (April), pp. 136-139.

Hanson Engineers Inc.: Ruck-A-Chucky Bridge, Ca, P/A first award (Jan.), pp. 68-69.

Harper & Kemp: Dallas City Hall (May), pp. 102-105.

Harrison & Abramovitz: Nelson A. Rockefeller Empire State Plaza, Albany, NY (May), pp. 106-109.

Holabird & Root: Illinois Bell Telephone, Chicago and Northbrook (July), pp. 70-73.

Hollein, Hans: Perchtoldsdorf town hall and Vienna travel agency (Dec.), pp. 76-83.

Howell, Sandra: Private Space-Habitability of Apartments for the Elderly, P/A award (Jan.), p. 99.

Institute for Architecture and Urban Studies (see Urban Development Corp.)

Johnson, Jed and Judith Hollander, Associates: Yves St. Laurent Enterprises offices, NY (Sept.), pp. 162-163.

Johnson, Philip/John Burgee: AT&T headquarters, NY (July), pp. 55-59; PPG Industries world headquarters, Pittsburgh (July), pp. 60-61.

Joyner/Bernardo Associates: Stendig International, Edison, NJ (April), pp. 140-141.

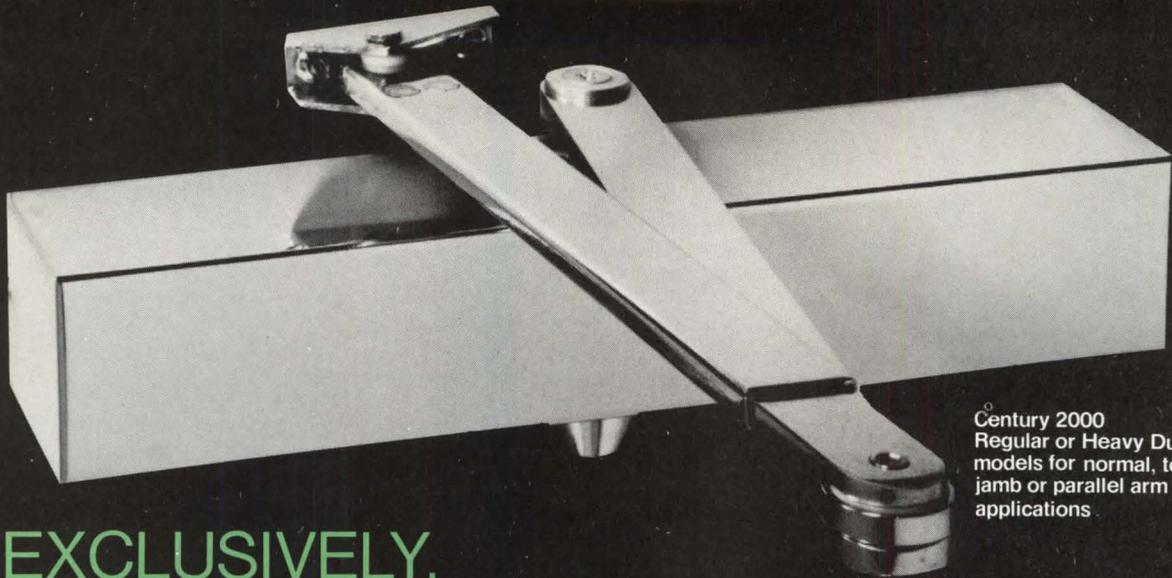
Kamnitzer Cotton Vreeland: World Savings & Loan Assoc. branch office, Santa Ana, Ca (Aug.), pp. 54-57.

Karren & Seals: Peralta Elementary School (Feb.), pp. 78-79.

Kirby Ward Fitzpatrick: Peralta Elementary School (Feb.), pp. 78-79.

Knowles, Ralph L.: Solar envelope (April), pp. 76-79.

Kober, Charles Associates: The Plaza



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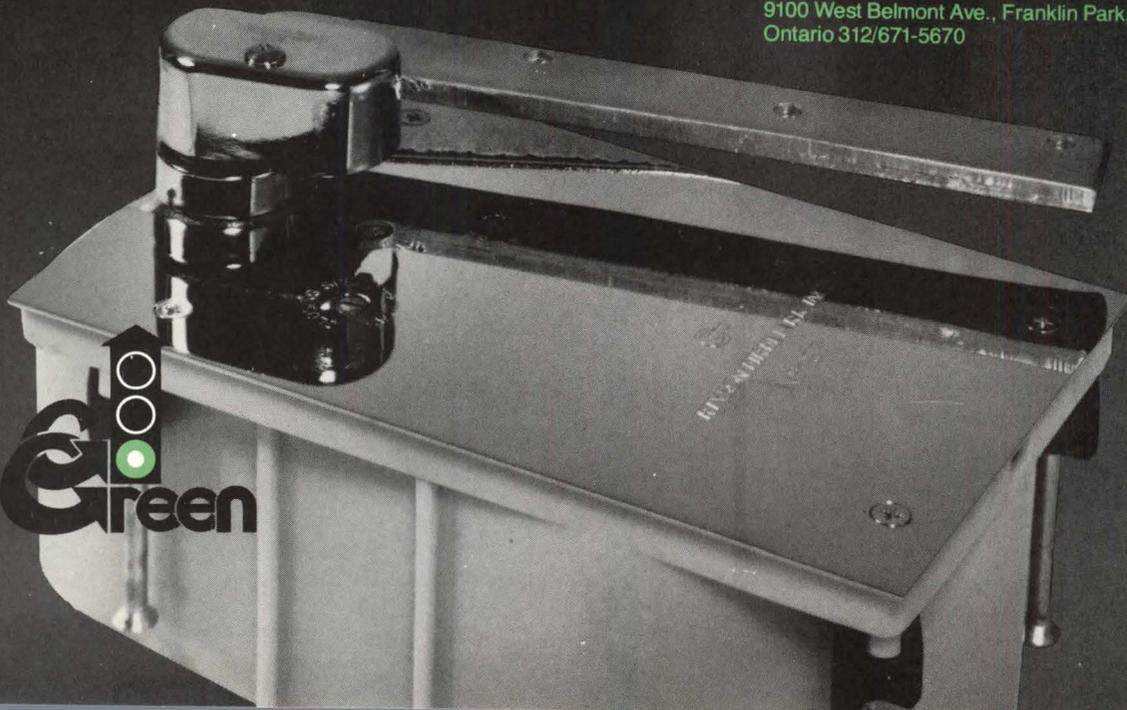
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Pasadena, P/A cit. (Jan.), pp. 92-93.
Koetter, Fred and Susie Kim: A farm-villa, Sicily, P/A cit. (Jan.), pp. 88-89.
Kupper, Eugene: Nilsson residence, Los Angeles (Dec.), pp. 60-65.
Kurokawa, Kisho, Architect & Associates: National Museum of Ethnology, Japan (May), pp. 92-97.
Lanken, Peter (see Rose, Peter).
Le Corbusier: Pavillon de l'Esprit Nouveau, Bologna, Italy (Nov.), pp. 70-73.
Lin, T.Y. International: The Ruck-A-Chucky Bridge, P/A first award (Jan.), pp. 68-69.
Living Systems: Planning Solar Neighborhoods, P/A cit. (Jan.), p. 103.
Lynch, Kevin (see Appleyard, Donald).
The Mandala Collaborative: Jondi Shahpour New Community, P/A award (Jan.), pp. 108-109.
Marquis Associates: Commodore Sloat Elementary School (Feb.), pp. 76-77.
Marshall & Bowles: Cabrillo Elementary School (Feb.), pp. 74-75.
Martin/Soderstrom/Matteson: Carter Clinic, Roseburg, Or (June), pp. 62-65.
Matthew, Robert, Johnson-Marshall & Partners: Hillingdon Civic Centre, England (Aug.), pp. 74-79.
Meier, Richard & Associates: The Atheneum, New Harmony, In, P/A award (Jan.), pp. 72-73.
MLTW/Tumbull Associates: World Savings & Loan Assoc. branch office, San Francisco (Aug.), pp. 64-65.
Moore Grover Harper: Crowell residence, Vt (Dec.), pp. 72-75.
Moss, Eric Owen Architect, Inc.: Morgenstern

warehouse (June), pp. 66-69.
Murphy, C.F. Associates: Minnesota Capitol Government and History Centre, P/A cit. (Jan.), pp. 86-87.
Myers, Barton Associates: Ghent Square Townhouses, Norfolk, Va (Oct.), pp. 60-63.
Office of the State Architect, Ca: Site 1 state office building, Sacramento, P/A cit. (Jan.), p. 80.
Ostlund, John: Farm/house, McGraw, NY, P/A cit. (Jan.), p. 82.
Passive Solar Associates: First Village, Santa Fe, NM (April), pp. 110-115.
Pei, I.M. & Partners: Dallas City Hall (May), pp. 102-105.
Perry, Dean, Stahl & Rogers, Inc.: Hall Mercer Children's Center, Belmont, Ma (March), pp. 76-83.
Righter, James (see Rose, Peter).
Roche, Kevin, John Dinkeloo & Associates: Sackler Wing, Metropolitan Museum of Art, NY (May), pp. 98-101.
Rose, Peter: Pavillon Soixante-dix, Quebec (March), pp. 70-75.
San Francisco Dept. of City Planning: Change without Loss, P/A award (Jan.), p. 106.
Sartogo, Piero & Michael Schwarting: Apartment in NY (May), pp. 114-117.
Sherman, Roger Associates: Grand Concourse, Pittsburgh, Pa (Nov.), pp. 66-69.
Sisco/Lubotsky Associates, Ltd.: The Cook's Spoon, Aurora, Il (Sept.), pp. 170-171.
Skidmore, Owings & Merrill: Ruck-A-Chucky Bridge, P/A first award (Jan.), pp. 68-69; Jondi Shahpour New Community, P/A award (Jan.), pp. 108-109.
Soleri, Paolo: East Crescent Complex, Ar-

cosanti Community, Az, P/A cit. (Jan.), p. 81.
Solomon, Daniel & Associates: Change without Loss, P/A award (Jan.), p. 106; Peralta Elementary School (Feb.), pp. 73-79; World Savings & Loan Assoc. branch office, Palo Alto, Ca (Aug.), pp. 62-63; Pacific Heights Townhouses, San Francisco (Oct.), pp. 54-59.
Steinfeld, Edward: New ANSI A117.1 Standard Research, P/A award (Jan.), p. 100.
Stern, Robert A.M. Architects: First Ave. Squash Club, NY (Sept.), pp. 154-155.
St. Florian and Howes Associates: Summer residence, Italy, P/A cit. (Jan.), pp. 90-91.
Stull Associates: Jackie Robinson Middle School, New Haven, Ct (Feb.), pp. 68-72.
Taller de Arquitectura, Spain: Homage to Catalonia (May), pp. 90-91.
Urban Development Corp.: Marcus Garvey Park Village, Brooklyn, NY (Oct.), pp. 50-53.
Venturi & Rauch: Pennsylvania Ave., Washington, DC (May), pp. 110-113.
Vinoly, Rafael: Buenos Aires Color TV Production Center (July), pp. 78-81.
Wallace, Floyd, Ellenzweig, Moore, Inc.: Communication Devices for S.W. Corridor Project, P/A award (Jan.), p. 107.
Warke, Val (see Ostlund, John).
Wasserman, Louis: The Architectural Implications and Applications of Amusement Parks, P/A first award (Jan.), pp. 94-95.
Williams, Tod & Associates: BEA Offices, NY (Sept.), pp. 156-159.
Wilson, Peter Associates: Esprit de Corp show-room and apartment, NY (Sept.), pp. 164-167.
Wudtke Watson Davis Inc.: John F. Otto Service Center, Sacramento, Ca (Nov.), pp. 80-83.

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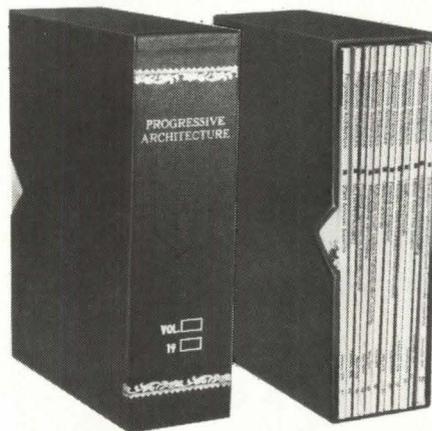
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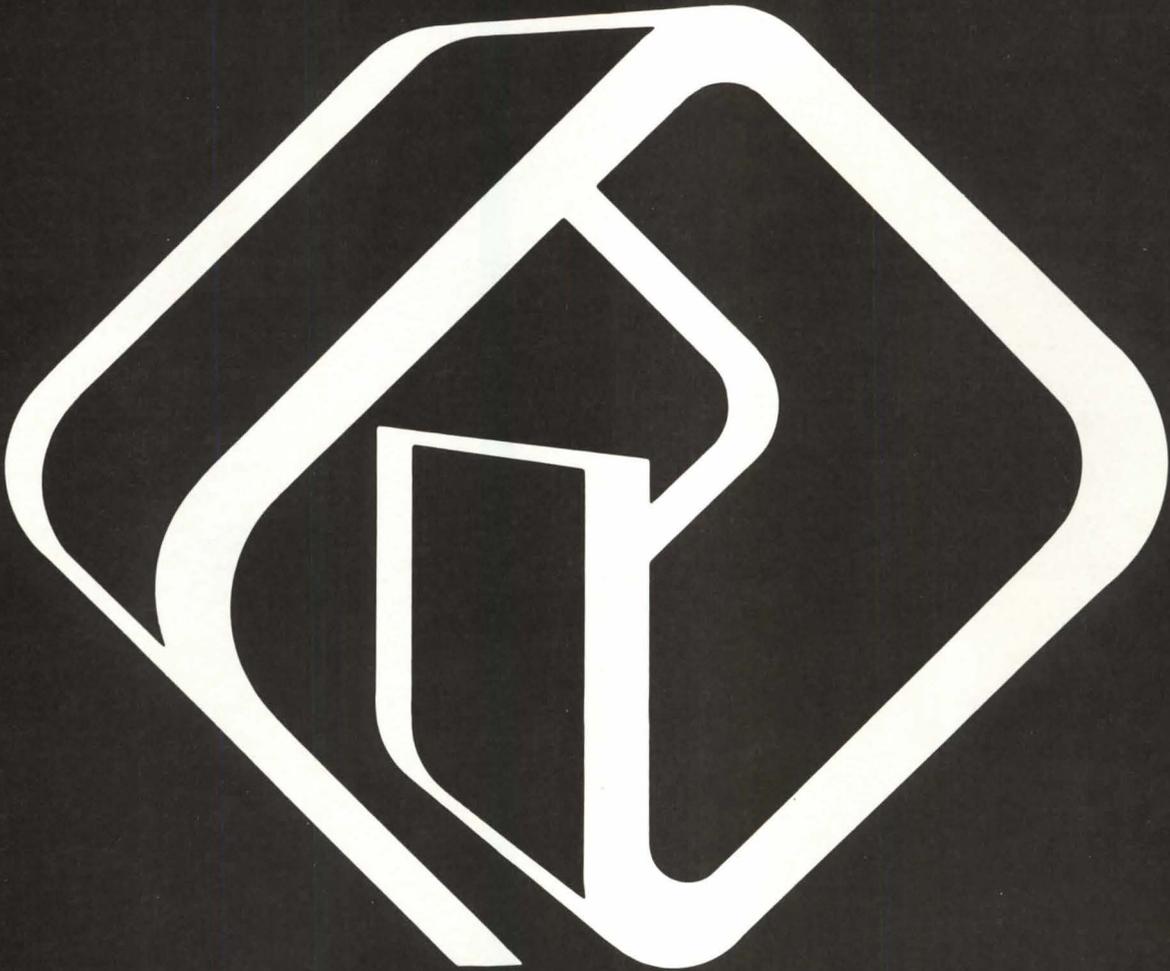
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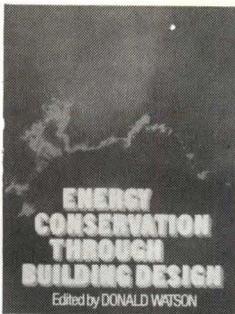
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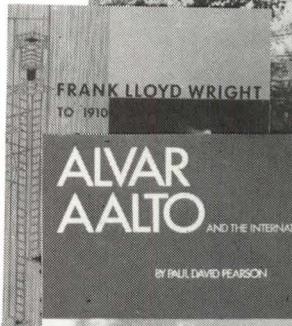
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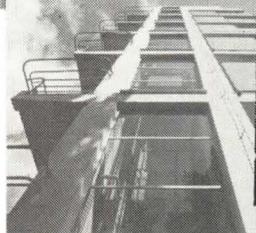
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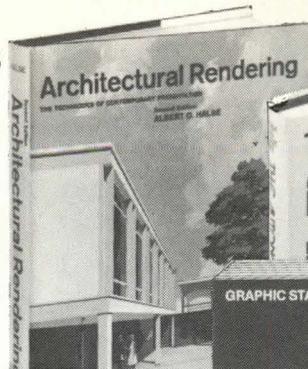
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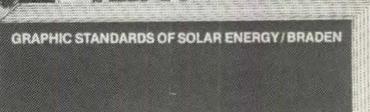
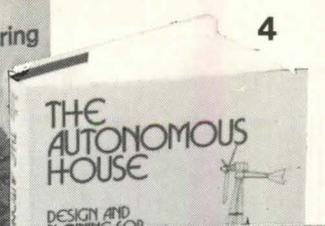
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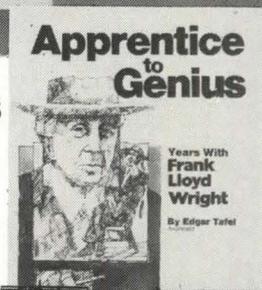
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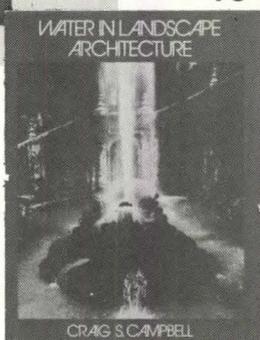


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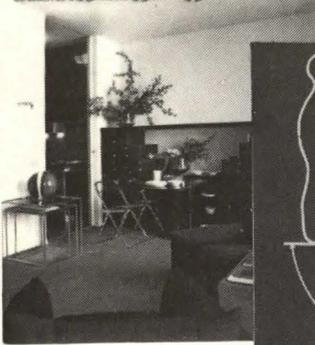
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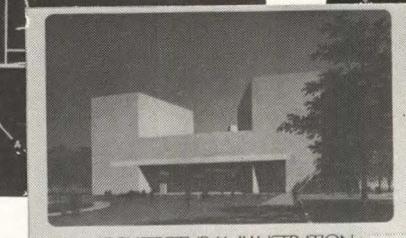
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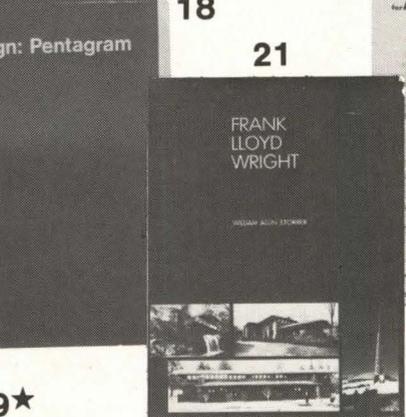
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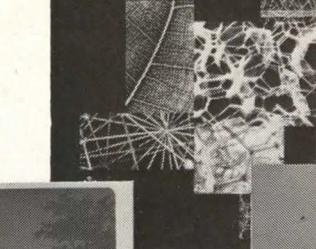
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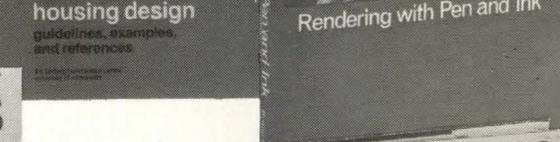
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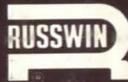


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