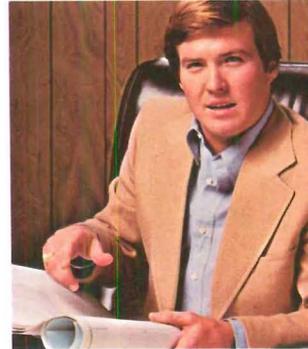


Progressive Architecture

March 1979 A Penton/IPC Reinhold Publication



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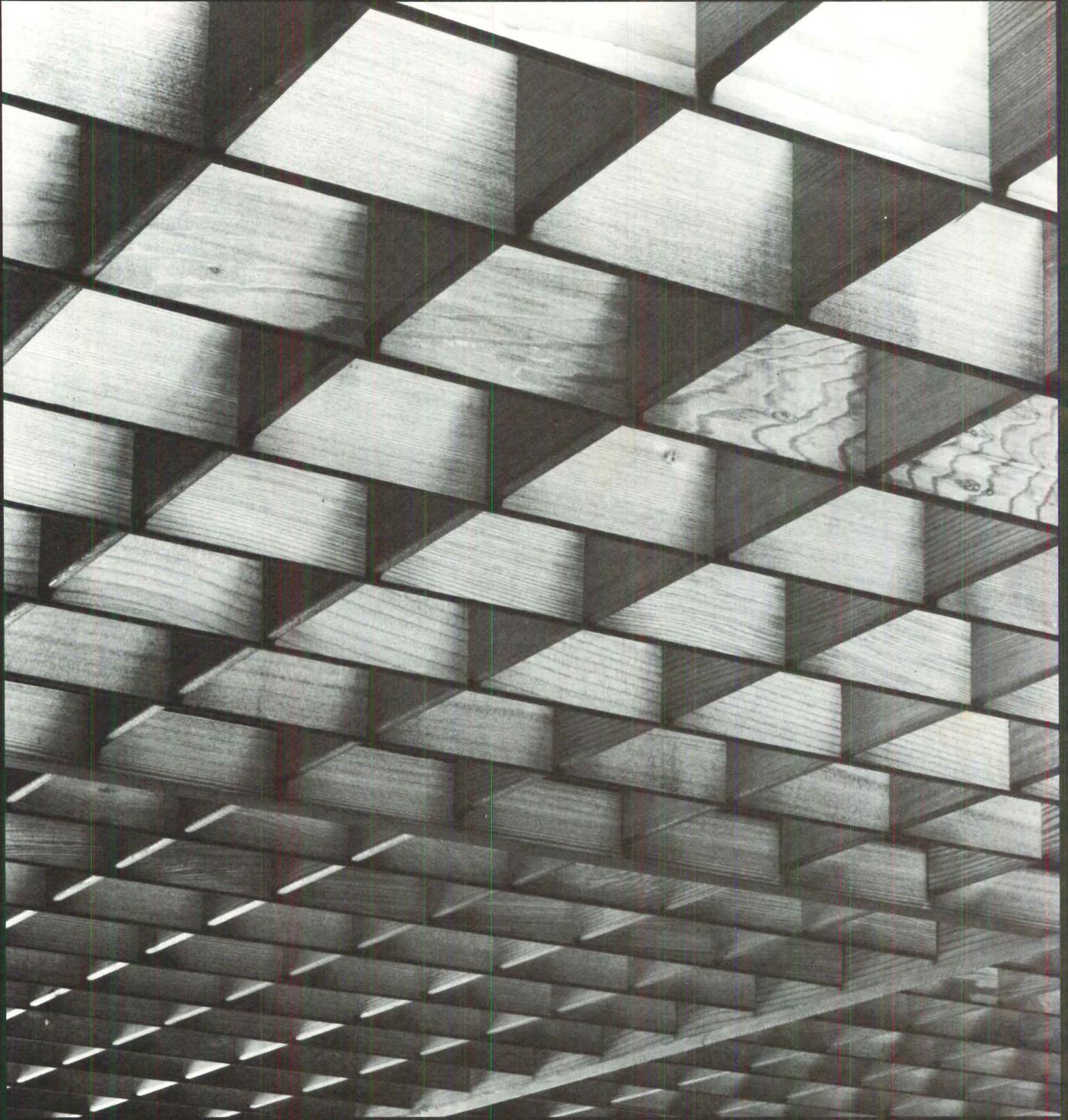
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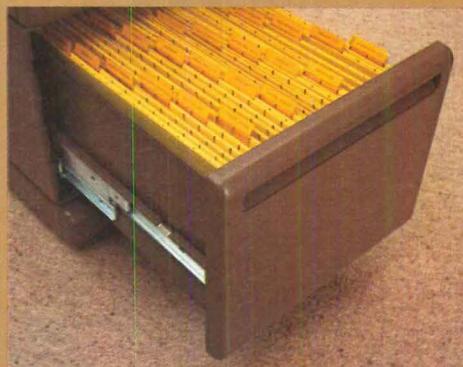
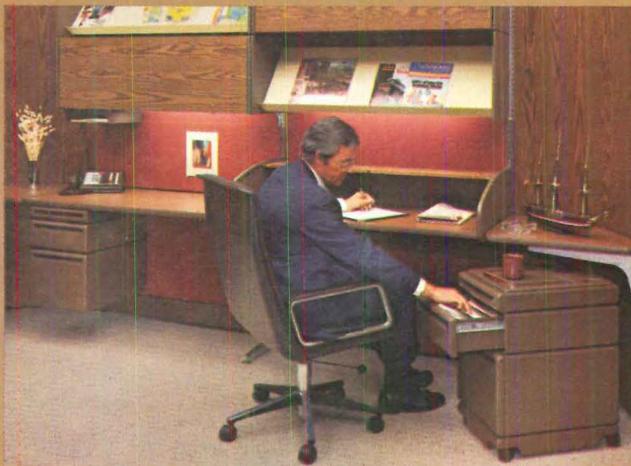
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March 1979

Progressive Architecture

7 Editorial: Legacy of buildings**Architectural design****57 Aalto in Italy**

The Church of Santa Maria Assunta, designed by Alvar Aalto for a village near Bologna, Italy, was the last of his works that he saw being built.

64 Welcomeness and light

Dagit/Saylor of Philadelphia has designed the Monastery of St. Clare to retain traditional functions, yet reflect the new ecumenical attitudes.

70 Nostalgie du château

P/A Award winner (January 1978) Pavillon Soixante-dix, designed by Peter Rose of Montreal, is a popular ski lodge in St. Sauveur, Québec.

76 Home away from home

Hall Mercer Children's Center, Belmont, Ma, by Perry, Dean, Stahl & Rogers of Boston, is a diagnostic center for children with emotional ills.

Technics**89 Specifications clinic: Specifying for long-term economy****90 Resilient bounces back**

At one time displaced by a fad for wall-to-wall carpeting everywhere, resilient tile is returning with better looks, durability, and economy.

96 Metrication: controversy and opportunity

The U.S. changeover to metric measurement will not be done overnight. How fast and to what extent metrication will take effect are undecided.

Departments

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Cover: The last of his buildings Aalto was to see in construction was Riola Church in the mountains above Bologna, Italy, p. 57. Photo: David Morton.



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ai

Legacy of buildings

March 1979

He really wanted to be an architect, but family tradition seems to have ruled that out, so he became a patron. Through his family's business and cultural involvements, then in his own career in government, Nelson Rockefeller—who died in January at the age of 70—sponsored billions of dollars worth of construction. Probably no king or commissar in this century has imposed his architectural preferences on so much building—and those preferences from the outset were for Modern Architecture.

One of Nelson Rockefeller's earliest jobs, right after college, involved the management of the family's Rockefeller Center project. Here he first worked with Wallace K. Harrison (an in-law of a Rockefeller in-law), who assumed primary design responsibility for the complex after Raymond Hood's death in 1934 and went on to design many other Rockefeller-sponsored landmarks.

Another major activity of Nelson Rockefeller, before he turned to politics, involved the Museum of Modern Art. As its treasurer (1935–1939), president (1939–1941; 1946–1953) and chairman (1957–1958), Nelson Rockefeller was directly involved in construction of the original structure by Stone and Goodwin, as well as the Philip Johnson extensions—not to mention its collection. And it was Nelson who spearheaded the family's effort in 1946 to buy and donate the United Nations site, an effort aided by Harrison, who went on to become coordinating architect.

It was during his 14-year reign as Governor of New York (1959–1973) that Rockefeller commanded the greatest resources, and seemed to direct them according to sophisticated design criteria—yet the results were woefully uneven in architectural quality. The greatest monument to his governorship is the \$1-billion Empire State Plaza at Albany, an enormous array of marble-clad structures

(designed by Harrison's firm) that has, to my knowledge, never earned a positive comment from any recognized critic. One of its few rivals in the whole world for sheer megalomania, the World Trade Center in New York, was made possible only by Rockefeller's decision to move 8000 state workers out of other Manhattan buildings into one of the twin 110-story towers, neither of which ever had any real economic reason to exist.

His programs for other state efforts produced no monstrosities of this scale. In fact they gave New York State architects—and a handful of outsiders—unprecedented encouragement to demonstrate Modern Architecture and urban design. There was the New York State University Construction Fund, created to build for a system that expanded from 38,000 students to 246,000 during Rockefeller's governorship: on its 71 campuses can be found some of the most creative work of architects such as Pei, Barnes, Davis/Brody, Franzen, Venturi, Birkerts, Gwathmey/Siegel, and CRS. Under a similar organization involving close monitoring by staff architects, the state Facilities Development Corporation also became patrons of the high-quality design for health facilities. In neither case, of course, were the results uniformly good.

Then there was the Urban Development Corporation, which Rockefeller put under the almost absolute rule of renewal dynamo Edward Logue. Designed to cut through local regulations in delivery of housing and community development, this enterprise was pushed through the state legislature only through Rockefeller's impassioned pressure by telephone from Atlanta, where he had gone for Martin Luther King's funeral. There are fine UDC developments all over the state—none, however, that override the interests of local governments.

All of these construction authorities were



New York Daily News

Governor Rockefeller and Mayor Lindsay show off World Trade Center model.

financed by bonds that had only the "moral" backing of the state, not of the "full faith and credit," which would have required the approval of parsimonious voters. Once doubts were raised about the solvency of the furiously active UDC, a crisis in the bond market brought the entire state to the brink of bankruptcy—just in time for succeeding governors to cope with the debacle. The construction agencies do survive, at reduced scale, and still undertake useful projects.

Along the way, Rockefeller had done a few other things of design significance: his state administration commissioned Philip Johnson to design the brilliant New York State Pavilion at the World's Fair of 1964, and simultaneously sponsored the Johnson-designed State Theater at Lincoln Center, a development directed by his brother, Laurence Rockefeller. And he collected art: an audit of his personal holdings at the time he was appointed Vice President in 1974 showed \$30-million worth of art, over half of his assets. He had founded the Museum of Primitive Art, since absorbed into the Metropolitan, where a wing for it, in memory of his son Michael, is now under construction.

Rockefeller's last enterprise, after his political retirement, was the marketing of reproductions of his own art, a scheme that drew justifiable scorn from art critics. It was a pathetic last effort for a man who put so much of his incredible wealth into the pursuit of aesthetic excellence.

As a patron of architecture, Rockefeller could—as in the Albany case—promote a program that was inherently grandiose and insensitive. Otherwise, however, the disappointments among the works of architecture he left behind must be blamed on the profession.

John Morris Olf

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Views

Awards awareness

Since publication of the 25th Annual P/A Awards last January, I am sure that the profession has been waiting for "the other shoe to drop." Would you personally thank the 26th jury for ending the suspense.

If we complacently sit back we can expect finely designed antenna towers and radar dishes to accrue future first awards. My colleagues, we have been put on notice, and it was long overdue. The future of architecture will be as we perceive it to be.

*Peter Newell McBurney, RA
Port Townsend, Wa*

[If design professionals are commissioned to do such objects, and professional jurors select them, you may see them in our awards issues. The CN tower in Toronto by The Andrews Partnership—an antenna—is surely architecture.—Editors]

I have just read your January 1979 issue and was particularly pleased to read the jury's comments on Louis Wasserman's study of American Theme Parks. I have not had the opportunity to read the study but hope that I do in the near future.

If the jury felt the study indicated that architects could "learn something to make the ordinary, everyday environment as pleasurable and joyful as theme parks," I wonder what we could learn from the man responsible for the design of the majority of the theme parks in America. R. Duell and Associates of Santa Monica, Ca, under the leadership of Randall Duell, have designed more theme parks than any other firm or individual in the world.

Randall Duell is the most creative, imaginative, and dynamic individual I have ever known. Hopefully, the day will come when Randall and his firm receive the recognition they deserve.

*Billy H. Glaze
Lloyd Jones Brewer & Associates
Houston, Tx*

I find this post-occupancy study (Private Space: Habitability of Apartments for the Elderly, P/A, Jan. 1979, p. 99) most amusing in its concept and in the make-up of the researchers, none of whom bears the appellation ASID—American Society of Interior Designers.

With this in mind, future studies would be unnecessary.

*Ted L. Pearson ASID
Baltimore, Md*

[With all due respect to professional organizations, we do not consider credentials such as AIA or ASID prerequisites for excellence. The program is open to all, and submissions are anonymous during judging.—Editors]

Please. Enough of Peter Eisenman. There is no brilliance in an inaccessible void.

*Bernhard Kiessling
Cincinnati, Oh*

Bravo to Peter Eisenman! Another stunning example of the architect's limitless abilities. So impressed, we immediately did working drawings for an eager client sensitive and understanding of the architect's needs. We put the project out for bid, but, alas, it came in a bit above our proposed budget. The public is again denied the genius of a man who can so easily escape the baseness of functional architecture.

*Tom Wright
Terry Muirheid
Dan Metzler
Metzler & Muirheid
Atlanta, Ga*

The following is my view of the comments of the jury for your 26th P/A Awards Program regarding energy. (P/A, Jan. 1979, p. 65).

Although something seems to have been left out of Elbasani's quoted comment, "... but it's after the fact if it in making it a good design," [see correction below] this is, perhaps, no more nonsense than Lumsden's comment that a project's design formed only by energy has little significance.

If one looks into the natural world from the cosmos to the sunflower and then to the smallest particle, *all* is energy. The so-called physical form we see is the result of an original and/or continuing energy exchange. Just as the economist who bases his concept of availability on price is wrong, so is the artist architect who denies the singular significance of energy. (Although it's really entropy we are concerned about.)

Fred Dubin seems to know when he said "... energy has given it a form, you may not like the form, but it has given it a form nonetheless." The architectural media may not be happy with this, as apple pie is easier to write about and illustrate. However, architecture (as a fresh slice of apple pie) will have little to do with entropic prosperity.

*Lee Stephen Windheim, AIA
Leo A. Daly Planning/Architecture/Engineering
San Francisco, Ca*

Awards corrections

The introduction to awards for Architectural design (Jan. 1979, p. 65) scrambled Barry Elbasani's comment. It should have read: "energy is just another ingredient in evolving a total design concept, but it's after the fact if it hasn't produced a totally integrated design in which energy has played a fine role in making it a good design."

The word "First" was omitted on the award for Temporary Paradise: A Look at the Special

Landscape of the San Diego Region (p. 104).

The research award for "Livable Urban Streets" had an erroneous addition of "& Associates" to credit for Donald Appleyard (p. 98).

Federal interior department

I gazed in horror and embarrassment at the results that the so-called "high style" designers produced in the Federal Design Improvement Program's lounge design invitation (P/A, Dec. 1978, p. 76). I cannot help pointing out that the responses by Tigerman, Moore and Torre only show more clearly the state of our profession and our organization.

At a time when the economic turmoil in this country has put many of us out on the street, we, as a group of professionals, need to constantly reestablish and reaffirm our position of importance and prove the necessity of the art and talents we have to offer a client. And clients range from John Doe across the street to our own government. We constantly complain about the lack of design and complacent attitude of government-employed designers, especially when they are producing projects that we can do with much greater sensitivity and speed. But we sit back and wait for something to happen.

I recently spent a summer working on the island of Cyprus; a land that has been split by a senseless war resulting in 200,000 refugees in their own land. The architects of the country formed a collaborative and presented their position to the government. Basically they stated that housing was needed and that they could do it better, cheaper, and with more sensitivity than the government, and it was the government's responsibility to give them the work. Commissions began to flow like water through the collaborative and they proved their case.

Hence, my cause for embarrassment. We finally have someone in the bureaucratic mess who realizes what is happening and hands an invitation on a silver platter to some of our "not so predictable" designers. The result? Not only is the response facetious and satirical, but one designer doesn't even accept the challenge to be more creative among the restrictions. The architect in Cyprus would jump at the chance (and so would many of us) to be creative and prove our necessity to such an important client.

The attitudes of the participants seem to echo the selfishness of our profession. If our organization had any unity and if the participants would realize that not all of us can turn away 90 percent of our work and be on the cover of *Time* magazine, they would have produced the "high style" design that was expected and would have given another shot in the arm to our profession. But then again, if our organization pulled its weight, we'd be there already. I'd say that that is where there is room for improvement.

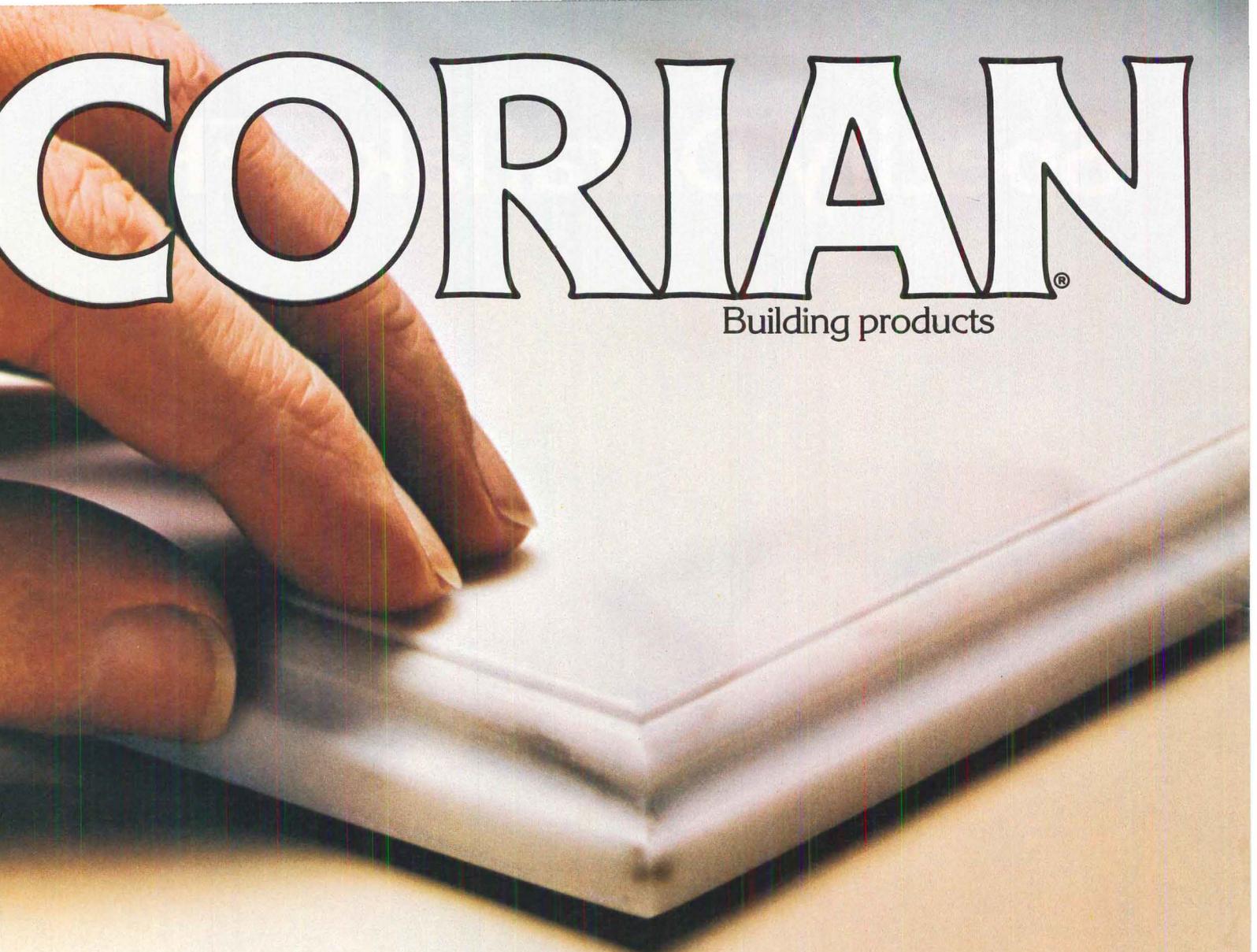
*Ray Giolitto
Architectural Designer
Hartford, Ct*

Stanley Tigerman must think he's the current *enfant terrible* of architecture for having "put one over" on GSA by designing that nasty room at the Federal Design Assembly. He is really just another elitist picking on an easy target: people with good intentions and limited resources.

He has never, and never will, pull one like that on his corporate clients... people with venal in- [continued on page 14]

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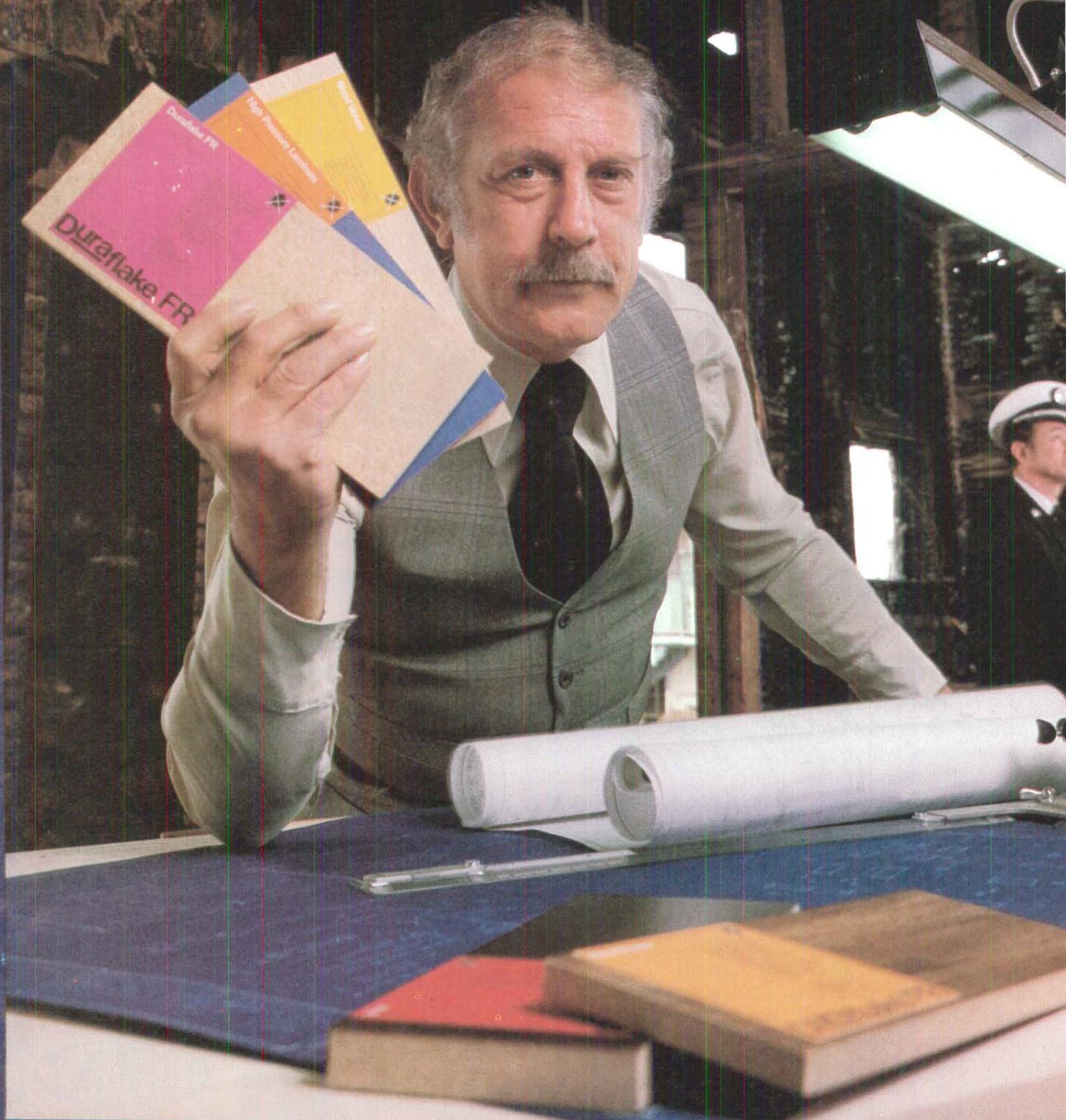
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tentions and vast resources. They'd throw him out.

Whatever Tigerman thinks, he is not being radical, audacious or even making intelligent social commentary . . . he's played a dirty joke on folks who needed his help and wanted his best.

GSA is making a series of strong moves to upgrade the design and function of the office environment for 1,933,485 federal white-collar workers (or five percent of all U.S. office workers)—all real people, many even trying to do a good and humane job of governance and service. And they're trying to do it at an extremely difficult time, with less money than ever.

Our government has always been a puritan government . . . no frills in the buildings is one result. Good design has been seen as a frill, as has the hiring of good architects. Tigerman's actions have reinforced the unfortunate notion that fancy architects are a frill, and proven that they can be irresponsible as well.

And with flags and stars and stripes painted on the ceilings yet. God save us from old hippies and their flag-sewn-on-the-ass parody of patriotism. It's all a stale bad joke from the 1960s, isn't it?

Michael Brill, President
BOSTI
Buffalo, NY

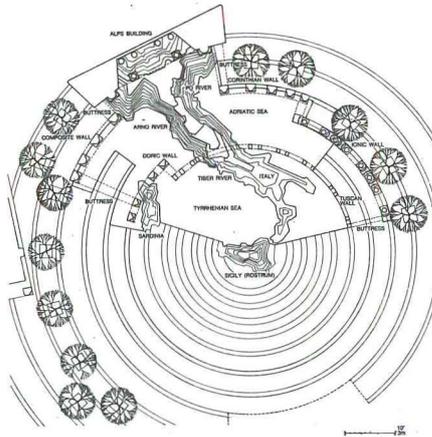
I'm certainly pleased to see that Michael Brill can emotionally be moved by something. Unfortunately, his sense of humor is clearly limited. While he is about the business of suggesting "elitism" in architecture (and in his case, purportedly representing populist positions by cladding himself in railroad switchman outfits with sheriff's badge) one understands his concerns. Since so much of his work is funded by federal grants, he must feel that he has to support them in whatever way he can. His allusion to the 1960s is well placed since no one better represents the do-gooding "sandal schleppers" of that time than Michael Brill. Perhaps grey-beige, Helvetica medium, and good taste are what it's supposed to be all about; I don't believe it for a minute!

Stanley Tigerman
Stanley Tigerman & Associates
Chicago, Ill

Piazza defended

Shocked, I was, at the venom and vitriol displayed in the January issue by your readers over Charles Moore's Piazza d'Italia in New Orleans. It's hard to recall when a single project or building elicited such fierce reaction from architects themselves, who, much more understandably, are accustomed to its coming from the non-architect public. The times, clearly, they are a-changin'!

And, it would seem, not a moment too soon. For such reactions help to underline the state of confusion and crisis in which architects are currently situated, after being so long engrained with heroic visions of changing a messy world through architectural form and making it a better, cleaner, more organized place to live; so long engrained with the Modernist notions of extreme functionalism and less is more, and so



Plan, St. Joseph's Fountain, Piazza d'Italia.

long engrained with a deadly serious, almost clinical, attitude about buildings and the people who use them. More than all else, the reactions testify to the way in which Modern architects, armed with many clever slogans and arguments to bolster their cause, cannot tolerate anything so spectacularly exuberant, refreshing, personal, allusionary and important as Moore's colorful Piazza. To those architects it is like putting a square peg in a round hole; it doesn't fit with their banks of knowledge or their expectations. It doesn't conform to their image of recent "plazas"—so long without the qualities that contribute to the richness of urban life. Their world view is different, and it is probably boring.

Moore's Piazza is audacious, if it is nothing else. But this is no reason to criticize it. For an architect with genuine courage and insight, with a touch of wild-eyed humor, to produce a superlatively meaningful celebration of an architectural and thus human heritage, indeed, is no easy task. At once, Moore has made the past meaningful for today. He has resurrected the architecture of the past and made it part of the living present. That he may also have changed, distorted, perverted, or fetishized the architectural style is beside the point. As in the past, but certainly before the ascendance of routine Modernism, great architectural moments were created through a selective synthesis of old and new elements, of combinations, additions, or subtractions. Moore follows in this tradition.

While apologizing for recent precedent, Moore's Piazza reaffirms the binding connection with a long-forgotten architectural heritage. Necessarily, I think, it shouts out with an almost childlike ebullience and a liberating exhilaration that the shackles of Modernism no longer hold and that the "universal style of our age," like the Wicked Witch of the West, is dead. Ding dong!
Randle Pollock
John Carroll University
Cleveland, Oh

I support Charles Moore and every one of his associates for daring to show humor. That they are deliberate in their endeavors is obvious.

Through our attempts to ease the human condition, we designers sometimes take our work too seriously. Architecture must have purpose and strength. As art it must have delight. (To what point in time is anyone's guess.)

As architecture reflects human values it also reflects an ever widening range of human experience. Given the sobriety of the past 60

years, a little light-heartedness won't hurt. I doubt if the wizards of Disneyland, Las Vegas, or Atlantic City could have devised anything so sophisticated or as "apparently" tasteless as the Piazza d'Italia. I propose erecting ten more magic fountains in strategic locations about the country to remind professionals and laymen alike just who and what we are.

I perceived Mr. Moore's work as the manifestation of happiness and not a utopian concept. We have come too far to believe our invincibility as social reformers. Such work as the magic fountain becomes a springboard for the expansion of creativity and awareness in a world that often grows faster than we can assimilate.

I wish to thank Mr. Moore and colleagues for being a factor in that expansion and P/A as well for having the dedication and the courage to recognize that there is more to architecture in the 20th Century than "social responsibility."

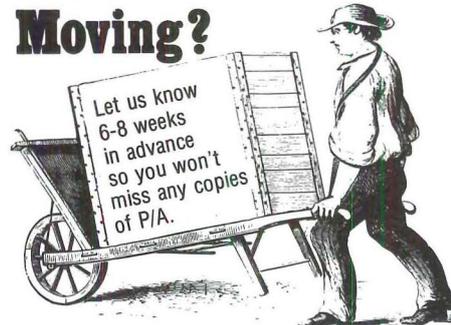
Walter L. Goodwin
Interior Designer
San Francisco, Ca

Error corrected

The publication explaining the Ruck-A-Chucky Bridge (P/A, Jan. 1979, p. 69) was incorrectly identified. It is ASCE Reprint 3305, available from the American Society of Civil Engineers, 345 E. 47 St., New York 10017 for \$1.00 a copy.

Credit extended

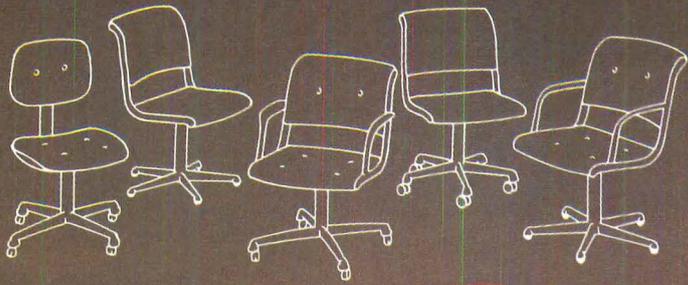
Lighting equipment for Citicorp was also supplied by mcPhilben/Omega Lighting (P/A, Dec. 1978, p. 106).



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frame building arranged around horizontal and vertical circulation spines. The spines run from the basement to the penthouse and east-west through the center of the building. The conventionally framed portion of the structure is located north of two large 56-ft x 120-ft skylighted courtyards. This portion, fed vertically from the mechanical penthouse, contains all bedrooms and physicians' offices.

The interstitial section extends the length of the site on the south side of the spine. Odd-numbered floors contain diagnostic and therapeutic facilities; even-numbered floors include interstitial space frames with steel trusses 84 ft 5 in. long. The interstitial spaces house mechanical services for the intervening floors and are flanked by additional spaces for physician offices.



Economy points to steel

Steel was the outright winner in cost savings against other structural systems," reports Charles C. Ang, chief structural engineer, D'Ambly, Inc., consulting engineers. "Considering material costs, fabrication, erection, and engineering time, we estimated that steel could save between 15 to 20 percent over other framing systems on this project." Beyond this several other reasons for selecting steel were cited:

(1) "Rapid erection of the structural frame was critical to the building's fast-track construction schedule.

(2) "The program requirement for flexible space arrangement on the ancillary floors involved long, clear spans suitable only for steel trusses.

(3) "Longer than average spans and minimal ceiling cavity space required that deflection control be achieved with minimum-depth members. This was dictated by the mechanical services required in the patient care and physicians' offices."

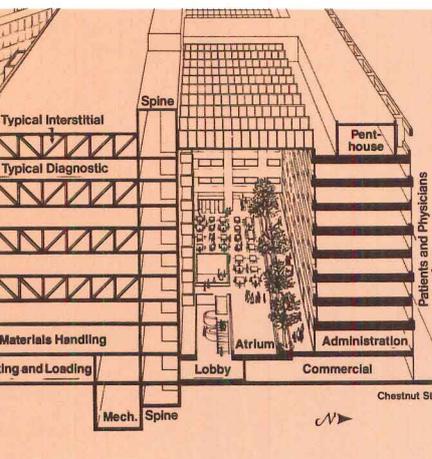
Story-high trusses

Much of the steel frame is conventionally designed using steel columns, beams, and girders with

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(ABOVE CENTER) The 750,000-sq-ft Clinical Teaching Facility is essentially a series of smaller, administratively autonomous hospitals stacked vertically within one building.

(ABOVE LEFT) All ductwork, plumbing, electrical distribution, and large pieces of equipment are arranged within the interstitial spaces to permit future revisions to rooms without disrupting adjacent spaces.

(LEFT) A building-high atrium separates the patient care areas from the diagnostic and treatment areas. A dining area, located on the deck of the atrium, serves visitors, students, and staff. Glass-enclosed elevator lobbies overlook the center court.

(ABOVE RIGHT) A steel-framed bridge, utilizing curved beams to accommodate differences in floor levels, connects the new building with the existing hospital.

Cross-sectional view shows how patient rooms are separated from diagnostic areas by a building-high atrium.

Owners: Thomas Jefferson University, Philadelphia, Pa.
Architect: H2/L2 Architects/Planners, Philadelphia, Pa.
Consulting Engineers: D'Ambly Inc., Philadelphia, Pa.
Prime Contractor for Structural Steel: Lehigh Structural Steel Co., Allentown, Pa.
Sub-Contractor for Erection: Cornell & Company, Philadelphia, Pa.
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News report



The architecture of diplomacy

As the relations between the U.S. and China increasingly come to include trade and tourism, developers are scrambling to build the symbol of business and pleasure, American style: the luxury hotel. China's present hotels, most of which are of Russian design, are outdated, along with the Sino-Soviet alliance.

In early November, Intercontinental Hotels Corp., a PanAm subsidiary, was the first to announce a \$500-million plan to build a half-dozen hotels in major cities. The agreement signed between Intercontinental and China International Travel Service (CITS), a tourist agency of the People's Republic, called for 5000 hotel rooms, of which 1000 are to be included in a first-class hotel in Peking. Locations and sites are not yet finalized, but current plans envision hotels in Shanghai, Canton, and two or three other major cities. All should be completed in three to four years.

The Intercontinental hotels are being designed by Henry C.K. Liu, a Chinese-American architect who teaches at Virginia Polytechnic Institute. Mr. Liu, who was selected by the Chinese as architect and asked to help find an American company to develop the hotels, has previously renovated China's liaison office in Washington, DC, and the UN mission office in NY. Design programming and guidance are being provided by Intercontinental's own architectural department. According to Walter Rutes, an Intercontinental architect extensively involved in the project, the final design of the hotels will be heavily influenced by the decisions and policy of urban planning boards and other governmental bodies in the People's Republic.

Project and construction managers for the hotel chain, it was recently decided, will be Bechtel International Corporation,



U.S. architects and developers in China: above, WWAT&G presentation to Shanghai authorities; below, Paul Sheeline of Intercontinental with Chinese tourism official Liao Cheng Chi.



an American firm. CITS has authorized Intercontinental to act as its agent in seeking long-term loan financing. U.S. banks are eager to participate in funding China's foreign purchases, but they may be prevented by legal obstacles arising from the 1949 seizure of U.S. assets in China and the reciprocal freezing of Chinese assets in the U.S. A possible settlement of the frozen assets issue is presently under negotiation, however. All loans will be guaranteed by the state-owned Bank of China.

It might be expected that large-scale projects in China would eventually involve

the Chinese-American architect, I.M. Pei. And indeed, a similar hotel project with Pei as architect is in the works. Pei and his son D.D. Pei recently traveled to China "to discuss the siting, design, and construction of a number of hotels," according to the younger Pei. The Pei office is working with developers Hyatt International on the as-yet-unfinalized project.

The first U.S. architectural firm to have sites and designs for hotels approved was Wimberly Whisenand Allison Tonag & Goo, of Honolulu. WWAT & G has agreed to design two hotels, one in Shanghai, one in [News report continued on page 22]

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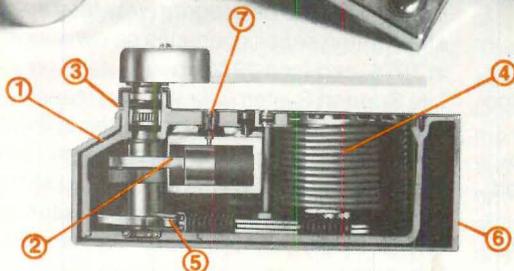
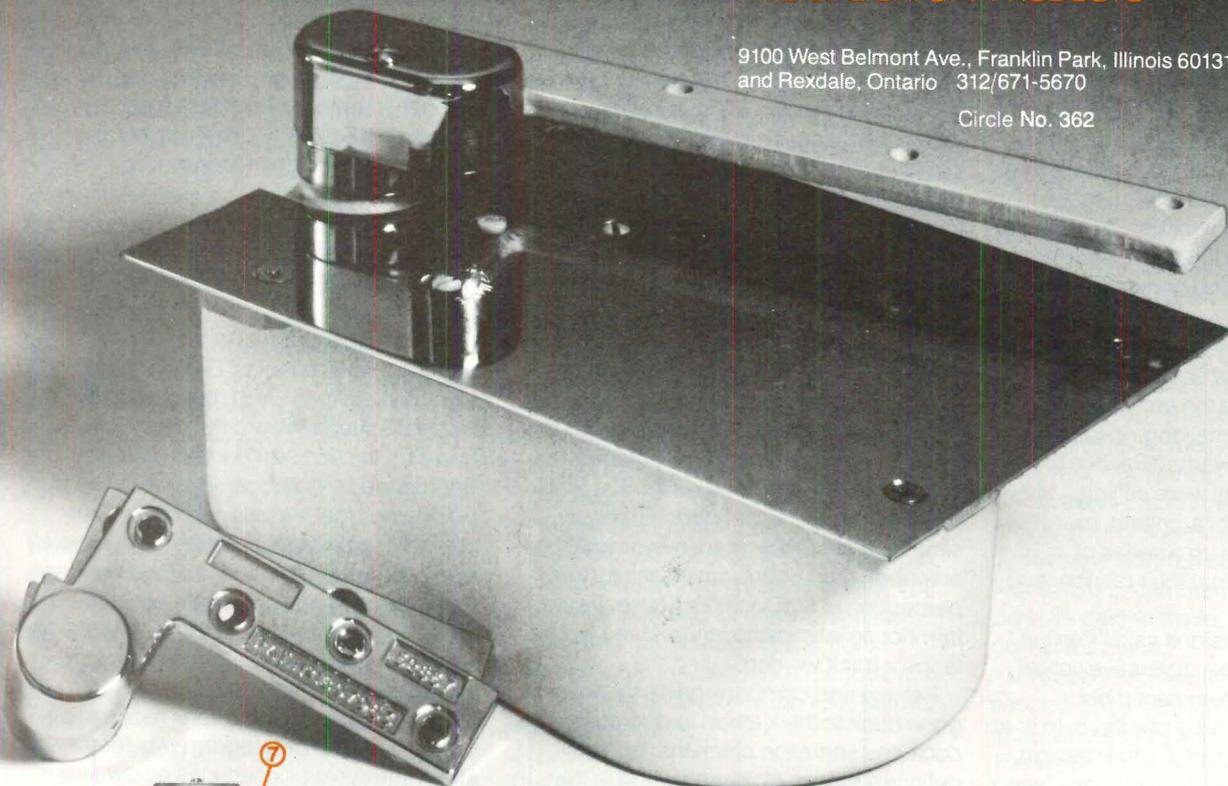
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Exhibitions of architectural import

Vienna Moderne: 1898–1918
March 2–April 29
University of Houston

The subtitle of this exhibition, "An Early Encounter Between Taste and Utility," suggests an innate opposition between these two orientations of design. The point of the best works in "Vienna Moderne," however, is that the relationship is a dialectic, not a conflict; that the oft-perceived battle between Style and Function is primarily a dispute between elitist and utilitarian philosophies, which can be transcended by form.

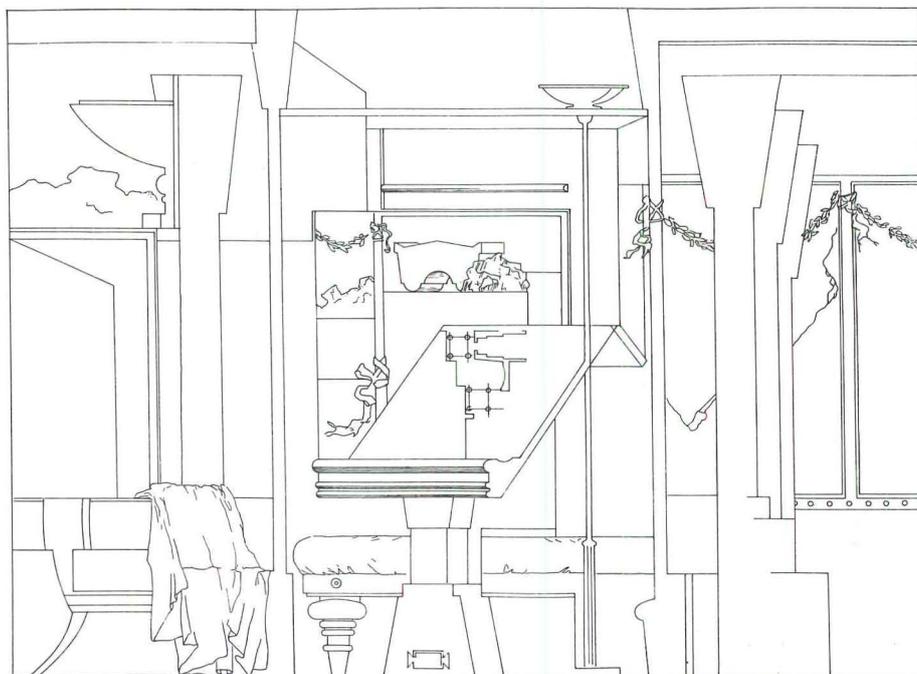
Example: the Purkersdorf chair, 1904–5, designed by Josef Hoffmann. Leader of the *Weiner Werkstaette*, an association of master craftsmen, Hoffmann set up artistic canons of integral ornament and forms pared to geometric basics. The Purkersdorf chair's resultant elegance proves that such geometricity is, of course, style, and such ornament derives directly from function. As Hoffmann and Koloman Moser wrote in the *Werkstaette's Program*: "We want to do what the Japanese have always done"—i.e., produce a fusion of art and craft.

These designers were caught in an era when art was beginning to feel that it should have social relevance, but remained bound soul and body to the elite. Their concepts could be translated into luxury or simplicity. Thus artists like Dagobert Peche use a purist vocabulary of form or trade it for a rococo one; contrast

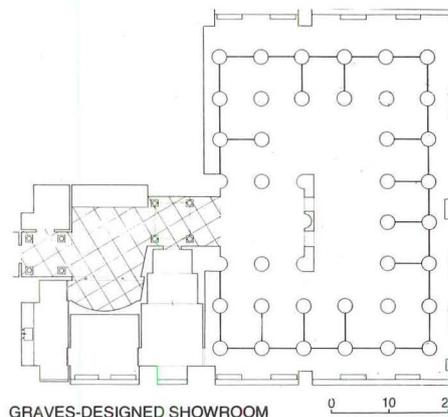
Purkersdorf Chair, 1904–5. Josef Hoffmann.



Cooper-Hewitt Museum (Stan Reis)



For the preview of the new Sunar International textile collection, architect Michael Graves designed a metaphorical garden showcase which allows the color, texture, and natural characteristics of the fabric to define and describe themselves within the space. Graves' U-shaped pergola promenade and backdrop mural provided the stage setting for the February 15 opening of Sunar's New York showroom: a "Fabric Introduction." Subsequently, the main space was transformed for furniture settings, but one section of the showroom, which was remodeled by Graves, will remain devoted to Sunar textiles. (Above, mural cartoon by Graves; right, showroom plan.)



his lacy 1915 interiors with his 1912 ceramic vase, whose simple shape resembles a pilaster base. The adaptations to specific clients are sometimes humorous, like Hoffmann's chair for the studio of Klimt, a tongue-in-cheek tribute to the painter who led the artistic breakaway of the turn of the century.

Directed by Jan Ernst Adlmann, the show was organized under the auspices of the Cooper-Hewitt Museum, NY. Their well-directed policy of presenting collectors' treasures not usually shown in U.S. museums produced a winner.

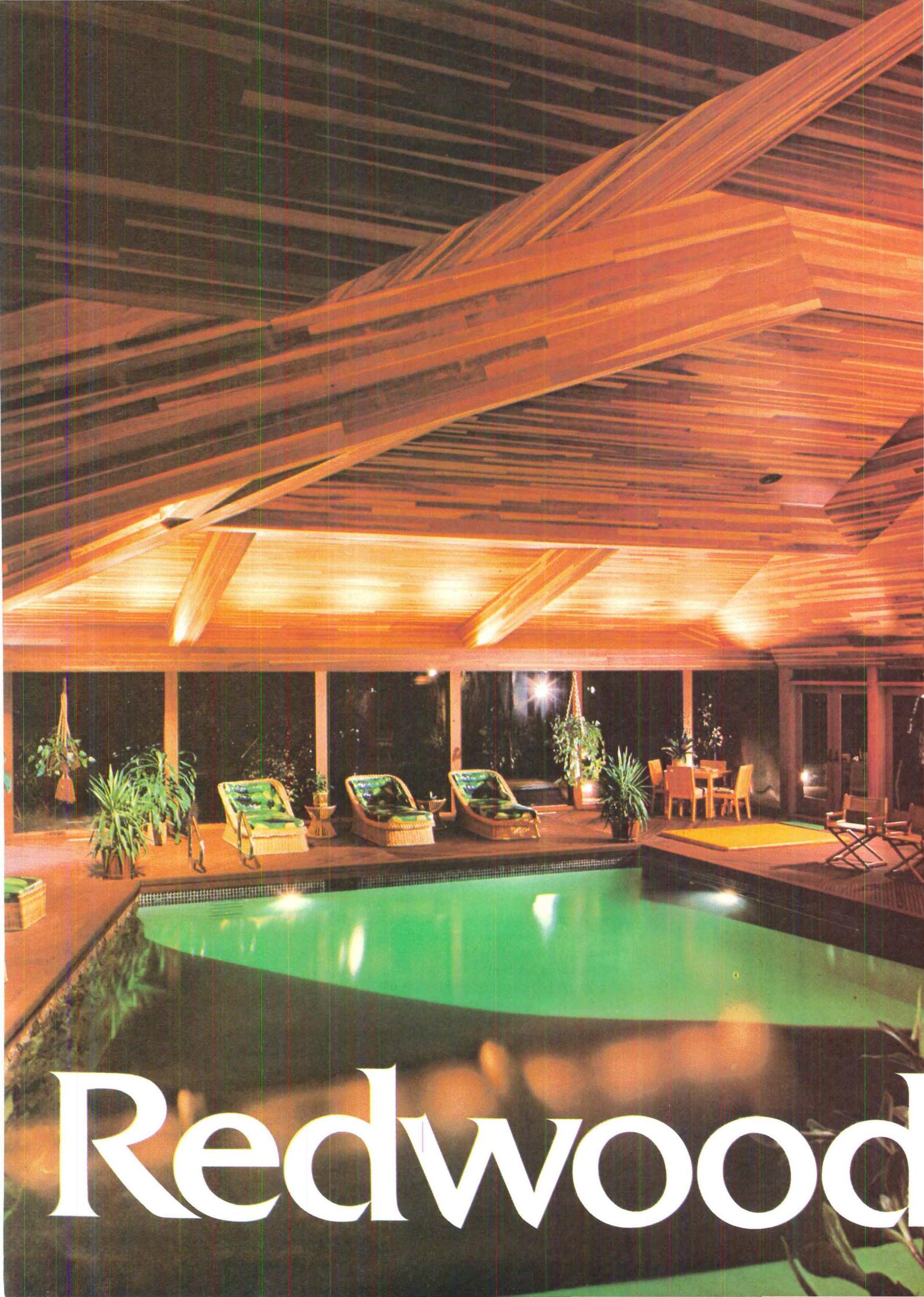
The show is to travel to the Portland (Oregon) Art Museum, and the Art Institute of Chicago.

Stanley Tigerman
Feb. 11–April 1
P.S. 1, New York

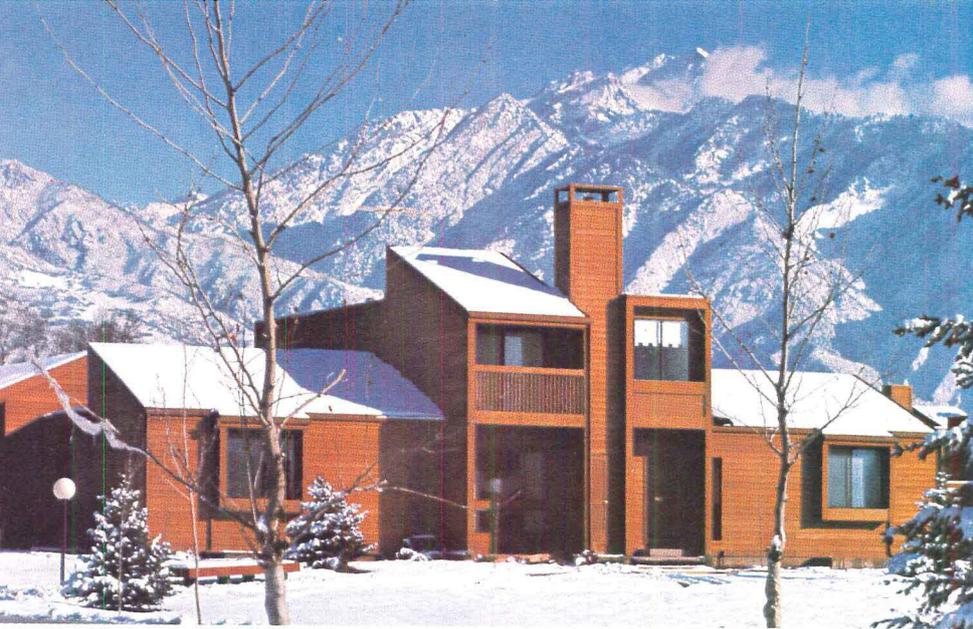
This exhibit of Tigerman's recent work portrays the Chicago architect in his customary tongue-in-cheek attitude. The show is rather scrappy; too many projects are presented and too often only in the rudimentary form of cardboard models. But it offers

a welcome glimpse of Tigerman's recent architectural witticisms: his controversial bureaucratic maze for the Federal Design Assembly (P/A, Dec. 1978, p. 76) and his residential and commercial commissions.

Included, for example, is a suave addition to a George Keck residence, entitled "Tigerman takes a bite out of Keck." The design clamps onto the low Keck rectangle a glass curve of the hotdog shape Tigerman made famous. Another addition/remodeling, called "House with Pompadour," plays curves off corners and pediments off a piled-up form evocative of clouds. The curves, cut-outs, and cloud motifs that characterize "the Tigerman" dominate. In "Kitchen for a Jewish Princess," a current project, the rippling roofline of the added dining area is echoed in the path and picked up in the relationship of the pool to the tombstone-shaped bushes. (The Kitchen is one of the few projects to be portrayed with finesse, in elegant plans.) The project that makes the most waves in terms of Tigerman's oeuvre is "Sam's Cut-Rate Liquors." The recent design for a liquor store immediately adjacent [News report continued on page 28]



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Clear grade residential ceiling

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Interior: Maurice Weir, FASID

Clear All Heart siding, multi-unit

Architects: Fisher-Friedman Associates, AIA

Knot and sap textured siding, multi-unit

Architect: Kermit Dorius, FAIA

Architects and Associates

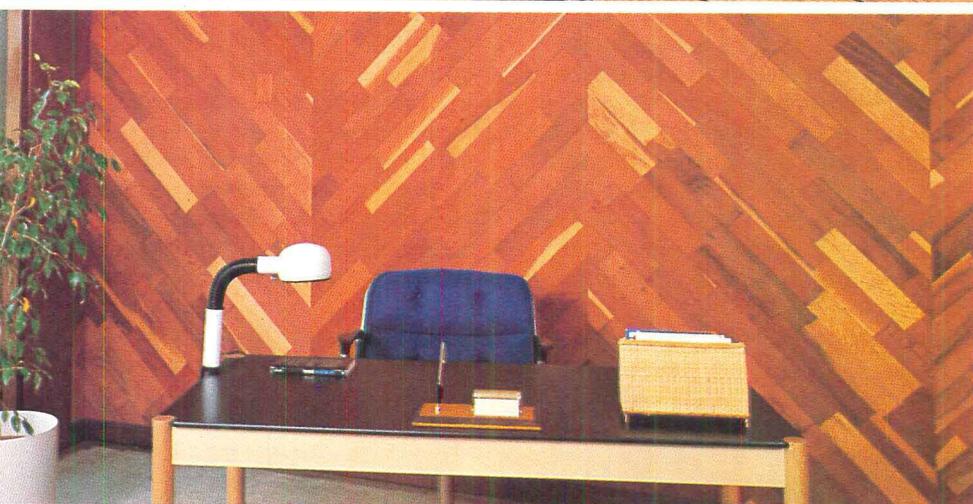
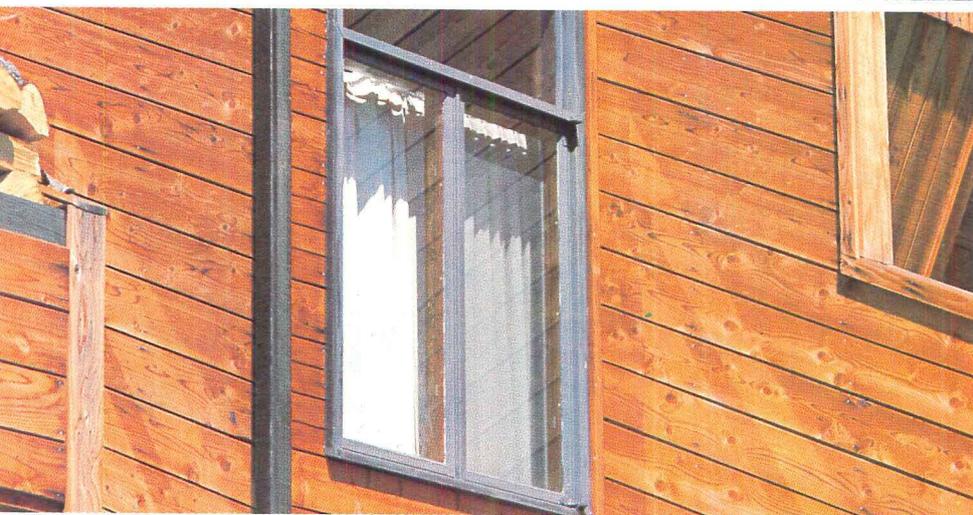
Finger joint interior accent wall

Architect: Richard E. Huston

Architect, Incorporated

Garden grades deck

Designer: Elsebet Jegstrup

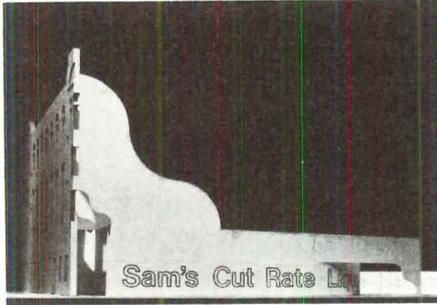


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Model for "Sam's Cut-Rate Liquors."

cent to the curve of the Chicago El incorporates the façade of a four-story warehouse. The now freestanding masonry wall, behind whose fenestrated surface is only a one-story store, is supported by sinuous buttresses.

Tigerman's work, as even this exhibit's cursory treatment shows, explores the suggestive possibilities of the curve—elegant, humorous, pornographic, and (even) purely formal.

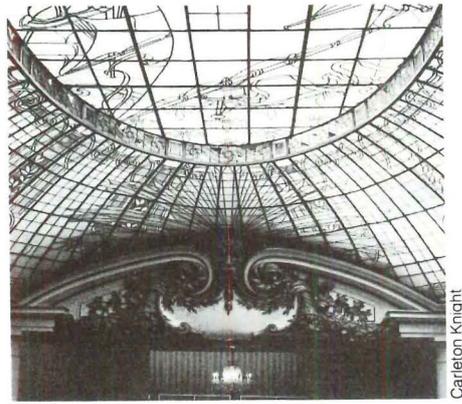
Eat your heart out, San Francisco

On January 11 the San Francisco Planning Commission approved Neiman Marcus' plan to demolish the beloved turn-of-the-century City of Paris department store on Union Square and replace it with a new \$18.5-million store designed by Philip Johnson. The new design incorporates the exquisite glass dome and the central rotunda of the original building.

For preservationists, this decision is the second major defeat in a five-year campaign to preserve the post-1906 image of Union Square. The other battle casualty, the Fitzhugh building, will be replaced by a new Saks Fifth Ave. store by Hellmuth, Obata & Kassabaum (P/A, Nov. 1978, p. 65).

Both new constructions seem superfluous as well as destructive. The two grand old buildings seem architecturally ideal for use as department stores. Indeed, Neiman Marcus' stated intention when they bought the City of Paris in 1970 was to rehabilitate the Beaux-Arts structure, which housed the family-run Verdier dry-goods firm from 1909 till Verdier went out of business in 1967.

When, in 1974, N-M declared their intent to demolish the building, it was on the grounds of structural inadequacy in meeting the seismic code. A peculiar rationale, seeing that the original building designed in 1896 by Clinton Day had withstood the 1906 earthquake disaster—except for one corner which may have been dynamited to stop fire. (Restored and remodeled after



City of Paris dome, above, and rotunda, right.

the quake by architects Bakewell & Brown for Verdier, the "City of Paris" department store opened in 1909. The galleried space with a skylit rotunda echoed the current fashion in department-store design set by world-famous emporiums such as the Galeries Lafayette in Paris.)

The announcement of the building's imminent demolition brought a great outcry from preservationists, 60,000 of whom signed petitions of protest. To allay public hysteria, Neiman Marcus switched architects from Carl Warnecke to Johnson/Burgee. Johnson's priestly eminence in the world of art and architectural history silenced dissent until his recent plan became public. After several attempts to use the old store, Johnson said, they found that it simply would not work with modern merchandising methods. The new design would save the rotunda but scotch the rest of the buildings.

Alarmed preservationists, who had been chipping away at the structural inadequacy claim, drew up their own rehab plans, suggested other sites for Neiman Marcus and found other buyers for the building. But it was "no sale." Neiman Marcus loved the city but if they could not be right in the heart of it, they would leave.

Enter, stage right, downtown politics which some would say directed the play all along. Although the City of Paris easily acquired State Landmark status and a place on the National Register in 1975, City Landmark status was denied it in 1974 by the Planning Commission, Allan Jacobs, director. The reasons given related more to Neiman Marcus' situation than that of the building itself. In fact, the structure's qualifications for meeting the Landmark code were never really discussed at all. This fall, as judgment day drew near, it became more apparent that the new pro-downtown development Mayor, Dianne Feinstein, would lean hard on the Planning Commissioners to get a favorable vote for Neiman Marcus.

The Johnson/Burgee 1977 scheme voted in reinstalls the skylit rotunda as the crowning touch on a glazed corner entrance lobby. With the exception of this



Johnson design, below, ungraciously boxes the elegant old rotunda in brick and glass.



high moment, the design is bland and uninspired—"intentionally understated," Johnson calls it.

The Planning Commission's approval is strongly laced with conditions. The overly abstract quality of the design must be mitigated by more surface texture and visual expression of the interior structure; the reddish colored granite diamonds in the checkerboard must be grayed. A more substantial indicated revision entails opening up the walls at street level with display windows.

Johnson, who attended the hearing and whiled away the long hours by reading Sherlock Holmes, has commented that the changes will be hard to make. However, he is not too worried. As he said: "I know the planning people here and Director Rai Okamoto very well, and we can work it out." [Sally B. Woodbridge]

Weese master plan for Federal Triangle

Harry Weese & Associates has won a design competition to develop a new master plan that will enliven the Federal Triangle in Washington, DC. The \$17-million plan, which was chosen over 34 other designs by a committee at the U.S. General Services Administration, concentrates on the area around the Old Post Office at 12th St. and Pennsylvania Ave. That structure is [News report continued on page 30]

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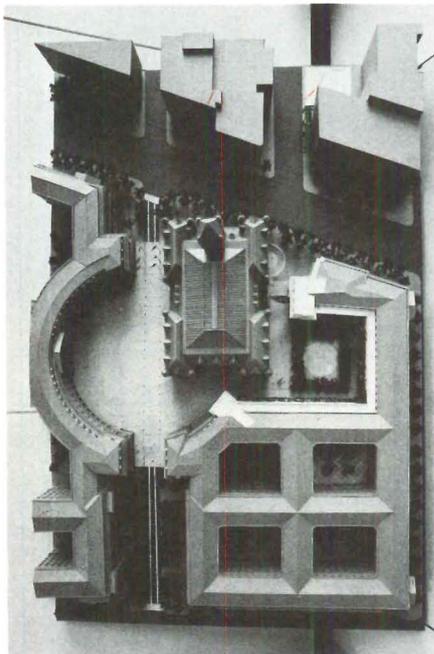
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presently undergoing renovation for use as federal offices and commercial space.

The Weese plan will create a granite-paved plaza in the Hemicycle between the Old Post Office and the New Post Office/ Interstate Commerce Commission building. One of the most unusual elements in the Weese plan is to add copies of the porches and façades on existing Federal Triangle buildings to the brick-walled stumps of the Internal Revenue Service building, suggesting a Great Circle that was never finished. (The IRS building was not completed because the Old Post Office was in the way and never demolished as originally planned.)

The IRS courtyard facing the Old Post Office, which is now a parking lot, will be reduced slightly by the addition of an arcade linking the porches. As one effort to bring life into the Federal Triangle, much of the first floor space behind the arcade will be devoted to restaurants; above will be five floors of offices.

Other parts of the plan for the Federal Triangle—it stretches from 6th to 15th Sts. and Pennsylvania to Constitution Aves.—include a Federal Walk to link the buildings, improved transit with links to the



Weese model: addition in white at center right.

Metro (also designed by Weese), underground parking, and a general upgrading of streets and walkways.

Selection of the winning design was made by the National Architect Engineer Evaluation Board, composed of GSA employees. The other two finalists were

Sasaki Associates with Shepley Bulfinch Richardson & Abbott and Gindele & Johnson, and Sert, Jackson & Associates with Jerome W. Lindsey & Associates.

Karel Yasko, a member of the selection board, said that the Weese plan won because it was the best urban design. He also indicated that the board preferred keeping the IRS building an integral part of the Federal Triangle by adding to it rather than cutting it off as the other plans proposed.

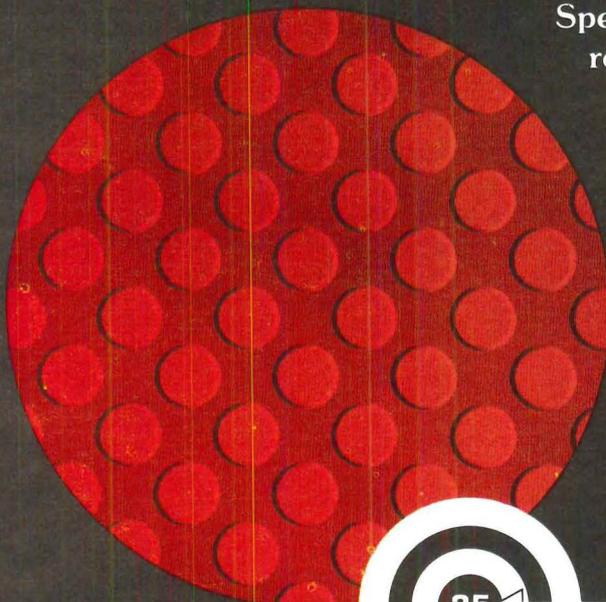
GSA hopes to submit the plan to Congress in July 1980 for funding. [Carleton Knight, III]

Saving Sullivan's Prudential Building

Louis Sullivan's Prudential Building (1895), considered his best and most appropriate expression of a "tall building," is alive and well in Buffalo. Sullivan's 83-year-old masterwork has been sold to a group of businessmen determined to convert the languishing structure into prime office space.

One of the new owners, Stanley Thea, a NY real estate marketing specialist whose previous projects include the marketing of [News report continued on page 35]

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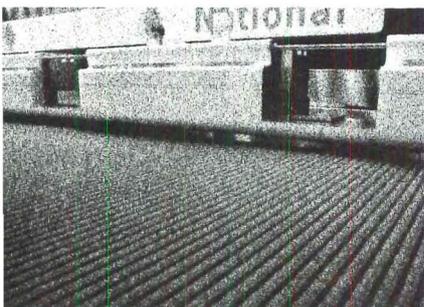
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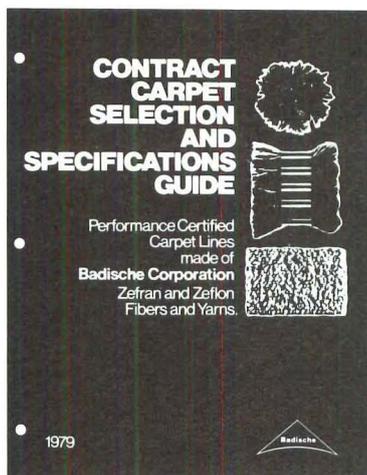


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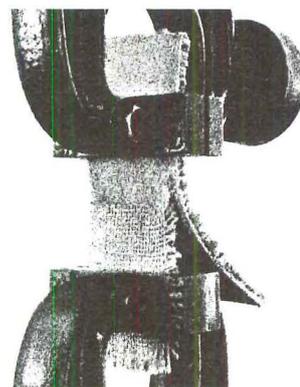
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Installation Date: May 1977 Photography Date: May 1978 Photographer: Ron Forth

New York City's Galleria and Olympic Tower, foresees a \$4.7-million price tag for restoration and rehabilitation. Thea and his partners Rudolph Bersani of Buffalo and Jack Schifrin of Cleveland intend "to make this monument economically viable, preserve it for architecture lovers throughout the world, while creating a good investment and major taxpayer to the City of Buffalo." Something for everyone.

Announcement of the sale of the National Historic Landmark by United Founders Life Insurance Company of Oklahoma City to the group for an undisclosed sum culminated a sometimes anxious five-year campaign to find sympathetic new owners and potential tenants for the building.

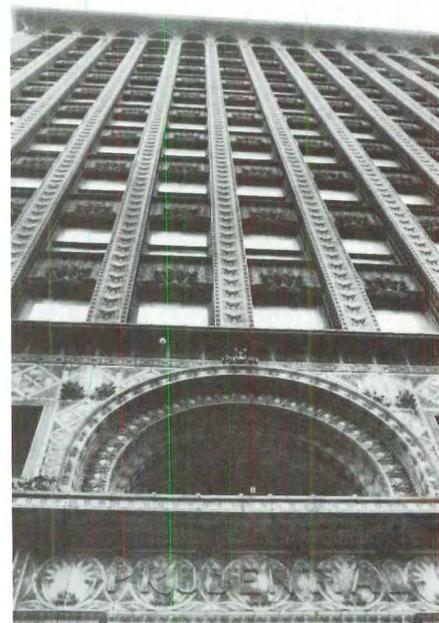
The campaign, complete with "Louis Lives" buttons given out by SUNY/ Buffalo's School of Architecture and extensive media coverage, undoubtedly raised the preservation consciousness in a city just beginning to take notice of its fine old buildings, where the *cognoscenti* still smart at mention of Frank Lloyd Wright's Larkin Building, torn down in the early 1950s to make way for a truck terminal that never was built.

With occupancy hovering at 30 percent, and suffering from an insensitive, tacky 1950s remodeling compounded by damage from a \$300,000 fire in 1973, the Prudential's prospects were dim indeed. But its superb location in the heart of the city's legal and financial district (where it anchors a fine swath of 19th-Century cityscape including an Upjohn church and a major work by Burnham), its manageable 13-story size, and the fairly good condition of its terra-cotta exterior weighed decisively in its favor.

While financing is being arranged and \$1.5 million in federal monies is being applied for, comprehensive restoration plans are being drawn up. These cover exterior façades, interior finishes and spaces, and reacquisition of ornament.

Although final plans have not been made, it seems certain that the Prudential's U-shaped floors will be extended and filled in, thereby increasing usable floor space by approximately 1000 sq ft per floor to a total net figure of 110,000 sq ft. The inclusion of fire stairs in the new addition will make possible the reopening of Sullivan's dramatic open stairwell, previously enclosed so that the building would conform to safety codes.

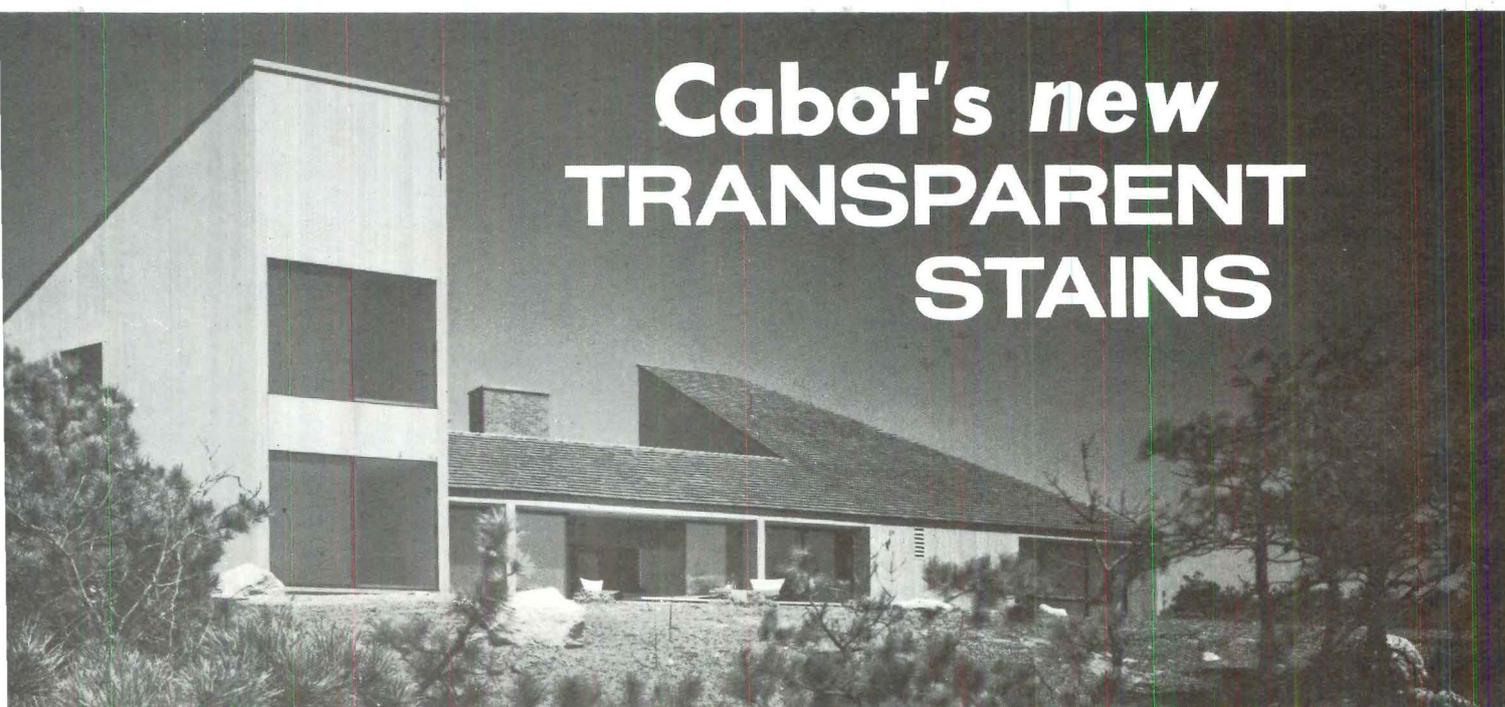
Repair and cleaning of the luxuriously



Buffalo Evening News

At important junctures of columns and beams, where the pushing and pulling forces of tension and compression are transmitted, Sullivan used his system of ornament to announce the energies within. Along the vertical columns, interlocking diamond shapes, like great stretched cables or ribbons, pull the eye upwards.

[News report continued on page 37]



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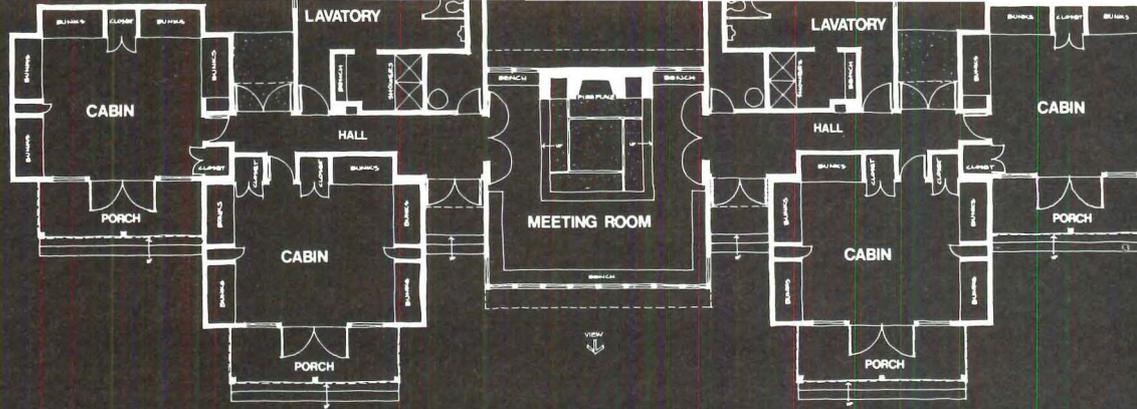
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ornamented terra-cotta façade is a clear priority. Other likely restoration work includes the uncovering of the mosaic friezes and pink Tennessee marble in the lobby areas, much of which is now hidden under black ceramic tile, the repair and cleaning of a 400-sq-ft Sullivan-designed skylight oval seed pods in a glass and cast-iron framework, and uncovering of marble chip flooring in all elevator corridors. Restoration proposals also include reacquisition of the original ornamental bronze electroplated iron elevator grilles, door and light escutcheons, and exterior light standards and lanterns, all designed by Sullivan.

A special clause in the terms of the sale contract calls for 1000 sq ft of space to be assigned "rent-free in perpetuity" for the use of the newly formed Louis Sullivan Museum of Architecture. According to Jack Randall, architect serving as both restoration consultant to the new owners and museum curator, the collection contains artifacts from demolished Sullivan buildings, a set of over 500 unpublished Sullivan drawings, furniture and artifacts by Frank Lloyd Wright, and an extensive

collection of slides and photographs of Sullivan buildings by the late Richard Nickel. [Jill Weber Radler]

Jill Radler is a graduate student in architecture at SUNY, Buffalo, who writes on architecture for the Buffalo Evening News.

Raymond McGrath Modernist leader

The death of Raymond McGrath in Dec. 1977 seems, in hindsight, to have coincided with the waning of the architectural movement he did so much to initiate in Britain: Modernism. McGrath, born in Australia in 1903, was the first graduate in architecture of Sydney University, in 1926. From there he went on to graduate work in England, where he spent the rest of his career, becoming one of the few avant-garde of the early (1930s) Modernist movement in that country. The best-known of his many innovative houses from this period is perhaps St. Anne's Hill, Chertsey, Surrey (1937)—a "big cheese with a slice cut out for the sunlight to enter." His studios for the BBC and aircraft interiors for BOAC (then called Imperial Airways)



St. Anne's Hill, Chertsey, 1937.

were among the design highlights of his oeuvre. McGrath's two books: *Twentieth Century Houses* (1934) and *Glass in Architecture and Decoration* (1937), co-authored with his brother-in-law, A.C. Frost, are major reference works from the early Modernist perspective. With his passing, we have lost one of the great figures of the "International Style."

City in a hurry to forget its past

After five years of false starts, the City of Minneapolis has started to vacate and clear one-and-a-half blocks of the
[News report continued on page 41]



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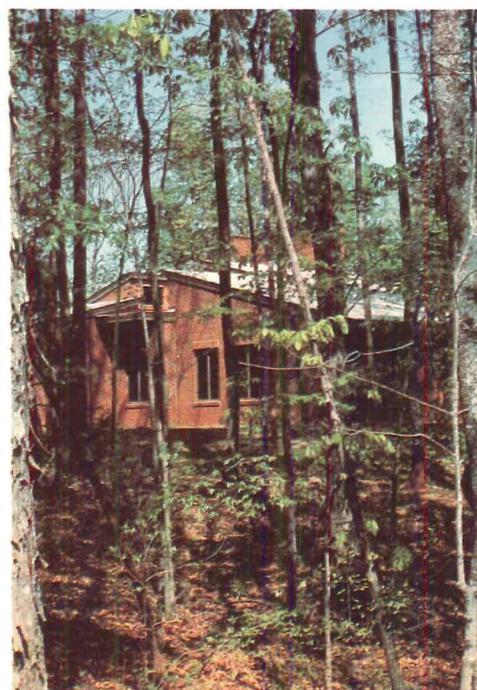
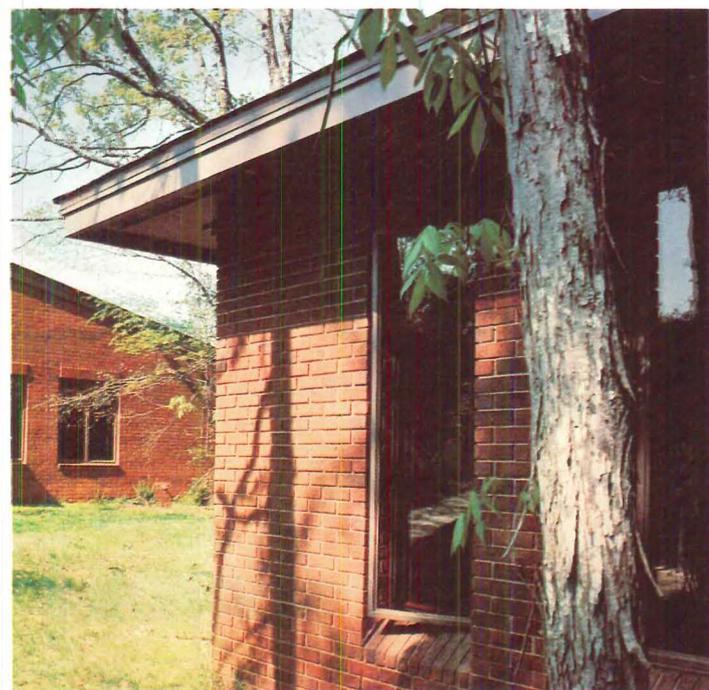
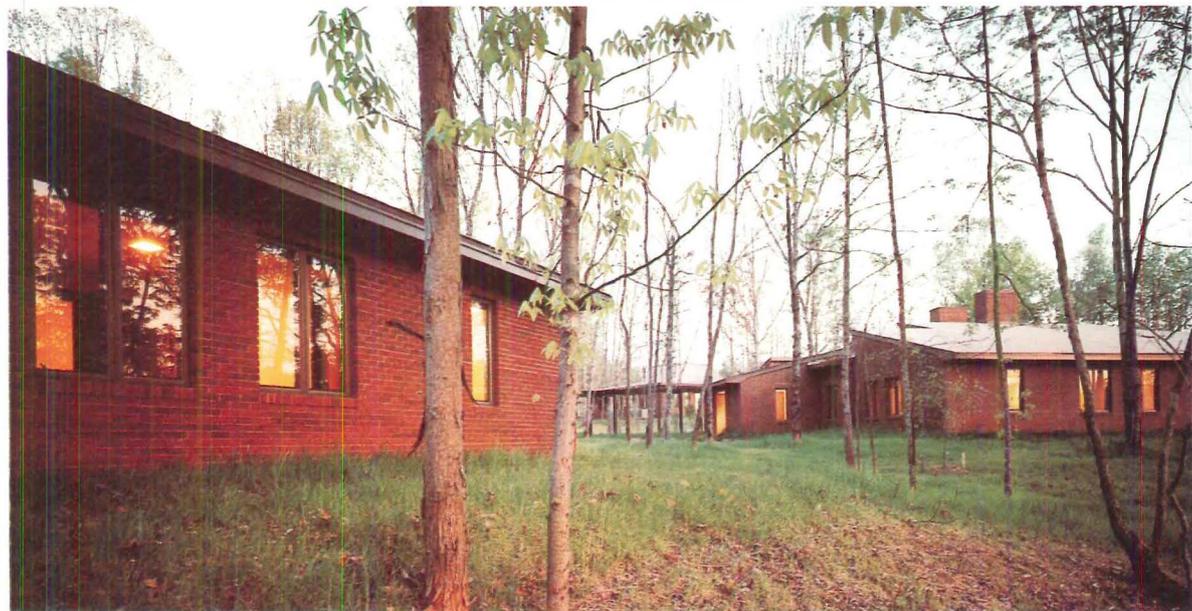
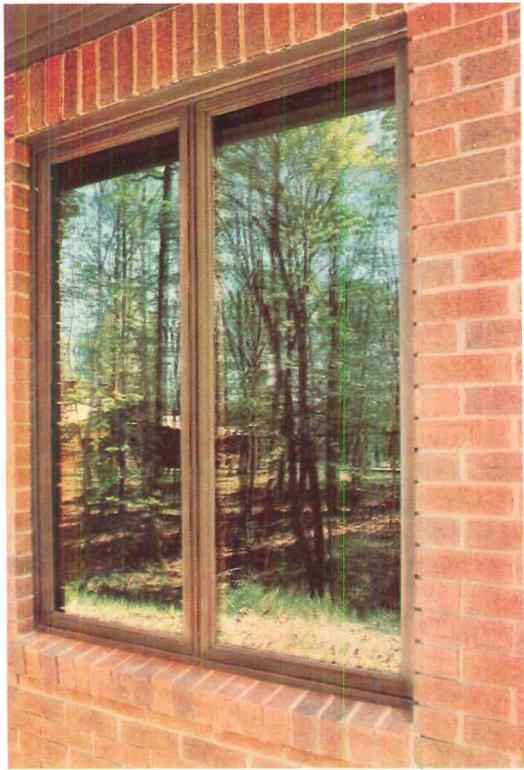
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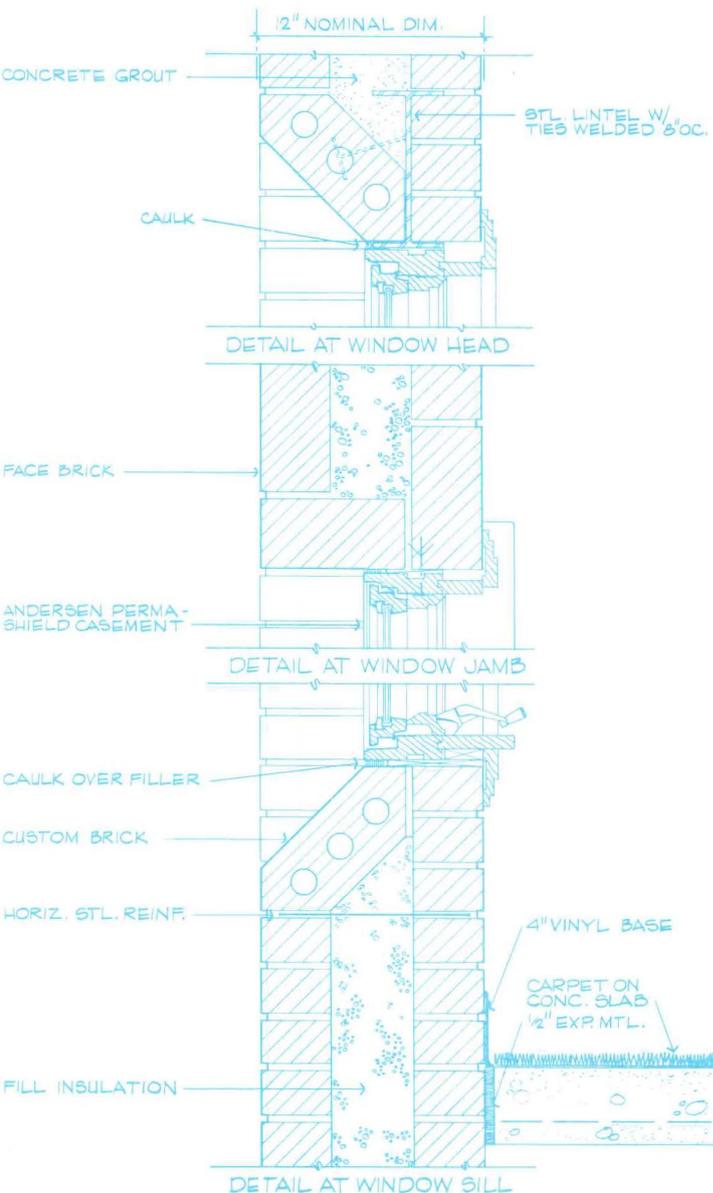
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Photos: Phillip MacMillan James

Scottie's sumptuous Art Deco interior.



downtown area in preparation for the \$100 million urban development project it calls "City Center." By late spring 1979, the city plans to turn over the cleared property to Oxford Development Properties of Edmonton, Canada, and their architects, Skidmore, Owings & Merrill, Denver. Slated to go, along with about half of the one-story shops and restaurants that make Seventh St. downtown Minneapolis' most active section, was the historically significant Art Deco interior of "Scottie's on Seventh" (P/A, Nov. 1976, pp. 64-65), a 1930s restaurant and disco.

SOM describes the City Center project as having a 3-level glass-and-steel shopping arcade as a base, topped by an 18-story, 600-room luxury hotel (managed by Western International Hotels), a 28-story office tower, and a 38-story office tower. Included in the lower framework is a 1.4 million-plus-sq-ft retail facility for Donaldsons department store and a 300-car underground parking ramp. Oxford also announced in late September a \$25-\$30 million development plan for the block adjacent to the City Center project, ex-

panding the initial site to two-and-a-half city blocks with a retail/entertainment complex at street level, a new YMCA, an additional two office towers, and a 600- to 800-car parking ramp.

Though most citizens support the concept of high density development in downtown Minneapolis, critical opposition to City Center tends to focus on the future of the marvelous interior of Scottie's (originally named The Forum Cafeteria). Oxford's marketing officials say the site is needed for an as yet unnamed department store.

Many local critics feel that any new development downtown, especially of this size and in this location, should be more

sensitive to urbanistic quality. To some, a City Center without the old Forum diminishes by one more precious building Minneapolis' fading sense of history. Many architecturally significant buildings from downtown have already been lost—some to fire, but most to a thirst for newer, "better" answers.

Spurred by such concerns, the present owners filed suit in January against both the city and Oxford, challenging the constitutionality of the use of "quick clearing" under the city's right of eminent domain, and Oxford's failure to file a complete Environmental Impact Statement. Issues decided in the District Court were: the his- [News report continued on page 42]

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torical significance of the façade, the possibility of Oxford building around Scottie's, the feasibility of taking the glass-tiled interior down, and a possible relocation site. The trial ended with an out-of-court settlement between Scottie's, Oxford, and the city. Scottie's is to receive \$1 million from the city and the developers; Oxford will dismantle the interior, restoring it to its original 1929 appearance, and relocate it at ground level within City Center on Sixth St. Scottie's will be given a long-term lease to operate the interior in its new location. [Bruce N. Wright]

Bruce N. Wright is an architect and columnist for Architect Minnesota.

P/A co-sponsors housing competition

Progressive Architecture, in conjunction with *Better Homes and Gardens* and the American Plywood Association, is sponsoring the second "Innovations in Housing" competition, intended to encourage attractive and economically viable single-family detached house design. The 1979 awards seek energy-conserving designs for houses with maximum spatial flexibility and broad appeal. Entries should

be designs for houses of 1700 sq ft or less that incorporate APA grade-trademarked plywood. Postmark deadline is March 16. For information and entry forms, write: "Innovations in Housing," P.O. Box 11700, Tacoma, Wa 98411.

Red Cedar Shingle awards program

The fourth biannual Architectural Awards Program of the Red Cedar Shingle & Handsplit Shake Bureau/AIA, intended to recognize designers of outstanding residential and light commercial structures and to feature projects using red cedar shingles or handsplit shakes, is now accepting entries. Entry categories are: residential single-family, residential multi-family, vacation homes, commercial/institutional, remodeling/restoration, and interiors. The jury for the 1979 program will be architects William Turnbull of San Francisco, Richard Bergman of New Canaan, Ct, and Euine Fay Jones of Fayetteville, Ar. Entries are due July 13; winners will be announced in September. For further information and entry forms, write: Red Cedar Shingle & Handsplit Shake Bureau, Suite 275, 515 116th Ave. N.E., Bellevue, Wa 98004.

Calendar

Exhibits

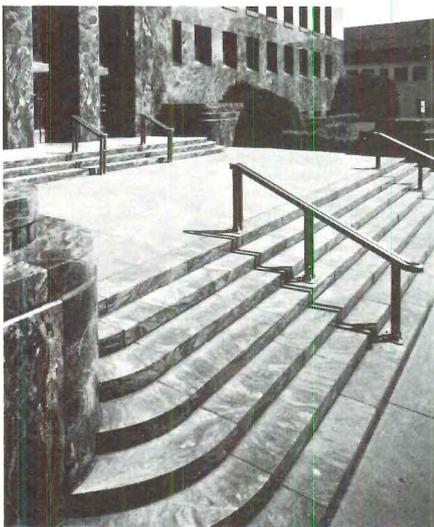
- Jan. 11–June 4.** "Orlando Giannini." The major works of this Art Deco pioneer, who collaborated with Frank Lloyd Wright, will be on exhibit at the Frank Lloyd Wright Home and Studio, Oak Park, Il.
- Jan. 15–March 18.** "Two on Two at the Octagon." Urban design of Washington, DC and Philadelphia.
- Jan. 21–March 25.** "World Architecture in Minnesota." Historical Revival architecture built in Minnesota between 1890 and 1930. Landmark Center, St. Paul, Mn.
- March 6–April 7.** "Siah Armajani First Reading Room." Max Protech Gallery, NY.
- March 15.** "New Architectural Visions in Northern New England," Lamont Gallery, Exeter, NH.

Conferences

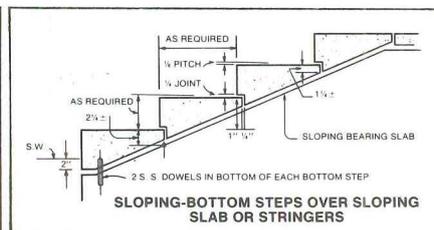
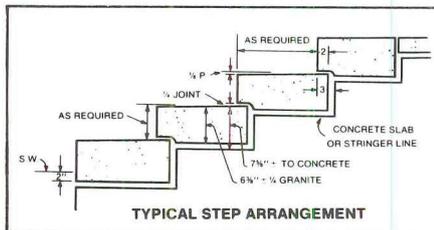
- March 14.** American Society of Interior Designers Info Fair. Chicago, Il.
 - March 13–16.** Western Wood Products Association Spring Meeting. San Francisco, Ca.
 - March 15–16.** COFPAES Federal Procurement Conference. Denver, Co.
 - March 19–20.** DOE Solar Energy Storage Options Workshop. San Antonio, Tx.
 - March 22.** American National Standards Institute Meeting. Washington, DC.
- [News report continued on page 46]

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Architect: Tinsley Higgins Lighter & Lyon, Des Moines, IA

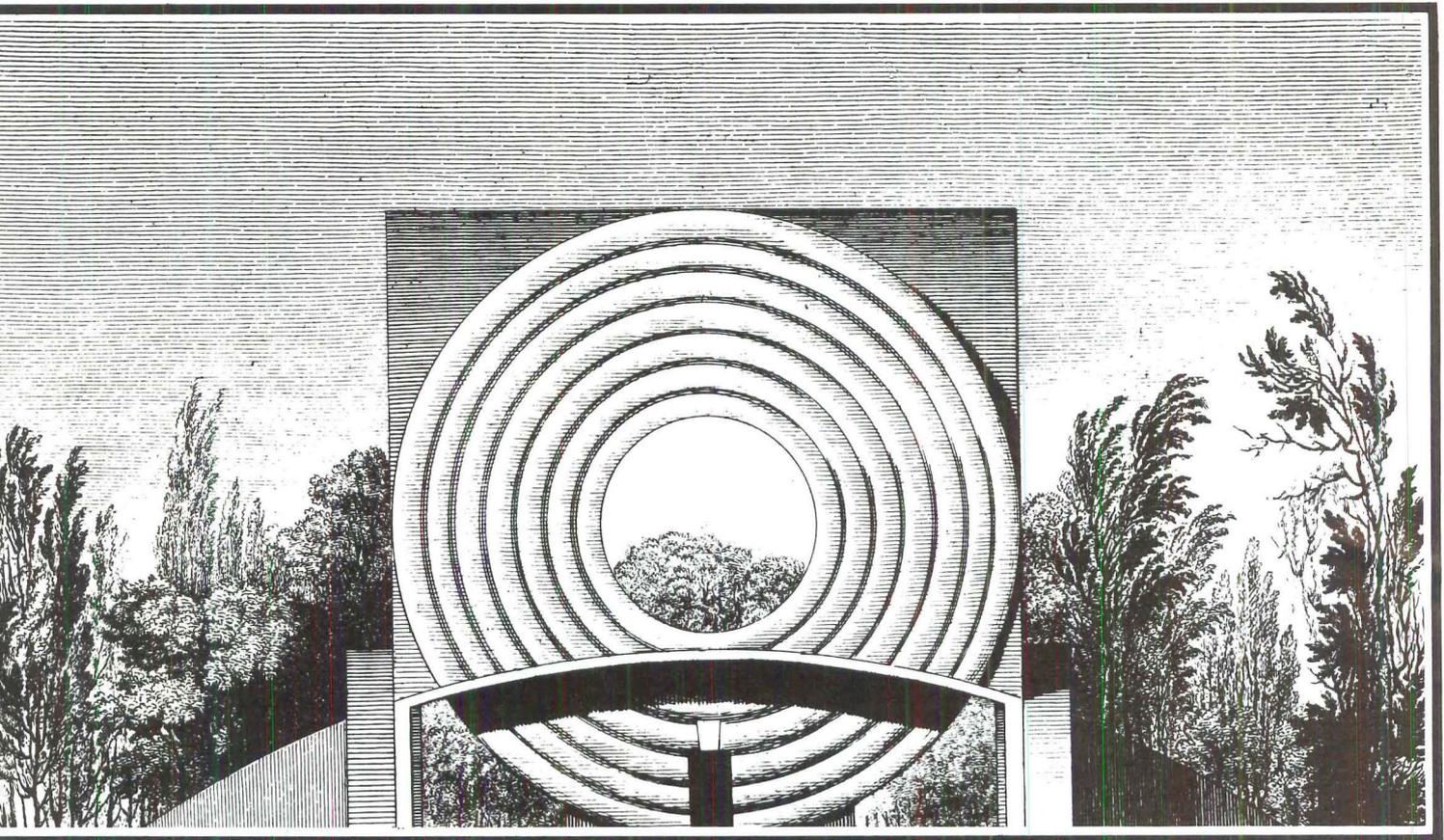


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Barrell-maker's Workshop
by Nicolas Ledoux, ca. 1785-1795
H: 21.2 cm. W: 17.9 cm.

A house in the form of two intersecting barrells, for the workshop and dwelling of the barrell-makers of the Ideal City of Chaux. On the facade is inscribed a representation of the hoops made by the residents.

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Corning Fiberglas Insulation wins going away.

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*T.M. Reg. O.-C.F. Corp. ©O.-C. F. Corp. 1979

WHY OWENS-CORNING FIBERGLAS ROOF INSULATION IS THE BEST BASE FOR BUILT-UP ROOFING

Base for BUR	Conforms to minor deck irregularities	Resilience	Ventable	Large sizes up to 4' x 8'	Easy to fabricate (in field)	Not damaged if wet (short term)	Excellent for covering old roofs	Stable "K" factor	Dimensional stability
Owens-Corning Fiberglas Roof Insulation	✓	✓	✓	✓	✓	✓	✓	✓	✓
Owens-Corning Fiberglas Furi®	✓	✓	✓		✓	✓			✓
Perlite								✓	✓
Urethane				✓	✓	✓			
Composites									
Wood Fiber								✓	

Report from San Francisco

Sic transit

In the John M. Wood Motor Coach Center, San Francisco architects Rockrise, Odermatt, Montjoy Associates (ROMA) have centralized and rationalized the maintenance of the city's fleet of 550 buses, in a humane work setting and a smart piece of industrial design.

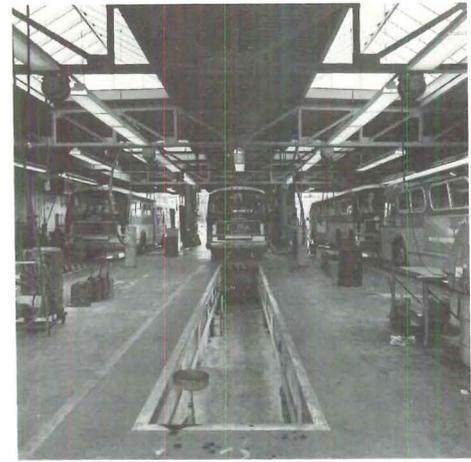
The five-building complex, completed in 1977 for an estimated \$14 million, is shoe-horned into an irregular two-block site. It includes a 120,000-sq-ft main shop building for major repairs, inspection, and washing pavilions for daily servicing of buses, a 16,000-sq-ft cable-car shop, and a 17,000-sq-ft operations building which functions as a dispatcher's office and a recreation club for standby drivers.

Although the area, called "Dogpatch," is primarily industrial, residential blocks line the site on one side. A drop in grade enabled the architects to reduce the station's impact on the neighborhood by siting the unsightly parts of the operation, bus parking lots, and general maintenance traffic areas below street level. The below-grade level of the buildings has sand-blasted concrete columns, fascias, and vertically ribbed walls. The street level is sheathed in bronzed anodized aluminum and bronzed glass panels. The design unself-consciously acknowledges the "Streamlined Moderne Revival" in louvered port-hole vents, red enameled tubular stack covers, and rounded wall ends on the bus washing stations, covered in concrete block glazed pale yellow. Both exterior materials and color treatment are likely to wear well if given the maintenance post-Proposition 13, publicly owned buildings are too often denied.

The complex holds a rigorous order in a lively and affirmative design. The order is a result of ROMA's meticulous research into and programming of the fragmented Muni system. The design's vitality was given high priority by Muni authorities who hope



ROMA's bus center for San Francisco MUNI: above, operations building, with tire shop in foreground; below left, cable car shop floor contrasts with service building inspection pits, below right.



Photos: Joshua Freiwald

the new quarters will boost chronic low morale in the public transit system.

The main shop building is a triumph of good programming on the ground floor. The heavy and light maintenance bays are divided by a three-story central spine with the support spaces—machine shop, body shop, paint shop, upholstery shop, and engine disassembly rooms—immediately adjacent. The mezzanine floor contains storage space for spare parts and a lunch room, while the third floor houses mechanical equipment and offices. Ground floor work spaces are roofed with precast, prestressed concrete double-tees supported by concrete walls at the spine and the perimeter. The enameled cement asbestos board walls with enameled acoustical panels that cover the interior walls above 7 ft have the color scheme of the Muni logo: orange, red, yellow, and white. The structures of the operations and car buildings are similar.

Much of the operation deals with noxious emissions and pollutants. These are confined and removed by an elaborate mechanical system of underfloor ducts which terminate at the floor with quick-coupling, self-enclosing receptacles. Most of the work spaces have an open and

airy atmosphere; on either side of the mechanics' pits, skylit roof sections provide daylight for work areas.

The pièce de résistance, from an artistic standpoint, is the cable-car shop building at the north end of the site. Set well back from the street, it is prefaced by a minipark embellished with heavy timber play sculptures by Stefan Novak (funded by Art Enrichment moneys for city projects). Within this discrete block one of the system's elite cable cars undergoes complete restoration in the course of a year. An atmosphere of old-fashioned craftsmanship pervades the building, and the design is correspondingly privileged. Here, an uninterrupted bank of windows across the front was possible because this face is not exposed to grime-producing diesel fumes.

The cable-car shop is intended as an attractive frontispiece. Down below, large noisy buses of uninspired design, the workhorses of the system, are lined up awaiting repairs which are carried out at a snail's pace because the Muni cannot pay high enough wages to hire a full complement of mechanics to service them. The design embodies Muni's operational ironies as well as its aspirations and desired image. [Sally B. Woodbridge]

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Looking to the future, plans call for a program of line consolidation which will result in a single offering of the best items from each collection. This combined collection, effective August 1, 1979, is detailed on the back of this page. Nevamar Corporation will maintain its established practice of effective communications and response to your design needs. You can continue to look to Nevamar for leadership in high-pressure plastic laminates.

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Until August 1, 1979, the current Nevamar and Textolite high-pressure plastic laminate lines will be available to you through the independent distributors serving your area.

On August 1, the two lines will be consolidated, and a collection of the best of both will become our 1980 stock line. * The new projected line, available in popular sheet sizes, is shown below. The numbers shown in parenthesis () indicate the former Textolite number for the pattern or color.

SOLID COLORS

S-1-6	Chinese Red	
S-1-7	Orange	
S-1-10	Brick	
S-1-11	Cranberry	
S-1-14	Kumquat	
S-1-15	Burgundy	
S-1-16	Orange Peel	
S-1-17	Russett	
S-1-18	Terra Cotta	
S-2-3	Champagne	
S-2-18	Brown	
S-2-19	Beige	
S-2-29	Tuscan Brown	
S-2-30	Biscuit	
S-2-31	Indian Gold	
S-2-33	Camel	
S-2-34	Taupe	
S-2-35	Burnt Sienna	
S-2-36	Architectural Brown	
S-2-37	Almond	(1469)
S-2-38	Cafe Au Lait	(1519)
S-2-39	Chameleon	(1549)
S-2-40	Chamois	(1609)
S-2-41	Deep Bronze	(1608)
S-2-42	Choco Brown	(1619)
S-3-1	Sky Blue	
S-3-7	Vivid Blue	
S-3-14	Space Blue	
S-3-16	Regimental Blue	
S-3-17	Plum	
S-4-1	Lemon	
S-4-8	Pale Gold	
S-4-13	Harvest Gold	
S-4-14	Mayan Gold	
S-4-15	Daffodil	

S-4-17	Vanilla	
S-4-18	Butter	
S-5-25	Parrot Green	
S-5-26	Apple Green	
S-5-33	Forest Green	
S-5-34	Deep Green	
S-6-1	Black	(1610)
S-6-3	Dove Grey	
S-6-5	Putty	(1481)
S-6-7	Oatmeal	
S-6-14	Black Pearl	
S-6-16	Adobe	(1618)
S-7-4	Solid White	
S-7-5	Antique White	
S-7-22	White White	
S-7-24	Chalk White	(1480)
S-7-25	Neutra	(1559)

SOLID INCLUSIONS

IC-2-1	India Spice Intertex	(1719)
IC-6-1	Dove Grey Intertex	(1721)

DIMENSIONAL PRODUCTS

CE-6-2	Natural Cane	
CR-2-1	Natural Cork	
S-6-1	Black Slate	
S-7-4	White Slate	
MA-2-1	Stonehenge Slate	
RC-2-2	Classic Cane	
GZ-2-1	Almond Glaze	
GZ-4-1	Solar Glaze	
RL-2-1	Cordoba Leather	
RL-2-4	Seville Leather	
LH-2-6	Russett Leather	(2229)
LH-2-7	Mocha Leather	(2239)

WOODGRAINS

W-2-461	Executive Walnut	
W-2-552	Light Teakwood	
W-2-686	English Oak	
W-2-786	Distressed Pecan Walnut	
W-2-981	Denver Walnut	
W-8-72	Figured Rosewood	
W-8-73	Barrel Oak	
W-8-85	Designers Teak	
W-8-86	Carpathian Burl	
W-8-94	Natural Butcher Block SG	
W-8-107	Silvan Teak	
W-8-110	Golden Ash	
W-8-112	Jacobian	
W-8-136	Beechwood	
W-8-164	Rustic Quartered Oak	

W-8-165	Hallmark Walnut	
W-8-166	Heritage Walnut	
W-8-167	Nara Planked Oak	
W-8-184	Vessel Oak (NEW)	
W-8-186	Gunstock Walnut	(9542)
W-8-187	Indian Teak	(9212)
W-8-188	Honey Teak	(9214)
W-8-189	High Point Burl	(8612)
W-8-190	Caisson Walnut	(9552)
W-8-191	Contemporary Oak	(9701)
WV-8-30	Natural Butcher Block CG	

LEATHERS

LH-2-2	Palomino Leather	
LH-2-3	HIA Brown Leather	
LH-2-4	Executive Leather	(2299)
LH-2-5	Antique Leather	(2234)
LH-2-6	Russett Leather	(2229)
LH-2-7	Mocha Leather	(2239)
LH-4-1	Harvest Leather	
LH-6-1	Black Leather	
LH-7-1	White Leather	
LH-7-2	Persian Leather	(2200)

ABSTRACTS

AG-2-1	Agate	
AN-1-1	Burnt Orange Antigua	
AN-2-1	Brown Antigua	
AN-2-2	Rustic Antigua	
AN-4-5	Golden Antigua	
AN-5-7	Lime Antigua	
BT-1-1	Burnt Orange Batik	
BT-2-1	Almond Batik	
BT-4-1	Sunshine Batik	
GS-7-1	Gold Sparkle	
ST-2-1	Golden Starlight	
ST-4-1	Pineapple Starlight	
ST-5-1	Avocado Starlight	
TP-4-1	Golden Topaz	

PREMIUM ABSTRACTS

GZ-2-1	Almond Glaze	
GZ-4-1	Solar Glaze	
OT-2-1	Old Town	(6000)

MARBLES

CA-3-1	Blue Cathedral	
CA-7-1	Cathedral	
DI-7-1	DaVinci	
MA-2-1	Stonehenge	
ZE-7-1	Zenith Marble	

*Nevamar and Textolite patterns and colors not shown will be available for identified specifications on a special order basis for six months following line consolidation. This provision is made to cover any projects where the deleted items have been specified. Please consult your distributor, or your Nevamar representative.

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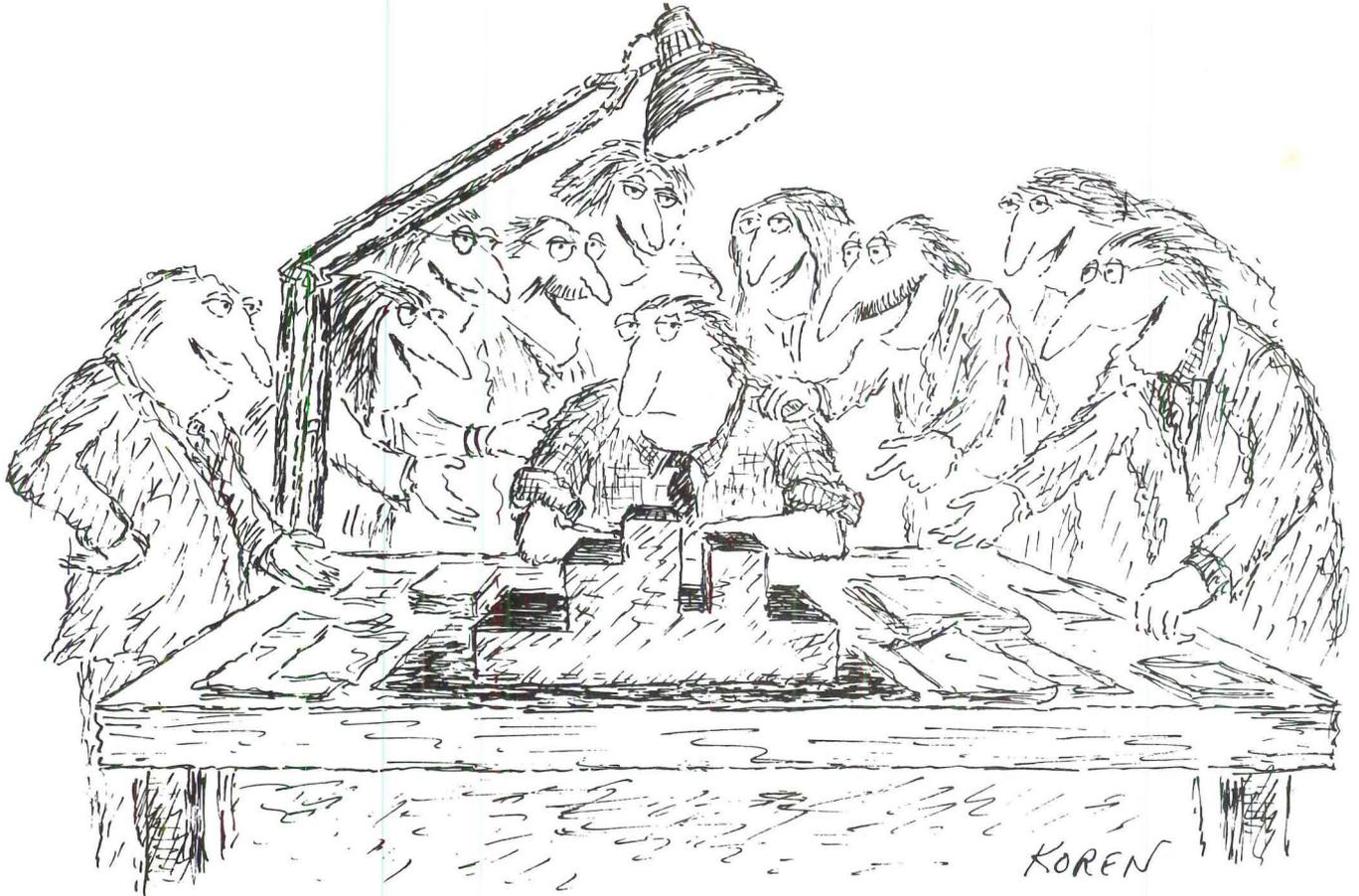
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guest rooms were inadequate for optimum guest comfort.

- Economy cycle cooling for public spaces in conjunction with airside balancing should be implemented.
- Modifications to air conditioning procedures in some of the Hotel's 53 individual zones were indicated.

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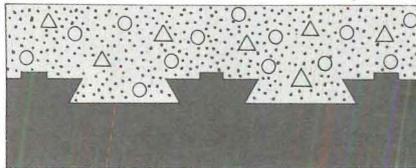
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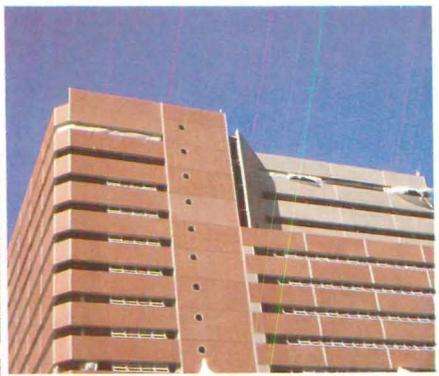
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Aalto in Italy

The last work Alvar Aalto was to see in construction is in a small village in the mountains near Bologna, Italy.

It is a fitting tribute to Alvar Aalto that the last of his buildings he was to see in construction was in Italy. "Because of its rich cultural tradition as well as its scenery," Mrs. Aalto recently said, "Italy meant very much for Aalto. During the years," she continued, "we received many planning works in Italy (and) . . . even if the realization of these projects sometimes seemed unrealistic from the very beginning, Aalto was each time truly inspired and optimistic when starting the work. He must have had a dream to be able to build at least once on Italian soil."

Although the Parochial Church of Riola, officially known as the Chiesa di Santa Maria Assunta, was inaugurated last June, the main square in front of it, the parish house, the freestanding bell tower, and the landscaping are yet to be completed. Other than those final elements, however, the church and its detached community assembly building are fully functioning.

The church is crisply detailed and organized overall into a succession of fan shapes, both in plan and in elevation. To achieve its form, six massive prefabricated concrete arches that diminish in width and height as they progress toward the altar are used as the major supporting elements within the main assembly hall. The roof over the arches is composed on the north side as a series of long, scalloped light monitors that also decrease in size as they extend from the front to the rear of the building. On the south side, a copper-clad roof follows the form of the arches down almost to ground level. The curving roof plane is interrupted about two-thirds of the way toward the presbytery from the rear by a copper-clad wall rising perpendicular to both roof and plan. This is the storage

The church's scalloped light monitors illuminate the interior with soft, north light.



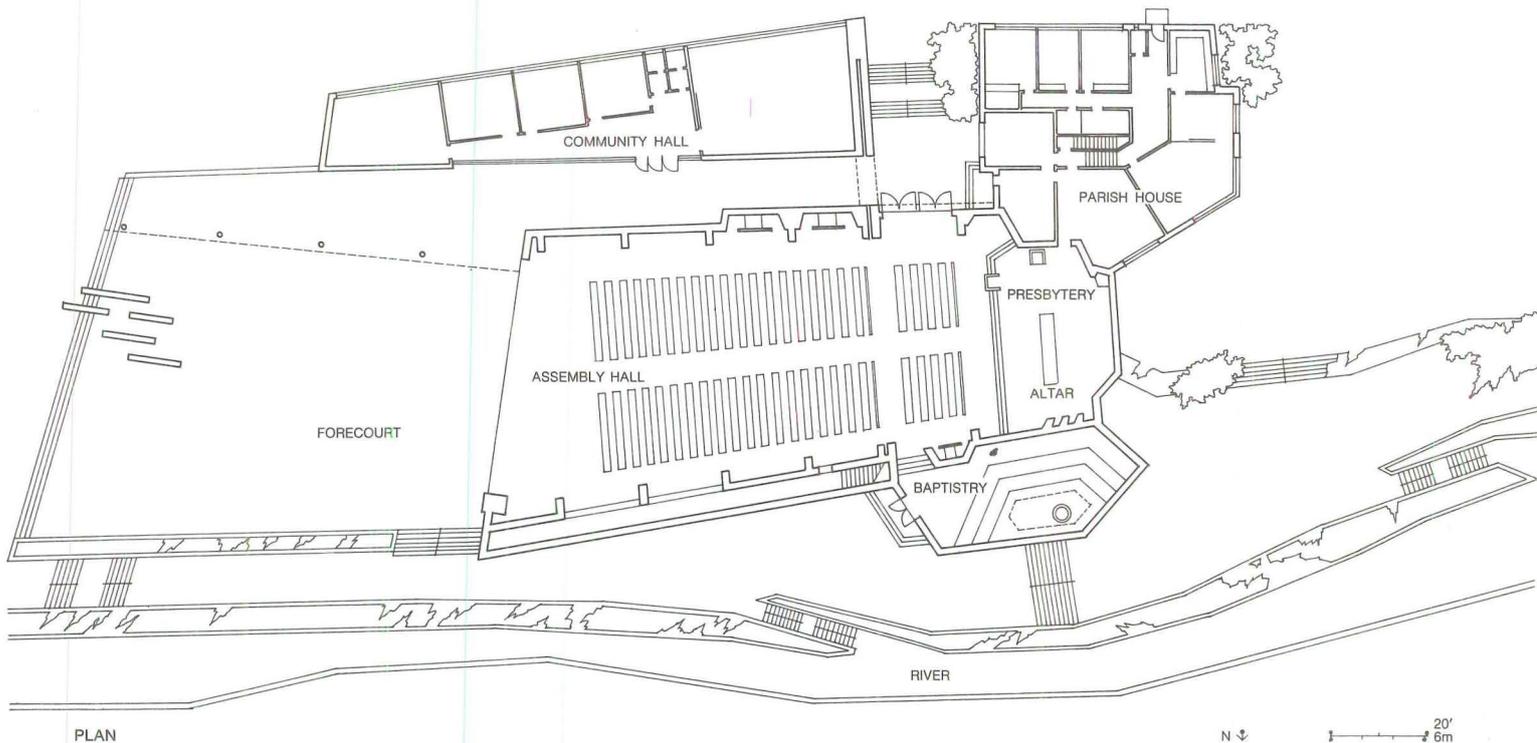
Parochial Church of Riola, Italy

element for the large sliding canvas panels used to divide the interior so that community activities can take place in the nonsacral part of the church. The walls of the whole complex, including the baptistry at the northwest corner of the church and the long assembly-room structure extending just beyond its south side, are clad in local sandstone. As is typical of all of Aalto's work, all of the fixtures and furniture, except for the assembly seating which came out of an old church, were designed in his office. The floor and furniture of the presbyterial area are made of Carrara marble.

Although the church was designed in the mid-1960s, it did not enter construction

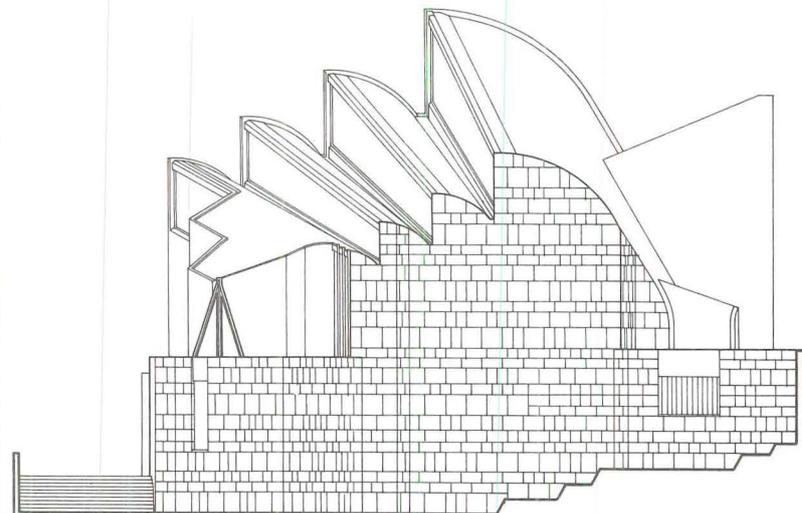
until 1975. By that time, the ecumenical council had established certain liturgical reforms, which meant that some alterations had to be made inside the church to reflect the new changes. Instead of placing the font for holy water in its usual position at the side beyond the main entrance, it has been designed as a small, freestanding shaft on axis with the entry. The altar is located so that the celebrant faces the congregation, and the baptismal font has been removed from the baptistry and placed in a more "public" position near the altar in the presbytery. The baptistry will now be used as a chapel for small celebrations. A tabernacle has been placed in it, and a small altar will eventually be built under the faceted skylight over its central space.

One might wonder what the circumstances were that led to Aalto's finally being able to realize a building in Italy. The story goes back to 1965 when a major exhibition of his work was mounted in the Palazzo Strozzi in Florence. At that time, the Aaltos met Cardinal Lercaro, the Archbishop of Bologna, the commune in which Riola is located. Through his interest in their work, the Aaltos soon returned to visit the building site high in the mountains 35 miles from the city of Bologna. The following year they came back with the first sketches. After Cardinal Lercaro retired in 1968, the project was almost forgotten for seven years. But in 1975, Mario Tamburini, a native of Riola and general manager of the large Grandi Lavori Spa building concern in Bologna, offered to carry out the

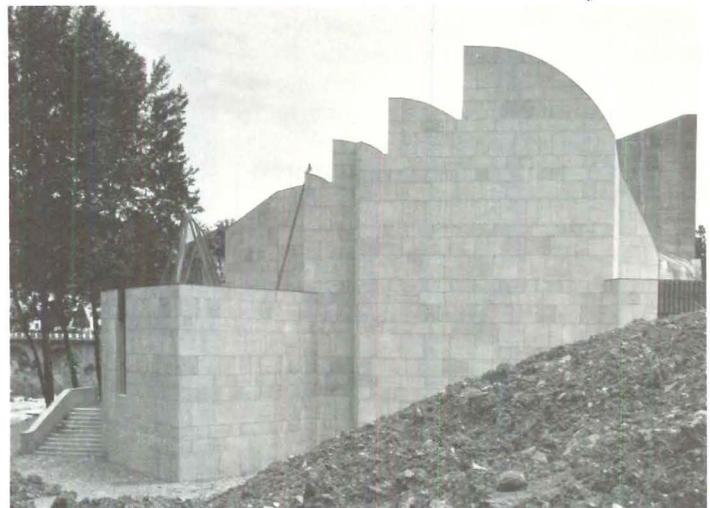


PLAN

The church is designed as a fan shape that radiates from the rear of the site to embrace the forecourt. The parish house (shown in northwest corner of plan, above) is not completed, nor is the bell tower (indicated at east end of plan). West elevation (below) illustrates how entire church diminishes in size toward the altar. The wall perpendicular to the nave's south enclosure (facing page) is used to store canvas partitioning panels.



WEST ELEVATION





Parochial Church of Riola, Italy

project even if the state and diocese funds could not completely cover its costs.

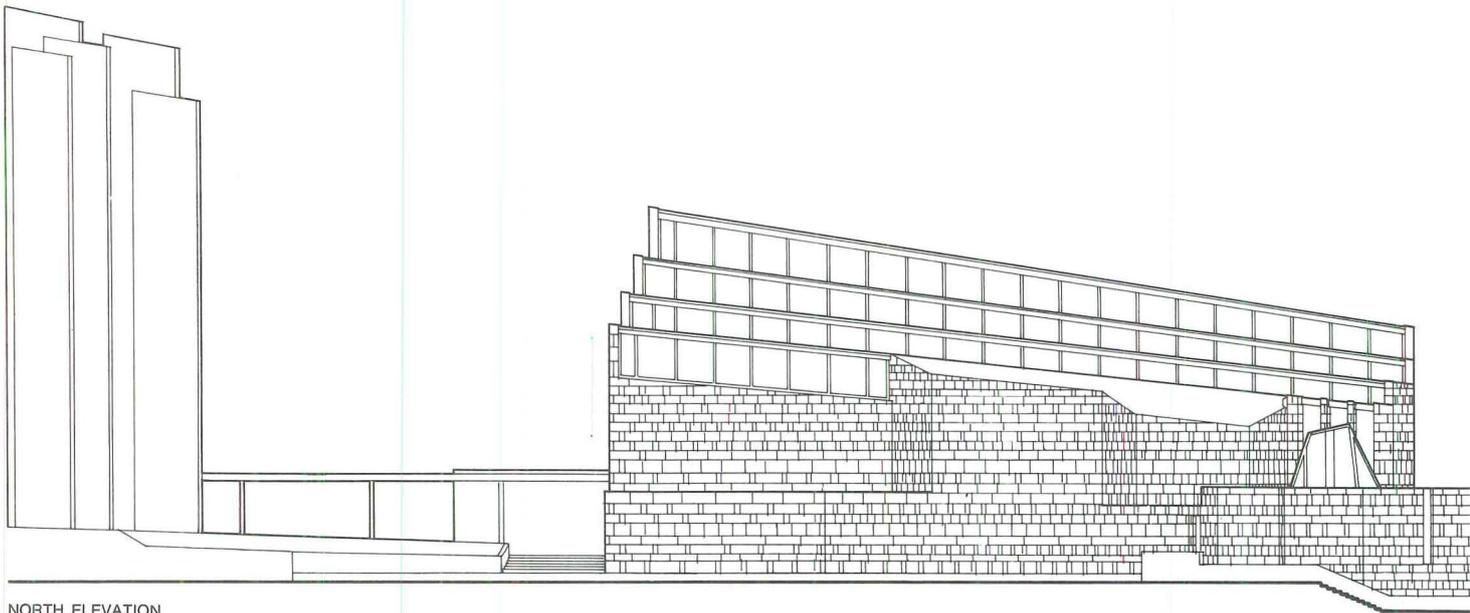
Although "an important starting point in planning was how to situate the building in the landscape," Mrs. Aalto said, "the church does not open into the scenery but with its closed walls and plain form has an intention to help the churchgoer into concentration and devotion. The church hall is nevertheless full of light which softly enters the room through windows placed high up in the ceiling construction." It might nevertheless seem strange that Aalto did not take more advantage of the truly spectacular site by providing at least some views to the wooded stream that runs

nearby and to the mountains in the distance. But to do so would have been contrary to a long tradition that, perhaps especially in Italy, views the church as a peaceful, but enclosed, sanctuary.

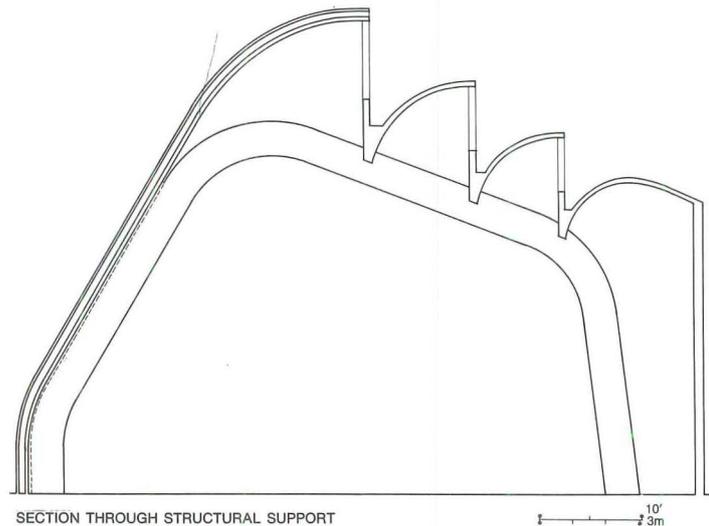
If Aalto did not take advantage of the site in one way, however, he did in another, and that was through organizing the buildings on it in such a way that the complex and its main square give the small village a new urban form that will become an important focal point in a place otherwise lacking one.

The complex has been set to the rear of the site, but its form has been articulated as a cluster of radiating fan shapes typical of Aalto's urban centers. As the form of the complex reaches toward the forecourt, it embraces it in a way that seems both to

enclose it conceptually and to encourage the faithful into its arms. This reflects an attitude at least as old as St. Peter's, but when Aalto first used such a device with his early church schemes of the 1920s in Finland, it was a revolutionary break. Before those projects, the Finnish tradition called for the parochial center to be isolated. But with those early antecedents of Riola, and especially with Jamsa of 1925 and Toolon of 1927, a first attempt was made to establish a religious center that maintained a continuity of building fabric within a city and thus made the church a community center as well. At Riola, however, the idea is carried even further through the inclusion of the side wing for community activities, and through the installation of sliding panels in the church



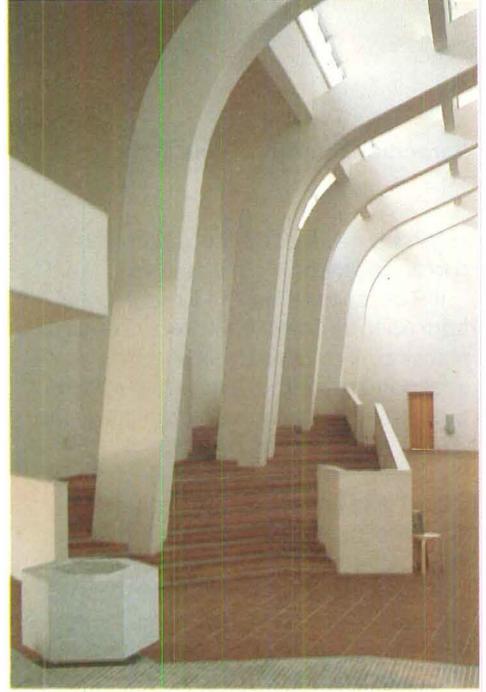
NORTH ELEVATION



SECTION THROUGH STRUCTURAL SUPPORT

10' 3m

Six massive reinforced concrete arches support the scalloped north light monitors that, along with the arches, diminish in size as they proceed toward the altar. The front entry (left) can be opened wide, and the interior can be partitioned, for community gatherings in the nonsacral part of the church. The organ and choir loft (facing page, top right) rises along the north side of the nave in a linear series of steps that begin at the baptismal font and end at the front near the entry.



Parochial Church of Riola, Italy

assembly hall to allow that space to be partitioned for nonreligious uses.

If Riola can be seen as a progression from Aalto's earliest churches in terms of planning, it can also be seen as the descendant of another, earlier one with regard to its interior spatial organization, as Giuliano Gresleri has pointed out in *Parametro* (No. 62). In the years around 1930, Aalto was working in his most rationalist phase, as evidenced by the major projects of that time, the Municipal Library of Viipuri and the Tuberculosis Sanatorium at Paimio. But at the same time, he was working on the Church of Michael Agricola for Helsinki, which seems to point in the direction of a new, organic attitude toward the organization of space. Michael Agricola is composed longitudinally of a central space terminated at the extremes by the integration of a tall form at the front and by a low, downward-curving apse at the back. A vaulted ceiling ends at the apse, where the altar is placed in the center of the visual line before the sloping enclosure. The rigid distinctions between ceiling and wall are blurred as the modulation of free planes fuses the dimensions of height and depth into a perspective that culminates at the altar.

This idea of a flowing organization of space diminishing toward a focal point can be seen in the later churches, particularly those of Vuoksenniska (completed 1959) and Wolfsburg (completed 1962). But like Michael Agricola, they make use of side lighting, which does not permit the distinctions between the elements of the enclosure to become as obscured as they are at Riola. There, no side lighting is used. Instead, a series of north-oriented, scalloped light monitors run over the supporting arches for the length of the building, tapering in dimension along with the arches, to conclude in perspective, short of their vanishing point, above the altar. Because the monitors allow only reflected light to penetrate the interior, the white assembly hall is flooded with an illumination that makes little distinction between structural and nonstructural elements, or between spatial and functional divisions within the space.

At Riola, the organic modulation of space is further encouraged, however, through the disposal of certain other elements within the church. As the enclosure radiates outward in its fan shape from the presbytery, the walls and floor of that area seem to be designed to give the impression that the space actually spills out into the assembly hall. At the same time, the organ and choir loft gradually ascends from the presbytery along the north side of the assembly hall under the skylights in an arrangement that further helps to blur dis-

tinctions between elements of the building and functional parts of the church.

What is disarming about the Church in Riola is that it is, after all, a simple and rather small structure. But the masterful orchestration of the elements that contribute to its form can be seen as the culmination of certain themes and ideas that Aalto dealt with throughout much of his career. That such complex issues could be concluded in so seemingly modest a structure bears witness to his irreplaceable loss. [David Morton]

Church of Michael Agricola, section (below); rendering of interior (below, middle left). Church at Wolfsburg, interior view (below, middle right); plan (lower middle right).

Data

Project: Chiesa di Santa Maria Assunta, Parochial Church of Riola, Italy.

Architects: Alvar Aalto; Vezio Nava, project architect.

Site: in the Appennini Mountains near a wooded stream, 35 miles from Bologna.

Program: a parochial church and community center for a small mountain village.

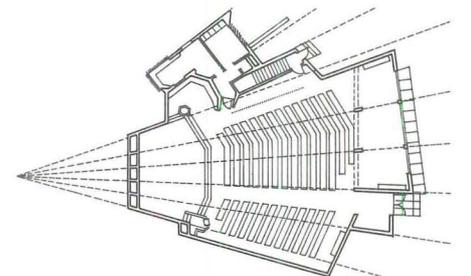
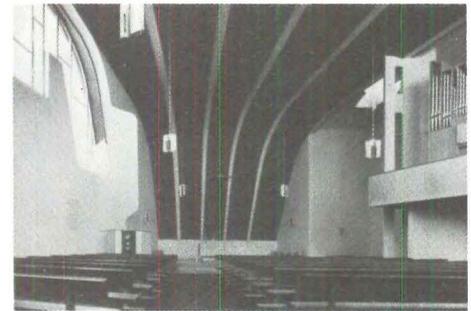
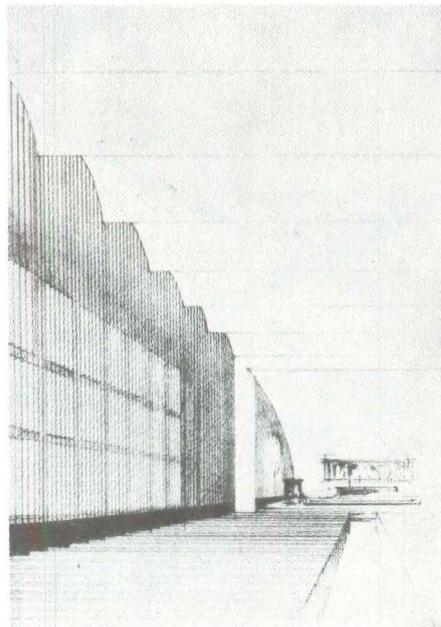
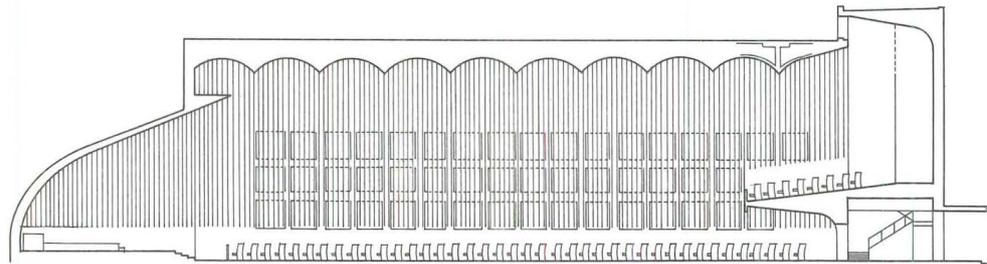
Structural system: concrete foundation and prefabricated concrete structural arches.

Major materials: concrete, local sandstone walls, copper-clad roofing.

Clients: Curia Archivescovile di Bologna; Prof. arch. Giorgio Trebbi.

General contractor: Grandi Lavori Spa, Bologna.

Photography: exteriors, David Morton; interiors, Christopher H. Richie.



Stairs lead to organ and choir loft (facing page), where view (below) looks to presbytery area.



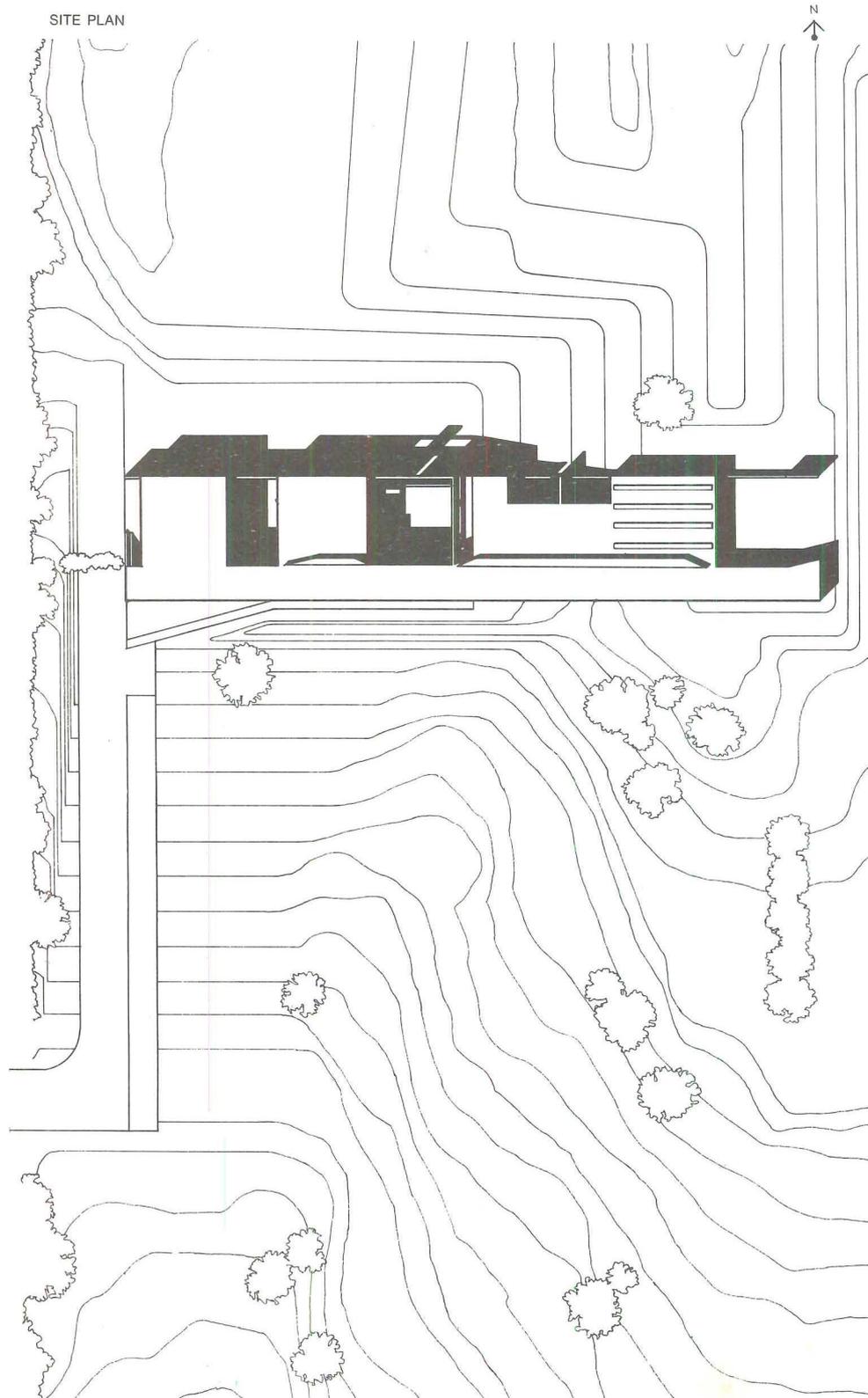


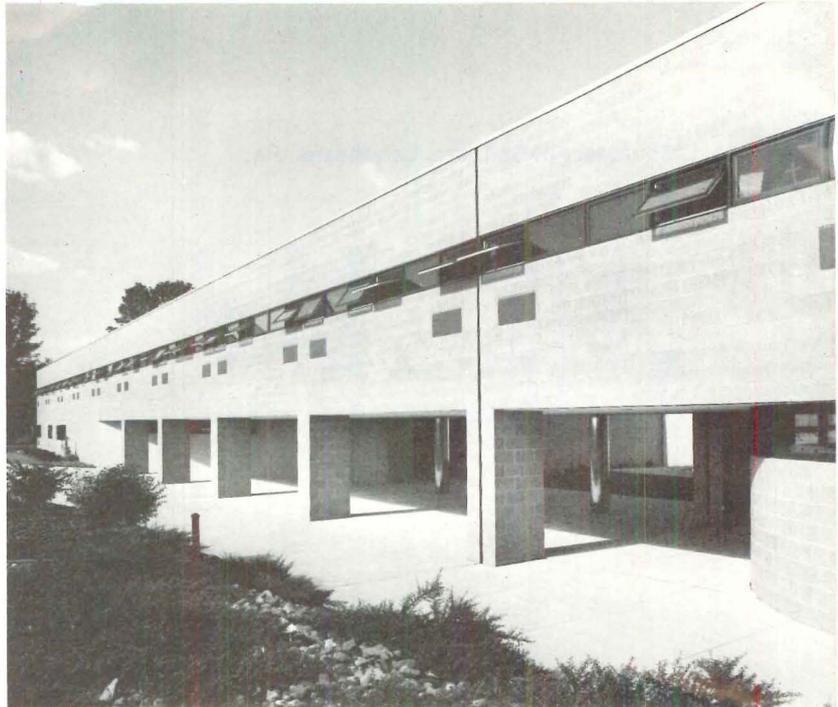
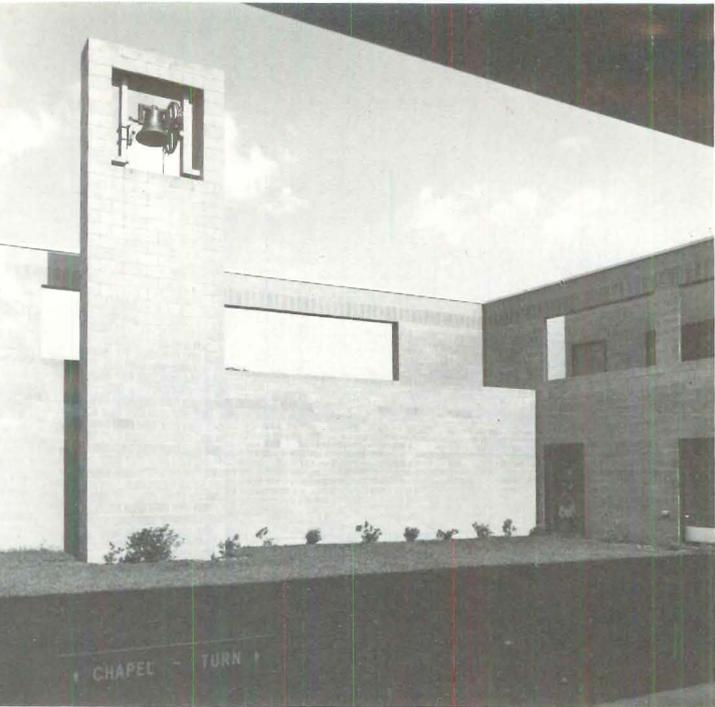
Welcomeness and light

A monastery for a cloistered order of contemplative nuns reflects new attitudes and also recalls the past.

Although there has been some renewed interest in the traditional forms of religion in the past few years, many people still live in a world where, as theologians say, "God is dead." Nothing, yet, has filled the role that was once played by religion as a powerful and dominant force of social organization. For this reason, a building type such as a monastery could, for some people, be an easy target for criticism with regard to its relevancy for today. A monastery for an order of Catholic nuns who live in complete seclusion from society, and whose only duty is to pray, could be an even easier target. But if one were to question the validity of such a place, one would then only express private attitudes that may or may not be shared by others, and that certainly would not have anything to do with the solution to an architectural problem, which is the concern here.

As an architectural problem, the Monastery of St. Clare, in Langhorne, Pa, designed by Dagit/Saylor, is of interest on several counts. It is, first of all, a complete world, and the only world those who enter its doors will ever know for the rest of their lives. It is an ancient building type reinterpreted in a modern idiom, but organized and constructed so that, at the conceptual level, the origins of the type are constantly recalled. In plan, the building represents a radical departure from the traditional Catholic monastery. Instead of taking the form of an enclosure around a courtyard, the linear building, with its five interior gardens, is articulated as a single "wall" that demarks the boundaries between public and private realms. And in a further departure from the norm, the building's largest open space, which is cut transversely almost through the entire structure, is a

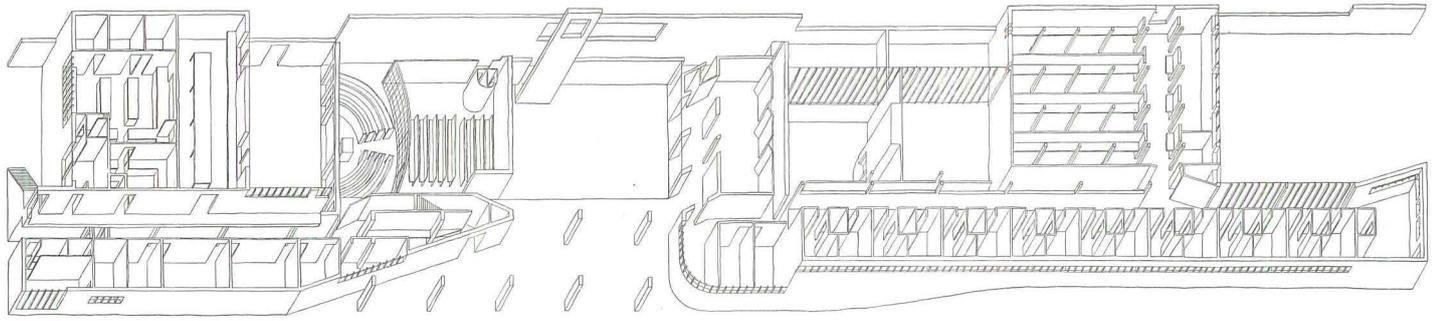




The monastery is designed as a "wall" separating public from private areas, but visitors are allowed into entry court (above) and adjoining chapel.



Monastery of St. Clare, Langhorne, Pa



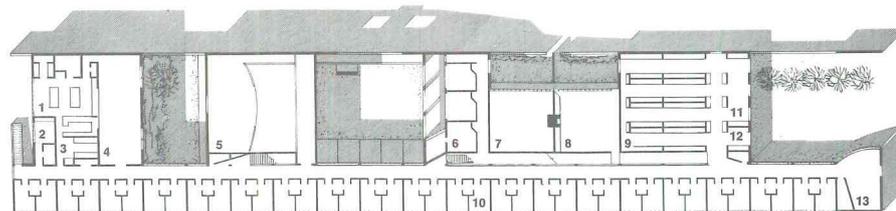
AXONOMETRIC

- | | | | |
|-----------------------|------------------|-----------------------|----------------------|
| Legend, 1st fl | | Legend, 2nd fl | |
| 1 Garage | 7 Chapel | 1 Kitchen | 7 Upper chapter rm |
| 2 Stor | 8 Entrance court | 2 Infirmary | 8 Library |
| 3 Chaplain | 9 Entrance | 3 Laundry | 9 Work rooms |
| 4 Externs | 10 Vestibule | 4 Dining | 10 Cells |
| 5 Sacristy | 11 Parlors | 5 Upper chapel | 11 Novitiate work rm |
| 6 Chapel garden | 12 Office | 6 Upper parlors | 12 Mimeo |
| | 13 Chapter room | | 13 Novitiate |

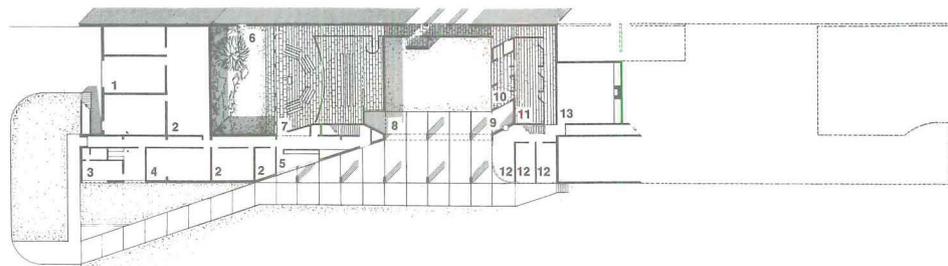
public courtyard. Yet with all of this, the monastery is designed both to accommodate traditional functions of monastic life and to reflect attitudes of the new ecumenism. "Even the low profile of the building, as it sits far from the road and above it," the architects say, "breaks with the traditional scale of such buildings and departs radically from the traditional relationship of monastic life to the public, [which] . . . reaffirms the spirit of Vatican II and its desire to create a more humanistic approach to religion."

For the 38 sisters living inside, the building was conceived as an expression of the dual nature of their lives, and as such it is designed to reinforce both the communal and the private aspects of monastic life. The sleeping quarters, which are the only "possession" of the sisters, are, according to tradition, designed as discrete, private cells. In contrast to this inner world of privacy, the community room, library, work spaces, chapel, and refectory are organized for an easy communication between the functional divisions, representing the communal nature of life within the enclosure. The cells, however, aligned along a skylit corridor across the front of the building, are arranged to look upon the communal spaces and gardens. The vertical circulation element that interrelates the two realms is organized as a long processional that ultimately leads to the chapel. Its frequent changes of level, direction, and view are traditional to monasteries.

The chapel, the most sacred part of the monastery, is located next to the large public garden. Visitors enter it from that garden, but the sisters enter it by an enclosed, private passageway that actually forms the back wall of the courtyard. Because the sisters are never to be seen by the public, a screen separates them from visitors inside the chapel. But the screen is an open metal grille that in today's more relaxed attitude gives only symbolic refer-



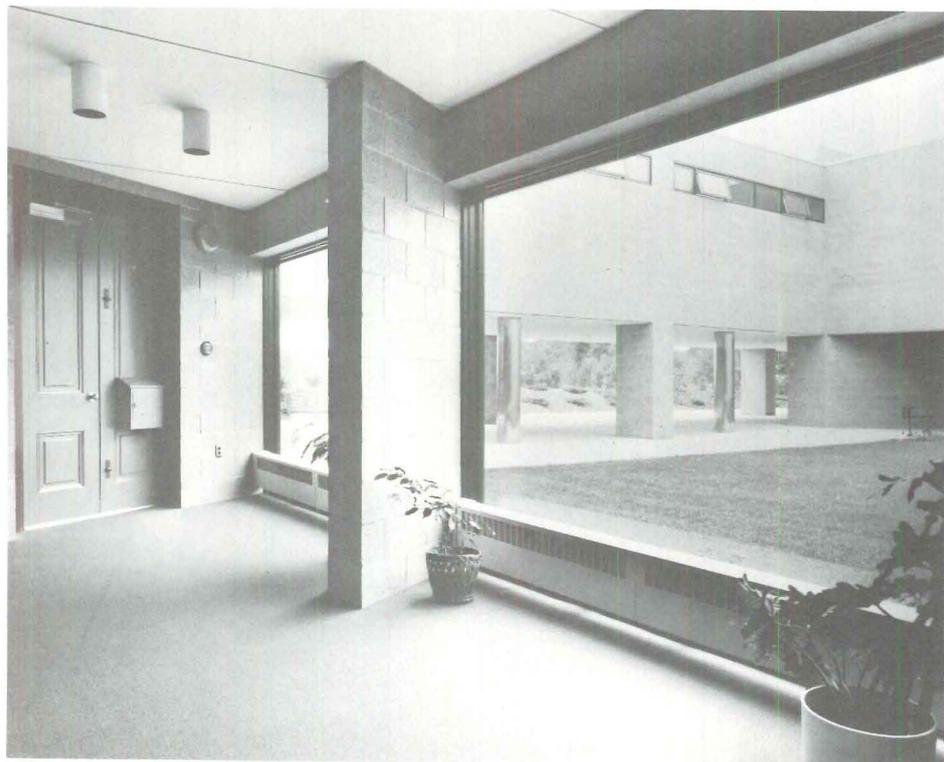
SECOND FLOOR

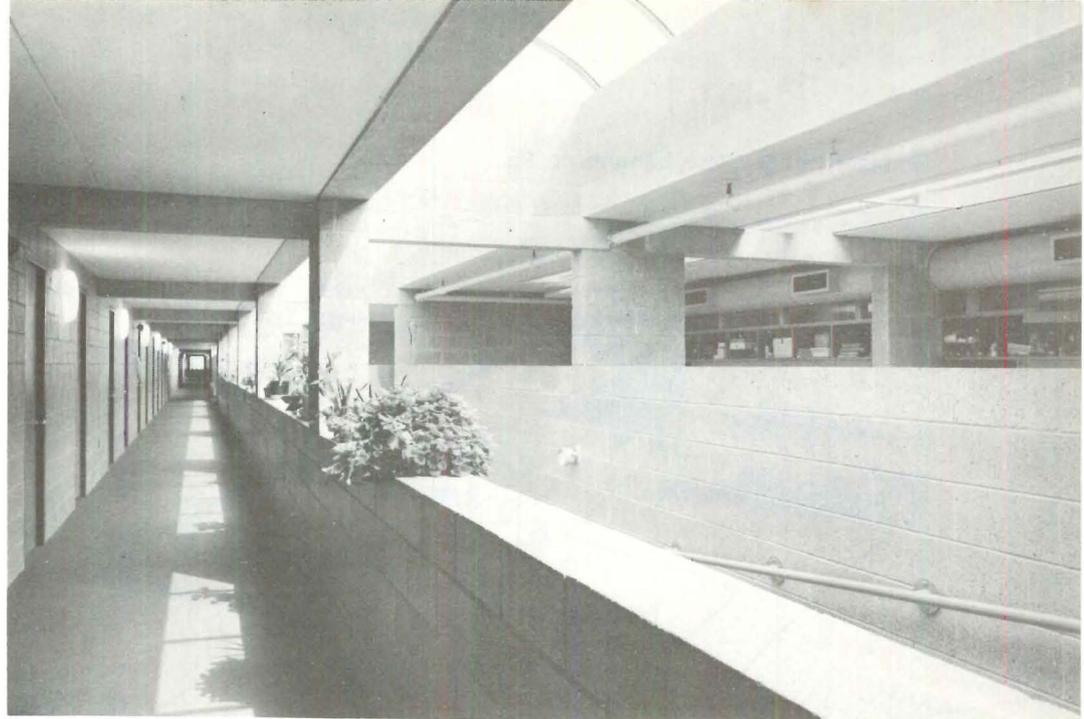


FIRST FLOOR

N ↑ 1" = 3m

Visitors' parlor (below) and chapel enclose entry court; these are only spaces open to public.

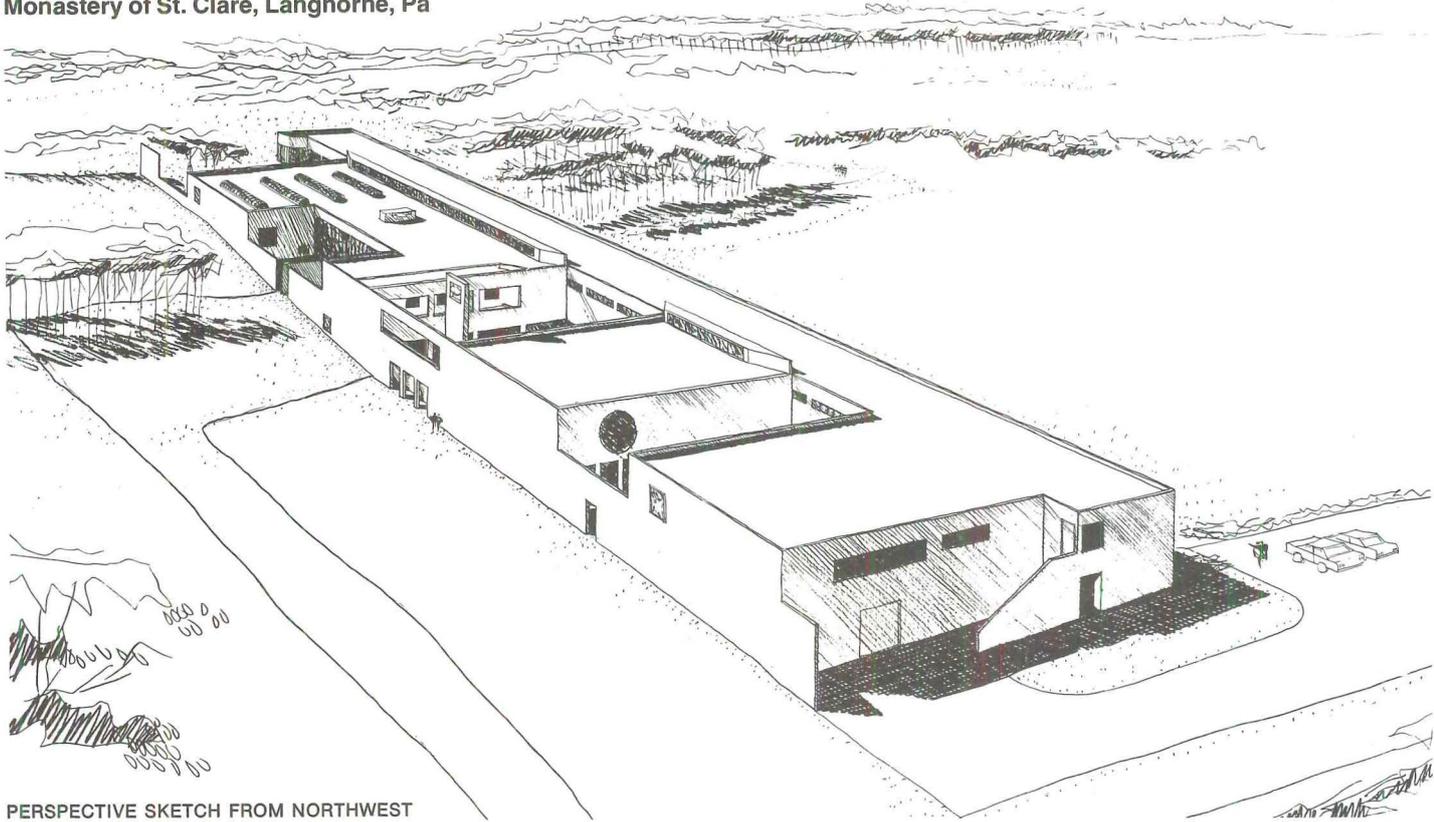




Interior spaces have been organized to provide long ambulatory, as is traditional in monasteries, where sisters can walk from their cells to chapel.



Monastery of St. Clare, Langhorne, Pa



PERSPECTIVE SKETCH FROM NORTHWEST

ence to its traditional function. A private garden for religious contemplation is between the chapel and the refectory, and like it, the other gardens also each have specific functions traditional to a monastery, such as reading, sewing, growing vegetables and flowers.

In this reinterpretation of the traditional monastery, however, the architects have also brought in elements that recall the old European monasteries as well as the sisters' original home in Philadelphia. The particular polished concrete block used for all of the walls was chosen specifically for its similarity to the cut stone found so often in old monasteries. For the same reason, much of the floor covering is of slate and quarry tile. But there are also certain objects used in the new building that came from the old Victorian house in Philadelphia, such as the main public entrance doors, a bell, and a number of stained-glass windows. One of the most important of these is a rose window depicting St. Clare, which is now in the chapel above the glass wall of the garden. It is not placed on center, but off axis to form a second focus with the tabernacle.

In a way, the move of the Poor Clare Nuns to the suburbs was not unlike that of others who have left the inner city. Like anyone else, they too enjoy peace and quiet and clean air. But unlike other people, these women devote their entire existence to prayer and contemplation, and these activities were becoming increasingly difficult in a neighborhood that was beset with urban ills, and that had

long since seen its better days. Because the sisters have no involvement at all in the local community, it was even easier for them to make the move. But there were other factors, too. Their life is one of complete poverty, which requires that they renounce all possessions before entering the order. They live only by what they earn through making altar breads and by the alms of benefactors, which results in an income that no longer goes very far in the inner city. Another advantage to the country life is that the sisters soon hope to start growing some of their own grain for the altar breads.

The Poor Clares have been in America for 100 years now, but the origins of their order go back to 1212, when the young noble lady Clare Scefci renounced her possessions and donned a coarse habit at the hands of Francis of Assisi to become the first Poor Clare. Francis soon took Clare and her followers to the church of San Damiano, and this disheveled structure that he and his followers had repaired became the first Clare monastery. There the sisters were charged by Francis to lead a life of prayer, poverty, and penance, to be the silent partners of Francis and his brothers who would go into the world to preach by their word and example.

In the new monastery in Bucks County there is no "high style" architecture, no aggressive forms, no rich materials or elegant detailing. There is, however, an evidence of great sophistication and sensitivity toward a purity of simple form that is masterfully organized to support the com-

plex needs of an unusual and particular community of people. "The sisters," architect Charles Dagit, Jr., says "were ideal clients. They weren't interested in details, but because they are contemplative, they could very easily understand conceptual ideas, which made things easy and certainly more interesting for us. Sister Mary Alfred, the Abbess of the monastery who organized the move from the city, says of the architects, "They brought us welcome-ness and light." [David Morton]

Data

Project: Monastery of St. Clare, Langhorne, Pa.

Architects: Dagit/Saylor, Philadelphia, Pa.

Site: 18 acres of gently sloping land in rural area of Bucks County.

Program: a monastery for 38 nuns who never leave the enclosure once entering it.

Structural system: masonry bearing walls with precast floor and roof plank. Walls separating interior spaces are bearing, exterior walls are not; this allowed flexibility for openings and permitted open planning along circulation ramp.

Major materials: polished concrete block, concrete plank, slate, quarry tile (see Building materials, p. 128).

Mechanical system: hot water, oil-fired baseboard radiation; through-the-wall unit air conditioners and rooftop units.

Consultants: Paul H. Yeomans, Inc., mechanical; McCormick, Taylor & Assoc., structural.

Client: Sister Mary Alfred, OSC, Abbess.

General contractor: Berkeley Const. Co., Inc.

Cost: \$1,287,000 bid; \$45 per sq ft.

Photography: Robert Harris.



Stained-glass window in the chapel came from nuns' older monastery; the screen no longer provides visual separation but is reminder of old traditions.



Nostalgie du château

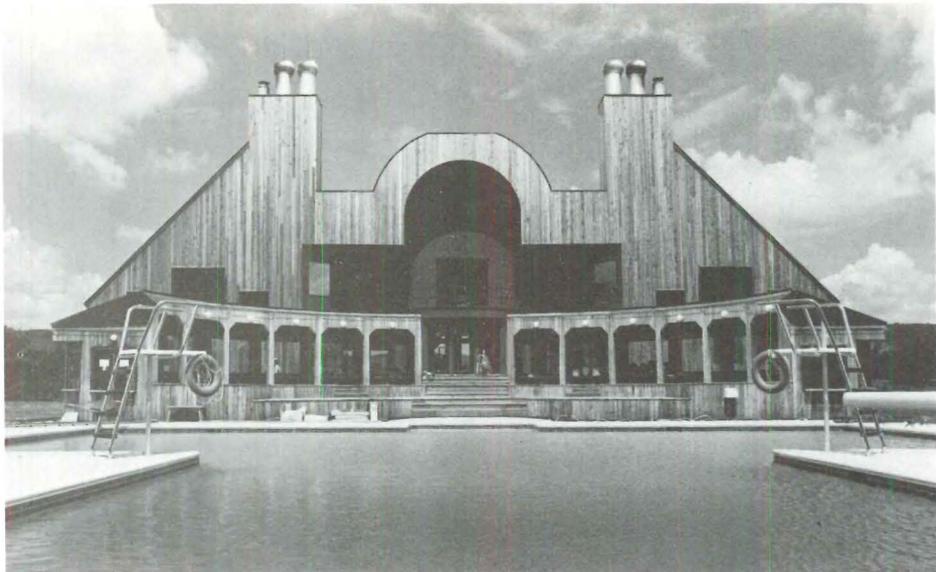
A ski lodge in Canada designed by young architect Peter Rose with Peter Lanken and James Richter has so far met with public success and professional acclaim.

When this ski lodge was given a P/A design award a year ago (P/A, Jan. 1978, p. 70), the jurors commended it for its gaiety and romance, or, in juror Charles Moore's words, its "crazy ebullience." Moore also saw in the almost symmetrical design a discipline and good humor "in which pieces are marshaled to give a lot of the grandeur of the 19th-Century great house" found in eastern North America.

These aspects of the ski lodge's architecture, not surprisingly, reflect Moore's own approach, particularly since two of the architects involved, Peter Rose and James Richter, studied at Yale during Moore's chairmanship of the architecture department there (1965–1973). An architecture that pays attention to history, context, and the creation of a sense of place, and that appeals to its users psychologically and even physiologically, now increasingly crops up among the progeny of Post-Modernists. But nothing is perfect, even when the polemics are on your side. While much of this architectural expression seeks rightly to correct Modern architecture's mistakes, it makes mistakes, too. Just different ones. Since public buildings of the Post-Modern genre are still relatively rare, the weaknesses of Pavillon Soixante-dix—as well as its successes—are worth examining.

Architects Rose, Lanken, and Richter gave the ski lodge two façades in the grand tradition of the 19th-Century railroad stations, where one front would be oriented toward people arriving at the station by car and by foot, another toward the people arriving and departing by train. Here, skiers and cable cars have replaced passengers and trains, and the important

A ski pavilion in the winter functions as swimming/tennis center in the summer.



Tony Hargreaves

elevation faces toward the slope. While both façades are given false fronts, the one facing the road maintains a more modest residential scale; the one facing the ski slope is more exaggerated.

The configuration of this façade recalls a schema that could be borrowed from Lord Burlington or Fischer von Erlach, although the prominence of the chimneys will remind many of one favorite Moore reference—Stratford Hall, Va. Other elements—a colonnade, "pochéd" walls, a domelike silhouette at the center—indicate the yearning to reinstate those qualities that made Pre-Modern architecture so special. Of particular interest is the attempt on the part of the architects to order the spaces symmetrically, while introducing some of the planar qualities and mass/void expression of early Modern work.

From the outside

Yet the reassembling of these elements on the exterior lacks a certain resonance. The façade relies heavily on cartoonlike imagery—the simple line, the flat plane,

the lack of detail—and so dilutes the content one would expect with the richness of this vocabulary. Budget and modern materials can explain a lot of this oversimplification. But faults in the basic attitude about how the past may be brought into play have also led to the overly schematic results. These problems occur in other Post-Modernist works as well, and merit some discussion.

Taken out of their original context of materials, textures, and detail, the formal elements used here lose their intrinsic scale relationships. We already know that door and window proportions, for example, change if the wall is flat and not textured. That appears to happen with colonnades, arches, and chimneys, too.

Thus the outside wall—a flat, taut, paper-thin wrap of cedar siding—lacks the mass and volumetric quality we see in historical architecture. Volumetric expression seems to be desired, for the flat façade is gouged by the deep void of the entrance. In the same way, the colonnade, itself a three-dimensional element—formed, how-

ever, out of assertively two-dimensional pierced screen walls—is pulled away from the building. But volume is only skin deep.

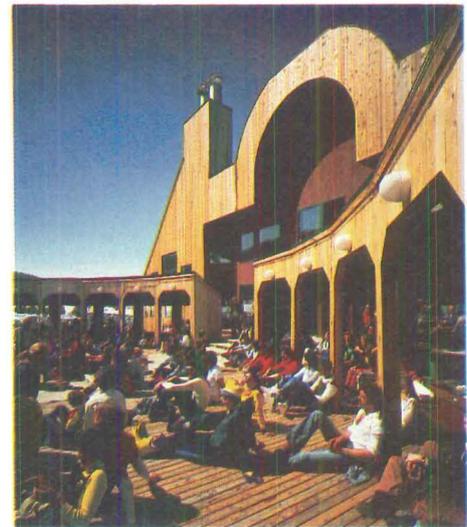
From the other side of the pavilion, one can perceive the false face of the main elevation looming above the hipped roof. There are meant to be no secrets.

The rhythms of this roadside elevation correspond to the rhythms of the façade behind, only on a smaller scale. Dormers align with the chimneys on the other side; the central mass carries an arched profile at a smaller repeat of the larger arched entrance behind; the flat fenestration stretching across the length of the building (even though some windows are blind) has replaced the colonnade on the other side. Yet this elevation, more modest than the

other, lacks strong definition. It is still perceived not as a mass, but a skin; its tacked-on elements may be legible, but they still read as appliqué.

Aside from any of these outside influences, however, there seem to be some difficulties with proportions, in and of themselves. For example, the width between the inner and outer curves of the arch appears too narrow in comparison with the depth of the portions flanking the arch. Flattening the arch at the top doesn't help. This general sort of manipulation has been done for years, but it gets very tricky when the parts are so simply delineated.

The Modernist dependence on the planar wall (or the non-loadbearing curtain

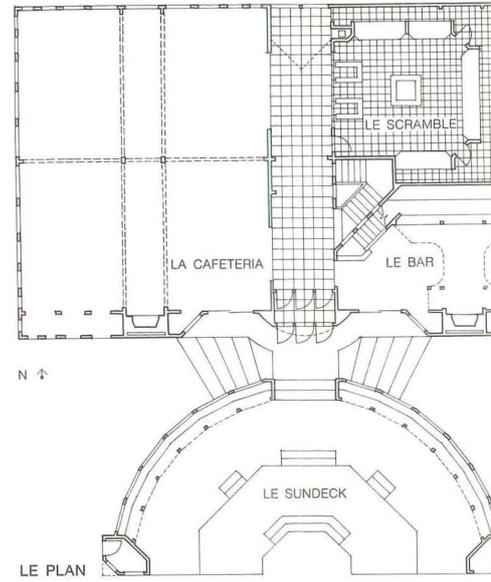
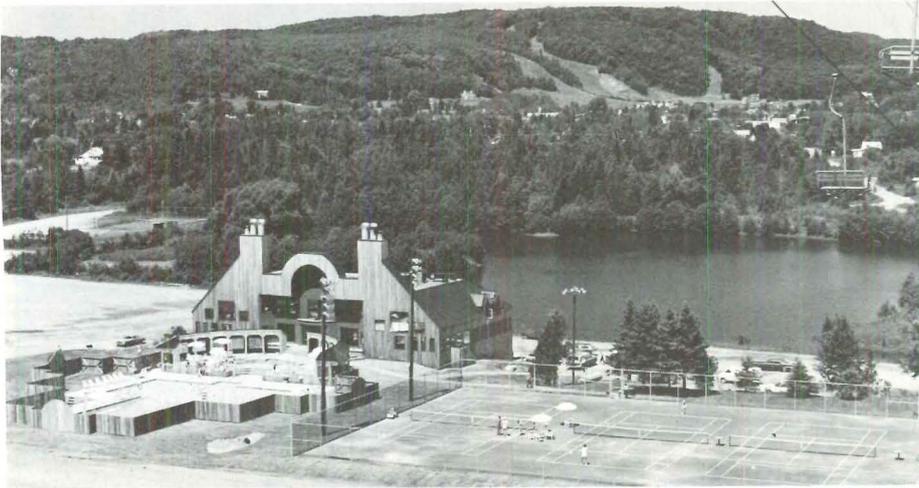


Graham French

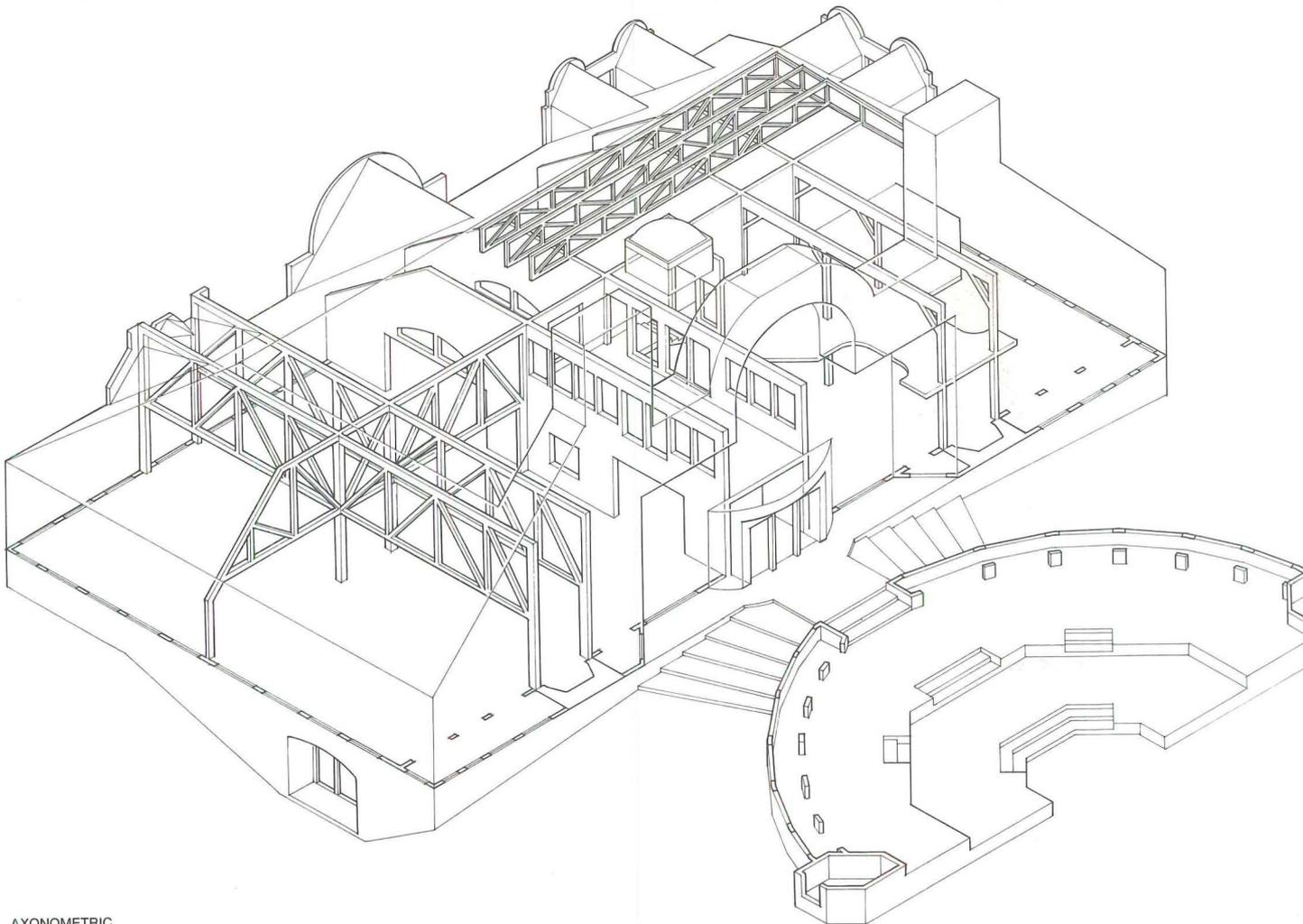
The major façade's colonnade and deck face south to the slopes; fireplace chimneys also carry turbine ventilators for air exhaust.



Pavillon Soixante-dix



The oldest ski area in North America, Mont St. Sauveur still retains its rural character (above); axonometric illustrates hybrid structure.



AXONOMETRIC

wall), the smooth surface of the cedar siding, and the minimal articulation of elements that might create shadow and suggest substance generate a context that the elements of the past can hardly ease into. It gets better, however, inside.

The plan's bilateral symmetry, legible on the elevation, works well for the apportionment of spaces on the main floor. A large dining hall seating 300, a bar/

discotheque for 160 people, and a cafeteria serving room all share the main floor's 6620 sq ft.

Certain inconsistencies appear though: the strong axis lacks termination, since the entrance and the hall lead one out through the other side—where there is a fixed floor-to-ceiling window. The expected exit drops to the floor below because of the change in grade. The centering of the

grand space on axis with the entry that one often sees in classical plans gives rise to another expectation. Here the great hall has been shifted to one side to become the dining cafeteria.

The interior spaces do succeed in becoming identifiable "rooms" that promote a sense of place and of individuality in an extremely proficient and inventive way. Although the interiors rely on devices such

as the screen wall punctured by doors, windows, tympanumlike silhouettes, or colonnaded walls juxtaposed against outside walls, they come off exceptionally well. By straightforwardly apportioning the quadripartite main floor areas on either side of the central hall, by using a different palette of colors in each, the architects have been able to expand the possibilities inherent in the plan and overall structure. Beaded tongue-and-groove pine paneling, seen in old casinos and Richardsonian railroad stations, is stained dark in the bar to close in the space. With its fireplace, its dark green ceiling, ducts, and light fixtures that promote a publiclike ambience, the bar is differentiated spatially by its double height, its grand stair, and the



Inside, rubber flooring and industrial lighting alternate with wood paneling, Victorian colors; (above) food pick-up; (below) bar stair.



Pavillon Soixante-dix

mezzanine overlooking it.

The dining hall, on the other hand, expands laterally. With its exposed laminated trusses and the hipped roof, the band of fenestration and low sills wrapping two sides of the room, with the paneling lightened and kept as wainscoting, the hall easily evokes associations to lakeside casinos of the 19th Century. The tracery of the trusses, the mauve and rose colors, the rubber flooring, the industrial dome lighting fixtures, or the double rows of exposed bulb lights add decorative and/or up-to-the-minute touches, admittedly, but the mix holds together.

The sky-blue cafeteria serving room, on the other side of the hall, is made to turn in on itself, and is illuminated by a skylight and theatrical bare bulb lights. Playfulness, historical associations, and two-dimensional layering all work at this level, without getting too cute. But then different rules apply to interiors, and the architects have sensed keenly what they are and how far they can be bent.

PM's problems

Rose, Lanken, and Righter intended to keep the exterior simple, direct, and fun. But the trap that threatens them is one shared by other Post-Modern architects—that of creating the kitsch object. While many of the proponents of Post-Modernism tend to dismiss the need to worry about the difference, the “kitschification” of Post-Modernism could envelop it before it has a chance to develop.

The process begins with the use of historical allusions self-consciously, without somehow transforming them, without bringing about a “discovery in that object of properties not perceived in the initial context,” to use Jorge Silvetti’s words (*Oppositions* 9, 1977).

The reductionism inherent in this kind of allusion involves its scenographic qualities. Basically the exterior of this building is designed to grab the eye quickly, whether looked at in drawing form or moving towards it in real life, down a ski slope or along a road. Its funky festive quality makes it extremely popular with its clientele. But in the end, the ski lodge becomes fast-food architecture, admired and consumed at a single glance. The image is more important than the building, the association more than the experience. When bogus qualities take over, then communication becomes thin and Post-Modernism turns to kitsch.

These comments are not to be seen as directed at these particular architects or this one harmless ski lodge near Montreal. The occasion for criticism arises here mainly because this building pro-



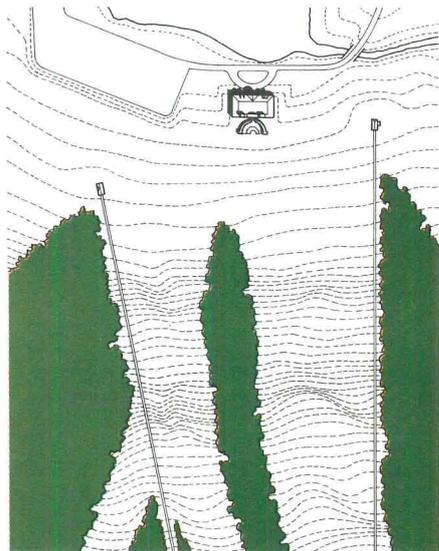
Graham French



Graham French

Double layered wall deliberately reads differently in the bar (left) and cafeteria (right).





vides such a clearcut example of Post-Modernism's own dilemma—that of being seduced by its easy appeal. [Suzanne Stephens]

Data

Project: Pavillon Soixante-dix, St. Sauveur, Quebec.

Architects: Peter Rose, with Peter Lanken (Montreal) and James Righter (New Haven), associated architects; Alan Maples, Erich Marosi, architectural assistants.

Site: base of two ski slopes in old farm community about an hour from Montreal.

Program: provide a lodge, 15,000 sq ft (gross), that can be used not only in the winter, but, with the addition of swimming pool and tennis courts, in the summer as well. A ski equipment and locker room occupies the basement level; cafeteria for 300, bar for 150, and kitchen/serving area occupy the main level, with a dance area for the bar; and the administrative offices are on the top level.

Structural system: conventional wood frame, steel framing, with laminated trusses for long spans.

Major materials: prepainted steel and built-up roofing, cedar siding and decking on the exterior, pine paneling inside, gypsum board, carpet (bar), studded rubber flooring (see Building materials, p. 128).

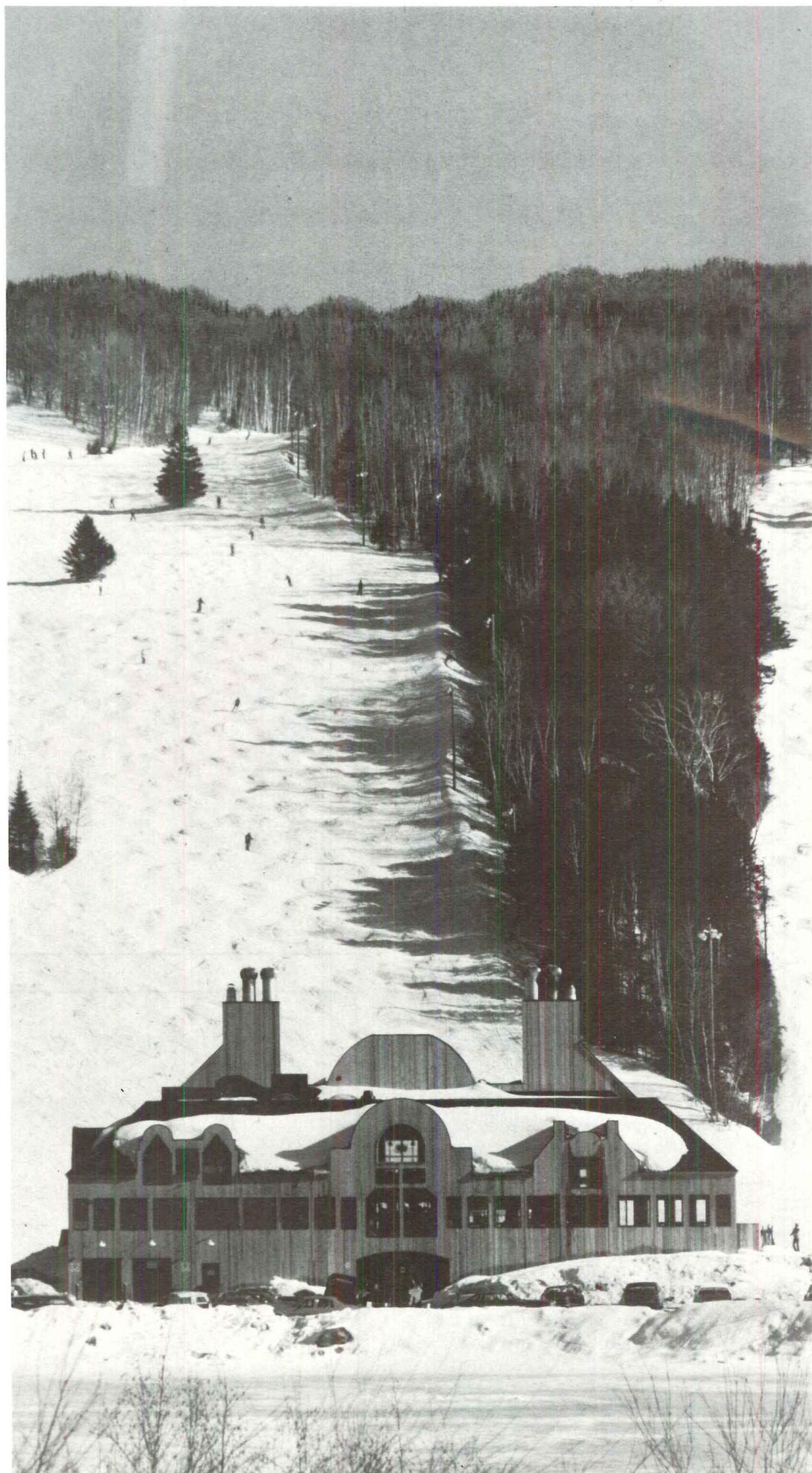
Mechanical system: forced-air electric heating, some baseboard; a/c in bar.

Consultants: S. Singh, structural engineer.

Client: Mont St. Sauveur, Inc.

Costs: \$670,000; \$45 per sq ft.

Photography: Peter Rose, except as noted.



From the road, one sees the "minor" elevation, and the back of the "false" front.

Home away from home

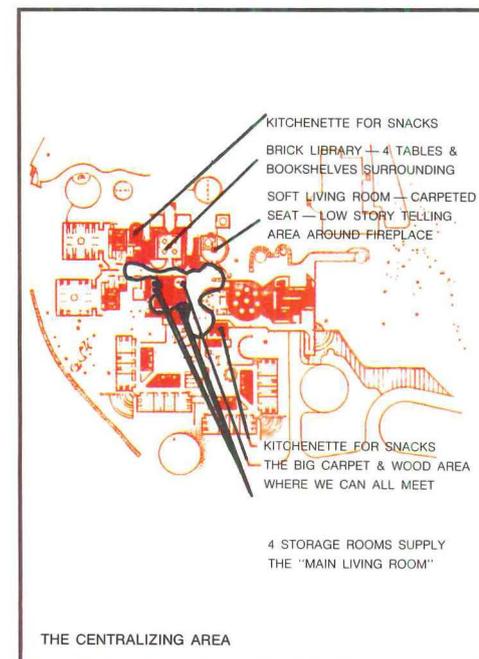
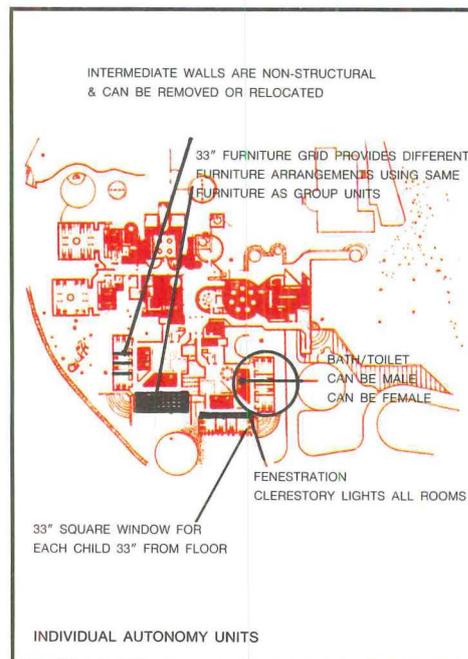
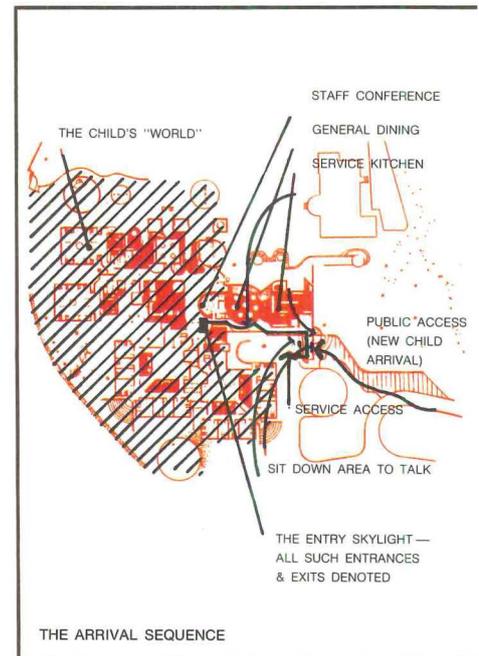
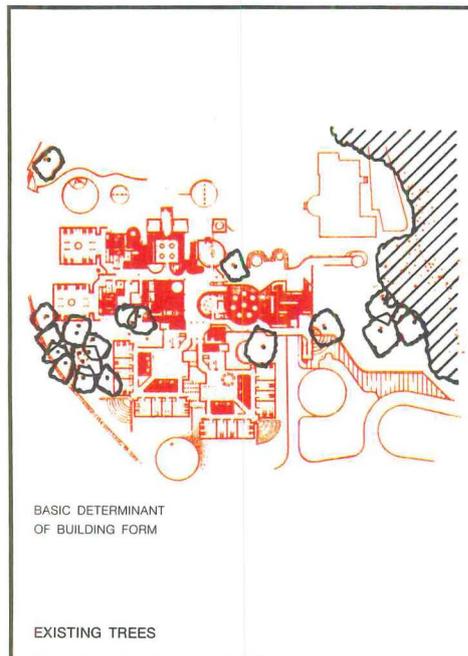


Originally designed to be a home for autistic children, this facility by Perry, Dean, Stahl & Rogers is now a diagnostic center for children with emotional disorders. It has made the transition with great adaptability.

In Boston the old saying goes that you're really nobody until you've got a pew at Trinity, a seat at Symphony, and a relative at McLean's. McLean's is the well-known private mental hospital just outside Boston that has been one of the more enlightened institutions treating psychological disorders in the United States since 1811. Set amidst a beautifully wooded, 244-acre campus, it looks more like a comfortably endowed liberal arts college than the popular conception of a mental hospital.

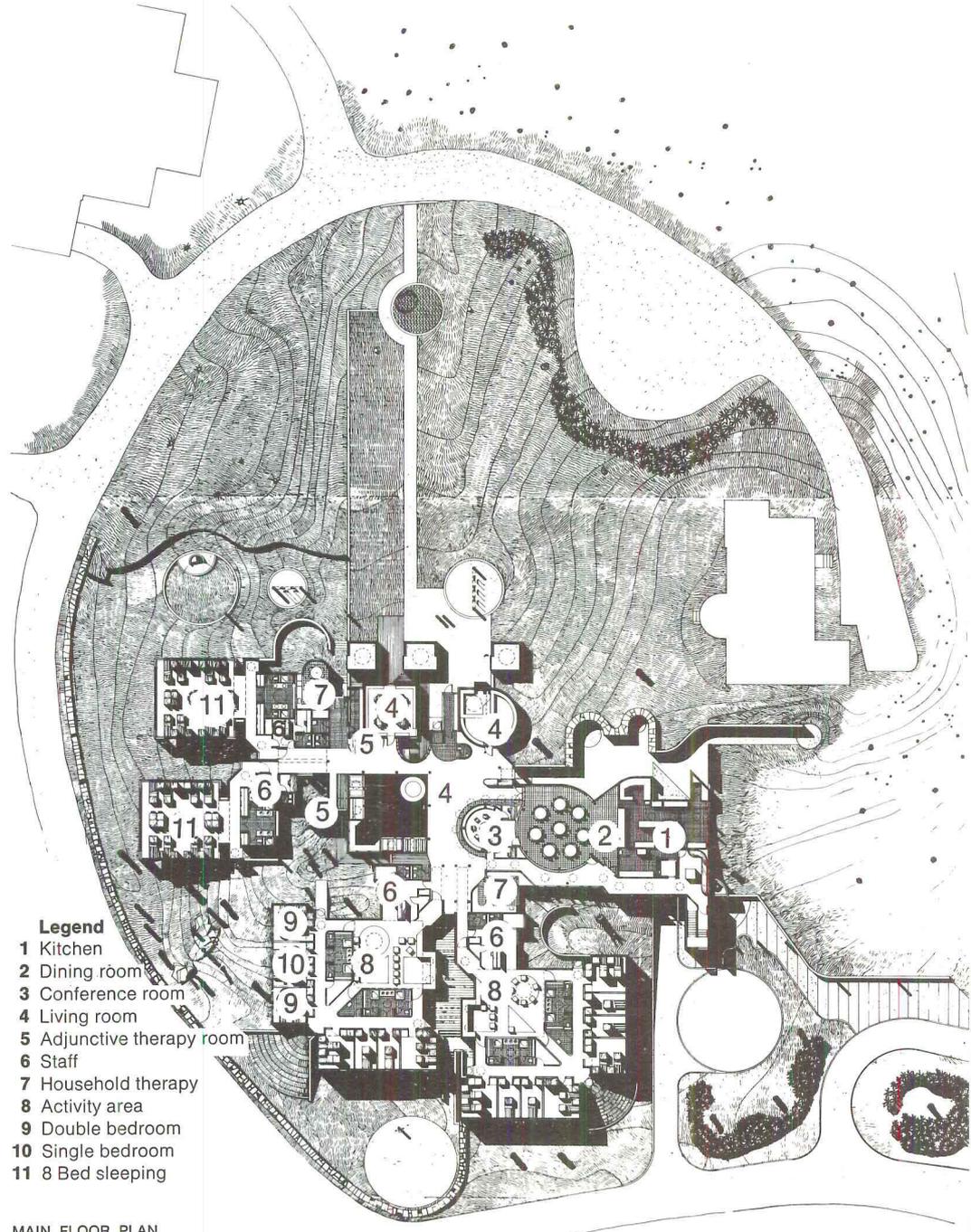
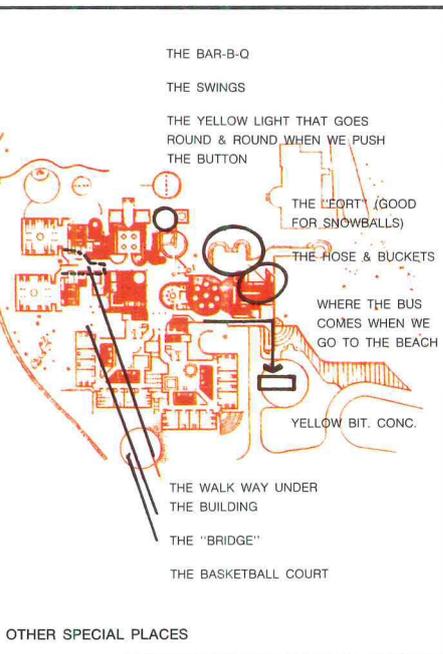
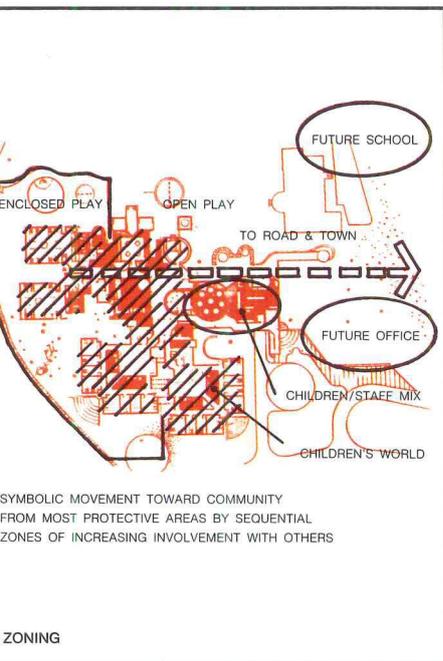
Its physical organization reflects the prevalent attitude toward housing the mentally ill that existed in the second half of the 19th Century. Post-Enlightenment theories of treating mental illness rejected the usual 18th-Century practice of single-building asylums—such as the notorious Bethlelem ("Bedlam") Hospital near London, which became a fashionable amusement place during the age of Hogarth. Rather it was thought to be more beneficial to lodge patients in smaller, domestic-scale buildings that provided at least the image of a more humane approach to the treatment of psychological disorders.

But McLean's (a division of Massachusetts General Hospital) adopted the pavilion mode for other reasons as well. During the 19th Century, it was not uncommon for Bostonians of means to maintain their needful relatives at McLean's in a style to which they had been accustomed at home. Not for them a wardlike setting in which Uncle Jared or Aunt Abigail might come in contact with some common lunatic. No! Those who could afford it set up their kin in one of the separate—and by no





Hall Mercer (above center) is linked to West Cottage (upper left), one of the original single residences. Classrooms for center are in Upham building (lower left).



Hall Mercer Children's Center

means small—houses that still dot the site. There, in solitude (save for complete household staff), it was possible for the wealthy deranged to live out their lives with an outward semblance of normality.

Breaking through to the other side

Since those days, the preference for one building type or another for mental health care facilities has fluctuated back and forth with changing theories of mental illness. Today perhaps the most encouraging outlook comes with our realization that certain settings are more appropriate than others not because of our projected feelings about mental illness, but because of our increasing awareness of what causes certain psychological disorders. That greater insight into the real nature of mental illness tells us that not all problems call for the same kind of treatment and physical accommodation. That important need for making distinctions was uppermost in the minds of the Boston architectural firm of Perry, Dean & Stewart (now Perry, Dean, Stahl & Rogers—P/A, Mar. 1978, p. 70) when they were commissioned in the early 1970s to design a specialized facility for the care, study, and treatment of autistic children.

Autism, which is best briefly described as a severe schizophrenic condition among children, accompanied by a withdrawal from the outside world, has long been one of the most baffling of mental illnesses, precisely because it is characterized by the inability of those who have it to communicate with other people. So in this case, the architect's usual procedure of gathering information from a building's prospective users was ironically circumvented by the nature of the disorder.

The only logical alternative for the designers was to embark on an inquiry into autism itself in order to find out how the known characteristics of the disorder can be influenced—or even reached—by intelligent design decisions. The architects were fortunate, at this early phase of the project, to have as their primary client collaborator Dr. Larry Stone, one of the leading authorities on autism, under whose coordination the Hall Mercer Center was being planned. Together with Dr. Stone, the architects visited and studied virtually every major facility involved in the treatment of autism in the United States and compiled their findings into a series of guidelines that were the basic determinants of how the building was to function, look, and feel.

Continuous vault skylights (right) were used over main circulation areas to give strong definition to corridors for autistic children.



Knowing there are limits

One of the main things they decided needed emphasis in a building for the autistic was a strong sense of outer boundary. Largely unresponsive to their surroundings, autistic children can, however, be made aware of the limits of their world, but only by means which are, to put it mildly, not overly subtle. So in order to dramatically differentiate the physical feeling of interior from perimeter that was deemed essential for a facility such as this one, it was decided to make the outer walls of the Hall Mercer building as boldly and unmistakably discernable as possible. Thus, while interior walls in most hospitals for the mentally ill are covered in finishes or materials that convey warmth, quietude, and gentle neutrality, those at Hall Mercer were left in cold, rough, exposed concrete.

The outside walls of the building are of that same material, too, and the effect of unfinished concrete among the warm jumble of brick and wood buildings that surround it is no less jarring than its interior application there. Although the Queen Anne structures that predominate at McLean's are not individually the most memorable examples of that style, together they do form a pleasing fabric. McLean's was further fortunate in having been spared the architectural mediocrities of the 1950s and 1960s that mar so many similar settings. Therefore, to introduce a building that departs so radically from its context in form and material was to take a very big risk indeed. But in this case it worked.

Stylistically, Hall Mercer shows very clearly the influence of the work of the late Louis Kahn: the reductionist geometry of its forms, the axial formality of its plan, the Brutalist handling of its major material. Yet, for all that, this is not an aggressive intrusion on the quiet scene into which it is set. This was insured largely by very sensitive siting, which reduces the visual mass of the building by placing it in a low crease in the rolling landscape. Generally, Hall Mercer is viewed from elsewhere on the McLean property from a rather high vantage point. Thus the cubes, cylinders, rectangles, and cones that project above the base seem not formidably monumental (as those shapes generally do in the work of Kahn), but rather almost toylke, the scale becomingly decreased and the image playfully diminished. A number of tall existing trees around the site were thoughtfully preserved, and the adjacent landscaping further enhances the sense of carefully considered positioning. (The center's base was to have been covered in ivy, but the young vines have been ripped out repeatedly by Hall Mercer's sometimes refractory residents.)

The architects' effort to establish that reduced sense of exterior scale stemmed from the desire to make the building seem



Household therapy room (above) is used to teach domestic skills as part of center's program.



Activity areas (above and below) are shared by residents. One (above) is used as ad hoc gym.



Hall Mercer Children's Center

from its first sighting by an autistic child to be easily comprehensible, comfortably welcoming, and above all reassuringly friendly. That intent is made literally manifest in the greeting spelled out in large, childish letters inscribed directly into the concrete wall that flanks the main entrance to Hall Mercer: "I like you," it says. This quite direct example of the notion (as Charles Moore has put it) "that buildings can and do speak" might seem to some to be embarrassingly literal. But once again, it was prompted not by our perceptions of its appropriateness, but by the need for absolutely unambiguous expression when trying to reach into the traumatically remote world of the autistic child.

A warm welcome

A great deal of attention was likewise paid to the way in which those children would enter the building, and the arrival sequence was among the most cautiously considered aspects of the design scheme. Ease and simplicity of movement, clarity and definability of spatial development, opportunity for pause and reorientation were all carefully plotted. The importance of this entry sequence was correctly seen as the crucial determinant of how an autistic child would begin to relate not only to the building itself, but to the therapeutic program that would take place there as well. How often in recent architectural design have we seen that kind of concern given to the needs of the users of buildings? How often have we seen the recognition that design can very strongly affect people's likelihood of deriving benefit from the human activities that take place inside architecture?

This building would have been a miserable failure had it not considered those things. But ironically, it was never to have its only true test. By the time the Hall Mercer Children's Center was completed, another director, without Dr. Stone's interest in autism, was appointed to head the new facility. It was then decided to use it instead as a diagnostic center for children (up to age 12) with a wide range of behavior-related disturbances: developmental difficulties, delinquency, and severe emotional illnesses.

This extreme programmatic shift was roughly as if a Greek Orthodox church, just before its consecration, were to be taken over by a Baptist congregation. Although the overall objective of the respective proceedings within the building might in both

Butting glass corners of eight-bed dormitories (right) give open feeling to the cubic spaces and admit large quantities of natural light.



cases be similar, the practical methods of going about it could scarcely have been more different. So it was with Hall Mercer. The design decisions there were rooted in the logic of the building's intended use, and without that eventual application, they threatened to become as meaningless as if they had been made for purely aesthetic effect alone. Luckily that did not occur.

Getting better all the time

For the most part, Hall Mercer was able to be adapted with surprising ease to its new requirements: housing (for relatively short periods of time) some 40 preadolescents with varying degrees of psychological disorders. The facility is divided into four residential units, each section with a mix of dormitory, semiprivate, and private rooms. Each of the four units has its own staff administrative area, but dining and recreational facilities are shared commonly by all residents of Hall Mercer.

The original interior design of the children's center was intentionally geared to the special problems of autism. But as much as that design took into account the very pressing necessity of providing a virtually indestructible surround for some characteristically destructive patients, it still presented an undeniably sobering image to the unaffected. Very much in the "heroic/tragic" mode of design defined by Vincent Scully, the interior spaces with their circular skylights, severely geometric spaces, and dun-colored, unpainted concrete walls seemed unnecessarily stark (though some might well argue that the grim grandeur of it all was more in keeping with the very real tragedy of autism than the cliché Bozo-the-Clown treatments that wards for mentally ill children most often receive).

Some rooms were much less disturbing than others: the eight-bed dormitories with butting corner windows that admit warm washes of sunlight, or the glass-walled recreation area that looks out to an inner courtyard and tall trees. But other areas were wholly inappropriate to the building's new purpose. The cylindrical concrete "living room," for example, is now happily slated for refurbishing. In its original phase it resembled nothing so much as a crematorium chapel by Kahn, or maybe a vacation villa by Aldo Rossi. Other things are being altered now, too. Bare concrete walls are being painted or covered with fabric, as much to facilitate the removal of the ubiquitous graffiti (which ranges from the heartbreakingly poignant to the bluntly obscene) as to achieve a desirable softening of the excessively bleak material.

Their problem or ours?

For the most part, it is rather hard to tell that this is a place wherein live children who for some very unfortunate reasons



Double bedrooms (above) and dormitory (below) have concrete walls that are now being painted.



Hall Mercer Children's Center

were unable to live outside it. Here and there around the building are small reminders—the locking and unlocking of doors as one proceeds through the spaces, the multiply staffed control areas (behind wired glass at the request of some employees), the small, windowless, cylindrical cells euphemistically termed “quiet rooms,” bare save for a pallet on the floor. But the occupants seem generally to like their environment, though the design principal, Charles Rogers, has reported that his own attempts to elicit user reactions usually veer off into critiques of the staff, since it is hard for many of the young patients to separate their feelings about the physical setting from their experience of the Hall Mercer program as a whole.

All in all, this is a vastly superior place in comparison with most mental health care facilities in the United States. The mental institutions that are part of every metropolitan region in America vary greatly in the quality of their care, but share a numbing sameness when it comes to the distressingly low quality of their design. But the questions remain (especially when designing for the severely mentally handicapped, such as the autistic children for whom Hall Mercer was originally designed): does it really matter what such a building looks like? Can they even tell the difference? Why bother?

Such questions, in the end, become completely subjective, revealing more about those who pose them than about those whom they ostensibly concern. The protest launched against Richard Meier's Bronx Developmental Center (P/A, July 1977, p. 43) by the parents of its prospective occupants before the building was even occupied exposed the emotional and irrational aspects of the way many people judge the design of such facilities, preferring mental institutions to accord with their own perceived expectations rather than with the needs of those who must live in them. Hall Mercer Children's Center functions well and humanely, reflecting positively on the community which supports it and which it serves. It is a thoughtful, intelligent, flawed, and very interesting piece of architectural design, most notable for what it sought to do—and largely succeeds in doing: helping people while realizing that the places that surround them can make a very real difference. [Martin Filler]

Fenestration at Hall Mercer (right) was planned to give autistic children frequent orientation views during the arrival sequence.

Data

Project: Hall Mercer Children's Center, McLean Hospital, Belmont, Ma.

Architects: Perry, Dean, Stahl & Rogers; Charles F. Rogers II, design architect, Peter A. Ringenbach, job captain.

Site: a wooded, hilly 244-acre campus not far from metropolitan Boston.

Program: originally intended for use as a home for autistic children, but never actually used as such, it now serves as a diagnostic center for a full spectrum of childhood emotional disorders through age 12. The facility contains 40 inpatient beds, preschool and school for approximately 100–125 children, outpatient facilities, activity/recreation areas, and staff offices.

Structural system: reinforced two-way concrete slab construction.

Major materials: reinforced concrete exterior and interior walls; carpet and quarry-tile floors; 4-ply built-up pitch and gravel roof; reinforced concrete, continuous vaulted skylight, and circular dome skylight ceilings. (See Building materials, p. 128.)

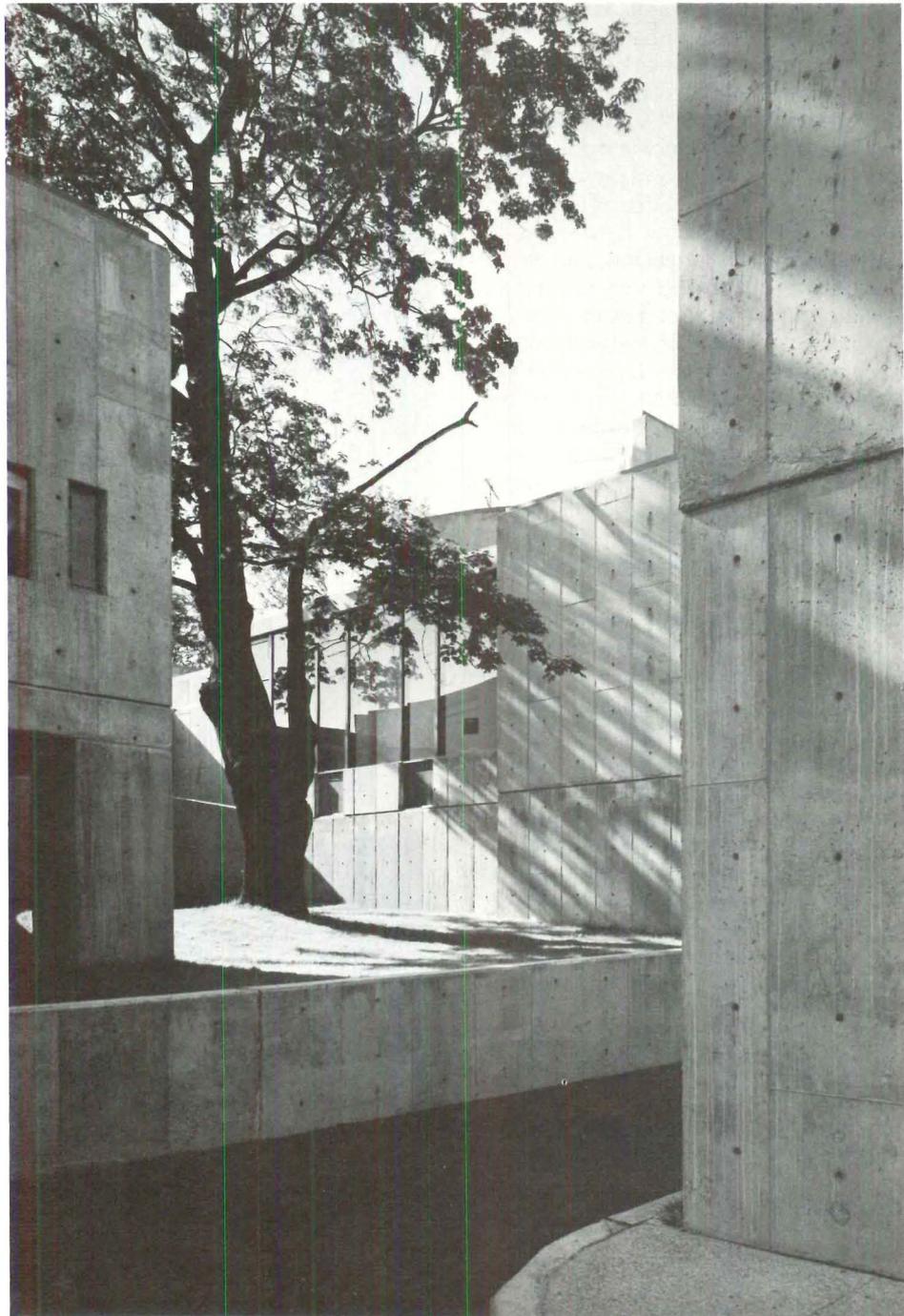
Consultants: Mason & Frey, landscape architects; Francis Associates, mechanical; Simpson Gumpertz & Heger, structural; Thompson Engineering, electrical.

General contractor: L.H. McIsaac.

Cost: \$1,974,881 (\$2,000,000 budgeted).

Photography: Edward Jacoby, color; Phokion Karas, black and white.

Site planning of building was devised to save as many existing trees as possible (below and opposite above). Friendly greeting inscribed in concrete tower flanking entrance (opposite below) was intended to reassure patients, but Brutalist treatment of material and form belies message.





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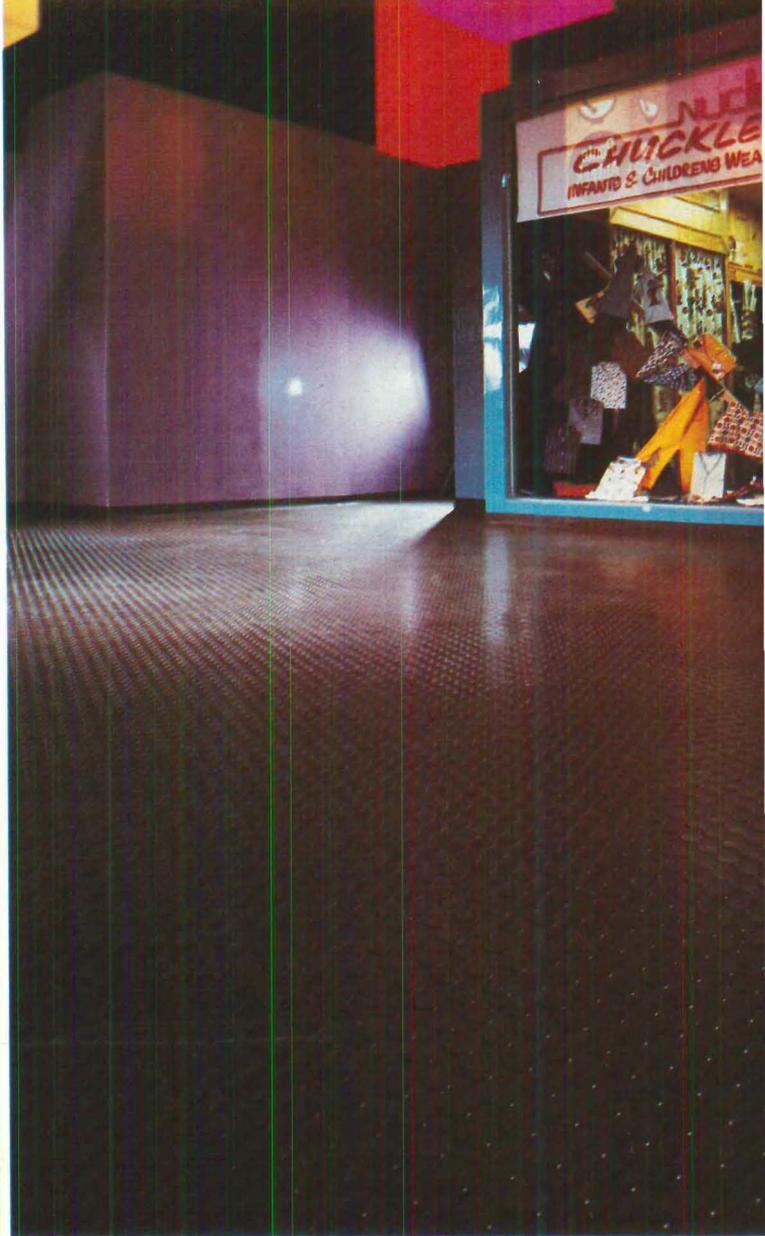
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Specifying for long-term economy

Josephine Drummond

When owners build for their own long-term use or investment, the architect must consider operation and maintenance.

Owners and managers of institutions, large building complexes, and multiple properties are increasingly concerned with the long-term or life-cycle costs of their facilities. Because the initial cost of a building's components accounts for only a fraction of the long-term total, the selection of materials and systems should also take into account the operation, maintenance, and repair costs expected over the life of the facility. To assure themselves that sufficient consideration is given to maintenance requirements, many sophisticated building owners include a review of construction documents by their maintenance directors.

The evaluation of maintenance requirements can and should be a part of the selection process for all building products, not just the major mechanical and electrical systems. If door locks, plumbing trim, and similar items require frequent service by specialized mechanics, maintenance costs will soon exceed the original purchase price and present unnecessary continuing expense.

Some compromise with design and aesthetics may at times be necessary to achieve low long-term costs. Flat paint on walls may be considered most pleasing from a design standpoint, but the need for frequent washing and repainting could substantially increase the overall cost of wall finishes. Long-life lamps are comparatively inexpensive to operate, but the color may not be desirable. The textures or colors available in durable wall finishes may limit the architect's interior design scheme. Water faucets having washers which are easy to change may not be available in designer finishes. Situations like these require evaluation to determine the most important concerns.

Manufacturers of most materials publish recommended procedures for maintenance and service. These are not usually included in sales promotional literature, so the architect must request them in order to get them. A study should be made of maintenance requirements while the selection of building components is being done.

Specifying that all like products be from one manufacturer can provide significant savings over the long term. There are fewer parts to stock, and maintenance mechanics have fewer systems and procedures to learn. Some owners will limit acceptable manufacturers of equipment to those with which their maintenance staff is familiar.

Material and equipment should be obtained from local sources

having good local technical and service facilities. If spare parts must be flown in from miles away, or the factory service representative only comes to town every 60 days, the cost of maintenance will reflect these awkward conditions.

During the construction phase of a project, the concern for long-term costs should continue. When substitutions are proposed, their evaluation should include a review of the life-cycle costs as well as other design and specification comparisons.

At project closeout, the contractor's operation and maintenance manuals should be reviewed for compliance to specifications. Properly prepared reference material can simplify the training of mechanics and minimize failure due to improper procedures. Refer to this column in *Progressive Architecture*, April 1978, for recommendations on specifying operation and maintenance manuals.

Operation of systems is simplified when components are clearly labeled and operation diagrams are provided, keyed to the labeling. Piping should show the service, pressure, and direction of flow. Circuits should be identified in electrical panelboards, and the circuits themselves should be tagged. Record drawings should indicate accurately the installed conditions.

Extra material should be provided to the owner for easily damaged finish materials, such as ceiling tile, floor tile, base and carpet, vinyl wall covering, and paint. This is especially important when frequent minor alterations will be made to a building, or when heavy usage may cause unusually heavy wear. Special tools may be required for systems such as fire sprinklers and control systems.

Where systems are complex or maintenance procedures require special techniques, manufacturers' representatives should train the owner's maintenance personnel in proper methods. Specifications must outline training requirements in detail, as manufacturers' technical employees' time is valuable. The owner's maintenance director should determine the proper time for the training to take place and the people to be trained. When manufacturers suggest that their representatives be present at start-up of equipment, these recommendations should be specified and adhered to. Careless or improper start-up can damage or shorten the life of expensive equipment.

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Resilient bounces back

Once overlooked in favor of carpeting, resilient flooring is now appreciated by architects and designers who value its combination of economical cost, ease of maintenance, and durability.

Every so often there occur specification fads in architecture and interior design, which are characterized by a sometimes imprudent rush to the use of one material or another regardless of its suitability for an extended variety of uses. One of the more widespread specification fads in the 1960s and 1970s was that for carpeting, which was used to a greater extent than ever before as a floor covering for every possible kind of installation, from hospitals to classrooms, from bathrooms to bars.

Within a few years, carpeting had pushed many other floor-covering options out of the minds of interior design product specifiers. Why? Perhaps it had something to do with the lingering image of luxuriousness that carpeting still has in the minds of the general public. More likely, it had very much to do with the relative cheapness of covering with carpet the large expanses of floor space that were created during the construction boom of the 1960s. But within a distressingly short span of time, the fallacy of a single all-purpose flooring was made clear on all too wide a scale.

There are no magic carpets

Rotting plywood under carpeted bathroom floors, hygienically hard-to-maintain carpeted floors in hospital children's wards, and carpeting in developer housing that had to be replaced before a two-year lease ran out all pointed to seriously misconceived flooring specifications. Carpeting, to be sure, is an excellent floor covering, and in many instances it is without doubt the ideal one. But it is not the only—or even the best—choice for many installations, no more so than any other

building material should ever be considered without careful evaluation of its properties and its appropriateness for a given setting.

This is equally true for resilient flooring. But of further significance is the fact that in recent years resilient flooring has been transformed into a virtually different product (and a much more diverse one) than it was ten years ago. New technologies, new materials, and new aesthetic approaches have made resilient flooring a totally different commodity than the cliché image that still is held by some people—that of dreary, old-fashioned linoleum rugs in drably colored, out-of-register Axminster prints. Chief among the improvements of resilient flooring has been that of increased durability. Now, instead of being associated with mere economy or a “down and dirty” approach to interior finishes, resilient flooring has become a true “life of project” product, one that is not likely to self-destruct with the ease of some of its more shoddily made precursors.

Picking and choosing

For the most important fact to consider in interior flooring specification today is that it has been estimated that over the life of a building, flooring costs will equal approximately *one-half* the initial construction costs of the project. Incredible, but true—especially when one considers the single largest component of that total cost: maintenance. Flooring obviously receives the heaviest wear of any element of an interior, needs the most constant maintenance, and must in fact be kept in better repair than any other interior surface if the spaces are to function at all. Thus, when even an economically constructed office building these days can cost in the neighborhood of \$5 to \$10 million, the continuing investment of \$2½ to \$5 million represented by interior flooring had better be a very carefully considered aspect of the

flooring specification process.

The best way to go about deciding whether resilient flooring is the kind of flooring for a specific use is to first review the ten criteria that must be considered in the choice of a resilient flooring. The benefits of resilient can best be judged comparatively within types of the material itself, and then successfully applied to larger considerations among flooring options at large. The ten resilient flooring check points are *color and design; comfort; cost; gouge-resistance; maintenance; moisture-resistance; seams; sound-absorption; stain-resistance; and wearability.*

Color and design is the area in which architects and designers will find perhaps the most surprising advances in resilient flooring. The product has been saddled for too long with the stigma of insensitive styling, resulting in its previous lower-middle-class associations. Recently, though, resilient manufacturers have been responding to the increased presence of the architect in interior design, and now a greater segment of the industry's offerings has a distinct appeal to the architectural specifier. No architectural publication is needed to record this: one need only look underfoot at the thousands of new installations of resilient flooring in architect-designed buildings throughout America. The preponderance of new resilient flooring designs reflects the increased influence of natural materials in the interior design marketplace, and for those installations where the use of real brick, stone, tile, wood, or cork presents problems of cost or maintenance, the use of resilient in those patterns offers an alternative solution.

To those architects who still adhere to Frank Lloyd Wright's dictum that a material ought to express its true nature (though the true nature of an amorphous material like vinyl might be subject to some debate), such designs might prove unacceptable, but for them, too, there are many other



Norman McGrath



Peter Rose

well-designed choices as well. The ubiquitous raised-disc tile, in rubber or synthetic rubber, has become perhaps the most popular new resilient flooring choice among young avant-garde designers and architects in the 1970s. And now, with the promotion of high-tech design to a new residential consumer audience, it is not unlikely that its market will widen even further into domestic use if high-tech does indeed become "the look of the '80s." There is, in short, something for everyone in resilient today, and the old excuse among high-style designers that resilient flooring just wasn't well-designed enough just isn't true any more.

Comfort is largely determined by the use to which a resilient-covered floor is to be put. For example, comfort is one thing on a gymnasium floor that is used for wrestling, and quite another on a lobby floor that is quickly traversed by a visitor in a few seconds. But suitably comfortable resilient floorings for either purpose do exist—and that increased range of cushioning is the second big change in resilient that has occurred in the years since many architects and designers last seriously considered using the material. Needless to say, resilient will never be as soft underfoot as some

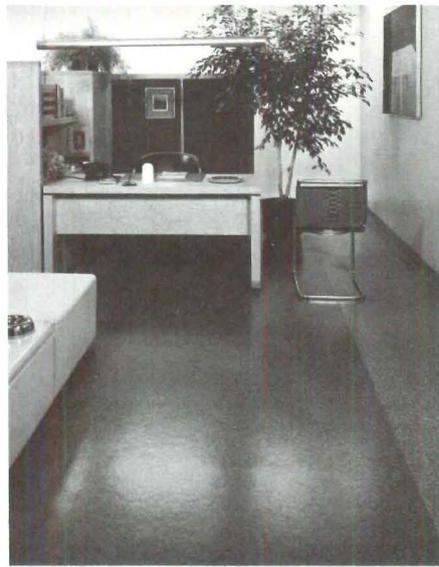
Among the most popular resilient flooring styles today is the raised-disc tile (in rubber or synthetic rubber) known popularly as "Pirelli" tile for its innovator—a nomenclature that, like "Jell-O," "Kleenex," and "Xerox," threatens to become generic. Three non-Pirelli installations include Maremont Corp. headquarters, Chicago (top left) by Interiors, Inc., Norament tile by Nora Flooring; Torczyner & Wiseman-law offices, New York (top right) by Susana Torre (P/A, May 1977, p. 76), tile by Hastings; and Pavillon Soixantedix, St. Sauveur, Quebec (right), by Peter Rose, with Peter Lanken and James Righter (p. 70), tile by Mondo. Other raised-disc tile manufacturers include Flex-Co, Target Tile and Tread, and R.C. Musson Rubber Co.



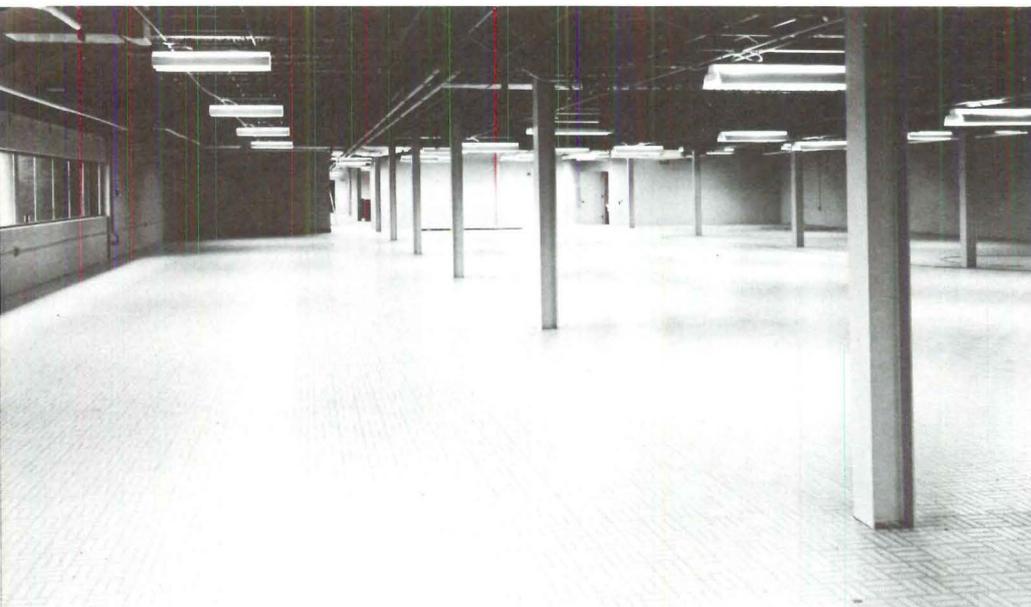
Resilient flooring



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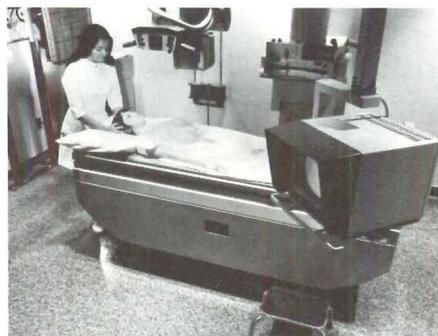
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carpeting can be, but it far exceeds the capabilities of any other hard-finish flooring. Essential to such comfort in resilient, no less so than it is with carpeting, is the substrate material over which the resilient flooring is laid, and the natural resilience of the material can be greatly affected by what is underneath it. For most installations, however, the much greater softness of many resilient floorings will make it worth the designer's effort to consider resilient for places where previously only carpeting had been deemed comfortable enough to specify.

Cost is uppermost in both architects' and clients' minds these days, and here is where resilient flooring has come to reflect changes in prevalent attitudes even more so than in design. For what the specifier will find is that resilient flooring is by no means a cheap material—in many cases, carpeting can be had for a lot less today per square yard. But architects have long been attuned to the concept of life-of-project costs: that is, the overall value of a building material during the years a building is used, as opposed to the bottom-line costs as considered by a contractor or developer. Fortunately, the world at large is catching up with the architect's way of looking at it, for in a period of skyrocketing material and construction costs, the expense of replacing any major part of a building—let alone one as extensive and as costly as flooring—looms as a possibility to be avoided at all costs, including that of a higher initial investment to insure against an even costlier future replacement. Across the board, resilient is a highly cost-effective material, especially in its relative durability and maintenance costs, and that quality above all others has been accountable for its dramatic increase in use of late.

Gouge-resistance is more of a consideration with the softer, cushioned vinyls than it is with the average vinyl-asbestos tile, rubber, or synthetic rubber flooring. But again, this point must be seen in light of the intended function of an installation, and gouge-resistance is of greater importance in a football field house than it is in a kitchen in a retirement community. But what particularly recommends many resilient floorings in settings where

The great versatility of resilient flooring is illustrated in the wide variety of settings for which it is appropriate: **1.** Sales conference room, Mannington Mills headquarters, Salem, NJ, Kingsway Aristocor flooring by Mannington; **2.** Office, Seagate sheet vinyl by Armstrong; **3.** Storage area, Mannington Mills headquarters, Patio-Brick Vinyl-Ease flooring by Mannington; **4.** Elementary school lunchroom and **5.** Hospital X-ray facility, Brigantine sheet vinyl by Armstrong; **6.** Pediatric ward, Acoustiflor by Tarkett.

gouge-resistance is important is the ability for many resilient floorings to "heal" themselves—sealing nicks and cuts from within. Likewise, resilient flooring in most cases can be patched with greater ease and less expense than most other kinds of flooring, making its selection for high-abuse areas a particularly intelligent one.

Maintenance is the twin sister of cost, for maintenance is the single largest factor contributing to the lifetime cost of flooring. Manufacturers of resilient flooring are well aware of this, and have consistently engineered increasingly better maintenance qualities into their products over the years. But still, manufacturers find that maintenance complaints far outnumber all others, and their inquiries into those complaints reveal a crucial focus for architects' attention—making sure that building maintenance personnel know how their specific resilient flooring must be maintained. There being no blanket formulas for resilient flooring upkeep (the vast diversity of what can be called resilient flooring should be indication enough of that), the only practical answer is for every architect to present the management of a new building with a maintenance manual of the architect's own compilation outlining what is to be done (and to be avoided) in the cleaning, repair, and preservation of this single largest interior product investment. Maintenance information is provided by resilient-flooring manufacturers as standard procedure, but far too infrequently is it passed on to clients. Now, with building and maintenance costs higher than ever before, it is the perfect time to reverse a foolish and wasteful oversight.

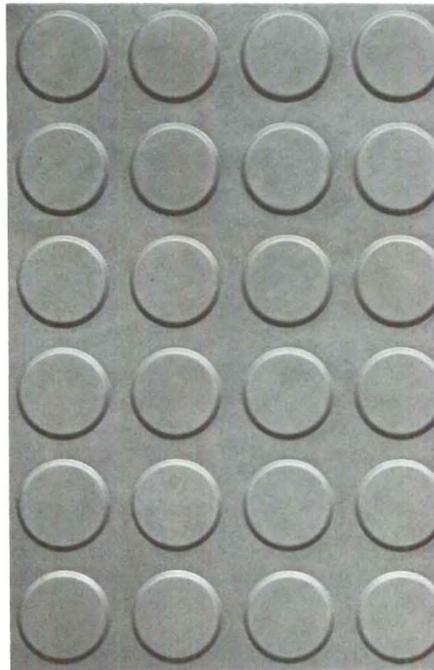
Moisture resistance matters most in installations that are on or below grade, or that are in proximity to water, such as swimming pools, or industrial settings where various solutions are used as part of manufacturing processes. Rot is the most serious problem within the structure of resilient in such cases, as is slippage on the surface. For the most part, the synthetic materials from which many resilient floorings are made (and even the natural rubber that is used in many others) are much more moisture-resistant than wood, tile, or carpet as flooring alternatives. Special attention, though, should be paid to the materials beneath the resilient surface, for as with other types of flooring they can strongly affect the moisture-resistant qual-

ities of the top layer. Slip-resistance is likewise linked to moisture resistance, and such qualities (which come from both the chemical composition of the resilient flooring and the surface texturing) are of especial importance in applications where other floorings are less susceptible to control of slippage. Nonslip floorings are specifically rated as such by manufacturers, and many resilient makers offer separate lines of slip-resistant floor covering.

Seams in resilient flooring have both advantages and disadvantages. Sheet vinyls have the fewest seams of all: hard sheet vinyls in 6-ft widths and cushioned vinyls in 12-ft widths make seamless installations possible in many smaller spaces. Yet resilient tile, in vinyl, rubber, synthetic rubber, acrylic-impregnated or vinyl-

bonded wood, offers greater flexibility of installation and a lesser degree of waste. Seams do greatly affect the maintenance of resilient flooring, for it is in seams where the most dirt collects, and where resilient is most likely to peel or crack. What matters more than the presence or number of seams, though, is the quality of the product itself, for with proper installation a resilient tile floor is on a par with a resilient sheet vinyl floor.

Sound absorption is another property which is relatively new to resilient flooring, and which positions it favorably against the sound-absorptive qualities of carpeting on the one hand, and the relative lack of the same in wood, tile, and stone floors. This makes it particularly worthwhile to consider resilient flooring in instances



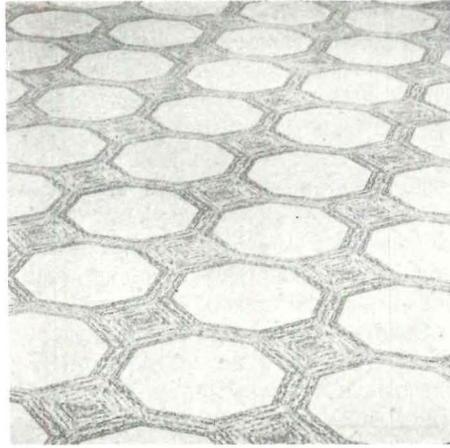
Two solutions to pattern wearability problem include choosing an inlaid flooring (such as Armstrong's Corlon, above right), in which pattern extends into entire thickness of material, or specification of a solid-color, raised-pattern flooring (such as Norament by Nora Flooring, above left).



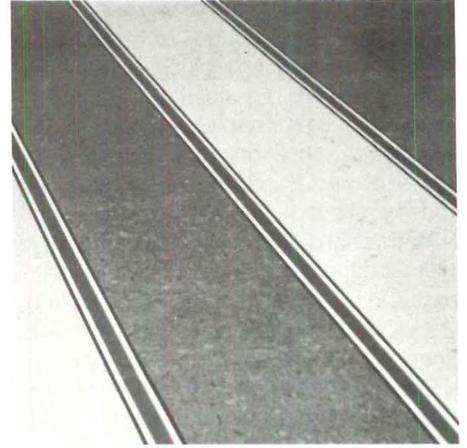
Among recent innovations in resilient flooring is the development of acrylic-impregnated (and also vinyl-bonded) natural wood and cork flooring, which has the appearance of its natural components and the ease of maintenance and durability of its synthetic ones. PermaGrain acrylic/wood flooring is used in Kent Memorial Library, Suffield, Ct, by Warren Platner (right).

Resilient flooring

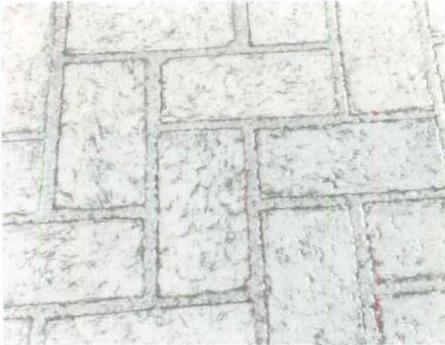
Among currently available resilient flooring choices are these: **1.** Octrelle and **2.** Custom Cortina VAT by Azrock Floor Products; **3.** Hammon Brick sheet vinyl by GAF; **4.** Glazed Brick VAT and **5.** Thru-Onyx VAT by Azrock; **6.** Lenden Wood sheet vinyl and **7.** Mexican Agate sheet vinyl by GAF; **8.** Meridian VAT by Azrock; **9.** Rustic Stone VAT by Kentile; **10.** Brigantine sheet vinyl by Armstrong; **11.** Casa Grande sheet vinyl by Congoleum; **12.** Capistano sheet flooring by Mannington Mills; **13.** Meadowland sheet vinyl by GAF; **14.** GenuWood II vinyl bonded wood flooring by PermaGrain Products.



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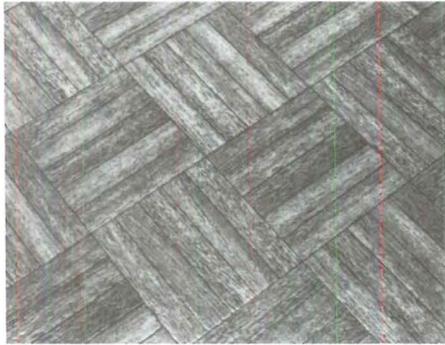
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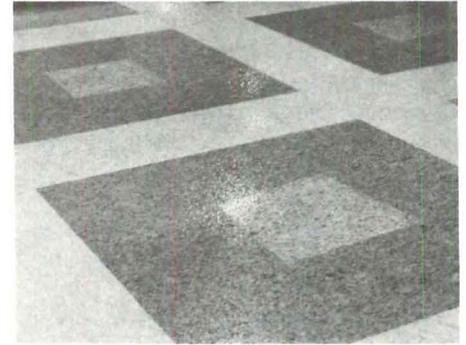
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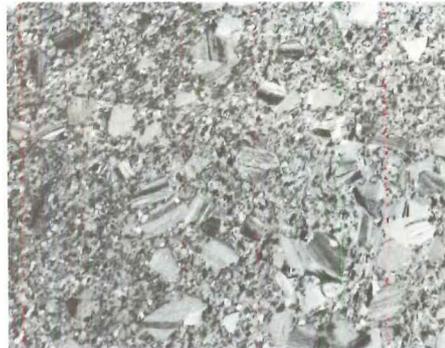
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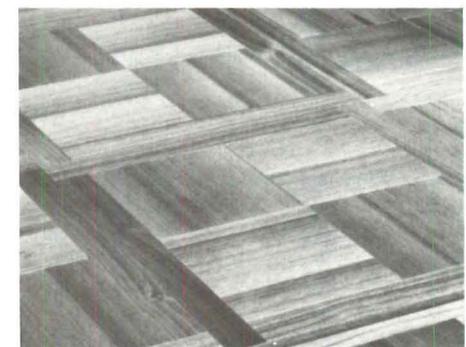
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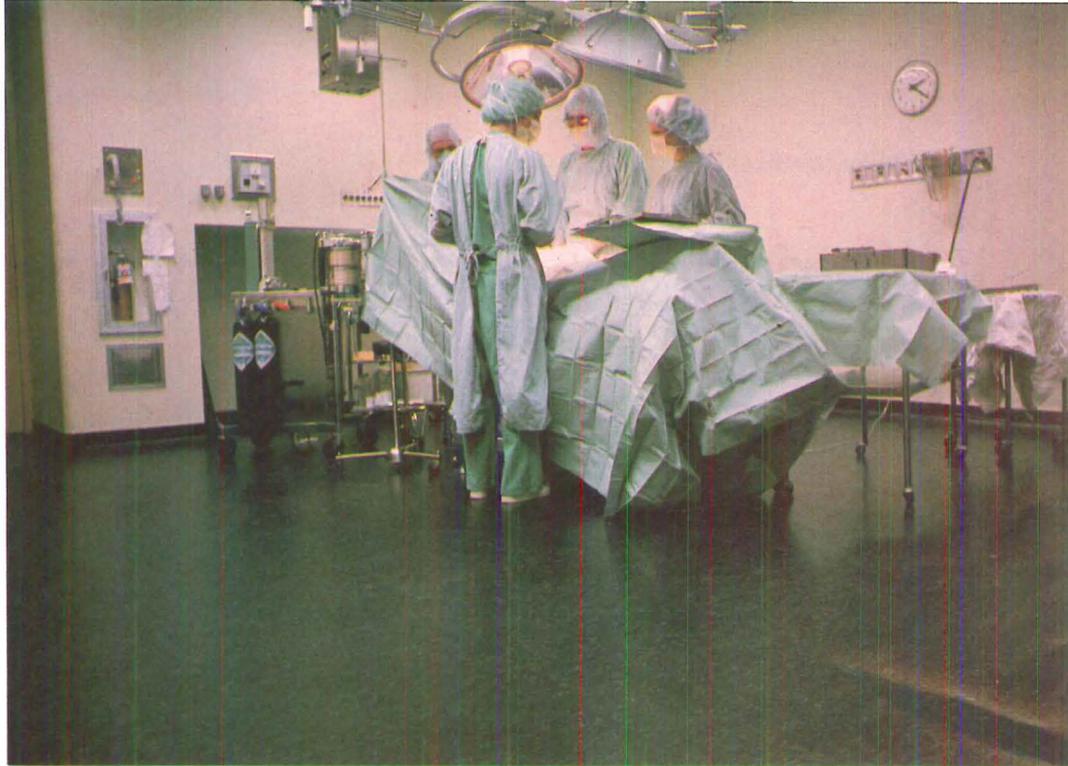
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where a combination of soundproofing qualities and ease of maintenance—such as offices, for example—is desirable, although resilient might not have been the expected specification choice in such installations in the past. The increased cushioning capability in present-day resilient manufacturing has helped the acoustic absorption qualities of the material as well, and is yet another characteristic that ought not to be overlooked in a flooring choice.

Stain resistance also has increased greatly as a result of improved product engineering, and there are fully documented ratings and specification guidelines for a wide variety of industrial- and laboratory-grade resilient floorings that can withstand the effects of all but the most potent solvents. In cases where prolonged exposure to stain-producing chemicals is to be expected, resilient flooring is more likely than not the only really feasible specification choice, since its synthetically derived stain-retardation properties are the only ones which can effectively fight the effects of strong chemicals. Most manufacturers, especially for this area of resilient flooring, maintain excellently documented records of suitability of various kinds of flooring for high-abuse stain situations—going so far, for example, as to test flooring for resistance to new photographic developing solutions before they have come into general laboratory use.

Wearability is the final, but by no means least important of the specification criteria to be considered in the selection of resilient flooring—for of what good will all the preceding criteria be if the basic product itself will not wear well as opposed to other kinds of flooring? For the most part, intra-industry standards have assured that most resilient floorings wear quite well indeed, and in fact many are consciously over-engineered to prove their practicality in problem installations. Base material, thickness of flooring, depth of wear layer, and expected use rate will all affect the long-term wearability of resilient flooring. In the case of patterned flooring—which was often shunned in the past for its tendency to wear less well (i.e., lose the pattern in areas of heavy use)—that difficulty has now been overcome with the introduction of new patterned floorings in which the pattern extends down into the resilient itself, so that it is still continuously visible as part of the overall flooring even if the resilient is worn down to 1/8 in. below the original surface. Wearability, it must be noted, is also in large part a function of the maintenance which a resilient floor is given, and in no case can the life of the product be expected to magically transcend the abuse, neglect, or incorrect care to which so many resilient floors are regularly subjected.

As for the next decade in resilient floor-



Special-installation floorings include Tarkett's Conductiflor (above) and Gymflor (below).



ing, look for these developments: improved design, greater ease of maintenance, and more diversified special floorings for high-abuse installations. The beneficial circular effect that architects are having on the development of new interior design products is the more they use interior design products, the more interior design products will continue to reflect architects' design preferences. Maintenance, on the other hand, is everybody's concern, from the architect to the real estate developer to the superintendent, and with ever-rising costs, it is certain that simplified maintenance of resilient flooring is bound to give this versatile material a most resilient future. [Martin Filler]

Acknowledgements

We wish to thank the following individuals and manufacturers for their help in preparing this article: *Amtico Flooring Division*, *American Biltrite Rubber Co.*: Frank Andrejack; *Armstrong*: Gary Cross, Robert de Camara, E. Wayne Schlegel; *Azrock Floor Products*: Walter R. Bell, Andrew Mackay; *Congoleum*: Kathleen Partogian; *GAF*: Ted Dean, Roy Gilb, Sylvia Lowe; *Mannington Mills*: Frank Hearst, Howard Turner. *Gray & Rogers, Inc.*: Chris Kelly and Leslie Ann Mogul; *Nora Flooring*: George O. Jenkins; *Permagrain*: J.J. Egan. *Aitkin Kynett, Inc.*: Pat Cecchini; *Tarkett*: William Morgan, Jr., Lennart Warburg. *Middleberg & Gunn, Inc.*: Ian Gunn and Don Middleberg.

For resilient flooring product and literature information, see page 117.

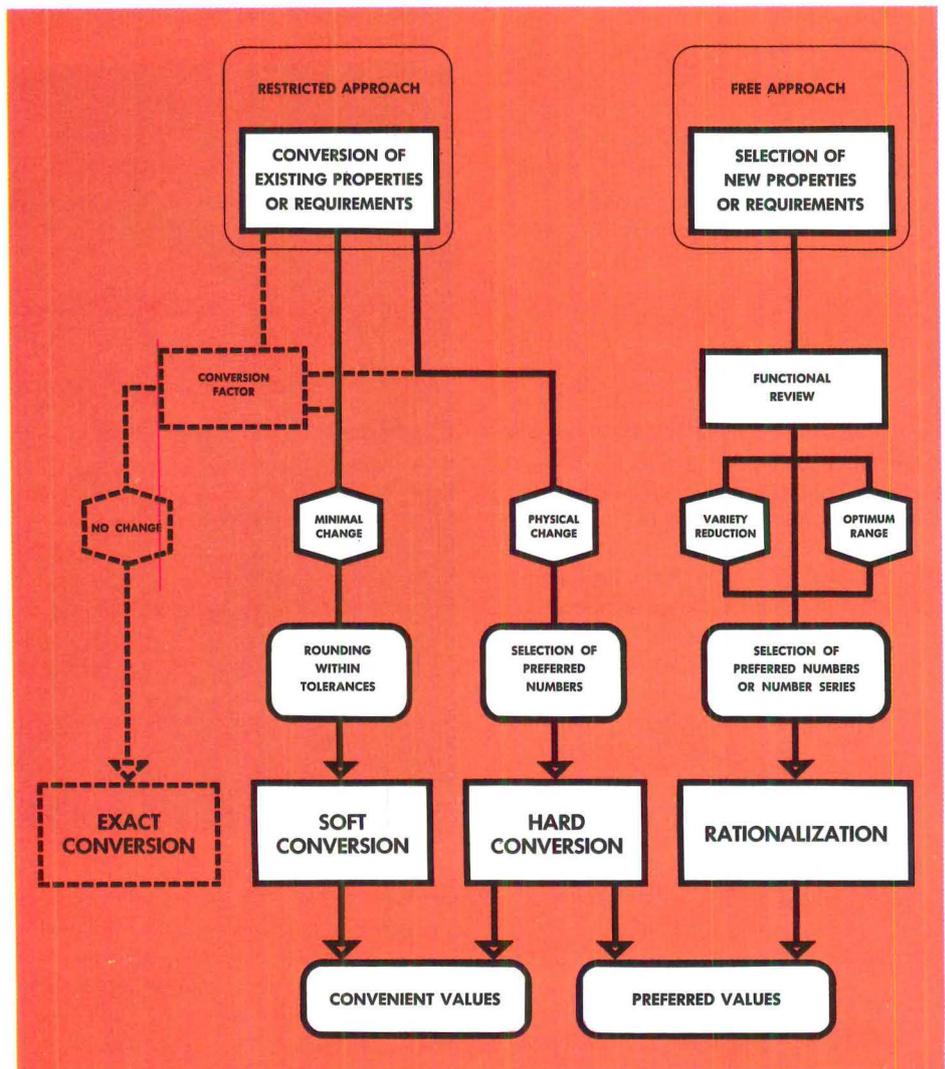
Metrication: controversy and opportunity

Thomas Clark Tufts

The U.S. has a national metric policy. To organize, plan, and coordinate change can be more valuable than change itself.

Metrication is going to happen. Although the United States was a signatory nation to the Treaty of the Meter in 1875, the stimulus for replacing the cumbersome "customary system" has fallen short, and the debate continues in the United States about its adoption as the predominant domestic system of weights and measures. Many technically oriented people argue that it should not be a decision of the general public. It is undeniably an emotionally charged issue—the stuff of which political debate is made.

Politicians focus on public opinion or sentiment, and an apparatus for quantifying the mood of the people is, of course, the public opinion poll. Regardless of its validity, the poll does affect political considerations, and many of the decisive debates about metrication will be predictably politically inspired. The following statement is extracted from a report by the Comptroller General to the Congress entitled "Getting a Better Understanding Of The Metric System—Implications If Adopted By The United States" dated October 20, 1978: "Since a decision will affect every American for decades to come, GAO (General Accounting Office) believes the decision, [whether] to continue with the current policy or change it, should be made by the representatives of the people—the Congress." From that simple statement one can draw the conclusion that if the decision is to be made by the Congress it will indeed be, at least to some degree, a political decision. It goes without saying that political decisions strive to be "popular" and that "popular opinion" is currently gauged by opinion polls and surveys, as much as any other single indicator. It follows, therefore, than an in-



Strategies for conversion and rationalization

The sequences and relationships of alternative metrication strategies for technical information are illustrated above. The objective in conversion or rationalization should be to make a change to either "convenient values" or "preferred values." Convenient values are values in which the number is selected primarily for its simplicity and/or convenience in description and practical use. Preferred values are values in which the number is selected on the basis of its membership in a family of numbers that are preferred for functional or mathematical reasons. In general, convenient values are best suited to applications involving "individual values," while preferred values are mainly associated with applications involving "sets or series of values."

NBS Technical Note 990, Hans J. Milton FRAIA

formed public is necessary to the informed decision-making process. The process of informing the public is by no means simple, however. Biased opinion and political rhetoric are certainly not to be confused with information in this context, and yet we must admit that it is frequently all that is available for the formulation of public opinion. Obviously, a way to validate information is imperative. What is the most important current information problem critical to understanding the environment of the entire metrication process?

Is there a national policy?

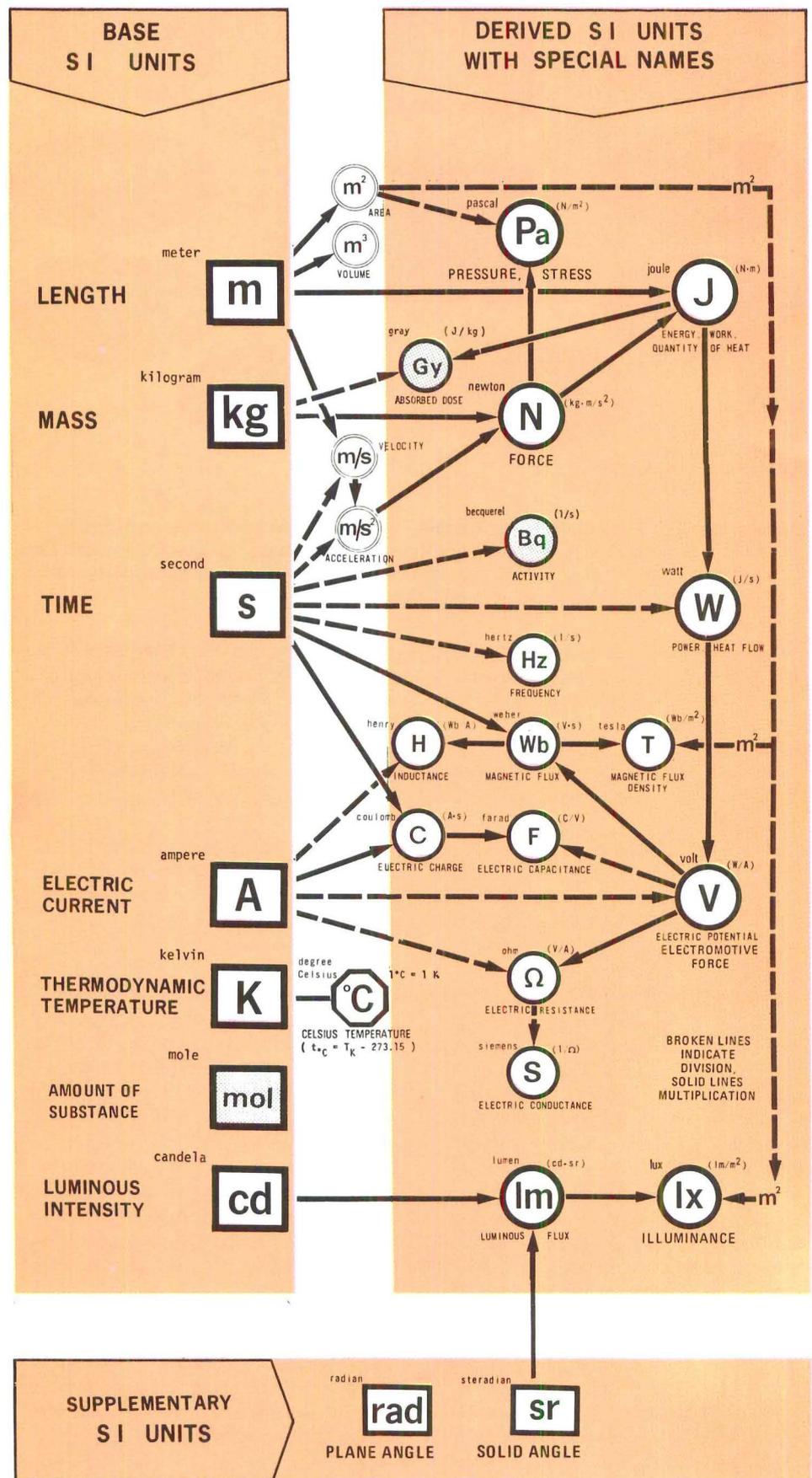
The problem, simply stated is—Is there a national policy toward adoption of the metric system, and if so, what is it? Quoting from the GAO report again, it states "The 1975 Act (PL94-168) and its legislative history show the national policy is not to prefer one system over the other but to provide for either to be predominant on the basis of the voluntary actions of those affected." This is under the paragraph heading "A decision has not been made."

This long-awaited report, more than two years in preparation, was given broad publicity in the press, and such out of context statements became headlines for articles indicating that the government did not have a policy of going forth with its previously publicized metric initiatives. Let us look at statements by the people vitally concerned with the Metric Act.

When he signed the bill, President Ford made the following statement, "I am today signing H.R. 8674, the Metric Conversion Act of 1975. This legislation establishes a national policy of coordinating and planning for the increased use of the metric measurement system in the United States." In the statement he briefly summarized the legislative history prior to the current era. Indicating that public acceptance was the key, he then emphasized that the important impetus for the bill came "from people in the business of buying and selling American products here and overseas."

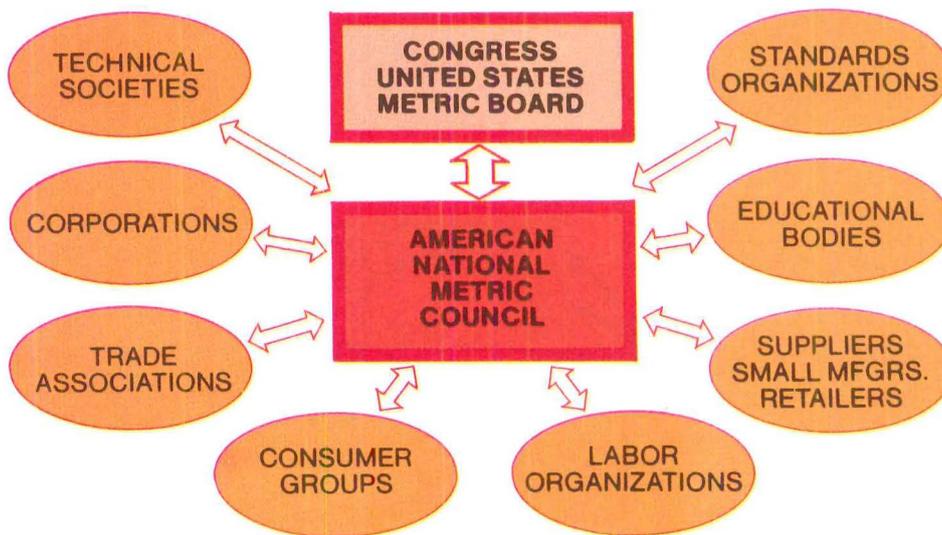
The legislation calls for a voluntary conversion and establishes a U.S. Metric Board to assist in the coordination, to report to Congress on the status of conversion, and to make recommendations for further legislation if necessary.

The GAO report, compiled after the signing, obviously gives a different interpretation from the President's statement. It states right on the cover, for instance, "Whether the Nations Measurement System should be changed is a question still unresolved." New evidence to support the original premise that there is a national metric policy—perhaps of greater significance than President Ford's statement—is found in a recent letter from Congressman Olin E. Teague of Texas,



SI units and relationships

The SI CHART is the new metric system approved in 1959 and shows graphically how the seventeen derived SI units with special names are formed in a coherent manner from the base and supplementary units. Unit symbols are shown in rectangles for base units and supplementary units, and in circles for derived units. The unit name is spelled out in full toward the upper left, and the derivation is shown in parentheses toward the upper right. The name of the quantity (the measurable attribute) is stated in capital letters.



The Metric Planning Megastructure

ANMC

Construction Industries Critical Path Network The CICC network is the critical path of the combined sector networks. The design sector is an example. Each event will require an estimate of time required to accomplish the activity. When SI day (Start Implementation) is set as a calendar date the network diagram will become a conversion schedule.

Chairman of the Committee on Science and Technology of the House of Representatives to Dr. Louis F. Polk, Chairman, United States Metric Board dated November 28, 1978. Addressed to those given the task of implementing the letter of the law, Teague criticized the GAO report: "The most notable aspect to keep in mind, and the aspect which the GAO entirely fails to reflect, is that the legislation which was sent to the President in Dec. 1975 was the result of a lengthy legislative consideration stretching over several Congresses. Because there were sharply differing views on this subject, ranging from those who favored a conversion mandated by the Government within a fixed time period to those who favored no legislation at all which would mean a continuation of the uncoordinated changeover in effect since 1866, the Metric Act is a compromise in the best sense of that word."

He further states that, contrary to the GAO analysis, the compromise law does in fact set forth a clear policy for metric conversion in the United States and "... that policy is to facilitate the conversion to Metric use in our country in order to reduce the total cost and inconvenience to our people. The intent of the Act is that the Metric Board should seek to reduce the time needed to make the conversion and to coordinate the conversion activities so as to achieve the benefits of Metric use sooner and reduce the cost and inconvenience arising from an unduly prolonged period of dual use."

Congressman Teague continues: "I would emphasize that the fact that the process is voluntary does not mean that the role of the Board should be a passive one." The congressman makes one further

point when he speaks of the matter of conversion costs: "It was never the intent of the Congress that the change to Metric should be done for its own sake. Rather, it should be done, as has been the case in all those industries where the change is already underway, where it makes economic sense."

Following this letter, Dr. Louis Polk, Chairman of the U.S. Metric Board, in remarks before the U.S. Chamber of Commerce on December 5, said he expects the private sector to continue to maintain the initiative in metric planning. He encouraged business and industry to continue to utilize the planning and coordinating mechanisms of such organizations as the American National Metric Council. In reviewing proposed conversion plans, Dr. Polk said the Board will be concerned that all affected parties, including consumers, have been consulted and that the plans are consistent with other activities in both the private and public sectors. "Our policy," he said, "will be to avoid duplication of effort and to encourage initiative by the private sector."

The focal point for planning

The American National Metric Council (ANMC) is a private, nonprofit organization planning for and coordinating metric conversion in the private sector. Representatives of business, industry, labor, and education and consumer groups work through ANMC in developing consensus plans for conversion. R.M. Hurd, Chairman of the Board of ANMC stated that "Metric conversion in business and industry should be planned and managed by the group that can accomplish conversion in the most efficient and cost effective manner—the

private sector."

The foregoing information has not heretofore been placed in an orderly perspective for the public to decide whether there is a national policy for metric conversion. Congressman Teague pointed out that the Metric Act of 1975 was a compromise "in the best sense of that word." Many of the people who participated in the formulation of the bill as passed, however, see the bill only from their "pre-compromise" point of view and consider it a victory or defeat. This attitude of course fails to recognize that it is neither. A new point of view has been fashioned—and it is the law. The policy stated in the bill and verified by those responsible for its promulgation and administration is adequate to understand the official status of metrication activities.

The environment, therefore, is ideal for the greatest "planned coordinated change" in the history of our country. A change so pervasive that it affects every American—a change that every American should want to help plan so that it maximizes the opportunities and benefits and minimizes the costs, disadvantages, and inconveniences. The megastructure of the planning organization is in existence—the Congress, the U.S. Metric Board and the American National Metric Council—and they are actively establishing their relationships. The job that must be done now is to formalize the organizational structure of the various private sectors under the auspices of ANMC; recruit representatives from the sector to actively participate in the research, planning, and coordination activities within the organizational structure; identify the decision-makers; disseminate the information that is developed by the participants to the decision-makers; develop a sector-wide consensus on a plan and schedule; and then implement the plan.

The organizational structure: The development of an organizational structure in the United States that would be capable of successfully planning, coordinating, and implementing a change in something as fundamental to the nation as its measurement system is an exciting prospect indeed. That organizational structure could easily serve as a model by which other social, economic, and political problems could be researched; solutions promulgated; and plans for change and improvement implemented. In the construction industry, for example, the problem relates very closely to our society in general. Everybody uses its product—buildings. It is credited with being the largest domestic industry in terms of annual dollar volume. A great many people work in it, and yet the decision-makers, if they exist, are largely unidentified.

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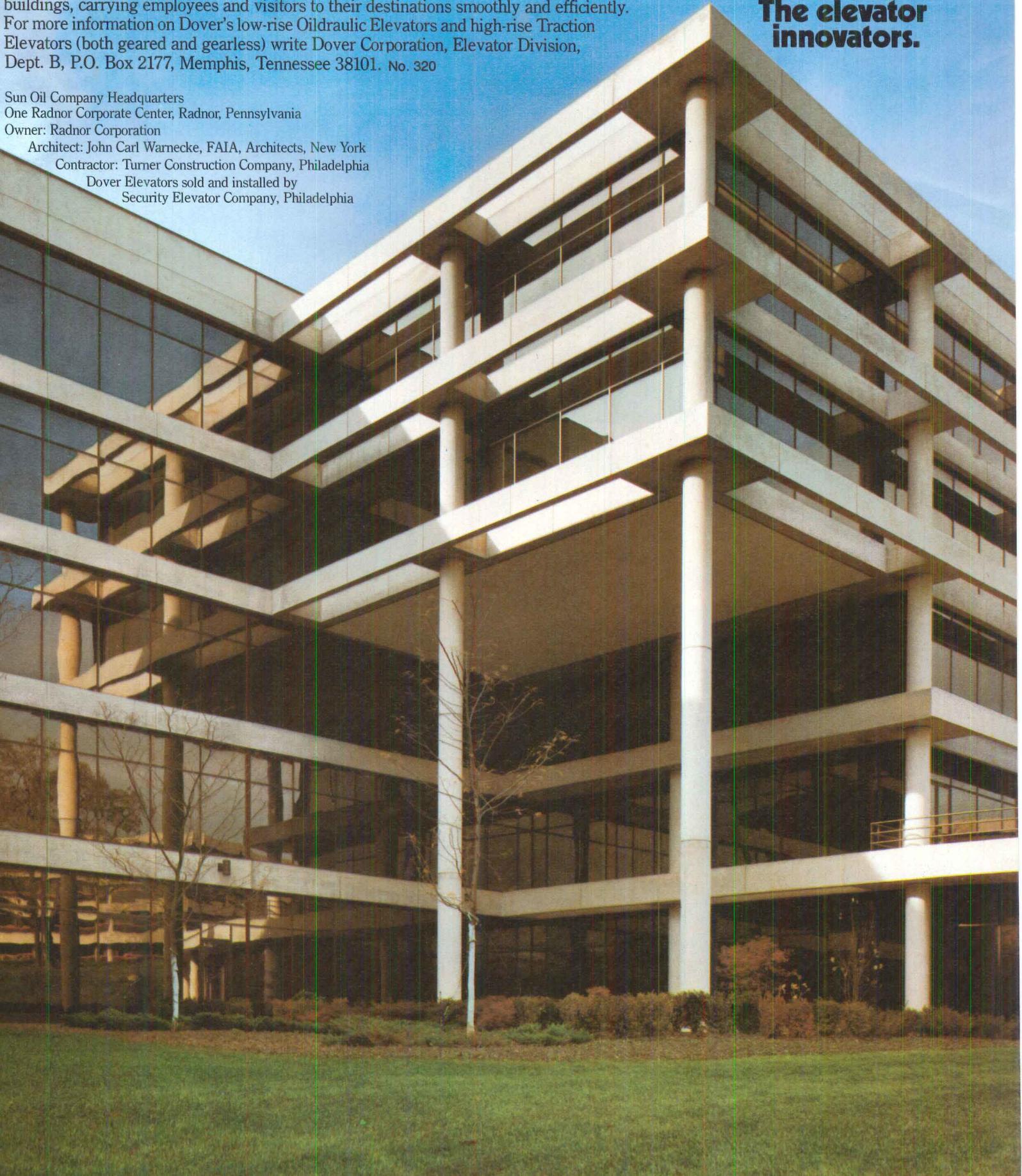
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Statute of limitations for fraud-based suits

Norman Coplan

Limitations for instituting suits for malpractice based on fraud depend upon whether there was willful intent or negligent misrepresentation involved.

Malpractice actions against architects may be based upon negligence, breach of contract, or fraud. Suits based upon the failure of an architect to use due care in his professional capacity can be traced back to Babylonian times, and the legal principles applicable to suits sounding in negligence or breach of contract are relatively well settled. However, the legal rules to be applied to actions which are based on allegations of fraud are not as well delineated because such suits have been relatively few.

Where fraud is claimed, one of the primary questions that may be raised relates to the time within which such suit must be brought. We have previously reported (P/A, "It's the Law," April & May, 1978) that, despite a statute which expressly provides that professional malpractice actions based upon negligence must be commenced within three years from the date the cause of action accrues, the highest court of New York has ruled that an owner has six years in which to institute suit against an architect for breach of contract, even if the essence of the claimed breach is the failure of the architect to exercise due care in the performance of his services. This decision, however, did not deal with the situation where the malpractice claimed is based upon allegations of fraud, nor did it treat with the question of when such an action must be commenced or from what date the running of the statute of limitations shall be measured. Following that decision, the Supreme Court of New York, in the case of *Urbahn vs The Town of Greenburgh*, considered those very issues.

In the *Urbahn* case, it was found that the architect had designed a public library in 1967, construction of which was completed in August 1969. One feature of the library building was that the exterior walls consisted of limestone roof facia. In April 1977, part of the limestone facia fell to the street. The owner thereafter asserted a claim for damages against the architect, contending that the architect had deviated from acceptable professional conduct by having the specifications prepared prior to the working drawings, resulting in a lack of coordination in the plans and specifications. The owner further contended that the architect had committed fraud when he submitted final plans because he implied thereby that all plans and designs had been coordinated. The owner sought arbitration of its claim, and the architect moved to stay the arbitration on the ground that it had not been commenced within the time provided by law.

The Court, in considering the architect's motion for a stay of the arbitration, pointed out that, in the reported decisions involving

the claim of fraud by an architect, actual fraud, such as collusion or misrepresentation, was involved and that in such type of case, the time within which suit must be instituted was two years after discovery of the fraud. If the owner's claim fell within this classification, the suit against the architect would have been timely. However, the Court further pointed out that the fraud alleged in the case before it was not actual fraud, but what is known in the law as "constructive fraud." Different rules and different limitations of time apply to these two types of so-called fraud. In this respect, the Court said:

"Two kinds of fraud are recognized in our jurisprudence: actual fraud, involving scienter—the intention to deceive; and constructive fraud, not involving willful intent or tantamount to negligent misrepresentation. . . . In cases of actual fraud, the claim accrued for statute of limitation purposes within two years from actual or imputed discovery. . . . whereas in cases of constructive fraud, the claim accrues on the date of the fraud and is governed by the six-year equity statute of limitations.

"Clearly, therefore, insofar as respondent's claim relates to constructive fraud, it accrued at the latest in February 1970, and would be time-barred in an action at law or in equity."

The Court rejected the owner's contention that the same legal considerations do not apply to arbitration proceedings as apply to legal proceedings, stating that "the statute of limitations is the same in judicial and arbitration proceedings and where all claims are time-barred in law, they are also time-barred in arbitration."

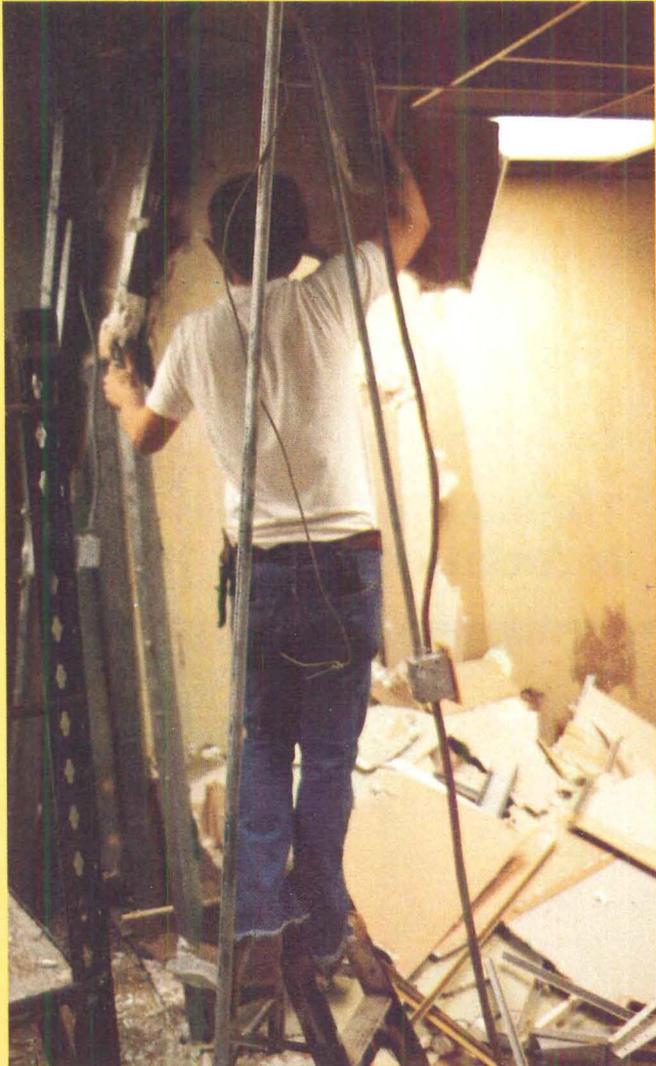
In response to the owner's argument that the statute of limitations should be tolled until discovery of the alleged constructive fraud occurs, which would be at the time the defect resulting therefrom manifested itself, the Court said:

"In reality, respondent desires recognition of an estoppel in precluding the assertion of the limitations defense where there is no factual predicate warranting a toll. . . . The alleged concealment of the lack of coordination of the plans is insufficient to trigger the actual fraud limitations period. . . . Alternatively, respondent erroneously contends that the outer limits of the period of limitations in cases of architectural malpractice should be extended to prevent a manifest injustice. . . . As sympathetic as the Court might be to respondent's position, it has no power to extend the statute of limitations. . . . nor to disregard the fundamental principle of law that, absent actual fraud, knowledge of the invasion of a right is not critical for accrual purposes."

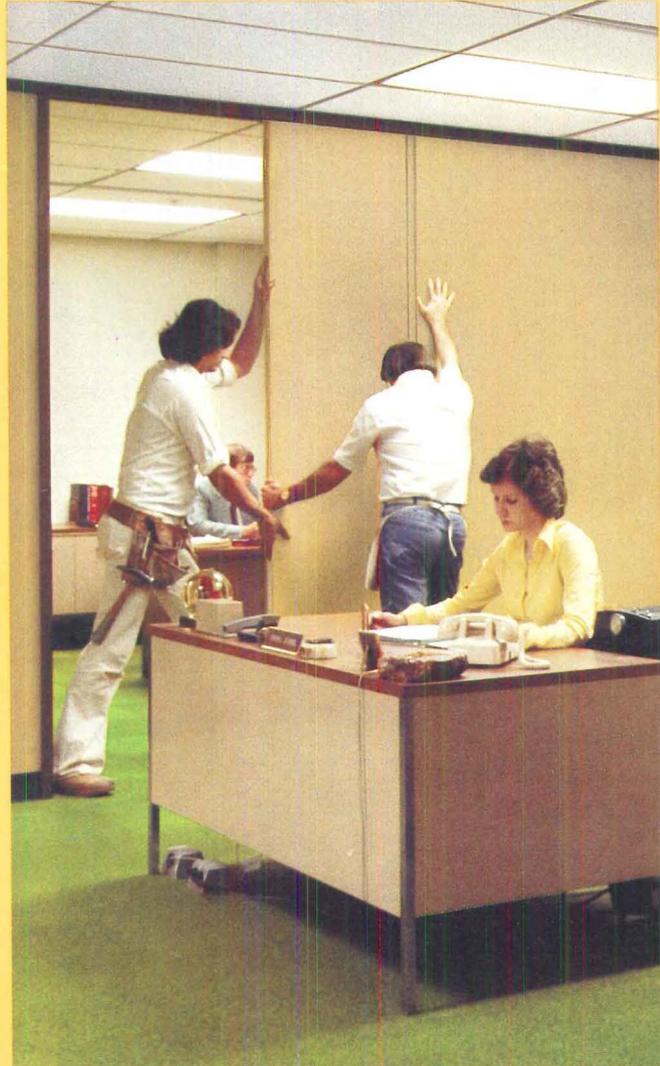
In conclusion, the Court ruled that a cause of action for malpractice, whether sounding in negligence, breach of contract, or constructive fraud, accrues at the latest upon the completion of the project, and therefore the owner's claim in the case before it was time-barred.

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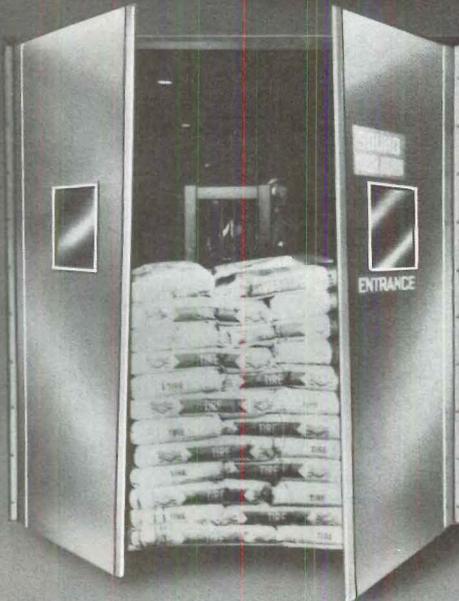
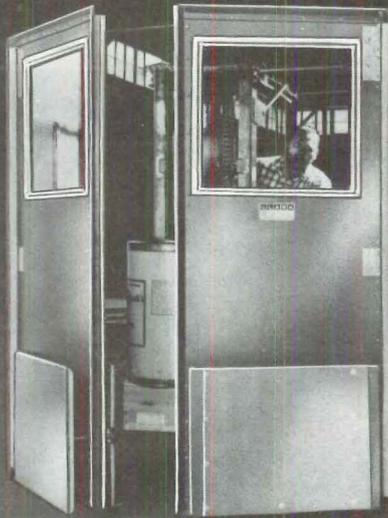
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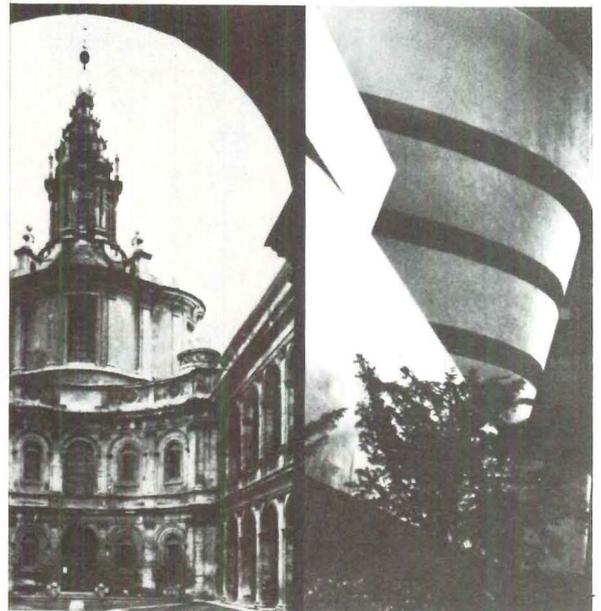
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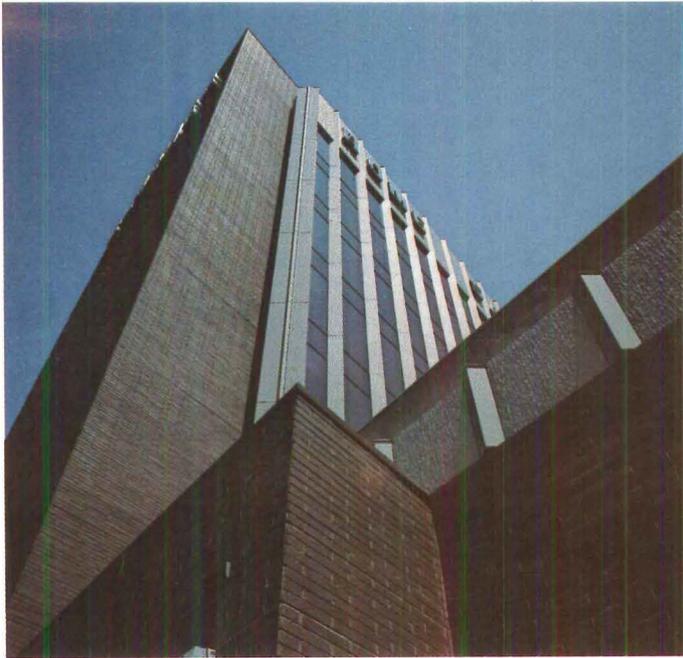
The Modern Language of Architecture



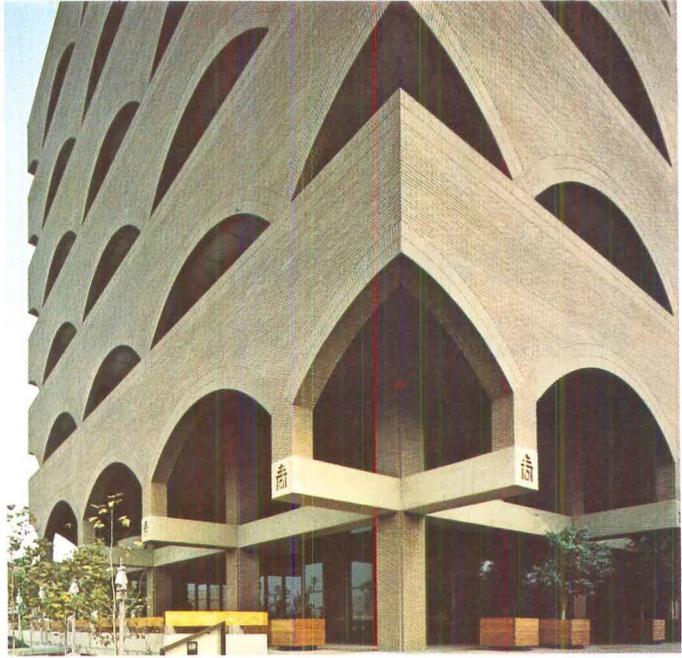
The Modern Language of Architecture, by Bruno Zevi. Seattle: University of Washington Press, 1978, illus., \$14.95.

Reviewed by: William C. Miller, Associate Professor. College of Architecture and Design, Kansas State University.

A work with the title *The Modern Language of Architecture* is assured of bringing forth a Pavlovian response from many, the current interest in Modernism being what it is. All the more important when the book is authored by the noted Italian historian, architect, critic, and author, Bruno Zevi. Here, one anticipates, is a volume which participates in the discussion of the pros and cons of Modern architecture, in addition to analyzing the architectonic language of the Modern movement. Originally this volume was published as two separate works in Italian in 1973 and 1974. The translation of these works, "A Guide to the Anticlassical Code" and "Architecture versus Architectural History," also formed the [continued on page 108]



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Books continued from page 106

basis of two Walker-Ames lectures delivered at the University of Washington in early 1977.

Upon reading *The Modern Language of Architecture*, one is confronted with an anachronism, rather than the meaningful discussion that was anticipated. Zevi's volume seems more like a piece of late-1920s or early-1930s polemics than a work produced in the mid-1970s. This is seen not only in the attitude toward modern architecture that Zevi assumes in the book, but more importantly in the tenor in which it is written. One almost expects to find a condensed version of Ulrich Conrads' *Programs and Manifestoes on 20th-Century Architecture*.

Zevi's presentation follows the typical format of early Modern polemics with an evil to purge, and here, a seven point program for salvation. The tone is one of moral self-righteous indignation so well identified with the writings of the Moderns. The evil, the architectonic Mephistopheles Zevi is railing against, is not new or unexpected: classicism and its bedfellow the Beaux-Arts system. "For the modern architect, the paralyzing taboos are dogmas, conventions, inertia, all the dead weight accumulated during centuries of classicism. The Modern code is applicable to many situations, on any scale, from a chair to a highway cluster, from a spoon to a city." Have we not listened to this before?

The seven points, or "invariables," which comprise the basis of Zevi's modern language are: 1. Listing as design method ("The list, or inventory, of functions is the generating principle of the modern language of architecture."); 2. asymmetry and dissonance ("Symmetry is one of the invariables of classicism. Therefore asymmetry is one of the invariables of the modern language."); 3. antiperspective three-dimensionality (here Zevi strikes out at Renaissance one-point perspective and states, "... the corner view of a building should have been the driving force"); 4. the syntax of four-dimensional decomposition (i.e., De Stijl theory); 5. cantilever, shell, and membrane structures (primacy of structure); 6. space and time (the old analogy with physics); and lastly, the reintegration of building, city, and landscape (here the term "urbatecture" is coined to signify the fusion of building and city).

It is not that these "invariables" are inappropriate for an analysis of the language of modern architecture; quite the contrary, in fact. These seven points do seem quite germane to an insightful discussion of much of modern architecture. The ideas of asymmetry, dissonance, and decomposition are of great interest to many today, especially when coupled with current attitudes toward contextual issues. Several others—the primacy of structures and the functional bias of listing—have been focal points of recent criticism.

The framework that Zevi establishes is not what is being criticized here, rather the overwrought emotional polemics that are used as the sole support of his theses. Zevi's argument against symmetry in the section on "Asymmetry and Dissonance" will suffice as an example. Instead of developing a cogent discussion on this topic, Zevi launches into an attack on symmetry. "Symmetry = a spasmodic need for security, fear of flexibility, indetermination, relativity, and growth—in short, fear of life." Or, "Symmetry = passivity or, in Freudian terms, homosexuality." Incredible as it seems, forty years after this type of polemic appeared, it is rearing its ugly head again. All the more incredible, this type of presentation is made by one who pretends to be a historian.

An interesting dichotomy between Part I and Part II of this work occurs. Under the heading of "Listing as Design Method" in Part I, Zevi develops the thesis—around Roland Barthes' "zero degree of writing"—that Modern architecture had to begin by rejecting all "traditional norms and canons." Granted we all know that [continued on page 110]

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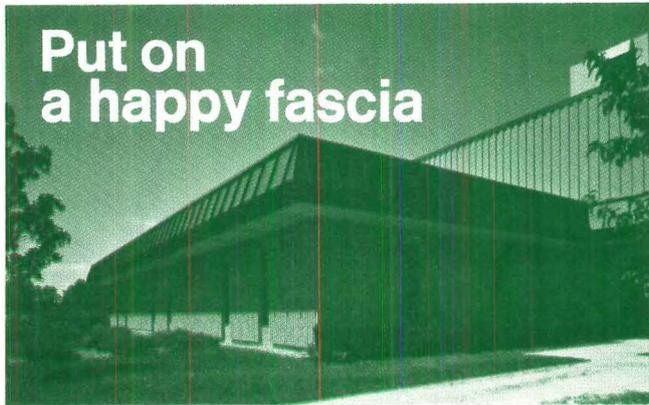
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the Modern movement tried to convince everyone (including itself) it was starting from scratch. But Part II of the book, "Architecture versus Architectural History," is a listing of the historical precedents Zevi feels Modern architecture is based upon. This might be rationalized by the statement ". . . modern architecture takes what is good from the past and reveals its anti-classical essence. It rejects and annihilates not the past, but the corruption of it that was carried out by the Beaux-Arts norms." But how can we have "cultural annihilation" on one hand, and a lengthy list of precedent on the other. That this work was originally two volumes does not stand up either; they become a connected piece here. This is endemic of the reasoning found throughout this work. One would also think that by 1978, photographic analogies between the vaulting of Amiens Cathedral and the Galerie des Machines, or between the exterior of a Gothic cathedral and an oil refinery have become clichés.

When one thinks of Bruno Zevi, one remembers his previous work, *Architecture as Space*. Although it could be considered somewhat polemical in intention, it is a well developed and thoughtful discourse. If *The Modern Language of Architecture* had been put forth in a similar manner, it could have furthered our understanding of the Modern movement and been a lively voice in the current debates. But as it stands, Zevi's latest work brings to mind Walt Kelly's famous words from his comic strip *Pogo*, "We have met the enemy, and he is us!"

Current and choice

Frank Lloyd Wright's Fallingwater: The House and Its History by Donald Hoffmann, with introduction by Edgar Kaufmann, Jr. Dover Publications, NY, 1978, illus., 98 pp. \$5.00.

This carefully researched work is the first book-length study in English on Fallingwater. With a text based on primary sources and on interviews with survivors of the building period, and with illustrations of 100 photographs, drawings, sketches, and plans, Hoffmann shows this landmark structure in all the stages of its creation: from its conception, through its construction, to its finished form.

Decorative Designs of Frank Lloyd Wright by David A. Hanks. Dutton, NY, 1979, illus., 232 pp. \$16.95 cloth, \$9.95 paper.

For the first time, a major study has been written that concentrates on the decorative arts in many of the important buildings Wright designed. The book details, with over 200 illustrations, his constant concern to create a totally cohesive environment for the client, where no detail was overlooked, and where each was designed to contribute to the total aesthetic impact of the individual space or building.

Greene & Greene: Furniture and Related Designs by Randell L. Makinson. Peregrine Smith, Inc., Santa Barbara, 1978, illus., 162 pp. \$27.95.

In this beautifully illustrated and produced book, the exquisite taste and sensitivity of the Greene brothers are revealed through their highly integrated designs for architectural furnishings. Masters of the California crafts tradition, they believed that all elements of a house should be interrelated to complement and harmonize with each other, while adding to and defining the architectural statement.



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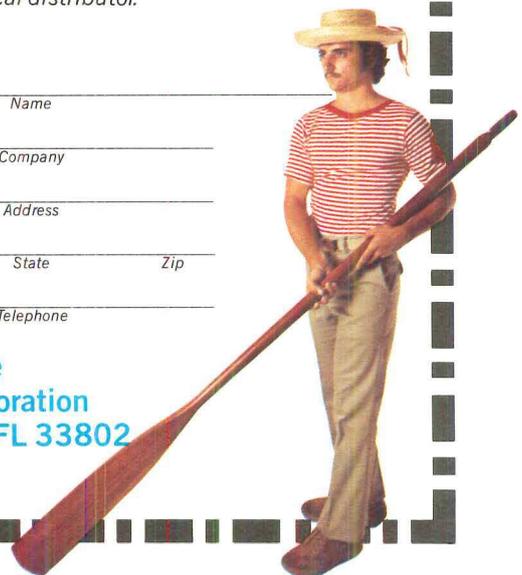
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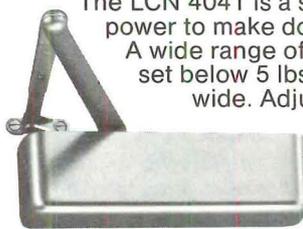
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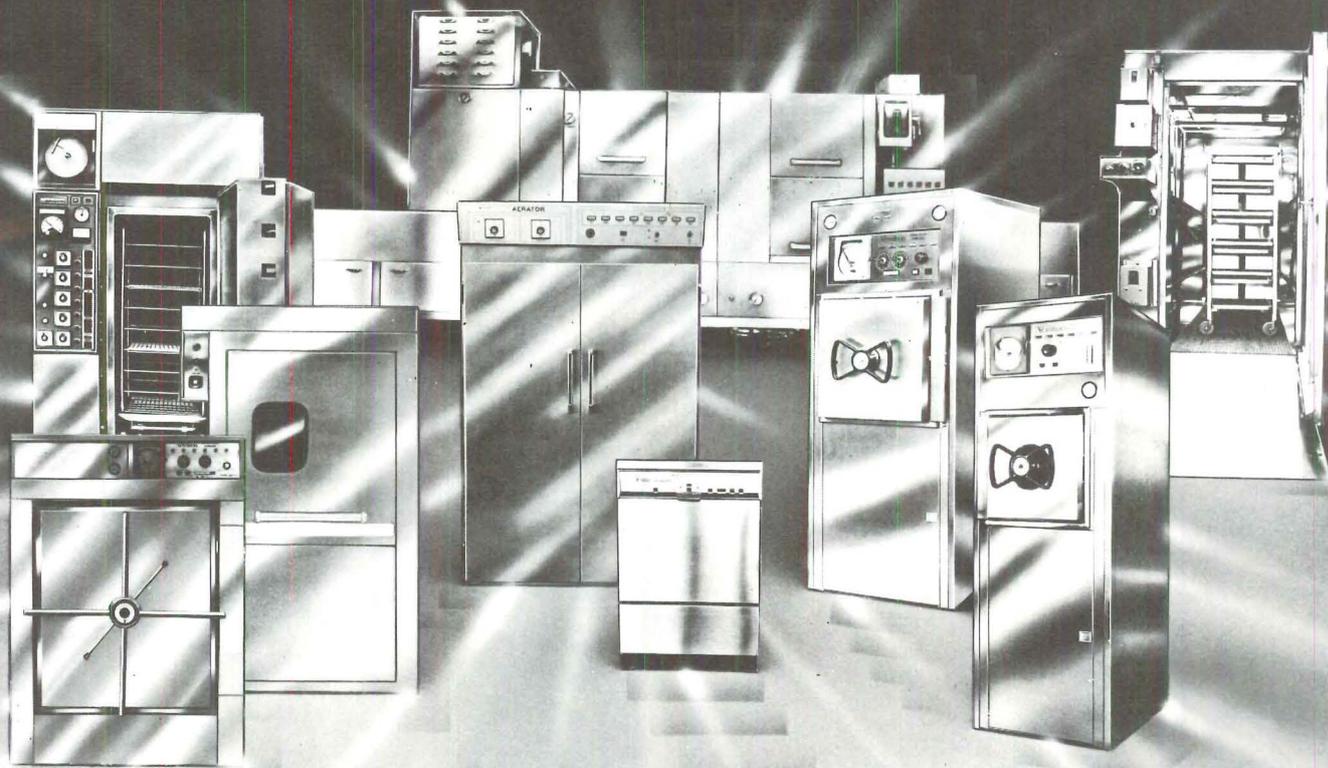
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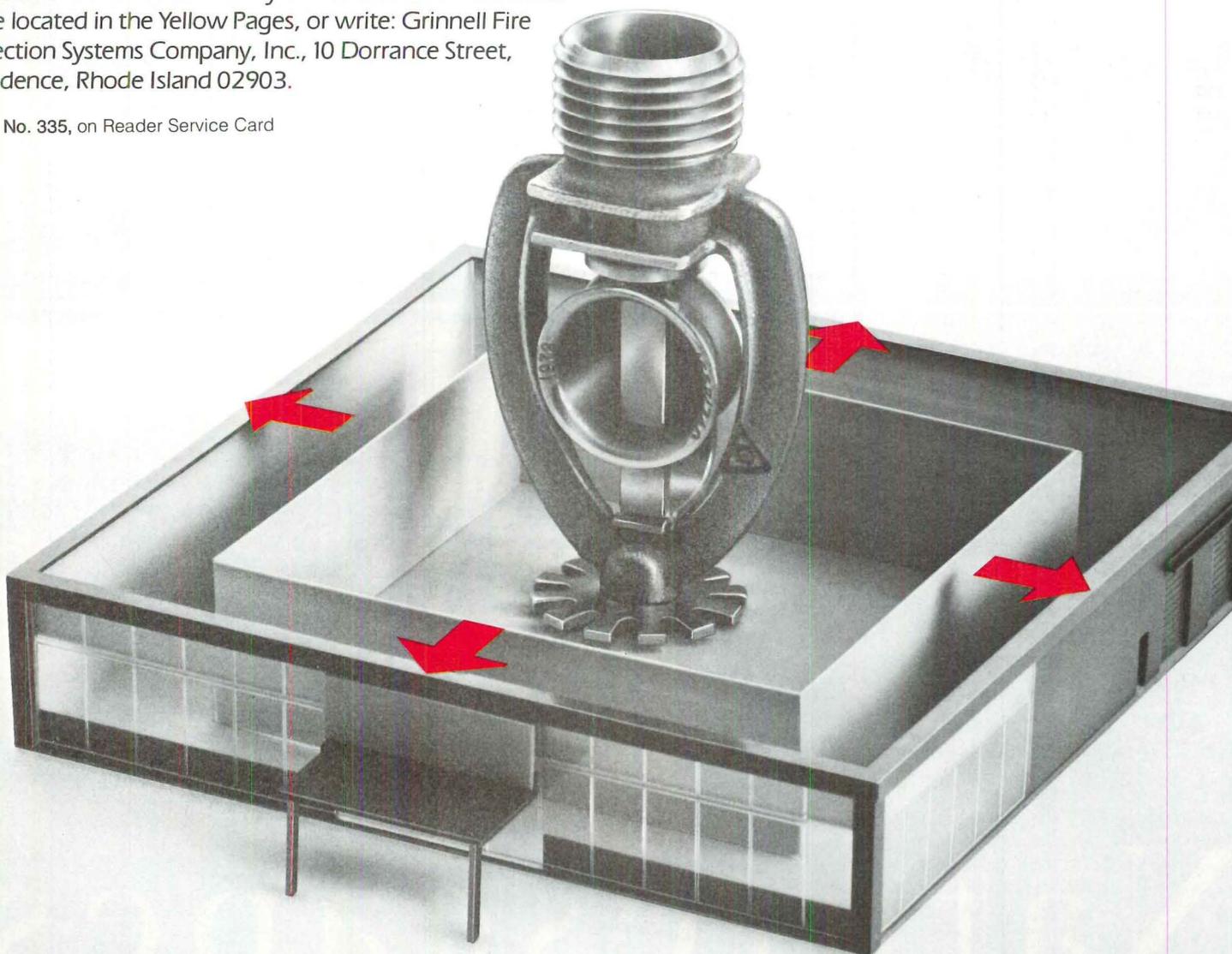
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Products and literature

Resilient flooring

The items below relate specifically to the interior design article on resilient flooring beginning on page 90 of this issue. They are grouped here for the reader's convenience.

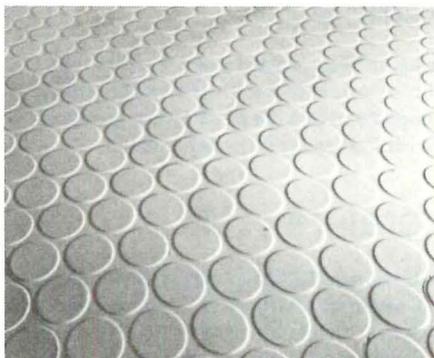
Products

Sports surfaces for indoor and outdoor use include Sportflex® for tennis courts and athletic tracks; Mondoflex® and Cork Rubber® nonslip surfaces for sports halls and gymnasiums; and Indoorflex®, suitable for sports halls, swimming pools, gymnasiums, and community centers. Special Indoorflex surfaces help prevent slips in pool areas. Mondo Rubber Canada, Ltd.
Circle 100 on reader service card

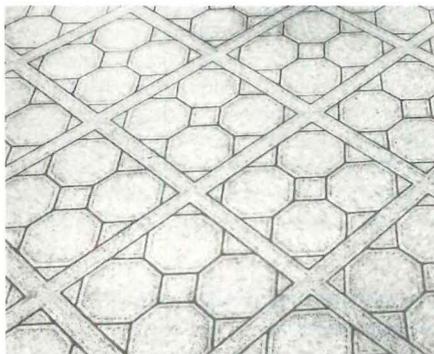
Vinyl composition tile with "Shine Ease" finish is protected from dirt, spills, and stains. The built-in shine makes waxing unnecessary. Tile is .080 in. thick, 12" x 12" square. The group includes Meridian, a stone chip pattern; San Luis, an embossed tile; Los Patios, with octagonal design; and glazed brick. Tiles are either dry back or self-adhering. Azrock Floor Products.
Circle 101 on reader service card

Gafstar 6700 series sheet vinyl flooring has a wear layer that provides stain resistance, a high-gloss, no-wax surface, durability, and resistance to discoloration caused by sun and heat. A foam interlayer provides comfort, warmth, and noise reduction. Patterns include woods, bricks, marble, stones, and painted tiles. All are available in 6-ft and 12-ft widths. GAF Corporation.
Circle 102 on reader service card

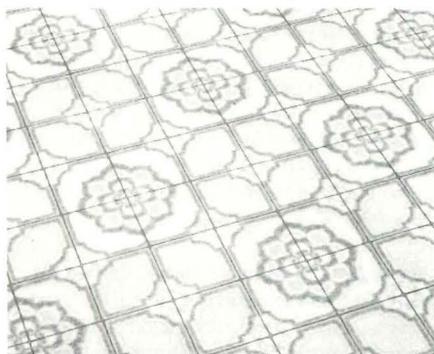
Sandoval commercial vinyl flooring has a small, multiveined chip effect resembling terrazzo. Special adhesives chemically weld the seams to prevent penetration of dirt and moisture. The six colors are white, beige, gray/ivory, rust, orange, and gray/maroon. Armstrong Cork.
Circle 103 on reader service card



Sports surfaces for indoor and outdoor use.



Vinyl composition tile, Los Patios design.



Gafstar 6700 series sheet vinyl flooring.



Sandoval commercial vinyl flooring. Solid vinyl tile in Parquet pattern.



"Parquet" comes in three traditional colors: cherry, walnut, and oak. "Woodhaven," also a parquetry design, comes in cherry, black walnut, and oak. The third design, "Octad," is a quarry-tile look in octagonal design; colors are tan, charcoal, brown, and adobe. All tiles are 12" x 12", 1/8-in. thick. Kentile Floors.

Circle 104 on reader service card

Thermal-molded rubber flooring products include 32 rubber tile colors, 32 cove and carpet base colors, 11 stair tread colors, and 6 colors of Condulite® conductive floor tile. The company also offers custom color service. The products resist abrasion, fire, soiling, static indentation, shrinkage, and color degradation, says manufacturer. Burke Flooring Products.

Circle 105 on reader service card

Safety flooring, called the Altro Safety Floor, combines vinyl with an abrasive for nonslip qualities. It is said to resist many chemicals, as well as abrasion, wear, and thermal conductance. There are nine colors and two strengths, the stronger being suitable for extremely wet and greasy areas. Altro, Ltd.

Circle 106 on reader service card

Reinforced vinyl flooring tile with the look of fine-grained pebbles has soil-hiding properties. Called Rustic Stone, the tile is available in six coordinated colors for the contract market: earthen brown, cocoa, tan, off-white, olive, and multitone. Kentile Floors.

Circle 107 on reader service card

Literature

Flooring products catalog contains full-color illustrations of company's tile colors and patterns in vinyl composition and asphalt tiles, strip, and cove base. Information is provided on sizes, gauges, uses, installation, light reflectance values, and brief specifications. Azrock Floor Products.

Circle 200 on reader service card

Aristocon® stain-resistant flooring has a finish that is said to eliminate the need for waxing. It comes in 6-ft and 12-ft widths in several patterns and colors. An eight-page, full-color brochure illustrates the Aristocon series and shows typical installations. Mannington Mills.

Circle 201 on reader service card

Rubber flooring in several types meets various requirements. Installation procedures, physical properties, and technical data are given for the specific types in an eight-page brochure. Color photos of different areas in which the tile has been used show its application in heavy wear areas. Mondo Rubber Canada, Ltd.

Circle 202 on reader service card

Conductive vinyl flooring is engineered to dissipate static discharges in areas where electronic equipment is manufactured and used. It can be applied to concrete, terrazzo, or ceramic subflooring. It is available in 36" x 36", 12" x 12", or custom sizes. The larger squares can be heat-molded into a curved, flared shape.

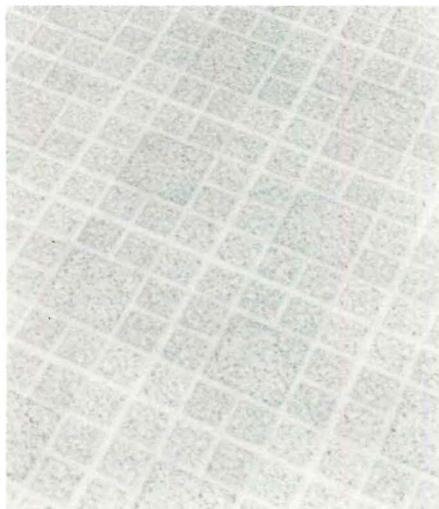
Literature continued from page 117

and installation specifications. VPI.
Circle 203 on reader service card

Resilient Rubber Flooring is a 12-page, four-color brochure that provides information and specifications about Target™ tile and treads. Of flame-retardant synthetic rubber, both have an ASTM-E84 flame-spread rating of 25 or less. A chart shows the range of marbled colors available, and another the resistance to chemicals and spillage. R.C.A. Rubber Co.
Circle 204 on reader service card

Villager™ vinyl flooring resists stains and mildew, and has color integrity, durability, and easy maintenance, according to the manufacturer. Two Villager patterns are Barclay Square®, a natural tile look in six colors, and Fairlawn, in four colors. Both are shown in color in a four-page brochure. Congoleum Corp., Resilient Flooring Div.
Circle 205 on reader service card

Molded rubber stair treads, vinyl treads, landing tile, sheet rubber, and rubber cove base are featured in one section of company's 1979 catalog. Disc-O-Tred safety rubber stair treads are ¼-in. thick in front, tapering to ⅛ in. at rear edge. They are designed to meet ASTM-E84 flame-spread rating of 25 or less, for use in commercial, industrial, and institutional buildings. Other products in the catalog include rubber and vinyl mats and matting; and dock bumpers, impact bumpers, corner guards, wheel chocks, and other special bumpers. The R. C. Musson Rubber Co.
Circle 206 on reader service card



Barclay Square Villager vinyl flooring.

Molded rubber stair treads.



Metrication

The items below relate specifically to the technics article on metrication beginning on page 96 of this issue. They are grouped here for the reader's convenience.

Literature

Metrication in Building Design, Production, and Construction. This is a 188-page compendium of ten papers prepared by Hans J. Milton, technical consultant on metrication and dimensional coordination to the National Bureau of Standards Center for Building Technology. Subject areas include management and economics of metrication; specific product metrication; public construction sector's role in metrication; building standards and codes; graphic design; and US opportunities in metrication. Order NBS SP 530, Stock No. 003-003-01971-2, from the Supt. of Documents, U.S. Government Printing Office, Washington, DC 20402. Price is \$3.75.

Metric Dimensional Coordination—The Issues and Precedent. These edited proceedings summarize a joint conference on metrication and dimensional coordination. Topics in this 77-page report are: Dimensional Coordination—An Industrial Management Tool; Building Standards Development in Sweden and in the Metric Building World; and Metrication—The Opportunity for an Industry-wide System of Dimensional Coordination. Order NBS SP 504, SD Catalog No. C13.10:504, from the Supt. of Documents, U.S. Government Printing Office, Washington, DC 20402. Price is \$2.40.

The Selection of Preferred Metric Values for Design and Construction. Technical Note has three parts: background information on number systems and properties of numbers, metric impact, and alternative conversion strategies; alternative preferred number concepts for individual values, sets of related values, and series of preferred values; and a methodology for the determination and selection of preferred metric values in technical information by means of a manual or an automated approach. For a copy of this 63-page report, NBS Technical Note 990, order SD Stock No. SN003-003-02001-0 from the Supt. of Documents, U.S. Government Printing Office, Washington, DC 20402. Price is \$2.50.

Recommended Practice for the Use of Metric Units in Building Design and Construction.

NBS Technical Note 938 contains a comprehensive set of recommendations for the use of metric units in building design and construction. It includes information about the structure of the International System of Units (SI), rules and recommendations for the presentation of SI units and symbols, and of numerical values associated with SI. Tables show working units, typical application of SI units in building design and construction, and special considerations in the selection and use of SI units in design and construction. Includes conversion factors.

Metric Publications is a 12-page brochure that lists and describes ANMC publications covering a variety of topics concerned with metric usage. Request a copy from the Special Publications Editor, American National Metric Council, 1625 Massachusetts Ave., NW, Washington, DC 20036. A self-addressed, stamped envelope enclosed with your request will speed response.

International Trends and Developments of Importance to the Metrication Plans of the U.S. Construction Community. Report describes the extensive efforts underway to reduce obstacles to trade caused by incompatible national regulations and standards, and changes in the marketplace for building components because of worldwide adoption of 100-mm module as the international standard of dimensioning. Discusses metrication as an issue for the U.S. construction community. Order this 72-page report, SD Stock No. SN003-003-01937-2, at \$2.40 per copy, from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Getting a Better Understanding of the Metric System—Implications if Adopted by the United States. This report to the Congress provides information on metrication and the issues involved. It contains detailed information on the status of voluntary conversion in many sectors, and recommendations to help implement national policy. Single copies are available free; extra copies are \$1 each. Order single copies of CED-78-128 from U.S. General Accounting Office, Distribution Section, Room 1518, 441 G. St. NW, Washington, DC.

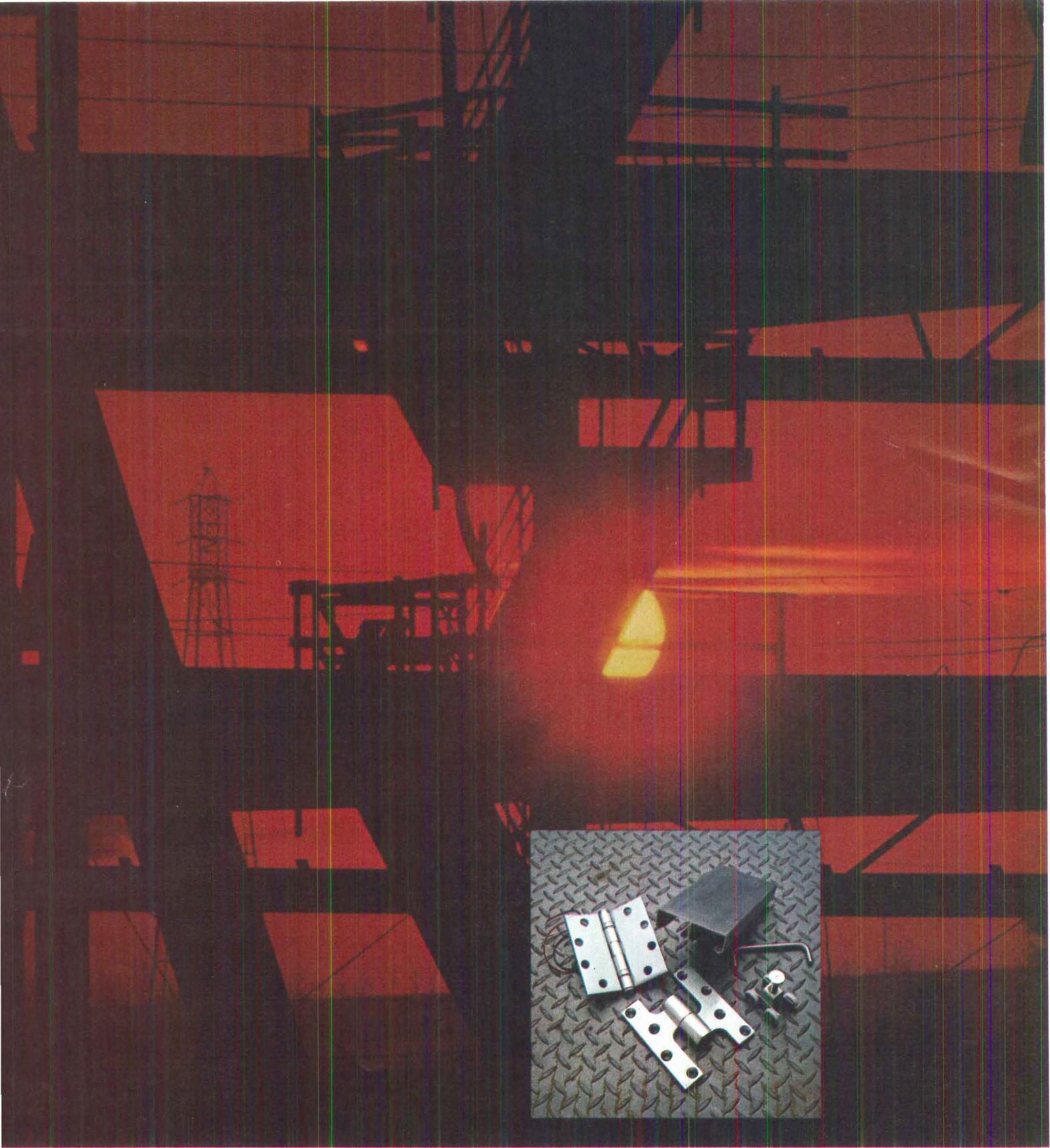
Metrication and Dimensional Coordination—A Selected Bibliography. This is a 32-page guide to the best available sources of information about the use of the international metric system in the construction industry. Order SD Cat. No. C13.10:458, at 75 cents a copy (minimum charge \$1), from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Recommended Practice for the Use of Metric (SI) Units in Building Design and Construction.

Technical Note 938 contains a comprehensive set of recommendations for the use of metric (SI) units in building design and construction. Tables show working units and typical applications for SI units. Conversion factors are provided for the most common units. Order SD Cat. No. C13.46:938, at \$1.60 a copy, from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Other products

A hospital console, accessible to the handicapped, is a full-size recessed unit made from stainless steel. Included are a tilted mirror, paper towel and paper cup dispensers, light switch, electrical outlets, shelf, soap dispenser, and extended lavatory for convenient use by wheelchair patients. Consoles can be installed in 4-in. walls in a rough opening 16 in. wide, 62



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TERNE: FORM, COLOR, FUNCTION.

The W. Alton Jones Cell Science Center is one of the world's great outposts in medicine's life-affirmative and unremitting struggle against disease.

It is altogether appropriate that such an institution should be housed in a superbly designed and superbly sited building. And appropriate, too, that this building should have been roofed with Follansbee Terne.

Among other positive considerations, Terne allowed the roof to become a basic element in the total design concept; it made possible a precise color statement (in this case, the architects used what they have described as an "organic" bronze to harmonize with the Center's Adirondack mountain setting and natural stone facade), and it should provide trouble-free protection for the life of the building, Lake Placid's severe winters and heavy snowfalls notwithstanding.

For Terne's longevity is measured in generations rather than years, and by the standards of those to whom ultimate performance is no less significant than initial cost, a Terne roof is not expensive.

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The W. Alton Jones Cell Science Center, Lake Placid, NY. Owner: The Tissue Culture Association.
Architects: Coquillard, Dolgner, Dundon & Argenta, Southfield, Mich. Roofer: Monahan & Laughlin, Hudson Falls, NY.
Photograph: Bartush Photography/Greg Hursley.

Circle No. 328, on Reader Service Card





Lounge Landscape modular seating.

Lounge Landscape System, designed by Robert Bernard Associates, is fully upholstered modular seating. Various components can be combined to form desired configurations. A high-back version divides space into private conversation areas. Upholstered urethane-filled seats and backs with laminate fiberboard interior frames are seated on a 3-in. wood base. A connector attaches units in any arrangement. Planters and tables have plastic laminate tops. Units disassemble for easy reupholstering. Thonet Industries, Inc.

Circle 109 on reader service card

The Kalahari carpet collection of cut/loop natural wool is increased to five designs with the addition of "Greek Key" and "Cayuga." Greek Key, used primarily as a border design, becomes an overall pattern in this collection. Cayuga resembles patterns used by American Indians of the Southwest. Both come in 12-ft widths. Couristan, Inc.

Circle 110 on reader service card

Lean-To™ is a luminous ceiling with the feeling of a skylight. It spans ceilings 2 ft to 4 ft wide and any length. Lighting is provided by 2-, 3-, or 4-tube fluorescent strips above the ceiling. It can be used for perimeter lighting or general lighting. Integrated Ceilings, Inc.

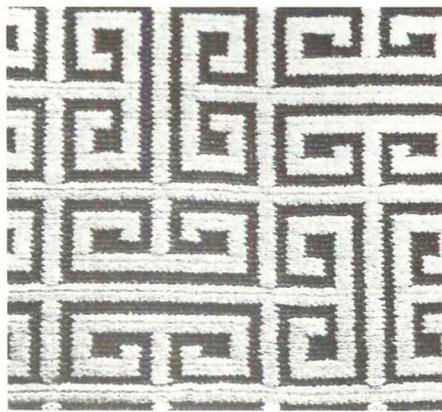
Circle 111 on reader service card

Tough-Coat masonry paint, with solvent- or water-base formulation, can be used indoors or outdoors on all types of masonry surfaces without the need for primers, according to the manufacturer. Its adhesion to concrete, brick, cinder blocks, cement blocks, stucco, stone, ceramic, and asphalt is said to surpass that of conventional products requiring primers, and to be unaffected by temperature fluctuations. The paint is available in standard and custom colors. Z. Z. Industries.

Circle 112 on reader service card

Renovator/Hi-Hat conversion unit converts the standard Hi-Hat recessed downlight fixture to an adjustable accent light. It screws directly into the Hi-Hat socket by means of an 8-in. or 12-in. stem. A 9-in. diameter plate slides up the stem to neatly cover the ceiling opening. Black, white, and bronze paint finishes, as well as mirror polished and brushed aluminum, are available. There is a range of fixture styles to suit specific installations. Lighting Services, Inc.

Circle 113 on reader service card



The Kalahari carpet, Greek Key design.

Plastic laminates added to the Micarta line include three Linagrains, seven woodgrains, two solid colors (Colorado Adobe and French Cream), two burlap patterns, and slate. The laminate, which comes in standard sizes, is a durable, easy-to-clean surface for uses ranging from kitchen countertops to office walls. Westinghouse Electric Corp., Decorative Micarta.

Circle 114 on reader service card

Extra Duty Nomad Surfacing, in a grease-resistant formulation, is suitable for commercial buildings, both inside and outside. The vinyl, of nonwoven continuous filament construction, withstands extreme temperatures and weather variation. Dirt and water pass through the open construction, maintaining a neat appearance. The area underneath can be swept or hosed out. Mats are 4' x 6' or 4 ft wide and up to 20 ft long. Mats also come in rolls 3' x 20' and 4' x 20'. 3M Company.

Circle 115 on reader service card

Planters in the 700 series are made from oak or teak bonded to structural fiberglass. The rims are similar in color to dark bronze anodized aluminum. The planters can be used for any interior architectural spaces such as lobbies, shopping malls, offices, and stores. Forms & Surfaces.

Circle 116 on reader service card

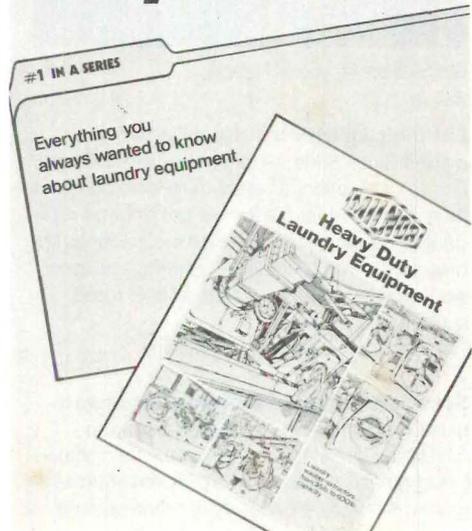
Model 402 Bacteria-Controlled Nursing Unit isolates patients from the surrounding area. It can be used for those who have infectious diseases, or for patients requiring protection. Optional features include temperature and humidity controls. The unit has all mechanical and electrical components: medical gas and suction outlets, filters, blower/motor assembly, electrical outlets, insulation, air return plenum, track lighting, plastic film access curtains, frame, and track. Sci-Med Environmental Systems.

Circle 117 on reader service card

Tracemaster 600 tracing tables offer ample leg room and access to the entire working surface of the light box. Heat is diffused to make the surface cool, and illumination is even. Chromium-plated arms adjust the box from flat to a 42-degree angle, or the box can be removed from the base for use on a desk or other work surface. There are two sizes: 26" x 36" and 36" x 48" glass area. Stacor Corp.

Circle 118 on reader service card
[Products continued on page 124]

Who offers architects the widest range of laundry washing systems?



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With capacities ranging from 35 pounds to 600 pounds, MILNOR® manufactures laundry washer-extractors in 32 different models with 11 different weight capacities. MILNOR has laundry systems for every type of facility... from schools, hotels, factories and nursing homes, to prisons, hospitals and commercial laundries. So, if your next project includes a laundry, check with MILNOR.

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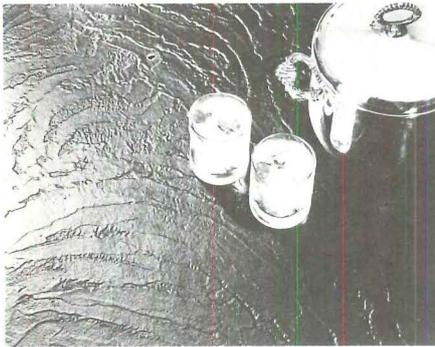


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Circle No. 358, on Reader Service Card



Black Slate laminated plastic.

Laminated plastic that is postformable includes Black Slate, a pattern from the Design Group I collection. Its easy-care, durable surface makes it suitable for wet bar or other residential, office, or commercial applications. The group includes 108 solids, patterns, designs, woodgrains, marbles, slates, and textured leathers. Wilsonart.

Circle 119 on reader service card

System 55 modular laboratory furniture includes benches, under- and overcounter casework, sinks, faucets, and service modules. Designed to interface with Forma environmental rooms, the units are quickly and conveniently

installed. Their modular design permits planning flexibility. Forma Scientific, Div. of Mal-linckrodt, Inc.

Circle 120 on reader service card

Vinyl wallcovering in a deeply textured pattern called "Jarvis" has been added to the Vicrtex® series. It resists stains, soil, and mildew, and is said to be virtually impervious to scuffs and tears. The material is 54 in. wide and comes in 21 colors. L. E. Carpenter & Company.

Circle 121 on reader service card

Other literature

Pedestrian traffic control systems such as turnstiles and components, posts and railings, gates, door guards, grilles, freestanding ropes and accessories are included in a 16-page brochure. Diagrams show construction details and dimensions. Products shown are suitable for stores, industry, amusement centers, institutions, and public facilities. Alvarado Manufacturing Co.

Circle 207 on reader service card

Door control hardware catalog for 1979 is an updated edition showing the company's complete line of door closers. Included are surface closers, floor closers, and overhead closers, as well as fire/life safety detection and control equipment. Rixson-Firemark Inc.

Circle 208 on reader service card

Mars-700 technical pen, pen sets, points, inks, and accessories are described in a six-page folder. An enlarged cross-section diagram illustrates features of the pen. For use on abrasive film, Duranite tungsten carbide points and Duraglide jewel points are available. J. S. Staedtler, Inc.

Circle 209 on reader service card

Vertically pivoted windows are described and illustrated in a four-page brochure. Windows lock in reverse position for economical washing from the inside and for added safety. Drawings show optional hardware to limit width of opening for ventilation without the hazard of fully opened windows. Kawneer.

Circle 210 on reader service card

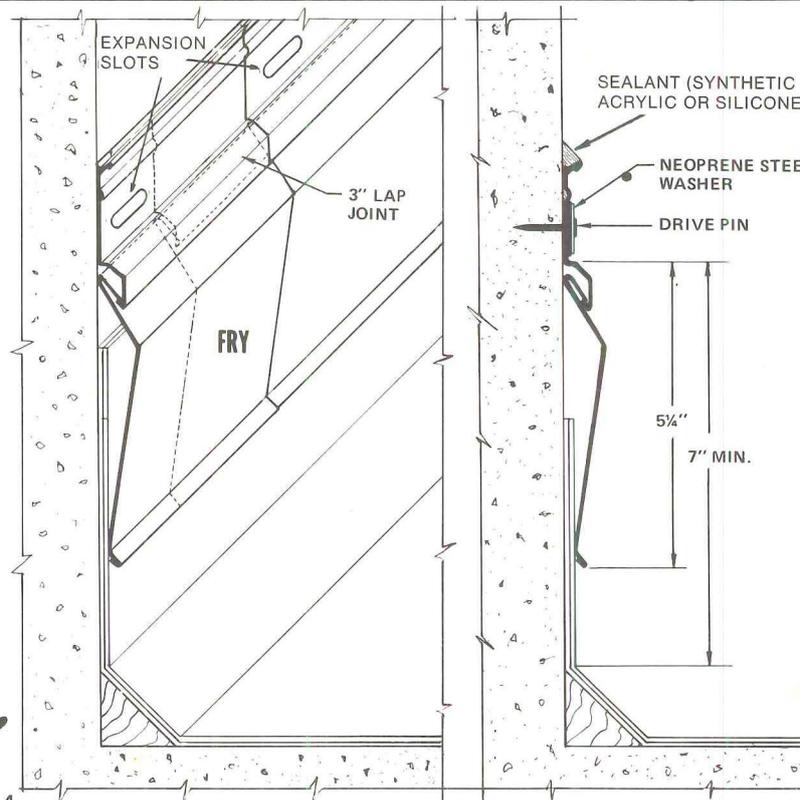
Carpet fibers of Ultron nylon include staple and continuous filament yarns. Carpets manufactured of these fibers are said to offer excellent static protection, reduced soiling, and retention of appearance. Reference table outlines the general properties of Ultron staple and BFC yarn and carpets made from each. Also included is information about processing, dyeing, and finishing, as well as packaging information. A bibliography of additional literature and data about companion yarns are also offered. Request a copy of Tech-Talk 72 on your professional letterhead from Monsanto Textiles Co., Technical Publications Dept., P.O. Box 2204, Decatur, Al 35602.

[Literature continued on page 126]

ESTIMATED LABOR SAVINGS TO 25% ...with Fry's Improved "Expan-O-Seal" Flashing System (Surface Mounted).

- Just one contractor installs **both** reglet and flashing at one time, instead of two different trades, at two different times.
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- Versatile! Can be used on brick, block, stone, concrete. Prefab corners also available.
- No painting or maintenance if Epox-E-Koted Aluminum, Titanaloy, Copper or Stainless Steel are specified.

Samples and literature sent on request.



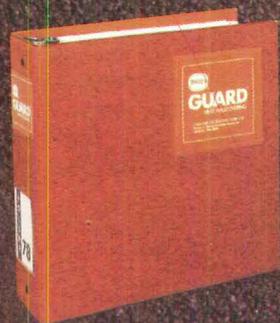
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GUARD[®]
VINYL WALLCOVERING

Circle No. 316, on Reader Service Card



Plywood paneling in hardwood veneers.

Plywood paneling in a choice of 12 hardwood veneers is covered in an eight-page brochure. Several typical installations show, in color, the variety of woods offered. Data given include materials, dimensions, durability, and cleanability. Champion Building Products.

Circle 211 on reader service card

Acrovyn® protection systems catalog offers corner, wall, and door protection products that



Acrovyn wall protection system.

absorb the impact of linen carts, push carts, and similar equipment. The material is vinyl/acrylic, which the company says resists marring, stains, and chemicals and is not damaged by commercial solvents and cleaners. The catalog supplies product information, typical job details, product and application photos, suggested specifications, and a color chart.

Circle 212 on reader service card

Chalkboards, tackboards, display cases, and similar products are described and illustrated in color in this 38-page catalog. Chalkboards are porcelain-enameled steel in a choice of colors. According to the company, they will retain their writing and erasing quality for a period of 50 years. Detail drawings show installation methods and trim styles. Suggested specifications are included. Greensteel, Inc.

Circle 213 on reader service card

Pneumatic transport systems that handle trash and soiled linen in hospitals, hotels, institutions, and other densely populated buildings are described in this four-page brochure, along with diagrams of a typical installation. Special features of the system are explained and shown in captioned photos. Loading stations on each floor permit prompt removal of soiled linen and trash, relieving congestion at doorways and elevators. According to the company, the system operates at considerable cost saving over manual cart removal. Trans-Vac Systems.

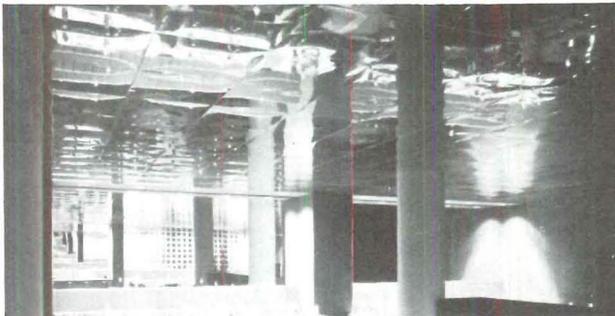
Circle 214 on reader service card

Lighting fixtures for specific tasks include fluorescent, incandescent, high-intensity Halogen, and miniature high-intensity lamps. There are desk, bracket base, pedestal, and floor models. Catalog 80 describes and illustrates the 88 models in 16 pages. Dazor Manufacturing Corp.

Circle 215 on reader service card
[Literature continued on page 128]

SPECULAR TILE "Living" Ceiling

HIGHLY POLISHED FLUSH ALUMINUM PANELS HUNG FROM SNAP-IN OR LAY-IN SUSPENSION SYSTEM



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UNPERFORATED FOR UTMOST REFLECTING QUALITIES OR PERFORATED FOR ACOUSTICAL CORRECTION Available in gold or silver

Dramatizes Your Lighting Effects

For sizes, finishes or prices, call or write

SIMPLEX CEILING CORP. Refer to SWEET'S CATALOG Section 9.1

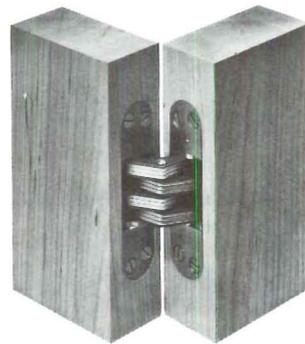
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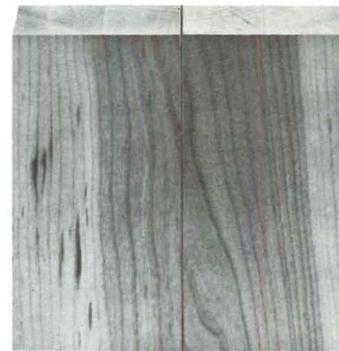
Reflects with Mirror-Like Quality

- Lively dramatic ceiling and wall treatment.
 - Mirrors your merchandise, fixtures and features.
 - Creates illusion of spaciousness without adding an extra inch.
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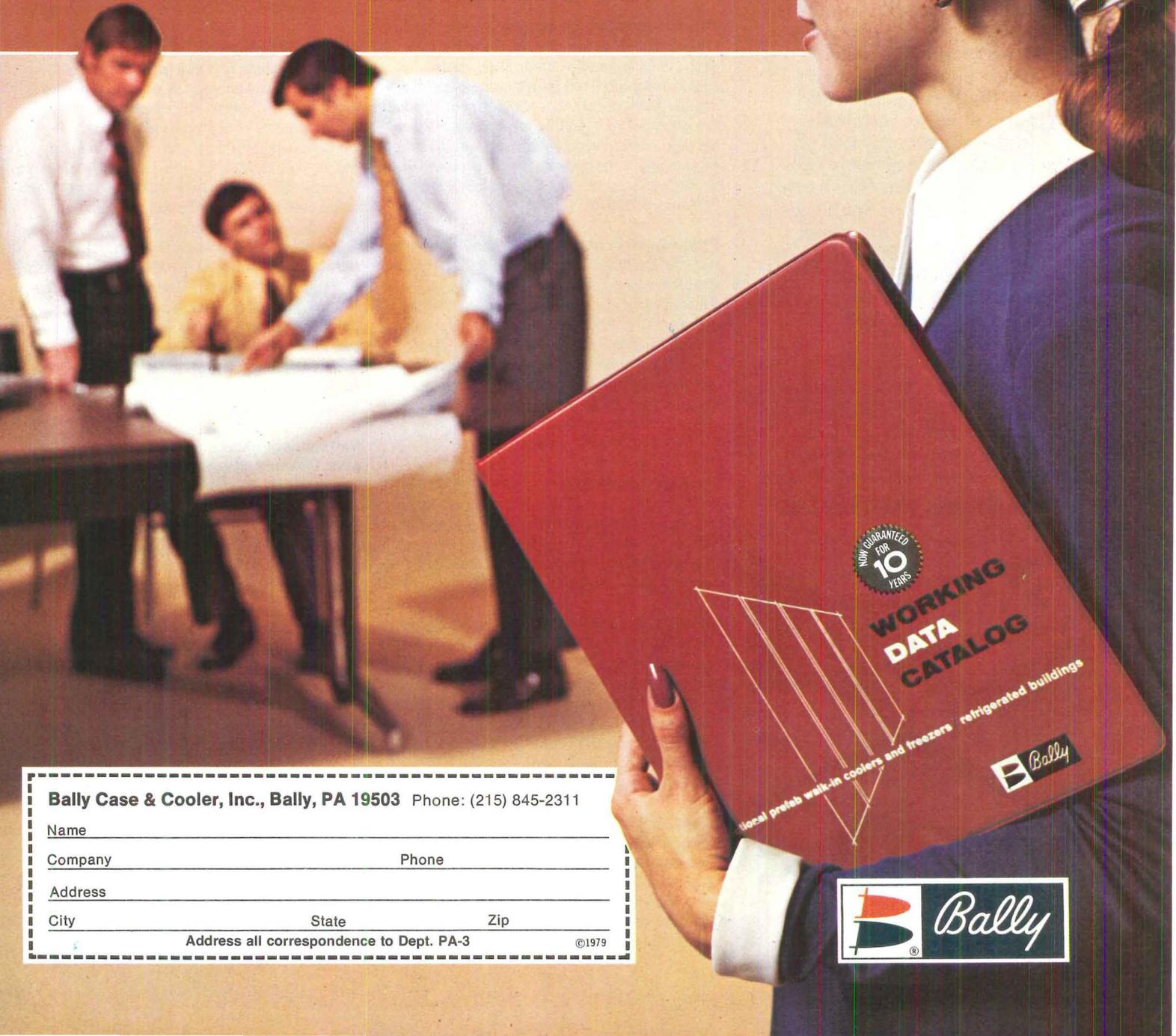
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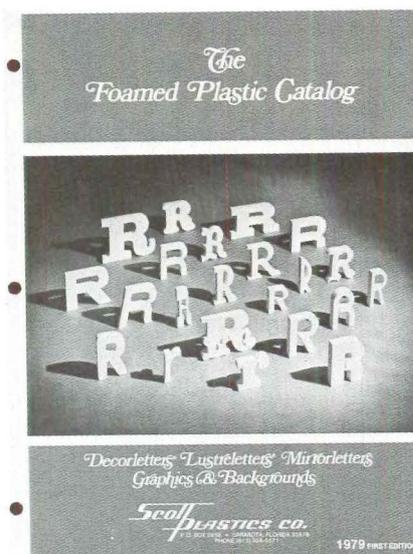
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Literature continued from page 126



Lettering catalogs for 1979.

Three 1979 lettering catalogs include: Plastic Letters, Numerals and Sprues; Foamed Plastics; and Changeable Letters. The letters, shown in a total of 102 pages, can be used for display, point of purchase, department, product identification, and directional and informational signage. Various type styles are offered. For a copy of any of the three catalogs, write to: David B. Gibson, Scott Plastics Co., P.O. Box 2958, Sarasota, FL 33578.

Products for controlling noisy environments in public buildings and offices, dampening and reducing equipment noise, conducting audiological testing, and similar applications are detailed in the 1979 condensed catalog "Noise Control." Booths, panels, and materials are covered in this catalog, with data sheet numbers included for those who want additional information about products listed. Eckel Industries, Inc., Eckoustic Div.

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"Glass for Construction" is a 28-page booklet with full-color photographs of glass product applications found in architectural projects across the country. Request copies from Libbey-Owens-Ford Co., Merchandising Dept., 811 Madison Ave., Toledo, Oh 43695.

A guide to the care of vinyl wallcovering includes general cleaning and special maintenance procedures. The bulletin was prepared courtesy of member companies of the Chemical Fabrics and Film Association. Guides are 50 cents each for 1-99 copies, 25 cents each for 100-499 copies. Write to Ed Gips, American Society of Interior Designers, 730 Fifth Ave., New York, NY 10019.

Buyers Guide for Chairs, newly revised, describes to buyers of commercial furniture how to test chairs for six essential features: durability, cost, comfort, appearance, space savings, and safety. Fixtures Manufacturing Corp.

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Progressive Architecture

Building materials

Major materials suppliers for buildings that are featured this month as they were furnished to P/A by the architects.

Monastery of St. Clare, Langhorne, Pa (p. 64).

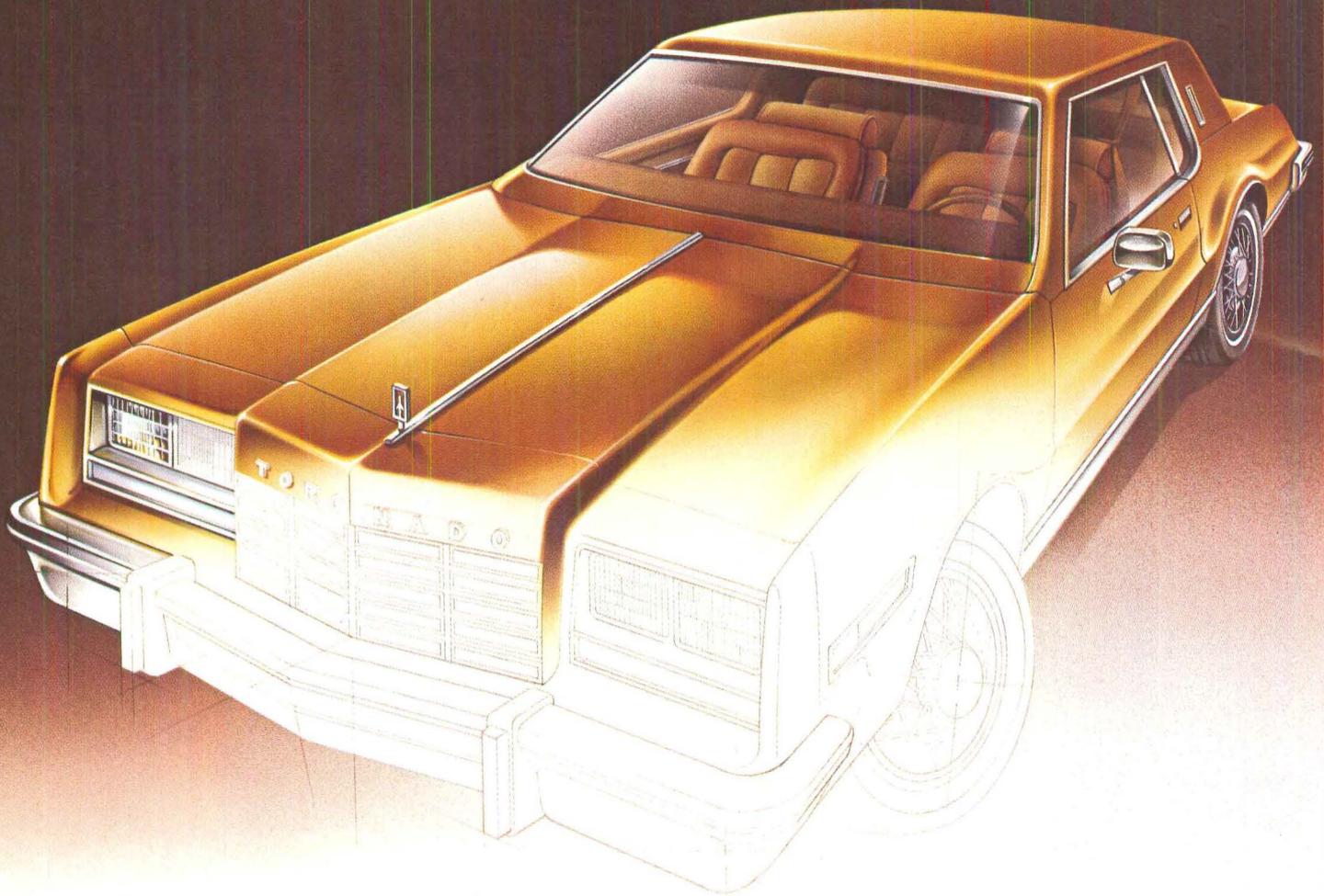
Architects: Dagit/Saylor, Philadelphia. Polished concrete block, cove base: Diener Brick. Concrete plank: Formigli Precast. Carpet: Lees. Built-up roofing, insulation: Celotex. Aluminum-clad wood windows: Pella Window Co. Oak interior doors: U.S. Plywood. Hardware: Schlage. Paint and stain: Finnaren, Haley Super Colors. Kitchen and laundry equipment: Sears. Light fixtures: Lightolier. Plumbing and sanitary: American Standard. Air-conditioning units: Fedders.

Pavillon Soixante-Dix, St. Sauveur des Monts, Québec, Canada (p. 70).

Architects: Peter D. Rose, Montreal, Québec. Laminated wood trusses: Lamco. Structural steel: A.A.L. Metal, Inc. Prefabricated nailed wood roof trusses: Arbour et Vidal, Inc. Floor surfacing: Mondo Rubber Canada Ltd. Carpet tiles: Heuga Canada Ltd. Steel roofing: Vic-Metal Corp. Clad wood casement and fixed windows, sliding glass doors: Pella Québec Ltee. Metal entrance doors: Kawneer Company Canada Ltd. Door hardware: Sargent and Company (Canada) Ltd. Belt conveyor: Mathews Conveyor Ltd. Lighting fixtures: Lightolier Canada Ltd.; Appleton Inc. Infra-Red heaters: Canadian Chromalox Co. Ltd. Plumbing fixtures: Crane Canada Ltd. Dry-pipe sprinkler system: General Sprinklers Co. Ltd. Lightning protection: Montreal Lightning Rods.

Hall Mercer Children's Center, McLean Hospital, Belmont, Ma (p. 76).

Architects: Perry, Dean, Stahl & Rogers, Boston. Reinforced concrete: Dragon II Cement. Reinforced two-way slab structure: Northern Steel. Quarry tile: Harvard Floor Craft. Carpet: Murray. Built-up roofing: Philip Carey Systems. Continuous vaulted and circular dome skylights: Naturalite, Inc. Fisco board insulation: Johns-Manville. Roof drainage: Josan. Philippine mahogany windows: Albany Milling. Framer glazing compound and tape: Tremco. Red-oak doors: Albany Milling. Rolling shutters: Cornell. Toilet compartments: Weis. Hardware: Corbin, Rixon, Stanley. Interior wall paint: Benjamin Moore. Equipment & services: AMF, Casson Corp., General Electric, Kelvinator, Kock, Ross-Temp. Kitchen equipment: Westinghouse. Elevators: Beckwith Elevator Corp. Electrical distribution: Empire Electric Products. Toilets: American Standard. Dispensers, receptacles: Bradley Washfontain Co. Mechanical system: Titus Mfg.; grilles. Buffalo Forge: AC units. Powers: temperature controls. Armstrong Machine Works: Humidifier.



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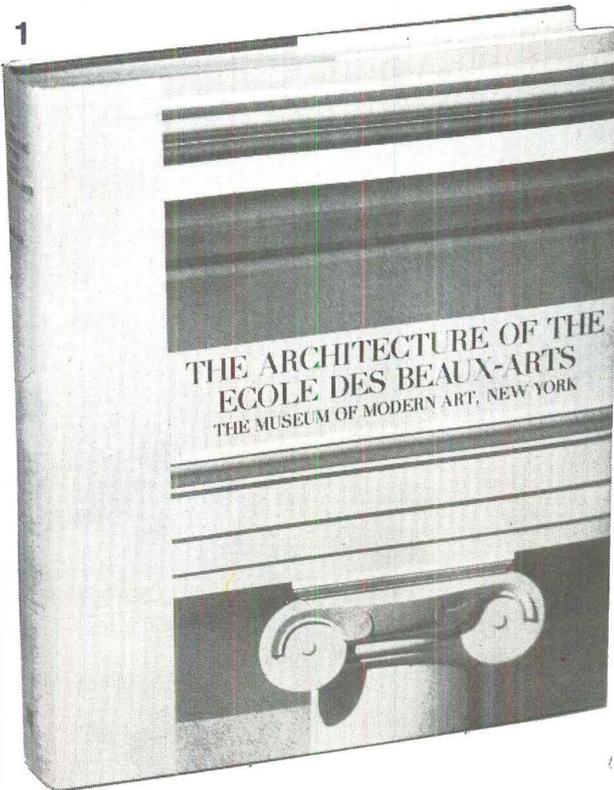
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A limited supply of the following issues of P/A are available at \$5.00 per Copy:

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1 The Architecture of the Ecole des Beaux-Arts
Edited by Arthur Drexler with essays by Richard Chafee, David Van Zanten, Neil Levine and Arthur Drexler
423 pp., illus. . . . \$45.00

The most comprehensive analysis and documentation of Beaux-Arts architecture ever published. Includes large-scale drawings of elevations and plans and photographs of major French and American Beaux-Arts buildings (including Pennsylvania Station and Grand Central Terminal).
Circle B601 under Books.

2 Alvar Aalto and the International Style
By Paul David Pearson,
240 pp., illus. . . . \$27.50

Although Aalto's heritage is being carried on by those he worked with and personally influenced, he left no written legacy of his design philosophy. This timely critical study fills that void by analyzing his personal form of expression as the last great leader of 20th century architecture.
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NEW★
3 The Federal Presence Architecture, Politics & Symbols in U.S. Government Building

By Lois Craig & the Staff of the Federal Architecture Project
580 pp., illus. . . . \$37.50
This profusely illustrated reference is not only a major pictorial resource for the architectural historian, but a sort of American album, a scrapbook of a special aspect of our cultural history. Includes an extensive bibliography of pictorial and written sources.
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4 The Autonomous House
By Brenda and Robert Vale,
224 pp., illus. . . . \$10.00

Two architects offer practical solutions to the design of a house that

operates independently within its environment. This "Autonomous House" is not linked to utility lines for gas, electricity, water, or drainage; but instead uses the energy of sun, wind and rain to service itself and process its waste.
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5 Architectural Rendering: The Techniques of Contemporary Presentation
By Albert O. Halse, 326 pp., illus., 2nd edition, 1972 . . . \$29.00

This completely up-dated revision of the most widely used guide to architectural rendering covers all working phases from pencil strokes to finished product — and shows how to obtain the desired mood, perspective, light and color effects, select proper equipment and work in different media.
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NEW★
6 Structure in Nature Is a Strategy for Design

By Peter Pearce,
245 pp., illus. . . . \$45.00
An innovative and completely illustrated approach to architectural and environmental design, based on a study of responsive and adaptive structures in nature (molecules, crystals, living cells) that conserve energy and materials.
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7 Tourism and Recreation Development: A Handbook of Physical Planning

By Fred Lawson & Manuel Baud-Bovy,
220 pp., illus. . . . \$39.95
This comprehensive book sets out step-by-step planning techniques for tourist resorts and recreational parks,

from the national down to the local. Practical measures are included for conservation and for modern developments.
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NEW★
8 Precast Concrete in Architecture

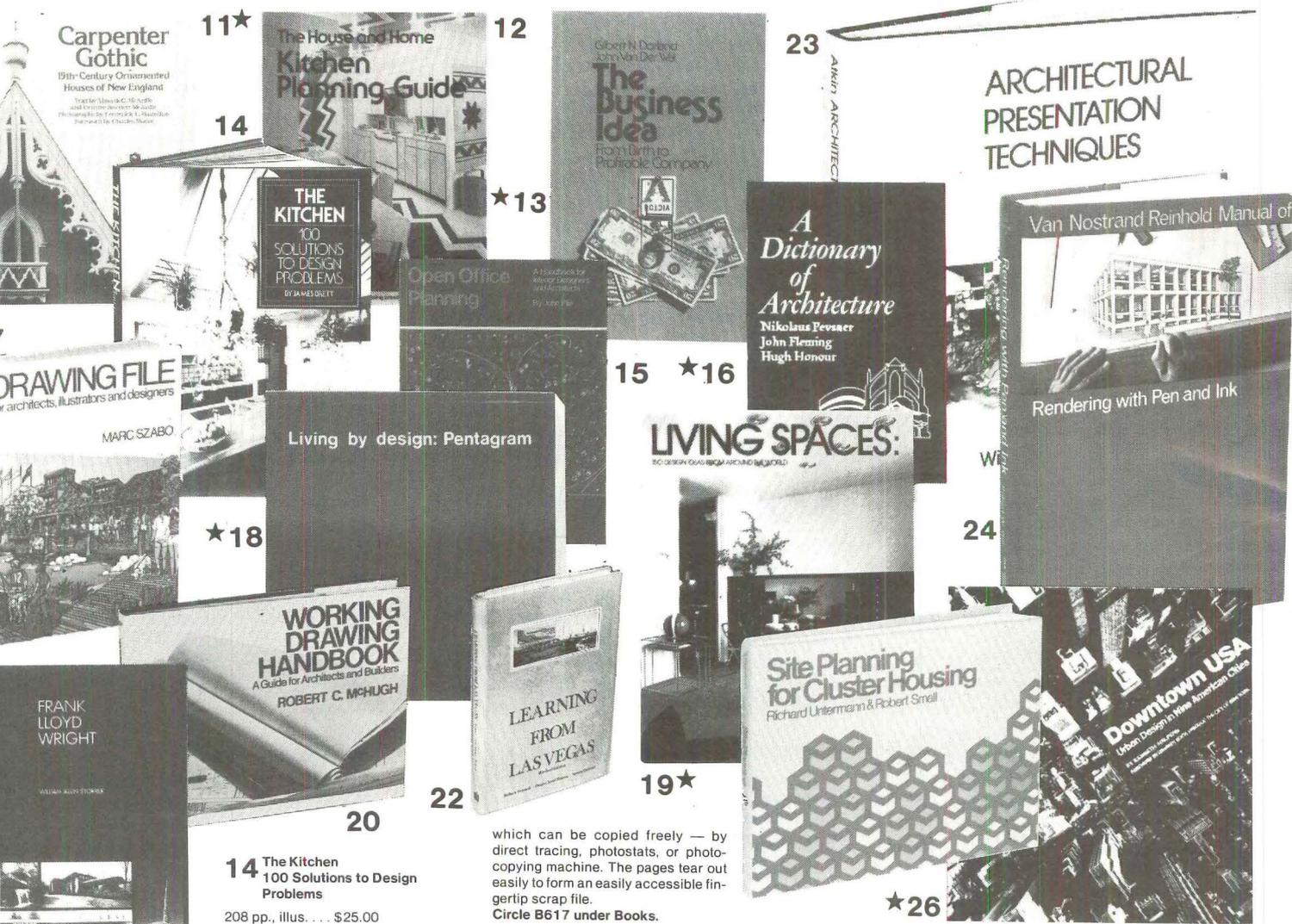
By A. E. M. Morris,
584 pp., illus. . . . \$42.50
This profusely illustrated book covers the development of the architecture of precast concrete for industrial buildings (rather than the re-discovery of concrete from the early 19th Century to the present day).
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9 Graphic Standards of Solar Energy
By Spruille Braden,
224 pp., illus., \$19.95

A timely design reference guide for those involved in the structure of our environment. The author's energy-conscious design includes mechanical systems for commercial and residential buildings, providing quick and efficient evaluation of data from design and working drawings.
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10 Water in Landscape Architecture

By Craig S. Campbell
128 pp., illus. . . . \$15.95
This profusely illustrated book is the first published work that deals with substantial detail with the technical as well as the aesthetic principles of fountain design. Covers basic hydraulic principles, practical applications, environment and equipment.
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Carpenter Gothic
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 Text by Steven G. Murrill and Edward Douthett. Photos by Robert W. Gill. Foreword by Charles Moore.

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The House and Home Kitchen Planning Guide
 By Robert C. McHugh.

13★
The Business Idea
 From Birth to Profitable Company
 By Robert C. McHugh.

23
ARCHITECTURAL PRESENTATION TECHNIQUES
 By William W. Atkin.

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THE KITCHEN
 100 SOLUTIONS TO DESIGN PROBLEMS
 BY JAMES DEIT

15
Open Office Planning
 A Handbook for Interior Designers and Architects
 By John Pile.

16★
A Dictionary of Architecture
 Nikolaus Pevsner
 John Fleming
 Hugh Honour

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Rendering with Pen and Ink
 Van Nostrand Reinhold Manual of Architecture with Examples of Artistic Rendering.

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Living by design: Pentagram
 By the Partners of Pentagram.

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 150 DESIGN IDEAS FROM AROUND THE WORLD
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 By Robert Venturi, Denise Scott Brown, and Steven Izenour.

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Living Spaces:
 150 Designs from Around the World
 Edited by Franco Magnani, Translated by Bobbi Mitchell, 120 pp., illus. . . . \$22.50

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 By Robert W. Gill, 368 pp., illus., . . . \$8.50

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The Kitchen
 100 Solutions to Design Problems
 208 pp., illus. . . . \$25.00

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 A Handbook for Interior Designers and Architects
 By John Pile, 208 pp., illus. . . . \$15.95

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Drawing File for Architects, Illustrators and Designers
 By Marc Szabo, 251 pp., illus., . . . \$13.95

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Drawing File for Architects, Illustrators and Designers
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Working Drawing Handbook
 A Guide for Architects & Builders
 By Robert C. McHugh, 166 pp., . . . \$13.95

26★
Downtown USA
 Urban Design in Nine American Cities
 By Kennerh Halpern, Forward by Edward Koch, Mayor of the City of New York, 256 pp., illus. . . . \$27.50

Whether its style is contemporary, colonial or country, today's kitchen must be designed to function as a convenient, congenial living center. This collection of 100 successful ways to design kitchen spaces explains the particular design problem for each kitchen area and illustrates the solution with superb photographs. **Circle B614 under Books.**

Presents a systematic approach that requires the use of specific methodology in organizing the physical layout of an open office with the primary purpose of facilitating communication among the staff. **Circle B615 under Books.**

This valuable reference book is a truly comprehensive dictionary that brilliantly describes, catalogs and explicates the history and development of architecture from prehistoric tombs to modern skyscrapers. Includes 2400 entries with over 1,000 illustrations. **Circle B616 under Books.**

This book provides over 200 pages of figures — in the most common and natural positions, activities, and types of wearing apparel, as well as dozens of drawings of boats and cars, all of

which can be copied freely — by direct tracing, photostats, or photocopying machine. The pages tear out easily to form an easily accessible fingertip scrap file. **Circle B617 under Books.**

NEW★
18 Living by Design
 By the Partners of Pentagram, 300 pp., illus. . . . \$15.00
 Introduction: Using Design is by Peter Gourd. This informative book on the use of design covers product design, environment design, identity design, interior design, graphic design, living by design, exhibition design. (Soft bound) **Circle B618 under Books.**

NEW★
19 Living Spaces:
 150 Designs from Around the World
 Edited by Franco Magnani, Translated by Bobbi Mitchell, 120 pp., illus. . . . \$22.50
 This magnificent book provides a wealth of imaginative and practical ideas for homeplanning and decoration for people confronted with the problems of confined living space and the resulting tensions which are often exacerbated by noise and pollution. The superb full-color photographs demonstrate interiors to satisfy aesthetic as well as practical needs. **Circle B619 under Books.**

This guide is a step-by-step presentation on how to produce working drawings as an integral aspect of communication between designer and builder. Includes convenient check-lists, budgeting information, and data on dimensioning that helps minimize chances of errors. **Circle B620 under Books.**

NEW★
21 The Architecture of Frank Lloyd Wright
 A Complete Catalog
 Second Edition
 By William Allin Storrer, 456 pp., illus. . . . \$15.00
 This second edition, which documents all of the buildings designed by Wright, replaced a number of photographs with new ones that show the buildings to better effect, changed some copy in the text, and incorporated factual information that has come to light since the original publication in 1974. **Circle B621 under Books.**

22 Learning from Las Vegas
 The Forgotten Symbolism of Architectural Form
 Revised Edition
 By Robert Venturi, Denise Scott Brown and Steven Izenour, 244 pp., illus. . . . \$17.50
 Includes the full texts of Part I of the original, on the Las Vegas Strip, and Part II, "Ugly and Ordinary Architecture, or the Decorated Shed". This book created a storm of controversy in its original edition, calling on architects of be more receptive to the tastes of common people. **Circle B622 under Books.**

23 Architectural Presentation Techniques
 By William W. Atkin, 196 pp., illus., . . . \$16.95
 This book includes presentations ranging from simple sketches in pencil and pen-and-ink to elaborate drawings, photographs, slide presentations and various combinations of media achieved with overlays, camera techniques and modern reproduction methods. **Circle B623 under Books.**

This paper-back edition is a copiously illustrated guide to the techniques and methods of rendering, including sections on perspective, projection, shadow, reflections, and how to draw cars, ships, aircraft, trees, and human figures. The author also describes the very wide range of instruments and equipment currently in use. **Circle B624 under Books.**

An invaluable guide to planning low-rise, medium-density cluster housing environments. Also covers jurisdictional and technical considerations of site planning, and includes more than 600 drawings and photos that illustrate design principles and techniques. **Circle B625 under Books.**

The author, newly appointed Director of the Mayor's Office of Midtown Planning & Development in New York City, shows the different approaches taken, or deliberately not taken, to give a sense of order to the unpredictable, constantly changing organism of the City. **Circle B626 under Books.**

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Design Studio and Theory: (Full or associate professor). Environmental Control and Design Studio (associate or assistant professor). For application and further information: G. Anselevicius, Chairman, Architecture Department, Hayes Hall, State University of New York, Buffalo, NY 14214. SUNYAB is an Affirmative Action, Equal Opportunity Employer.

Director: Architecture Program, School of Design, N.C. State University is seeking candidates for position of Director. Involves administration, teaching and curriculum development in undergraduate and graduate professional programs, beginning July 1, 1979. Rank and salary negotiable. Send resumes to Vernon Shogren, Chairman, Search Committee, Architecture Program, School of Design, P.O. Box 5398, Raleigh, NC 27650. An Equal Opportunity Employer.

Faculty: Tennessee, Knoxville 37916. University of Tennessee, Architecture. Faculty position, full-time for area of Architectural structures. Graduate degree in Architecture or Engineering necessary. Applicants with industrial experience and professional engineer's license preferred. Involves teaching at all levels within undergraduate program. Rank, salary commensurate with experience. September, 1979. Send vita. EOE/AA Apply: Dean Hanson.

Faculty: The School of Architecture and Urban Planning at UCLA is seeking candidates for teaching positions in the following fields: Environmental Controls, Person/Environment Relations, Architectural History, and Design. Candidates should also be prepared to assume responsibilities in administrative areas and to conduct research or actively engage in practice. Appointments will normally be made at the level of Assistant Professor, but senior appointments will be considered where appropriate. Previous professional practice, research, and teaching experience will be taken into consideration. Candidates should apply to the Staffing Committee, Architecture/Urban Design, UCLA, 405 Hilgard Avenue, Los Angeles, California 90024. Minority and women candidates are encouraged to apply. UCLA is an Equal Opportunity/Affirmative Action Employer.

Job Captain/Architect: Position available with prominent consulting architect. Qualified individual should have degree and 2-5 yrs. intensive exp. in project production facets, some design exposure and the ability to assume ever increasing responsibilities for total project supervision. Position offers excellent compensation package and future professional growth opportunities. Contact our representatives in confidence: G. Marshall Assoc., P.O. Box 66083, Chicago, Il 60666.

Lecturers: In the Assistant/Associate Professor pay ranges for the 1979-80 academic year. Teach-

ing areas include (a) two- and three-dimension design and environmental awareness, (b) architectural design and practice, (c) acoustics, lighting thermal equipment, mechanical and electrical services and computer applications. Required Master of Architecture or other appropriate master's degree; or professional degree and extensive practice. Teaching experience at collegiate level licensed experience in practice, research and publications are desirable. Salary is \$14,256-\$21,600 for academic year, depending upon qualifications. Interested persons should send curriculum vitae with a request for an application form and position description to: Chairperson of Selection Committee, Architecture Department, School of Architecture and Environmental Design, California Polytechnic State University, San Luis Obispo, Ca. 93347, Phone: (805) 546-1316. Closing date for applications is April 1, 1979. Affirmative Action Equal Opportunity/Title IX Employer.

Faculty: Dept Arch Auburn U anticipates several vacancies Sept. 79 in fundamental and advanced design. Advanced degree and office experience required. Registration and teaching experience desired. In addition to design studio, teach a lecture or seminar in area of expertise. Salaries open and competitive. Applications and vita to Dear Keith McPheeters, School of Arch and Fine Arts Auburn U, Auburn, Al 36830. Affirmative Action Employer.

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[continued on page 134]



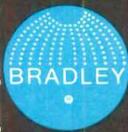
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School of Architecture, University of Toronto:

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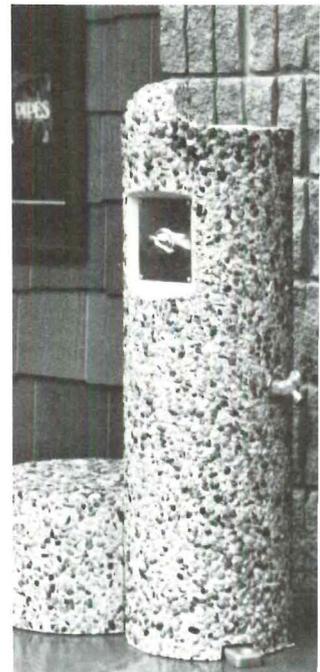
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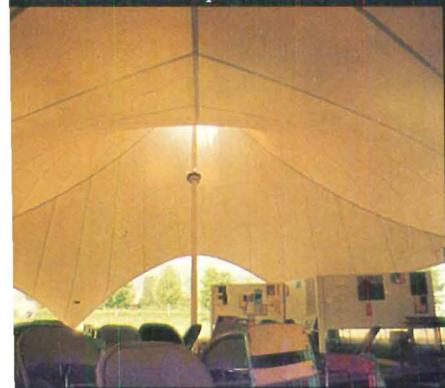
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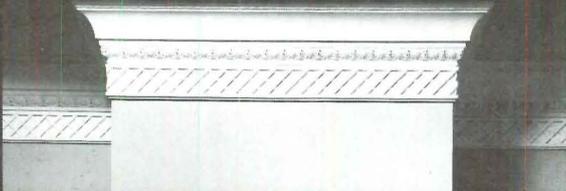
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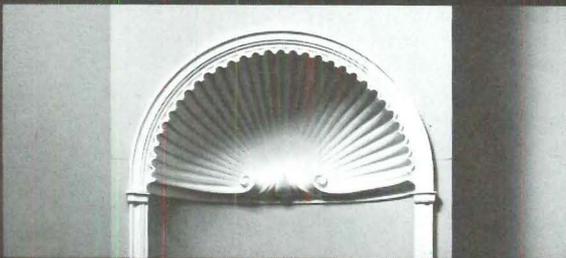
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