# **Progressive Architecture**

November 1978 A Penton/IPC Reinhold Publication

Reclaiming the pas



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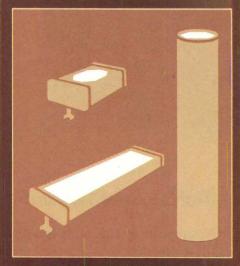
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November 1978

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**Cover:** St. Joseph's Fountain, designed by Charles Moore and Urban Innovations Group, forms the centerpiece of August Perez & Associates' Piazza d'Italia in New Orleans (p. 81). Photo: Norman McGrath.

### How saving money on roof insulation is a quick way to go broke

**NEW CONSTRUCTION** Economic Insulation Amount– Heating and Cooling

**C**utting down on roof insulation is like cutting your financial throat. Roof insulation makes good economic sense.

But only when you know how much you really need. Too little and you'll be buried in fuel cost. Too much insulation and it'll seem like forever before you recover the cost.

Here's a not too farfetched example to show you what we mean: A million-square-foot (1,000,000) plant with a minimum amount of roof insulation "R" 2.77 ("C"-0.36) in the northern part of the country with 7,000 degree-days and 500 cooling hours. It can cost you \$129,700 per year to heat and cool.

Assuming a 5% annual inflation in fuel costs, seven years from now the same building will conservatively cost you a whopping \$208,250 to heat and cool per year.

But there's more to come. The original equipment cost for heating and cooling our not so farfetched example could run as high as \$1,900,000. How's that for a quick way to go broke!

 $\mathbf{R} = 16.67$  $\mathbf{C} = .06$ 

R = 14.29

**C** = .07

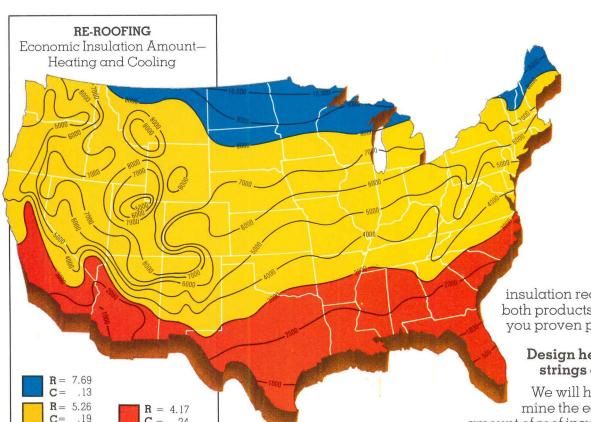
#### How to avoid going broke

Take a hard look at these two "Economic Insulation" maps. Using 7,000 degree-days, 500 cooling hours and 80°F temp. difference. The map for a new roof recommends an "R" of 16.67 ("C" of .06). Translated into energy costs a year, that's only \$25,000 to heat and cool this building. A savings of \$104,700 the first year and a possible reduction in equipment cost of \$1,500,000.

### How the maps were developed

Owens-Corning has taken twenty years of energy management experience and put it into a computer.

We used a metal-deck commercial or industrial building, with gas heat and electric cooling, as our base. We did thorough calculations for degree zones throughout the country. Then we factored in a 15-year building life. A 5% annual fuel inflation estimate. We put corporate income taxes at 48%. Electric costs at \$0.03kwh, \$1.80/M cu. ft. (1 million btu) for gas. Equipment costs were pegged at \$1000/ ton—cooling. \$35/1 M btu heating. Plus 5% equipment maintenance cost. Roof resist-



ance: 1.50-summer, 1.11winter. Insulation 3/4" fiber glass.

C =24

For equipment design an 80°F temp. diff. and deck ETD of 62°F were used. Allowed for 10% roof insulation cost adjustment and 75% heating system efficiency. The maps are the result.

If you're designing a new roof or replacing an old one, you can tell at a glance the economic amount of insulation you should be using for your project. Pure and simple.

### Talk to our computer about your special requirements

Our "economic insulation" maps should cover most of new roofing and re-roofing projects. If your roof is a special case, you can talk to our EMS 3 computer by using a touchtone telephone or computer terminal. Give EMS 3 the basic information about your project and EMS 3 will tell you the economic insulation amount based on your input. It will also give your projected first-year heating and cooling savings, equipment savings on new construction, and added insulation cost. We'll send you full details so you

can call EMS 3 about your special requirements.

### Ask us about our roof insulation

We've got Fiberglas\* Roof Insulation and Fiberglas Urethane Roof Insulation (FURI). Depending on your design and

	as Roof Ir Iermal Val	
<u>"R"</u>	<u>"C"</u>	Nominαl <u>Thickness</u>
9.09	.11	2-1/4"
7.69	.13	1-7/8″
6.67	.15	1-5/8"
5.26	.19	1-5/16"
4.17	.24	1-1/16"
3.70	.27	15/16"
2.78	.36	3/4"

FURI Insulation Thermal Values			
"R"	"C"	Nominal <u>Thickness</u>	
20.00	.05	3-3/4"	
16.67	.06	3-3/16"	
14.29	.07	2-5/8"	
12.50	.08	2-3/8"	
11.11	.09	2"	
10.00	.10	1-13/16"	
9.09	.11	1-11/16"	

insulation requirements, both products will give you proven performance.

### Design help with no strings attached

We will help you determine the economic

amount of roof insulation. EMS 3 is hardly a salesman. It's there to help owners, engineers and architects obtain energyefficient roofs.

Of course we want to sell vou our insulation. We believe if we help you find the economic amount of roof insulation you'll probably come to us for the right insulation for your roof.

### What you should do now

Planning a new building or replacing an old roof? Incorporate the "economic insulation" amount from the maps into your specifications. If you're not directly involved in specifications, pass them along to the person who is. If there is anything that you don't understand about insulation, call your local Owens-Corning representative. That phone call might keep you from going broke.

Want more information on our roof "economic insulation" amount maps, or how to talk to our computer, drop us a line. Write to Q.I. Meeks, Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo,

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**Progressive Architecture: Editorial** 

### What's in it for the architects?

November 1978

Although preservation has become virtually an article of faith in the architecture profession today, such a situation is by no means inevitable. Only a couple of decades ago, Modern architects riding the crest of design revolution showed little patience with historic structures or those "little old ladies in tennis shoes" who tried to save them. (Is there some significance to the fact that today's youth wear tennis shoes for everything?)

Even today, individual firms and their clients are likely to be hindered by preservation forces: their plans may call for demolition of buildings that appear valuable to others; their remodeling schemes may be obstructed by controversy. Yet the profession, collectively, seems solidly on the side of preservation.

From a strict self-interest viewpoint, as we have noted, there are valuable professional opportunities in renovation, remodeling, and adaptive reuse. Such commissions offer excellent chances to demonstrate ingenuity and design sensitivity. They require more professional effort per dollar of construction outlay than new buildings especially for those still new to the process—but they generally bring in higher fees, per construction dollar, as well. For the profession as a whole, then, work on existing structures has the practical benefit of yielding a favorable share of building cost.

But what motivates the profession to fight—usually in groups—to prevent demolition or substantial remodeling, when the net effect seems to be a reduction in architectural work? Admittedly, even hands-off preservation decisions, like that on New York's Grand Central Terminal, can generate commissions—for feasibility studies, for lighting, mechanical, and refurbishing schemes—but there seem to be more genuinely public-spirited motives behind the profession's defense of architectural landmarks.

It is as if architects, having passed through a period of revolutionary zeal into one of eclectic appreciation, want to preserve the best architecture of the past as object lessons—to show the public and the next generation of architects what design skill can contribute to the world. These motives may be mixed with more social ones maintaining the identity of a place, for instance, or defending a disadvantaged group of users against displacement.

There is, however, a threshold-of-awareness problem in preservation. All of us—architects, journalists, and preservation organizations—tend to view preservation as some kind of active process, be it renovation, reuse, or just controversy. We all tend to overlook the fine architecture that simply continues to function, in good repair, with no apparent threat.

In P/A, we try to document the most important current preservation activities—remodeling and rehabilitation, public legislation and controversies. Even the defeats have important practical lessons, as demonstrated in David Morton's introduction to our "Reclaiming the Past" features in this issue. With rare exceptions, however, we leave the documentation of what seems to be undergoing no change to the historians, the guidebook writers, or other periodicals—ranging from *Oppositions* to your daily newspaper—with more diffuse editorial missions.

We know, however, that all these structures that continue in their intended roles constitute the bulk of our architectural heritage; and we want you to know that we know. We also know—as our readers do—that the lack of an *apparent* threat is no reassurance that any of this architecture is secure.

Last month, our Technical Editor, Richard Rush, titled his article on locks and security devices "Defending buildings against people." In another sense, this is what the preservation cause is all about.

Preservation is only one means toward a better physical environment—the safeguarding aspect of a larger effort to accumulate cultural capital of a particular kind: architecture. By *saving* the best—and continuing to *add* the best—we will all be serving the interests of architecture.

John Monis Difa

#### Letters from readers

### Views

#### **Embracing change**

People inherently value their ability to adapt their own environment. The degree to which adaptation is encouraged can be directly linked to the intent of a building's design. It was, therefore, a delight to read the recent "High Tech" article in your July issue.

While the style of building enclosures preoccupies much of the current architectural discussion, the published projects (in particular the Auraria Learning Resources Center and Herman Miller Factory) emphasize an important approach to technology which encourages adaptation. By treating technology as a tool, the architect has produced a building of "procedures." This fosters an atmosphere of change and flexibility, resulting in a building which is an understandable resource rather than a preconceived monument.

To the man on the street these buildings are not high-tech but do somehow symbolize an uneasy expression of impermanence. Without any historical clues of permanence, they repre-

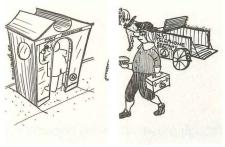


 utilizing the technology of procedure and change is significant. With increased public awareness of building performance and the scrutiny of costs, more architects should file for a divorce with the fixed and embrace change.
 Jeff Scherer The Hodne/Stageberg Partners, Inc. Minneapolis, Mn

sent a philosophy of user participation rather

Associates to evoke emotions of insecurity by

than admiration. The willingness of C.F. Murphy



#### Calling up the past

Is it possible that Mr. Johnson is helping AT&T discover—and return to—its roots? If so, his design for their New York City headquarters may be only the beginning.

The enclosed sketches illustrate other applications of Neo-Classicism to Telephone Company operations. *Irving Lepselter, IDSA* 

Industrial Design/Product Development New York, NY

#### Earthy metaphor

About the Big Yellow Schoolhouse, P/A, August 1978:

I like it in spite of a few internal dumbs. It is truly a bit of architectural sardonic whimsy. It rests on land "plowed into submission and denuded of natural vegetation." It is colored Earthmover Yellow! Mary B. Gadd Biology Preparator Colorado Springs, Co

#### Prefabrication vs conventional construction

Two articles on which I wish to comment: Hiram's at the Locks, Seattle, Wa, and Plying Colors (P/A, Aug. 1978, p. 63, p. 51).

Hiram's at the Locks: Congratulations on covering a personally familiar problem in detail, the myth that prefabricated buildings are always cheaper. Our own experience in industrial architecture design has brought us face-to-face numerous times with cost confrontations between prefabricated buildings and conventional light-frame steel/metal siding construction. Much to our own amazement, and more so to the amazement of our clients, prefabricated buildings do not always price out cheaper. First, take a prefabricated building off the assembly line with no changes in standard optional structural systems, gauges of metals, colors, sizes or profiles, and you indeed have a more economical building. However, start altering any of the standardized components, particularly the structural components, and computer-design confidence collapses with resultant added "safety confidence" cost. Second, require [Continued on page 12]

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### General Electric, the company that's made a science out of energy efficiency, gives you a fresh look at integrated ceilings.

# Only Lok Ceilings wrap performance and energy efficient system.

Let's face it. An integrated ceiling can be defined in many ways. But unless it coordinates air distribution, modular design and a range of lighting capabilities, it's not a truly integrated system.

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The secret to Lok's integrated system is modular construction. Over 300 styles of steel and extruded aluminum grid members are available so you can design your ceiling to match the room (instead of designing the room to

match the ceiling). This versatility is particularly important when you're renovating an existing structure. Moreover, the range of functional and aesthetic options offered can bring a new dimension to any interior arrangement. And, if you wish, we'll support you with engineering expertise.

### Two "Misers" that pinch every watt.

GE/Lok makes fluorescent fixtures available in a number of luminaire families

(regressed, recessed, semi-recessed or surface mounted). Furthermore, we can team Watt-Miser™ II lamps



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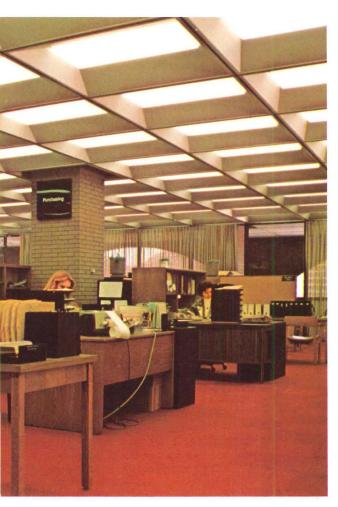


fluorescent system commercially available today. Compared to standard lightballast systems, two four-foot Watt-Miser I lamps and a Maxi-Miser II ballast will typically deliver equal light output, while using fewer watts.

### Lucalox<sup>®</sup> lamps substantially cut energy costs.

Considering High Intensity Discharg (HID) for brighter light levels? Specify th golden-white light of Lucalox lighting systems. At higher mounting heights, Lucalox lamps can cut your energy requirements up to 22 percent, achieve better light control than fluorescent, an provide a life span of 24,000 hours.

# rom General Electric testhetics into a totally



### ficient air distribution control.

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venly diffuses pplied air roughout e working wironment r greater omfort. It effiently handles w, normal or gh volume quirements,



hile attractively interfacing with the ceiling spension system.

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Achieving adequate foot candles doesn't necessarily mean the best light is

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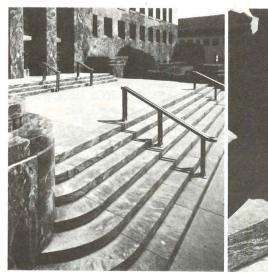
#### Views continued from page 8

heavier gauges of metal than standard component metal, choose other than standard component siding and roofing profiles or colors, select other than standard component paint, or change standard optional building profiles to specific client requirements, and mass materials purchase essential to low materials cost vanishes along with efficient erection cost.

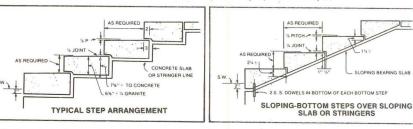
We do not hesitate to give prefabricated componentized buildings a fair cost and supply/erection schedule bid against conventional light-frame steel/metal siding construction; however, we no longer subscribe to the myth that prefabricated buildings will always come in cheaper. Therefore, whenever requested to consider prefabricated building for a given manufacturing process and/or storage use, we make comparative cost to determine if, in fact, prefabricated buildings will be the more economical solution for a given specific use and/or environment. Sometimes they will be, sometimes not; oftentimes they prove to be more expensive than conventional construction.

Plying Colors: Again, a good coverage in the importance of color impact on the environment. In industrial architectural design, the very massiveness of many of our buildings requires us to give careful consideration to color and clientimage impact. We recently completed a building housing the world's longest paper manufacturing machine in Augusta, Ga. This building was selected by Alcoa Aluminum Company to appear in the 1979 edition of Sweets Catalogs,

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Darrell A. McCarroll, Sr., Architect Simons-Eastern Company Atlanta, Ga

[The reader's observations on prefabricated buildings vs conventional light construction more or less summarize the message we intended to convey in the article on Hiram's at the Locks. As noted in a previous "Views" column (Oct. P/A, p. 12), our article may have implied that the preengineered system was the cause of delays and cost increases that were largely attributable to other factors.--Editors]

#### Housing competition

Thanks a lot for the "Innovations in Housing" Competition and its winners (August P/A, p. 66). It proved to me that passive energy design does not necessarily have to employ pitched roofs and cedar shakes to provide the imagery of an energy-efficient house. Unfortunately, this was the dogma that my instructors professed to me.

See guys, not everything has to be an MLTW reproduction. Neil M. Denari, Student

Atlanta, Ga

As is usually the case with competitions, the rules were suspended for the judging of the "Innovations in Housing" competition; and the jurors' personal tastes were allowed to choose the winners. However, this time it seems sad, there was so much need for innovation.

As I read the rules, the designs were to: 1. use plywood innovatively; 2. be energy efficient; 3. adapt to all U.S. climates; 4. cost \$35/sq ft or less

The first-place entry may have come close to some of these, but the others made no attempt. If these were the most innovative of 270, what were the others like?

Better luck next year.

Lawrence Kasparowitz

Penngrove, Ca

[It was clear from the entries themselves that the first-place submission and several others met all the requirements. As the article indicated, some of the other entries cited did not. The jurors' subjective reactions did, as always, affect the decisions.-Editors]



#### Credit due

The stunning photo (above) of Emilio Ambasz's taxi project at the Museum of Modern Art (P/A, Sept. 1978, p. 99) was taken by George Cserna. To take the picture, Cserna had to make a double exposure, first for the black-light Manhattan skyline, then again with spotlights turned on the taxis.

Cold Spring Granite Company, Dept. PA-11

12

Bigelow does what no other carpet producer would dare: reveals a new photograph of its 1971 Tampa Airport carpet installation.

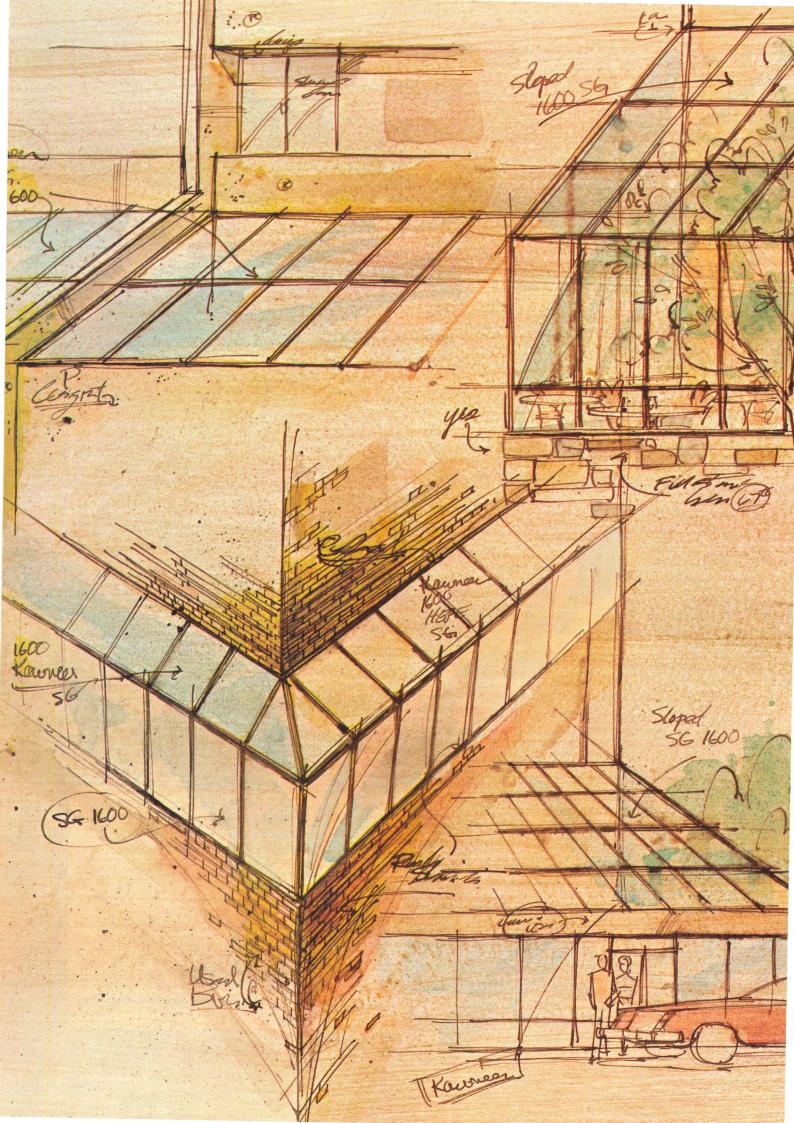
### After 71/2 years and over 100,000,000 people, it looks brand-new and beautiful. That's Beauty & The Bottom Line.

Obviously good design, superb color, professional service, static control, soil resistance and sound absorption are all important in contract carpet. But the <u>real</u> question is...does it still look good long after it's on the job? If it's not toughunder tough conditions...the world's best design is worthless. Take another look at the photograph. With this kind of extraordinary performance at Tampa Airport, think what Bigelow can offer you and your clients.

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The addition of sloped glazing to a building's design can be a frustrating, time-consuming experience. After hours of design, drafting and consultation, the choice is often between budget breaking costs or painful performance compromise. With a large budget and custom design, the sky is the limit. But, in many cases it is the skylight which is the limit.

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Kawneer 1600 SG is a pre-engineered, standardized sloped glazing system. Design, performance and life cycle savings are built in before 1600 SG ever leaves the factory. This includes features such as internal drainage gutters, a unique, baffled sill assembly\* for continuous drainage and a PVC thermal barrier to minimize heat loss and to control condensation.

Kawneer 1600 SG can be integrated with vertical walls, or applied to curbs, or to structural steel sub-framing, or even used with inside and outside corners. It is not only compatible with Kawneer's 1600 curtainwall system, it can be blended with all Kawneer entrance systems for a truly unique design. 1600 SG can accommodate a variety of slopes and configurations.

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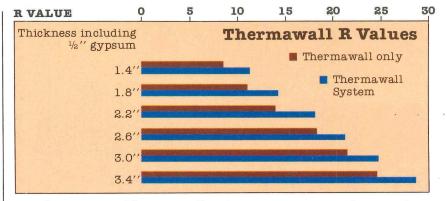
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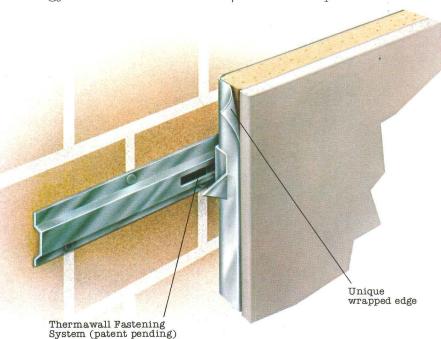
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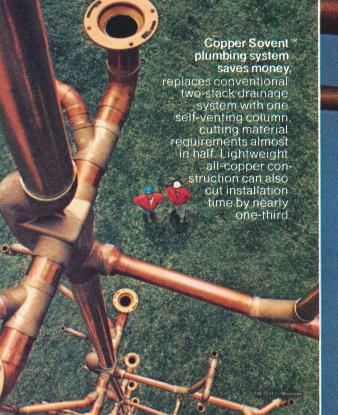
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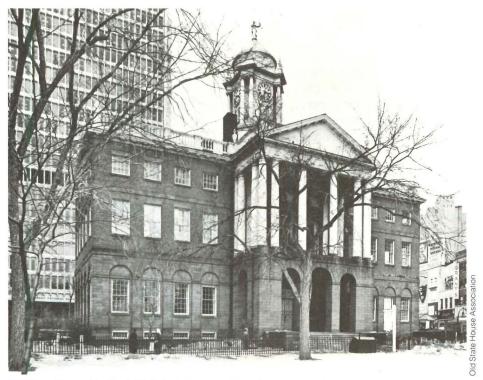
### News report

### Connecticut statehouse saved

The oldest statehouse in the nation, the Old State House in Hartford, Ct, is being restored to its original Federal elegance in a two-part program that will first strengthen the building's structure, then restore its historic interior. When complete, the building will serve as a visitor center for Hartford.

The 1796 building, by Charles Bulfinch of Boston, owes its continued life to the Old State House Association, a nonprofit organization formed by a group of concerned preservationists when the city cut funds for the building's maintenance from its budget in August 1975. Determined that the historic State House should not go merely because the city found it a white elephant, the Association mounted an emergency fund-raising drive and succeeded in obtaining a 99-year lease from the city. Through private funds and state and federal grants, they have already raised \$1,400,000 of the projected \$1,850,000 needed to renovate the building and assure its future.

Exterior and structural work, the first phase of the \$850,000 renovations, began in October 1977, when the statue of Mme. Justice was removed from the cupola prior to extensive roof repairs. The restoration is currently moving into its final phases; reenthroned in the courtroom, Justice will welcome the building's reopening ceremonies on May 19, 1979 (and a reproduction of the statue will sit atop the cupola).



Old State House, Hartford, Ct. Exterior is currently undergoing repairs.

This major architectural conservation project was long overdue. The Old State House is a classic of the Federal Period, an outstanding example of the style that embodied the ideals and idealism of the United States' first years.

But by 1879, the simple refinement of the first public building designed by Bulfinch was passé; the state government moved to the more opulent State Capitol. The State House, turned over to the city, was allowed to deteriorate until 1921, when one of the first public architectural preservation campaigns in Connecticut, spearheaded by Morgan Bulkeley, was mounted to save the building.

The repairs carried out at this time were not adequate to save the building from suffering further damage from the elements, and the "Houses of Comfort" (public bathrooms) applied to the exterior damaged its architecture. Nor did the 1920s restorers anticipate the problems that pollution and increased traffic would cause; dust, soot, and pollution-laden humidity have since caused at least visual decay. According to Wilson Faude, director of the Old State House group, the primary concern of the renovations at this time is to control the environment of the building. Measures to protect the structure from further water damage, such as roof repairs and the



The Great Hall. Renovation will eliminate 1920 doors and windows and glaze openings to floor.

opening of a new drainage system, were the first steps taken. Now a new electrical system is replacing the 1918 equipment, and the windows are being sealed prior to installation of air conditioning and humidity controls. When the interior of the building has been prepared, the original furnishings, now in storage, will be re-placed in the rooms.

The modern Visitors' Center, along with its offices and equipment, will be located in the basement (which was not part of the original design) so that, as Faude says, "there will be no money changers in the temple." Courtyards will replace the Houses of Comfort. "The guiding principles in this renovation/restoration," explains Faude, "have been to return the building as close as possible to Bulfinch's original design."

The State House will become a monument to an architectural style and an era. The first floor, containing the Great Hall and courtroom, will house periodic exhibits, while the Senate chambers and the House of Representatives chamber will be restored as visual documents of the period. Architectural details such as the capitals of the Senate columns, bastardized by "improvements," will be restored to their original design, but there will be little explanatory material added. "The architecture is so good," says Faude, "that we don't want anything to interfere with it."

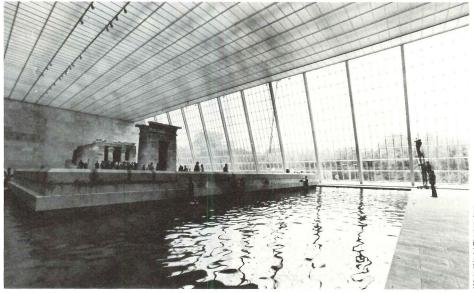
The careful restoration of the Old State House might serve as a model for similar projects around the nation in its successful achievement of funding and renewed purpose.

### Lower Nubia to Upper Fifth

At the end of September, the Metropolitan Museum of Art in New York revealed its newest-and one of its oldest-treasures, the First-Century B.C. Lower Nubian Temple of Dendur. The temple is housed in the new Sackler Wing at the north end of the museum on Fifth Ave., which has been especially designed for it by Kevin Roche, John Dinkeloo & Associates. The Aeolian sandstone structure was given to the US by the Arab Republic of Egypt in 1965 in recognition of our \$16 million contribution to UNESCO'S international campaign to save the monuments that would have been flooded by the 300-mile-long Lake Nasser being formed behind the Aswan High Dam.

gateway, however, are important on several counts. It is unlikely that structures of such age could ever again come to an American museum. Moreover, the complex is completely intact, with crisp, well-preserved reliefs depicting the drowned brothers and Augustus making offerings to various divinities.

The Sackler Wing, which houses the temple in its 200' x 165' exhibition hall, also includes the new Sackler Gallery for Egyptian Art and the Sackler Center for Far Eastern Studies. The exhibition hall is now the museum's single largest special gallery, and for many people its size is its main problem—not that there is necessarily anything wrong with the hall itself, but that the diminutive 41' x 21' temple and its 11' x 12' gateway look decidedly forlorn in the vast gray granite and glass enclosure.



Temple of Dendur as installed at the Metropolitan Museum of Art, New York.

Although the temple is old, it is not old by Egyptian standards and, strictly speaking, it is not Egyptian. The Nubians maintained political and cultural identity separate from their powerful northern neighbors, but on occasion did adopt certain Egyptian traits, such as can be seen in the temple, which is a simplified and late version of the standard Egyptian cult temple. The temple was not built by Egyptians or Nubians, but by the Roman Emperor Augustus who, probably as a means of consolidating his hold on the tribes of the area, had it erected to commemorate the drowning of two sons of a local chieftain.

The temple and its companion

The idea behind the exhibition hall's design was to simulate the setting on the Nile where the temple stood for 2000 years. Around a raised, reinforced-concrete foundation, the temple is surrounded by "land-scaped" stonework. A 102' x 32' reflecting pool in front, with two side extensions 45' x 7' each, is calculated to evoke the ancient site.

The entire north side of the hall is an inclined curtainwall of clear, insulated, tempered glass with aluminum framing supported vertically by ten wide-flange steel mullions. A ceiling of hammered wire glass and aluminum framing is hung 48 ft above the floor from 200-ft-long trusses that support a

skylight covering the entire wing.

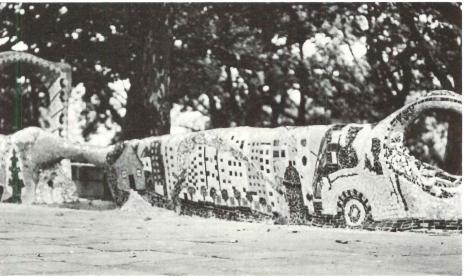
Did the exhibition hall have to be so vast, and is there really any sense in trying to simulate the ambiance of the Nile on Fifth Ave.? Those are the questions most asked of this new addition. The matter of the hall's size will remain one of opinion. Housing the temple in a setting "appropriate to its archaeological character," however, was a condition of receiving the gift. Only the Metropolitan could meet all of the requirements, which also included dismantling, transporting, and reconstructing the temple, providing adequate preservation facilities and atmospheric conditions for the fragile stone, relating it to an important collection of Egyptian antiquities, and making it available to a wide public. The exhibition hall protects the temple from the elements, and its north wall of glass makes the antique structure visible to more than just those who enter the museum. [DM]

### Too gaudy for Grant?

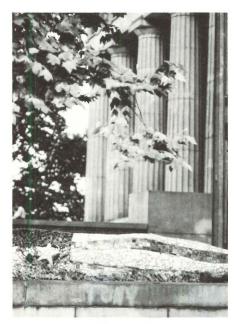
A 4-year-old beautification project at the General Grant National Memorial (P/A, Oct. 1973, p. 100), welcomed by the National Park Service at the time as a community-involving project to better adapt the site to community needs, is now threatened with removal by the Park Service as an inappropriate intrusion on a national shrine.

The flowing cement benches, designed in 1972 by sculptor Pedro Silva and covered with mosaics in the style of Anton Gaudí by local residents, were part of a program sponsored by Cityarts Workshop (a community art group), with financial assistance from NPS and Canada Dry. Since their installation, the benches have become the subject of increasing controversy. While they are a model and source of inspiration for similar projects in the New York area, the colorful benches have brought negative response to the Park Service from architectural professionals and amateurs who feel that they detract from the neoclassical tomb.

Though NPS spokesman David Kahn emphasizes that "at this point we have not come to any set decision regarding the benches," the Park Service is considering moving them to another



Mosaic benches, part of a community arts project, still surround Grant's tomb.





location—a step that, according to architect Philip Danzig, who worked on the project, would inevitably mean their destruction. Danzig compared their structure to that of an eggshell; made of iron ribs covered with wire mesh and the layer of cement in which the mosaics are embedded, the continuous benches owe their strength to the efficiency of their shape.

NPS cites maintenance as one prob-

lem with keeping the benches, but although the benches have had no maintenance since their installation, they are in near-perfect condition. The Park Service's antipathetic attitude seems, rather, to parallel that of a neighborhood resident who sees the benches as an expression of "a period of permissiveness and experimentation that's over now."

No decision on the fate of the benches is imminent, according to Kahn, but if current Park Service thinking prevails, the unique benches will be replaced by something like the backless marble slabs considered in keeping with monument sites. Whatever the eventual outcome, the evolving story of the Grant's Tomb project, and the changing attitudes towards appropriate preservation evinced by NPS and others, may well indicate that America's growing interest in conserving its historic past reflects a new conservatism.

### Barges recycled into real estate

One off-beat yet profitable preservation project currently underway in San Francisco involves the recycling of 70 25-ton barges for use as personal or commercial properties. The 30' x 60' barges, which float in only 2 ft of water, are fireproof, watertight (obviously), and contain 1800 sq ft of potential floor space. Marketed as floating facilities or shells for structures by Sam Kalman and Co., the barges have a negotiable price tag of \$10,000 each. [News report continued on page 24] News report continued from page 23

nently located on Park Ave. and 42nd St., opposite Grand Central Station, the Terminal, designed by John Peterkin of New York, opened in 1941. It

was the first centrally located terminal

to consolidate and coordinate offices

and departure facilities of competing

The elegant design and the sump-

tuous Art Deco interior of the ellipse-

limestone structure, which originally

included shops, restaurants, and a newsreel theater on its 42nd St. front,

was almost immediately obsolete as a

departure center because of Manhat-

were transferred to the present Termi-

tan traffic. Airline departure facilities

nal on East 38th St. in 1954, and in

1971 even the ticket offices in the 42nd St. building were closed. Efforts

were made to reuse the structure for

boutiques and restaurants, but by the

time Philip Morris bought it earlier this year it had been deserted for almost

Plans for the new building, de-

signed by architect Ulrich Franzen,

call for a 25-story structure, but the

negotiated with city authorities.

specifics of the design are still being

shaped central lobby and the surrounding offices made the building

one of Midtown's glories. But the

airlines.

two years.

Once part of the now-defunct Pacific Far East Lines, the barges were built in the early 1970s as part of a program to speed up cargo unloading in nonmodernized ports. Rather than unload the cargo into small boats, the cargo-filled barges were taken off the ship and floated into the harbor.

So far, ten of the barges have been purchased, eight by a marina and two by Michael Raleigh, who "thought it would make an interesting project to redesign them." Raleigh plans to float one in San Francisco Bay for use as a second residence, but he's not sure what the other will eventually become. "Anyway," he said, "I thought it a good price for that amount of space."

### Airlines terminal demolished

New York's Airlines Terminal Building, one of the city's best-known Art Moderne landmarks, is currently being demolished to make way for an addition to the adjacent corporate headquarters of Philip Morris, Inc. Promi-

The Art Moderne Airlines Terminal as it was in its heyday





Fox Theater and Southern Bell Office Tower.

### Whatever happened to the Fox?

Since 1974 there has been a concerted effort in Atlanta to prevent the Fox Theater, a great Moorish confection of the late 1920s, from being demolished. Very few Atlantans had patronized the Fox as a movie theater, but most had fond memories of its earlier days of glory. "Save the Fox" appeared on bumper stickers, billboards and scrawled on computercard phone bills. National attention focused on this campaign (P/A, Feb. 1975, p. 20).

This spring, Atlanta Landmarks, Inc., a nonprofit organization committed to the preservation of historic buildings and also the owner of the Fox, announced that the mortgage was paid and the Fox thereby saved. Southern Bell, who originally wanted the Fox site to build its new headquarters, with the help of a number of professional planners and architects on both sides of the protest, figured out where to put the one-million-plus-sq-ft facility that Southern Bell required, as well as an underground rapid transit station (MARTA) and not touch a minaret of the Fox.

Currently under construction is a 45-story concrete office tower wedged between the west side of the Fox and the east side of the MARTA Station, and [News report continued on page 29]

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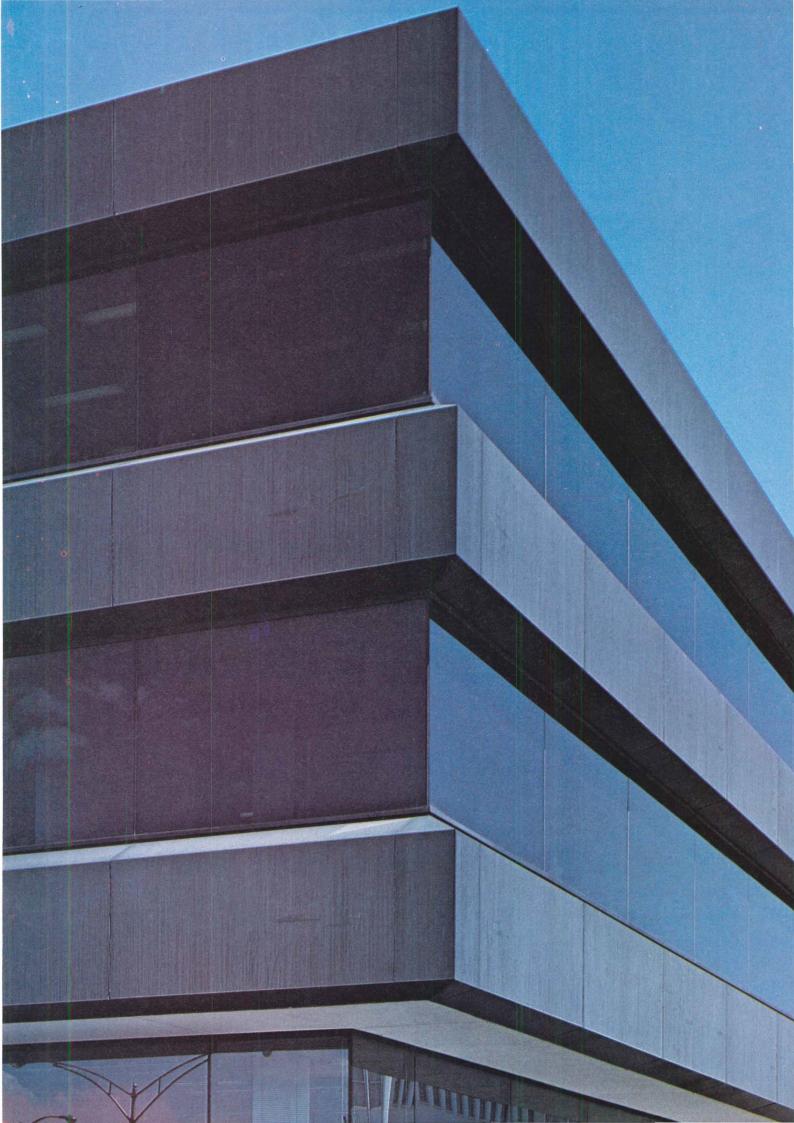
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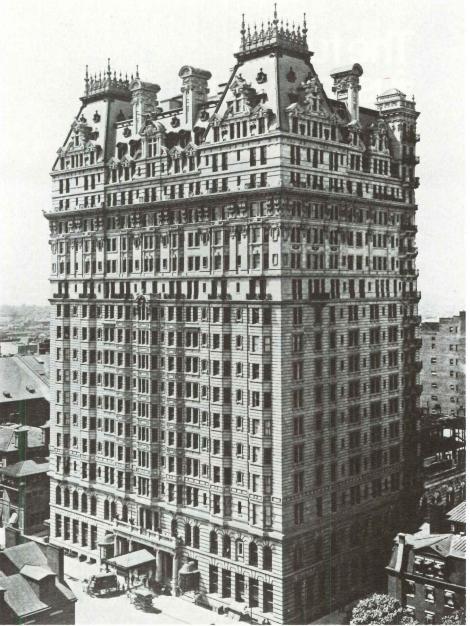
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#### News report continued from page 24

a 7-story structure to the north of the Fox on the remainder of the full city block designed by a joint venture of Finch Alexander Barnes Rothschild & Paschal, Atlanta, and Skidmore Owings & Merrill, New York. There is even room for a second office tower to accommodate future growth by Southern Bell without jeopardizing the "Fabulous Fox." Ironically, Southern Bell has had a covenant written stating that it must participate in any future decisions regarding the future of the Fox, in case anyone else wants to tear it down. Abreu & Robeson of Atlanta, architects for the exterior restoration, plan to reconstruct the original storefronts and redesign the north façade of the building fronting on the new Southern Bell complex.

When a public corporation shores up the foundations of an aging structure so that it can build 50 ft below and wedge an office tower on a confined piece of land, it would appear that a new era of historic preservation might be at hand in Atlanta. Quite the opposite, however, has occurred. Since the Fox's salvation, Atlanta has lost the Atlanta National Bank, a turn-of-thecentury office building, to MARTA construction; the Dinkler Hotel, one of the early entertainment-hotel complexes of Atlanta; Bailey's Coffee Supreme Warehouse, one of the earliest allconcrete structures in Atlanta and an integral part of Underground Atlanta. Last January, the Loew's Grand, a theater and office building that in its long life hosted the premiere of "Gone with the Wind," mysteriously burned down two days before its owner was to commit to city-endorsed restoration or to demolition desired by the owner. Except for the Atlanta National Bank, all of these landmark sites now accommodate parking.

The concept of scraping off the façade for future decorative use and demolishing the remainder of the building, first used by Finch-Heery of Atlanta to preserve a portion of a 1900s clothing store within MARTA's Five Points Station, has become an all too ready solution to preservation efforts. The original building of the Atlanta Public Library had the same face-lifting in order to make room for the new facility designed by Marcel



The terra-cotta facade of the Bellevue-Stratford as it originally appeared in 1904

Breuer, New York, and Stevens & Wilkinson, Atlanta, now under construction, but the Classical facade still remains in storage.

The "Save the Fox" campaign effectively exhausted the public's interest in historic preservation to the point that maintaining a consistent attitude toward preservation in Atlanta has proved to be difficult if not impossible. Preservation-minded organizations such as the Atlanta Urban Design Commission are too often regarded as ivory-tower idealists who have no concern for progress. Until Atlantans develop a taste for the visual and physical integration of the city's architectural past within the urban context, a dozen structures will be lost for every Fox saved. [Jon H. Carlsten]

### Bellevue-Stratford elegant encore

A Victorian dowager, the Bellevue-Stratford Hotel in Philadelphia, will reemerge at the center of the city's social life after a \$20,000,000 exterior and interior restoration and renovation intended to "restore the spirit of the original building" while functionally modernizing the interior.

The neo-French Renaissance structure, designed by William and George Hewitt, is listed on the National Register of Historic Places for its ornate terra cotta and limestone facade and the intricate plasterwork on the interior. After restoration, the Philadelphia landmark, [News report continued on page 32]

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Bellevue-Stratford lobby before restoration.

traditionally the city's most elegant hotel, will reopen as the deluxe Fairmont Hotel, owned by the Rubin Co. and operated by the Fairmont chain of San Francisco.

Demolition began on August 20, and the job is going ahead at such a pace that no one currently is sure of the specifics of the outcome. "Demolition is going on while we design," said project manager Hy Myers of the architectural firm of Day and Zimmerman Associates of Philadelphia, "but the hotel will reopen in September 1979."

Most of the renovation work, involving long-overdue basic updating of the Bellevue's utilities, is determined by necessity. The hotel was technologically innovative when it was opened in 1904—it included its own generator to power the lifts, and an electric light system designed by Edison-but the turn-of-the-century bathrooms now need to be replaced, as does the kitchen. Modern conveniences such as air conditioning will be installed. This work may incidentally alleviate any remaining worries about possible contamination of the hotel, the site of the first outbreak of Legionnaires' Disease.

The restoration of the Bellevue presents more of a problem than does its renovation. "They have to obliterate \$6 million of ghastly 1950s restorations," Judy Morse of Rubin Co. says bluntly. During that period, the original entrance was extensively altered: the elaborate limestone and terra-cotta canopy and the balcony above it were removed and a canopy of stainless steel and red granite installed. Inside, similar alterations were carried out, with stainless steel replacing the decor around the elevators.

The difficulty and cost of finding materials identical to those originally used and craftsmen competent to handle them prevents an exact reproduction of the original lower façade and interior details damaged by age and alterations. Myers is unsure what style or materials will be adopted in the restoration to preserve the essence of the original. Possibilities include the use of plastic to substitute for terra cotta, as was done in the case of the Pennsylvania Academy of Fine Arts, designed by Frank Furness and restored by Myers.

It is to be hoped that the combinations of an architectural firm experienced in preservation problems and a client whom Myers describes as "respectful of the building" will result in the sensitive restoration of a fabulous period piece.

### Toward better federal design

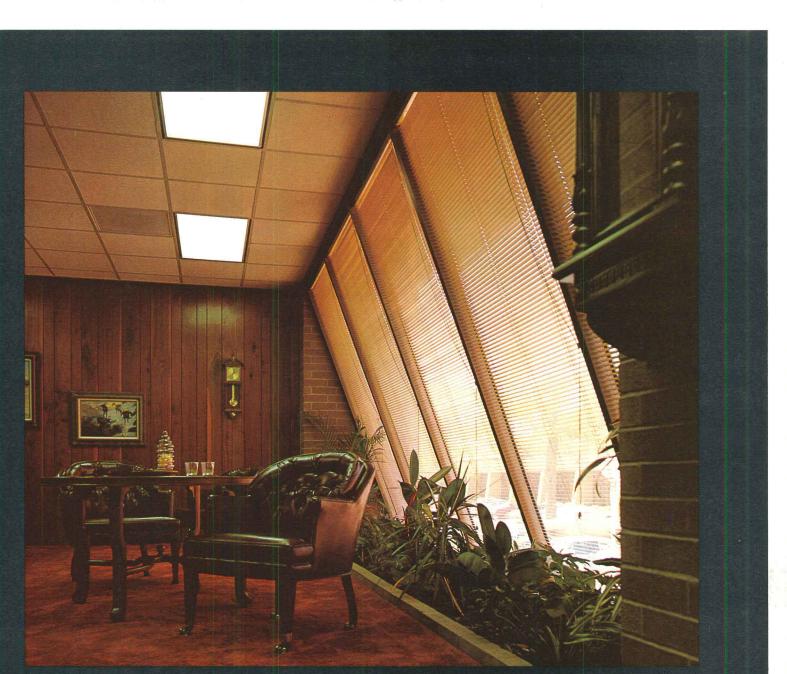
The Fourth Federal Design Assembly, the latest in a series of annual convocations held to increase design awareness and standards within the federal government, was held in Washington, DC, on Sept. 21 and 22. Site for the conference was the Pension Building, which has been proposed as a National Museum of the Building Arts. Sponsored jointly by the National Endowment for the Arts and the General Services Administration. the Design Assembly attracted delegates from some 70 government agencies (ranging from the CIA to the Bureau of Indian Affairs, from the Fish and Wildlife Service to the Government Printing Office) as well as several hundred observers from designrelated professions and the press.

The theme of this year's assembly was "The Agency Team—Integrating Design into Policy," and the greater part of the proceedings on both days was given over to presentations of design policy case histories by teams composed of agency officials who commissioned design improvement projects and the architects and de-

signers who carried them out. The first, and perhaps most significant, of the presentations was for a new grand design for Pennsylvania Ave., intended to supplant the neverexecuted recommendations made by the President's Committee on Pennsylvania Avenue in 1964. Unlike that earlier scheme, which called for the imposition of a new wall of large-scale buildings on the north side of the "Avenue of Presidents." culminating in a massive National Square carved out of several city blocks adjacent to the Treasury Building, the new plan is considerably more humane, while still acknowledging the monumental requirements of the capital city.

Prepared by a team composed of the Pennsylvania Avenue Development Corp., Braccia, Joe & Woodbridge, Jerome Lindsey Associates, Sasaki Associates, and Venturi & Rauch, this new scheme calls for the planting of mature trees along both sides of Pennsylvania Ave., the redesign of sidewalks along the length of the avenue to promote pedestrian use, and the construction of a Western Plaza near the Treasury terminus of the boulevard, a far smaller alternative than the proposed National Square. The plaza plan, by Venturi & Rauch, was the best of the design proposals made during the conference. For the most part, the general quality of design discussed at the assembly was good, if not inspired, a vast improvement over former government standards, but too often tied to formularized solutions by well-known and longestablished designers.

In an attempt to break out of the usual list of design conference regulars, the assembly's organizers invited four avant-garde designers to create lounges for delegates and observers at the Pension Building. The designers—Joe D'Urso of New York (who withdrew before the conference began), Charles Moore, John Ruble & Robert J. Yudell of Los Angeles, Stanley Tigerman of Chicago, and Susana Torre of New York, were commissioned to do two rooms each using only GSA-approved furnishings and related materials. (These six lounges will be the subject of a feature article in the December P/A.) But for the most part, the names and faces were familiar, leading one to believe that as far [News report continued on page 36]



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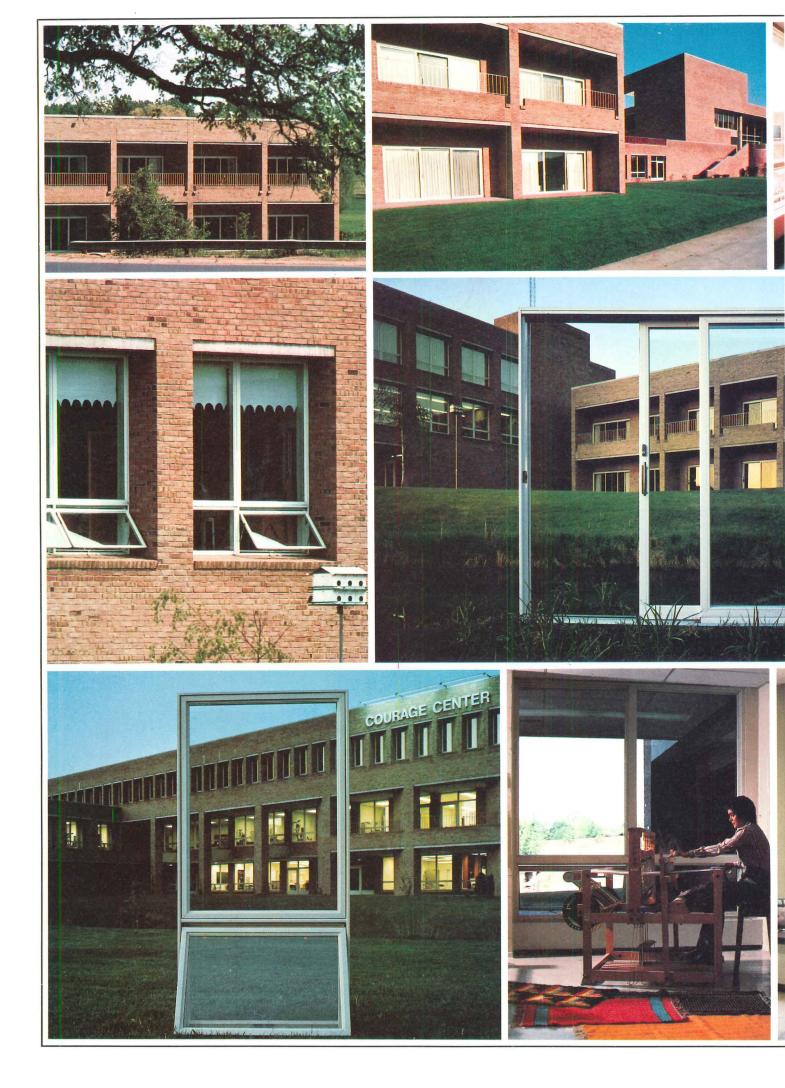
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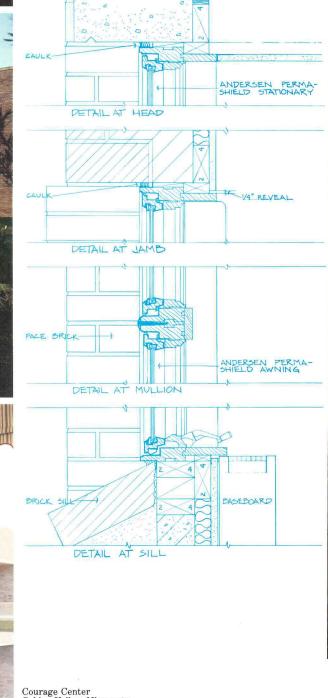
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Courage Center Golden Valley, Minnesota Architect: Rafferty, Rafferty, Mikutowski & Associates St. Paul, Minnesota

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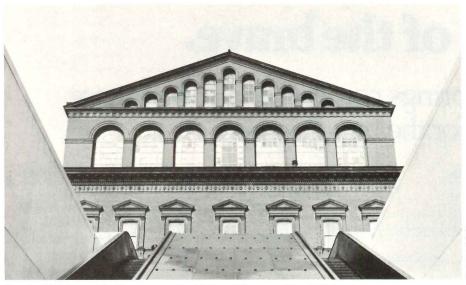
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Pension Building, slated for reuse as the National Museum of the Building Arts.

as federal officials are concerned, design is governed by men, not laws.

An improvement over this year's proceedings would be to have more discussion on how to evaluate design, how to find good designers, and how to encourage government employees at all levels of responsibility to do the same. Too often the agency reports had a somewhat self-congratulatory air that the still-questionable level of much federally sponsored design would seem to belie. All of this was made more ironic by the timing of the Design Assembly itself, coming as it did amidst almost daily revelations of widespread corruption within the GSA, one of the conference's cosponsors.

But taken as a whole, we have come a long way from the days when design consciousness, insofar as it existed in the government, was the result of isolated individuals. Above all, this event was ample proof of the level of progress. Whether good design can be made a matter of policy remains to be seen, but it is good to know that our government is at least trying. [MF]

### Senate approves Building Museum

Legislation designating the historic Pension Building (1882–87) in Washington, DC, as a "national treasure" and saying it should be reserved for possible use as an architecture museum has passed the US Senate and awaits final action by the US House of Representatives.

The Senate resolution complements a bill introduced in April by Sen. Charles McC. Mathias, Jr. (R-Md.), to establish a National Museum of the Building Arts and is described as a "holding action" for the Pension Building until the museum proposal is ready to go.

The resolution calls upon the US General Services Administration to undertake space and cost studies as well as a structural analysis of the building. The Smithsonian Institution is to study how such a museum might work within its existing operations, and the National Endowment for the Arts is to determine the potential for private funding of such a museum. All reports are to be submitted to Congress by the end of this year.

It is hoped that this action by the Congress will prod the Carter administration into taking a position on the museum and eventually including it as part of the administration program.

Earlier this year the Committee for a National Museum of the Building Arts, Inc., published a proposal for such a museum by critic Wolf Von Eckardt. While many applaud the idea of the museum, critics, including Ada Louise Huxtable of the *New York Times*, question the proposed program and its \$21 million cost.

The Pension Building has four tiers of galleries around a spectacular inner court, the roof of which is supported by eight 76-ft Corinthian columns. It formerly housed the District of Columbia courts, but is now occupied by the Heritage Conservation and Recreation Service, US Department of the Interior. [Carleton Knight, III]

## Old Post Office renovation marked

Encouraging words from both First Lady Rosalyn Carter and Joan Mondale marked the beginning of the \$18 million mixed-use renovation of the Old Post Office in Washington, DC, on September 21.

Mrs. Carter, noting that Pennsylvania Ave. is often referred to as "America's Main Street," said the post office project was "an example of what to do on Main Streets all over America." Mrs. Mondale spoke of the changing preservation movement. Old buildings are an endangered species, she added: "Conservation of the built environment is as important as saving natural resources."

The ceremony was presided over by Jay Solomon, administrator of the US General Services Administration, which is overseeing the work. He noted that a similar effort is under way in St. Louis with the Old Post Office there. Both projects were made possible by the Public Buildings Cooperative Use Act of 1976, which permits the federal government to lease space in federal buildings for retail purposes.

Solomon noted the presence of architect Arthur Cotton Moore, whose firm is part of the joint redesign venture. [Carleton Knight, III]



Mrs. Carter speaking at the opening ceremony for the Old Post Office.

[News report continued on page 40]

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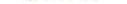
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News report continued from page 36

## Exeter St. Theater alive and well

Current trends in preservation seem to favor restoration over adaptive reuse; an architecturally valuable building may be saved as an art object, but it's often found inefficient and unprofitable to make it function as a working structure once more. It's encouraging, therefore, to note the success of award-winning rehabilitation of the Exeter St. Theater in Boston by Childs Bertman Tseckares & Casendino Inc.

Completed in October 1977, CBT's project, recently cited by the Third Urban Design Awards Program, was actually the second revamping of the 1885 neo-Romanesque building designed by William C. Richardson. The Back Bay landmark was originally intended as a temple and spiritual center, but in 1914 it was converted into a movie theater specializing in fine arts and foreign films. The popular theater was finally forced to close in



Renovated Exeter St. Theater, Boston.

1973; in 1974 developer Neil St. John Raymond purchased the building and commissioned CBT, an architectural firm known for its work in adaptive reuse, to redesign the building in a manner that would assure its economic viability. CBT modernized the theater, renovated the top floor for office space, and added a glassenclosed restaurant on the Newbury St. side. Both theater and restaurant have proved commercial successes. Boston seems glad to have its Fine Arts Film Center back, looking almost better than before.

## Tempest over Boston waterfront hotel

It's back to the drawing board or back to the courts for a Boston waterfront project that has toppled a Boston Redevelopment Authority (BRA) director, demoralized the design agency's staff, undermined an architecture competition, and left a city neighborhood irate.

The project, a \$20 million hotel development at the waterfront, embroiled the city in a controversy of broad import. At issue was not only a prize piece of real estate—the 11,000-sq-ft historic Long Wharf property—but an architectural concern: whether design criteria and neighborhood wants will be honored by the city.

Last spring, the city held a design competition for the seaside hotel, but the top choices among the entries were dismissed in favor of a low-[News report continued on page 44]

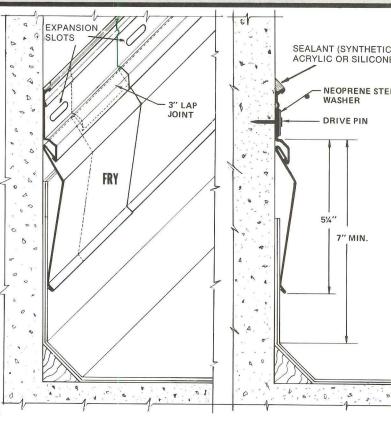
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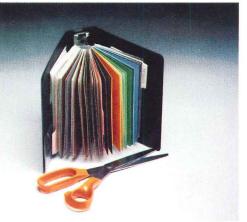
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### Levolor's Riviera<sup>®</sup> Blinds

News report continued from page 40



Cossutta model for the Long Wharf Hotel

placed grandiose design by Araldo Cossutta, architect for developer Mortimer Zuckerman-and the tempest began. Zuckerman, who also launched the controversial Park Plaza, was repeatedly described as a friend of Mayor Kevin White. "It's fairly obvious there's been a high degree of favoritism involved," Chris Dearing, president of the Waterfront Residents Association, summed it up just before filing a complaint in court this fall.

On the heels of the mayor's choice, then BRA director Robert F. Walsh was fired, and design director John

Sloan resigned. The Boston Society of Architects lodged a protest, and the minutes of the prestigious competition panel, on which sat Benjamin Thompson, Frederick A. Stahl, and Earl Flansburg, were released to reinforce the BSA sentiment.

Antagonists to the Cossutta plan feel his hotel, a ziggurat of formalistic heft, is a "poor piece of urban design," out of touch with the scale of the site, indifferent to pedestrian access to the ocean, and uneconomical. Only critic Peter Blake, whose apartment is in an adjacent I.M. Pei-Cossutta high-rise, had a kind word to say for it; at the invitation of Mayor White, Blake critiqued the design review, further angering local architects.

Although Cossutta has told waterfront residents that he will retool the design, the episode may endanger the whole hotel project, many feel. Some nearby North End neighbors now have fresh thoughts that a hotel might intensify the gentrification of the area. "I have the feeling that it's Park Plaza déjà vu," says an insidermeaning a long, 1960s-style entanglement stemming from the developer's steamroller approach to the neighborhood.

It may also endanger the whole design process set up for the city by Edward Logue in 1961. The breakdown in the design process whereby a competitor who didn't follow the rules was chosen by the city which had set them up is distressing. It is this political approach to planning which has dismayed Boston's architects and disturbed its urban designers. "It's a morgue here," said a BRA member. "The credibility of the design department has been destroyed. I've a feeling that the end has come." [Jane Holtz Kay]

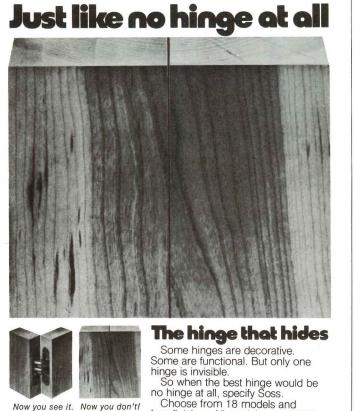
#### News editor appointed

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Eleni M. Constantine has been named associate editor of P/A, in charge of News Report, Products and Literature sections. A graduate of the Overseas School of Rome, she received a B.A. in history and literature from Harvard, where her honors thesis was on the [News report continued on page 48]



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#### News report continued from page 44



city of Ferrara. This was followed by a year at the Warburg Institute, London, toward a Ph.D. in architectural history. Prior to joining P/A, she wrote for the *Harvard Crimson, Building Design* (U.K.), *Newsweek International*, and has researched, edited, and/or written three guidebooks on Europe. Recently, she has been editing books for SITE, Inc., New York.

## Blenheim saved from a mean pinball

The Blenheim Hotel, a great Moorish fantasy in reinforced concrete, has become the nearly universal symbol of Atlantic City's past.

The Blenheim's location, on the Boardwalk not far from Park Place, is, as any Monopoly player can tell you, a very good one. It had to figure in the new Atlantic City of casino gambling, either as a renovated building or as a construction site.

At the moment, it looks as if part of the Blenheim—the eight-story domed rotunda and smaller wings that front on the Boardwalk—will probably be



Rear Blenheim tower, to be demolished.



Main boardwalk entrance of the Marlborough-Blenheim Hotel, Atlantic City.

saved. Since this is the most important and visible part of the building, it appears to be a victory for preservationists.

The latest architects on the job are the New York office of Skidmore, Owings & Merrill, who will construct a new casino-hotel of up to 1500 rooms. This scheme will also involve rehabilitation of the adjacent, French château-style Dennis Hotel, which was to have been demolished in an earlier Venturi & Rauch scheme for the complex (P/A, Oct. 1977, p. 67).

After rejecting the Venturi & Rauch scheme, Bally Manufacturing Co., the maker of slot and pinball machines, which owns the Dennis and holds a lease on the Blenheim and adjacent Marlborough, proposed to raze all three hotels. The Blenheim, a 1906 building by the Philadelphia firm of Price & McLanahan, with a concrete structure developed by Thomas Edison, is listed on the National Register of Historic Places. State preservation authorities considered both the Dennis, a 1901 Price & McLanahan building, and the Marlborough, a wood-frame Queen Anne-style building, eligible for the National Register.

Bally agreed to a compromise, under which the Dennis will be saved, the back of the Blenheim and all of the Marlborough will be demolished, and the front of the Blenheim will be saved if structural engineers and marketing consultants to be hired by the state's Department of Environmental Protection determine that the structure is sound and using it is feasible. The compromise came in August as the result of aggressive study of the issue by the state Department of Environmental Protection which must approve buildings on the coastline. The department hired engineers and architects of its own to test Bally's claim that the buildings could not be saved. Their findings were that, although further structural tests are needed and there are some problems with the structure, the Blenheim probably need not be torn down. [Thomas Hine]

[News report continued on page 52]



Detail, Marlborough-Blenheim roof.

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## Structural steel "system" cuts cost of Boston area schools.



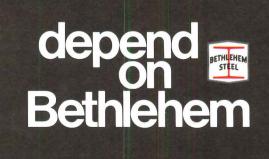
Simple and repetitious structures hold down design and engineering time, ease problem solving, and save money.

Boston's Public Facilities Department has sponsored the development of a pre-designed, pre-engineered structural steel system that has been adopted for more than \$180,000,000 of new school construction in the Boston area. Known as the BOSTCO system (see box), it establishes guidelines in advance for structural framing, snow loads, fire proofing, and many other structural details. Developers were the Engineers Design Group, Inc. of Cambridge.

The BOSTCO system has been successfully used by a number of schools in the Boston area. Two schools are illustrated here, one in the city and one in an outlying area.

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Andrew Jackson/Horace Mann Community Schools, Boston (Opposite Page) Architects: Peirce, Pierce and Kramer/ Korslund, Lenormand & Quann, Inc., Boston, A Joint Venture Engineer: Engineers Design Group, Inc., Cambridge Steel Fabricator: Antonelli Iron Works, Quincy

Cape Regional Technical High School, Harwich (Below) Architects: Drummey Rosane Anderson, Inc., Wellesley Engineer: Engineers Design Group, Inc., Cambridge Steel Fabricator: A. O. Wilson Structural Co., Cambridge







### The BOSTCO System.

This structural system is based on a structural grid consisting of steel columns, one to six stories in height, and steel beams. The grid utilizes secondary members 10 ft on center to produce structural bays which may vary from a minimum size of 20 ft by 20 ft to a maximum of 30 ft by 50 ft. A 5<sup>1</sup>/<sub>4</sub>-in. composite slab spans the beams. In order to provide a stiff floor system without paying an undue cost, the beams have been designed for composite action with the slab. Holes in the webs of all of the internal beams allow smaller piping and electrical distribution to be placed within the layer of the floor-ceiling envelope occupied by the structural system.

Long-span structures (clear spans exceeding 50 ft), such as gyms, pools, and auditoriums, are supported by beams and columns and long-span joists at 5 ft on centers. Bays are restricted in width to 20, 25 or 30 ft in the primary direction. The length of the bays is determined by the requirements of the individual projects; however, the bay length is a multiple of 5 ft.

Foundations, other belowgrade work, and grade slabs are not strictly part of the system; however, their design must be accommodated to the constraints of the system. Stairs, stair towers, and other similar secondary structural elements are also nonsystem, but must also obey system constraint insofar as their design affects the system's work. The external appearance of the schools is not affected by the system, and can, therefore, widely vary.

#### In progress



#### 1 California Building

The restoration of the California Building complex in San Diego's Balboa Park, a \$1.62 million federally funded project, was completed in October by the M.H. Golden Co. of San Diego, architects for the restoration. The exterior renovations of the California Building and its 100-ft tower, designed by architect Bertram Goodhue for the 1915 Panama-California Exhibition, utilized a patented epoxy/resin impregnation process. Similar to techniques used in the restoration of antique temples in Greece and Italy, the chemical process coats the pores of the concrete, preventing further water damage. Severely deteriorated ornamentation on the exterior was replicated in a lightweight fiberglass, aggregate, and epoxy mixture which matches the structure's original texture and color. "Since the building is on the National Register of Historic Sites," explained project manager Earl Hayden, "the authenticity of the reproduction was paramount."

#### 2 Wright's First Christian Church

The free-standing belltower of the First Christian Church in Phoenix, Az, designed in 1957 by Frank Lloyd Wright, has just been completed. Constructed of precast-concrete panels supported by a pedestal of local stone and patterned concrete, the 120-ft tower is crowned with a four-ton gold cross, illuminated at night. The \$225,000 tower represents the second phase in Wright's master plan for the church complex, which is being posthumously executed by the Frank Lloyd Wright Foundation. Project architect for this phase of the work was Aubrey Banks of the Foundation.

#### **3 Connecticut State Capitol**

Restoration of the Connecticut State Capitol, a project whose fortunes have risen and fallen with the state's political pendulum, is finally underway with the allocation of over \$8.5 million by the state legislature last spring. The Hartford-based firm of Olsen & Miller received the contract to repair and renovate the Gothic Eclectic 1879 building, stylistically unique among state capitols, designed by Richard M. Upjohn. Work on the exterior began in late June with comprehensive repairs to the roof and restoration of the elaborate cast-iron cresting. The project will take several years to complete.



#### 4 IBM Building, Houston

IBM began construction in October on a 17story building in the Riverway business park, developed by John Hansen Investment Builder in Houston, Tx (P/A, Oct. 1978, p. 78). The triangular building, designed by Caudill Rowlett Scott of Houston, has a mirrored glass exterior which contrasts sharply with One and Two Riverway, designed by S.I. Morris. Well on the way to completion, these two office towers are faced with bands of dark glass and precastconcrete panels. IBM bought the lot at the center of Riverway after the first Morris building was begun, and the new design was subject to the approval of both Hansen and Morris. Completion of the 407,000-sq-ft building and its attached multilevel garage is set for late 1980.

#### **5 AMAX Petroleum Building**

New York-based Gwathmey Siegel Architects has designed a new corporate headquarters building for AMAX Petroleum Corp., Houston, Tx. To be completed by June 1979, the fourstory glass and marble structure has a streamlined, low-profile elegance generally associated with "East Coast" projects. The AMAX building, located on the West Belt, will make a distinctive addition to the booming business strip of west Houston.



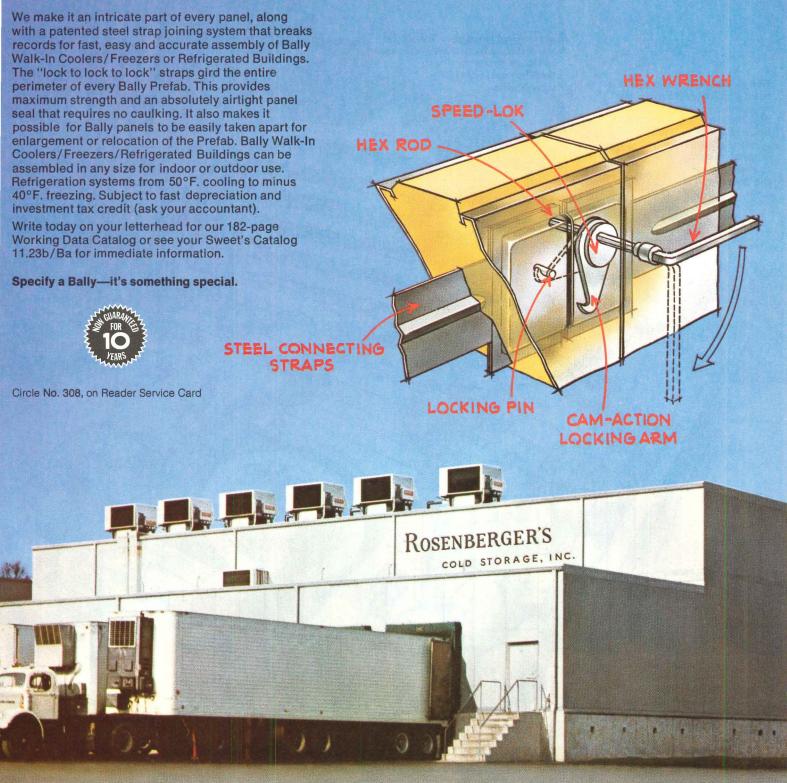




# Bally created the state of the art

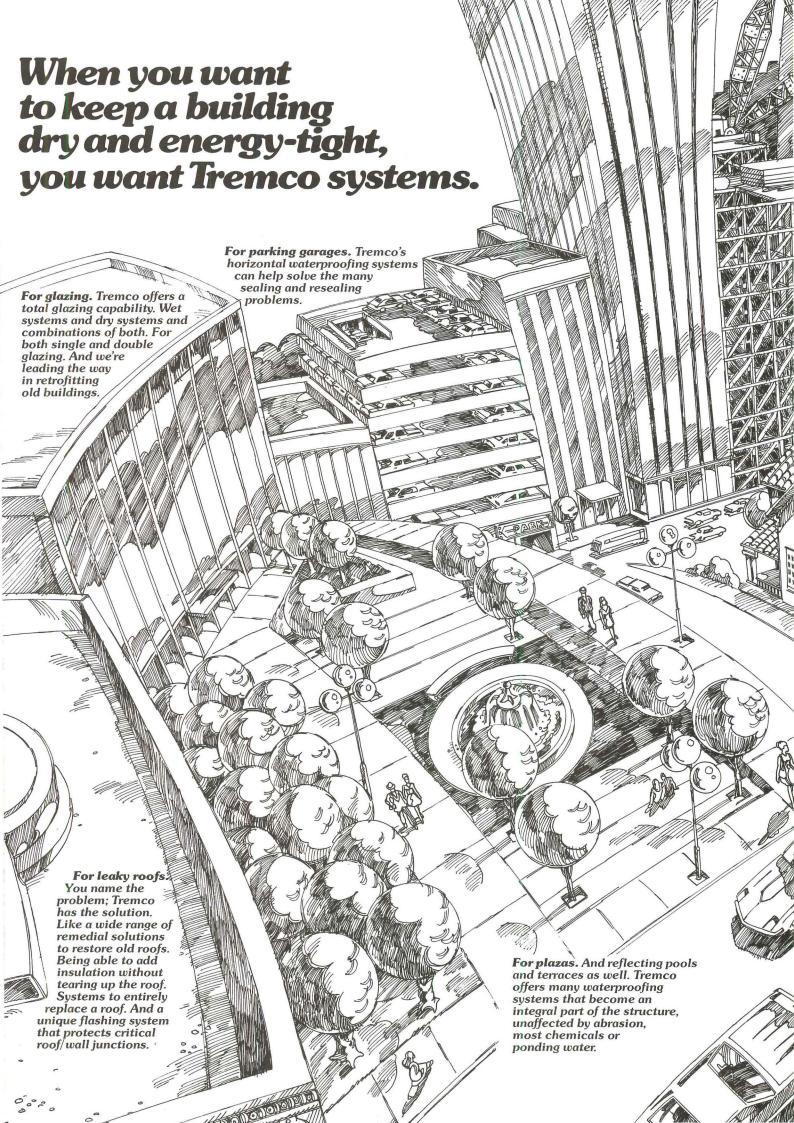
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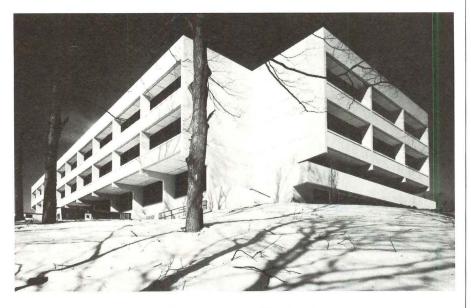
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Architect: Philips-Kaufman and Associates, P.A., Morristown, N.J. Structural Engineer: Shaw & Ganster, Maplewood, N.J. General Contractor: Frank Briscoe Company, Inc., East Orange, N.J. **Owner: The Prudential Insurance Company** of America, Newark, N.J.

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For information on Professional Membership Program, write to Directorof Marketing.

News report continued from page 52

### Calendar

Nov. 8-Dec. 7. "Houses on the Aegean" exhibit, Columbia University, New York, NY.

Nov. 17-Dec. 17. "OMA: The Sparkling Metropolis," an exhibition of over 40 works by the London-based Office for Metropolitan Architecture (OMA) that illustrate plans devised to revitalize Manhattan. The Solomon R. Guggenheim Museum, New York City. Nov. 21-Feb. 4, 1979. "Vienna Moderne: 1898-1918," an exhibition of arts and crafts. Architects/designers represented through household objects, renderings, models, plans, and elevations include Otto Wagner, Josef Olbrich, Adolf Loos, and Josef Hoffmann. Cooper-Hewitt Museum, New York City.

Nov. 30. Deadline for submitting titles and abstracts for the International Conference on Environmental Psychology, sponsored by The University of Surrey Department of Psychology, to be held in Guildford, England, July 16-20, 1979.

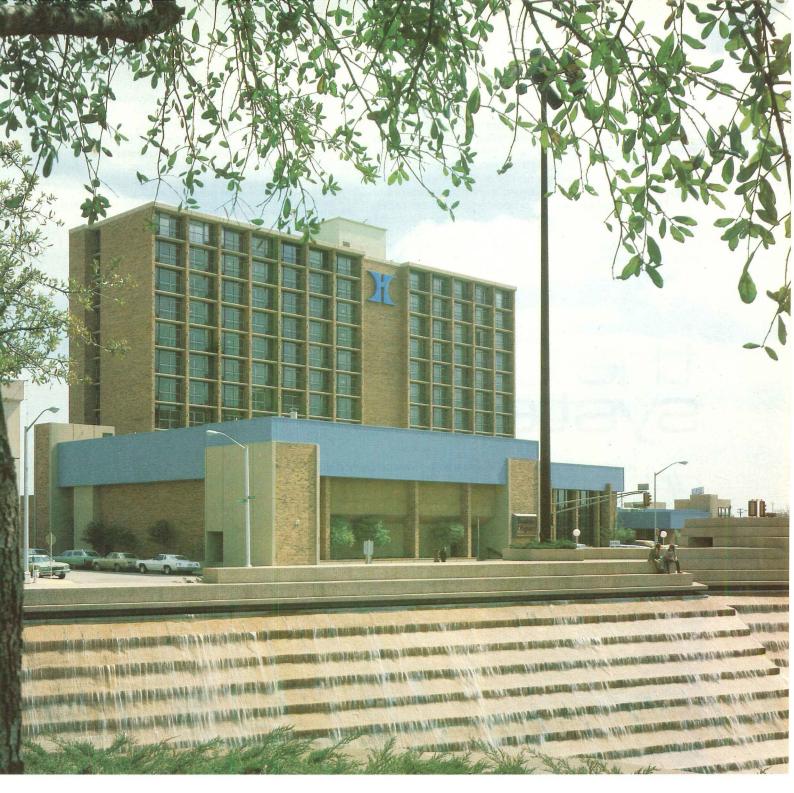
Nov. 30-Dec. 20. Exposition Alberto Sartoris. Unpublished architectural drawings by one of the first major figures of the Modern Movement. Ecole Polytechnique Federale de Zurich, Zurich. Also shown at the Ecole Polytechnique de Lausanne Nov. 2-18.

Through Nov. 25. "Dwellings" explores ways in which artists have used images of the house in sculpture and drawing. Institute of Contemporary Art, University of Pennsylvania, Philadelphia.

Dec. 1. Deadline for entries in the Plywood Design Awards for buildings completed after June 1, 1977. For information write to Plywood Design Awards, P.O. Box 2277, Tacoma, Wa 98401.

Through Dec. 3. "Monuments and Monoliths: A Metamorphosis," exhibition of sculpture by 20th-Century artists, Nassau County Museum of Fine Arts, Roslyn, Long Island, NY. Through Dec. 3. "Inner City: An Environment," environmental sculpture of a city block by Michael McMillen, Lobby Gallery of the Whitney Museum of American Art, New York, NY.

#### THE ANSWER'S IN REINFORCED CONCRETE.



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Jenniges is imparting his knowledge and experience to two young apprentices—David Sweitzer (left), his employer's son, and Paul Pfutzenreuter, son of the man who taught Jenniges his trade more than two decades ago.

The masonry industry makes craftsmen the way it makes buildings—one at a time, by hand, with skill, care and pride. It's those qualities that keep masonry the most economical of building materials, and have kept it competitive in an increasingly mechanized world.

Jenniges sees the national energy crisis causing more and more architects, engineers, builders and owners to turn to masonry, which means an even brighter future for masonry craftsmen. "It's the best way you can build," he says. "My apprentices have years of steady work ahead of them." Jenniges adds: "There are so many different masonry materials to work with. Not just the hundreds of varieties and sizes of brick and concrete block, but stone, marble, ceramic tile, terrazzo, mosaics, and plaster. You have to work hard at this trade, but when you finish a building, you can turn around, look at it and say, 'I had a hand in that building and I'm proud of it.' "In a way, that's how I'd like to feel about my apprentices years from now-that I had a hand in making them skilled craftsmen, and I'll be as proud of them as I am of any building I've worked on."

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### Preservation ironies

#### In economically troubled New York a historic building is saved, while one is lost in prosperous San Francisco.

The most important news in preservation this year is unquestionably the saving of New York's Grand Central Terminal (P/A, Aug. 1978, p. 25). The Supreme Court's June 26 favorable decision (see p. 112), however, is important not only to New York City. It sets an invaluable precedent that now can be cited as other landmark cases come to court. Unfortunately, it was not passed in time to have any effect on a tragic case unfolding in San Francisco.

After a four-year battle led by The Foundation for San Francisco's Architectural Heritage, the City Planning Commission approved plans to demolish the Fitzhugh building on Union Square for a new Saks Fifth Avenue department store designed by Hellmuth, Obata & Kassabaum, with Gyo Obata as design principal (P/A, Aug. 1977, p. 46). The Fitzhugh, which is listed on the National Register, was designed in the Italian Renaissance style in the 1920s by James and Merritt Reid as a ten-story medical office building.

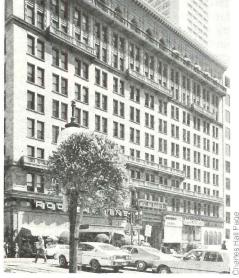
According to *Heritage Newsletter*, the Foundation's official publication, permission for demolition was granted even after the planning commission found that the new store would "have a significant (negative) effect on Union Square." But that isn't all. Both the City Planning Department and the Northern California Chapter of the AIA believe that "the Fitzhugh is an essential part of the historic character and architectural integrity of Union Square," and the planning department has also "declared that, indeed, the Fitzhugh Building was a valuable asset to the City."

The Foundation proposed that if Saks could not use the old building (its 11' x 15' column bay would be a real problem to a department store, even though its steel structure was sound), it might at least build its new one behind the existing shell. This would maintain the character of the important northwest corner of the square flanking the old and elegant St. Francis Hotel.

But retaining the shell would be a serious problem for Saks. Even though the Fitzhugh is a certified historic landmark, converting it to a different use would require that it be brought up to "earthquake standards" because of its heavily populated location. Retaining the shell would mean that its elaborate facing of terra cotta, one of the most hazardous materials in an earthquake zone, would have to be positively secured to the building walls. The Foundation's engineer believed this could be done, without dismantling the walls, by backing them with reinforcing sprayed concrete and fixing the terra cotta to them by metal ties. Saks believed this to be too costly, but the Foundation points out that the granite and bronze-colored glass of the released schemes for the new building (illustrations of the latest version are not yet available) is also expensive. Another problem for preservationists is that the proposed six-story building does not maintain the sense of containment for the Square the ten-story Fitzhugh did.

The point is, though, that if the country's largest specialty store chain had wanted to retain the Fitzhugh, it probably could have; at least that is widely believed in San Francisco. The real irony is that if Saks had wanted a true Saks image, it probably could not have found a building more like the main store in New York, which has served that city well for many decades.

No matter what is put on the square, it will not be the Fitzhugh, and that is what should be there. "It is ironic," Robert Berner of the Foundation recently wrote, "that New York City, which has fundamental economic and fiscal problems, has rejected a major development in order to save Grand Central Station, while San Francisco, which is in relatively good economic and fiscal health, is so weak in conserving the rich array of resources which contribute so much to the City's economy and environment." Perhaps now, with the Supreme Court's decision, some of this will stop. Justice William J. Brennan, Jr., was clear in acknowledging "landmark law has more severe impact on some landowners than on others." [David Morton]



In San Francisco, the Fitzhugh building (above) is currently being demolished for a new Saks Fifth Avenue department store. The original and still-operating Saks in New York (below) could almost be its twin, which makes one wonder why the image is not appropriate for San Francisco.



### A come-back with kudos

The restoration and renovation of a faded downtown hotel in Los Angeles by architect-owners Phyllis Lambert and Gene Summers has pushed the grand hotel into the limelight again.

In 1973, Gene Summers and Phyllis Lambert, two independent architects, began design for a new hotel complex in Bunker Hill, Los Angeles. At about the same time they were negotiating with hotel operators and mortgage lenders during the depths of this nation's recession, the historic Biltmore Hotel was put up for sale. Although badly in need of repair, structural evaluations indicated that there were no seismic problems with the 50-year-old steel frame and 12-in. brick exterior. Summers and Lambert purchased the Biltmore—located on the fringe of a then deteriorating section of downtown-for a depressed price of \$5.25 million, or 50 cents per square foot, including the land.

With plans for the nearby 1300-room Bonaventure Hotel by John Portman (P/A, Feb. 1978, p. 52) already under way, Summers and Lambert were risking a personal fortune on this dowager of a building from an earlier era. Architectural historians were elated that the building was going to be saved, but the economic community was uncertain whether the purchase would prove financial folly or redevelopment wizardry. It is indeed a pleasure to report that with grit, guts, and good design, the latter prevailed. Today the Los Angeles Biltmore Hotel is once again one of the finest hotels west of the Mississippi, and has played a pivotal role in revitalizing the Pershing Square of downtown.

#### Backward and forward in time

Named a historic landmark by the Los Angeles Cultural Heritage Board in 1969, the Biltmore contained several of the most magnificent public spaces in Southern California. It originally opened in October, 1923, as the largest hotel west of Chicago with 1000 guest rooms. Designed by the renowned architectural firm of Schultze & Weaver (also known for the WaldorfAstoria in New York), this classic revival structure employed the finest artisans and craftsmen available to create ceilings, staircases, wall panels, and door frames of unmatched elegance and refinement in the Spanish-Italian Renaissance style.

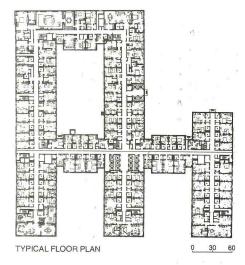
During its legendary history, The Biltmore hosted such diverse luminaries as Cecil B. DeMille, Clark Gable, John F. Kennedy, and Richard Nixon. Opposite tree-lined Pershing Square, it was a Los Angeles institution, but the shift in real estate values towards the west and the deterioration of the hotel caused by neglect took their toll. By 1975, the guest rooms were a shambles, and the public spaces were in disrepair.

The challenge in renovating a landmark building is making decisions about what to preserve and what to remodel. The design concept at the Biltmore involved a hierarchy of restoration with the least impact on historically important spaces, sensitive remodeling of suites and guest rooms, and a bold integration of contemporary elements into certain office and commercial spaces. Summers and Lambert, both known for their Miesian leanings, were able to rise to the occasion on all levels.

The grandiloquent Galleria and main lobby ceiling, originally hand painted by Giovanni Smeraldi, were carefully retouched by his former apprentice, A.T. Heinsbergen. The basic guest rooms were designed in various shades of six basic colors: red, orange, yellow, green, blue, and violet. The coordinated shades within each room create the sense of a special experience. "We wanted the guest rooms to be strong, to make an impression," explained Summers, "we wanted to give people a different experience from what they would have in their own homes."

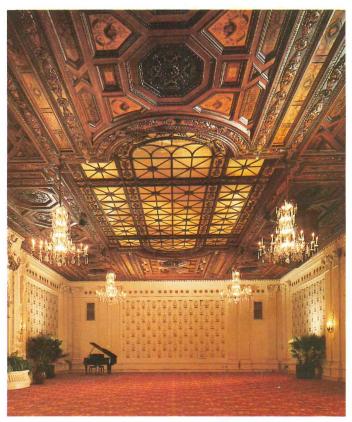
In contrast to the brightly colored guest rooms, the larger suites are a subtle combination of natural tones. In Summers' own suite, for example, the dining room walls are painted off-white, the moldings are a deeper cream color, and both are highlighted by beige-colored silk wallcovering. In concert with the subdued period quality of the suite, Summers added additional





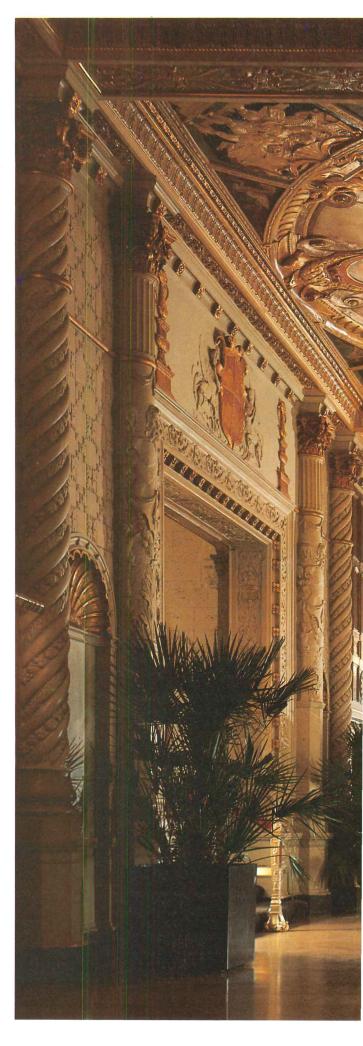
One of the famous spaces in the 1923 landmark Biltmore designed by Schultze & Weaver was the entrance lobby (opposite), with its Spanish-Italian Renaissance ornament. Architects Lambert and Summers restored the painting and decorative work of the interiors while introducing Miesian furniture for a modernist/historicist juxtaposition that dramatizes the ornament.





The Galleria, a through-block passage a level above the main lobby, is a showcase for the painting originally executed by Giovanni Smeraldi and recently touched up by his student A.T. Heinsbergen. In the music room (above), the apparently wood carved ceiling is actually handpainted cast plaster. In the Gold Room (below) murals evoke the 1920s movieland quality with idiosyncratic charm.







#### **The Biltmore Hotel**

Interiors gradually shift from old but refurbished spaces to newly renovated as one goes from the lower public floors upstairs to the hotel rooms. The Crystal Ballroom downstairs has its hand-painted ceiling (right, top) intact. Hotel corridors have new carpeting, lighting, paint, and other details and furnishings. Similarly, the bedrooms, which come in a range of monochromatic color schemes, retain only the wood molding as a sign of former lives. Now dominant is the bold artistry of Jim Dine, who was commissioned to execute prints, wall friezes, paintings, even lamps and rugs. Downstairs in the lobby restaurant (bottom, left) old and new styles mesh, with original columns and ceiling left intact. An upstairs suite (bottom, right) shows mixing of wainscoting and molding with Jim Dine artwork, modern furniture.











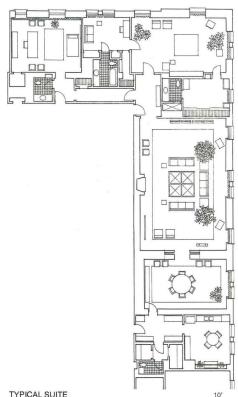


Skylit walkway for advertising offices.

moldings to accent the basic design.

In the new commercial office spaces, such as the 25,000 sq ft for the Chiat/Day Advertising Agency, Summers proves his ability at integrating contemporary and traditional design in a striking series of spaces employing greenhouse skylights to accentuate the view of the original building. His own offices at the hotel (Summers is its president) reflect this concern.

Throughout the hotel, the attention to aesthetic and artistic detail is unsurpassed. Every room has an original piece of artwork by Jim Dine and a collection of plants, succulents, and cacti. The concept of employing the modern art of Jim Dine in juxtaposition with the traditional ornamented hotel proved to be a masterstroke. The guest rooms and hallways are decorated with bas reliefs using everyday objects such as fruit, vegetables, hammers,



10' 3m and other tools. In fact, a gilded mirror frame by Dine evokes the imagery of the gilded grapes and vegetation framing the arched entrance to the Galleria. "The idea of using Dine came from the original building with its classical molding and sculpture. We wanted to carry that idea upstairs," explains Summers who has been collecting Dine since 1961.

The furnishings throughout are elegant and carefully designed. The use of Mies's Bauhaus-inspired furniture of the 1920s with this Renaissance revival building of the same period creates intriguing juxtapositions—a functioning example of the concept of "both/and" in architecture rarely achieved with such skill and success. And successful it is. Summers reports that convention sales for 1978 are up 25 percent over 1977, and the projection for 1980 is a 50-percent increase.

#### Key to success

The key to The Biltmore's success is a rare combination of good design, sound financing, good management, and a dash of good fortune. The overall project cost of \$30 million for a revitalized hotel of 800 guest rooms and suites, 27 banquet and meeting rooms, with 90,000 sq ft of offices, 16,000 sq ft of restaurants, and nearly 40,000 sq ft of retail shops, creates an overall atmosphere of luxury for a cost of about \$30,000 per room. Compared with the \$100 million Bonaventure Hotel with an expenditure of approximately \$75,000 to \$85,000 per room, it is easy to see why The Biltmore is doing so well.

According to Summers, when he and Phyllis Lambert bought the hotel, the occupancy rate was 39 percent (based on 1000 rooms) with the average room rate at \$21. After the conversion of two floors to conference and meeting rooms, the current occupancy rate is almost 70 percent (based on 800 rooms), with room rates starting at \$48 for a single and \$58 for a double.

The only way it was possible for Lambert and Summers to maintain the quality control they desired was to be all things to all people. In effect, Summers acted as ar-

chitect, owner, contractor, decorator, and hotel management all in one. There was no bidding of the construction documents which greatly simplified the drawing process, and, says Summers with a childlike grin, "there were no change orders." Major design decisions required a meeting between owner, architect, and general contractor, which found Gene Summers alone at his desk talking to himself. While Summers and Lambert had established Ridgway Ltd. in Newport Beach, Ca, Lambert still lives and maintains an office in Montreal. The company meanwhile has a number of other projects in the LA area, which involve design, construction, leasing, and management.

In light of the AIA's decision in Dallas to allow an architect to be a developer, it is interesting that Gene Summers, FAIA, passed the exam for his contractor's license last year. This sort of multidisciplined expertise should be welcomed into the profession, particularly when architects take the risks and meet challenges of restoration and revitalization with the aplomb and conviction of Phyllis Lambert and Gene Summers. It is a testament to the notion that good design is good business. [Michael Franklin Ross]

#### Data

**Project:** The Biltmore Hotel, Los Angeles, Ca. **Architect:** Ridgway Ltd. Newport Beach, Ca (Phyllis Lambert and Gene Summers, architects, formed company to handle architecture, design, construction, management, sales, leasing, and marketing.)

**Program:** renovate 55-year-old hotel in downtown Los Angeles with 772 guest rooms, 27 banquet and meeting rooms, 90,000 sq ft of offices, 16,000 sq ft of restaurants, 40,000 sq ft of retail shops. Third and fourth floors still to be renovated for additional rooms.

**Structure:** existing steel frame, masonry walls. **Major materials:** Brick, steel, carpet, oak parquet flooring, paint, plaster, gypsum board (see Building materials, p. 142).

Contractor: Ridgway Ltd.

**Cost:** \$30 million, about \$30,000 per room **Photography:** Hedrich-Blessing.

## Backstage along the Strand

Preserving the urban scenery of places like the Strand in Galveston calls for making the plain spaces behind the ornate fronts economically productive.

Galveston is one of those fortunate places bypassed by prosperity just long enough. Overshadowed in the 20th Century by nearby Houston, the city moldered in the subtropical sun for decades, stirring economically only in the 1960s, just as the Victorian architecture of its heyday began to be appreciated.

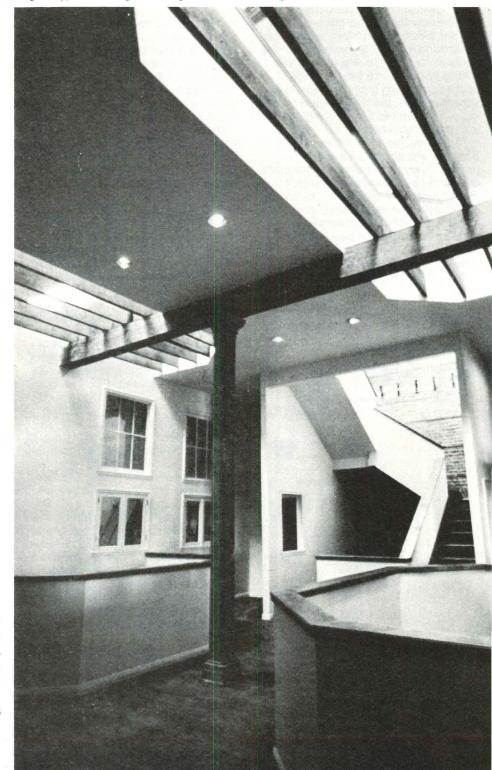
Rehabilitation of gingerbread houses on Galveston's tree-shaded residential streets has proceeded well under individual owners, armed with historic district status. But revival of the commercial district along the Strand—once the Wall Street of the South—called for purposeful planning, involving public and private funds.

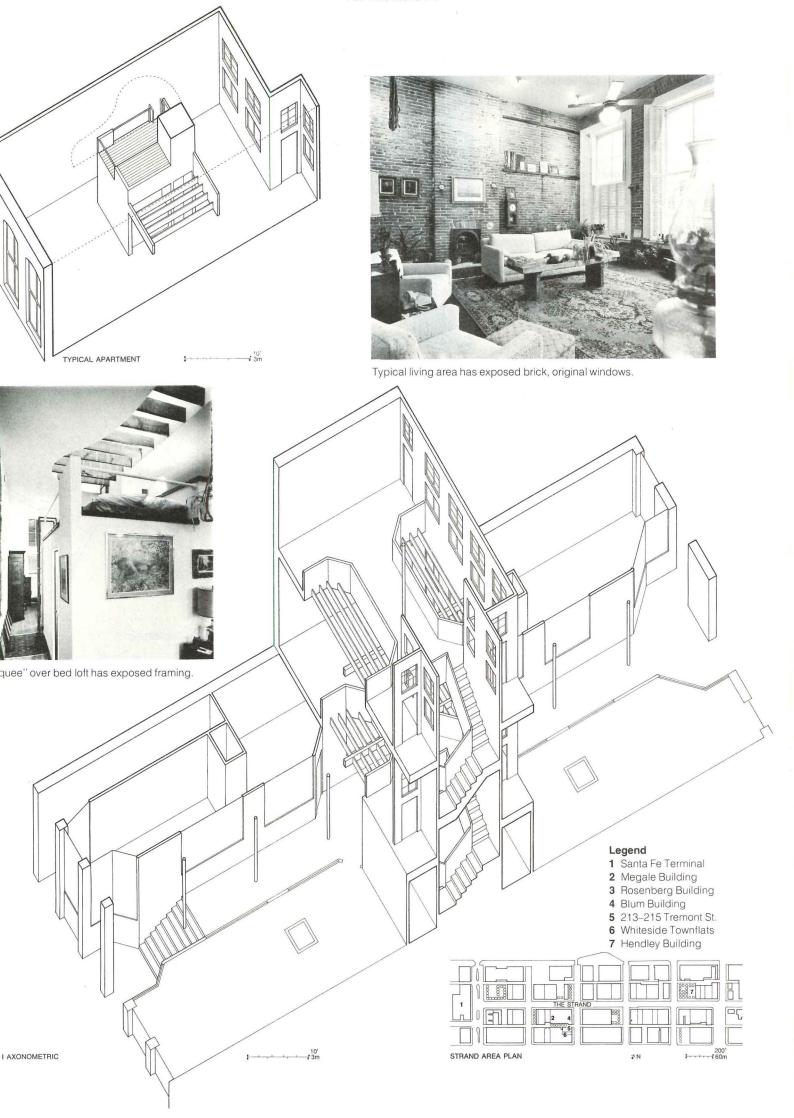
The process has been characterized by modest goals and elastic timetables. A 1973 study by architects Ford, Powell & Carson of San Antonio dealt mainly with such basic physical steps as improving sidewalks and street lighting. A more ambitious "Action Plan for the Strand" was prepared in 1975 for the Galveston Historic Foundation by architects Venturi & Rauch of Philadelphia, with the help of a National Endowment for the Arts grant (P/A, Dec. 1976, pp. 26–27). Backed by economic projections and traffic studies

Restored 1870 front of Rosenberg Building.



Original cypress framing crosses light wells in Rosenberg "atrium."





#### Adaptive reuse in Galveston

relating the Strand area to the whole city, this commonsense rehabilitation plan set forth as a first consideration "to make the buildings weather-tight.'

Denise Scott Brown, partner in charge of this study, stressed the importance of ordinary street architecture as the main asset of the Strand. A primary objective was to assure survival of these buildings by attracting tenants for them-mainly retail at street level, residential above. (At the time of the plan, there were 5 stores, 2 restaurants, and 12 residential units in the 14 city blocks.) It was deemed important to retain surviving wholesale activity and attract retailers of a more enduring type than novelty restaurants and boutiques with short life-cycles. Although a few artists had moved into unimproved lofts, increased residential demand here seems to depend heavily on modern utilities, emergency exits, and air conditioning. Initially, at least, new office space along the Strand was considered not competitive with modern office space readily available nearby.

#### Gracious living over the store

Residential conversions to date have been concentrated near the corner of the Strand and Tremont St., where renovated buildings will be linked by making a back alley into a pedestrian precinct. Two large three-story buildings on the Strand have been rehabilitated to designs of Taft Associates of Houston; each has shops off a passage through to the alley, with a central stair-lightwell leading up to the apartments. The Megale Building embodies the architects' general concept, but the adjoining Rosenberg Building shows their skill down to its details. Its distinction derives from the simplest devices: cutting lightwells without removing the original cypress joists, which filter light in the manner of traditional Southwest "portales" (see New Mexico Union article, this issue); exposing the beams over sleeping lofts to give a valuable illusion of space; reusing smallpaned windows and other wood elements salvaged from old interior partitions.

For the paired buildings across the alley at 213–215 Tremont St., Taft Associates worked out a circulation scheme with sculptural stairs under a greenhouse enclosure, entered from the alley. The large units here are divided more conventionally into rooms, but only by sleek storageservice units, with glass above, that seem to hover between bounding walls of exposed brick.

The next building along Tremont St. represents the pioneering effort at apartment living in this area, completed in 1975 to designs by Ford, Powell & Carson for owner-occupant Emily Whiteside, executive director of the Galveston County Cultural Arts Council. The "townflats" here, one to a floor, are reached through another central, skylighted stairwell-this one more homey, with brick paving and tall woodframed windows. The owner's first-floor



Gypsum board sculpture of atrium stairwell.

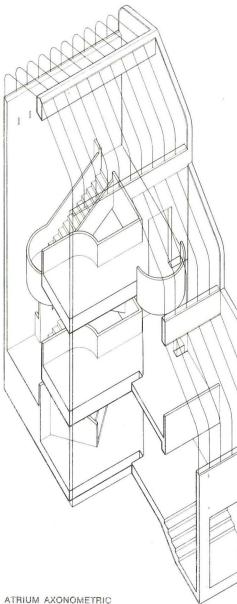
unit extends into a skylighted wing that was originally a printer's shop.

At the streetcorner itself is the Blum Building, now being converted, under Ford, Powell & Carson's plans, into a complex of first-floor restaurant and upper-floor offices, all around a skylighted atrium. The local office market has now become tight enough-and the condition of adjoining properties sound enough-to make rental office space at this location a good risk.

A few blocks east along the Strand, the Hendley Building is about to be restored under Taft Associates' direction to house the Galveston Historical Foundation's offices and workrooms, with first-floor auditorium and exhibition spaces. The oldest structure on the row, Hendley shows its 1859 origin in the use of monolithic granite, rather than cast iron, for its street-level portals. Strategically located next to a parking lot turned minipark, the structure will have a 5-ft-wide extension that will brace its frame and house mechanical services, toilets, and escape stairs-allowing original partitions on upper floors to remain intact. The visible west face will have inserts of earth-colored tiles set in a pattern, within a dark cement-plaster matrix.

#### **Terminating landmark**

The Strand has one singular landmark emphatically closing its west end-the huge, vacant Santa Fe Terminal. The revitalization of this 11-story, 195,000-sg-ft structure has been seen as economically crucial and is about to begin, following plans by Ford, Powell & Carson. Completed in the 1930s, the terminal represents a different era from the rest of the

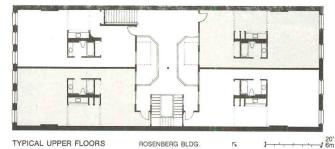


Atrium of 213-215 Tremont St. opens from alley shared by Rosenberg and other buildings. Restoration of Blum Building and conversion of alley to pedestrian space are planned.



Legend

- 1 Megale Building
- 2 Rosenberg Building 3 Blum Building
- 4 213-215 Tremont St.

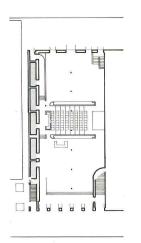


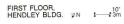


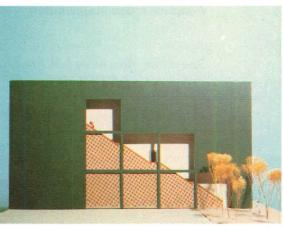




Flats in 213–215 Tremont have streamlined service-storage islands.

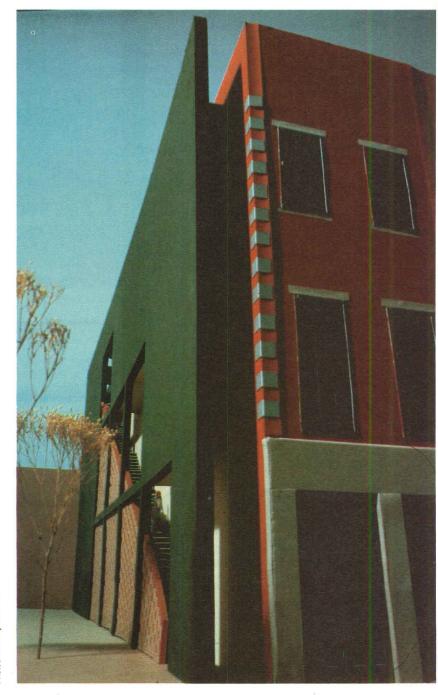






Hendley Building, being remodeled by architects Taft Associates as headquarters for Galveston Historic Foundation, will be buttressed by stair-mechanical addition facing proposed park.





#### Adaptive reuse in Galveston

Strand—and does it very well. A fireproof structure, with large floors and elevators, it will provide suitable space for government agencies and educational institutions. Much of the ground level will be devoted to a railroad museum, for which some rolling stock already stands at the old platforms. The return of some rail passenger traffic to Galveston is not being ruled out.

One visible alteration to the terminal will be the addition of a canopy at the main entry. While no canopy could be totally compatible with the tall Art Deco entry, some protection is in order here, as elsewhere in this hot, rainy city. The canopy design, of Art Moderne flavor, will be pulled away from the façade at the main opening, allowing sunlight and hanging lamps to pass through.

#### The Strand among city streets

As the Venturi & Rauch plan stressed, the reuse of the Strand area depends heavily on sorting out traffic and parking and making streets more attractive to walk along. A projected Industrial Boulevard just to the north is expected to divert heavy traffic; garages adjoining this artery are planned to improve access by car and-more important-to ease pressure for demolition of buildings on nearby streets for parking lots-a pressure that rises with prosperity. Parking-lot gaps already interrupting the Strand are to be filled in visually with rows of trees, some converted to miniparks like the one next to the Hendley Building. Shade and rain protection in front of Strand buildings is to be provided by rebuilding of canopies, which has already occurred at a couple of locations.

Other Action Plan recommendations already being followed include those on paint colors and commercial signs, which are to be "eclectic, rather than pure" in their evocation of Victorian precedent. The first of the "building information signs" proposed by the plan has now been installed; designed by Taft Associates, the sign shows a historical view on one side, a description on the other, both engraved in aluminum on a dark green ground looking properly 1970s Victorian.

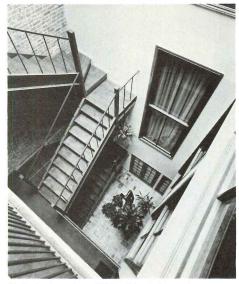
The funding devices behind the Strand renovation are modest, but have great leverage. A revolving fund established by the Historic Foundation in 1973 is used for purchase and resale of buildings-and rehabilitation of their façades. Funds from HUD are expected to go toward the costs of such improvements as parking garages, a pedestrian overpass to waterfront piers, and conversion of alleys to pedestrian walks. Ultimately, however, the revival of the Strand will depend on commitment of private funds-by investors, by tenants and owner-occupants, and by the residents and tourists who decide to walk, work, shop, and dine along the Strand. And all these innumerable decisions will hinge on the nurturing of the area's architectural ambiance. [John Morris Dixon]



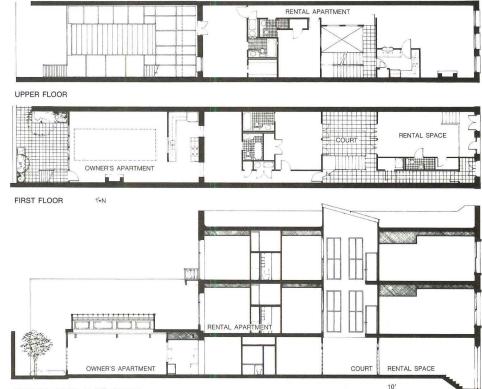
Rendering shows Whiteside flats with unrestored 213-215 Tremont St. flanking "pedestrian" alley.







Tall windows face Whiteside stair court.

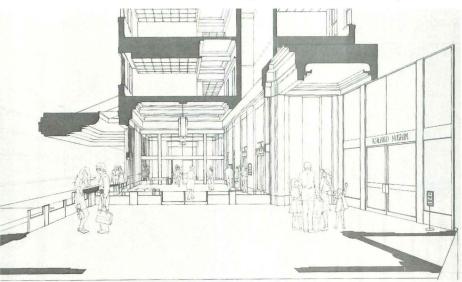


WHITESIDE TOWN FLATS SECTION

10' 3m



Restoration of Santa Fe Terminal includes new canopy that skirts decoration at main portal.



Ford, Powell & Carson scheme for terminal interior would play up remaining period features.

#### Data

Project: Rosenberg Building, Galveston. Architects: Taft Associates, Houston: John J. Casbarian, Danny Samuels, Robert H. Timme, partners. Client: Robert L.K. Lynch.

Site: commercial row, south side of Strand. Program: conversion of 12,000-sq-ft loft building to shops on first floor, apartments above. Structural system: original wood framing on brick bearing walls.

Major materials: original brick and cast-iron front; exposed brick, gypsum board, reused wood on interior (see Building materials, p. 142). Mechanical systems: individual air-handling units. roof-mounted chillers.

**Consultants:** John Boyce & Associates, mechanical; Nat Krahl & Associates, structural. **General contractor:** Gautier Construction. **Cost:** \$162,000; \$13.50 per sq ft.

Project: 213–215 Tremont St., Galveston. Architects: Taft Associates, Houston: John J. Casbarian, Danny Samuels, Robert H. Timme, partners. Client: Daniel K. Thorne. Site: west side of Tremont, ½ block from Strand. Program: conversion of 12,000-sq-ft 3-story loft building to 1st floor shops, apartments above. Structural system: original wood framing on masonry bearing walls; steel beams in atrium. **Major materials:** original brick and plaster exterior, with cast iron; exposed brick, original wood, gypsum board interiors; greenhouse sections, brick pavers in atrium (see Building materials, p. 142).

Mechanical system: air handlers in each leased space; condensing units on roof. Consultants: John Boyce & Associates, mechanical; Nat Krahl & Associates, structural; Life Safety Design, Inc., fire safety. General contractor: Lassiter Co. Cost: \$285,000; \$24.50 per sq ft.

**Project:** Whiteside Townflats, Galveston. **Architects:** Ford, Powell & Carson, San Antonio: Boone Powell, principal in charge; Joe Stubbelfield, Killis Almond, project architects. **Client:** Mrs. Emily Whiteside.

Site: 217 Tremont, adjoining 215 (see above). Program: conversion of 4800-sq-ft, 3-story loft building to three floor-through apartments. Structural system: existing brick; wood framing.

Major materials: existing brick and cast-iron exterior; exposed brick, wood, gypsum board. Mechanical system: individual residential airconditioning units, electric heating elements. General contractor: Swain Restoration Co. Cost: \$87,000; \$18.35/sq ft; 1975 completion.



Art Deco motifs at central terminal entrance.

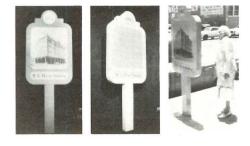


Restored canopy shades granite-arched front.



Blockfront of office-warehouse structures near east end of designated area has missing details restored by Richard Haas trompe-l'oeil painting.

Taft Associates' design of building information sign has historic view on one side, text on reverse, engraved in vandal-resistant metal.



## Learning to love a landmark

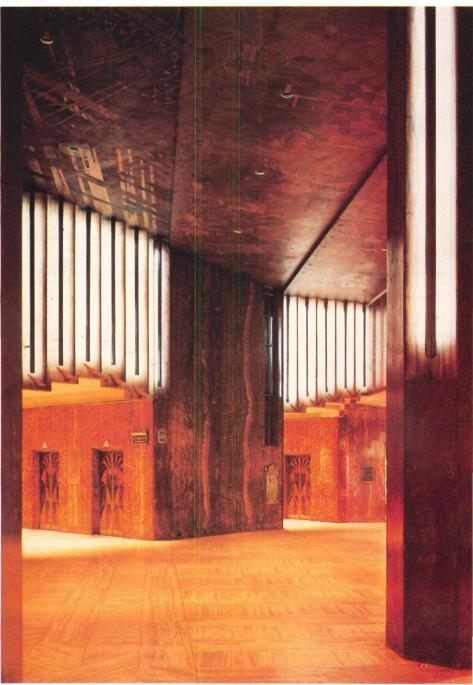
The owners of an Art Deco skyscraper feel that landmark designation could be somewhat of a mixed blessing for them.

For his 1930 musical comedy *The New Yorkers*, the inimitable Cole Porter wrote a song called "Let's Fly Away," in which a pair of bored Gothamites long to get away from it all in lyrics which complain, "I'm tired of the Paramount's gaudy gilding / I'm tired of looking up to the Chrysler Building." For those of us with somewhat less jaded appetites, looking up to the Chrysler Building has not been such an arduous task. Since it was designed 50 years ago by William Van Alen, its distinc-

Elevator doors (below) are stainless steel inlaid with exotic woods in stylized fan motif.



The Chrysler Building's lobby (below) and elevator doors (below left) are classics of Art Deco design



tive, glittering spire has been a unique component of the Manhattan skyline, quite unlike the top of any other building anywhere else. Its lobby, a gorgeous fantasy of mauve marble, exotic woods, stainless steel, and dramatic lighting, is one of the best surviving examples of interior design in the Art Deco style. From top to bottom, the Chrysler Building is a landmark in the truest sense of the word, and it is as quintessentially a part of the New York scene as bagels and lox, brownstones, and the Brooklyn Bridge.

#### Down in the depths

So it came as something of a shock when, in early 1977, it was announced that the Chrysler Building had been sold in foreclosure proceedings to the Massachusetts Mutual Life Insurance Co., after Avon Associates (an affiliate of Chatham Associates, Inc.) defaulted on a \$15 million mortgage held by the Boston-based insurance company. To some, the concept of losing money on such a large and famous real estate property must seem hard to grasp. You might go broke trying to lease space in a shoddy spec office building in some remote and ill-conceived industrial park, but the Chrysler Building? Yet a look at the environs of the 77-story office tower rather quickly indicates how that could have happened.

Forty-second St., the great Midtown Manhattan thoroughfare celebrated in song and story, has for many years been slipping into a seemingly inexorable decline. At its eastern end, 42nd St. is anchored by the United Nations enclave, Roche & Dinkeloo's Ford Foundation building, and the still-lovely Tudor City complex. But the street becomes increasingly seedy as one moves westward, until one ultimately reaches the veritable hellhole of the Times Square area. Less than halfway down in that descent (both geographically and physically), the immediate surroundings of the Chrysler Building have clearly seen better days. Dingy discount shops and the overflow of Grand Central Station's bag-person population have done little to attract new tenants to the area.

- -

But new life is returning. Just across Lexington Ave. from the Chrysler Building, the abandoned hulk of the old Commodore Hotel (deaccessioned by the bankrupt Penn Central Railroad) is stirring with the start of its off-again-on-again renovation into a new Hyatt hotel. The squat and funky Airlines Building (which looked rather like a granite Art Deco radio) is being dismantled to make way for Ulrich Franzen's new Philip Morris headquarters building across the street from the train terminal (p. 24). And several master planning proposals for the rehabilitation of 42nd St. are among other hopeful signs of its eventual resurrection.

#### Interior Deco rating

Thus the new owners of the Chrysler Building found themselves with a property that was visibly past its prime. As of last summer, some 50 percent of the building's

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rental space was reportedly unoccupied. That staggering figure could logically throw Massachusetts Mutual into a panic, given its investment of some \$35 million all-told, plus the \$23 million additional it estimates will be necessary to renovate the building to a competitive position among the more desirable Midtown office towers. Mass Mutual turned to Edward S. Gordon & Co., Inc., the New York real estate developer, to manage the revitalization of the Chrysler Building, which was announced last spring amidst a flurry of publicity that capitalized on the structure's de facto landmark status. This news was all the more welcome at the time, for it coincided almost exactly with the disclosure that Radio City Music Hall (containing the greatest of all Art Deco interiors) was soon to be closed and possibly destroyed by its owners, Rockefeller Center, Inc

Spurred on by the vociferous public outcry to save the endangered theater, the New York Landmarks Preservation Commission quickly granted landmark status to the Music Hall. Having had one bad scare, the commission then decided to take action on the Chrysler Building before its new owners could undertake any changes that would destroy the character of the well (if not beautifully) preserved structure. At first, landmark status was proposed for the building's exterior only; it was later extended to include its public interiorslobby, concourse, staircases, elevator halls and cabs-as well. There was one problem, though. The Gordon firm had already proceeded well along in its plans for renovating the building, including changes to the lobby, the space that was the basis for interior designation. To the building's owners, financially committed to the new lobby scheme, the Landmarks Commission's action seemed as belated as it was unwelcome.

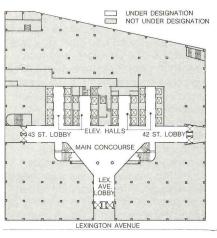
#### Minority of one

On July 11 of this year, lawyers for Mass Mutual submitted a memorandum and statement to the Landmarks Commission opposing designation for the Chrysler Building, a seemingly ironic turn of events after the extensive public relations campaign that stressed the owners' desire to restore the building to its former glory. Excerpts from the Mass Mutual petition are rather astonishing reading for anyone familiar with the Chrysler Building, and are summarized in this excerpt from the client's argument: "a) the Chrysler Building is only one of several buildings of similar design; b) there is no substantial history connecting the Building and the City; c) it is no longer a substantial tourist attraction; and d) the interest in Art Deco design is a result of change in fashion rather than because of its permanent distinguished quality. For these reasons the Building is not a landmark for designation purposes and should not be designated.'

Everyone, of course, is entitled to his own opinion, but it would be fair to suppose that Mass Mutual is in a distinct minority in the expression of the above views on the

#### **Chrysler Building, New York**

aesthetic and historic importance of the Chrysler Building. No one doubts that the owners are acting in good faith: they really feel that what they are doing is in the best interest of the Chrysler Building. Yet they fought its protection under the existing landmark laws. If we want to understand this perplexing turn of events, we should try to find out why landmark status appeared to be such an unwanted gift. Money, as one might have suspected, had a great deal to do with it. If the client's architectural and historical arguments in their July 11 statement seem rather guestionable, the financial reasoning (or shall we say fears) behind their decision to fight designation seems quite a bit more under-



GROUND FLOOR PLAN

NOT TO SCALE



standable. The net income on the Chrysler Building last year was only an approximate 1.1 percent of its total assessed value of \$17 million, a figure that the owners find, not surprisingly, to be an inadequate return on their investment. The projected operating deficit of the building this year has been estimated to exceed some \$300,000.

With a \$23 million renovation program about to begin—a program deemed by Mass Mutual to be the essential factor in restoring the financial health of the property-the owners felt the kinds of restraints imposed by landmark designation were too risky to go unchallenged. At the heart of their objections lay the possibility of delays that could result from applications to the Landmarks Commission that would be legally required under designated status. If a building is declared a landmark, all alterations to it must be cleared first with the Commission before they can be carried out, a transaction that can be lengthy, even if approval is eventually given. The owners appeared to be doubly vulnerable, with both the interior and exterior proposed for designation. Mass Mutual wanted to cut its financial losses and to move full speed ahead with the renovation project, and they wanted the assurance that it would not cost them a great deal of time-and thus a great deal of money-to do so.

#### Let's not spoil a beautiful relationship

In further developing their case against designation, the owners of the Chrysler Building enumerated the actual changes that they planned to make to the building, in order to demonstrate their intentions to preserve the character of the structure. Exterior alterations would be minor: airconditioning units would be inserted into existing windows and would be masked by Decoid grilles harmonizing with the building's design. But interior changes planned by the owners would have been far more disturbing. Though those plans included the much-needed cleaning and relighting of the ground-floor lobby and concourse, other modifications would have altered the lobby in ways that seem unnecessary and obtrusive.

Among the worst of the projected ideas was the ill-conceived scheme to duplicate the stylized fan motifs of the magnificent marguetry elevator doors and to extend those designs above the existing doors up to the ceiling of the elevator lobbies. It was felt that the doors as they have existed for 50 years weren't visible enough, and thus emerged this unfortunate example of the theory that if some is good, then more must be better. Further damage would have been done to the elevator halls by the installation of jazzed-up stepped ceilings to echo the shapes of the stainless steel "curtains" that surmount the archways leading to the elevators. Other plans called for the addition of planters to the lobby, a feature that the Commission pointed out would be anachronistic in a building of that period. If the original design of the lobby is as questionable as the owners would have us believe in their brief (in which they claim "that a change of fashion rather than originally inherent merit has dictated the present interest in the Building"), why do they want to make it more "Art Deco" than it already—and, one would think, sufficiently—is?

These imagined improvements would be not only pointless, but downright destructive; this is an urgent case of needing to let well enough alone. A much better idea is for the re-creation of the long-lost digital clock on the wall facing the main entrance of the building. A photograph of that original timepiece has been found by JCS Design Associates, Inc., of New York, which has been preparing design schemes for the lobby.

As we move up the tower from the ground-floor lobby, we find the nature of the changes of less urgent concern. The remodeling of the Chrysler Building's office floors does not in any noticeable way affect the public's perception of the building as a whole. Office design and technology have changed a great deal since the early 1930s, and some of the building's office interiors have not been appreciably renovated since then. If the Chrysler Building is to be the going financial concern it must become in order to survive, then the quality of its rental office space is the one area where the developers should have as free a hand as possible. The New York firm of Prentice & Chan Ohlhausen has been given the task of bringing the currently unoccupied office space (over 200,000 sq ft vacant last summer) up to current standards that will allow it to contend successfully with other, newer buildings in a highly competitive real estate market. At the very top of the Chrysler Building, the Cloud Club (originally a members-only retreat for businessmen) will likewise undergo a renovation, although preliminary sketches remind one more of an airport cocktail lounge than the Art Deco revival that it correctly should be.

#### **Pyrrhic victory?**

On September 12, 1978, the New York Landmarks Commission granted landmark status to the Chrysler Building. According to the Commission's executive director, Lenore Norman, revised plans for the renovation of the lobby have not yet been submitted to the Landmarks group. She predicts some minor changes to the lobby will be made, while other, more extensive proposed alterations will have to be brought before the Commission for a hearing. Given the nature of some of the original proposals, we can breathe a sigh of relief. But will this larger issue of private profit vs public good be faced again if developers feel that potential landmark properties have too many strings attached to make them worth the trouble? This victory, and others like it, might turn out to be battles won in a losing war if the compelling issues raised by both sides in this landmark controversy are not eventually, and successfully, resolved. [Martin Filler]

## The magic fountain

A plaza by August Perez & Associates revives an old section of New Orleans. At its center, a dazzling new fountain by Charles Moore evokes the spirit of Italy, homeland of its benefactors.

Great architecture tends to inspire admiration, reverence, humility, awe, and other such solemn emotions. But rarely does it fill its beholders with feelings of happiness, romance, warmth, joy, and love. The new Piazza d'Italia in New Orleans is one of those rare exceptions. The latest adornment of America's most atmospheric city, the Piazza and its centerpiece, St. Joseph's Fountain, form an ensemble of unqualified pleasure and delight, the perfect expression of the *gioia di vita* that is as characteristically Italian as the vocabulary of forms and colors that makes this such a deeply evocative place.

The story of the Piazza's conception, planning, and execution is an inspiring one: a happy conjunction of architects and clients that was enriched by a sympathetic intersection of tastes and fantasies, a surprising sharing of visions and dreams. It was originally conceived by several members of New Orleans' considerable Italian community. The vibrant cultural mix of New Orleans has owed a great deal of its vitality to its Italians, though their contribution has never been so widely recognized as those of the French, the Spanish, or the blacks. To remedy that situation, and to signify the increased ethnic awareness that has become a matter of great pride to Italian-Americans in the last decade, it was decided that a new symbolic focus-part gathering place and part memorial-was needed by the Italian community.

At about the same time, the City of New Orleans was becoming increasingly concerned about the startling demolition rate of buildings in its central business district: some 100 structures were pulled down in one four-month period alone. To counteract that trend and to provide a sign of revitalization, the city—led by its then-Mayor Moon Landrieu—decided to develop a block it owned in that area. The city



St. Joseph's Fountain forms the centerpiece of the new Piazza d'Italia (above). Encircling the site are 19th-Century commercial buildings which will be renovated at later stages of a multi-phase redevelopment plan. Beyond the fountain rises the framework for the Lafayette Archway, which will link the Piazza with the proposed Lafayette Mall, extending the renewal area to surrounding blocks.

#### Piazza d'Italia

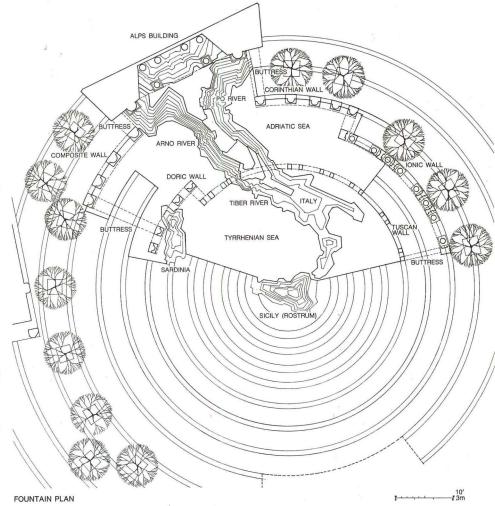
had received that land as a trade-off from a real-estate developer in an earlier urban renewal scheme; it now created the perfect opportunity to give the Italian citizenry its longed-for monument.

#### **Toil and trouble**

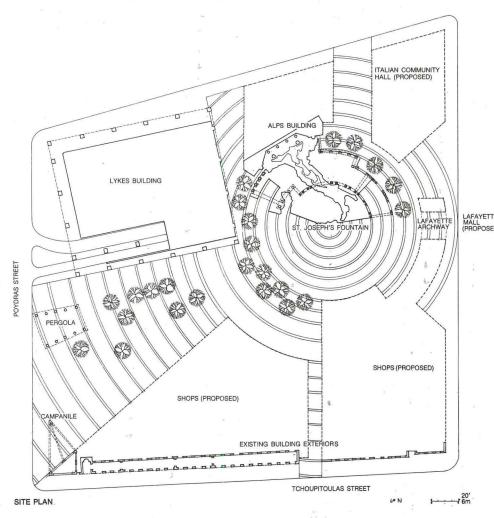
The Mayor's Office, under the direction of project administrator John Chrestia, began its search for an architect by organizing a limited, invitational competition in two phases: the first stage, in which some 60 or 70 firms from around the country were contacted; and the second, in which six offices were invited to submit proposals for final judging. As it turned out, this seemingly prudent plan engulfed the project in controversy from the very start, and the brilliant conclusion of this effort could not have seemed more unlikely at that early, turmoil-ridden stage. The Mayor's Office did not want to organize the selection process in accordance with guidelines for architectural competitions set down by the American Institute of Architects. Moon Landrieu felt the city should not be obligated to accept an architect who might not have had experience with urban renewal projects, and the mayor felt the AIA's competition rules could lead to that eventuality. So incensed by this flouting of its authority was the local chapter of the AIA that it threatened sanctions-and even possible loss of license-to any local firm that entered the competition

Undeterred, the New Orleans firm of August Perez & Assocs. decided to enter, was asked back for the final round of judging, and eventually won the competition. But at what price: the firm had done a great deal of work for the state and federal government in the past, and dark rumors began to spread about possible intrigue within the jury. The city's news media, hot on the scent of a possible scandal and spurred on by the AIA chapter's hints of political influence, whipped the story into a local cause celèbre. Emotions still run high on the issue, with none of the participants free from a biased point of view. From any viewpoint, it was a rather ugly business.

While charges, denials, and countercharges flew back and forth, a most fortunate decision was nonetheless made. The embattled jurors strongly suggested to the winning firm that it consider working in conjunction with the runner-up in the competition: Urban Innovations Group of Los Angeles. UIG's principal, the peripatetic Charles Moore, produced an entry that was strong precisely where the Perez entry was weak, and vice versa. Whereas the Perez scheme concentrated on the development of the existing 19th-Century commercial buildings on the site with little indication of what was to be done at the center of the proposed plaza, the UIG scheme stressed the design of the fountain at the center of the plaza, with much less attention given to the surrounding buildings.



St. Joseph's Fountain (plan above and opposite page) evokes Italy both in plan and in design.



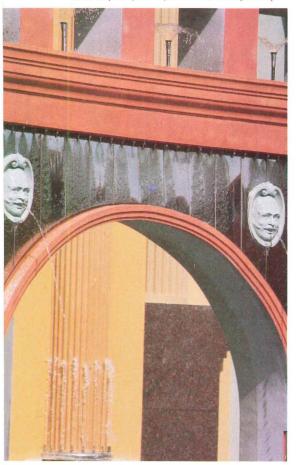




Charles Moore in hip boots (above) adjusts working model of capital of Composite column for St. Joseph's Fountain, California, 1976.



Ionic capital (above) and Doric wall (below).



#### Where's Charley?

August Perez & Assocs. wisely accepted the jury's advice, contacted Moore, and thus began what now seems like the best of all possible solutions for the design and construction of Piazza d'Italia. That both parties benefited greatly from this collaboration there can be no doubt. Among the first to recognize that was the jury of P/A's 23rd Awards Program, which gave a citation to the final, combined scheme. (P/A, Jan. 1976, p. 82). The Perez office in its 35-year history had produced little design of really memorable quality. A coincidental example of their earlier work is the 22-story Lykes Building that directly adjoins the Piazza site. Designed in 1968, it has vertical strip windows and is clad in white marble. This office tower is bland, but it is also inoffensive, and it is a better foil for the new plaza than the more ambitiously designed high-rises that can be seen from the site.

As for Charles Moore, his nomadic architectural practice, his high volume of current work, and his hopelessly complicated professional affiliations could make his participation in a project seem like (in the words of Sportin' Life in *Porgy and Bess*), "a sometime thing." Moore is a designer of incomparable invention and skill, but the success of his projects is often directly proportional to the quality of his collaborators.

Moore's associates at the Perez office were R. Allen Eskew and Malcolm Heard, Jr., two young architects who eagerly welcomed this opportunity to work with Charles Moore, but who were able (as some have not been) to resist being swept away by his considerable reputation. It is doubtful that, at such great distance from its designer, St. Joseph's Fountain, tricky in design and complicated in construction, could ever have reached completion without the kind of day-to-day attention it was given by the Perez office. Completing the quartet of principals was Ron Filson (also a P/A citation winner the same year, Jan. 1976, p. 72), Moore's equable and trusty project coordinator at UIG, who served as liaison between the two far-flung offices.

#### First things first

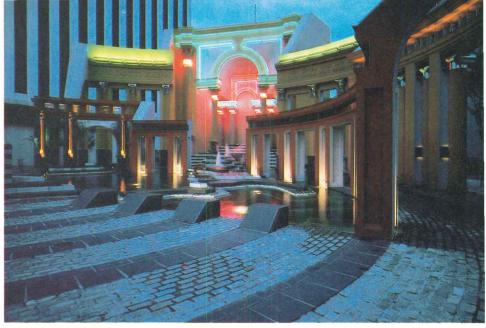
Early in 1975 it became apparent that priorities would have to be decided upon in bringing the project to reality. The city's plan to act as lessor of the rental properties at the Piazza fell through as a result of a court challenge to the city's similar role in its earlier redevelopment of the nearby old French Market. A private developer would have to be found, and efforts would have to be directed toward attracting that necessary participant. Therefore it was decided to begin construction with the center of the plaza first, in an attempt to stimulate public interest in the Piazza as proof of its commercial de-

Latin inscription on fountain (opposite) reads, "This fountain was given by the citizens of New Orleans as a gift to all the people." In foreground are heel and toe of the boot of Italy.

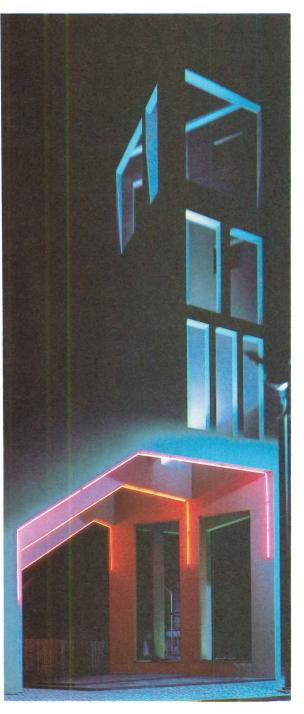








Temple (above) and campanile (below) announce presence of Piazza on Poydras St. At night, St. Joseph's Fountain becomes a rainbow of neon (above).



sirability for a potential developer.

It was a very smart idea. Though at this point the entire renewal scheme is still far from complete, and a developer has yet to be found, the essence of the Piazza's character has been clearly and beautifully established-enough for it to appear certain that this is a major architectural accomplishment. Not far from the Vieux Carrée and the banks of the Mississippi, the Piazza can be glimpsed only in tantalizing segments from the streets that surround it. A common feature of both the Perez and the UIG schemes, this partial visibility was correctly anticipated as a means of drawing the curious passerby into the plaza. At the same time, such planning clearly relates the Piazza to its Italian prototypes, entry into which was usually made from dark, narrow, streets into the bright, open, plaza (as was noted by Camillo Sitte, whose works have had a great influence on Moore's development of public spaces).

#### Signs and wonders

On Poydras Street, the main traffic artery that adjoins the Piazza site, the presence of something special is announced by two more reminders of Italy. The first of these is an 84-ft tall campanile, stucco over steel frame, which holds the corner of the block within which the Piazza lies hidden. The campanile does not, as its name might suggest, yet function as a bell tower, though the donation of a carillon is still hoped for. But it is pure Moore. Like the architect's earlier designs for Kresge College with William Turnbull (P/A, May 1974, p. 76), it looks as if it were cut out of cardboard, its thin planes creating both shadow and substance that appear at odds with its seemingly flimsy, yet deceptively solid construction. The exterior of the tower is painted a pale blue-gray, while its interior surfaces are done in the darker, richer colors that tell us that the geode theme—one of Moore's favorite and most recurrent motifs—is being invoked here once again. This is especially true at night, when a small fountain set into the tower's triangular base is illuminated, and bright,

dancing reflections play off the inside surfaces of the campanile.

Further down Poydras Street stands another clue to the Piazza's iconography. It is a small pergola in the shape of a classical temple, the columns of its unarticulated order made from poured concrete, its entablature, pediments, and roof formed from standard plumbing pipe: a conceit not unlike that of Venturi & Rauch's "ghost house" at Franklin Court in Philadelphia (P/A, April 1976, p. 69). But the colums of this tempietto do not line up perfectly, and in fact are skewed diagonally inward in order to mediate between the differing widths of the entry to the plaza at the street, and that of the forecourt, which narrows beyond the pergola like a slice of a big pizza pie.

The paving at that entrance to the Piazza is composed of broad, alternating arcs of pale granite and dark slate. Like the everwidening ripples of a stone thrown into a calm pond, they emanate from the center of the Piazza in concentric circles. The contrasting materials create the pattern that produces a strong visual interest and effectively claims both the plaza and our attention. The looming presence of the Lykes Building begins to recede from our awareness as the Piazza is finally revealed to us.

#### Forum follows function

By carefully controlling our view of St. Joseph's Fountain as we approach it from the streets that surround it, the designers have heightened the element of surprise in its final revelation. For as we round the bend we see not one of those earnestly purposeful "urban amenities" that were all the rage among municipal planners ten years ago-which, when ignored by the public, led some to complain that Americans were unable to appreciate the joys of plazas. St. Joseph's Fountain is a latterday Roman forum, composed of a series of six concentric, hemicyclical colonnades, each representing one of the classical orders: the Doric, Ionic, Corinthian, Tuscan, Composite, and a sixth, known in Moore's nomenclature as the "Delicatessen Order"

(framing the entrance to a proposed restaurant opening onto the plaza).

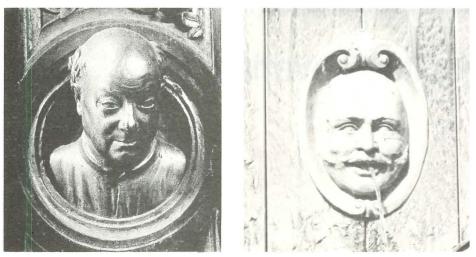
Upon looking more closely, we begin to see what makes this so different from a mere textbook recitation from Vitruvius: the water. For the water here does not *spritz* up in boring little jets like the centerpiece at a flossy bridal shower: St. Joseph's Fountain explodes, shimmers, shines with water, indeed is composed of it. Literally. The feathery acanthus leaves of the Corinthian capitals, the egg-and-dart molding of the lonic order, the "wetopes" (so named by the pun-loving Moore) of the Tuscan order, and even the very columns of the Tuscan order all are made of water.

Nothing quite like this has ever been seen in America before. Moore and his collaborators have manipulated water in ways that one scarcely would have thought possible. But here it is, washing sensuously over the stainless steel arch of the Doric wall, sliding down stucco surfaces with surprising richness of texture, dancing in the sunlight in thousands of permutations in the course of a sultry Southern summer afternoon. Then still another surprise is revealed: stretching its way from the outermost circular wall to the very bull's-eye of the plaza is an 80-ft-long map of Italy. Made of slate, marble, cobblestones, and mirrored tiles, stepped up in places to suggest the topography of the original, this mini-peninsula is washed by three rivulets-the Arno, the Po, and the Tiber, of course-that flow down the boot into two basins representing the Tyrrhenian and the Adriatic Seas.

#### What is remembered

The Piazza d'Italia is the richest expression yet of the historicist revival in contemporary architecture, and as such the timing of its completion is most fortunate, coming as it does on the heels of the controversy over Philip Johnson's proposed design for the new AT&T Building in New York. Unlike Johnson, who is giving historicism a bad name with his witless architectural oneliner, Moore has employed the classical vocabulary with deep feeling, and the sincerity of his approach shines through with touching directness. Moore's selection of design elements does not stem from a desire to be trendy or clever, but rather is at once meant to celebrate the contribution of one people in particular, and to affirm its effect on all our lives in general.

This is the best evidence of Moore's belief in what he calls "loose fit," which he defined (in an interview in The Los Angeles Herald-Examiner, Sept. 2, 1978) as "a set of images that are extensive enough and vague enough to have the chance of reminding someone of something.... You have to have things familiar so that people will feel comfortable, and then a surprise to make familiar things seem more vivid than ever." There is something here for everyone. The historically minded will be reminded of the Marine Theater and the Canopus at Hadrian's Villa at Tivoli (one of Moore's favorite places in the world), but also of Bernard Maybeck's Palace of Fine



Lorenzo Ghiberti included a self-portrait (above left) in his Gates of Paradise for the Florence Baptistery, ca. 1435. Charles Moore's colleagues at August Perez & Assocs. included his portrait (above right) in cartouches flanking the Tuscan arch of the Piazza as a surprise tribute.

Arts of 1915 in San Francisco (P/A, Nov. 1976, p. 66). On the other hand, the general public might recall the sets of a Cecil B. DeMille epic, or a monumental movie palace fondly remembered from one's lost youth.

The plaza has already become a resounding success among the Italian community, which is pressing ahead with its plans to build a community building on the southern corner of the site. At a festa held there this summer, the New Orleans architects overheard a father from the old country explaining to his daughter how the Piazza was just like Italy; though in truth the Piazza evokes a vita far more dolce than that which most Italian immigrants left behind. With one detail of the design are some members of the Italian community less than pleased: the neon lighting that outlines the arches and columns at night, which to them speaks of sleazy barrooms and cheap hotels, an indecorous addition to an otherwise nice place to take the family. This is further proof of the impossibility of reassigning meanings to popular images, a problem faced by architects who wish to use vernacular motifs outside of an authentically vernacular context. The Piazza seems destined to become a major attraction in a city where tourism is the second largest industry, for with certainty it can be said that there's nothing like this at home, wherever that may be this side of Rome

#### A link in the chain of life

Whatever the future of the Piazza d'Italia will be will reflect on New Orleans' ability to make use of its new treasure. In assessing this new work we can carefully unwrap that most fragile word in the critical vocabulary: masterpiece. And though a masterpiece the Piazza d'Italia assuredly is, its future is by no means safe, its ultimate fate by no means certain. Even in its halfcompleted state, it suggests the delights of the finished scheme. Sitting with a Campari and soda in the twilight, watching the people and listening to the soft strains of a mandolin, we could partake in pleasures that are as precious now as they ever have been since the days when plazas were the outdoor living rooms of every city worthy of the name.

Still to come is not only the completion of the buildings that surround St. Joseph's Fountain (the Lafayette Archway, a monumental link with the proposed Lafayette Mall, is now under construction), but also the successful integration of the Piazza into the life of the city. The revitalization of a forgotten neighborhood is an operation as chancy as a heart transplant: unless the right chemistry is present, the organism will reject the new presence, no matter how well-planned or successfully executed the surgery has been. In the case of this new showpiece of New Orleans, the new heart of an old section seems to be taking. It is the symbolic heart of a community with strong attachments to neighborhood and an ancient and highly developed sense of place, and that augurs well for its ultimate success. The Piazza d'Italia is a link across both space and time, and a precious bond with the land that inspired it. [Martin Filler]

#### Data

Project: Piazza d'Italia, New Orleans. Architects: August Perez & Assocs; R. Allen Eskew and Malcolm Heard, Jr., project designers; Robert Kleinpeter, project coordinator; Robert Landry, field representative. Fountain design: Charles Moore, Urban Innovations Group; Ron Filson, project coordinator. Client: Office of the Mayor of New Orleans. Site: a city block in 19th-Century commercial district in downtown New Orleans.

**Program:** construction of an urban plaza, including a fountain and projected outdoor café, restaurants, shops, and community meeting facilities.

Structural system: steel frame construction. Major materials: stucco, cobblestones, marble, slate, stainless steel, tile, and neon lighting. Consultants: Morphy, Makofsky & Masson, structural; Cary Gamble & Assocs., mechanical and electrical; Tina Beebe, color; Richard Peters, lighting.

General contractor: Landis Construction Co. Cost: \$1,638,436.18 (\$1,652,000 budgeted). Photography: Norman McGrath.

## Cultural overlay

#### An expansion for a meditation center in Vermont by Harold Rolls explores key issues about ornament and architecture.

At first glance, this unassuming assemblage of farmhouses in northeastern Vermont hardly looks as if it might be addressing some critical architectural issues of concern today. But, unexpectedly, the design solution for the Tibetan Buddhist Meditation Center takes an approach toward exploring and building upon past architectural codes that merits some attention. Much of the design for Karme-Choling's new buildings is "contextual" both in the way it relates to its site and in the way it responds to the vernacular of New England rural architecture.

Because of the concern residents of the small town of Barnet had expressed over this seemingly exotic implantation in their midst, architect Harold Rolls and the Karme-Choling staff sought a design that would retain a sense of a local building type-the white clapboard farmhouse. Yet at the same time, the center had to signal to its own visiting community its role as an education center for Tibetan Buddhism.

The resolution to these conflicting goals is complex and, for the most part, masterful. Not all of it comes off. Specifically, the Tibetan Buddhist symbolic ornament seems to be so much embellishment overlaid on the sensitively executed architecture. This aspect of imposition of one code of meaning over another raises questions about the nature of "inclusivist" architecture: can an architecture be successfully created that combines design elements as disparate as those of an Eastern religion and a New England vernacular architecture-even when this imposition occurs in only a few spots?

#### **Evolving design**

Vermont architect Harold Rolls, a former resident of New York who had been associated with Davis, Brody & Associates, got involved in the design of the center's expansion in 1974. The Tibetan Buddhist organization called Vajradhatu ("inde-



Meditation Hall at Karme-Choling is laden with gold-leaf ornament carved by residents.

structible space"), which has about 20 meditation centers in the US, had purchased 540 acres of farmland including an old three-story white clapboard farmhouse, with a smaller two-story wing, plus a large old barn.

Initial plans to add only a few extra spaces grew to encompass four new buildings resembling the older farmhouses, linked with each other and the original buildings. A grassy courtyard, soon to be transformed into a rock garden, forms the central open space.

Progression has been thought out according to programmatic needs as well as the desire to foster an interactive social atmosphere. Thus the dining room acts as a main indoor link between what is to be a main entrance on the end wall of the old farmhouse and the new living room and dormitory areas at the rear of the complex. Corridor and dining room were combined with a purpose-to keep spaces tight and intimate, thereby promoting interaction between visitors and staff. Similarly, the bedrooms and dormitories are small-some so cozy they make FHA minimum standards appear lavish.

With this tightly organized grouping, Rolls deliberately pursued the easy formality of farmhouse architecture, designing regular, ordered, boxlike volumes sheathed in clapboard, with gabled roofs, containing nooks, crannies, and garrettype spaces for living. One has to go no farther than the attic of the original farmhouse to see the quirky, uncontrived adjustments there that have influenced the new residential guarters. From the original building's dormer windows and interior windows turned on angle to fit into tight spaces came Rolls's own newer versions of enlarged dormers, skylights, and small cupolas to admit light and air into dormitory spaces. From the farmhouse front porch came the new linear portico wrapping two sides of the courtyard.

Along with this 19th-Century vocabulary are introduced changes in planes, shifting open spaces, glass expanses, dramatization of natural materials, and crafted wood detailing recalling the work of Aalto, Wright, and, in some cases, Charles Moore. The location of the complex next to a steep slope permitted some fortuitous design opportunities: the inclusion of a



The original complex, with a barn (left) and two farmhouse buildings (right of center), was expanded with four linked buildings at rear.

granite outcropping in the stepped-level living room, for example. Rolls placed a 14' x 25' skylight above the rock to extend contact with the natural landscape, and demarcated the slightly depressed living room with an oak-capped balustrade.

In passing from one space to another, one is made aware of transitions and shifts. Where there are joints, connections, passages, that is particularly where the architecture asserts itself. This is the sort of solution in which a combination of elements—a lally column, wood trim, a stair railing, a beam—are used to create unexpected events occurring with reason, but not necessarily predictability.

The main stair serves as a node where three different buildings come together and where residents are dispersed to all parts of the complex on seven different levels. Rolls admits that the joining of intersecting planes from the various floors of the separate buildings was resolved only during the actual construction process and not without a degree of trial and error. Although the crew was inexperienced initially, craft skills improved as the building developed. The workmanship achieves a high level of quality throughout despite the low budget (\$600,000): only two wood elements were professionally milled-the main stairway and the maple and walnut inlaid floor of the main shrine.

#### Incongruous overlay

The workmanship of the principal meditation room, matches that found elsewhere in the building, although it is more involved. While the sheer consistency of the recreation of a symbolic code belonging to another time and place has to be admired, the bright red and blue applied to framing elements in the shrines and to the exterior trim of the buildings, plus the gold-leaf carving, the emblems, and the clothcovered valances, do appear at variance with the integrity and simplicity of the overall architecture.

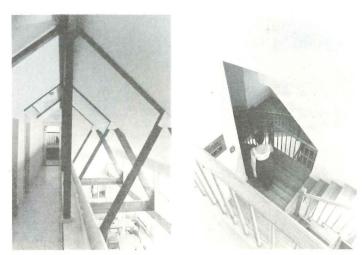
Certainly any ambivalence to the ornament could arise simply from differences in aesthetic preferences between Eastern and Western design modes. Still it seems

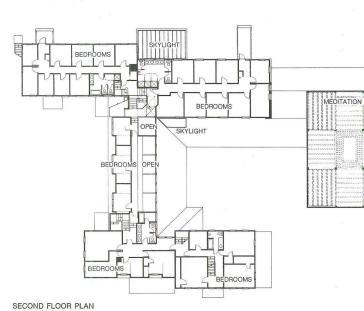


Main stair links living-room wing with dormitory (above); portico links two buildings (below).



#### Karme-Choling Meditation Center





SKYLIGHT

LIVING

DISH-WASH

DINING ROOM . HA 1 KITCHEN

PANTRIES

SERVIN

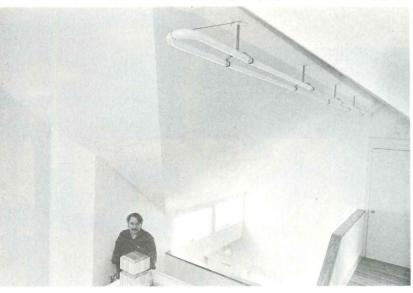
OF

NA

C LIVING

LOUNGE

Mezzanine/corridor overlooks dining hall (left), leads to main stair (right).



Field-fabricated fluorescent mounting designed by Rolls lights stair

as if the two, architecture and ornament, could have been meshed more effectively. The "difficult whole" of "inclusivism" implies a consciously strong manipulation of disparate elements to create a dynamic tension—a dialogue—that reveals and comments on the relationships between the different design codes. The grafting of Tibetan ornamental motifs onto the New England farmhouse vernacular at Karme-Choling neither comments nor unifies. An understanding of these operations did not, for one reason or another, take place on the same level evidenced in the rest of the complex

The appearance of the Tibetan motifs seems a little at odds with the general attitude and philosophy of the Tibetan Buddhist movement in the States. Led by Chogyam Trungpa, Rinpoche, who served somewhat as client and advisor at Karme-Choling, Tibetan Buddhism intends to spread its beliefs and practices without the fetishism of materialistic religious effects often associated with various religions. The leaders and staff of the center, and Rinpoche himself, adhere to the practice of maintaining direct links with society (or reality) through their dress and behavior; unlike other Buddhist sects, they wear street clothes, including suits and ties, and are not prohibited from smoking, drinking, and sexual relations

FIRST FLOOR PLAN

MEETING

PLAYROOM

The impression the staff at the center gives confirms their commitment to this philosophy and no doubt helps establish a rapport with the public at large. If the visual expression of the religious ornament does not guite correspond to other levels of assimilative effort elsewhere, this does not exclude its eventual incorporation in other centers. Meanwhile, in this particular example, the architectural result points to benefits of slowly working out design solutions within the framework of a received and familiar architectural vocabulary. The bringing together of certain 19th-Century architectural elements with 20th-Century modernist ones enriched the architectural communication. Adding to that architecture the ornamental elements of yet another time and place in this case complicates the communication. [Suzanne Stephens]

#### Data

Project: Karme-Choling Meditation Center, Barnet, Vt.

Architects: Harold Rolls, Architect, South Peacham, Vt; Donald Root and Daniel Hesse, construction coordinators.

5

PATIC

MEDITATION

MEETING

STOR PORCH

ENTRANCE

20'

Site: 540 acres of hilly farmland.

Program: design four buildings, a dining hall, west wing, east wing, and meditation hall totaling app. 20,000 sq ft as extensions to original farmhouse. Dormitory space accommodates about 96 persons including four-person rooms with sleeping lofts, a third-floor attic space in east wing, a level below the meditation hall. Staff has single and double rooms in new and existing buildings

Structural system: wood frame, steel lally columns, concrete footings, rock foundations, wood clapboard sheathing. Trusses span spaces 20 ft wide in dining room; support dormer windows in east wing attic.

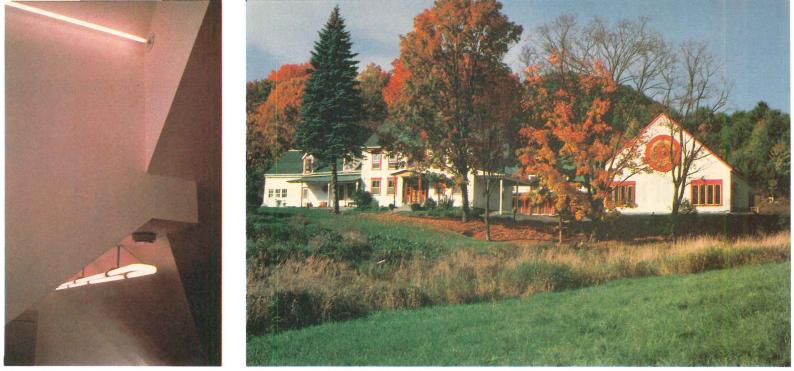
Mechanical system: hot water baseboard heating.

Major materials: oak, fir (beams), gypsumboard, concrete.

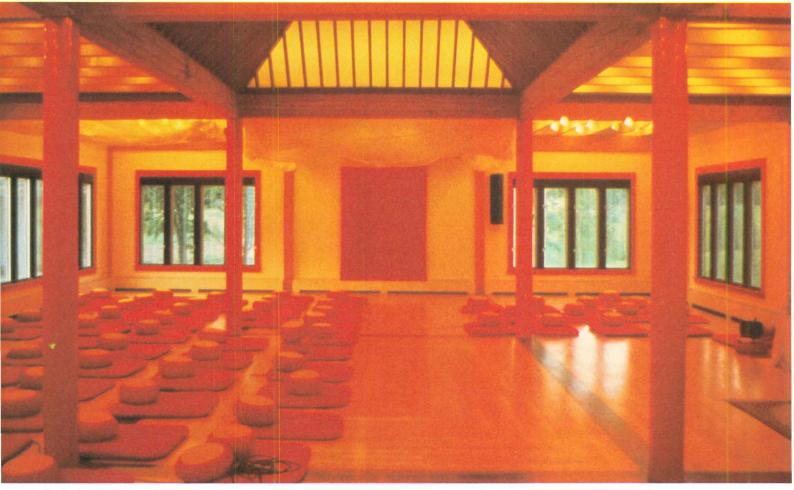
Consultants: Herbert Levine, lighting; John Prospero, structural.

Client: Karme-Choling, a division of Vajradhatu, a nonprofit association of Tibetan Buddhist meditation centers

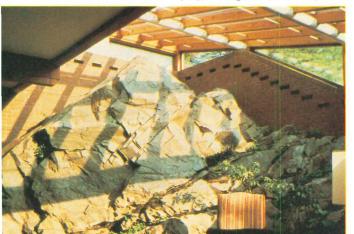
Costs: about \$600,000 including site work, furnishings; about \$30 per sq ft.



Expressionist intersection of seven levels of three buildings was given to stair (left); exterior view to Meditation Hall (right).

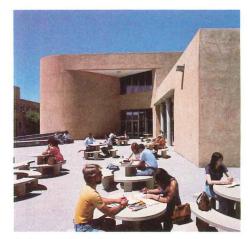


The Meditation Hall before ornament (left); in living room, slits at top of wall permit convector heating; in pipe beam, warm air "defogging."





## From the ridiculous to the sublime



At the main level of the Union, a new outdoor dining terrace was created by the new entry and staircase addition (above) at the south end. The east side (below) was developed into a dining "portal" with new trellis added.

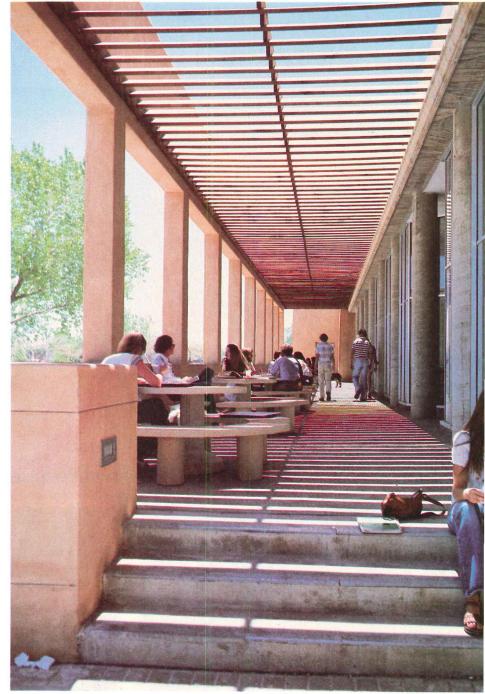
#### In remodeling an old student union, a new form continues to evolve as uses are defined and tested by students.

At first glance, the "new" Student Union Building hardly shows any change. A closer look and a trip to its interior bring to view an incredible reworking of a twentyyear-old behemoth into closer fit with the needs of a new generation of students. Additionally, the building's location within the fabric of the campus plan had evolved to generate needs somewhere between an agora and a shopping center; all of this to be developed in three phases over several years, with major architectural intervention initially setting out new directions within the constraints of a low budget (somewhere in the area of \$20 per sq ft). The result, produced by Albuquerque architect Antoine Predock (P/A, March 1974, p. 60), is an elaborate remodeling, both in terms of the use of its particular sector of the University, and in terms of what was possible for the budget.

Accepted for what it is, namely a modest restructuring and clarification of an existing shell, the New Mexico Union presents a responsive, low-key profile in contrast to others of more recent vintage (see P/A, March 1978, p. 67, on San Francisco State). Its purposes had less to do with prestige image and more with a happier coincidence between campus activities and student users.

Its location is that of a "seam" between a diverse collection of class and administration buildings, and major circulation routes connecting these with campus entry points and parking lots. In essence, the Union is a crossing-through building as well as an actual target. This was recognized early in the process by the Student Union Board, which observed that nearly 85 percent of University students commute from within Bernalillo County. During the first two years at the school, the Union serves as the major contact with the University, and most of the social interaction on campus happens in the cafeterias.

To this end, the architects worked with



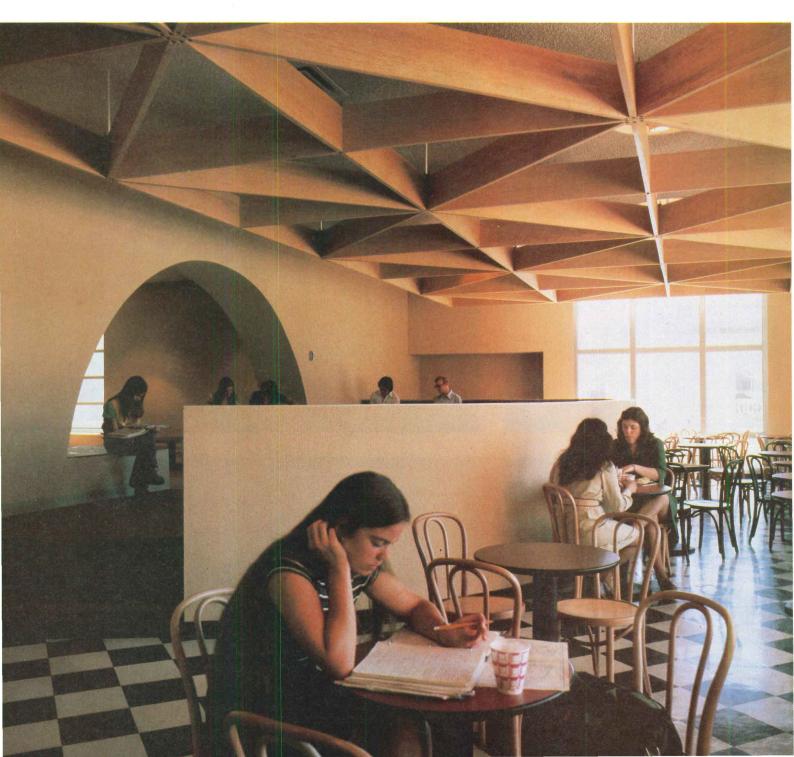
the Union Board to solicit responses from the students. Presentations were made to the Union Board, campus forum discussions were held, "graffiti panels" for suggestions were installed in the Union, and a plastic conceptual model was set up in which collage images were inserted as a technique, according to Antoine Predock, "... to avoid the usual hangups that people have with conventional presentation drawings." Undoubtedly, this served as a method to direct discussions on issues and not solutions, to sift through the graffiti suggestions characterized by Predock as "interesting creative garbage." The result was an evolutionary definition of preferences in arrangement, mix of facilities, and their relationships.

The existing building controlled certain choices; it was a 1950s blend of typical New Mexico adobesque and what might be described as "Art Yuccho." Its interior arrangement created serious circulation problems, one of the more notorious being a monumental centralized entry that resulted in student circulation through what was called the Trans-Cafeteria Highway. While the architects had initially hoped to create vertical spatial connections, the existing structural integrity of two-way slabs had to be retained. There were other specific "givens," such as a fixed, \$15,000 gigantic lazy Susan in the cafeteria called by students the "Rack of Nausea," which the architects had to design around.

Within the variety of suggestions offered by users, the potential tenants represent-

Sidewalk Café (below) uses slat ceiling and checkered floor for special image. Information kiosk (above) is at intersection of main axes.





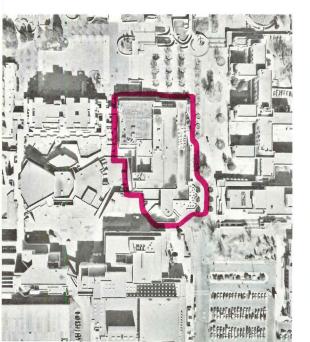
#### **New Mexico Union**

Café (below) is distinguished from main circulation spine by dropped fascia "beam." Aerial view of campus (bottom) shows Union's close relationship to other buildings. Conceptual model (middle) was used to show interweaving of circulation and activity zones to students. Greenbelt (right), at entrance to lower level, is developed around ramps for handicapped and stairs. At lower level, fast food is available at Pronto (middle right), and entertainment is given at the theater (bottom right), the lobby of which can be expanded into an outdoor court.





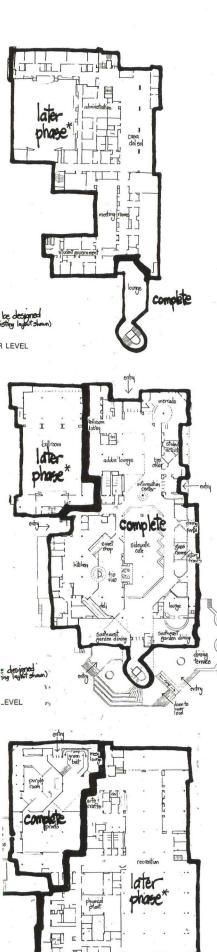


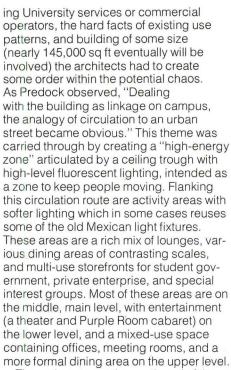












The main entry on the south end of the Union was reworked to direct traffic as well as to provide easy access to outdoor activities, in the spirit of New Mexico indoor/ outdoor connections. This entry is visually devoted to a new oval-shaped stair tower which is inflected to channel circulation. Also, the east side of the Union was enhanced by the addition of a trellis-covered dining terrace. The Union is oriented on all sides to campus entry points, but the principal axis is north-south. On the main level, this creates the "street" atmosphere. Lower and upper levels are connected vertically at the entry points which feed into specific areas. Changes in contour elevation bring double entries at the north, south, and west sides; this, plus the absence of an accessible elevator in the north side generated the elaborated entry ramp for the handicapped encircling the Greenbelt area.

Remodeling was done with the most modest of materials; gypsum board, vinyl tile, aluminum storefront sections, and lots of paint. Gypsum board was shaped to add sculptural texture and to articulate separate entities for different use areas: the material was dropped down, set out, pushed in, and then vibrantly painted. The layout of walls plays off extensive diagonals to minimize the extent of the interior as a corridor, as well as to create "inbetween" conditions (such as the Blue Wall campus information bulletin board area), and to direct flow between areas. One of the most interesting devices is the collection of glass storefronts between interior circulation and the east dining terrace; these transparent kiosks are now being filled by a variety of commercial shops, and can also serve as meeting areas for occasional users. All of this was in the spirit Predock characterized as "the Union made visible.'

• The devices used might be classified as "surficial" materials. By using fairly obvi-

The

ANTOINE PREDOCK ARCHITEC

ous associations, Predock was able to extract an instant response to a use, and to maintain a potent image. Thus, the Purple Room has a wall of glass block to pull activity into the entry and vice versa, as well as to suggest the treatment one would find in an urban tavern. The Sidewalk Café uses black-and-white checkered tile patterns and an expedient hung wood-slat ceiling. Greenbelt is carpeted in Astroturf. Graphics and signs supplement this use of quick imagery.

#### To be continued ...

In its arrangement, the New Mexico Union succeeds in combining use elements of agora and shopping center, with a kind of quick and dirty imagery that establishes immediate responses and mental associations. As a process, the phased remodeling continually fed user evaluation of the spaces to the architects. The University's architecture students, who are deeply involved in methodology and programming, will undoubtedly conduct a formal postoccupancy evaluation as ground work for the next major construction phases.

Is it architecture? Certainly, the concept of remodeling spanned a range of scales to redefine the use of the Union as part of the campus, down to the specific images for a variety of uses and users. Its substance was a modest range of materials and its context provided a limited degree of intervention. By choosing its moves carefully, the office of Antoine Predock was able to remodel at various levels, and to move a ridiculous situation closer to one of greater responsiveness for varied, changing, and indeterminate uses. [Peter C. Papademetriou]

#### Data

**Project:** New Mexico Union, University of New Mexico, Albuquerque.

Architects: Antoine Predock, with project team Glade Sperry, Jr., Stanley Moore, Lawrence Licht, Ronald Jacob.

**Program:** renovation of existing 145,000-sq-ft student union involving heavy user participation to establish needs for today's students.

**Site:** in middle of flat campus, hemmed in on most sides by other buildings.

Structural system: existing adobe, steel frame, poured concrete.

Mechanical system: some fan coil units added to existing system supplied with chilled and hot water from campus plant; new air handling units with heat recovery provisions added in kitchen. Major materials: stucco exterior walls, gypsum board texture interior walls, vinyl asbestos tile, gypsum board ceiling, aluminum storefront windows and entrance doors.

**Consultants:** Antoine Predock, interior design; Bridgers and Paxton Consulting Engineers, Inc., mechanical; Randy Holt & Assocs., structural; Donald S. Fowler, electrical.

**General contractor:** K.L. House Const. Co. **Client:** University of New Mexico, Van Dorn Hooker, university architect.

**Costs:** about \$20 per sq ft for renovation. **Photography:** Joshua Freiwald, except p. 94 left, Antoine Predock.

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### It was a real gas

In Seattle, Richard Haag Associates has turned an old gas plant into a gigantic walk-through Tinker Toy.

Long famous for its spectacular natural setting, Seattle is now gaining renown for parks that celebrate man-made features. Freeway Park (P/A, June 1977, p. 86) attempts to rectify one kind of environmental blight; while with Gas Works Park, Richard Haag Associates has turned a 72-year-old industrial sink into what has been described as a "funk park," "as a testimony to Rube Goldberg engineering," and an "Iron Gothic sculptural experience." The names come and go, but affection and admiration for the park grow.

Now about two-thirds complete, the park is both a triumph of creative preservation and a model solution to one of today's pressing urban environmental design problems: how to provide for a variety of recreational activities in a mixed residential-industrial context.

Much of the success of the park lies in the special features of the site—a point of land jutting into Lake Union near the entrance to the Lake Washington Ship Canal. There, an ever-changing panorama of boats, the cityscape across the lake, and the sunset are rich resources for the spectator. But credit goes to the designer for seeing the rusting, "iron age" complex as an aesthetic resource, and for providing a splendidly simple format that shows off the industrial dinosaurs to best advantage.

A single achievement of Haag's scheme is that it requires about as much maintenance as a vacant lot or open field. Except for a screen of trees by the parking lot, untended field grass is the only vegetation (the cosmetic grove of trees shown in the original master plan has been eliminated). A high mound on the west side of the site provides variety of terrain; the immediacy of water and the breadth of the view give another kind of spatial release.

#### The background

Such bold simplicity veils a complicated and hard-fought struggle to bring the park



Before its conversion to Gas Works Park, the industrial sink (above) was used to make gas.

to its present state. From 1906 to 1956, the Seattle Lighting Co. (also the Seattle Gas Co.) ran the plant to manufacture gas, first from coal and later from crude oil. Conversion to natural gas closed the plant in 1956. The city made the first of ten yearly payments to acquire the site in 1963, and in the 1968 Forward Thrust Bond Issue approved \$1,617,000 for development of an urban park.

After the office of Richard Haag was commissioned to prepare a master plan, a site study revealed a composition of rubble fill capped by a 50-ft-high mound of subsoil fills saturated with industrial afterbirth: oil, tar, and so-called "exotic toxicants." Erratic groundwater tables caused layers of oil-filmed water to float within two feet of the ground surface.

Despite this devastating evidence, the prevailing sentiment among park boosters was for the traditional Victorian greensward studded with specimen trees and the proverbial rose garden. Opposing the arboretum constituency was a counterculture movement that grooved on the romance of antique industrial forms and archaic technology.

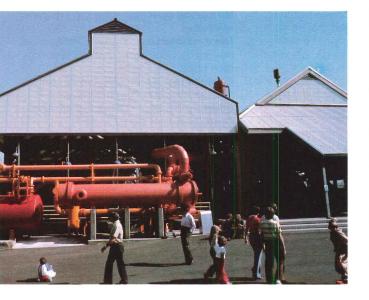
In retrospect, abandoning the arboretum idea should have come easily, with only a simple presentation of the overwhelming odds against its success. But Haag and his cohorts have had to struggle for every foot of polluted ground. Soil experts came from far and wide, but in a final testing stage, one expert was lowered into a trench, only to be hauled out again in a state of asphyxiation. His report more or less concluded the arboretum effort.

Still, the structures were not saved. Haag, who had already been haunting the place in search of the genius loci, then established an office in the blacksmith shop. In 1971–72, he welcomed the public to programs on planning and recycling. Most successful was a slide show relating the towers to sculpture by Tinguely and Picasso. More and more people began to see the industrial remains as a meaningful link to the city's past.

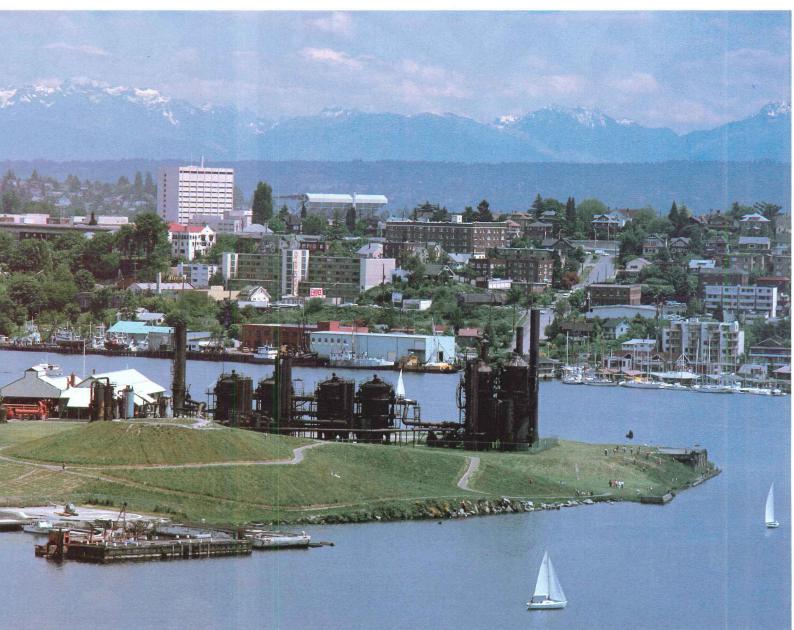
After the spring, 1972, approval of the master plan, stage one of development began. This involved clearing the site of nonconvertible structures and utilities, reroofing the boiler house and exhauster building to convert them to a sheltered picnic area and play barn, and extensive remodeling of the site.

The problem of defining the park continued, however. Haag's concept of an active park with structures and terrain that could stand unlimited hard use encompassed preserving the generator and precooling towers and recontouring the site to create a hill with one side as an amphitheater for concerts. The plan excluded landscaping in the traditional sense. However, a municipal park without some natural ground cover was too unorthodox for the Park Department. To solve this problem, biotic techniques were used and the soil was infused with sewage sludge which produced a 20-acre crop of tomatoes and a testimonial to its survival powers. Another battle over park rules about irrigation was also won, so that the park now turns seasonally green and brown

More obstacles lay ahead. In 1973, a youngster broke into a clearly marked, restricted area and injured himself in a fall from one of the towers. So once again the question of whether to make them available to the public has arisen. Haag hopes that additional pruning of the towers' appendages will make them secure against







Now nearly two-thirds complete, work has been progressing for over ten years to convert the old industrial wasteland into a recreational park.

#### **Gas Works Park**

the assaults of the imprudent and agile. Then will come the problem of funding their conversion into a museum and a camera oscura. The latter plan involves drilling a pinhole in the wall of one of the 16-ft-diameter, 68-ft-high towers which would receive light through a periscope attached to a prismatic mirror on top. The image of the city across the lake would project inside the drum, creating a magic tableau. Phase three, about to begin, will see \$300,000 spent to construct an outdoor play area with brightly painted industrial shards for small children and a waterside flight of steps for fishermen. An "autonomic" sundial, which will give out astrological information as well as the time of

day, will be installed in the "crater" of the

park hill. Since the expense of a bronze stylus for the 28-ft-diameter dial was prohibitive, a person standing in the marked center will perform its function. Presumably, the coming attractions will feed Gas Works' reputation as a park of the future in touch with the past. [Sally Woodbridge]

#### Data

**Project:** Gas Works Park, Seattle, Wa. **Architect:** Richard Haag Assocs., Inc., Landscape Architects; Richard Haag, principal; Michael Ainsley, project architect.

**Program:** gas manufacturing plant recycled into public park.

Site: a point of land jutting into a lake near entrance to ship canal; composed of rubble fill saturated with industrial waste.

**Strúctural system:** wood-frame industrial sheds, concrete-block comfort station.

**Mechanical system:** existing sprinkler system reactivated.

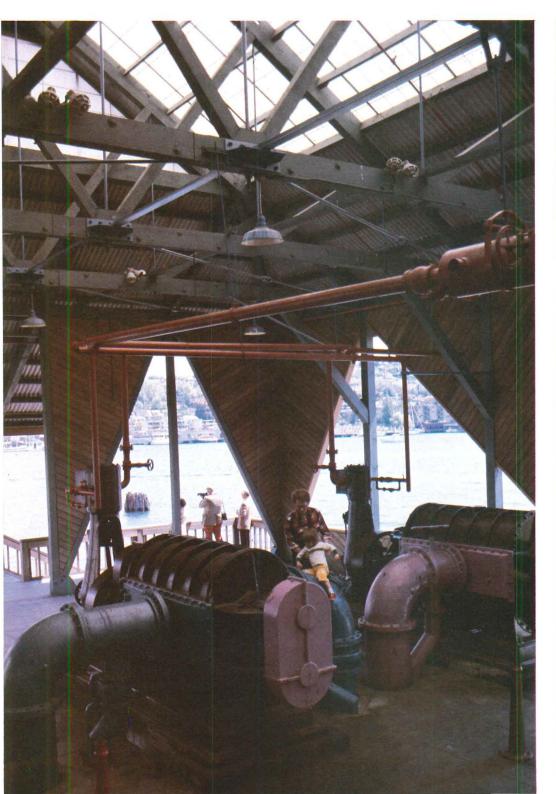
Major materials: wood trusses, heavy timber, iron tierods, wood studs, concrete floor, concrete block.

**Consultants:** Olson/Walker Assocs., architectural consultants for comfort station.

**Client:** Seattle Dept. of Parks & Recreation. **Costs:** \$446,414; \$10.80 per sq ft.

**Photography:** Robert Kelley, except Sally Woodbridge, left; Richard Haag, right and bottom, p. 99.

Industrial equipment in the boiler house and exhauster building has been cleaned and painted bright colors to transform it into a giantsized Junglegym. The structures housing the equipment only needed reroofing to convert them into a play barn and sheltered picnic area. Soon, new outdoor play areas will be built.

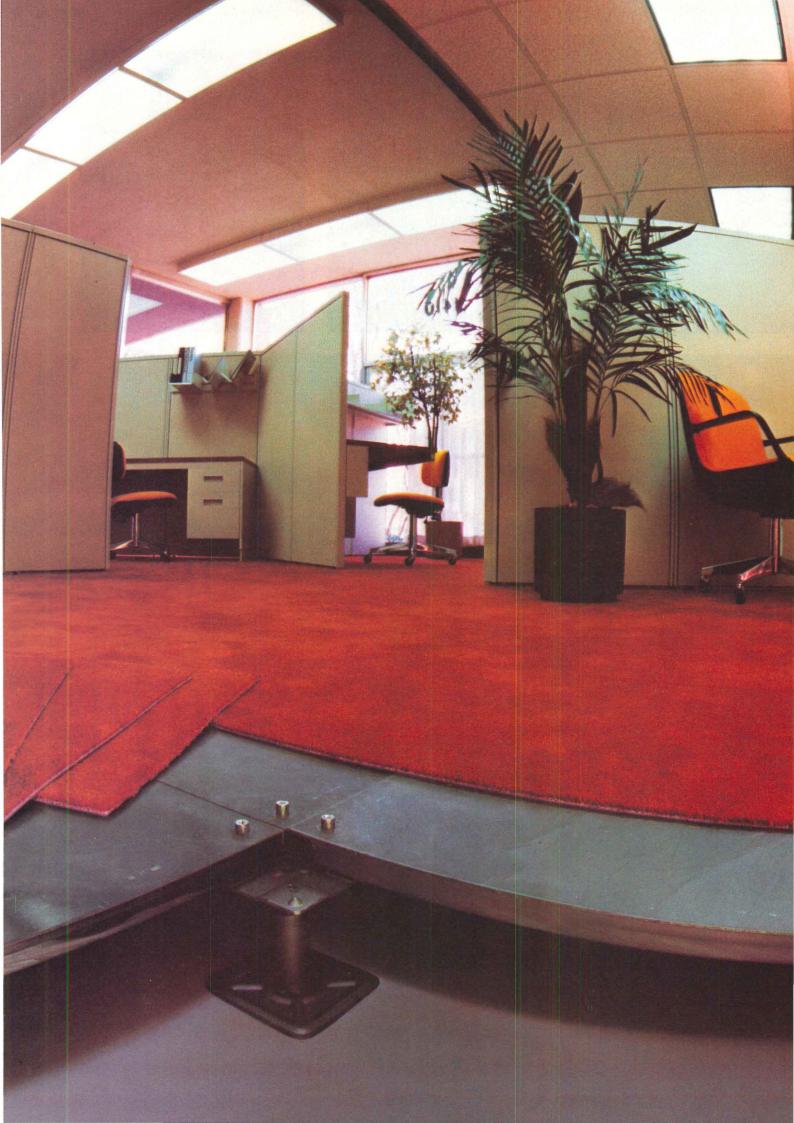












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Georgetown Plaza, White Flint Mall, Rockville, Maryland Architect: Midas Valgeaia **Technics: Specifications Clinic** 

## The making of a specifier

Alvin D. Skolnik

We neglect the education of construction specifiers. A broader base of professional coursework is needed, combined with supervision by qualified specifiers, to increase the numbers of well-trained professionals.

In 1964, the theme of The Construction Specifications Institute's convention in Dallas was "CSI's Role in Education." Having examined, at that time, both the undergraduate programs in architectural and engineering schools and the task of continuing education for the practitioner, CSI began to explore the role it should play in specification education. Following the 1964 convention, the Institute's Education Committee established finite goals and task groups for implementation. While considerable progress has been made since that time, much remains to be done.

Continuing education for practitioners is now receiving considerably more attention than before, and a compelling need exists today to increase the number of qualified specifiers. Whenever a survey of accredited architectural or engineering schools has been taken to determine whether courses in specifications writing are offered, there is a painfully small increase in affirmative responses when compared to the responses of earlier surveys.

Most curricula in architectural and engineering schools include courses in professional practice, building materials, construction administration and management; and other courses which are of value in the "making of a specifier." It is felt by many senior specifiers, however, that specification writing is now so complex that it warrants either a curriculum of its own or, at least, a major area of study. Ideally, the programs should include the study of chemistry, metallurgy, properties of building materials, materials testing, business law, professional practice, and a good, old-fashioned course in the correct use of language and how to write properly. Obviously, there is no intent here to suggest that the specifier be anything less than a well-rounded architect or engineer. In fact, an individual with experience in all phases of professional practice (including field experience) should be well prepared to join that august body of professionals who devote their full efforts to being specifiers.

What is needed in order to develop new and better specifiers is an increase in courses at the undergraduate and the postgraduate levels and comprehensive in-depth seminars taught by qualified instructors. It is quite difficult to train oneself in the requisite skills without the benefit of these educational tools, unless an employer is willing to provide an in-house training program under the watchful eye and the guidance of an experienced specifier.

As is the case with any architect or engineer, there are certain attributes which would serve the specifier well. Patience, motivation, and tenacity are important. It is mandatory that the learning process be continuous, keeping current on all new developments related to products, systems, test methods, and their applicability to end-use, construction practices—and even the mechanics of producing "hard copy" efficiently and expeditiously. Commitment is a key word—commitment to the highest standards of excellence and professionalism. Diplomacy is essential in gaining and maintaining the confidence of a colleague or client. The ability to produce within the framework of ever-changing contractual relationships and in a variety of construction markets (both domestically and internationally) is important.

Obviously, certain of these attributes are character traits which are very much of a part of an individual's overall identity as a person—the synthesis of his total development as a human being. However, much of what it takes to be a well-trained and highly regarded specifier can and *should* be available through formal education programs offered in the universities and in continuing education programs.

For well over a decade, the CSI Education Committee has provided guidance to those in the educational community who recognize the important role of the specifier. Increased opportunities for architects and engineers to develop and maintain these skills would certainly be welcomed.

**Author:** Alvin D. Skolnik, FCSI, is Director of Research and Specifications for Skidmore, Owings & Merrill, New York.

### A tour de floors

Work stations must plug into work support systems. Changing the work can alter the nature of support, and moving the worker can mean shifting the station. Underfloor systems can meet the challenge of change. Forethought in floor choice can save time and money.

Earthbound folks like us often admire the daring and skill of divers and spacemen who brave hostile environments. One source of our wonder is the delicate ease with which they work, balancing a bulky life support system strapped to their backs or tethered to their bulging suits. We tend to underplay the growing importance of support systems in our own work. Building occupants who press the on-off button can forget the maze of wires, cables, and conduit, but architects cannot. The last fifty years has brought the electric typewriter, telephone, duplicating machine, closed-circuit television, cathode ray tube, and minicomputer into the office, onto the desk, and up to eyes, ears, nose and mouth.

In recent years, the floor has proven to be a logical and inconspicuous place to put wiring, especially in office buildings. As permanent walls are replaced by lightweight movable partitions in our designs, and floor areas increase to the extent that desks are remote from exterior walls, we are left with either underfloor distribution or a ceilingoriginating system. In columnless space, architects often prefer to bring power and communications through the floor. The question is how to place them under the floor and where to pull them out.

The "work support" system, as a layer of cables, exists underfloor in one of five different horizontal planes. It can run along the underside of the slab (as in a poke-through system), within the undersurface of the slab (as in electrified cellular deck), within the body of the slab (in concrete underfloor systems), just under the top surface of the slab (fill and finish), or above the structural slab and below the useful walking surface (as in a raised or access floor).

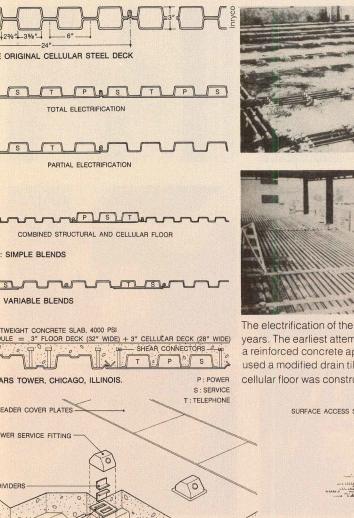
Just as the type of ceiling construction used places restrictions on the structure from below by directly influencing the slab fire rating, the probability of change in the activity above the floor can also be a factor in selection of the structural floor. Office building architects who expect a large variety and frequent change of desk layout patterns may justify an increased initial floor system cost by reducing the expense of moving work stations and outlets over the life cycle cost of the building.

The choice of underfloor system interrelates with the other elements of the building in many ways. The flexibility of the desk layouts, for example, will determine the recommended spacing of the service fittings. This is usually manifested in a modular grid pattern of floor outlet possibilities. The thickness of the total floor section also has an effect on the building's total height. If the raised floor is chosen, care must be used to control increased costs.

Every underfloor system results in a penetration of the actual floor surface. The penetration can be as simple as lifting a hatch lid or as complicated as drilling through the concrete slab. The location and appearance of that service fitting is important, as is the floor's appearance when the fitting has been relocated. The ideal is to move the hole in the floor along with the service fitting!

Architects who wish to express the dynamic character of the floor system might choose an access floor system whose panel edge treatment is pronounced, creating a floor grid pattern. They might also select a hatch-door access to the outlets whose metal trim is visible in the flooring. Other designers might prefer a solution which conceals joints in panels or service fittings and leaves invisible remains when the outlet is no longer to be used. The other possibility, of course, is to treat the service fitting as a necessary functioning element of the office environment which should be exposed and clearly detailed.

Today, architects have a rich selection of underfloor systems. Choosing the correct placement of the work support system within the floor requires thorough analysis, without prejudice. Some buildings are ideal for one system and inappropriate for another. It is not uncommon to discover an appropriate mix of different systems within programmatic requirements. Understanding these systems may not provide the answer to your system choice. After all, the rest of the building must speak to that. With all of the electronic and communication potential we sandwich into them, it's a wonder the floors can't speak for themselves!

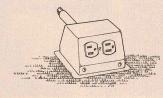


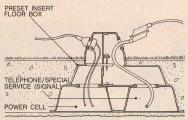




The electrification of the underfloor spans 50 years. The earliest attempts in 1922 were for a reinforced concrete application (top) and used a modified drain tile. The first electrified cellular floor was constructed in 1933 (bottom).

SURFACE ACCESS SERVICE FITTING

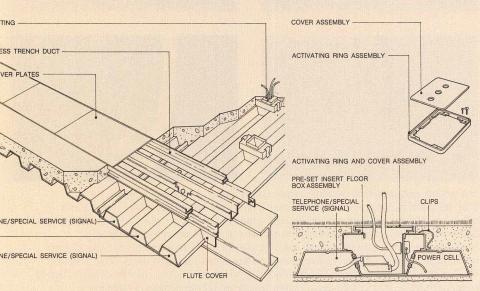




DUCT AND FLOOR DECK/CELLULAR FLOOR BLEND WITH DUAL SERVICE PRE-SET INSERT RFACE SERVICE INDICATED. SURFACE AND FLUSH FITTINGS MAY BE USED

E/SPECIA SIGNAL)

E/SPECIAL SIGNAL)



DUCT AND FLOOR DECK/CELLULAR FLOOR BLEND WITH DUAL SERVICE PRE-SET INSERT USH FITTING INDICATED. COVERED BOTTOM TRAY TYPE TRENCH MAY BE USED

#### **Evolution in electrified cellular floors**

The blended electrified cellular floor with composite structural action has been a long time coming. Its evolution is a fascinating sequence of ideas and events to which architects and designers have made no small contribution. The use of corrugated steel in buildings began with the walls and roof. In the early 1900s, steel deck provided the formwork for reinforced concrete. Electrification was not an integral part of these slabs, nor was there composite action between concrete and steel. The first in-slab electrification was recorded in 1922. Asphaltine-impregnated drain tile was embedded in a thick concrete slab, and then fed with wiring. By the mid-1920s, underfloor steel duct replaced the drain tile in concrete floors. Wiring ran vertically to the appropriate floor and then horizontally in a steel duct. Smaller ducts fed off the distribution duct at right angles and brought electrification in close proximity to the work station. By 1933, concrete floors poured onto corrugated steel deck had also begun the integration with electricity. Two corrugated-metal roof decks welded together formed closed cells in which to run the lines. The upper deck still served as the formwork for the concrete floor. Feeder ducts within the slab rested on the deck and ran perpendicular to the deck ribs. Holes were drilled through the feeder duct into the cells below the slab.

In the 1940s and 1950s steel deck began to change. It came into common use in roofs with rigid insulation instead of concrete. Shapes dimensioned for insulation spans were used in floors. Sections were also altered to produce composite action when concrete was used. Undulations, stubs, and surface treatment increased the bond and structural action between the concrete and steel. The two welded corrugated sheets were replaced by one corrugated section with a flat steel sheet welded in place to close the cells. At first, the whole underside of the floor was closed into cells, providing the opportunity for 100 percent electrification. Eventually, the option was developed that closed only those cells which were needed, introducing the "blended" cellular floor and reducing steel costs.

While the structural advantages were being investigated, the ducts in the floor began to bulge with wires and cables. They required order and separation. The late 1950s saw an increase in dimension of the telephone cables. The trench got wider, and each cell held exclusively one type of cable. Two options emerged for tapping from the floor surface into the cells. The floor cell could be reached by drilling through the concrete, installing a threaded pipe section and attaching a surface service fitting; this was the "afterset" solution. The other solution was to install a metal chamber feeding to the cell before the concrete pour. The top of this unit was installed just below the floor surface. Once the concrete was in place, a thin panel was removed to give access to the cell without drilling. This is the "preset" method.

#### **Technics: Underfloor systems**

Composite action: the late 1960s and early 1970s saw a series of new methods and developments in the electrified floor. The impetus perhaps was the improved knowledge and technology which had followed from the early high-rise office buildings. Architects for New York's Lever House pioneered in the use of the electrified cellular floor. The same firm, SOM, continued to innovate, almost twenty years later, with the Sears Tower in Chicago. This building saw the cooperation between industry and architecture which has typified the history of the underfloor systems. A 3-in. deep corrugated section was developed specifically for floors. The wider fluted deck was blended with cellular deck to coordinate with a 5-ft modular dimension, and both decks were surface treated to work in composite action with the concrete. The system included welded shear studs to integrate the steel beams, the concrete slab, and the deck.

Flush fittings: as the number of cables and services needed increased, the possibility and probability of change in office planning began to show. Desks and outlets could be placed almost anywhere, and walls were moved with them. The expense of drilling from trench header into the cells and from the floor into the cells came into focus. Why tap each cell separately? Now that the space between the undulations was wider (from structural considerations), why not straddle two ribs or drop down between them, and tap two cells with the same preset insert? For that matter, why not sink the whole service fitting into the floor and out of sight? Add predrilled holes in the cells and the result is a flush-mounted preset fitting option which spans two adjacent cells and can be placed in minutes with no afterdrilling. in the trenches: following the trenchdrilling expenses of the Hancock building in Boston, manufacturers began the development of a "bottomless" trench. The top of the trench was necessary as a removable steel panel in the floor. The bottom of the duct however was only needed to isolate the concrete from the wiring. If the sides of the trench could extend down and fill the trapezoidal voids in the deck, the trench bottom could be eliminated. As a bonus, the floor deck could be predrilled in the factory to occur at precisely the right place in the trench.

An architect today who chooses to take advantage of all of these innovative developments can install an electrified cellular deck with a matrix of preset service fittings spaced appropriately just below the surface of the floor. The tenant for that floor can then activate any service fitting he wishes, as it is needed, by simply punching through a thin panel and fishing the appropriate cables through the opening. When the fitting is no longer necessary, it need not be deactivated; we can simply close the access opening.

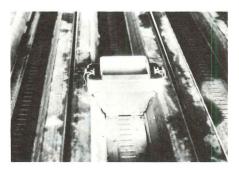
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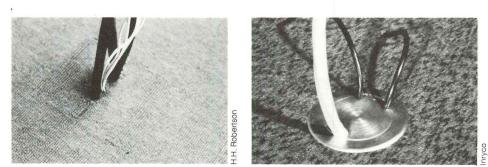












The modern cellular floor is geared for speed of installation. The early version of the floor ran feeder ducts over the cells, and then drilled down where necessary. This system proved very flexible but time consuming, and limited the service fittings to surface mounts. Since each cell was carrying a different kind of wiring, a separate service fitting (and hole) was needed for each type of service. As the number of fittings increased and the layout of the desks became more difficult to predict, an answer was sought that could be "preset" in the floor and attached quickly over predrilled holes in the deck flutes. The new designs clipped cleanly into place, and tapped two adjacent cells to reduce the number of holes in the deck. They also made it possible to produce flush fittings. The added bonus was the potential of leaving the fitting activated while dormant which made reuse a breeze.



The raised floor began as the answer to a specific problem, the computer room. The early aluminum solutions proved to be costly but worked well. The last five years have seen the more general application of the concept. Steel panels and stringers (middle) will support 250 psf. Speed of installation comes with modular wiring to a factory-installed service box (right). The insert in the middle drawing depicts the standard "stringerless" aluminum pedestal.

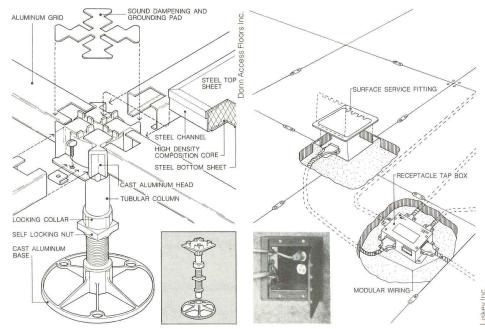
electrified cellular floor is the increase in desk pattern flexibility and change at minimal increase in floor depth. Kindred advantages, however, have proven to be the ease and effectiveness of fire-protecting the cables, and the possibility of including an integral air distribution system or lighting between the ribs in the floor. So many different cells also provide a large total available cross-sectional area while keeping the different cable types apart. The flush fitting is a possibility with the cellular floor but of course need not be used, giving the electrified cellular floor the choice of preset, afterset, surface, or flushmounted service fittings.

#### Service fittings

The service fitting is the final leg of the journey for a slender electrical wire or communication cable to the work station. When the electrical outlet or cable connection is completely concealed within a hollow in the floor, access might be through a hatch lid or by removing a sectioned panel. Physically, the floor plane is broken only by the cables or wires themselves. Visually, the carpet may be cut out or peeled back in such a way as to leave very little to view but the wires. The hatch lid may be designed to be covered by carpet or tile and invisible, or clearly indicated in the outline of the floor plane. Flush fittings are becoming common in electrified cellular deck and access floor. They are unrealistic with poke-through or underfloor duct concrete systems.

It is possible to solve the electrical outlet aspect of the problem with a surface plate in the plane of the floor, but service fittings projecting above the floor have been the standard for poke-through and underfloor ducts used in concrete construction. The choice of fittings spans a spectrum from the merely functional to the elegant.

The accompanying problem with a floor system is what to do with the remnants of a service-fitting location when the wires have



FLOATING FLOORS

been removed. In many cases, a metal plate is installed to hide an unsightly hole in the carpet. Other systems try closing the carpet flaps which were created in making room for the fitting from the outset. With a metal hatch solution, plugs are pulled and the door is simply closed. If carpet tile is used, the tile unit is replaced with one with no hole at all.

Proponents of the flush fitting criticize the surface fitting as being ugly, an unnecessary obstruction, and a tripping danger. The surface fitting exponents counter by insisting that dark wires coming from a hole in the carpet are difficult to see and are as much a tripping hazard. They point to the remnants of the flush fitting as an untidy solution and insist that they are a nuisance to office workers who unplug their possessions at night and must repeatedly peel back carpet or open a hatch.

A service fitting which is well located is probably beneath a desk, making the visual problem less critical during use than when it is abandoned. In the case of the flush mount in a cellular floor, the abandoned fitting is usually not deactivated so the outlet can be reused without additional cost at a later date. The newer, dual fittings also have the advantage of reducing the number of holes in the floor at the outset.

Using a flush outlet and a cellular deck implies using a preset fitting. Using a preset fitting and a cellular deck of course does not preclude the later installation of an afterset fitting. Some designers still prefer the afterset service fitting citing its complete freedom of placement as a great advantage.

#### The evolution of the raised floor

The original: parallel to the evolution of the closed-cell electrified floor in recent years has been the development of the concept of a raised floor. Historically, the raised floor, or access floor as it is also called, was created to accommodate the budding computer industry of the 1950s. ACCESS FLOOR WITH MODULAR WIRING

The computer is a delicate and expensive device, and places extraordinary demands on the electrical and mechanical systems as well as the floor. It will not accommodate surges in power caused by load variations, and "down time" must be avoided. The room itself must be able to accommodate the high heat output of the machines and a fairly high relative humidity (40-60 percent). The surface upon which the machines rest must be nonmagnetic, conductive, grounded to avoid accumulation of static electricity, and fastidiously clean. Since most of the initial installations were in existing buildings, a place was needed for all of the additional wiring and air conditioning. The answer meeting all of these restrictions was a new floor for the space, raised, and constructed of lightweight aluminum.

The first systems consisted of modular, square, die-cast aluminum panels raised and resting on pedestals at the panel corners. The pedestals were glued at the base to the original floor. The pedestal shank was threaded to allow for height and leveling adjustments. The pedestal head was designed to handle the various corner and edge conditions necessary and to accurately lock the panels together.

An outstanding feature of a lightweight die-cast aluminum panel was the great precision with which it could be fabricated. The accuracy proved to be a must when a large expanse of floor was placed. Small errors duplicated many times can result in large errors. Accuracy also implies the complete interchangeability of panels. The exposed top surface of such panels ran the gamut from floor tile to carpeting with special edge treatments to reduce wear and placement problems.

The early computer rooms used conventional air-conditioning ducts. As systems grew and changed, the ducts could not easily adapt. Later systems have used the space between the structural slab and the floor as an air plenum using a perforated

#### **Technics: Underfloor systems**



ENCLOSURE HOOD POWER BARRIER TELEPHONE GROMMET RECEPTACLE FINISHED FLOOR BASE FITTING AND GASKET ADJUSTABLE BARRIEL MOUNTING BRACKET UPPER INSERT HOUSING FIRE PANEL DIVIDER FIRE PANEL GRID -FIRE PANEL HOUSING BARRIERED EXTENSION CORE DRILLED 3" Ø HOLE LEVELING SCREWS TELEPHONE Components POWER CONDUIT ADAPTOR JUNCTION BOX COMMUNICATION ELBOW Raceway

Trenchduct and insert system in concrete slab.

floor panel for an air-conditioning grille. As time passed, ways were sought to reduce the cost of the aluminum systems. At first, wood replacements proved to react unfavorably to the load and moisture content of the air. Later, steel-encapsulated particle board eliminated many of these problems. Still more recently, a slightly more costly all-steel panel has been developed. In addition to the simple pedestal support, a stringer option is possible which is designed to compensate for tolerance variations of panels. Systems generally rely on a gravity-held connection, but can add mechanical fasteners either from the corners of the panels to the pedestal heads or at the corners and midpoints of the sides. The mechanically held solutions increase the rigidity over some loosely laid systems, but sacrifice speed of removal. Many of them admittedly lose some performance characteristics and longevity with their low cost, especially in a computer application. What they have done, however, is introduce the possibility of using the raised floor in a more general office use application.

**Choices after choice:** the decision to raise the floor is accompanied by a host of attendant choices. Designers must rethink the structural, electrical, and mechanical nature of a raised floor.

The live and dead load to be placed on the floor, as well as the weight added to the original structure by the new floor, must be considered in the case of a retrofit. The panels are usually supplied in three basic sizes: 18" x 18", 24" x 24" and 30" x 30". The aluminum panels are designed to hold computers, so normal loading is generally no problem (they are usually 24 in. square). Steel panels are available in three structural grades: general construction, computer, and heavy duty. Steelencapsulated wood panels are supplied as general construction and computerrated only. Whether the floor is supported by pedestals alone or stringers and pedestals, the strength, construction characteristics, and eventual versatility of the resulting floor may be affected. Access floor systems vary in their methods for accomSECTION: STANDARD "POKE-THRU" SERVICE FITTING

modating joints, edges, and corners. The height chosen for the floor, usually 8 in. to 12 in., depends upon how much space is available (in the case of a retrofit) and what the services are that must run beneath it. As mentioned, the floor itself may be a plenum or carry shallow ducts.

The location of the junction boxes on the structural floor and the type of connection used for the wiring will eventually influence the ease of changing and alternating panels. The use of modular wiring in the early 1970s has proved to increase installation speed as well as simplify panel variations. The wiring is constructed like an extension cord, in precut lengths which can be connected at service fittings or junction boxes with a lock-plug device. Clever forethought as to telephone cable coordination has also permitted architects in some cities to design for panel movement and relocation without disconnecting telephone wires, a time-consuming necessity in most underfloor systems.

Problems and potential: raised floors do not come without possible problems. Building angles, curves, and irregularities are difficult to accommodate, but not impossible. Bathrooms and washrooms must use conventional floors, introducing the possibility.of ramps, steps, or sunken floors. A maintenance crew ignorant of floor construction could botch a raised floor with wet washing techniques, or placement of especially heavy loads on a lightweight panel. Vibrations or deflection in the structure below might necessitate releveling the floor after initial installation. Carpet or tile wear might mean replacement of an entire floor panel.

The potential of the raised floor has yet to be fully realized by architects. The possibility of level change can enliven a large dreary office space. The opportunity for increased identity of the work space can be seized by changing the color of the carpet or tile used on the floor panel itself.

#### Concrete underfloor systems

**Underfloor raceways:** as discussed earlier, underfloor raceways have been embedded in concrete since the 1920s. The

- "Where the owner is his own major tenant, and where he is concerned about the costs of tenant relocation over the life cycle (say 15 or 20 years), then of course the positive aspects of floor systems begin to take effect and there is no question that, more often than not, you will end up with some variation of an underfloor raceway system."
- "Poke through has been bad mouthed over the years by system vendors so that it tends to be regarded by potential tenants as a nuisance and not very flexible. If you are a developer and you are going to build an office building for multiple-tenant occupancy, the initial flexibility and low cost have obvious appeal. Nor would you be concerned how often the tenants relocate their furniture or work stations, since they are going to pay for those changes." Joseph Loring

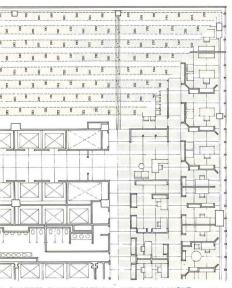
steel ducts for service wiring can run within the structural depth of the floor slab or can be placed on the completed floor slab within the topping, the technique known as "fill and finish." A third possibility also exists for renovation which entails routing the topping surface of an existing floor and installing shallow ducts which are then hidden by the floor covering.

Because concrete is a free-forming material, the placement of underfloor ducts has always meant substantial freedom of placement. Once the main trench duct has been placed, the branch ducts can be spaced at virtually any interval. Preset fittings poke up from the duct desired. Perhaps it is because of this inherent freedom, and its success, that underfloor duct systems have been so little altered over the years.

It is generally understood that modern demands for wiring services are demanding greater quantities of duct space every day. The space within a structural slab or on top of one is not infinite. Care must be taken when ducts are placed within the structural slab to avoid creating additional structural height of the floor slab. Within the topping, an underfloor system might demand a depth of 4 in. Care must be taken when installing a preset system that the shoring does not allow a camber to develop that will entail superfluous afterdrilling (also true with composite floors).

A plug in a poke: a poke-through system, in general, is a system which entails no underfloor raceways of any kind. Conduit runs from its connection to the service fitting on the underside of the slab to the junction box centrally placed (perhaps on a grid pattern). A sleeve may be preset in the floor at the time of construction or placed later. When a hole is drilled, a sleeve is forced into place which is threaded on its interior. The service fitting is then installed from above. The first costs of poke-through systems are hard to beat, but there are restrictions.

The big problem is change. To install a new poke-through outlet in an existing building, the ceiling panels on the floor



UBBINS & ASSOC, ARCH.

below the outlet must be removed. If this space does not belong to the same tenant, someone else possibly suffers inconvenience. Of course extensive changes normally do not occur during the work day, but electricians are not chosen for their housekeeping ability. Another problem with after-drilling is that holes are drilled usually in ignorance of the idiosyncratic properties of the building and might ruin a hidden pipe or duct.

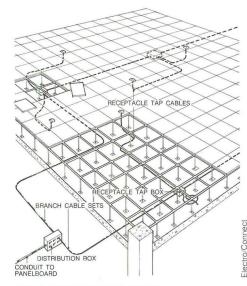
Recent changes in telephone company policy in many cities require that telephone wiring be run in conduit. This situation eats into the profits of the poke-through system, which formerly ran exposed telephone wiring in the hung ceiling of the floor below.

Poke-through has received heavy criticism in the 1970s as weakening fire protection in a floor. Fire-rated outlets do exist that effectively hold critics at bay. Many engineers are no longer apprehensive of problems with a fire-rated poke-through outlet. They will recommend them freely in the appropriate situation.

#### Cost

Before the underfloor system choice is made, costs of the viable solutions are analyzed. Of primary interest is, of course, the initial cost of each floor system including structure and fire protection. The probability of change must be estimated and the cost of those changes calculated annually over the building's useful life. Vince Nowicki is an electrical engineer involved with floor system selection for GSA buildings. "Any way you look at it," says Nowicki, "you are going to pay more for flexibility." The initial pain of flexibility cost diminishes with time.

Choice of system can affect the location of the service fittings, the speed and convenience of change, and growth potential. Changing the location of an outlet or telephone requires paid professional services and materials. The purpose of the preset systems, for example, is to reduce the time and effort needed to make such changes. What these systems lose in initial cost to a poke-through system, they can gain back in relocation savings. The total cost analy-



TYPICAL ACCESS FLOOR AND SERVICE

sis includes both the initial costs and these estimated service and maintenance costs. The life-cycle cost is then determined, adjusted to the future cost of money and the projected inflation spiral, over a period of 10, 20, or 30 years.

Architect Peter Kastl, of the Ehrenkrantz Group, adjusts this life-cycle cost dependent upon the effect the floor system choice has on the rest of the building. If the floor system is light in weight, structure and foundation costs may be reduced. If the floor system adds height to the building, material is added to the structure and façade of the building as well as the height of the risers, ductwork, and static pressure of the fan system. If the building volume is changed while maintaining constant height, air-conditioning and energy costs can still be affected. The speed of the erection of the system may attract early occupancy and be a system bonus.

#### Conclusion

The real benefits of having an appropriate and accessible work-support system are intangible. They translate into worker efficiency and good morale. Floors have literally always been a great source of support. We are learning to use them effectively to support us in new ways. As we stack them in space and fill them with power, they seem more than ever ready to sprout ways to serve us. [Richard Rush]

#### **Acknowledgements**

We wish to thank the following architects, engineers, organizations, and manufacturers for their help in preparing this article: American Iron and Steel Institute; Citibank; Donn Corp.; Dual-Lite; The Ehrenkrantz Group; Electro/Connect; Floating Floors Inc.; General Services Administration, Vince Nowicki; H.H. Robertson Co.; Hugh Stubbins & Associates; Inryco Inc.; Interior Facilities Assoc.; Joseph R. Loring and Assoc.; Liskey Inc.; 3M Company; Raceway Components Inc.; Republic Steel; Roll Form Products; Skidmore Owings & Merrill; Square D Co.; Tate Architectural Products Inc.; Walker Parkersburg. For underfloor systems product and literature information, see p. 124. Joseph R. Loring & Associates, Consulting Engineers, was organized over 30 years ago with Joseph Loring functioning as partner and chief electrical engineer. In 1962, the office was selected as the electrical engineers for the World Trade Center. In the past 22 years, the Loring office has been involved in the design of more than 50 million sq ft of office building space containing virtually every variation of floor system. Recent projects include The Aid Association for Lutherans headquarters in Appleton, Wisconsin, John Carl Warnecke, architect, with a full access floor, and Citicorp Center with a cellular deck with flush outlets.

"My tendency in a steel-frame office building is to look for a cellular deck and to recommend a floor system," says Loring, "even if the building is designed for multiple-tenant occupancy. These buildings tend to compete with each other. If an owner can say, 'we have a floor system in this building,' it's going to be a selling feature."

"The access floor would be economically viable only in a relatively low building, say under ten stories, where the added floor-tofloor height would not be prohibitive. It's a very risky thing to sell someone on the benefits of this particular system if he is a reluctant dragon (not fully aware of all of its implications). It has too dramatic an impact on the structure for an engineer to propose independently." The "dramatic impact" to which Loring refers is the fact that the access floor may require that the structural floor be recessed to accommodate the raised floor. Removing the raised floor at a later date is therefore unfeasible. How do the systems get cost justified?

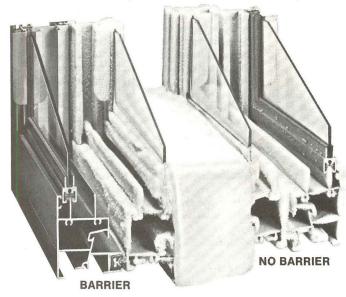
"First we would price out the structure and add the cost of the access floor, which may be \$4.00 per sq ft. Then we would develop a very simple and extremely flexible distribution system which would be run beneath it. The telephone system would be wired with exposed cables. Microprocessors, computer outlets or similar devices, which many tenants have, could readily be accommodated. We would probably recommend an 8-in.-high floor. Anything less than that is risky because allowance must be made for unanticipated crossovers. If not, there is likely to be a blockage. If such a system is adopted, we have added 8 in. per floor to the height of the structure. However, if we were thinking about a floor system to begin with, we probably would have had a 4-in. fill and finish (in a concrete building); therefore we have added only 4 in. per floor. What are we saying? Well, we probably have a more economical structural system, and we are saving the cost of an underfloor duct system, which is not inexpensive, probably \$1.50 per sq ft. We have thus added \$2.50 per sq ft to the cost of the building, plus 4 in. of height per floor-not insignificant. Now we begin to do our 15- and 20-year life cycle studies, evaluating the cost of relocation of the various service outlets, comparing the time involved, the cost, and the inconvenience. In this way you begin to see where an access floor, in the right building with the right user, would be an extremely effective resource." Joseph Loring



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#### Landmark statutes

Norman Coplan

Preservation of buildings having historic significance is gaining acceptance throughout the United States. Is such designation "taking without just compensation"?

There are presently in existence statutes in all 50 states and in over 500 municipalities dealing with the preservation of buildings with historic, cultural, or aesthetic significance. Although this legislative effort has been ongoing for the last 50 years, it was accelerated in recent years because of a growing appreciation and acceptance of the premise that the destruction of historic or aesthetic structures has an adverse effect on the quality of life.

The legal validity of many of these statutory efforts has been questioned, and there has been much uncertainty as to the principles of law applicable to the issues raised by challenges to such statutes. However, preservationists around the country were elated by the recent decision of the United States Supreme Court (*Penn Central Transportation Company* vs *City of New York*) upholding the validity of the Landmarks Preservation Law of the City of New York as applied to Grand Central Terminal. The highest court of the United States in this decision made it clear that it had accepted the principle that it is an appropriate function of government to preserve historic, cultural, and aesthetic values, provided that it is done in the public interest and in a manner which does not violate due process.

As pointed out by the United States Supreme Court, New York City, in adopting a landmark preservation law, "acted from the conviction that 'the standing of New York City as a world-wide tourist center and world capital of business, culture and government' would be threatened if legislation were not enacted to protect historic landmarks and neighborhoods from precipitate decisions to destroy or fundamentally alter their character." This statute, as was typical of many such landmark laws in other jurisdictions, did not achieve its goal by acquiring historic properties, but rather through regulations, controls, and incentives encouraging preservation by private owners. The statute provided that if the Landmarks Commission determined that a building satisfied certain criteria, such building would be designated a "landmark," which in turn would impose a duty upon the owner to keep the exterior features of the building in "good repair" and prohibit any alteration

of the exterior architectural features of the landmark without the Commission's approval.

Grand Central Terminal, constructed in 1913, is one of New York City's most famous structures. As stated by the Court, this building "is regarded not only as providing an ingenious engineering solution to the problems presented by urban railroad stations, but also as a magnificent example of the French Beaux Arts style." After this building was designated a landmark by the Landmarks Commission, its owner, Penn Central Transportation Company, in order to increase its income, proposed that a multistory office building be built above the Terminal. The Landmarks Commission withheld its consent, saying, "to balance a 55-story office tower above a flamboyant Beaux Arts façade seems nothing more than an aesthetic joke."

The owner instituted a legal action against the City of New York contending that the Landmarks Commission had "taken" its property without "just compensation" in violation of the Fifth and Fourteenth Amendments of the United States Constitution. The United States Supreme Court, in addressing this question, stated:

"The question of what constitutes a 'taking' for purposes of the Fifth Amendment has proved to be a problem of considerable difficulty. While this Court has recognized that the 'Fifth Amendment's guarantee is designed to bar Government from forcing some people alone to bear public burdens which, in all fairness and justice, should be borne by the public as a whole,' . . . this Court, quite simply, has been unable to develop any 'set formula' for determining when 'justice and fairness' require that economic injuries caused by public action be compensated by the Government, rather than remain disproportionately concentrated on a few persons. ... The economic impact of the regulation on the claimant . . . is, of course, a relevant consideration. So too is the character of the governmental action. A 'taking' may more readily be found when the interference with property can be characterized as a physical invasion by Government . . . than when interference arises from some public program adjusting the benefits and burdens of economic life to promote the common good."

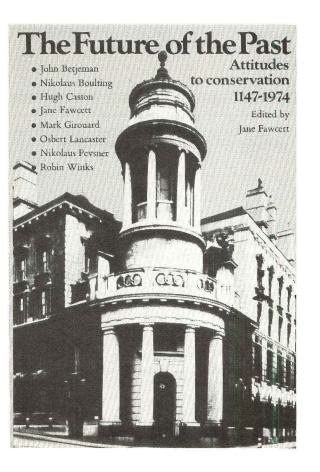
The Court compared landmark preservation statutes with zoning laws, pointing out that challenges to zoning ordinances, based upon the theory that they constitute a "taking" without compensation in violation of the Constitution, have been held to be without merit "in a wide variety of situations when the challenged governmental actions prohibited a beneficial use to which individual parcels had previously been devoted and thus caused substantial individualized harm." The Court said:

"This Court has recognized, in a number of settings, that states and cities may enact land use restrictions or controls to enhance the quality of life by preserving the character and desirable aesthetic features of a city."

The owner of the property contended that the nature of a landmark preservation statute essentially differed from that of zoning legislation in that the former applied to individually selected properties, whereas a zoning ordinance has general application. It urged that any substantial restriction imposed pursuant to a landmark law should be accompanied by just compensation if it is to be constitutional. In the next column, this discussion of the Court's significant decision will be continued.  $\Box$ 

Books

#### Past's future

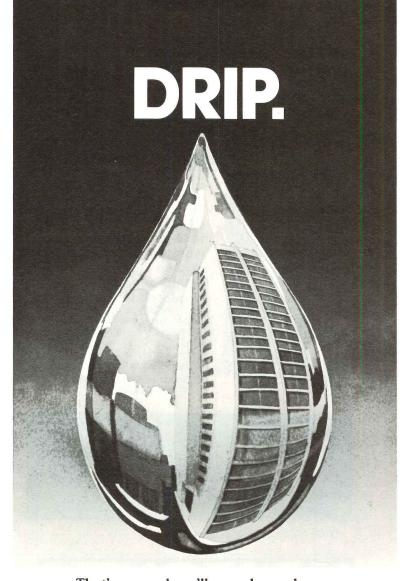


#### The Future of the Past: Attitudes to conservation

**1147–1974,** edited by Jane Fawcett, New York, 1976, Whitney Library of Design (Watson-Guptill Publications). 160 pp., 125 illus., \$15.95.

Reviewed by William Morgan, assoc. prof. of architectural history, Univ. of Louisville, Ky, and chairman, Kentucky Historic Preservation Review Board.

The Future of the Past, published by the Victorian Society, is another indicator that historic preservation has come of age. While it addresses itself primarily to conservation in Great Britain, it contains much that is relevant to the preservation movement in this country. It is one of a series of [continued on page 118]



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#### Books continued from page 117

books with titles like *Assaults on our Senses* and *The Rape of Britain* that unfortunately have not been made available in America.

The book is a collection of essays contributed by eight eminent historians, preservationists, and architects. It is a combination of historical articles and general preservation philosophy.

The historical accounts list conservation highlights from the rebuilding of Canterbury Cathedral in 1147 to the present. Nikolaus Boulting's "The law's delays: conservationist legislation in the British Isles" provides a chronological discussion of protective measures from the Middle Ages through the founding of various antiquarian societies in the 19th Century to the Civic Amenities Act of 1967. In so doing, he catalogs the evolution of attitudes from the idealistic pronouncements of William Morris ("We are only trustees for those who come after us.") to laws (such as the Historic Buildings and Ancient Monuments Act of 1968) that offer tax relief for conservators and jail terms for violators.

Similarly, Nikolaus Pevsner's "Scrape and Anti-Scrape" tells of the more sophisticated rationales that developed in the last century, particularly over the issue of church restoration. James Wyatt and Sir George Gilbert Scott's attempts to "recover the original" led to much mutilation and destruction, which in turn aroused the sensibilities of men like Morris and spurred efforts to protect older buildings, complete with all their various accretions and alterations. Such battles still rage, and the Victorian Society is now fighting to save works of those 19th-Century restorers.

Jane Fawcett's "A restoration tragedy: cathedrals in the eighteenth and nineteenth centuries" recounts in great detail how through restoration the Gothic Revivalists destroyed the very source of their inspiration. As interesting as this and Mark Girouard's chapter on "Victorian alterations to country houses" are, they are perhaps of more interest to historians of the period than to preservationists.

Contrasted with these historical pieces are more general essays. In Robin Winks's "Conservation in America: national character as revealed by preservation," the former United States Cultural Attaché in London notes that Americans are more obsessed by history than Britons are and also more self-conscious of their sense of destiny. What we have preserved are symbols of our search for a national identity, so that our battlefields, frontier cabins, and monuments to business form a "genuine mirror" of what Americans think of themselves. We tend to use history with a "bias of utility," so that the emphasis placed on "relevance" has fostered an "unholy alliance" between preservation and tourism.

Most preservationists overstress literary and artistic forms of human endeavor; they also tend to be bookish like one of the other contributors, poet laureate John Betjeman. Betjeman's highly personal "A preservationist's progress" reflects on what makes one like architecture, how architecture affected him and formed his own prejudices, and also reminds us that buildings can be "funny." It was Betjeman who founded the famous *Shell* [continued on page 120]

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#### Books continued from page 118

*Guides* in 1933, "to draw attention to Georgian and early Victorian and to deplore overrestoration," he now admits.

Equally witty and delightful is Osbert Lancaster's "What should we preserve?," an essay which alone makes the book worth the price. It should be required reading for everyone concerned with the built environment. In it he sets out three grounds, and only three, on which we are logically entitled to press for preservation: intrinsic aesthetic merit, *pietas* or emotional appeal, and those buildings which "fulfill a vital role in the landscape," a criterion that covers setting, ambiance, and townscape.

Lancaster, taking aim at the Williamsburg-inspired freeze-dried restorations wherever they may be, admonishes us never to try to stop the clock and never to try to restore a building to its original state. To convert buildings into museums is too often a form of embalming, for, to Lancaster, preservation means maintenance of a building in a state still capable of being subject to transformation.

To offset the views of lovers of architecture (as opposed to creators of it), Hugh Casson raises some tough but necessary questions in "Old sites and new buildings: the architect's point of view." Is new building stifled by the past? Do we preserve certain buildings because of fear of replacement? Does preservation mean greater visual sensitivity or lack of cultural nerve? After all, we need new buildings just as much as we need the familiarity, stability, and sense of place provided by old buildings. Considering that Sir Hugh is one of the few architects who have consistently shown the skill, imagination, and tact to successfully join the old and the new, it is disappointing that there are no illustrations of his work.

Although its dual offering of history and philosophy might somewhat diffuse its appeal, the real importance of *The Future of the Past* is that it reminds us that "without the continuous deposits of architectural humus, no modern architecture can thrive."

#### Our national trust

**The History of the National Trust for Historic Preservation, 1963–1977,** by Elizabeth D. Mulloy. Washington, DC, The Preservation Press, 1976, 320 pp., illus., \$11.00.

This book is a sequel to the 1947–1963 history of the Trust's formative years written by David E. Finley, past chairman of its board of trustees. In detailing the growth of the leading private American preservation organization, the new book surveys early preservation efforts and legislation, the founding of the National Trust, early Trust programs and acquisitions of properties, and the international studies and national efforts that resulted in passage of the National Historic Preservation Act of 1966. It also focuses on the unprecedented growth of the Trust, the development of its programs and policies, federal preservation legislation and funding, major preservation battles, and other milestones achieved, as well as tools developed as preservation and the Trust came of age.

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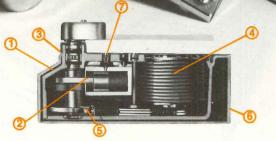
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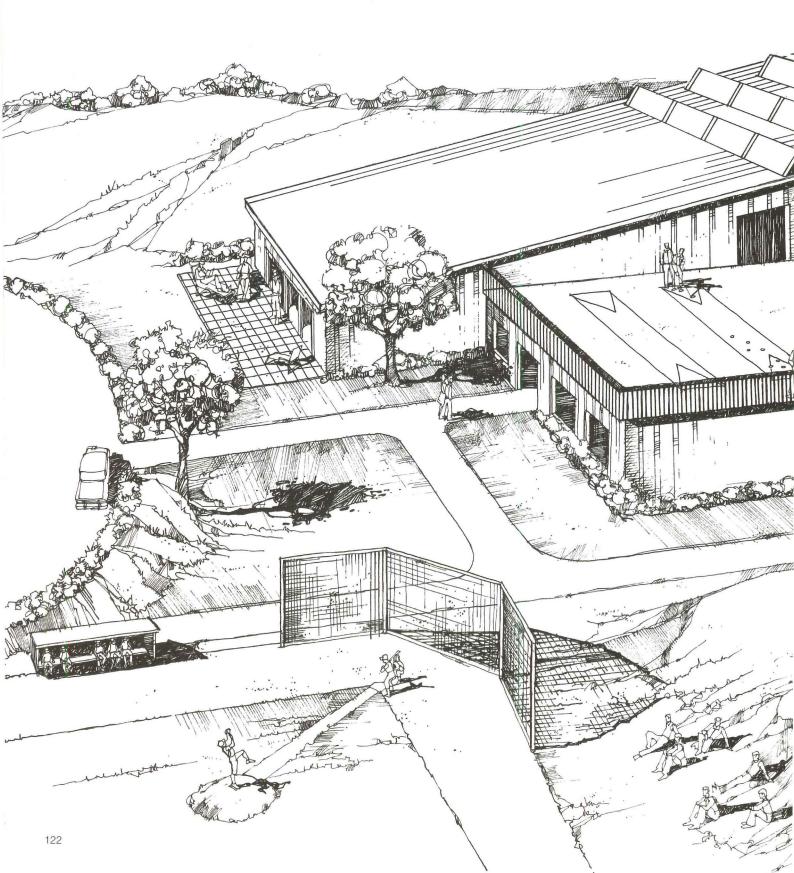


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#### **Progressive Architecture**

#### Products and literature



#### Underfloor systems

The following items are related to the article on underfloor systems beginning on page 104 in this issue. They are grouped here for the convenience of the reader.

#### Products

**The InterLoc** floor system is an access floor made up of panels, pedestals, and fasteners. An edge coupling joins the panels into a unit, and corners also are fastened to the supporting pedestals that are secured to the underfloor. The assembly resists both upward and downward loading so furniture and partitions can be attached directly to the floor. Panels can be removed only from the top, precluding entry into secure areas by way of the underfloor space. Liskey, Inc.

Circle 100 on reader service card

#### The 124 Dual Flush Service System brings

power and telephone service to a predetermined location with one fitting. Once the fitting is installed, only the aluminum trim carpet plate is visible. Platform leveling legs can be adjusted during installation. The fitting has three access openings for combination electrical and telephone service. It is UL rated and accommodates 15 or 20 amp duplex grounded receptacles. Walker Parkersburg Div. of Textron. *Circle 101 on reader service card* 

**Fire-I**<sup>®</sup> is a method of slab penetration for electrical, telephone, communication, and computer circuitry distribution. An inorganic chemical material in the center coupling expands when exposed to excessive heat to form a solid, fire-resistant insulation barrier. According to the manufacturer, the barrier reduces heat transfer to acceptable levels, and eliminates passage of fire, smoke, and air through the slab. Fire-I is UL listed for one- to four-hour fire-rated floors. Raceway Components, Inc. *Circle 102 on reader service card* 

**Computer-room floors.** Die-cast aluminum floor panels supported by aluminum pedestals make up a stringerless system that provides an

The InterLoc floor system.

air plenum and allows underfloor cables to be laid in place rather than pulled through. Aluminum provides grounding and eliminates static problems. Since it does not rust or require painting, there are no rust particles or paint flakes to interfere with computer performance. Where ceiling height is adequate, the system can be used to convert existing space to computer rooms. Floating Floors, Inc. *Circle 103 on reader service card* 

#### Literature

Electrical service system. The Electro/ Connect wiring system consists of branch circuit cables, reversing cables, distribution boxes, power in/out adapter assemblies, tap boxes, tap cables, and low voltage control. The distribution box is attached to the panelboard by conventional conduit. Individual circuits are then plugged into power-out connectors in distribution boxes. Connectors are factory-wired into each fixture. A 16-page brochure describes the system components including emergency lighting, individually controlled lighting, lighting circuits, power circuits, communication, and clock/signal circuits. Electro/Connect Div., Emerson Electric Co. Circle 200 on reader service card

**Rail-Way**<sup>®</sup> **Trench Ducts.** Four-page bulletin shows a diagram of Rail-Way trench ducts, and identifies and describes the components. The duct is used in cellular steel floors and underfloor raceways to accommodate power and telephone services. It also serves as flush raceway for computer rooms, language labs, shop areas, and X-ray rooms. There are flush floor fittings that provide access to the ducts below. Square D Co.

Circle 201 on reader service card

**Poke-thru Devices** connect to modular wiring by means of a plug connection in an underfloor plenum. The device contains intumescent material to seal raceway and assembly channel in the event of fire. The unit is adaptable for floors from two and one-half to eight in. thick. Installa-



Electrical service system.

tion procedure is described and shown in sixpage folder. Dual-Lite, Inc., Wiring Products. *Circle 202 on reader service card* 

**N-R-G Flor** is an integrated in-floor electrical distribution system for the economical location and relocation of electrical and communication outlets. The system provides fast, easy access to trench ducts and preset inserts, and has ample capacity for expansion. N-R-G Flor and its components are illustrated with diagrams in a 16-page manual that also includes specifications. Inryco, Inc., Building Panels Division. *Circle 203 on reader service card* 

**Q-floor/Taproute system,** a cellular floor, allows power and telecommunication lines to be accessible at any location. Cellular and noncellular units can be combined at lower cost to provide service with only minor adjustments in desk locations. A 26-page catalog shows profiles and dimensions, lists properties, provides acoustical data, and lists specifications. Also included is a metric conversion table. H.H. Robertson Co., U.S. Building Products Div. *Circle 204 on reader service card* 

Access Floor Systems provide convenient access to electrical, mechanical, and communication services. A 12-page brochure describes the system of all-steel floor panels in three models: computer rated, general construction, and heavy duty. Floor panels snap into free-standing pedestals bonded in place, each capable of two inches of vertical adjustment to assure accurate floor leveling. Diagrams show understructure as well as accessories available to adapt to special requirements. Donn U.S.A. *Circle 205 on reader service card* 

A snap-on stringer access floor system sup-

ported on pedestals provides underfloor access to electrical, communication, and other services. Floor panels recess into the rigid stringer grid. Stringers can be removed, repositioned, and relocked without special tools. Data sheet illustrates the assembly and lists its advantages. Diagrams show design features. Tate Architectural Products.

Circle 206 on reader service card [continued on page 126]

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The 570 Series of office seating comprises seven basic models: a five-adjustment secretarial chair, and arm and armless versions of swivel-tilt, fixed-base, and revolving swivel return chairs. Soft lines, resilient surfaces, and specially designed bumpers will not damage surrounding furniture. All models are available in both four- and five-leg bases with optional chromium finish. GF Business Equipment, Inc. Circle 104 on reader service card

Office chairs added to the 450 Series are a high-back, swivel-tilt chair and a fiveadjustment secretary's chair. Improved leg design featured on the new designs, with optional dual wheel casters, will be used on the entire line. A wide choice of fabrics is offered. GF Business Equipment, Inc. Circle 105 on reader service card

Paradigm Series office seating comprises six chairs: armless; with metal open arms; with upholstered arms, either open or closed; and high-backed with upholstered arms, either open or closed. Recessed arms avoid contact with work surface edges, and swivel bases have blunt edges to avoid damaging shoes or back cabinets. Upholstery fabrics include vinyl, glove leather, and lightly textured fabrics. Stow/Davis. Circle 106 on reader service card

Corporate logos are produced as tapestries, area rugs, or carpeting of 100 percent wool to carry out a corporate theme. Wall hangings are 2' x 2', 2' x 3', or 3' x 3', and carpeting is available in any quantity; both are produced to exact specifications as to size, color, and design. Logo Looms Ltd.

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The 570 Series of office seating.



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Paradigm Series office seating. Corporate logos produced as carpeting.



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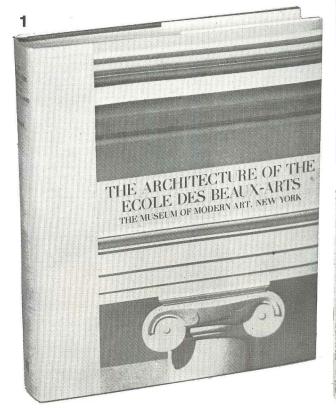


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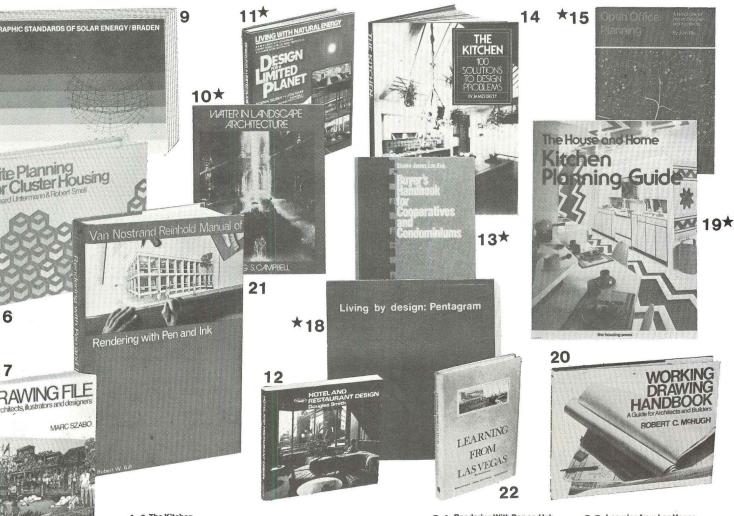
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uver's Handbook for ooperatives & ondominiums

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a truly practical, nontechnical at provides expert assistance g the correct unit for any set of I needs. It presents a detailed, anized program that allows erson to be confident that his vestment is based firmly on nd it is written in clear, simple - not legalese. 613 under Books.

**14** The Kitchen 100 Solutions to Design Problems 208 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.

#### NEW \*

#### 15 Open Office Planning A Handbook for Interior **Designers and Architects**

By John Pile, 208 pp., illus. . . . \$15.95 Presents a systematic approach that requires the use of specific methodol-ogy in organizing the physical layout of an open office with the primary pur-pose of facilitating communication

among the staff. Circle B615 under Books.

#### 16 Site Planning for Cluster Housing

By Richard Untermann & Robert Small 306 pp., illus. . ..\$23.50

An invaluable guide to planning lowrise, medium-density cluster housing environments. Also covers jurisdic-tional and technical considerations of site planning, and includes more than 600 drawings and photos that illustrate design principles and techniques

Circle B616 under Books

#### 17 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, photostats, or photo-copying machine. The pages tear out easily to form an easily accessible fingertip scrap file.

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#### NEW \* 18 Living by Design

By the Partners of Pentragram 300 pp., illus. ... \$15.00

Introduction: Using Design is by Peter Gourd. This informative book on the use of design covers product design, environment design, identity design, interior design, graphic design, living by design, exhibition design. (Soft

bound) Circle B618 under Books.

#### NEW \*

#### **19** The House and Home Kitchen Planning Guide

By the Housing Press 190 pp., illus. . . . \$18.95

Happily combining detailed informa-tion for both the home owner and professional builder, this lavishly il-lustrated book provides in-depth discussions on all facets of kitchen de-sign and building. Before-and-after drawings make both the proelem and solution explicit and easy to understand.

Circle B619 under Books.

#### 20 Working Drawing Handbook A Guide for Architects & Builders

By Robert C. McHugh,

166 pp., ... \$12.95 This guide is a step-by-step presenta-

tion 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.

#### 21 Rendering With Pen and Ink

By Robert W. Gill, 368 pp., illus., . . . \$7.50

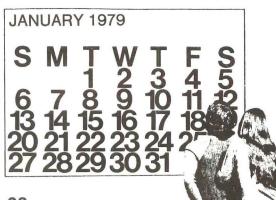
This paper-back edition is a copiously illustrated guide to the techniques and methods of rendering, including sections on perspective, projection, shadow, reflections, and how to draw cars, ships, aircraft, trees, and human figures. The author also describes the very wide range of instruments and equipment currently in use. Circle B621 under Books.

#### 22 Learning from Las Vegas The Forgotton Symbolism of Architectural Form

**Revised Edition** By Robert Venturi,

Denise Scott Brown and Steven Izenour 244 pp., illus. . . . \$17.50

Includes the full texts of Part I of the original, on the Las Vegas Strip, and Part II, "Ugly and Ordinary Architec-ture, or the Decorated Shed". This book created a storm of controversy in its original edition, calling on archi-tects of be more receptive to the tastes of common people. Circle B622 under Books

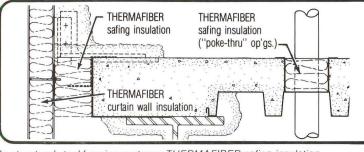


#### 23 Graphic Calendar 365 ... \$12.50

Bold and contemporary, this muchacclaimed calendar is a marvelous addition to architectural offices, a standard for designers, and needless to say, a must for the nearsighted. Comes in heavy, black tube with coordinated label for gift mail-ing. 12 sheets, each 45" x 32", bound with 3 metal eyelets for hanging.

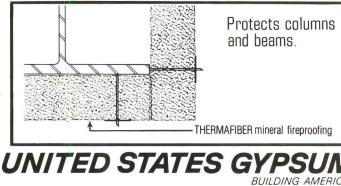
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#### Products continued from page 126

Steel desks. Cube series 1500 desks, with a range of pedestals, offer a variety of gallery or flush-top, L-return options. Concealed channels handle telephone and machine cords. There are matching tables and credenzas for design continuity, and all are available in colorful finishes, laminates, and oiled walnut tops. All-Steel, Inc. Circle 115 on reader service card

Pre-engineered polymer moldings. Direct impressions from original wood or plaster pieces are said to enable reproductions with the texture of the originals. The polymer replicas of ceiling medallions, domes, niches, and moldings are lightweight and resilient. They are factoryprimed, and can be installed with ordinary carpentry tools. Focal Point, Inc.

Circle 116 on reader service card



Wicker and rattan seating.

Wicker and rattan seating. New in a wicker and rattan group are a wicker bar stool, rattan bar stool and lounge chair, and Bali design arm chair (shown) and stacking chair. Bali is open cane interspersed with wicker strands, coated with clear lacquer for easy maintenance. Frames are epoxy or polished chrome. Shelby Williams Industries Inc.

Circle 117 on reader service card

The violin chair, a Danish stacking chair, is formed of plywood, and has a base of chromium-plated steel. Designed by Poul Pedersen, the chair is available in teak, oak, or mahogany finishes, or painted white, brown, or black. Cado/Royal System, Inc. Circle 118 on reader service card

Raphael Lounging is spring-suspension seating on a beam. There are straight line, curved, and corner groups ranging from a single chair to room-sized continuous configurations. The system includes benches, tables, and seats with backs as interchangeable modules. Frames are dual-plated nickel chrome. Add Interior Systems, Inc. Circle 119 on reader service card

Occasional table. Revival of an Eileen Gray design is an adjustable tubular steel smoking or



Occasional table.

side table with split-circle base. Top is smoked or clear glass, and frame is either polished chrome or brass finish. Height is adjustable from 211/2 to 361/2 in. Stendig International Inc. Circle 120 on reader service card

Campus color coordinated woven carpeting is made for schools, colleges, and universities. Produced from Du Pont's Antron III BCF nylon, it has rigid, rib-cord texture and a low, tight pile woven through the back for dimensional stability. There are ten heather tones and five bold stripe combinations. Bigelow-Sanford, Inc. Circle 121 on reader service card

Hardwood flooring. Oriental Azalea flooring, in 12" x 12" cloth-backed sections, can be permanently secured to plywood, old wood, tile, and concrete slab. The manufacturer says that the prefinished flooring will withstand heavy traffic, and can be used in reception areas, as well as commercial and industrial hallways. Wood Mosaic

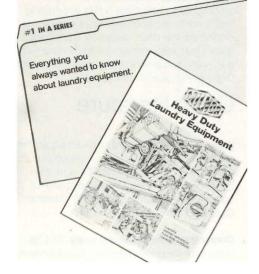
Circle 122 on reader service card

Europa track lighting, in bell shape, comes in white, satin chrome, antique brass, and polished brass finishes. It uses 75- or 150-watt Par 38 reflector spot or flood lamps, and 200watt Par 46 reflector spot or flood lamps required in commercial installations. Trakliting. Circle 123 on reader service card

Low-wattage track lighting, designed for residential and light commercial applications, comes in a choice of seven fixtures in five different finishes. Components are prewired and polarized to assure a properly grounded system. Fixtures are made of heavy-gauge steel and molded nylon. They have concealed wiring, glazed porcelain sockets, and permanent bonded finishes. Keene Corp., Lighting Div. Circle 124 on reader service card

Residential/contract lighting. Addition to this company's line includes Hemisphere, a canopy hung light, 18 in. in diameter. Stock color is white epoxy, with other standard colors available. Ron Rezek Lighting. Circle 125 on reader service card [continued on page 132]

#### Who offers architects the widest range of laundry washing systems



#### MILNOR.

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

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Integrated ceiling systems combine acoustical control, lighting, and air delivery. The large-module elements fit into a grid for fast installation. Speakers that mask sound to provide speech privacy are also available. There are vaulted, coffered, and flat styles, and a variety of light modules to suit different installations. Owens-Corning Fiberglas Corp. *Circle 126 on reader service card* 

A lead pointer, Turquoise No. 17, has a toolsteel cutter wheel that hones any drafting lead smooth and needle-sharp in seconds. Included are four interchangeable color-coded guides that accommodate all lead-holder sizes, dust pads, and a nonmarring clamp. Berol USA. *Circle 127 on reader service card* 

#### Other literature

**Drafting supplies** offered in this 60-page Mars catalog include pencils, pens, colored pencils, drafting instruments, inks, scales, and other tools and accessories. Descriptions and full-color illustrations are included. J.S. Staedtler. *Circle 207 on reader service card* 

**Galvanized steel studs and joists.** This 36page book describes techniques and systems developed by builders to reduce building costs by using galvanized steel studs and joists. Discusses advantages of galvanized steel framing, the system approach to manufactured housing, prefabrication and panelization, design applications of steel studs and joists, and a cost and weight comparison of steel and lumber. Included are case histories with data on time and cost savings. Zinc Institute, Inc. *Circle 208 on reader service card* 

**Expanded metal products.** Information file includes a background brochure that explains how expanded metal is made and forms in which it is available. A second, "Recommended Nomenclature," is designed to help in specifying and using expanded metal products. Also included is a directory of member producers which lists names, addresses, telephone numbers, and names of key personnel. Expanded Metal Manufacturers Association. *Circle 209 on reader service card* 

Versa Vent<sup>®</sup> window systems open inward from the top for ventilation, inward from the side for cleaning and maintenance. A lever handle controls the opening modes. Other features explained in the 8-page brochure are weatherseal design, friction-free operation, and energyconservation properties. Diagrams show single, horizontal ribbon, and replacement windows, and curtainwall. Flour City Architectural Metals. *Circle 210 on reader service card* 

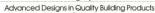
**Color sampler for blinds.** Folder has samples of more than 200 slat colors and patterns that are available for Riviera<sup>®</sup> blinds. Chart shows head, bottom, bracket, ladder, and cord colors that match or coordinate with slat colors. Similar information is given for Tiltone blinds that are



Color sampler for blinds.

white on one side and a color on the other. A slat quantity guide shows the number of slats in blinds 12 in. to 91 in. long, in 1-in. increments, for use in figuring striped blinds. For a copy of Riviera Color Sampler #21, write on professional letterhead to Customer Service, Levolor Lorentzen, Inc., 720 Monroe St., Hoboken, NJ 07030.

Armco Building Systems





Building systems.

**Building systems.** Information about Steelox and KOR/MET wall systems, Steelox standingseam roof systems, framing systems, and accessories is included in this color brochure. Diagrams illustrate the advantages of the wall and roof panel construction, and photographs show the products in use. Armco Building Systems.

Circle 211 on reader service card

#### Noisemaster resonator sound absorbers.

Catalog sheet illustrates and describes units for sound absorption and acoustical correction applications in industrial, institutional, and commercial buildings. The lightweight, noncombustible fiberglass cylinders, 12 in. in diameter and 24 in. long, enclose two tuned metal resonators which increase their low frequency sound absorption. They may be installed horizontally or vertically from ceiling structures without special tools. The Proudfoot Co., Inc. *Circle 212 on reader service card* 

**Butt-Joint Glazing System.** Illustrated 32-page booklet describes a butt-joint glazing system for providing continuous horizontal window walls for commercial buildings. Designed without vertical framing, the system provides unobstructed views of the outdoors. Panels are bonded edge to edge, nearly invisibly, with structural silicone. The system consists of head and sill frames for various glass thicknesses, and includes procedures for glass handling, installation, and maintenance. PPG Industries, Inc. *Circle 213 on reader service card* 

Weatherstrip and thresholds. Describes and shows diagrams of door thresholds and saddles in configurations that provide for water return, weatherstripping, thermal barrier, and panic exit. Weatherstrip for wood and metal doors, and double-hung wood, jalousie, and metal and wood casement windows is included in the 36page catalog. Pemko Manufacturing Co. *Circle 214 on reader service card* 

#### Barrier-Free Design: The Law, Volume II.

Contains illustrated versions of Federal, New Jersey, Connecticut, and Pennsylvania building-design rules for the physically handicapped. Updated information will be supplied to holders of the book and can be easily incorporated into the looseleaf format. Copies of Volume I containing illustrated Federal, New York State, and New York City building codes also are available in limited supply. Free copies are available from Eastern Paralyzed Veterans Association, 432 Park Ave., S., New York, NY 10016.

Office furniture. Catalog offers a full selection of office furniture in the Skagen group including executive desks, secretarial desks, and office, lounge and lobby seating. The pieces are constructed of laminated red-oak veneers and solids, with hand-rubbed polyester natural or walnut finish. R-Way Furniture Co. *Circle 215 on reader service card* 

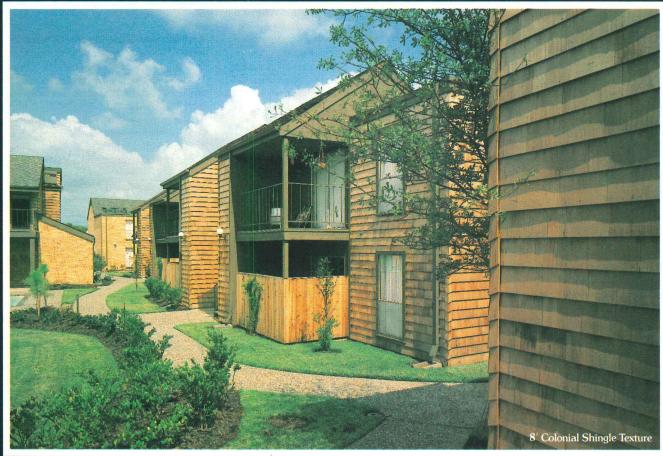
Aluminum window blinds with narrow (1-in.) louvers fit between the glass panes of dualpane windows. Flexalum blinds can be tilted manually or by motorized controls to permit varying degrees of diffused light; or left horizontal for an unobstructed view. Brochure discusses free-hanging, between-glass, and motorized systems including specifications, installation descriptions, and suggested use. Flexalum, Hunter Douglas Inc.

Circle 216 on reader service card

**Plywood Wall Systems** provides design and application data, and includes information about walls designed for saving energy, for fire protection, and for noise control. A guide to grades of interior and exterior plywood is presented in tabular form. The 20-page brochure is illustrated with photographs of typical applications and with construction diagrams. American Plywood Association.

Circle 217 on reader service card [continued on page 138]

## "Quality means a lot to us. So we depend on Shakertown Panels."





Bill Scott and Benno J. Bauer, partners Benno Bauer Investments Houston, Texas

"Quality sells. So when we plan an apartment complex, we look for quality and curb appeal all the way. And we've learned to depend on Shakertown Panels for the quality we need, year after year, project after project."

Benno Bauer has specified Shakertown Panels in his building investments since 1974. He expects a consistent product from a reliable supplier. A product made to the same exacting specifications in 1978 as it was in 1974. Major builders have come to count on Shakertown for its predictable appearance, sales appeal and availability.

Shakertown 8' Panels are #1 Certigrade Western Red Cedar shakes and shingles electronically bonded to wood backing with a full-surface gluing process. You have a choice of five textures and two exposures.

"We always know how Shakertown Panels will look. And that's good." If you'd like quality, dependability and savings on installed costs on your next project, take a tip from Benno Bauer. Find out more about Shakertown.



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Circle No. 355, on Reader Service Card

Products continued from page 132



A floor lamp with petal-shaped shade.

A floor lamp with acrylic petal shapes forming the shade is one of the Milan Collection of lamps. The stem is 60 in. tall, available in black or chromium finish. The shade, which can be directed up or down, comes in brown and white. For a catalog of the collection, write on profes-

sional letterhead to Koch + Lowy, 21-24 39 Ave., Long Island City, NY 11101.

**Entrances and storefronts** covers general specifications, materials, construction and design, finishes, hardware, care and maintenance

information about a variety of door and storefront systems. Diagrams show construction details, and photos show the various styles. Hardware styles also are illustrated. Amarlite Anaconda.

Circle 218 on reader service card

Perma-fastner<sup>®</sup> is a wind-resistant system for fastening roof insulation to metal decks. It consists of a 3" x 3" stress-distribution, temperedsteel plate treated to resist corrosion, and a self-drilling, self-tapping screw that is surfacehardened and has a rust-resistant finish. The manufacturer says that self-locking threads prevent the screws from backing out under windload, vibration, or other stress. Four-page brochure provides information about the product, methods of installation, code conformance, and related roofing products. Grefco, Inc., Building Products Div. *Circle 219 on reader service card* 

#### Mettle Mica decorative surfacing material is

available in 24-in. widths in four new standard finishes: polished brass aluminum, polished chrome aluminum, polished smoked aluminum, and polished aluminum. Brushed aluminum and brushed brass aluminum come in widths up to 48 in. The material can be cut, routed, drilled, and machined with standard woodworking and metalworking tools, and is applied easily with standard adhesive systems. It can be applied wherever decorative laminates are used as design highlights, fascias, and accents. Catalog contains complete information and samples of each finish. The October Co. Circle 220 on reader service card

**Slate Roofs.** Describes kinds of slate, sizes, thickness, and weight. Diagrams and text provide information about laying slate, flashings, roof construction, and construction details. Includes recommended practice on reroofing with slate. Originally published in 1926, the book has been reprinted in its entirety. It is available, postpaid, for \$5.25 from Vermont Structural Slate Co., Fair Haven, Vt 05743.

#### Architectural Guidelines for Glazing Sys-

**tems.** Discusses factors influencing glazing performance and common causes of failure. There are recommendations for wet, wet/dry, and dry glazing, with diagrams showing proper methods for each type. Also covers glazing acrylic and polycarbonate plastic sheets. Table shows recommended sheet thickness and rabbet dimensions. Tremco. *Circle 221 on reader service card* 

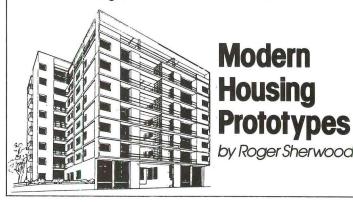
**Fixed and operating metal louvers.** 1978 catalog has product diagrams which illustrate the advantages of fixed horizontal, continuous horizontal, and narrow-line louvers, and show the various methods of operation of movable louvers. Free-area charts and load-span graphs are included. Lists and describes available finishes, with a chart showing standard colors. Elwin G. Smith Div., Cyclops Corp. *Circle 222 on reader service card* [continued on page 140]

#### Are You Designing a Sauna, Fitness or Spa Facility?



**FOR SALE** 32 Buildings for \$25.00

Arch. design. (F.L. Wright, Le Corbusier, Mies van der Rohe, etc.) All multi-fam., incl. hi-rises, row-hses., single clusters, towers. All excell. cond. Compl. w. site plans, floor plans, axonometric drawings, photographs. Plus social, environmental, financial reports. Many extras. 162 pp., over 250 illus. Exclusive with: **Harvard University Press**, Cambridge, Massachusetts 02138.



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#### CORIAN<sup>®</sup> makes your most imaginative ideas suddenly practical.

#### With opalescent beauty. Easy care. Wood-like workability.

CORIAN<sup>®</sup> 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.

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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 36228, Wilmington, DE 19898.

CORIAN is Du Pont's registered trademark for its methacrylate building materials.



**Safety color** brochure describes and illustrates colors which conform to OSHA safety standards. Covers the basic principles of color coding, the significance of each color, and the necessity for following traditional patterns. Includes instructions for identifying contents of pipes by using color bands. The Sherwin-Williams Co.

Circle 223 on reader service card

**Concrete forming services.** Brochure discusses one-way and two-way joist construction; beam, slab, and wall forming; and column forming. Diagrams illustrate the various forms, and tabular information is provided about the amount of concrete required to produce floors of various thickness. The Ceco Corporation. *Circle 224 on reader service card* 

Curtain walls and windows. Curtain walls illustrated in 12-page brochure have thermal barriers to prevent heat transfer. Frame sections are made of aluminum extrusions, with single or double glazing available. Windows swing open from the top or the bottom, or pivot vertically from the center, and are weather-stripped to protect against water and air infiltration. Models that resist forced entry are included. Amarlite Anaconda.

Circle 225 on reader service card

**Delta Oak collection.** A collection of contemporary oak office furniture with graceful, curved lines is illustrated in this four-color brochure. Included are pull-up and executive chairs, desks, tables, and lounge seating. Recently added to the series are filing and storage units which combine with the furniture into a complete work station. The Gunlocke Company. *Circle 226 on reader service card* 



The most complete, authoritative guide for stripping: weather, sound and light—as well as thresholds.



Zero's latest catalog shows many new products; contains 190 full-scale drawings. Write today for your copy.



1924-1979...55 years of opening the door to progress.

pen dels te mrved Fire vents brochure and guide.

**Fire vents.** Brochure and guide provides information about automatic fire venting and acoustical fire vents designed to be installed on roofs of theaters, concert halls, auditoriums, and similar structures. Vents are available in many sizes, and can also be custom designed. Bilco Co. *Circle 227 on reader service card* 

**Circleometer** makes it possible to construct over 200 circles, 0.012 in. apart, from a single center point location, to ± 0.005-in. accuracy. The plastic disc has a center pin and a spiral pattern of holes that make it possible to draw circles of specific sizes. There are four models: fractional inches, decimal inches, ¼-in. scale, and metric. Atlantic & Pacific Industries, Inc. *Circle 228 on reader service card* 

**Concrete forming system.** Literature describes the Max-A-Form<sup>®</sup> all-steel system for forming ties, bulkheads, and fillers, multiple lift operations, corners, pier caps, stems, and columns, etc. Site pictures and drawings illustrate specific applications. Symons Corp. *Circle 229 on reader service card* 

Systems for Solar Control. Sundrape vertical blinds are controlled by a single chain which operates both rotation and traversing of louvers. Printaroll is a rolling shade system that is available with fiberglass fabric screens to let in light and screen out glare. These and two other systems to control solar glare and heat are covered in this technical brochure. Master Recessed Systems, Inc.

Circle 230 on reader service card

#### Architectural finishing and maintenance.

Chart lists finishing products for wood and masonry, descriptions, coverage, material on which they can be used, and location for their use. Provides step-by-step method for using penetrating seal and finish products on floors. Watco-Dennis Corp.

Circle 231 on reader service card

**Electric hand dryers.** Three models of air dryers are illustrated in this 4-page brochure. Diagrams show methods for installing a surface-mounted style and two remote-mounted models. Case of ¼-in. aluminum withstands abuse. Humphrey, Inc.

Circle 232 on reader service card

**Flashing retainers.** Describes and illustrates flashing retainers, Windlok clips, systems for stucco, concrete, and masonry, and company's original reglet. Discusses custom service for unusual reglet configurations. Fry Reglet Corp. *Circle 233 on reader service card*  Variations on the theme. Symmetrical styling on alcon's heavy-duty and standard-duty locks reflect your changing needs and our continuing quality.

(R): X series, M4000 series, S series

No. 323, on Reader Service Card

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Rate between any two of Delta's domestic cities is \$30 (\$25 between Dallas/Ft.Worth and Los 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).

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#### **Building materials**

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

#### The Biltmore Hotel, Los Angeles (p. 66).

Architects: Ridgway Ltd. (Gene Summers and Phyllis Lambert, copartners). Artwork framing: Art Services. Wall friezes and special mirrors: Admont Plastics. Bathroom tile: Razook Tile. Bedframes: Bedline. Bedspreads: Paul Kaiser Association. Carpets: Patrick Carpet Mills; corridors: Philadelphia Carpet Mills; rooms Criteria Carpet Mills. Casegoods: Belvedere Products Inc. Chairs: Chaircraft Inc. Drapery fabrication: Aer-O-Lite Draperies Inc., Decor Draperies. Elevators: Westinghouse Elevator. Lamps: London Lamps. Lavatories, toilets: American-Standard. Linen and pillows, shower curtains: James G. Hardy. Lounge chairs and sofas: Republic Furniture Mfg. Mattresses: Health Rest, Serta Bedding of S.Cal. Paint: Sinclair Paints. Planters and wastebaskets: Glass Form. Special lights: Lightolier. Suite side chairs: Knoll. Table bases: L & B Mfg.

#### Rosenberg Building, Galveston (p. 72).

Architects: Taft Associates, Houston. Existing brick walls, wood framing, cast-iron storefronts. Paint: Pittsburgh Paint. Kitchens: Dwyer. Lighting fixtures: Prescolite, Swivelier. Plumbing fixtures: American-Standard. Individual airconditioning units: Carrier.

#### 213-215 Tremont St., Galveston (p. 74).

Architects: Taft Associates, Houston. Existing brick walls, wood framing, cast iron; restoration of some cast-iron portions in concrete. Paint: Cook. Intercom: NuTone. Greenhouse components: Janco. Track lighting: Lightolier. Recessed can lighting: Prescolite. Plumbing fixtures: American-Standard. Sprinklers in atrium: National. Air conditioning: Fedders.

Piazza d'Italia, New Orleans (p. 81). Architects: August Perez & Associates, New Orleans. Fountain design: Urban Innovations Group, Los Angeles. Polished stainless steel wall surfacing: Holzer Sheet Metal Co. Reflective tile: G. Appiani, from Architectural Stone. Verde alpi marble, sierra chica granite: Architectural Stone. Cobblestones: New Orleans Dept. of Streets. Pennsylvania black slate, Carrara marble: Architectural Stone. Exterior paint: Devoe. Fountain equipment: Kim Lighting, Inc. Sign lights: Columbia. Custom neon: Industrial Sign Co. Electric distribution: Square D Co. Drains: Josam Manufacturing Co. Sump pumps: Hydromatic. Ceiling heaters: Chromalox. Nozzles and pumps: City of Industry.

#### New Mexico Union, Albuquerque, NM (p. 92).

Architect: Antoine Predock, Albuquerque. Poured concrete footings: Ideal Cement. Exterior stucco, gypsum board: U.S.G. Gypsum board texture: Triko-Plex. VAT: Flintkote. Roofing: Johns-Manville. Steel studs: U.S.G. Aluminum storefront windows and doors: PPG. Hardware: Sargent, Norton, Stanley. Paint: Wellborn Mfg. Co. Lighting: Lightolier. Plumbing, sanitary: American Standard. Heating, air conditioning: Trane.



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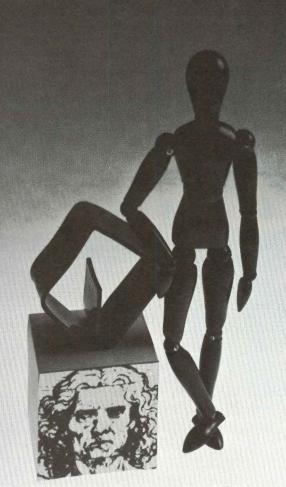
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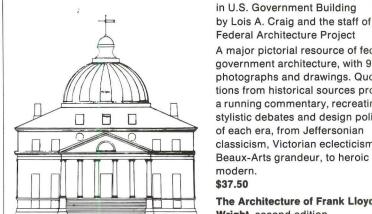
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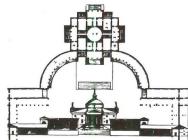
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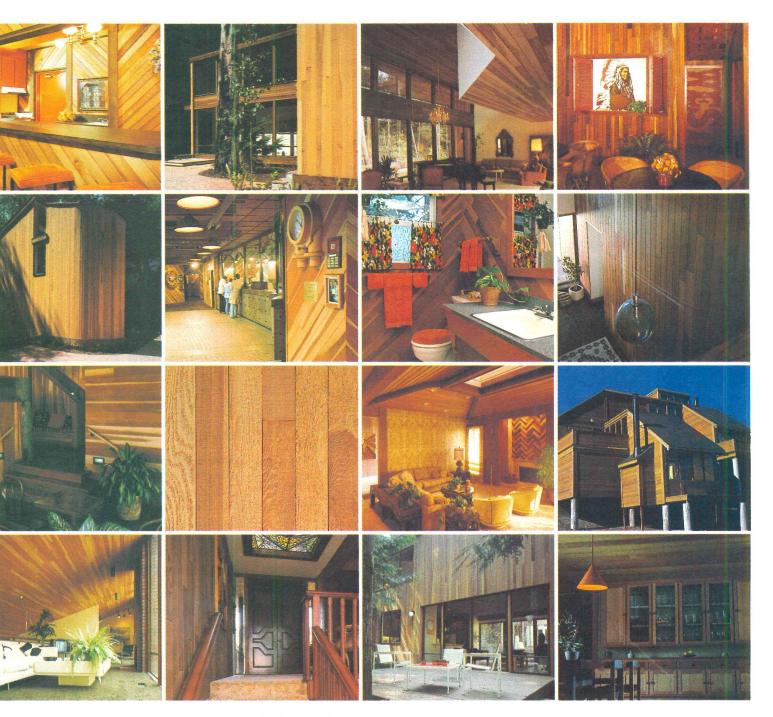
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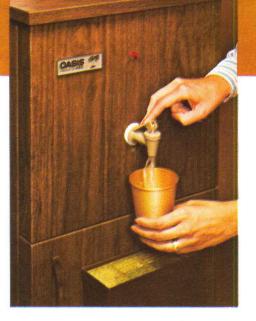
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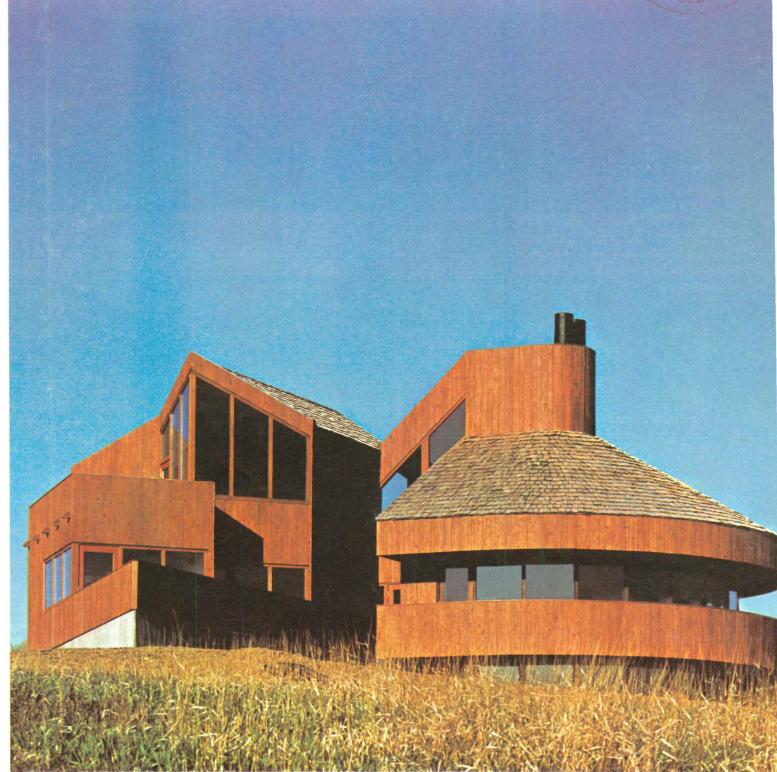
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