"A custom-look floor at an affordable price -- that's asking a lot. So I ask for Azrock."

"Beautiful flooring is important in my designs. Azrock Concours lets me create a custom look — without a custom price."

Azrock Concours is luxurious flooring of deeply embossed vinyl composition tile. The depth and clarity of embossment add dimensional beauty and help to conceal subfloor irregularities. The real beauty of Concours is the unlimited number of one-of-a-kind designs you can create for commercial and residential interiors. All from a single tile — all straight from the Azrock carton. Specify the tile that lets you create custom floors at an affordable price. Ask for Azrock Concours.

The name to ask for in resilient floors.

Concours — from the Azrock International Collection. Four natural colors. 1/8” gauge, 12” x 12” size. For free samples and design ideas, ask your Azrock flooring contractor or write Azrock Floor Products, Dept. 407A, P.O. Box 531, San Antonio, Texas 78292.

Circle No. 303, on Reader Service Card
The Eggcrate Ceiling—a beautifully detailed open ceiling in handsome natural woods. One of a unique new group of ceiling systems in wood and metal, ideal for acoustics, air distribution and versatility of illumination. Wood ceilings are available NCX pressure-impregnated for Class I Flame Spread Classification. Units install easily in standard suspension systems.

Forms & Surfaces
Box 5215 Santa Barbara, CA 93108 (805) 969-4767

Circle No. 209 on Reader Service Card
The new case for drawers.

UniGroup's Modular Drawer System. It offers all the flexibility you're accustomed to with open plan systems. The optional castored base positions the work where it's most comfortable to reach and permits easy relocation. Or, the system can be suspended beneath work surfaces. And all-steel construction, with rounded edges and corners, lets it take abuse without dishing it out. Options, including endless drawer combinations, are plentiful. Summarily, it recognizes a universe of people requirements. With this, we rest our case. Ask your Haworth representative for literature, or write Haworth Inc., Holland Mich. 49423.
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.

Welcomeness and light

64
Dagit/Saylor of Philadelphia has designed the Monastery of St. Clare to retain traditional functions, yet reflect the new ecumenical attitudes.

Nostalgie du château

70
P/A Award winner (January 1978) Pavillon Soixante-dix, designed by Peter Rose of Montreal, is a popular ski lodge in St. Sauveur, Québec.

Home away from home

76
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

Resilient bounces back

90
At one time displaced by a fad for wall-to-wall carpeting everywhere, resilient tile is returning with better looks, durability, and economy.

Metrciation: controversy and opportunity

96
The U.S. changeover to metric measurement will not be done overnight. How fast and to what extent metrciation will take effect are undecided.

Departments

8 Views

117 Products and literature

21 News report

128 Building materials

42 Calendar

132 Job mart

46 Report from San Francisco

138 Directory of advertisers

104 It’s the law

139 Reader service card

106 Books

Progressive Architecture

March 1979

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.
This demonstration of strength is actually a piece of cake for Perma Ply-R**, Owens-Corning's unique continuous-strand roofing membrane. In fact, it's the strongest roofing felt you can buy.

Why is strength so important? A roofing system is often subjected to enormous strain. Rapid temperature change can exert enormous stress. Normal building movement and shifting also add to the strain.

This can cause a roofing system to split. And that can be big trouble.

You can minimize that risk with Owens-Corning Perma Ply-R built-up roofing membrane.

Like that very expensive 3,000 lb. car it is lifting, Perma Ply-R is engineered for top performance. Produced by a unique patented
Processed, Perma Ply-R membrane is made of strong continuous glass fiber strands that give it great longitudinal and transverse strength.

Because of this, Perma Ply-R outperforms any other roofing membrane you can specify. Perma Ply-R meets the tensile strength requirements of ASTMD2178 Type IV. Shouldn't you be using the strongest roofing felt you can buy? Call your local Owens-Corning representative and ask him about our Perma Ply-R built-up roofing systems. Or if you want more information on Perma Ply-R roofing, write to H.M. Meeks, Owens-Corning Fiberglas Corp., Fiberglas Tower, Toledo, Ohio 43659.
Nova, an exceptionally comfortable, stacking chair, can cater to the upscale image of corporate dining rooms, or stand up to the pandemonium of teen agers in cafeterias and classrooms.

**Nova. A three-year guarantee.**
Nova's unique cross-frame design eliminates the need for easily-breakable welded connections found in many other systems.

So after successfully testing it in over 250,000 sittings, each up to 220 pounds, without any damage, we offer a three-year structural guarantee on each chair.

The shell, molded in either nylon or polypropylene, is light enough to move, yet heavy enough to provide extra strength and durability. And unlike painted metal shells, the color is integral, so a scratch on the surface only reveals the same color underneath.

**Nova. Unlimited options.**
When Gerd Lange designed the Nova system in 1970, winning one of Germany's leading design awards, he planned for almost every option.

You can order upholstered pads that can be replaced right on the premises, chair-stacking dollies, ganging frames, tandem units with or without tables, tandem riser mounts (for theater riser steps), fixed pedestal bases (that bolt into the floor), book racks, glide feet, tablet arms, removable-top tables, table-top dollies, even a variety of ashtrays.

But if you're ingenious enough to think of something more, we can probably make it on special order.

**Nova. It's parked everywhere.**
Since its invention in 1970, Nova has sold by the tens of thousands all over the world.

Mt. Sinai Hospital, The University of Alaska, the Guggenheim Museum and the Largo Library use it. When Pan Am flies into J.F.K., Nova is waiting.

Prudential Life, Bell Telephone, Holiday Inn, and Zip'z ice cream parlors use it. And, of course, Cuyahoga Vocational High School.

So whether your clients include the carriage trade or the galloping herds, Nova is the best parking place you'll find.

For more information about Nova write or visit Atelier International, 595 Madison Avenue, N.Y., N.Y. 10022. Or phone us at (212) 644-0400. Our complete catalog of furniture, lighting, art and accessories is available upon request. Some major credit cards accepted.

For your convenience, we have additional showrooms in Chicago, Dallas, Los Angeles, Atlanta and Seattle; sales offices in Boston, Cincinnati, Detroit, Houston, Miami, Philadelphia, Pittsburgh, San Francisco, Washington, D.C. and selected furniture dealers nationally. Member ASID, IBD, BIFMA.
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 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 O'Dea
Ecol-O-Vane® Aluminum Ceiling Systems by Levolor put the accent on designing with color.

The people who know more about colorful windows than anyone else are making colorful ceilings now, too. In fact, there are so many dazzling colors and metallics available with Ecol-O-Vane, over 100 in all, you just may run out of creative ideas before you run out of color choices.

Each color comes in three panel styles, flat, vee or zee shaped. They arrange, and interchange, with a minimum of effort, to create color sweeps, patterns, even images.

But while you ooooh and ahhhh over the beauty and versatility of Ecol-O-Vane, bear in mind the practicality, too. No other ceiling system provides a noise reduction coefficient as high, up to .95. Plus, Ecol-O-Vane is easy to install, maintain and store, and completely compatible with conventional HVAC and lighting systems.

So, right now, if you look up and see a dull, "just-there" ceiling without feeling, maybe you should investigate Ecol-O-Vane. Clip the coupon and we'll be glad to send you the particulars.

LEVOLOR®
Ecol-O-Vane Ceiling Systems

Circle No. 347, on Reader Service Card

*Applies to "Vee" style panel with 2 inch, 1 lb. density fiberglass blanket

Levolor Lorenzten, Inc., Department LL-379
720 Monroe Street, Hoboken NJ 07030.

I'm interested in a ceiling with feeling.
Please send me more information on Levolor's Ecol-O-Vane Aluminum Ceiling Systems.

Name_________________________ Title_________________________

Firm___________________________

Address________________________

City________________ State_______ Zip____________
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 Appley (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 compliant 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 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]
CORIAN® makes your most imaginative ideas suddenly practical.


CORIAN® building products are your ideal choice for interior horizontal and vertical surfacing applications where you need a combination of beauty, durability and easy care.

Add to this a workability that approaches that of a fine hardwood, and you can quickly see that many of the imaginative customizing ideas you may have considered and abandoned are now beautifully practical with CORIAN.

All this is possible because CORIAN, unlike laminated or coated synthetic products, is solid, with color and pattern all the way through.

The result is a deep, opalescent quality...a smooth, pleasing touch...exceptional stain and impact resistance...plus simplified care and repair.

Quite simply, CORIAN brings you "practical elegance"...practicality with a flair. And isn't that really at the heart of every design problem?

CORIAN® is available in sheet stock for kitchen and bath countertops, wall wainscoting, bathtub and shower surrounds and custom surfaces. One-piece molded tops and bowls of CORIAN for kitchen, bath or bar also available.

For more information, write: Du Pont, Room 36977, Wilmington, DE 19898.

*CORIAN is Du Pont's registered trademark for its methacylate building materials.
Specify Duraflake FR.
Anything less and you could be playing with fire.

Play it safe with Duraflake FR.
Specify Duraflake FR, the fire-rated particleboard that exceeds Uniform Building Codes and was approved and awarded a Class I rating by Underwriters' Laboratories in 1975. For the past several years, architects, engineers, builders and contractors throughout the world have been specifying Duraflake FR with confidence for offices, hospitals, auditoriums, airports, courtrooms...all types of buildings where public safety is vital.

Play it versatile with Duraflake FR.
You can do almost anything with Duraflake FR. It can be drilled, routed, bullnosed, beveled and precision-machined. Smooth, grain-free Duraflake FR is also an excellent substrate for easy application of fine wood veneers, high and low pressure laminates and vinyls for wall systems, as well as contract furniture and fixtures.

Play it smart and always specify Duraflake FR.
For safety, versatility and economy, specify Duraflake FR. We can meet both code and creative challenges.

Play it for all we've got...a full Duraflake product line.
Besides fire-rated Duraflake FR, we offer a complete range of Duraflake products to meet every challenge! Ask for Duraflake that is edge-banded...filled...color coated...primed...or treated with hot melt polymer. If you need industrial particleboard, door core, stair treads, edge-filled shelving or decking, Duraflake makes those, too. You can even specify Duraflake that is custom cut to your specs!

Play around with our free Duraflake FR kit. Seeing is believing. Send us a note or call us regarding your needs, and we'll send you our colorful Duraflake FR kit to help you get even more fired up over Duraflake FR.

Our kit contains product samples, application information, physical properties data, as well as information on the full Duraflake product line. Mail your requests to: Duraflake FR Kit, P.O. Box 428, Albany, OR 97321.

Or, call our sales office at 503-928-3341.

Duraflake®

Willamette Industries, Inc.
Building Materials Group
P.O. Box 428
Albany, Oregon 97321

Member of National Particleboard Association
Associate Member of:
National Kitchen Cabinet Assn.
National Furniture Manufacturers Assn.
National Assn. of Plastic Fabricators
Architectural Woodwork Institute

Duraflake FR is a product of the forests—the completely renewable industrial raw material resource.

Circle No. 323, on Reader Service Card
tensions 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, IL

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 engaged with heroic visions of changing a messy world through architectural form and making it a better, cleaner, more organized place to live; so long engaged with the Modernist notions of extreme functionalism and less is more, and so 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, allusional 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-forlorned 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

Credit extended

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

Plan, St. Joseph's Fountain, Piazza d'Italia.
Don’t fight The System!
GF’s 570 Series works with—not against—your systems environment.

Lightly scaled, softly sculptured and wonderfully comfortable, GF’s 570 Series chairs are perfectly suited to the working environment of today…and tomorrow!
The soft, rolled seat and back and resilient, urethane covered structural steel frame feel good, look good and prevent damage to the surrounding furniture. Comfort settings adjust to the user’s body—reduce muscle tension and fatigue.

Seven models in 3 frame colors are available in the full range of GF fabrics, leathers and vinyls. Call your GF dealer or visit our showroom.
GF Business Equipment, Inc., Youngstown, Ohio 44501.
In Canada: Toronto, Ontario.
Interstitial steel frame helps hospital achieve optimum space flexibility...

costs 20% less than competitive framing systems considered.

How do you design a full-range, 404-bed health care center, integrate it with a medical teaching curriculum, and blend it architecturally into the surrounding retail community? That was the problem facing the designers of Thomas Jefferson University's new Clinical Teaching Hospital, Philadelphia, Pa. The solution: A ten-story, steel-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 framed 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 physicians' 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 or 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 spandrel trusses supporting the architectural curtain wall.

The interstitial service area utilizes story-high trusses which support a 3-in. composite steel floor deck topped with 2½ in. of concrete. An inverted cellular steel floor deck is installed in the interstitial areas.


Give us a call:
Atlanta (404) 522-4918
Baltimore (301) 685-5700
Boston (617) 267-2111
Buffalo (716) 856-2400
Chicago (312) 684-5422
Cincinnati (513) 381-6440
Cleveland (216) 696-1881
Detroit (313) 336-5500
Houston (713) 659-8060
Los Angeles (213) 726-0611
Milwaukee (414) 272-0835
New York (212) 688-5522
W. Orange (201) 736-9770
Philadelphia (215) 561-1100
Pittsburgh (412) 281-5900
St. Louis (314) 726-4500
San Francisco (415) 393-4800
Seattle (206) 285-2200
When the design statement has to be particularly right...

you are concerned with color, design and dimensionality. Consider Wilsonart Brand laminated plastic.

Wilsonart Brand Design Group I offers you a superb collection of woodgrains, solid colors, designs, marbles, leathers and slates from the finest craftsmen in the world.

Wilsonart Brand Metallic Laminates—in copper and aluminum bas-relief and designs—are particularly unique for an exceptional image projection.

When the furnishings have to set the mood and the walls have to confirm it, combine the two for a precise image and complete control of the setting.

For some most unusual ideas, write for your Wilsonart Design Group I and Metallic Laminates brochures.

Circle No. 374, on Reader Service Card
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, 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 site, 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]
NEW HEAVYWEIGHT CHAMPION

Heavier than any overhead door closer will probably ever be... and stronger, by far.

How it might look or fit on a door frame was irrelevant. Rixson’s floor closers conceal in the floor, out of sight and harm’s way. Our only concern was performance, long term economy.

- Controls heavy traffic doors better, more reliably, longer than any other closer.
- Provides true fast latch, or slow latch, and more efficient door control than any other closer.
- Warranty is for 10 years, longer than any other closer.
- Mechanical efficiency and shock resistance unsurpassed by any other closer.

And an exclusive combination of many, many important advantages: Unique long-life iron closer body... double sealed unit... standard all temperature hydraulic fluid... delayed action capability... vertical adjustment for uneven door conditions... and available with coordinated holder/stop and/or with electric pivot. Prohibits removal of closer or door when locked. But can be removed for service without door takedown.

Ask the door control specialists:
RIXSON-FIREMARK
ARCHITECTURAL AND FIRE/LIFE SAFETY PRODUCTS

9100 West Belmont Ave., Franklin Park, Illinois 60131
and Rexdale, Ontario 312/671-5670
Circle No. 362

Exclusive Rixson-Firemark
1. Cast iron closer body
2. Stainless steel valves (non-removable)
3. Teflon, urethane and steel seals (5 total)
4. High efficiency torsion spring
5. Direct loading link and pin assembly
6. Heavy duty Cycolac® cement case
7. Full control panel
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 Wiener 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.

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 remodelled by Graves, will remain devoted to Sunar textiles. (Above, mural cartoon by Graves; right, showroom plan.)

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 adjacen

[News report continued on page 28]
Redwood comes in a much wider variety of grades, shades, textures and types than most people think.

Redwood, as the work shown here clearly demonstrates, is not only beautiful, it's versatile. Redwood can be warm and rich. It can be bright and colorful. Redwood can be smooth and handsome. It can be rough and striking. Redwood has almost infinite possibilities.

And redwood adds enduring value to whatever you design or build. No other wood weathers like redwood. No other wood is as resistant to warping, checking, and age. No other wood takes and holds a finish better, or needs a finish less. Redwood insulates against heat, cold and noise. Redwood resists flame spread.

Redwood. There is, literally, no other wood like it.

Credits:

Clear grade residential ceiling
Architect: Norman Jaffe, AIA
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 Legstrup

CALIFORNIA REDWOOD ASSOCIATION
One Lombard Street
San Francisco, California 94111

Redwood – A renewable resource

Circle No. 312, on Reader Service Card
News report continued from page 25

The Planning Commission's approval is significant because, although the City of Paris easily acquired State Landmark status and a place on the National Register in 1975, the Landmark status was denied 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 sky-lit rotunda as the crowning touch on a glazed corner entrance lobby. With the exception of this 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...
One performance after another, you'll find the Castelli name catching on. The Axis 4000 seating system is an integral part of any theatre experience. It provides the kind of dramatic impact demanded by varying programs. With interchangeable parts and accessories to accommodate critical audiences everywhere.
News report continued from page 38

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

The Weese plan will create a granite-paved plaza in the Hemicircle 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


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 masterpiece 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]
The only true Perlite/Urethane/Perlite sandwich insulation.

GREFCO, Inc./Building Products Division, 3450 Wilshire Blvd., Los Angeles, CA 90010
Please send me a free sample of Permalite Pk Plus Roof Insulation.
Name __________________________ Title __________________________
Company __________________________
Address __________________________ City __________________________ State __________ Zip __________

New, more efficient, long-lasting Permalite Pk Plus is FM approved for class 1 insulated steel deck construction and for windstorm resistance classifications 1-60 and 1-90.

What makes Permalite Pk Plus so great?

☐ Permalite Pk Plus is a true, chemically bonded 3-part composite sandwich of perlite, urethane and perlite in which the rigid, urethane core is protected from extreme temperature fluctuations.

☐ In hot weather and long exposure to sun, the top perlite layer with its Sealskin® surface helps protect the BUR from excessive loss of oils and natural elasticity.

☐ Permalite Pk Plus helps keep the urethane warpfree and stressfree. Asphalt can be applied at normal application temperatures.

☐ Permalite Pk Plus is fire rated...dimensionally stable...and proven in hundreds of installations.

☐ Integral Sealskin® treatment of top perlite layer provides resistance to bitumen soakup and superior bond of roofing felts to insulation.
WE’RE CALLING OUR FUTURE BY A BRIGHT NEW NAME

Badische Corporation

Dow Badische, manufacturer of carpet fibers and yarns, has changed its name to Badische Corporation, but you’ll find that we’re the same innovative company you have always looked to for leadership in the carpet industry.
Is our future shaping up? At our headquarters in Williamsburg, Virginia, Badische Corporation, now a member of the BASF Group, is firmly committed to a policy of expansions and new developments in the contract commercial area.

We're just as firmly committed to serving you in the same personal way we always have—through an intensive program which offers free technical and specifying assistance. The only thing that's changed is our name.

Get specifying, as you well know, is a highly technical job; especially with the plethora of fibers and constructions to choose from in carpet today.

Our carpet fibers and yarns are specially engineered for specific commercial end uses to assure performance. You'll find them in a wide variety of carpet styles.

Another unique feature is our CREATE® program, a free service that helps eliminate many of the risks in carpet specifying.

Our warranties are important to look for when you specify carpet. Zefstat® is our Lifetime Anti-Shock Carpet Warranty, and Zefwear® is our 5-Year Carpet Wear Warranty. These warranties, granted only to carpets that have been tested and meet our specifications, are further performance assurance to you and your clients.

Product innovation, expert technical assistance, a multi-faceted CREATE program, strong warranties and Performance Certified contract commercial carpets are some of the ways we are shaping our future to serve you better. We not only have a bright new name, we have a bright new future in the years ahead. Follow it with us.

Badische Corporation (Formerly Dow Badische Company)
Williamsburg, VA 23185

Zeflon® and Zeflon™ are trademarks owned by Badische Corporation, formerly Dow Badische Company.
Zefran®, Zefstat®, Zefwear® are registered trademarks owned by Badische Corporation, formerly Dow Badische Company.
CREATE® is a registered Service Mark owned by Badische Corporation, formerly Dow Badische Company.

BASF Member of the BASF Group
heuga u.s.a., inc. 185 Summer Ave., Kenilworth, NJ 07033  201-245-3480

Client: Warner Gear, Division of Borg-Warner Corp., General Offices, Munice, IN  Architecture: George W. Cox & Assoc., Inc.
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 Bernabi 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...
"Compatibility of the housing unit with the character of the small, separate, woodsy cabins was paramount.

"Cedar shakes on the roofs and shingles on the walls help keep the building scale small and personal—and are natural and rustic materials traditional to the camp's history"—James E. Hussey, A.I.A.

For our new Architects' cedar library, write Suite 275 515-116th Avenue N.E., Bellevue, WA 98004. (In Canada Suite 1500, 1055 West Hastings Street, Vancouver, B.C. V6E 2H1.)

Cedar Shakes (Heavy) 1.69
Cedar Shakes (Medium) 1.15
Cedar Shingles .87
Built-Up Roofing, Slag .78
Asphalt Shingles .44
Built-Up Roofing, Smooth .33
Asbestos Cement Shingles .21
Slate .05


These labels under the bandstick of red cedar shingle and shake bundles are your guarantee of Bureau-graded quality. Insist on them.

Tlingit canoe paddle of cedar. To touch the earth.
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]

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) 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

Jill Radler is a graduate student in architecture at SUNY, Buffalo, who writes on architecture for the Buffalo Evening News.
At a mental health center...
Andersen institutes warmth and harmony.

Windows can be a critical element in the livability of an institutional project.
That's why, when designing these extended care units for the Mecklenburg Mental Health Center, the architect specified Andersen® Perma-Shield® casement windows in Terratone color.
They knew the beautiful look, feel and charm of their inside wood trim would establish a warm, comfortable atmosphere.
They knew these windows in Terratone color would create harmony, too. Thanks to their deep, dramatic earth-tone hue—it blended beautifully with both the brick exteriors of the buildings and the landscape.
And they knew Andersen windows would match the County's desire to save on operating costs. The tough, long-lasting Perma-Shield vinyl sheath virtually eliminates maintenance—it’s designed not to rust, pit or corrode. Won't chip, flake, peel or blister.
Finally, unlike the leaky, drafty kind, Perma-Shield windows help save fuel. Because they have a wood core—one of nature's best insulators—and are built two times more weathertight than industry air-infiltration standards.
So bring warmth, harmony—livability—to your next design. Specify Andersen Perma-Shield casement and awning windows in beautiful, blendable Terratone color.
For more details, see Sweet's File 8.16 or your Andersen Dealer or Distributor. He's in the Yellow Pages under “Windows.” Or write us direct — Andersen Corporation, Bayport, Minnesota 55003.

The beautiful way to save fuel™
Andersen Windowalls
Westminster seating in this continental layout features individual arm rests for user comfort and center pedestal riser mounts for easy maintenance.

Complimentary layout service available on request.

Installation: AT&T Long Lines
Architect: John Carl Warnecke, FAIA
Architects
Product Design: Dickinson/Smith

JG Furniture
A Division of Burlington Industries
Quakertown
Pennsylvania 18951
215 536 7343

Circle No. 376, on Reader Service Card
continuing from page 37

News report...expand 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 hist...

[News report continued on page 42]
News report continued from page 41

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 Eune 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.
March 6–April 7. "Siah Armajani First Reading Room." Max Protetch Gallery, NY.

Conferences
March 14. American Society of Interior Designers Info Fair, Chicago, IL.
March 15–16. COFPAE Federal Procurement Conference, Denver, CO.
March 22. American National Standards Institute Meeting, Washington, DC.

[News report continued on page 46]
Il Maker's Workshop
Nicolas Ledoux, ca. 1785-1795
H: 2 cm. W: 17.9 cm.

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

A moment in design history.

The Acorn Chair
Designed by Lella and Massimo Vignelli.

Sunar
18 Marshall Street, Norwalk CT 06854
203 866-3100

Visit our new showroom at West Week.
YOU'RE
You're wrong if you specify Owens-Corning fiberglass Roof Insulation just to save energy.

You're right to specify Owens-Corning fiberglass Roof Insulation because it is the best base for your built-up roof. Of course efficient use of insulation is very important. But our roof insulation gives you that and so much more. For example, because it's Fiberglas, it resists rot, warping and shrinking. That provides a dimensionally stable base for your BUR System. It's just one important reason why Owens-Corning Fiberglas Insulation is the best base for a built-up roof.

The comparison chart below lists the critical features you should look for in any built-up roof-base. A cursory glance shows you Owens-Corning Fiberglas Insulation wins going away.

One more thought. Quality Fiberglas roof insulation has been our business for over 35 years. And we're continually making it a better product through research and development. It is something that you can't put on a chart. But it's something that you can depend upon from Owens-Corning. Learn more about Owens-Corning Fiberglas Roof Insulation. Contact your nearest Owens-Corning office today, or write to R. F. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

---

<table>
<thead>
<tr>
<th>Base for BUR</th>
<th>Conforms to minor deck irregularities</th>
<th>Resilience</th>
<th>Ventable</th>
<th>Large sizes up to 4' x 8'</th>
<th>Easy to fabricate (in field)</th>
<th>Not damaged if wet (short term)</th>
<th>Excellent for covering old roofs</th>
<th>Stable &quot;K&quot; factor</th>
<th>Dimensional stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owens-Corning fiberglass Roof Insulation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Owens-Corning fiberglass Puf</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Perlite</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Ithane</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Composites</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Wood Fiber</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Circle No. 356, on Reader Service Card
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 situating 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 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]
The Nevamar Corporation is pleased to announce that through a recent purchase agreement with General Electric Company, we are now marketing both the Nevamar and Textolite lines of decorative plastic laminates.

The Textolite line (previously integrated with Parkwood) and the long-respected Nevamar line now combine to become an important continuing source for laminates — and laminate ideas — for your designs. Both lines are now available to you, stocked at the independent distributors serving your area.

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.

If you have any questions, call the Nevamar or Textolite distributor in your area. For product information, use the toll-free Nevamar Hot Line, (800) 638-4380. Nevamar Corporation, 8339 Telegraph Road, Odenton, Maryland 21113.
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 | Knumquat    |
| 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 (1481) |
| S-6-5 | Putty |
| 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 (1480) |
| S-7-24 | Chalk White (1559) |
| S-7-25 | Neutra |

**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 | Stonenhenge 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 | Cassin 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 (2239) |
| LH-2-5 | Antique Leather (2234) |
| LH-2-6 | Ruisset 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-7-1 | 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.*
R 27 Insulation Value, Pre-finished Interior Beauty,
All in an Easy Roofing Installation

Homasote Easy-ply® Roof Decking in combination with Thermasote® gives superior insulation Plus a finished ceiling and vapor barrier at the same time!

When you build with Homasote Easy-ply® Roof Decking plus Thermasote® Nail Base Roof Insulation, you create a tough structural base for finished roofing at the same time you construct a beautiful finished ceiling. And the installed combination of these two high R value Homasote products helps meet today's increased energy saving needs.

Both Easy-ply Roof Decking and Thermasote panels are easy to handle and install and are simple to cut and shape. Easy-ply Roof Decking is available in structural thicknesses for rafter spacing up to 48” on center.

Let your Homasote Representative show you how roofs of Homasote's Easy-ply Roof Decking and Thermasote can save you construction time and money and help you build a better, more energy-efficient building every time.

Photo Courtesy of Cluster Shed, Inc./Timber Peg
How many people can you please when you design a building?

You want to please yourself. You have to satisfy your client. And if you can make the investors and tenants happy, you will have accomplished quite a feat! You'll find that designing with Fluropon-coated metal curtainwalls can help you please the people who will determine the success of your projects.

You're looking for great design opportunities.

You can create magnificent statements with Fluropon-coated panels because Fluropon offers virtually unlimited possibilities with the shape, form and even the texture of the metal panels. You may even discover new opportunities in metal curtain wall design!

But your client wants a financially successful building.

Fluropon, the full-strength Kynar 500® coating, has the longevity to compete with anodized coatings. However, Fluropon-coated panels cost less and provide better color integrity and availability. Plus, Fluropon has the long-term ability to maintain its original color and deliver years of maintenance-free protection. And that makes Fluropon an even better choice!

Investors want a good return on their money.

Fluropon's exceptional durability and color integrity can help maintain the marketing impact of your initial design, so the building's investors can expect the same flow of tenants and income, along with the resale potential, that they were looking for when the building was first conceived.

Make your public happy, too!

Your statement will become part of the public's architectural heritage. And the sweeping designs and exceptional durability that are possible with Fluropon will help your building work with its environment and become a lasting community asset.

Call or write today for more information about Fluropon.

Fluropon®: A People-Pleasing Product for Architects Designing Metal Panel Buildings

Kynar 500 is a registered trademark of Pennwalt Corporation
See our insertion "9.10 Des." in Sweet's Industrial Construction and Renovation File.

DeSoto, Inc.
1700 South Mount Prospect Rd.
Des Plaines, Illinois 60018
(312) 391-9364

Call or write today for more information about Fluropon.
Presence. Cramer's 9000 seating is the definition of presence...taste in form. Warm. Luxurious. Clean. A statement of quality design.

The 9000 series—deeply comfortable: tubular chrome in mirror or subtle brushed; arms of polished oak or rich walnut; side chairs with an inimitable memory return. And a new Glyon sled base for an interesting option.

9000 is a complete line with innumerable variations.

Cramer

For more information, call or write.

Cramer Industries Inc.
625 Adams Street, Kansas City, KS 66105
913/621-8700 Toll Free: 800-728-4969

Member BIFMA


Circle No. 317, on Reader Service Card.
Blanket your roof with silicone/urethane foam and get up to 30% energy savings.

It's like a nice, thick blanket for your roof. The Dow Corning® silicone/urethane roofing system snuggles your roof in protective layers of long-lasting silicone rubber and highly insulating urethane foam to keep water out, seal heat or cool air in. All year around you're saving energy, as much as 30 percent or more compared to an equivalent thickness of conventional roof insulation.

This lightweight roofing system is leak-free and weatherproof. Underlying urethane foam provides a seamless blanket of efficient insulation, and on top is a flexible membrane of Dow Corning silicone rubber that's unaffected by all kinds of weather—rain, snow, sleet, sunlight and temperature extremes from −80 F to +300 F.

The spray-applied, seamless roofing system reduces or eliminates ponding, excessive weight, and overlaps where water can enter. And the efficient insulation blanket drastically reduces thermal shock and deck movement that can damage conventional built-up roofing systems.

This roofing system can be installed on new roof decks as well as over most old built-up roofs. You save on costly roof removal and disposal and eliminate operational shutdown.

Install the Dow Corning silicone/urethane roof system and rest easy.

For more information, contact Dow Corning Corporation, Dept. H7-510, Midland, Michigan 48640.

Dow Corning Cost-cutting silicone elastomers.

Circle No. 321, on Reader Service Card
"We figured we could save the MGM Grand Hotel $8,000,000 in future energy costs.

Only E CUBE had the capability to confirm our analysis."

That's the conclusion of Consulting Engineer Frank T. Andrews of Fullerton, California, who's had long experience in dealing with Las Vegas hotel complexes. When he was given the MGM Grand Hotel energy-saving assignment, Andrews knew that because of the many variables and intricacies involved, the job required a computer solution with a flexible input format and almost unlimited scope. After investigating several energy analysis programs, he selected E CUBE because it was the best way to:

- Quantify energy saving techniques.
- Measure life cycle dollars saved by conserving energy.
- Analyze existing buildings and systems, allowing them to be modeled exactly.
- Critically examine large complex buildings.
- Model exactly an infinite number of zones with complex exterior surfaces.
- Accomplish the energy analysis at low computer running cost.
- Secure impartial results.

**Future savings: $8,000,000.**

In recommending the best program for MGM Grand, and simulating the most appropriate series of conservation options, Frank Andrews was able to verify that:

- Chilled water pumping horsepower could be increased to adequate size and controlled to reduce electric consumption.
- Oversized variable air volume system in low rise building areas was wasteful and should be renovated.
- Existing fan coil units for tower 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.

With these and other improvements, the savings in energy costs to the MGM Grand, taking inflation factors into account, is projected to be in the area of $9 million over a 25-year life cycle.

**Other advantages of E CUBE.**

Saving money is an important reason for using E CUBE, but not the only one.

E CUBE is private—your project data and results are never seen by a third party.

E CUBE is a comprehensive system—it computes the hour-by-hour energy requirements of your building, or planned building for an entire year, taking into account all weather, design, operation and occupancy factors.

E CUBE allows the design engineer to control the results by his input of performance efficiencies. E CUBE is extremely accurate and inexpensive to use.

E CUBE is proven—with thousands of customer runs.

To find out how you can capitalize on this timely and effective program, or for information on Seminars for new and advanced E CUBE users, contact your gas company, mail in the coupon, or call David S. Wood at (703) 841-8565.
beauty on track

now you can have light where you want it as you want it... beautifully. 18 design collections, over 60 different models—

The ultimate in tracklighting systems by Omega, and ERCO of Germany.

EMERSON ELECTRIC CO.
270 LONG ISLAND EXPRESSWAY/MELVILLE, NEW YORK 11746 / 516-293-8500
In Canada: EMERSON ELECTRIC CANADA LTD., P.O. Box 150, Markham, Ontario, Canada, 416-294-9340

Circle No. 349, on Reader Service Card
It's a new look and a new concept in the United States, though used extensively in Europe for years; precast concrete panels (in any size) faced with Gail Brickplate frostproof vitrified tile with a keyback design to insure permanence. The tile are mounted on sheets up to 3' x 3' and shipped to the precast plant where they are integrated into concrete panels. After curing, they are shipped to the jobsite where they are hoisted by crane into place. Advantages of such prefabrication for high-rise construction are many:

**ECONOMY:** Elimination of costly scaffolding since panels are hoisted into place by crane.

**QUALITY CONTROL:** Factory supervision assures greater accuracy, consistent quality.

**SPEED OF ERECTION:** Extreme weather does not hamper installation since tile is precasted in the precaster's factory.

**MAINTENANCE FREE:** All of the advantages of a vitrified tile (less than 3% absorption); no need for repainting, sandblasting or acid cleaning. Frostproof tile is permanently locked into the concrete panels with keyback ridges.

Gail will provide technical assistance through factory engineers. For more information or brochures, mail the coupon. No. 337
Variations on the theme. Symmetrical styling on Falcon's heavy-duty and standard-duty locks reflect your changing needs and our continuing quality.
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...
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 presbytery 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.

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.

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 Pallazo 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
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.
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 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 distinctions 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]

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.
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 interpreted 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

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 procession 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-
Interior spaces have been organized to provide long ambulatory, as is traditional in monasteries, where sisters can walk from their cells to chapel.
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 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 Scefi 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 complex 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]
Stained-glass window in the chapel came from nuns' older monastery; the screen no longer provides visual separation but is reminder of old traditions.
A ski lodge in Canada designed by young architect Peter Rose with Peter Lanken and James Righter has so far met with public success and professional acclaim.

When this ski lodge was given a PIA design award a year ago (PIA, 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 Righter, 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 Pavilion Soixante-dix—as well as its successes—are worth examining.

Architects Rose, Lanken, and Righter 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 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...
The oldest ski area in North America, Mont St. Sauveur still retains its rural character (above); axonometric illustrates hybrid structure.
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 publike 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.
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-
provides 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.”
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 Bethlehem ("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 wealthyly 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 formidable monumentally (as those shapes generally do in the work of Kahn), but rather almost toylike, 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
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 corner 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 indestructable surround for some characteristically destructive patients, it still presented an undeniably sobering image to the unafflicted. 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
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]
Science and Building

Structural and Environmental Design in the Nineteenth and Twentieth Centuries
Henry J. Cowan

How did modern architecture develop into its present state? How did technology affect aesthetics? The answers to these questions and more can be found in this absorbing new book. Cowan deals with a wide range of subjects—from sewage disposal and computer-based methods of structural analysis to concert hall acoustics and air-conditioning. In showing how science and technology transformed the craft-based practice of architecture, this book gives you a fascinating, significant look at the successes and failures of modern architecture.

(047102738-3) 1978
374 pp. $24.95

Architectural Handbook

Environmental Analysis, Architectural Programming, Design and Technology, and Construction
Alfred M. Kemper

Here is the first book of its kind that incorporates the complete range of architectural activities involved in building design. Covering all the specialized fields involved in contemporary architecture, the book features practical applications of environmental studies, a computer simulated process for building design, energy design guidelines, and many more critical topics. Following the basic NCARB outline in discussing each of the profession's activities, this book is also an invaluable resource for those preparing to take architectural registration examinations.

(047102857-2) March, 1976
approx. 640 pp. $34.95

Frank Lloyd Wright

His Life and His Architecture
Robert C. Twombly

This comprehensive, detailed study of one of architecture's most compelling figures treats Wright's buildings as primary sources—viewing them as biographical as well as social and aesthetic statements. Based on a wide array of previously untapped sources, this lavishly illustrated, meticulously documented book will give you many specific practical ideas about architecture as well as a better understanding of America's most famous architect.

"This is the best biography of Wright available!"—John Sergeant, author of Frank Lloyd Wright's Usonian Houses

(047103400-2) January, 1979
approx. 444 pp. $19.95

Architectural and Engineering Salesmanship

David G. Cooper

Here is a complete guide to effective salesmanship, one of the most important yet often overlooked aspects of practicing architecture. The author develops guidelines in the three key areas of expertise—design, technical, and nontechnical—for obtaining and keeping clients. Insights on prospecting, interviewing, and closing sales are presented in the context of the architect's special experience. For all those who want that something extra in today's competitive market.

(047103642-0) 1978
158 pp. $14.95

Central City Malls

Harvey M. Rubenstein

Here is complete, in-depth coverage of the process of mall development. Rubenstein analyzes the cultural, natural, economic, political, and legal factors that determine mall feasibility, size, and location—as well as design elements, street furnishings, physical factors, and form characteristics. Includes 22 case studies covering full malls, semi-malls, and transit malls.

(047103098-8) 1979
191 pp. $22.50

Modern Furniture

John F. Pile, Pratt Institute

Now you can get immediate access to the hard-to-find "secrets" of professional furniture design. Written by a top authority, this book offers complete coverage of the history, aesthetics and technical issues involved in both design and production. It confronts the significant issues of design quality by reviewing, analyzing, and criticizing the classics of modern furniture. With numerous illustrations, dimensional charts, models, and much more.

(047102667-0) January, 1979
208 pp. $25.00

BOOKS FOR BUILDING CAREERS...FROM WILEY

International Urban Growth Policies

New-Town Contributions
Edited by Gidem Golyan, The Pennsylvania State University

The first truly international review of urban planning experiences and the role of new towns in over a decade. Twenty-seven contributors discuss the experiences of eighteen nations, compiling basic information on contemporary new-town policies throughout the world and analyzing this information comprehensively. Provides policies, guidelines, and strategies.

(047103748-6) 1976
460 pp. $29.95

Architectural Working Drawings

Ralph W. Liebling & Mimi Ford Paul

Covering every phase of the practitioner's work—from lettering and symbols to plans and elevations—this book takes you step-by-step through the techniques of preparing professional working drawings. The authors analyze actual drawings, give valuable insights into effects achieved, suggest alternatives, and demonstrate the approaches best suited to particular problems. This book offers an unrivaled summary of techniques for refining your style or simply gaining a better grasp of all aspects of working drawings and their production.

(047103432-3) 1977
310 pp. $17.50

The Master Builders

A History of Structural and Environmental Design from Ancient Egypt to the Nineteenth Century
Hans Blumenfeld

This fascinating history of building science analyzes the work of master builders from ancient times through the Napoleonic era. Cowan offers not only enlightening descriptions of structural design, but also clear explanations of how structural limitations influenced design and aesthetics. With numerous illustrations and a valuable glossary, THE MASTER BUILDERS gives you a rich, readable picture of architecture and building prior to the Nineteenth Century.

(047102740-5) 1977
299 pp. $21.50

The Master Builders

Hans Blumenfeld

Forty-five essays by the noted city planner and writer—many of them unpublished or difficult to find—cover virtually every important issue in urbanology. Many of the essays were written with the past ten years and offer important contributions to recent developments. Special chapters on the role of government, economics, housing, and traffic supplement discussion for everyone who valued the author's T Modern Metropolis.

(047104281-1) 1978
432 pp. $23.00

Environmental Analysis, Architectural Program­ Design and Technology, and Construction
Hans Blumenfeld

THE MASTER BUILDERS gives you a rich, readable picture of architecture and building prior to the Nineteenth Century.

(047102740-5) 1977
299 pp. $21.50

Environmental Design from Ancient Egypt to the Nineteenth Century
Hans Blumenfeld

Cowan offers not only enlightening descriptions of structural design, but also clear explanations of how structural limitations influenced design and aesthetics. With numerous illustrations and a valuable glossary, THE MASTER BUILDERS gives you a rich, readable picture of architecture and building prior to the Nineteenth Century.

(047102740-5) 1977
299 pp. $21.50

Modern Furniture

John F. Pile, Pratt Institute

Now you can get immediate access to the hard-to-find "secrets" of professional furniture design. Written by a top authority, this book offers complete coverage of the history, aesthetics and technical issues involved in both design and production. It confronts the significant issues of design quality by reviewing, analyzing, and criticizing the classics of modern furniture. With numerous illustrations, dimensional charts, models, and much more.

(047102667-0) January, 1979
208 pp. $25.00

Available at your local bookstore—or use this handy coupon.

WILEY-INTERSCIENCE, a division of John Wiley & Sons, Inc.
605 Third Avenue, New York, New York 10016

Mail to: WILEY-INTERSCIENCE
P.O. Box 092, Somerset, N.J. 08873

Name
Affiliation
City
State/Zip

□ Rubenstein/MALLS (047103098-8)
□ Pile/FURNITURE (047103407-0)
□ Kemper/HANDBOOK (04710267-3)
□ Blumenfeld/METROPOLIS (047104281-1)
□ Twombly/WRIGHT (047104682-2)
□ Cooper/ARCHITECTURAL (047103432-3)
□ Golany/POLICIES (047103098-8)
□ Cowan/BUILDING (047102738-3)
□ Cowan/MASTER BUILDERS (047102740-5)
□ Liebling/DRAWINGS (047103432-3)

□ Payment enclosed, plus sales tax, Wiley pays postage/handling. We normally ship within 10 days. If shipment cannot be made within 90 days, payment will be refunded.
□ Bill me. □ Bill firm or institution.

Prices subject to change without notice.

Please send the books indicated for 15-DAY FREE EXAMINATION. (Restricted to the continental U.S. and Canada.)

□ Rubenstein/MALLS (047103098-8)
□ Pile/FURNITURE (047103407-0)
□ Kemper/HANDBOOK (04710267-3)
□ Blumenfeld/METROPOLIS (047104281-1)
□ Twombly/WRIGHT (047104682-2)
□ Cooper/ARCHITECTURAL (047103432-3)
□ Golany/POLICIES (047103098-8)
□ Cowan/BUILDING (047102738-3)
□ Cowan/MASTER BUILDERS (047102740-5)
□ Liebling/DRAWINGS (047103432-3)

Payment enclosed, plus sales tax, Wiley pays postage/handling. We normally ship within 10 days. If shipment cannot be made within 90 days, payment will be refunded.

Bill me. □ Bill firm or institution.

Prices subject to change without notice.
Security's shining hour.


*Patent No. 4,103,526

Circle No. 364, on Reader Service Card
"Side by Side." Gilford’s new collection of Belgian Linen wallcoverings
and the matching drapery fabrics.  
They complete the picture.
Wherever color contributes to environment... consider the advantages of NORAMENT. Twelve standard and sixty-three decorator colors are available in its general purpose formula. Wherever slip-resistance is a standard for safety... consider the advantages of NORAMENT. Three-dimensional discs, called pastilles, in an over-all pattern, are supplied in large one-metre square tiles.

Made of 100% pure synthetic rubber, NORAMENT's several formulations make it specially suited for use indoors and outdoors, under wet and dry conditions. Even its general purpose formulations are resistant to oils, greases, acids and chemicals. NORAMENT meets fire safety requirements.

NORAMENT is used worldwide for airports, restaurants, fast food chains, colleges, schools, office buildings, laboratories, oil rigs, auto show rooms, printing plants, subways, post offices, factories, hospitals, banks, sewage and power plants, computer rooms, locker rooms and as decking for swimming pools... and almost all conditions of use, test and wear.

The trading floor of the Mercantile Exchange in Chicago is a raised NORAMENT floor. After eight years of daily use and abuse, including butted cigarettes, NORAMENT shows no discernible wear... no loss of lustre. Self-waxing and easy to maintain, NORAMENT is best where the action is.
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.

Author: Josephine H. Drummond, CSI, is Manager, Southern Premises, Real Property Management Department, Wells Fargo Bank and is a specifications consultant in private practice.
Resilient flooring

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 facts 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.

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 is the area in which many 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

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
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 Pavilion Soixantedix, St. Sauveur, Quebec (right), by Peter Rose, with Peter Lankcn 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 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 Aristocon 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 Hospital X-ray facility, Brigantine sheet vinyl by Armstrong; 5. 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 qualities 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...
Resilient flooring

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 overengineered 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 ¼ 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 flooring, 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 Kynet, 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.
Metrcication 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 metrcication 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-
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 metrification 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,
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 congressmen 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 organiza­tion structure; identify the decision­makers; 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.

The building and construction industries
On the green meadows of Radnor Corporate Center in suburban Philadelphia, Sun Oil Company located their world-wide headquarters. Two other buildings of this $25 million, 450,000 sq. ft. office campus house the national corporate headquarters of six additional companies. The 72-acre setting, distinguished for its natural landscaping that includes a wildlife preserve, blends graciously with the gently rolling Pennsylvania countryside. Ten Dover Oildraulic® Elevators serve the three buildings, carrying employees and visitors to their destinations smoothly and efficiently.

For more information on Dover's low-rise Oildraulic Elevators and high-rise Traction Elevators (both geared and gearless) write Dover Corporation, Elevator Division, Dept. B, P.O. Box 2177, Memphis, Tennessee 38101. No. 320

Sun Oil Company Headquarters
One Radnor Corporate Center, Radnor, Pennsylvania
Owner: Radnor Corporation
Architect: John Carl Warnecke, FAIA, Architects, New York
Contractor: Turner Construction Company, Philadelphia
Dover Elevators sold and installed by
Security Elevator Company, Philadelphia
A 10-acre roof of TEFLOW...and air
Fabric coated with
supports the load.

An air-supported dome of lightweight Fiberglas® coated with DuPont TEFLON® fluorocarbon resin completely roofs Pontiac Silverdome, home of the Detroit Lions, Detroit Pistons and Detroit Express. The 10-acre area is the largest permanent structure roofed with architectural fabric to date—and the stadium cost far less to build than comparable stadiums using other dome approaches.

Although the roof weighs 200 tons, the spectators inside never notice the slight increase in air pressure that supports it.

In addition to low construction costs, fabric structures coated with TEFLON offer easy and economical maintenance. The coated fabric resists sunlight, dirt and aging, and rain helps keep it clean because of the non-stick surface of TEFLON. Fabrics coated with TEFLON have high reflectivity, which helps minimize energy expenditures for cooling in summer. They also provide relatively high solar transmission for natural illumination and can be insulated to minimize heat loss in winter.

Architectural fabric structures are strong. When properly specified, they easily withstand the stresses of wind and snow. And Fiberglas® coated with TEFLON does not support combustion—exhibiting exceptionally low values for flame spread and smoke generation.

Send for free booklet

Find out more about the advantages of architectural fabrics coated with TEFLON for permanent buildings. For a free 16-page full-color brochure, write: DuPont Company, Room 37050A, Wilmington, DE 19898.
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 constructive fraud 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.
Drywall is no bargain. Vaughan Walls are.

Changes in drywall partitions are messy and expensive.

Vaughan Walls are designed to be moved, quickly and easily.

Vaughan Walls go in fast for a clean, time-saving installation. Future moves are easy, without disruption. Meet any design criteria — components for every condition. Doors and windows where and when you want them. Pre-finished vinyl panels never need painting, last for years, unlimited choice of surfaces. Exceptional strength and stability, with space-saving 2¼" wall thickness. Excellent sound control (37-50 STC), one-hour fire rating available, hang-on capabilities, non-combustible service chaseways. Components are 90%-100% reusable, no component ever obsoleted in 22 years. Qualify for investment tax credit. Factory-licensed contractors assume total job responsibility.

For more information, write or call Vaughan Walls, Inc., P.O. Box 68518, Indianapolis, Indiana 46268, 317/299-0070
Clark double-acting doors are 100% tough!

They can stand up to punishment better than any other door you can buy.

They are available in corrosion-resistant finishes which fight off the devastating effects of steam, salt water and waste treatment chemicals.

They save money by reducing the loss of cooled or refrigerated air. (The Shock Absorber door is urethane filled for maximum insulating efficiency.)

They are designed to provide the constant access you need to keep your material on the go.

Call or write us today for free double-acting door catalog.

U.S.A.: 69 Myrtle St., Cranford, N.J. 07016; Tel. 201/272-5100; Telex 13-8268

ENGLAND: Willow Holme, Carlisle CA2 5RR; Tel. 0228-22321; Telex 561-64131

SWEDEN: S-522 00 Tidaholm; Tel. 0522-11320; Telex 670 66 Bevev S

CANADA: 46 Torbay Rd., Markham, Ontario L3R 1G6; Tel. 416/495-1292; Telex 06-986840


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]
Mini-Brick simplified engineering and shortened construction schedule in 110' steel structure as construction moved at its own pace, not tied to the masonry.

Mini-Brick eliminated need for heavy back-up framing or typical reinforcing steel. Ordinary metal studs used with rib lath and plaster.

There are things you can do with Mini-Brick® you just don’t think about doing with regular size brick. For example—working with those rows of sweeping lines. Cantilevering a massive structure. Peer ing a big building when you’re on a steel and concrete budget. And the like. They’re all very thinkable with Mini-Brick.

That’s why. Mini-Brick is an honest, kiln-fired brick, but it’s just 7 1/16” (11mm) thick. That’s 1/7th the size—and 1/7th the weight—standard brick.

They set in like tile. No heavy back-up framing or the typical reinforcing steel. Handling on scaffolding is 1/7th simpler, too. So is job-site storage.

And the construction schedule isn’t tied to the masonry; it’s free to run its own pace.

4 sizes—over 30 finishes. There’s plenty to work with. Glazed, unglazed—each unique, with a distinctive, handcrafted character that’s a sharp contrast to the uniformity of tile.

Some sizes are especially for paver use; all are excellent for veneering.

Big building bricks.

New think kit. All the details—case histories, specifications, application techniques—are in our latest literature.

Write or call for your free set.
THOUSANDS OF HEALTH OFFICIALS RELY ON THIS SEAL

Why? Because the NSF seal or logo assures them that a health-related product bearing the NSF mark has been manufactured, inspected and tested in accordance with an NSF standard. The public health official knows that the standard itself has been written with the assistance of nationally recognized public health professionals and submitted to peer review by the NSF Council of Public Health Consultants.

Health officials know, too, that for decades NSF has monitored the design manufacture and performance of millions of health-related items of equipment bearing the NSF seal. For example, specimens of such products are evaluated at random on unannounced factory visits by NSF representatives. When necessary, sample products may be sent to the NSF Testing Laboratory for performance tests.

In accepting a product with the NSF seal or logo, the health official has the reassurance of a professionally developed voluntary standard—backed by scientific testing in the laboratory of a foundation which is named "national" but is recognized throughout the world.

National Sanitation Foundation—an independent non-profit, non-governmental organization dedicated to environmental quality. Offices and laboratories: NSF Building, Ann Arbor, Mich. 48105 (313)-769-8010

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 (principle 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
PPG OFFERS A STUNNING ALTERNATIVE TO THE DRAB SLAB.

Discover a spectacular exterior wall treatment that puts new designs on what it surrounds. Discover PPG's Solarcool® Spandrelite® wall cladding. In addition to dramatic beauty, Solarcool Spandrelite wall cladding offers outstanding performance capabilities. In new or existing applications, at a cost that's lower than the expected exterior wall treatments: concrete, aluminum, stone and polished stainless steel.

An advanced structural silicone glazing system with the mullions inside can make Solarcool Spandrelite wall cladding appear seamless. You're free to choose glass types and thicknesses previously unimagined. And Solarcool Spandrelite works as an energy-efficient opaque curtain wall or a window area. Can even hang in front of insulation.

Since 1965, PPG has led the world in creative application of structural silicone glazing systems. And began to build more "oohs" and "aahs" into buildings.


PPG: a Concern for the Future
Circle No. 359.
Put on a happy fascia

One that stays happy, too. Because Hickman Modu-Line fascia panel systems completely eliminate oil-canning. Modu-Line is a custom system. So it’s available in any spacing you need from 4 to 24 inches. And comes in lengths up to 24 feet. You select from a big variety of battens, and a bunch of colors and finishes. The result is a handsome, custom system. And one that lasts.

Hickman. The flexible system that never flexes once you put it up. See our catalog (7.3 H) in Sweet’s.

Hickman’s FREE “Roof-Line” . . . 1-800-438-3897
Available in Canada

NEW

perforate

AN ECONOMICAL ALTERNATIVE TO CLOSE MESH GRATING

- Combines STRENGTH of bar grating with the small opening of perforated or expanded steel.
- Protects people under mezzanines or catwalks
- Prevents tools, parts and debris falling through grating
- Flooring for Sand Blast rooms
- Wide variety of sizes available

GET THE “HOLE” STORY ON PERFORATED METAL + EXPANDED METAL WIRE CLOTH + BAR GRATING + GRIP STRUT SAFETY GRATING

CALL OR WRITE FOR OUR NEW CATALOG AND STOCK LIST
WAREHOUSE STOCKS CLEVELAND • CHICAGO • DALLAS • TAMPA

McNICHOLS CO.
5501 Gray Street / Tampa, Florida 33609
813/876-4100
CALL TOLL FREE
800-237-3820
(In Florida) 800-282-6600

Current and choice


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.


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, 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.


In this beautifully illustrated and produced book, the exquisite taste and sensitively 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.
Nature's tile with an Italian accent!

Florida Tile has applied the skills of Italian craftsmanship to an original blend of nature's own clays to create Natura. This classic ceramic tile is available in a fascinating variety of decorator colors, textures and fired glazes designed to enhance any floor or wall of the home. Natura is European in heritage, yet made in America, so it's competitively priced with complete back-up inventory that makes it promptly available for those discerning clients of yours when they want it. Return this coupon and we'll send you the name of our distributor near you, some additional information and an actual sample of Natura, the Florida Tile that says elegance with an Italian accent. Naturally.

I have clients who understand the beauty of an Italian accent in distinctive floor and wall covering. Please send me a sample of Natura and all other information you have on this fine tile. I am also interested in the name of my local distributor.

Name
Company
Address
City State Zip
Telephone

Florida Tile Sikes Corporation Lakeland, FL 33802

Circle No. 331, on Reader Service Card
New LCN 4041 Closer

meets minimum opening force requirements for barrier free access.

The LCN 4041 is a special series Super Smoothee® closer engineered with low-rate spring power to make door opening easier for people who are elderly, disabled or handicapped. A wide range of spring power adjustability permits the opening force of the 4041 to be set below 5 lbs. to meet many barrier free requirements for interior doors 36" to 48" wide. Adjustment upward satisfies many exterior opening force minimums and the 4041 can be regulated to compensate for many unforeseen conditions such as wind and negative or positive pressures.

The LCN 4041 has all the best features of the standard Super Smoothee: streamline appearance, heavy duty components, non-handed, mounts three ways and adjustable spring power.

Where minimum opening forces for exterior doors range from 8 lbs. to 15 lbs. and greater door control is required, specify regular 4040 series Super Smoothee.

Send for FREE LCN brochure which describes problems of and solutions for barrier free openings.
Alma Desk is proud to announce the latest addition to our wide variety of seating for the office environment. Available in arm chair, low back swivel and high back swivel styles, the possibilities are further complimented by a choice of walnut or oak and over 200 fabrics.

True to Alma Desk tradition, our newest seating offers an excellent combination of tasteful design and superb comfort.

For seating, desks, credenzas or panel systems, contact Alma Desk Company, Box 2250, High Point, North Carolina 27261. Showrooms: 280 Park Avenue, New York; 1140 Merchandise Mart Plaza, Chicago; Southern Furniture Mart Center, High Point.
Vernitron's Systems Approach gives you a broad range of interrelated sterilizers, washers and dryers. The precise system to meet your precise needs. Or, the individual unit to replace part of your present installation. To solve your specific problems.

Design is simple, so it's easier to train personnel. Automation's built in, so operation is easier. Machinery is readily accessible, so our systems are easier to maintain. Modular elements snap in, snap out. Many replacement parts are standard-available through your local industrial supplier. Goodbye downtime.

And we give you the Vernitron representative. He's more than a salesman. He's a washer, dryer, sterilizer pro! He can make on-the-spot repairs. Replace parts. Make suggestions. Untangle problems. Need. You the Vernitron representative. He's more than a salesman. He's a pro. Vernitron gives you T.E.S.S. Our exclusive Terminal Effluent Sterilizing System. Extra protection when involved with today's high hazard technological materials.

Make the Vernitron system your system. Our engineers will match their experience and innovation with your creativity. To engineer and install equipment designed to meet your specific needs.

If construction or expansion of a biohazard department is in your future, mail the coupon below today. I'd like to get Vernitron in my system. Tell me more about your sterilizers, washers, dryers and T.E.S.S. systems.

5 Empire Boulevard, Carlstadt, New Jersey 07072

CABLE: VERMED NEW YORK

VERNITRON MEDICAL PRODUCTS
5 Empire Boulevard, Carlstadt, New Jersey 07072

Circle No. 372 on Reader Service Card
NATURESCAPES: The largest, most dramatic collection of quality photosurfaces available.

They offer an exciting design alternative to your residential or contract requirements.

The collection consists of works by the finest photographers/naturalists. Reproduced on the most stable grade of synthetic available, a Naturescape photosurface is durable, dry-strippable and meets all commercial/institutional standards.

NATURESCAPES. The perfectly natural wallcovering.

Write for full color brochure.

“FLOWERING DESERT” by Ed Cooper/ 10 1/2” x 8 1/3” wall
GRINNELL SPRINKLER SYSTEMS GIVE YOUR DESIGNS MORE ELBOW ROOM.

Space limitations imposed by building codes can also impose limits on architectural creativities. But you can broaden those limits by installing a Grinnell Sprinkler System.

When sprinklers are installed throughout a building, many building codes permit up to a 300% increase in floor area—depending upon occupancy, height, and construction — resulting in a correspondingly better utilization of valuable land.

A sprinkler system is a capital investment that allows you other cost-saving design freedoms as well. Increased building height. Greater distance between exits. A wider range of interior finishing materials. Lighter roof framing. Decreased exit widths. Fewer draft stops and less firestopping.

So when you lay out your next building, design in a Grinnell sprinkler system. It'll help you make more economical use of every construction dollar.

For additional information call your nearest Grinnell district office located in the Yellow Pages, or write: Grinnell Fire Protection Systems Company, Inc., 10 Dorrance Street, Providence, Rhode Island 02903.

Circle No. 335, on Reader Service Card
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.

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.

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.

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.

"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", ¼-in. thick. Kentile Floors.

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.

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.

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.

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.

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.

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.

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 assembled into any pattern.
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 1/4-in. thick in front, tapering to 1/8 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.

Metrcation

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

Literature

Metrcation in Building Design, Production, and Construction. This is a 188-page compendium of ten papers prepared by Hans J. Milton, technical consultant on metrcation and dimensional coordination to the National Bureau of Standards Center for Building Technology. Subject areas include management and economics of metrcation; specific product metrcation; public construction sector's role in metrcation; building standards and codes; graphic design; and US opportunities in metrcation. 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.


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 $2.40.

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 each. Order single copies of CED-78-128 from U.S. General Accounting Office, Distribution Section, Room 1518, 441 G St. NW, Washington, DC.


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 in. high.

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 metrcation 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.
Construction products that swing, slide or fold. We've got a full line for every building class, every building style. And the service to back it up. That's why we have such a solid reputation. And it's building every day. If your reputation is building, contact your nearest Stanley sales representative today.

Stanley Hardware, Division of The Stanley Works
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.

FOLLANSBEE STEEL CORPORATION • FOLLANSBEE, WEST VIRGINIA
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

Plastic laminates added to the Micarta line include three Linairgrains, 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 111 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 112 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 112 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 113 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 114 on reader service card

Who offers architects the widest range of laundry washing systems?

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.

For a FREE Laundry Planning File—and help in selecting the right laundry system for your clients—check the reader response card or write us today.

MILNOR.

Who offers architects the widest range of laundry washing systems?

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.

For a FREE Laundry Planning File—and help in selecting the right laundry system for your clients—check the reader response card or write us today.

MILNOR.

Who offers architects the widest range of laundry washing systems?

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.

For a FREE Laundry Planning File—and help in selecting the right laundry system for your clients—check the reader response card or write us today.

MILNOR.

Who offers architects the widest range of laundry washing systems?

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.

For a FREE Laundry Planning File—and help in selecting the right laundry system for your clients—check the reader response card or write us today.

MILNOR.

Who offers architects the widest range of laundry washing systems?

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.

For a FREE Laundry Planning File—and help in selecting the right laundry system for your clients—check the reader response card or write us today.

MILNOR.

Who offers architects the widest range of laundry washing systems?
Black Slate laminated plastic.

Laminated plastic that is post formable 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 Vircutex® 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.
- Installed after other trades are finished.
- Fry's SM Flashing helps eliminate buckling with new expansion slots (16" OC) which permit expansion, contraction.
- Helps eliminate leak problems with use of neoprene-surfaced, stainless steel washers to cover expansion slots.
- 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.

Fry Reglet Corporation

625 So. Palm Ave., Alhambra, CA • Phone (213) 289-4744

Circle No. 330, on Reader Service Card
THE NEW GUARD.
OLD AS TIME.

Witness the nature of new Guard. New textured patterns drawn from the timeless earth. Weathered wood in new "Splinters." Woven grasses in new "Djakarta." And the history of timeworn mountains in new "Sand Stripe." Elegant, warm, simple... the perfect inner environment. And all are economical, care-free Type II material designed first of all to last. Get in touch with these and all the other time-honored Guard vinyl wallcoverings in the Guard sample book, now with 35 designs and 800 colors to choose from. Send for more information and sample swatches. Columbus Coated Fabrics, Columbus, Ohio 43216. But hurry. Time waits for no one.

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

Acroyn® protection systems catalog offers corner, wall, and door protection products that 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. Construction Specialties, Inc.

Circle 212 on reader service card

Specular Tile

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

Shezan Restaurant, New York, N.Y. Archt: Gwathmey & Siegel, New York, N.Y.

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.
SALES OFFICE: 50 HARRISON ST., HOBOKEN, N.J. 07030 • PHONE (212) 349-1890
DIRECT PHONE TO FACTORY: (201) 864-6630

Sales "Reps" needed—Write to Simplex for information

NOW YOU SEE IT

NOW YOU DON'T

The Soss Invisibles—for a custom look for any room! These amazing hinges hide when closed, eliminating unsightly gaps, hinges and door jambs. They’re the perfect hidden touch for doors, door walls storage cabinets, built-in bars, stereos, and TV’s. Specify the Soss Invisibles wherever looks matter. See listing in Sweet’s or write for catalog: Soss Manufacturing Co., Division of Core Industries, Inc., P.O. Box 8200, Detroit, Michigan 48213.
NOW READY. A NEW BALLY WORKING DATA CATALOG.

The most comprehensive information available about Walk-In Coolers, Freezers and Refrigerated Buildings.

FREE FOR YOUR REFERENCE LIBRARY.

Up to the minute technical engineering information in this new 186 page volume... illustrated with over 400 photos, drawings and charts. Provides weight and size data, refrigeration and electrical capacities, details about floors and doors. Also, actual samples of available metal finishes. Three pages of data and charts explain the superior advantages of Bally's 4" thick urethane, foamed-in-place... with an R Value of 34.48. For immediate reference, see Sweet's Architectural File, 11.23b/Ba.

Circle No. 306, on Reader Service Card

Bally Case & Cooler, Inc., Bally, PA 19503 Phone: (215) 845-2311

Name
Company
Address
City State Zip

Address all correspondence to Dept. PA-3
Delta handles more over-the-counter shipments of 50 lbs. or less than any other certificated airline. And DASH (Delta Airlines Special Handling) serves 86 U.S. cities plus San Juan. Any package up to 90 inches in total dimensions, and up to 50 pounds is acceptable. DASH packages accepted at airport ticket counters up to 30 minutes before flight time, up to 60 minutes at cargo terminals.

Rate between any two of Delta's domestic cities is $30 ($25 between Dallas/Ft. Worth and Las Angeles or San Diego or San Francisco). Shipping charges prepaid. Pick-up and delivery available at extra charge. Call 800-638-7333, toll free. (In Baltimore, call 269-6393).

You can also ship via DASH between Delta cities in the U.S. and Montreal, Nassau, Freeport, Bermuda and London, England. For full details, call your local Delta cargo office.

DELTA IS READY WHEN YOU ARE ®

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 style types are offered. For a copy of any of the three catalogs, write to: David B. Gibson, Scott Plastics Co., P.O. Box 2956, Sarasota, FL 33578.

Products for controlling noisy environments in public buildings and offices, dampening and reducing equipment noise, conducting acoustical 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.

Circle 216 on reader service card

"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 Libby-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.

Circle 217 on reader service card

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).


Circle No. 318, on Reader Service Card
It takes a comfortable setting to get a great idea rolling.

Elegance and comfort. It takes skill to design the fine lines that make beauty functional. It starts with an idea that needs a comfortable setting in which to grow. Bruning understands.

We have a full line of Hamilton engineering drafting furniture and Bruning accessories designed for maximum comfort, efficiency and accuracy.

Our ACCUTRAC™ draf ter, for instance, allows you to use 99% of your drafting board. And its head is made with a multiple-tooth index plate that’s almost impossible to wear out.

Fact is, Bruning can get you rolling with a complete line of top-quality furniture and supplies.

For more information, call your nearest AM Sales Office. Or write AM Bruning, Dept. E, 1834 Walden Office Square, Schaumburg, IL 60196.

We help bring your vision to life.

Bruning
the Informationists.

See our catalog in Sweet's, Sec. 1.4/Br.
Here, for the first time in this century, is an opportunity to re-examine the philosophy of the Beaux-Arts school of architecture.
Carpenter Gothic
19th Century Ornamental Houses of New England
McArde & McArdle
p., illus. ... $24.50

Living by design: Pentagram
206 pp., illus. ... $25.00
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.

Open Office Planning
A Handbook for Interior Architects and Architects
By John Pile
206 pp., illus. ... $15.95
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.

A Dictionary of Architecture
By Nikolaus Pevsner, John Fleming, and Hugh Honour
554 pp., illus. ... $17.95
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.

Drawing File for Architects, Illustrators and Designers
By Marc Szabo
251 pp., illus. ... $13.95
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, photoslifts, or photocopying machines. The pages tear out easily to form an easily accessible finger-access file. Circle B620 under Books.

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, replaces 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.

Living Spaces: 150 Designs from Around the World
Edited by Franco Magnani
120 pp., illus. ... $22.50
This magnificent book provides a wealth of imaginative and practical ideas for home planning 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.

By Robert C. McHugh
166 pp., ... $13.95
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.

The Architecture of Parkett: Frank Lloyd Wright
By Robert Venturi
196 pp., ... $16.95
This book includes presentations ranging from simple sketches in 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.

Rendering with Pen and Ink
By Robert W. Gill
368 pp., illus. ... $8.50
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.

Downtown USA: Urban Design in Nine American Cities
By Kenneth Halpern
Forward by Edward Koch, Mayor of the City of New York
256 pp., ... $27.50
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.

Rendering with Pen and Ink
By Robert W. Gill
368 pp., illus. ... $8.50
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.

Site Planning for Cluster Housing
By Richard Unter mann & Robert Small
306 pp., illus. ... $32.50
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.

Downtown USA: Urban Design in Nine American Cities
By Kenneth Halpern
Forward by Edward Koch, Mayor of the City of New York
256 pp., ... $27.50
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.
Progressive Architecture

Job mart

Situations Open

Architect/Construction Administrator: Young twenty-man Dallas, Texas firm desires architect with three to five years experience and proven abilities in construction administration activities. Duties will include both field and office work. We are a diversified firm serving a broad range of clientele. We are an equal opportunity employer. Send resume to Thompson/Parkey Associates, Architects, 8325 Walnut Hill Lane, Suite 205, Dallas, Tex 75231.

Architect/Health Planner: Position open with major consulting A/E exhibiting excellent growth history. Qualified professional should possess highly design oriented background of 8-10 yrs. in the health care and/or teaching facilities area with additional professional expertise in complete facilities Master Plan preparation and programming. Supplementary qualifications should also include the ability to conduct effective oral and written communications, supervise related project personnel, and, to assist in some marketing efforts. Position offers excellent compensation along with future personal growth. Respond in confidence to our representatives: G. Marshall Assoc., P.O. Box 66083, Chicago, Ill 60666.

Architectural Design/Visual Design Faculty Position: The Department of Architecture, College of Environmental Design, University of California, Berkeley, is seeking candidates for a position at the Assistant Professor level to teach visual thinking, drawing, graphic communication, and design. The candidate should have a strong commitment to teaching undergraduate students and to working with the core faculty group in the College's innovative new Undergraduate Program in Environmental Design. Teaching experience particularly in drawing, graphics and beginning design, professional experience in design, visual communication or related areas, and a commitment to research will be important. The position carries co-responsibility for the introductory course in seeing, drawing, and design. This involves lecturing, demonstrations, studio work, supervision of teaching assistants, and course administration. The successful applicant will also be a person with the ability to establish connections with environmental design and architecture faculty working in design, social and behavioral factors, building science and technology, landscape architecture and urban planning.

Contact the Secretary of the Faculty Search Committee, Department of Architecture, University of California, Berkeley, California 94720, for further information and application forms. Applications must be received by 15 April, 1979. The University of California is an Affirmative Action employer.

Assistant Architects, Kuwait: Applicants must have a Bachelor's Degree in Architecture or equivalent with (2-5) years experience in preparation of architectural working drawings. Postholders will be responsible for the production of well coordinated architectural details for major commercial and residential projects. Preference shall be given to those applicants with ability to draw perspectives and have adequate knowledge of building services. Please send resume with desired salary and photograph to: KUWAIT ENGINEER'S OFFICE, P.O. Box 3679, Safat, Kuwait.

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 Shoget, Chairman, Search Committee, Architecture Program, School of Design, P.O. Box 5396, Raleigh, NC 27690. An Equal Opportunity Employer.

Faculty: Tenessee, 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. Involve 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 experience 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, Ill 60666.

Lecturers: In the Assistant/Associate Professor pay ranges for the 1979-80 academic year. Teaching areas include (a) two- and three-dimensional design and environmental awareness, (b) architectural design and practice, (c) acoustics, lighting and thermal equipment, mechanical and electrical services. We are also looking for other applications. Required is the Master of Architecture or other appropriate master’s degree, or professional degree and additional practice. Teaching experience at collegiate level licensed in practice, research and publication is desirable. Salary is $14,256-$21,11 per 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 93407, 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 openings 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.


Marketing Manager: For 40 person AE office in Mid-Atlantic area. Must be capable of directing marketing, advertising, public relations and client contact operations. Firm principals assist in contract development and presentations. Spectro projects includes industrial, commercial and government work, with some work in multi-family and institutional. Applicant must have sales experience. 1361-263, Progressive Architecture.


Project Designers: An expanding medium size A/E firm has a position open for an experienced project designer. Registration is preferred, but openings are also available for architects in training with three to five years experience. Recent hospital experience is preferred, although not essential. We are a multi-disciplined design-oriented firm with a wide variety of project types. We are located in a Big Ten university community with outstanding opportunities for cultural and athletic activities. Iowa City offers an excellent environ...
Break the barriers of accessibility, cost and space.

Barrier-free Bradpack wash centers are completely pre-assembled to save you time, space and money. Everything (including light, towel and soap dispensers, mirror, faucet and many other features) has been designed for convenient use by everyone, including the physically disabled. A Bradpack wash center comes to you in one piece—so you can set it into place and connect the water and electricity. With significant savings in floor and wall space as well as installation labor, these units are equally suited to remodeling or new construction applications.

Find out how you can break barriers to efficient washroom design. Send for our Bradpack catalog. A 30 minute educational film, "Barrier-Free Washroom Design" is also available for viewing. Contact your Bradley representative or Bradley Corporation, 9101 Fountain Blvd., Menomonee Falls, WI 53051 (414) 251-6000. TELEX 26-751.

Another right idea from Bradley

Circle No. 308, on Reader Service Card
The logic of this tensioned membrane structure is as exciting as its appearance. A canopy over a school yard play area, it provides shelter for outdoor activities in almost any weather. The attractive "upside-down" design allows rain water runoff through the support columns.

The shelter is fabricated of vinyl-coated polyester material held in tension on a steel framework. The result is a lightweight, rigid structure engineered to withstand heavy wind loading. Though it is in a higher priced class than a tent, a tensioned membrane structure offers far greater strength and durability. Compared to alternate structures of wood, steel or masonry, it typically results in important cost savings.

When your imagination calls up great roofed-over spaces or rhythmic curvilinear shapes, Helios Tension Products are the people to try your ideas on. We specialize in helping architects translate their innovative designs into practical reality. Our expertise includes design, engineering, fabrication and erection—a total comprehensive service unmatched in the U.S.

For more information, or help with a specific project, call or write:
Dept. P3, Helios Tension Products, Inc.
1602 Tacoma Way, Redwood City, CA 94063
Telephone: (415) 364-1770
Telex 345590

HELIOS TENSION PRODUCTS, INC.
Soft Shell Structures Division
Job mart continued from page 134

leadership in the development of project management and production techniques. Currently managing 30 person architectural department at large A/E firm. Seeking similar position with architectural, A/E or design-build firm which offers increased financial and professional growth. Reply Box 1361-296, Progressive Architecture.

Environmental Systems Professor: Professional engineer, presently Visiting Lecturer at Architectural School, interested in developing curriculum and/or teaching energy technology to architects. Many opportunities developing for architects with background in energy conservation, solar energy, retrofitting, Mechanical/electrical professional engineer. Registered in several states and NEC Certificate of Qualifications. Reply Box 1361-266, Progressive Architecture.


Architectural Services

Architectural Arts by Steve Rugg: Professional presentations that sell concepts and ideas, are accurately depicted by artists that have the knowledge and experience to put YOUR ideas to work. Commercial and Residential Renderings; B&W-color; Interior Renderings; Furniture Illustrations; Advertising; Brochures. Write for FREE brochure. (305) 896-0473, P.O. Box 3362, Orlando, Fl 32802.


Computer Applications: Software development services for architectural, engineering and construction management applications. Automated solutions to the analysis and maintenance of project and office management information. Additionally, computer graphics, space planning, data base systems, and cost estimating. Write Robert J. Krawczyk 211 East Delaware Place, Chicago, Il 60611, (312) 944-4450.

Design and Development Services by PLANNING 2000/Inc.: Complete service for your project. Offering high standards of planning and design for commercial, residential and institutional developments. The interdisciplinary approach gives the client real answers, not pre-determined ones. Write Douglas M. Cotner, 106 So. Washington Ave., Saginaw, Mi 48607 or call (517) 754-2131.

International Plastics Consultants, Research and Development: Specializing in low and moderate cost housing systems for developing countries and for domestic markets, applications of plastics in building and architecture, specification writing, university lectures, variety of other services. Armand G. Winfield Inc., 82 Dale St., West Babylon, N.Y. 11704, (516) 249-2462.

Rendering Services: Top professional rendering service coast to coast. Architectural, Urban, landscape, interiors, industrial, advertising illustrations in pen and ink or color for the best reproductive Portfolio by appointment. Allow maximum time for job completion. Please call Mark de Naolovsky-Pozzavodski (203) 669-4596, 25 Birchwood Dr. Greenwich, Ct 06830.

Rita Sue Siegel Agency: Ms. Woody Gibson creates creative architects, interior designers and urban planners to our international clients. Rita Siegel identifies and evaluates industrial and graphic designers. You are invited to submit confidential resumes. Our clients pay all fees. W. 55th St., NYC 10019, (212) 586-4750.

Slate Roofs: "A handbook of data on the construction and laying of all types of slate roofs." Ten in 1926 and now reproduced. Completely vaut today. Many details. Send $5.25 to Verm Structural Slate Co., Inc., P.O. Box 98, Fair Haven, Vt 05743.


Notice

Please address all correspondence to box numbered advertisements as follows:

Progressive Architecture

% Box

600 Summer Street

Stamford, Ct 06904

Advertising Rates

Standard charge for each unit is Twenty-five Dollars, with a maximum of 50 words. In counting words your completed ad (any address) counts as five words, a box number as three words. Two units may be purchased for Fifty Dollars, with a maximum of 100 words. Check or money order should accompany advertisement to be mailed to Job Mart % Progressive Architecture, 600 Sur Street, Stamford, Ct 06904. Insertions will be accepted not from the 1st of the month preceding month of publication. E number replies should be addressed as noted above with i number placed in lower left hand corner of envelope.
New, factory-formed zinc roofing systems

MICROZINC 70
reduces on-site costs in Dallas-Ft. Worth

In the Dallas-Ft. Worth area, Microzinc 70 is well-known for its beautiful pre-weathered patina — the reason it was chosen for this stunning residential design.

But Microzinc 70 is even more attractive in economical ways!

Each Batten-seam or Standing-seam LOK System is delivered in pre-engineered form. Installation is so simple that on-site labor costs are substantially reduced. No cleaning, no special soldering tools, no painting needed — and no priming should you want to paint. Once Microzinc 70 is installed it becomes still more attractive... no maintenance problems; no leaks, no staining from run-off, and no rotted materials. Investigate the on-site cost savings of Microzinc 70 pre-engineered components. For further information, write today or call 615-639-8111.

Greeneville, Tennessee 37743 (615) 639-8111.

Ball Metal & Chemical Division

Circle No. 305, on Reader Service Card