

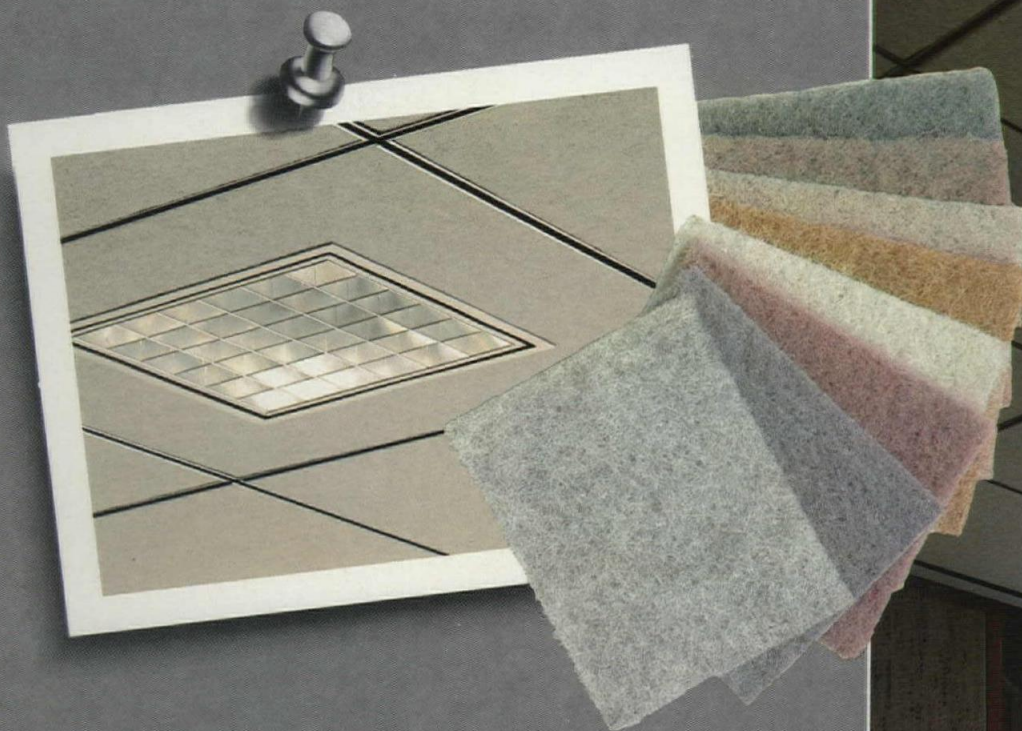
# Progressive Architecture

December 1982





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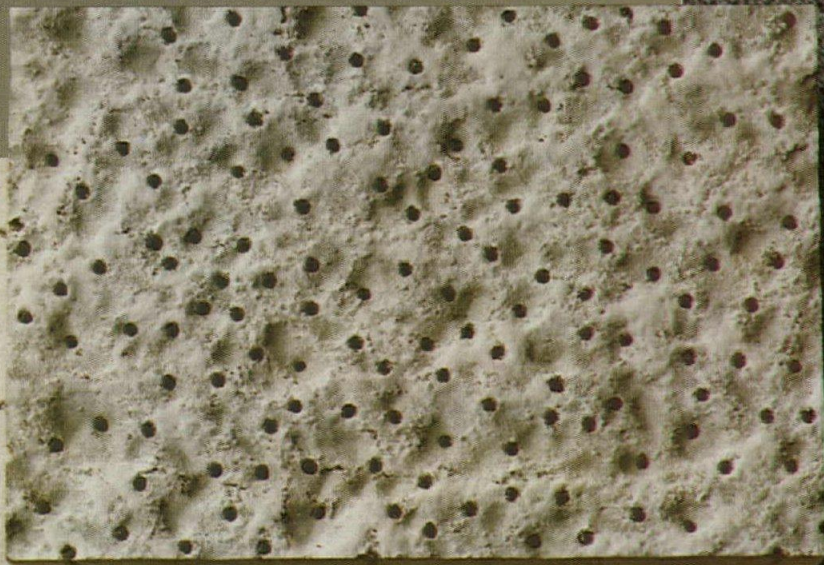








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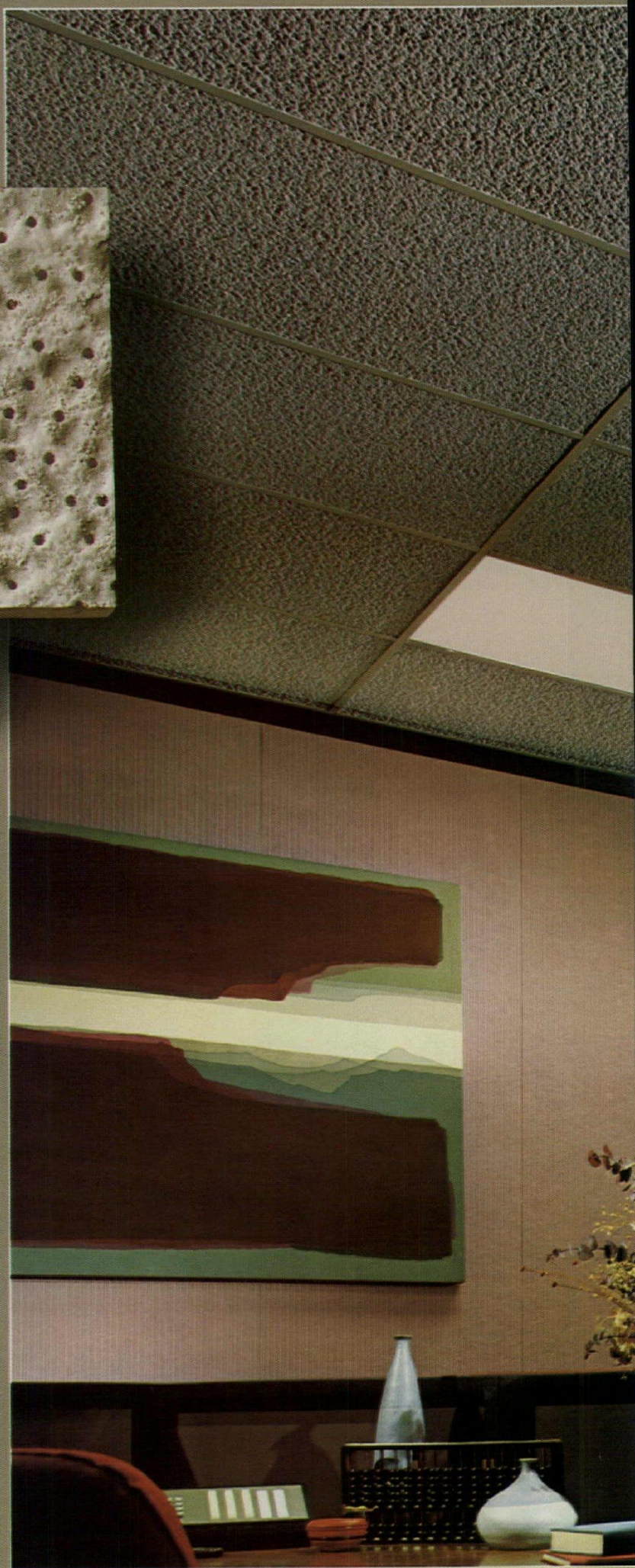
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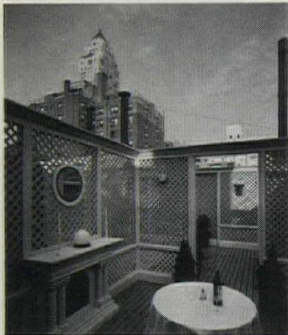




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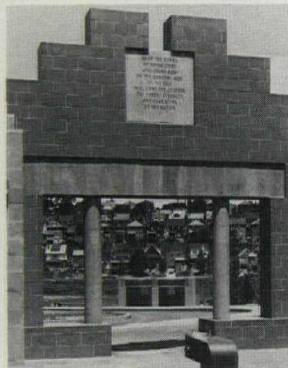
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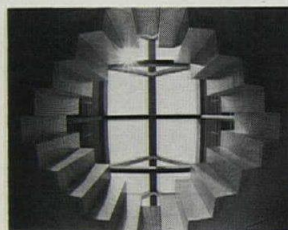
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ADP MPA



# The architecture market

**Preparing an issue that includes a section on 'money and design,' along with diverse examples of built work, prompts some thoughts about architectural supply and demand.**

There is an art market, a grain market, and a stock market, but no organized trading in architecture. What do people get when they invest in architecture—when they spend more on buildings than it would take to get mere shelter? They may get a place that functions better than a mere replication of the simplest known model, an extra increment of material or aesthetic richness, or all of the above.

It's easier to say where the money goes when one invests in architecture: partly into better spaces, materials, and equipment—partly into superior design services. It's hard to imagine investing in one of these areas without the other—to do so would be poor economics and probably poor architecture as well.

The demand for architecture does not quite coincide with the demand for building. Most warehouses, for instance, involve hardly any architectural investment; so, sadly, do most single-family houses. The more special or intricate a building's program, the more architectural services must be bought—as a bare minimum—even before one considers exceptional quality.

Look at the buildings in this issue: a chic restaurant on a priceless piece of real estate is seen—in this case, at least—as demanding exceptional architecture; an outdoor recreation facility is given character considerably beyond the prescriptions of Architectural Graphic Standards; and so on.

While all of the above assumes that the products of the profession are buildings for use, there is another set of products of relatively little monetary value—the ideas embodied in books, magazines, drawings, lectures, etc., which can be labeled "cultural capital." This part of the architectural output is related to that of the "fine" arts, a similarity made more apparent by the current boom in sales of architectural drawings through galleries.

A look at the fine arts marketplace can shed some light on the demand for architecture. There is, at base, no real need for fine arts; the demand for them is strongly influenced by supplies. The arts are not promoted quite so crassly as consumption of designer jeans or skimobiles, but the process is related. Demand for paintings, ballet, or chamber music depends heavily on the supply of critically approved products. While the demand for architecture is affected by this kind of feedback process, architecture must respond to a much larger underlying demand generated by the changing needs of society.

Historically, it is easy to spot times and places where the demand for architecture—as against mere building—was high. That was obviously true of Imperial Rome, for instance, and for Baroque Rome, where the

clientele may have been even more discerning. In the latter case, it is notable that much of the work of the best architects involved fragments—chapels, façades, domes, stairways. The need was not for building so much as for upgrading the architecture of structures that already existed.

In the expansion of 19th-Century cities, by contrast, a prodigious amount of building was done by replicating a few serviceable models, with vernacular variations. It took a few decades of this physical expansion—in America, at least—before a demand for architectural quality and professional expertise to meet it developed concurrently. A lot of naïvely bombastic public monuments went up before the likes of Richardson, Sullivan, McKim, or Goodhue set higher standards in the market.

The collection of essays on Money and Design in this issue, and the thoughtful introduction to them by Technics Editor Tom Fisher (p. 57), do not dwell on parallels in history and fine arts. They deal—as they should—with how the architecture profession should proceed now, with so many attractive alternatives competing for the buyer's dollar. Now that these articles have been assembled, it is obvious that they are based on one kind of cultural capital: architectural research. The authorities we tapped to write on the subject are, not surprisingly, heavily involved in research. What they write is challenging and constructive in itself, but it is technical and management oriented. They do not examine the subjective factors in this market. Why, for instance, does a corporation such as AT&T or a developer such as Gerald Hines make exceptional investments in fine materials and high-powered designers when serviceable office space can be more cheaply obtained? The motivations, though hard to pin down, are related to those that elevated Baroque churches from mere auditoriums to wonders of space and surface. Architects can—and should—offer all manner of practical services that contribute to the physical environment, but also nurture a demand for the art that is embodied in any real architecture.

*John Morris Diefen*



# Views

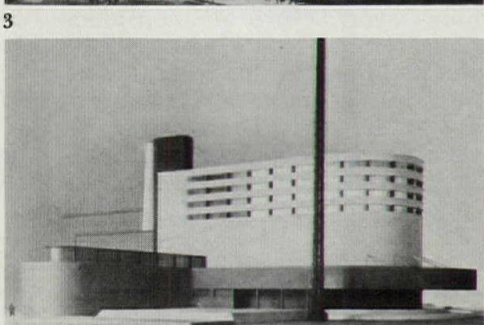
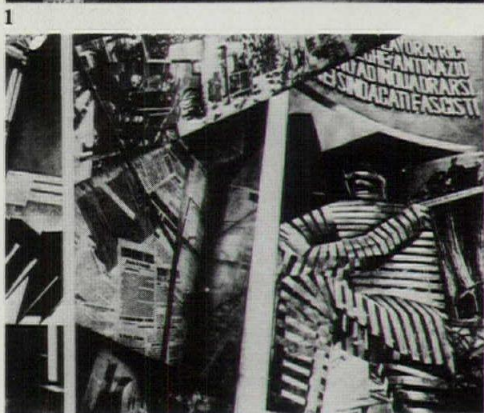
## Fascist Architecture and Fascist Italy

It is always gratifying for a historian to have his interpretation of a period confirmed by somebody who lived through those times. I was very pleased, then, to read Giorgio Cavaglieri's response (*P/A*, Nov. 1982, p. 10) to my article (*P/A*, Sept. 1982, p. 71) on Giovanni Muzio and the Milanese Novecento. I must take issue, though, with Cavaglieri's simple equation linking Novecento architecture with Fascism and Rationalist architecture with left-wing politics. First, it is not clear that the domination of the post-World War I housing boom in Milan by the Novecento style would not have occurred under *any* government. The issues here seem to relate more to psychological needs that manifested themselves throughout Europe as a "return to order" than to any particular political ideology.

If, on the other hand, one turns to buildings expressly commissioned to glorify the Fascist regime, then one is left no choice but to consider the major realizations of the young Rationalists. At the Second Exhibition of Italian Rationalist Architecture in Rome (1931), the architects issued their famous manifesto identifying their movement with the Fascist revolution. In effect, here was a generation of young architects who saw their futures being consumed in paper projects. They complained that they were 50 in number who in the last four years had only built four buildings. The upper classes were not giving them commissions in the private sector. The government, though, was engaged in an enormous program of public works. While it is difficult to ascertain what Fascism meant to the young Rationalists in the political sense, it is easy to comprehend the human issue of wanting to be productive.

The Rationalists' bid for commissions from the government won a limited victory. This is largely because Mussolini presented Fascism as a Janus-headed hybrid. On the one hand, Fascism was portrayed as a progressive social force that was modernizing Italy. To convey this message, Mussolini accepted and even promoted Modern, i.e., Rationalist, architecture. On the other hand, Fascism was portrayed as the inheritor of ancient Roman imperialism. Here, Mussolini promoted a comparable architecture whose most famous designer was Marcello Piacentini.

To the Rationalists, then, went the commission to design the exhibition in 1932 commemorating the tenth anniversary of Mussolini's March on Rome. Adalberto Libera, secretary and prime mover of the Rationalist movement at that time, along with Mario De Renzi, designed a heroic, militaristic façade for the exhibition hall with four giant, metal fasces nearly 40 meters high rising in front of the equally severe en-



trance (1). Contemporary photos showing armed soldiers aligned with these oversized pylons reveal how well matched they were with the architecture. In the interior, Giuseppe Terragni was responsible for the design of the *Sala del '22*, where he employed an exuberant Futurist aesthetic to convey the dynamism of the Fascist cause (2).

Terragni's own famous Casa del Fascio in Como (1932-1936) was just as militaristic in its aspect as the Libera/De Renzi exhibition hall. Terragni's façade presented an abstracted grid of the traditional ancient Roman military encampment (an appropriate image for Como, which to this day bears the clear imprint of its Roman heritage). Thus, the building's meaning could be conveyed without its never-to-be-executed decorative program glorifying Il Duce on the front façade (3). One can still imagine the 16 glass doors opening simultaneously as the Fascist cadres marched out of the central atrium to mix with the cheering crowds on the piazza outside.

To say that the Rationalists helped to glorify the Fascist regime, though, is to raise more questions than it answers. How did the free, democratic West, for example, regard Fascism in the early 1930s? In 1933, on the occasion of the Chicago World's Fair, whose theme was "A Century of Progress," a fleet of seaplanes flew from Italy under military command. The Italian aviators were greeted by officials when they paused in England and Iceland, only to be feted by the large Italo-American community upon their arrival in Chicago. The Italian exhibition pavilion, designed by Libera and De Renzi in collaboration with Valente, echoed the form of the seaplane, that hybrid between ship and airplane which symbolized both Italian technological achievement and military prowess (4). This favorable reception was not an isolated incident. One has only to remember the full-page editorial "Open letter to Mussolini" in the avant-garde *L'Architecture d'Aujourd'hui* (Oct.-Nov. 1933), which challenged Mussolini to embrace Rationalism, rather than a pompous, academic style, as the architecture for Fascism.

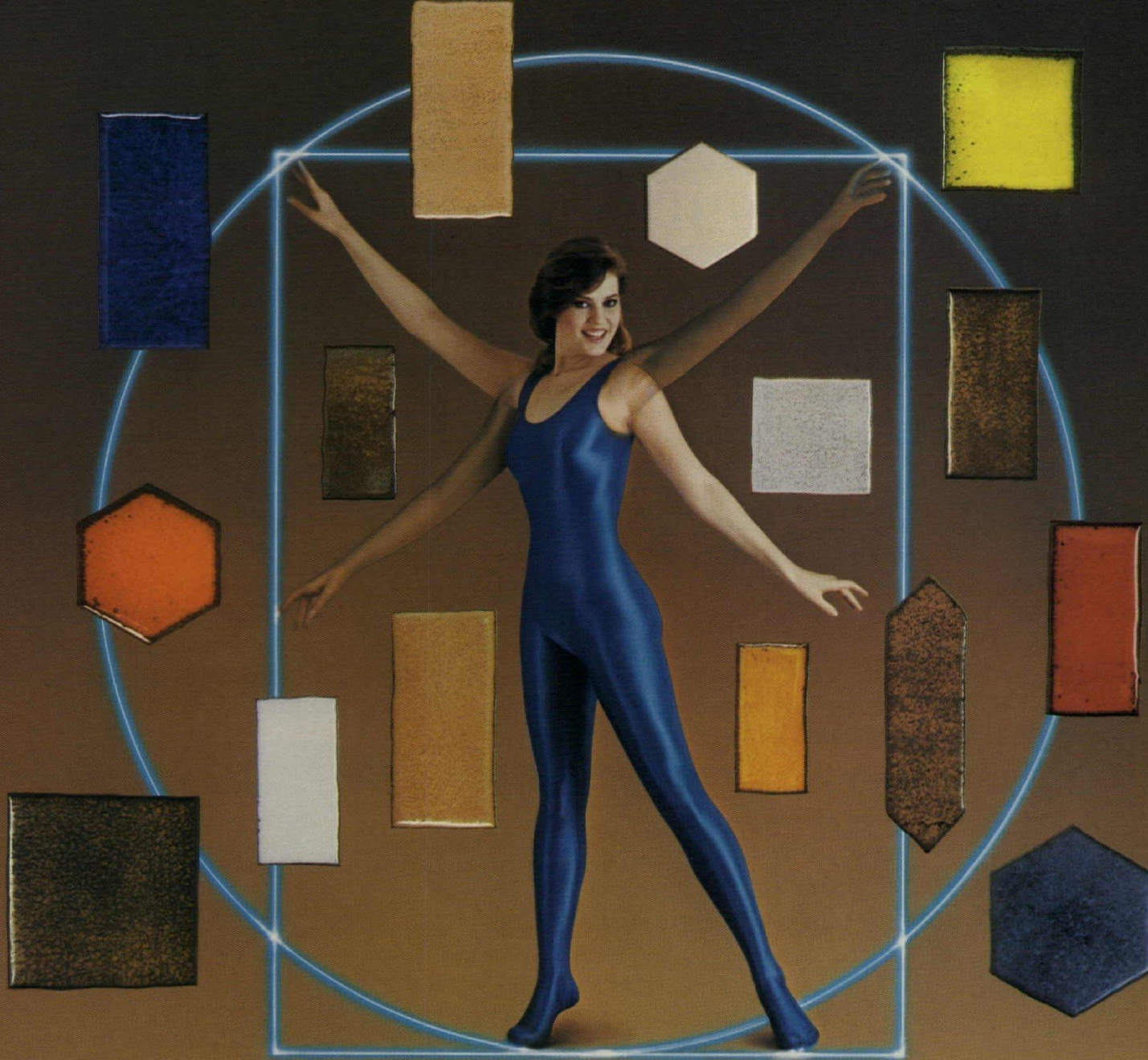
If Rationalists such as Libera and Terragni were enthusiastically and repeatedly glorifying Italian Fascism through their public architecture, what did this mean to them in a private sense? Once again, the answers are not easy to find. When Gropius was obliged to leave Nazi Germany, he was honored at a dinner given by the Italian Rationalists. Libera rose to speak. Having spent his childhood near Trento, he was able to address Gropius in his own tongue. According to a contemporary account, the Italians present, who could not understand a word of German, were virtually moved to tears by Libera's very voice.

My anecdote for Terragni is not as pleasant. In his preface to *Nuova Architettura del Mondo* (1938), Agnoldomenico Pica, Rationalist architect and self-appointed chronicler of the movement, credited Giuseppe Pagano with the first Italian Rationalist building. Reading this account in *Casa d'Oggi*, Alberto Sartoris wrote to Terragni on Aug. 13, 1938, urging him to assert publicly their primacy over such "Palestinian precursors." On Aug. 19 Terragni drafted a letter to the virulently anti-Semitic *Casa d'Oggi* to proclaim that he and the other members of the Gruppo 7 had initiated Modern architecture in Italy "before the names of Pagano-Pogatschnig and [his partner] Levi-Montalcini" were heard from.

Yet, when Terragni went to the Russian Front to experience the realities of the Fascist militaristic ideology his architecture glorified, he returned a victim of his own delusions. Terragni was brought back to Italy in an ambulance train not with any physical wound, but with a broken psyche. He had been devastated by the destruction of modern warfare in which he was actively engaged. During his convalescence, he asked forgiveness of Lingeri, since Lingeri had given his son "a killer" for a

[Views continued on page 12]





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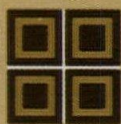
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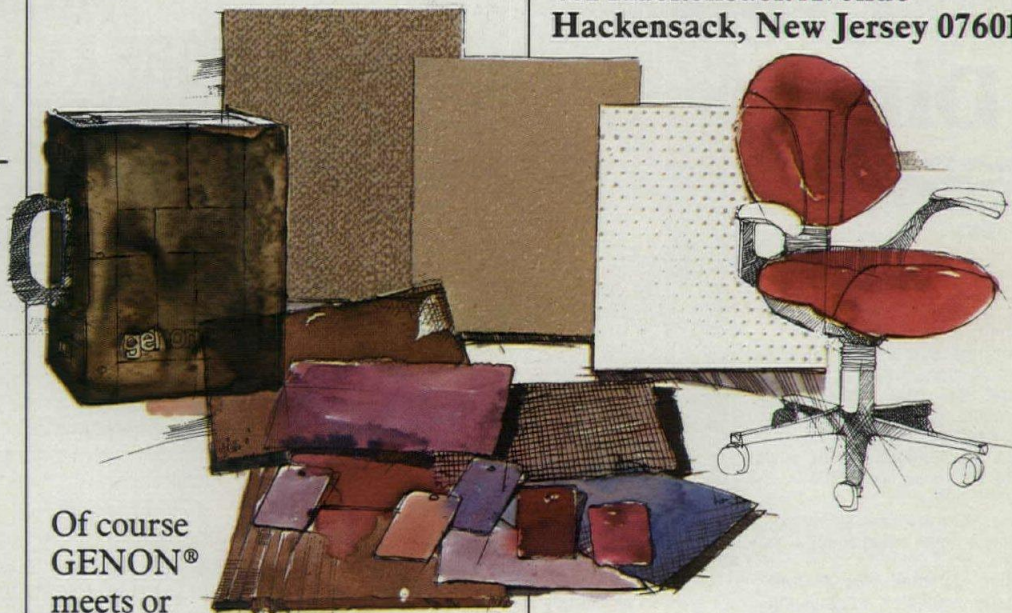
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godfather. Terragni died during this period of intended recuperation at the age of thirty-nine.

One is certainly free to raise the issue of Fascism with respect to Italian architecture between the two World Wars. It is, however, not a tale that can be encapsulated by simple phrases. Rather, it concerns the drama of numerous lives filled with tragedy and pathos.

*Richard A. Etlin*

*University of Maryland  
College Park, Md*

#### Mission metal

I am hesitant to defend David Ireland (P/A, Aug. 1982), but I would like to reply to Laszlo Papp's letter criticizing his house (Oct. 1982). I live in the same neighborhood (San Francisco's Mission District) as Ireland's "corrugated metal castle," and find his house quite appropriate, if unlovely. I have been in the Ireland house, and walked by it many times. Mr. Papp should add similar experience to dilute his theoretical diatribe. The house is located in an older mixed industrial, residential, and commercial area where corrugated metal walls do not stand out. Galvanized corrugated metal is an honest material, and traditional in the American vernacular, especially for roofing in snowy and rainy areas. The material is resistant to graffiti, a serious problem in an area where

Latino youth gangs mark their territory with spray paint. The metal rolling "warehouse" doors are also appropriate where window-breaking by vandals is common. In fact, when a new business puts roller doors up, we take it as a sign that they are here to stay. The Mission is under pressure from several directions, and Mr. Ireland's house is an appropriate response to those pressures.

Mr. Papp objects to Mr. Ireland being credited as an "architect"; but it seems fruitless to begin again the old arguments about who is and is not one. Mr. Ireland's house is an honest and strong statement; architects should be capable of learning from artists who build houses.

*Marc Brenman*

*Capponi and Brenman  
San Francisco, Ca*

[P/A erred in identifying Ireland as an architect in its Data list. The article itself spelled out his background in art and design.—Editors]

#### Credit extended

The article "Parts of the sum" (Sept. 1982, p. 212) should have credited Keith Goddard for the etched-glass design on the window designed by Stuart Wrede. We regret the omission.

Architects for the Independence IV Potter Residence (News Report, Passive Solar Awards, Oct. 1982, p. 28) were Acorn Structures and MassDesign Architects of Concord, Ma.

#### Credit correction

Architect for the Botswana Technology Center, Gaborne, Botswana (News Report, Passive Solar Awards, Oct. 1982, p. 28) is T.E.A., Inc. (David Norris and Peter Temple)/Associates in Rural Development, Inc., Harrisville, NH.

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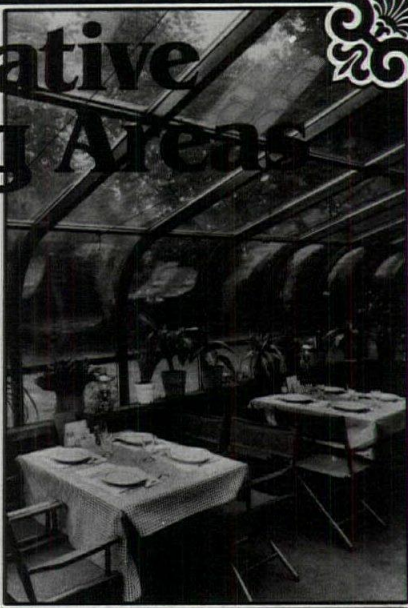
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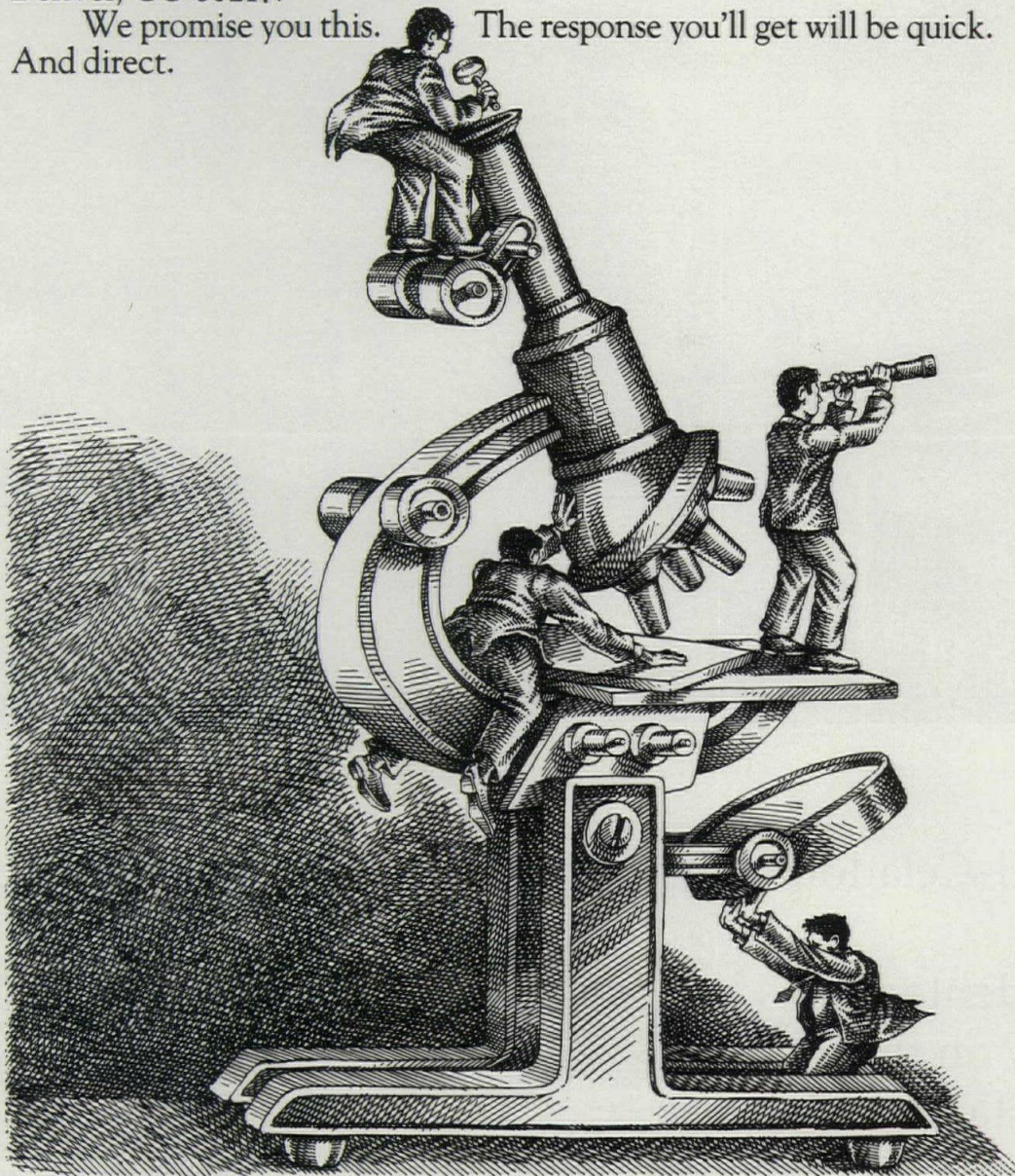
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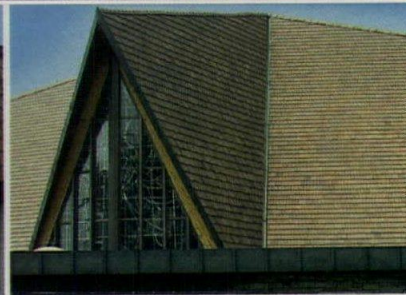
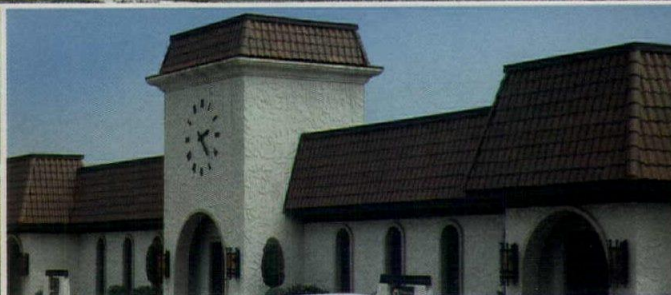
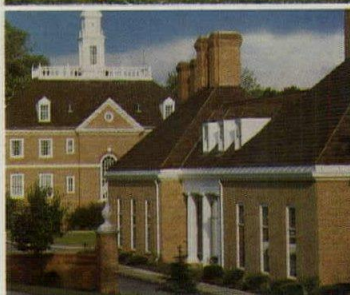
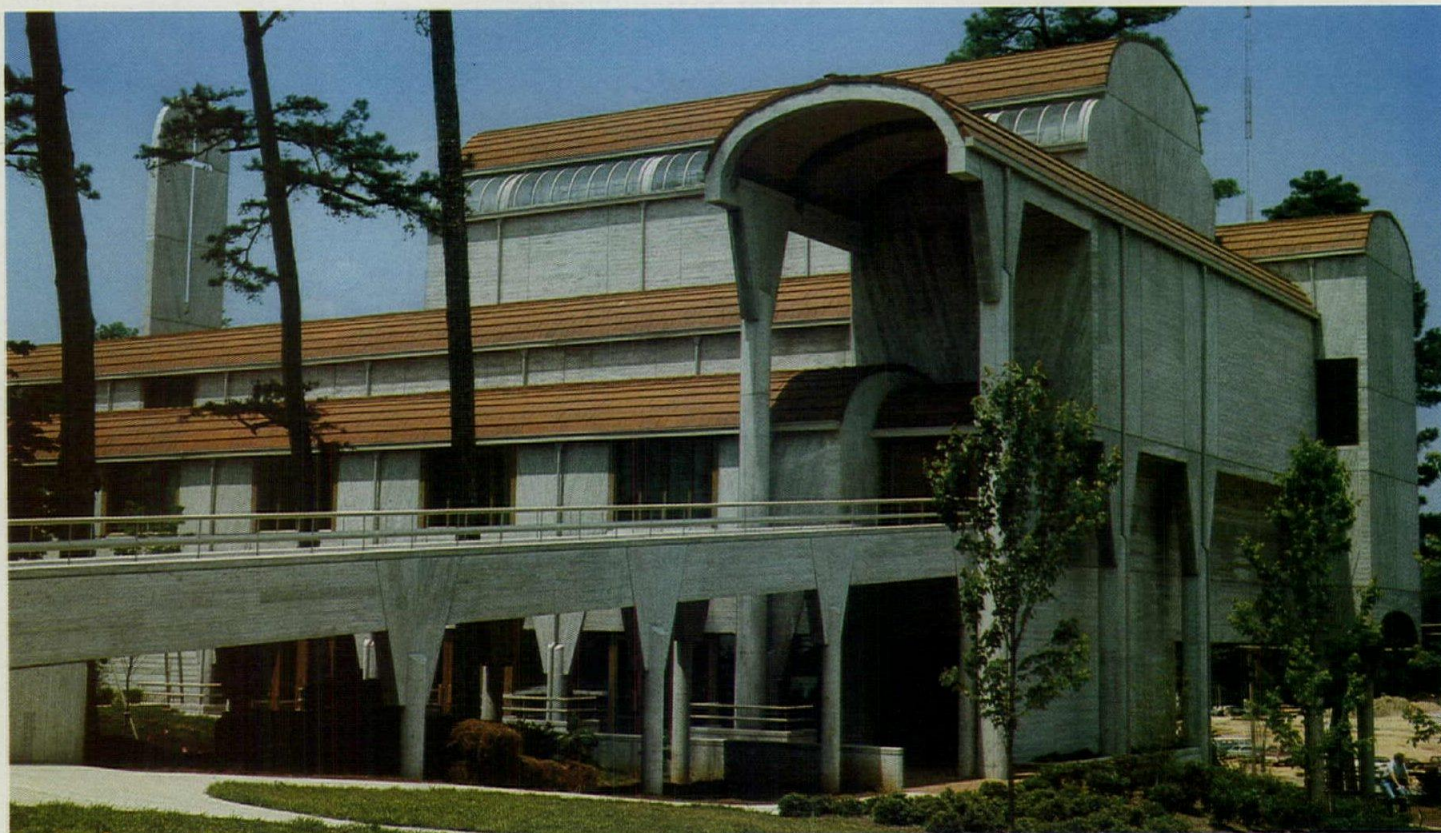


Photo: Chuck Kottal

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Progressive Architecture announces the third annual competition recognizing outstanding furniture and lighting design proposals, not yet being marketed by any manufacturer as of entry deadline, January 26, 1983. The competition is intended to give the design professions a forum to express ideas about the next generation of furniture design, at a time when architects and designers are increasingly custom-designing furniture for their projects and manufacturers are increasingly open to fresh ideas. The competition is specifically aimed at furniture intended for use, but the design need not be constrained by existing production or marketing practices. Entries may be based on either fabricated pieces or project drawings. Designers are encouraged to consider the aesthetic and ideological implications for furniture design implied by the current concerns within architecture and other design disciplines.

Winning projects will be published in the May 1983 P/A, and they will be displayed at NEOCON 15, the National Exposition of Contract Interior Furnishings, at Chicago's Merchandise Mart, June 1983. Awards will be presented to the winners in an evening program in early March attended by press, designers, and NEOCON manufacturers.

In addition to the exposure afforded the submissions, the competition will encourage further discourse between the entrants and respected furniture producers. Any ongoing discussions will, of course, be up to the individual designers and manufacturers, but benefit to both is anticipated.

The jury for this competition:

**Kenneth Frampton**, Professor of Architecture, Columbia University; Fellow of the Institute for Architecture and Urban Studies; an editor of *Oppositions*; and author of *Modern Architecture: A Critical History*.

**Frank Gehry**, FAIA, president, Frank O. Gehry & Associates, Venice, California; furniture designer.

**Arata Isozaki**, principle, Arata Isozaki & Associates, Tokyo; furniture designer.

**Rodolfo Machado**, Partner, Machado-Silveti Architects, Boston; Head of Department of Architecture, Rhode Island School of Design; furniture designer.

**Michael McCoy**, Co-chairman, Design Department, Cranbrook Academy of Art, Bloomfield Hills, MI; partner in graphic, furniture, exhibition and interior design firm of McCoy & McCoy.

**Submissions** are invited in all categories including chairs, seating systems, sofas, tables, desks, work stations, storage systems, lighting, beds, and miscellaneous furniture pieces. Designations of award and citation may be made by the invited jury, based on overall excellence and advances in the art.

**Judging** will take place in New York City during the month of February. Winners will be honored in New York City at an

The Third Annual

# International Furniture Competition

sponsored by

# Progressive Architecture

with winning projects to be displayed at

# NEOCON 15

June 1983

The Merchandise Mart  
Chicago



awards dinner in early March. P/A will arrange for coverage of winning entries in national and local press.

#### Eligibility

1 Architects, interior designers, industrial designers, and design students from all countries may enter one or more submissions.

2 Design must be original. If found to be

substantially identical to any existing product design, entry will receive no recognition.

3 Designer may be under contract to or in negotiation with a manufacturer for this design, but design must not be available in the marketplace as of entry deadline.

#### Publication agreement

4 If the submission should win, the

entrant agrees to make available further information, original drawings or model photographs as necessary, for publication in the May 1983 P/A and exhibition at NEOCON in Chicago.

5 P/A retains the rights to first publication of winning designs and exhibition of all entries. Designer retains rights to actual design.

6 P/A assumes no obligation for designer's rights. Concerned designers are advised to document their work (date and authorship) and seek counsel on pertinent copyright and patent protections.

## Entry form: International Furniture Competition

Please fill out all parts and submit, intact, with each entry (see paragraph 11 of instructions). Use typewriter, please. Copies of this form may be used.

Entrant:

Address:

Entrant phone number:

Category:

Entrant:

Address:

Designer(s) responsible for this submission (identify individual roles if appropriate):

I confirm that the attached entry meets eligibility requirements (paragraph 1-3) and that stipulations of publication agreement (paragraphs 4-6 will be met. I verify that the submission is entirely the work of those listed on this form (or an attached list as necessary).

Signature \_\_\_\_\_

Name (typed) \_\_\_\_\_

## Furniture Competition Progressive Architecture

P.O. Box 1361, Stamford, CT 06904

(Receipt)

Your submission has been received and assigned number:

Entrant:

Address:

Entrant:

Address:

#### Submission requirements

7 Submissions WILL NOT BE RETURNED.

8 Drawing(s) and/or model photo(s) of the design should be mounted *on one side only* of one 20" x 30" foamcore board presented horizontally. **ANY ENTRY NOT FOLLOWING THIS FORMAT WILL BE DISQUALIFIED.**

9 There are no limits to the number of illustrations mounted on the board, but all must be visible at once (no overlays to fold back). No actual models will be accepted. Only one design per board.

10 Each submission must include a 5" x 7" index card mounted on the front side of the board with the following information typed on it: intended dimensions of the piece of furniture, color(s), materials, components, brief description of important features, design assumptions, and intentions. This information is to be presented in English.

11 Each submission must be accompanied by an entry form, to be found on this page. Reproductions of this form are acceptable. All sections must be filled out (by typewriter, please). Insert entire form into unsealed envelope taped to the back of the submission board. P/A will seal stub of entry form in envelope before judging.

12 For purposes of jury procedures only, projects are to be assigned by the entrant to a category on the entry form. Please identify each entry as one of the following: Chair, Seating System, Sofa, Table, Desk, Work Station, Storage System, Lighting, Bed. If necessary, the category "Miscellaneous" may be designated.

13 Entry fee of \$25 must accompany each submission, inserted into unsealed envelope containing entry form (see 11 above). Make check or money order (no cash) payable to *Progressive Architecture*.

14 To maintain anonymity, no identification of the entrant may appear on any part of the submission, except on entry form. Designer should attach list of collaborators to be credited if necessary.

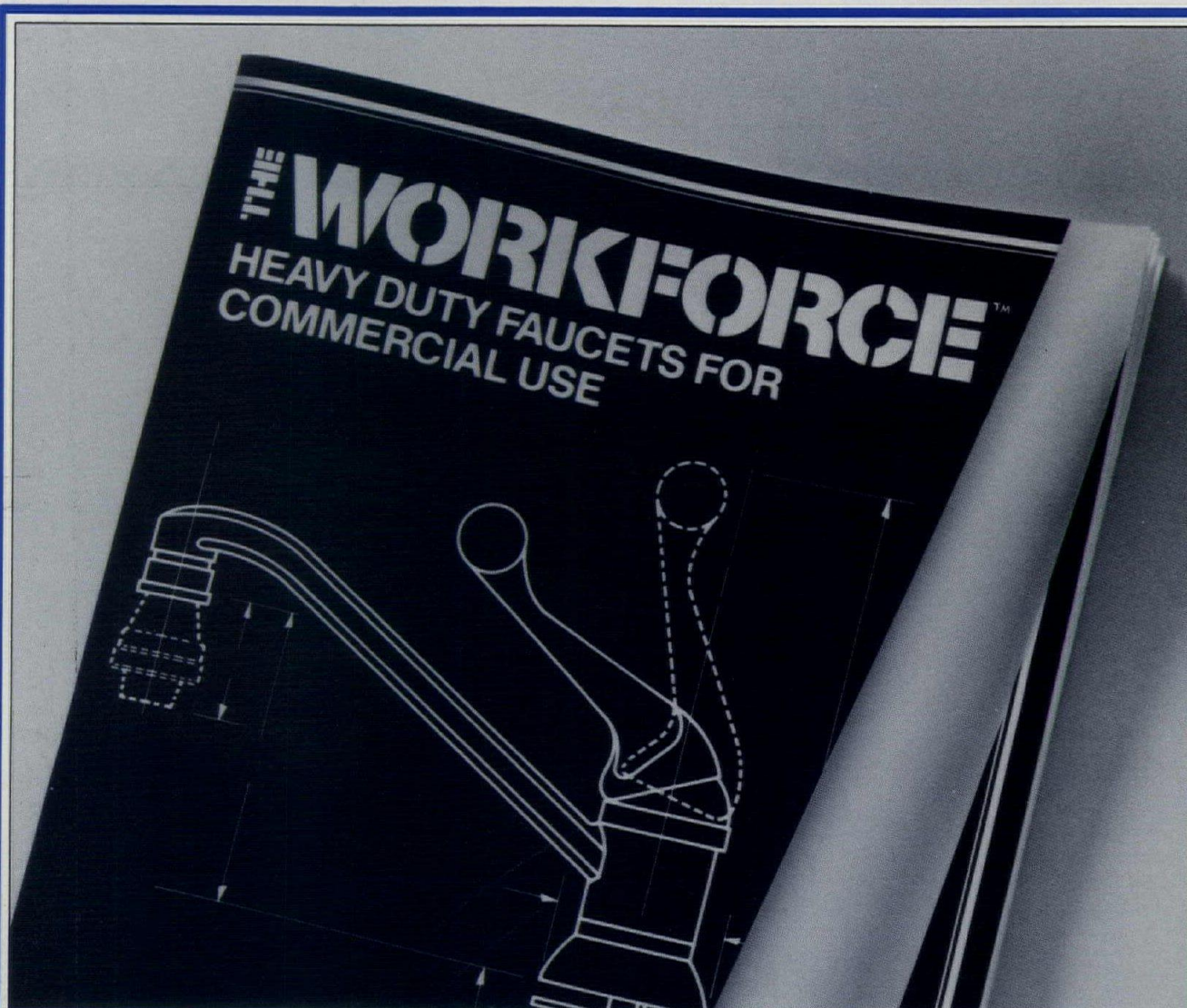
15 Packages can contain more than one entry; total number of boards must be indicated on front of package.

16 **Deadline for mailing** is January 26, 1983. Other methods of delivery are acceptable. Entries must show postmark or other evidence of being en route by deadline. Hand-delivered entries must be received at the address shown here by January 26.

**Address entries to:**  
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Progressive Architecture  
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P.O. Box 1361  
Stamford, CT 06904



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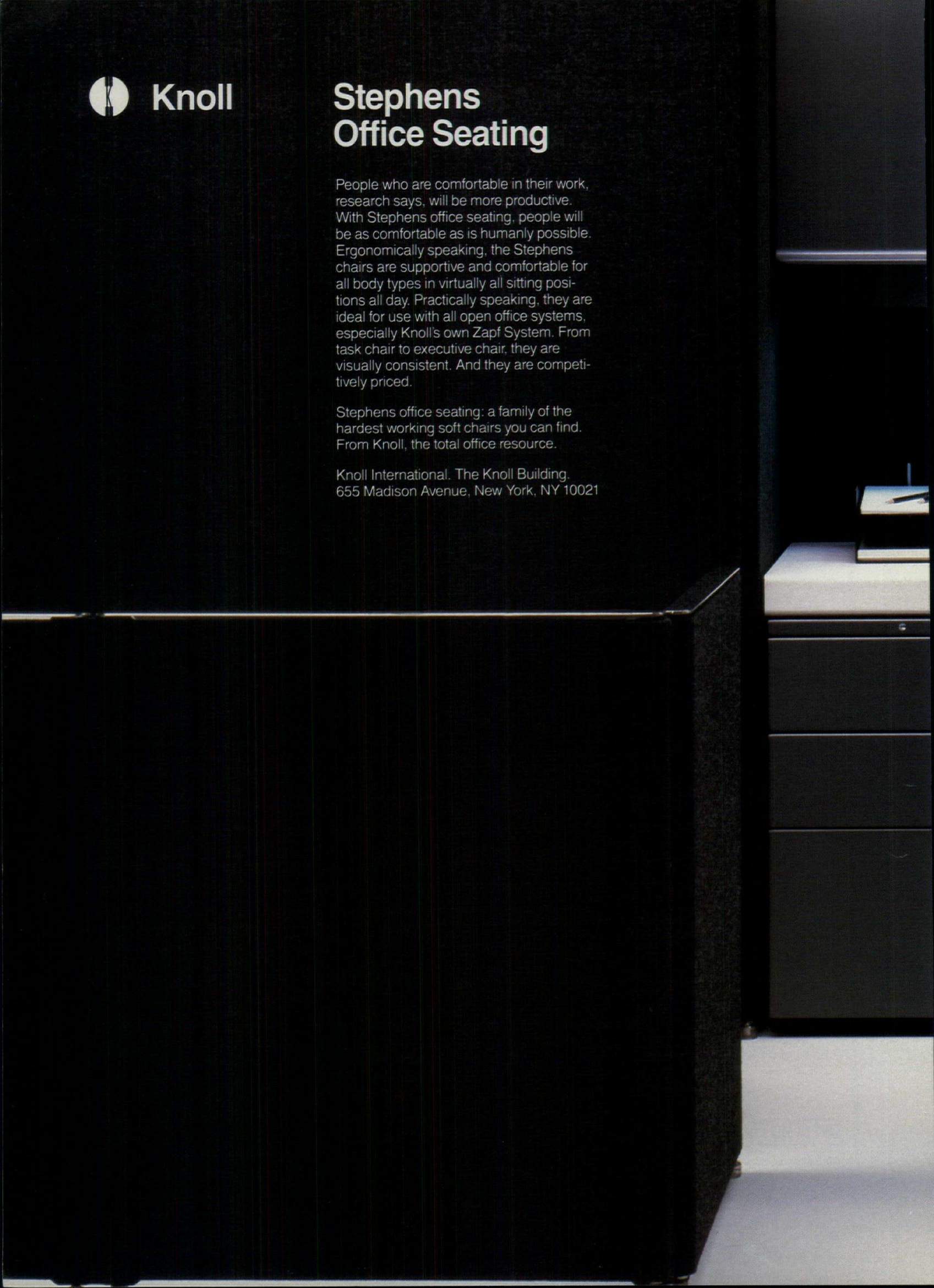
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## Pencil points

### Johnson, Aubry for Rice

The University of Houston recently announced that its College of Architecture, currently spread around the campus in several buildings, will have a new \$20 million 131,000 sq ft facility to be located at the northeastern edge of its urban campus, adjacent to the existing Fine Arts Building.

¶ Architects for the project: Philip Johnson and John Burgee Associates (specifically Philip Johnson) in a joint venture with Houston firm Morris/Aubry Architects (Gene Aubry being an alumnus of U of H).

¶ The selection of both parties was made by the University's Board of Regents, which specifically suggests equal design involvement for both firms.

### San Antonio chooses Moore

Charles Moore and his firm Moore Ruble Yudell (Santa Monica, Ca) have been selected to design a new College of Fine Art (the first independent college of fine arts in the Southwest) for the San Antonio Art Institute in Texas.

¶ The 40,000 sq ft building will be sited adjacent to the SAAI's 14,000-sq-ft existing facility on the grounds of the McNay Museum. From a field that included Venturi, Rauch & Scott Brown, Robert A.M. Stern Associates, and Taft Architects of Houston, the Moore firm was chosen because of its recent success in working with citizen groups and its known affinity for Spanish Colonial imagery.

### Lever landmarked

In early November, the New York Landmarks Preservation Commission voted unanimously to grant landmark status to the 30-year-old Lever House, making it the most contemporary landmark in the city.

¶ The owners of the SOM-designed building, have been sorely tempted of late to consider the redevelopment of its underutilized (by today's zoning and economic standards) midtown site.

### Cranbrook restoration

In late October, ceremonies were held to dedicate the recently completed restoration of the Cranbrook School Quadrangle.

¶ As money becomes available, the Cranbrook alumni council plans to restore the whole campus, designed in 1927 by Eliel Saarinen and now listed in the National Register of Historic Places.

¶ Architects for the restoration are TMP Associates.

### Designated but perhaps not saved

In August of this year, the Landmarks Preservation Commission designated the 1892 New York Architectural Terra Cotta Company Office in Queens as a landmark.

¶ The handsome two-story brick building possesses outstanding examples of early architectural terra cotta: its sign, its elaborate doorway details, the inset building date, and several fireplaces.

¶ Citibank, owner of the building and its two-acre site since 1971, is encouraging the Board of Estimates to overturn designa-

[Pencil points continued on page 36]

## PA News report



### Moore awarded Beverly Hills Civic Center

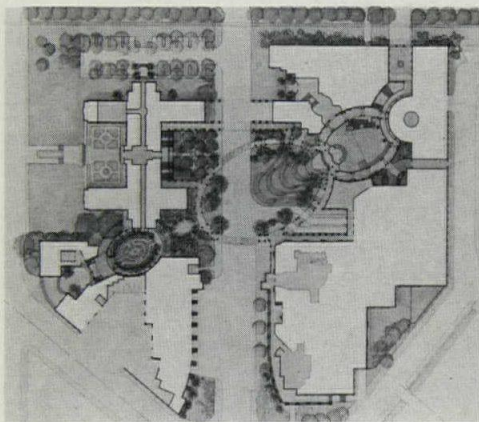
In mid-October, in the most prestigious competition to take place in Los Angeles since Bunker Hill, the architectural jury and city council of Beverly Hills unanimously selected Charles Moore/UIG to design an expanded civic center. The project will include new police headquarters, a new fire station, a community cultural resources center, and parking to serve the entire complex. The emphasis of the competition was on the planning of the complete site and the relationships within it.

The competition site, in the eastern section of Beverly Hills, is one of great civic prominence and sentimental value.

The focal point is the Spanish Baroque City Hall, with its formal gardens and blue-green tiled dome. Moore's scheme was the most successful because it responded positively to this building, enhancing it by placing it at the heart of an expanded Spanish/Moorish development.

Altogether, five firms competed for the prize: Eisenman Robertson of New York, Arthur Erickson of Canada (and Los Angeles), Frank Gehry of Los Angeles, Moshe Safdie of Boston, and Charles Moore of Los Angeles. The jury, led by professional advisor Donald Stasny, included M. Paul Friedberg, Esther McCoy, Daniel Solomon, Anthony Lumsden, and Richard Saul Wurman.





*Beverly Hills Civic Center site plan.*

While most of the architects made heroic efforts to solve the urban design problems involved in the expansion, Moore's scheme was unquestionably the most appropriate design, a fact conceded by even his most vocal detractors. His scheme was an attempt to weave new buildings with old, tying them together with a series of monumental civic spaces. He created a group of connected precast concrete buildings echoing the rhythms and materials of the city hall, and joining them together with a series of arcaded oval courtyards slicing diagonally across the site. The scheme was sensitive to the Angeleno tradition of secret outdoor rooms and the connections between inside and outside. It carefully considered both building and plant materials; and it was the most inexpensive of all schemes submitted. At long last, a major civic building has been awarded to a major local architect. [Barbara Goldstein]

## Philip Trammell Shutze: 1890-1982

On Oct. 17, 1982, Philip Trammell Shutze, recently called by Henry Hope Reed "America's greatest living Classical Architect," died at the age of 92 in Atlanta. Until the past summer, Shutze maintained one of the oldest and most creative practices in the Southeast. He began his career in the offices of Neal Reid in 1908, attended Georgia Tech's and Columbia University's School of Architecture, and won the Prix de Rome in 1915. When he returned from Rome he became a designer for Hentz, Reid & Adler, and upon Reid's death in 1926 the firm became Hentz, Adler & Shutze. From that time until the beginning of World War II, the firm generated a rich body of Classical work bearing Shutze's mark—mansions, banks, academic buildings, churches, synagogues, and department stores.

The rush to embrace the International Style after World War II rendered Philip Shutze's architecture unfashionable for 30 years, but the recent resurgence of interest in Classical forms redirected attention at the nearly forgotten Classicist and gave Shutze the opportunity to turn his rapier wit upon

the "trash" of the Modernists.

The essentially mannerist work of Philip Shutze—the outscaled scroll keystones and quoins of the C&S Bank, the sea shell water cascade on the axis of the Swan House, the drum lantern of the Temple Synagogue—provide an expression of humanity more explicit than the vocabulary of Modernism displayed upon the glass boxes of most other contemporary Atlanta structures, and his

buildings are likely to remain among the most memorable in the annals of Atlanta's 20th-Century architectural history. [Jon Carlsten]

## Italy in London

This past fall, London was enlivened with Italian design. First, Italian indus-



*Shutze's Swan House (top) and Academy of Medicine (above).*



trial design hit the West End with a new group showroom, I & L. Then art exhibitions opened at both the Institute of Contemporary Arts and the Hayward Gallery, organized by the City of Milan and the British Arts Council.

The works shown at the Hayward were selected by G. Ballo, R. Barilli, F. Caroli, V. Fagone, and R. Sanesi, and were divided into sections called Spatialism; From "Azzeramento" to "Modulazione oggettuale"; Kinetic Art to "Arte Programmata"; Object and Popular Image; Lyric Abstraction and New Abstraction; Conceptual Art and Poor Art; and New Tendency. Sculpture was spread throughout.

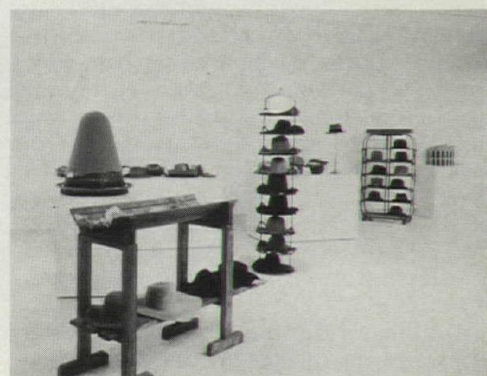
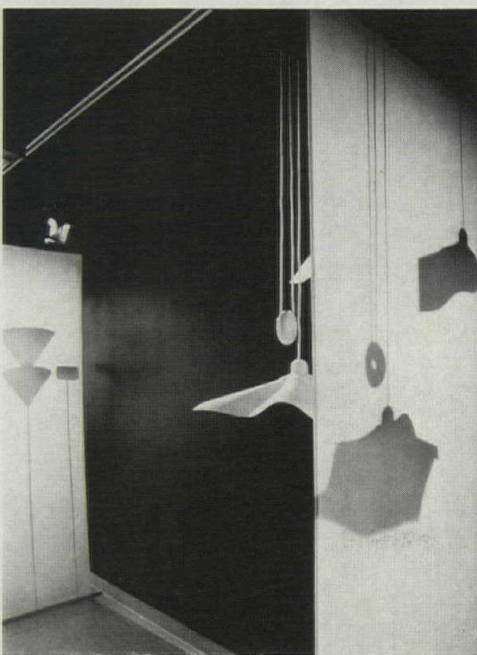
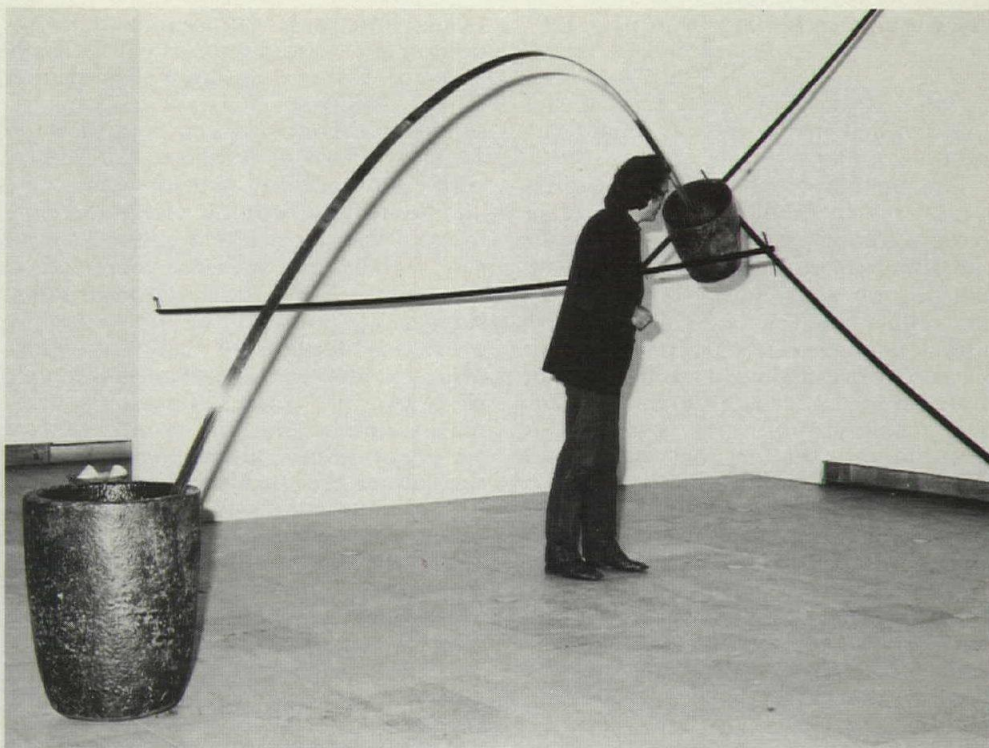
A great number of the artists featured at Hayward are veterans of Kassel and the Venice Biennale and are read as barometers of international art. Lucio Fontana and Piero Manzoni were honored as begetters of the breakaway in the 1960s. Works by both the Pomodoros were there, with models of Gio's architectural sculptures: his "plan for communal use" for Ales, Sardinia, 1977, is shown in the Abstraction group. Gilberto Zorio, one of the New Poor, is described in the catalog: "Zorio exemplifies . . . that there is a kind of short circuit between typical nomadic cultures, who live by gathering food, and our own . . . present day in which we have all become gatherers of electric information." In his "Crogiuoli," 1982, one pot containing cerulian liquid is joined to another holding turquoise and cerulian crystals. Gianni Colombo, who has recently broken away from his Gruppo T of the 1960s and has been creating "environments" to involve the visitor, is represented by his 1982 sculpture Entredit, which is bathed in lime-green light and dominates the Kinetic group.

This exhilarating exhibition confirms Caroline Tisdall's introduction to the show's catalog: "In art as in life, Italy, of all European countries, is still the most extreme, the most divided, and for that reason, probably the most alive."

[Monica Pidgeon]

## Italy in New York

"Precursors of Postmodernism: Milan 1920-1930s" opened at the Architectural League in New York on Nov. 4, and will run through Dec. 18. The exhibition of 75 black-and-white photographs by Gabriele Basilico, which was curated by Fulvio Irace, who also wrote the catalog, documents for the first time an important architectural movement that emerged in Milan after World War I. In the search for a "return to order," Novecento architects such as Giovanni Muzio (P/A, Sept. 1982, p. 71) and others looked to the Classical forms of the past. The images were rarely applied with strict adherence to earlier codes, however, but were integrated with other modes such as the Baroque, Secessionist, early 20th-Century Dutch, Modernist, Futurist, and De Chirican symbolism. It was an immensely rich



Italy in London: Zorio with his Crogiuoli (top); in New York: Muzio's 1922 "Ca' Brutta" detail (middle); in California: Italian lighting designs (left) and Borsalino hat "factory" (above).



period that was short-lived, but which is now recalled in this extraordinary collection of images.

The meaning of the exhibit for today is captured in Emilio Ambasz's preface to the accompanying catalog: "To us the phenomenon of these architects is interesting on many levels. Not only did they anticipate current concerns with history and bricolage, but also their methods foreshadowed some of our contemporaries' experiments. That their results still intrigue us today may be credited to the fact that their wager was placed on a conception of architecture as a magic theater, rather than as a treatise of wittily juxtaposed architectural references."

The exhibit, which is expected to travel, was made possible by a grant from Alessi. For further information, contact The Architectural League, 457 Madison Ave., New York, NY 10022. [DM]

## Italy in California

*Italian Re-Evolution: Design in the Eighties*, an exhibition of Italian design from 1945 to 1980, is currently on view at the San Francisco Museum of Modern Art after completing its opening run at the La Jolla Museum of Contemporary Art. The show, conceived by Sebastian J. Adler, director of the La Jolla Museum, was developed and organized by Piero Sartogo (of Sartogo Architects & Associates, Rome, and Design Collaborative, New York), with associate curator Nathalie Grenon, and assisted by an advisory committee including Bruno Zevi, Alessandro Mendini, Fabio Mauri, Gianpaolo Fabris, and industrialist Gianni Bulgari. The multimedia, multidisciplinary exhibition presents over 600 objects in the context of contemporary Italian daily life and mass culture, illustrating the relationship between the user and the used. Furniture, household items, cars, sporting goods, clothing, jewelry, and even foodstuffs are displayed against backgrounds that evoke the time and place in which they are used, focusing on a work day and a holiday. For example, the section on waking up includes alarm clocks, 17 different coffeemakers, cars and motorbikes, a Borsalino hat "factory," and 24 office chairs from different manufacturers. Background information and commentary offer a combination of critical/historical analysis of past design elements and projected research on future trends. Concurrently, a film program presents works by modern Italian masters such as Fellini, Antonioni, Pasolini, Bertolucci, and Visconti.

The 200-page catalog accompanying the exhibition is, according to Sartogo, meant to serve less as a guide to the show than as an independent document on design. It is indeed fascinating. With a foreword by Adler, an introduction by Sartogo, essays by Argan, Zevi, Pinin-

farina, and Fabris, and commentary by designers Castiglioni, Bellini, and Sottsass, fashion designer Gianfranco Ferre, composer Giancarlo Menotti, semiotician Umberto Eco, and director Francesco Rosi, to name a few, it is filled with photographs, statistics, analysis, and film clips running along the bottoms of the pages like a cultural newsreel. For anyone who has marveled at the ability of the Italians to turn out staggering numbers of new designs every year in the form of highly sophisticated prototypes, as well as their inability to produce these designs on a truly mass scale, the show offers not simply a history of design, but an examination of the culture that produced it.

The show will travel next to the Winnipeg Art Gallery (Feb. 25-April 15, 1983); the Dade County Center for Fine Art (June 16-Aug. 28); and the Wadsworth Atheneum, Hartford (Sept. 10-Oct. 30). [PV]

## Jahn and others in Houston

Author Larry McMurtry once observed that "best" was a designation Texans reserved for things of sentiment ("best little woman"), while "biggest" was for the really important things ("biggest deal"). Combining both attributes is the joint-venture development of Southwest Bancshares, Inc., and Century Development Corporation, designed by Helmut Jahn of the Chicago office Murphy/Jahn, with Lloyd Jones Brewer & Associates of Houston.

Houston's new Southwest Tower (P/A, Nov. 1982, p. 60) will be the tallest building west of the Mississippi, moving the skyline up to third place (for bigness) after New York and Chicago. These three "top" cities provided the architects competing for the plum project—Skidmore, Owings & Merrill of

Houston, Kohn Pedersen Fox of New York, and winner Chicagoan Jahn.

All three schemes reflect a rejection of the purist "box" skyscrapers of the 1950s, a movement perhaps initiated in part by Pennzoil Place in Houston (Johnson/Burgee with Morris/Aubry), and pushed full-throttle by Johnson/Burgee's AT&T in New York. SOM's design features an open space at its crown with observation levels, while the exotic KPF scheme places a "trellised" capital above a doubly rotated shaft.

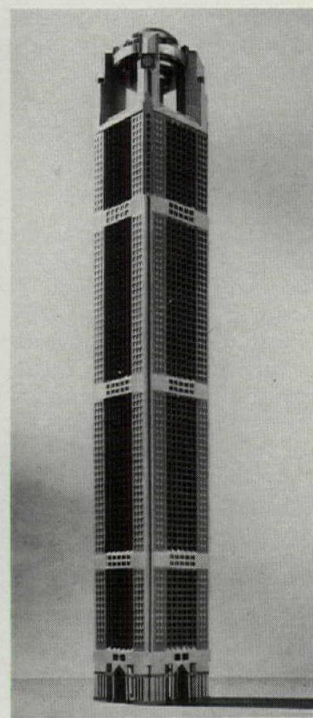
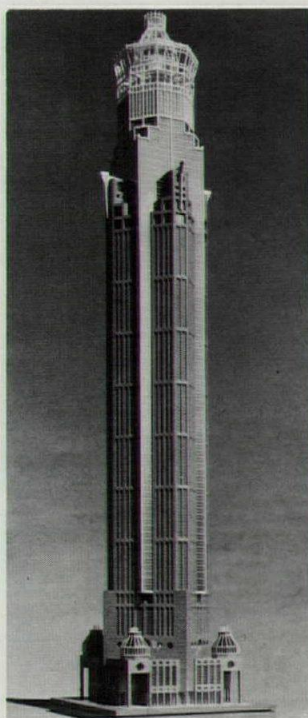
The Jahn proposal is an almost pure 1920s-style obelisk in profile, not unlike Minneapolis's Foshay Tower. Its engineering concept, developed by LeMessurier Associates/SCI of Boston and Walter P. Moore & Associates of Houston, provides for a column-free exterior generated by paired columns at the outer corners linked together by diagonals carrying all wind and gravity loads, allowing an 80-ft clear span. As the columns taper vertically, the shaft sets back in five sections.

At present, the projected \$400 million cost will yield 2,000,000 sq ft of space for office and retail, rising some 1400 ft in height. The base will contain retail spaces and public art displays, and will be connected to adjacent buildings at street and underground levels.

As the Jahn design evolves, one remaining issue is that of FAA approval for its height—about 40 stories seem to be under debate. As the design now stands, the Southwest Tower appears to be the proverbial phoenix, rising tall and striking above a rather languid economic scene. [Peter C. Papademetriou]

## Jahn at Yale

Faced with millions of square feet of space to be organized in a giant tower in [News report continued on page 28]



Tower designs by winner Murphy/Jahn (left), KPF (middle), and SOM (right).



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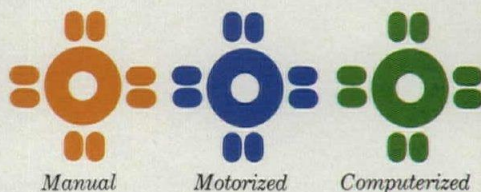
**18** ElectroShade® Systems are available with pre-programmed computerized controls to shade an entire facade automatically and adjust the height of the shade to the sun's angle.

**19** Our Technical Services Department and regional sales engineers offer you planning and cost benefit analysis.

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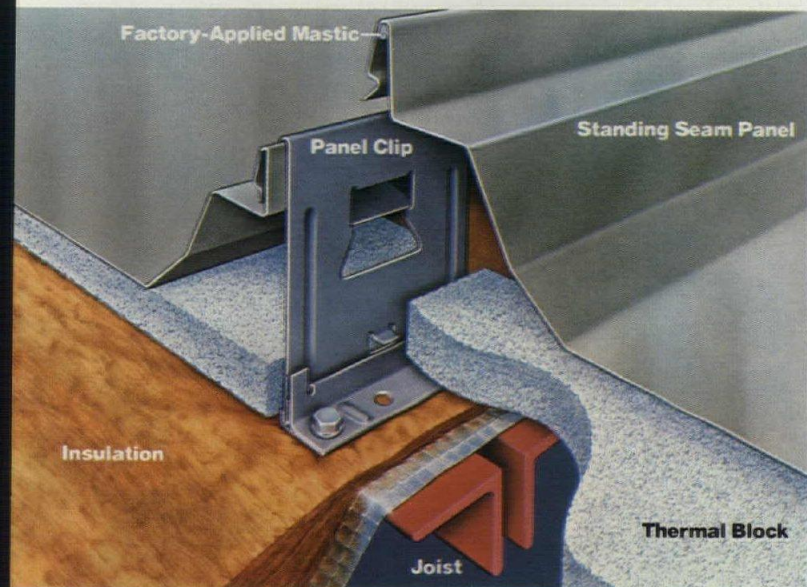


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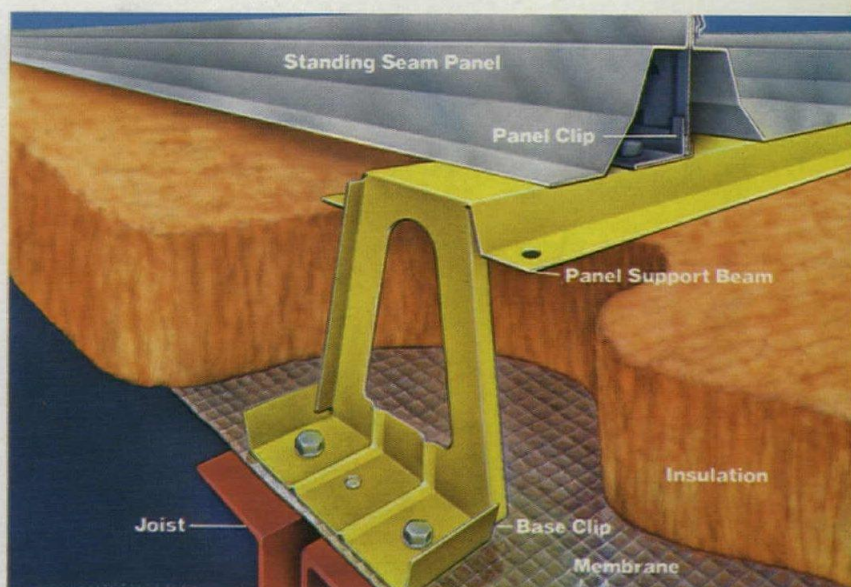
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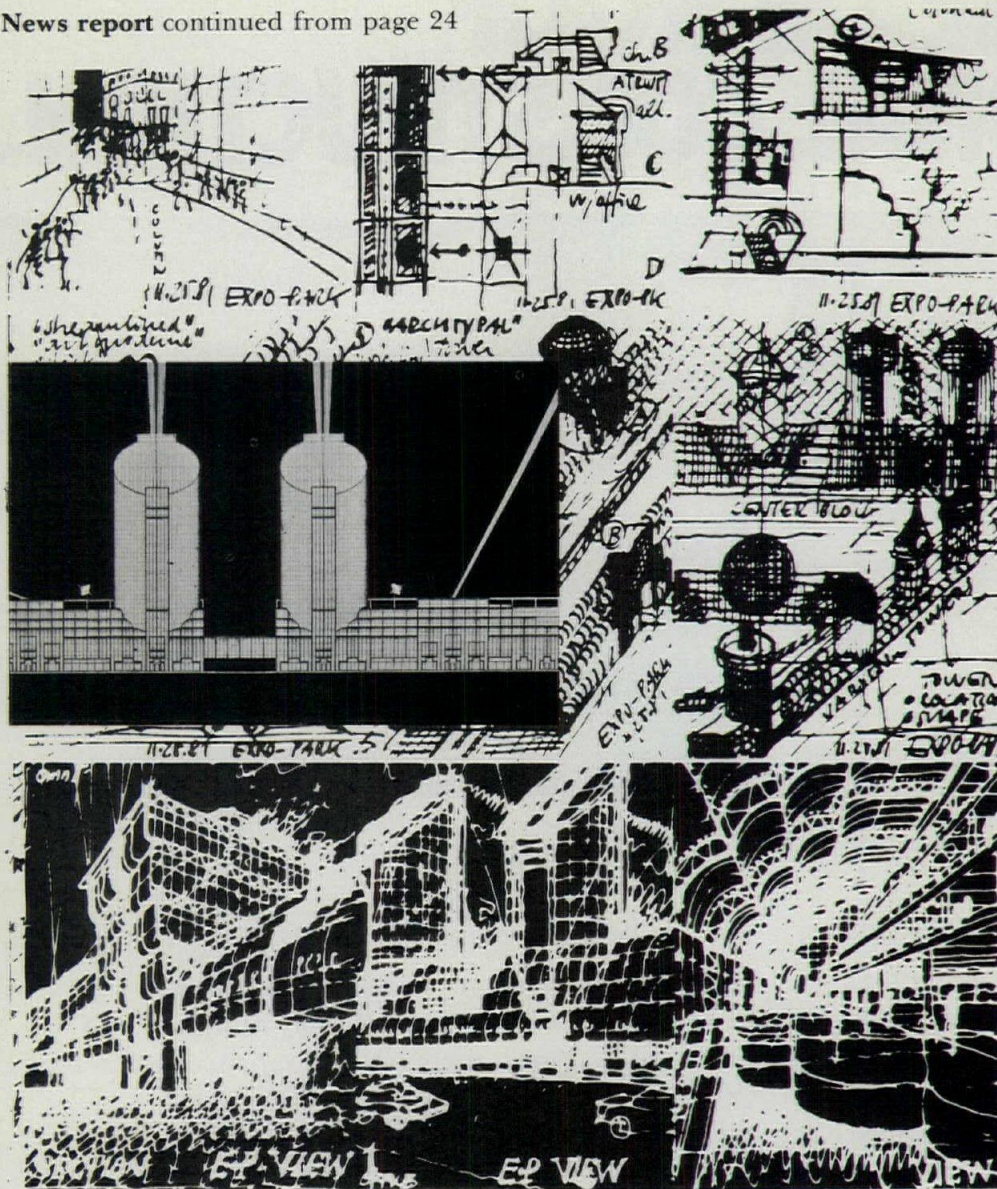
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Part of Jahn's rendering and sketches for Chicago Exposition Center.

a downtown area of one of America's cities, what is an architect to do? In the case of Chicago's Helmut Jahn, one apparently begins by filling up page after page of sketchbook paper with notational views of possible octagons, telescopes, offset squares, skin details, and megastructural systems miniaturized, while filling the margins with remarks on the influences of context or the client's demands. The result is a grid of crosshatches and inked lines as dense and complex as the forces that feed into the design and as energetic and single-minded in their formal clarity as Jahn's designs.

The recent show of Jahn's drawings at the Yale School of Architecture makes clear that a facility in the formal manipulation of large-scale elements and a dramatic, almost Pop Art form of presentation has allowed the 42-year-old Jahn to convince a remarkable number of corporate and civic clients of the merits of his firm's post-Miesian direction. The drawings of the Humana Competition entry and the proposed Chicago Exposition Center easily dominate the viewer through their huge

scale, aggressive high-tech imagery, flashes of neon colors, and elegant Art Deco curves. Whether rendered in air brush or Prismacolor, there is always something abstracted or collagelike about these otherwise very professional drawings: The Northwest Terminal Tower is shown literally torn out of the ground and out of context, and the Deere Office Building has palm trees growing in its slick modular grids. Cold and sleek, the drawings present scaleless visions of futuristic communities sliced by Demuth-like rays that recall the searchlights of a 1930s movie opening. Visions of future and past worlds coexist in the Chrysler-like Southwest Tower: In the drawings that separate base, shaft, and top into three 6-ft-tall images, two couples dressed in 1950s clothes run toward the rusticated stone base of a glacierlike glass and steel tower.

Like other recent shows of architectural drawings, the Jahn exhibit speaks of the power of the flattened, abstracted image to push us back into a more innocent past, pull us towards a happy future, and leave us with only a fleeting glimpse of the complexities of the urban situation. [Aaron Betsky]

*Aaron Betsky, a final-year architecture student at Yale University, writes frequently about architecture.*

## Trust convention skirts issues

The National Trust's 36th Preservation Conference was held Oct. 6-10 in Louisville, Ky, the smallest city ever to host a National Trust convention. The meeting, which attracted almost 1400 people, was a tribute to Louisvilleian Helen Abell, chairman of the city landmarks commission, former National Trust vice-president, and recipient of the Trust's Crowninshield Award last spring.

The Louisville conference initiated a new format for its meeting sessions: registrants were encouraged to select one Topic Track and attend all the sessions on that subject. Despite the discussions of historic properties, education, fund raising, and the like, the real issues concerning the future of preservation were only touched upon. An exception was Brendan Gill's keynote speech, which attacked Reaganomics and the idea that private enterprise could preserve a nation's patrimony.

One notable feature of the conference was the focus on Frederick Law Olmsted and the magnificent, extensive, and too little known park system he designed for Louisville. There was an exhibition of original drawings and plans for the parks, while restoration was begun on a five-acre 1892 Olmsted park in the city's West End.

Not surprisingly, the tours and entertainment were more appealing than the Topic Tracks. The offering of tours included historic houses, trips to horse farms, distilleries, and the contemporary architecture of Columbus, In, as well as visits to both gentrified and unrestored neighborhoods. This year's social events ranged from a black-tie Bourbon Ball, to a block party in the cast-iron district, a costume Beaux-Arts Bash, and an old-fashioned burlesque show.

Ironically, with Downtown Louisville undergoing a veritable orgy of destruction, the conference seemed to ignore the implications of its choice of meeting place. Two blocks of handsome 19th-Century commercial buildings were razed to erect the windowless convention center and the ho-hum Hyatt hotel that served as the conference headquarters. Preservationists also viewed the just-opened Galleria, a suburban-type shopping mall by SOM, which eradicated one of the city's greatest architectural landmarks, the Will Sales building—the battle for which marked the rout of preservation forces in the city. All of which makes one wonder if the good that the National Trust is doing is keeping it from doing the good that it ought to be doing.

[William Morgan]

*William Morgan is the Chairman of the Kentucky Historic Preservation Review Board. [News report continued on page 31]*





# A government building by the 1981 Sullivan Award winners. **ELEVATORS BY DOVER**

A purposely informal organization of elements distinguishes the Skagit County Administration Building in Mount Vernon, Washington. Designed to promote ease of access and open government, the building houses six county departments and three public hearing rooms on a downtown courthouse block. Two Dover Elevators help smooth the flow of inter-floor traffic. For more information on Dover Traction and Oildraulic<sup>®</sup> Elevators for low, mid- and high-rise buildings, write Dover Corporation, Elevator Division, Dept. 686, P.O. Box 2177, Memphis, Tennessee 38101.

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## Celebrating Mackintosh

It is now almost 55 years since the death of Charles Rennie Mackintosh, probably Scotland's greatest 20th-Century architect. It has taken that long for official bodies in Britain to pay him adequate recognition, but the recognition, while long in coming, is substantial. During 1981, and continuing into 1982, there have been several major developments.

Mackintosh's threatened Scotland Street School in South Glasgow has now been saved and is being used for the time being as a Museum of Education. To demonstrate Scottish education through the ages, the building is being fitted with old furnishings and furniture, and classrooms are being laid out to indicate different teaching methods over the last 100 years. The structure's future use as a museum of interior design, with the reconstruction of the interior of the now demolished Ingram Street Tea Rooms, is still possible.

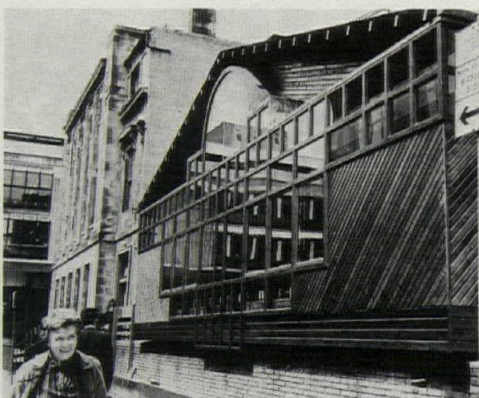
The rehabilitation as a jeweler's shop of the celebrated Willow Tea Rooms, with the street front and some of the interior fittings restored (P/A, Nov. 1981, p. 25), has won both the Civic Trust Award and an AD Project Award.

Amidst fanfare, Glasgow University has opened the reconstruction of Mackintosh's own house in South Park Avenue as part of its Hunterian Museum. The re-creation by William Whitfield partners provides a key to understanding Mackintosh's process of design, illustrating parts of other schemes as well, notably Hill House.

A few hundred yards away, a new Museum Gallery has been opened in the Glasgow School of Art to display the school's fine collection of furniture, including the most recent and amazing discovery, the white bedroom furniture of the now demolished Hous'hill.

Finally, in Helensburgh, a significant event has transpired. Hill House, Mackintosh's finest house and the only one open to the public, has been transferred from the Royal Incorporation of Architects in Scotland, which saved the house from sale and redevelopment in 1972, to the National Trust for Scotland. The transfer to the National Trust, the primary custodian of the Scottish Heritage, ensures that the house will remain open to the public. The Trust is restoring the house to a close approximation of its original state.

1983 is the tenth anniversary of the founding of the Charles Rennie Mackintosh Society, and celebrations have been planned to greet that anniversary. Between the 22nd and 26th of August 1983 in Glasgow, events will include lectures by international speakers on subjects embracing Mackintosh and his contemporaries Horta, Hoffmann, Gaudí, Lethaby, Olbrich, Wood, Wright, Guimard, Saarinen, and Sullivan. There will be visits to many buildings of Mackintosh's time, and the pioneering exhibition that was held in 1933 in the McLel-



Mackintosh's drawing of his Scotland Street School (above). Designed by Gillespie Kidd and Croia, a "Postmodern" extension to Mackintosh's Glasgow School of Art.

lan Galleries is to be re-created in the same location. Further details of the 10th Anniversary Celebrations of the Charles Rennie Mackintosh Society can be obtained from the CRM Society, Queen's Cross Church, Garscube Road, Glasgow. [Charles McKean]

Charles McKean is secretary of the Royal Incorporation of Architects in Scotland and architectural correspondent to The Times newspaper.

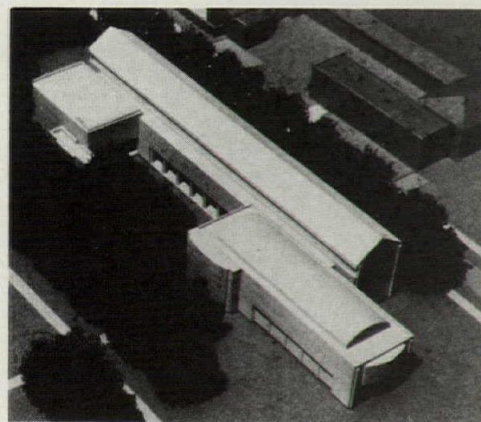
## Pelli continues a Rice tradition

Preliminary designs by Cesar Pelli and Associates for the Robert R. Herring Hall, new home of the Jesse H. Jones Graduate School of Administration at Rice University, were recently unveiled, accompanied by an announcement of a \$300,000 challenge grant from the Kresge Foundation. Groundbreaking for the building is planned for 1983, with construction to be completed in time for the 1984-85 academic year.

The Pelli design, like the Stirling-Wilford architecture school addition at Rice which preceded it (P/A, Dec. 1981, p. 53) and the Charles Tapley Associates Mudd Computer Center now under construction (P/A, Aug. 1982, p. 32) is responsive to its context.

The building will be located on a parking lot at the rear of 1968 extensions to the 1947 Fondren Library, a zone decidedly outside and at the "rear" of the main quadrangle, Rice's Academic Court. One edge of this space is bordered by the Wiess College dormitory and, opposite, by the Rice Memorial Center.

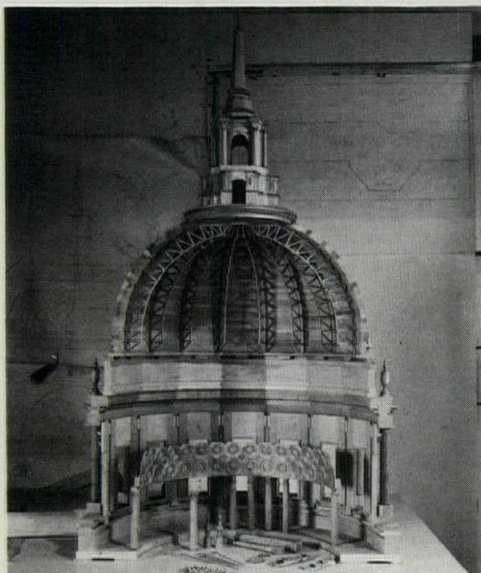
In a simple *parti*, Pelli continues the thrust of original campus architect Ralph Adams Cram's 1910 organization of building blocks that run parallel to the main East-West axis, using a simple three-story single-loaded corridor block of classrooms and offices punctuated by more articulated two-story end pavilions containing a large reading room and a lecture hall. These two elements refer to a typical Cram block by virtue of the pavilion end mass, and possess the "clip-on" aesthetic common to earlier Pelli projects. As in the Rice Memorial Center directly opposite, the two elements define a court, the sort of formal space which has come to be associated with many of Pelli's more recent works, particularly those of a commercial nature. The two "special" blocks reflect the visual character of earlier Rice buildings (cloisonné masonry, striped banding) with several alternative entry porch elements shown in the design drawings. Contrasting with this architecture is that of the classroom block, whose more subdivided (flexible?) spaces are fenestrated with a continuous strip window, compatible with the general horizontal treatment of the block, but definitely a Modernist design motif. This dilemma of expression, a problem earlier probed



Pelli's Herring Hall.



by Stirling and Wilford, is suggested by the treatment of the end elevations, gridded-panel infill in a cleanly expressed structural frame, not unlike Pelli's U.S. Embassy in Tokyo of 1972. It suggests not the closure of a Beaux Arts composition but the indeterminate aesthetic of the extrusion, an earlier theme of Pelli's work. Further evolution of this project bears watching, to see how these opposing tendencies find their ultimate resolution.  
[Peter C. Papademetriou]



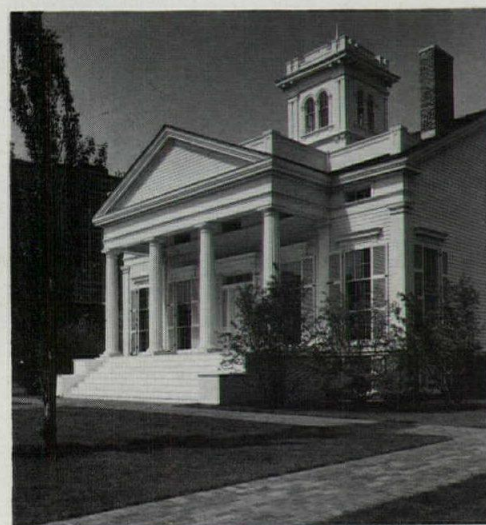
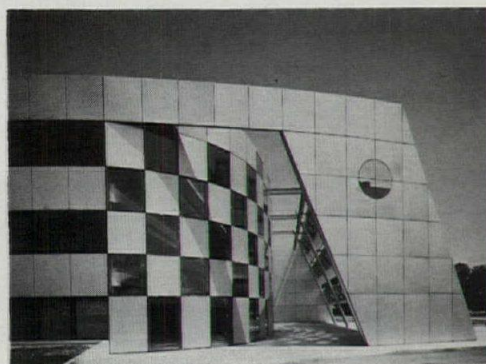
Wood model by Don Potts of City Hall dome.

## Celebration: AIA SF100

To celebrate its centennial, the San Francisco chapter of the American Institute of Architects opened an exhibition Oct. 28 at the San Francisco Museum of Modern Art that commemorates the profession as a whole more than its star performers. Instead of presenting the city's architectural monuments as signed works, four themes cover the range of architecture, and in the process, the scope of architects' contribution to the building of the city over the past 100 years, over half its existence.

A partially colonnaded room-within-a-room in the museum's main gallery was designed by Michael Manwaring. Four saw-toothed niches house photographic displays and slide shows exploring the themes of Civic Pride, Home and Work, Utility, and Pleasure. The niches are introduced by sumptuous natural wood models designed and executed by Bay Area sculptor Don Potts. Standing as high as nine feet, they represent the City Hall dome, a bay-windowed Victorian house back-to-back with the Hallidie Building façade, one Golden Gate Bridge pylon, and Golden Gate Park in low relief.

Marc Goldstein and Tom Aidala curated the exhibition; Randolph Delahanty researched and wrote the text. Closing date is Jan. 2, 1983.  
[Sally Woodbridge]



Tigerman's "Pompadour" house (top).  
Murphy/Jahn's Department of Energy (middle).  
City architect's house museum restoration (above).

## Chicago AIA Awards

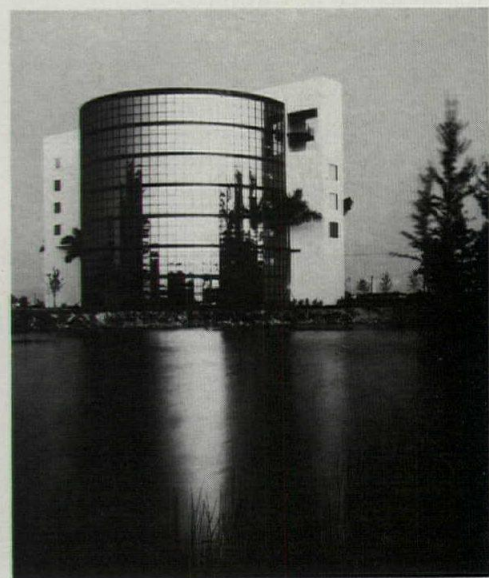
The Chicago AIA awarded 13 Distinguished Building Awards and one Twenty-five Year Honor Award to Chicago area architects during ceremonies at the Art Institute September 8. The jury for the program included Evans Woollen, Paul Kennon, and Milo Thompson.

The Twenty-five Year Honor Award was won by Skidmore, Owings & Merrill for its Inland Steel Building.

Distinguished Building Awards for New Construction went to: Booth/Hansen & Associates, Ltd., for Herman Miller/Grandville and Villa Barr; Joseph W. Casserly, City Architect for the City of Chicago Fire Station (Booth/Hansen, associate architects); Murphy/Jahn for the Argonne National Labs; Nagle, Hartay & Associates, Ltd., for its Lake

Bluff Townhouses; and Frederick F. Phillips & Associates for the Willow Street Townhouses.

Distinguished Building Awards for Extended Use were won by: Pappageorge Haymes, Ltd., for the Blood Residence; Kenneth Schroeder Associates for 2038 Dayton; SOM for both 919 N. Michigan and Orchestra Hall; Stanley Tigerman & Associates, Ltd. for House with a Pompadour; and Marvin Ullman for the Stone Residence. The Distinguished Building Award for Restoration was taken by Joseph W. Casserly, City Architect, for the Henry B. Clarke House Museum.



Arquitectonica's Overseas Tower.

## Florida awards

Eight building projects out of 150 entries have won awards for "Excellence in Architecture" 1982 by the Florida Association of the AIA. Judges were Paul Rudolph, Charles Gwathmey, and John Johansen.

The winners were: The Gregg Beachfront Residence by Carl Abbott of Sarasota; University of North Florida Student Activity Center in Jacksonville designed by Clements/Rumpel/Associates of Jacksonville; the Aguilera Residence in Dade County by George F. Reed of Miami; the Neighborhood Senior Citizens Center in Jacksonville by Pappas Associates, Architects, Inc. of Jacksonville; the Passenger Terminal Complex at Orlando International Airport designed by Kemp, Bunch and Jackson, Architects of Jacksonville with Schweizer Associates, Inc., Associated Architects serving as project architects to the Greiner Team; Residence in Coconut Grove by Henry Alexander of Miami; The Overseas Tower in Miami by Arquitectonica of Coral Gables; and The Oceanfront Townhouses at Atlantic Beach by William Morgan Architects.  
[News report continued on page 34]





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## 1982 Georgia AIA Design Awards

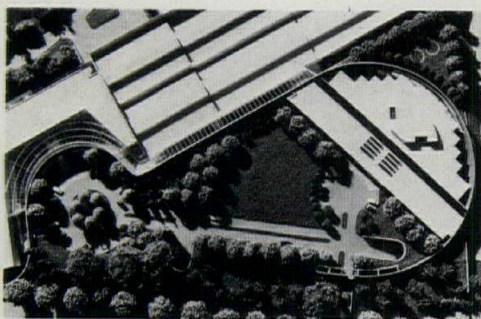
Seven Atlanta architectural firms garnered twelve awards for Design and Excellence in Architecture. In contrast to the 1981 Awards program, a successful effort to delineate between the built and unbuilt was made. The 96 entries to this program were juried separately in categories of projects built after Jan. 1, 1977 and projects under construction or to be under construction by Jan. 1, 1983.

Awards for Excellence in Architecture were given to the following eight built projects by the following five architects: Heery & Heery, Architects and Engineers, Inc., for the Roswell Facility of Herman Miller, Inc., for PruCare Northeast Health Clinic, Atlanta, and The Queen Alia Heart Institute of the King Hussein Medical Center, Amman Jordan; Nix, Mann & Associates, for Lenox Square Entrance and Lobby, Atlanta, and for the Clayton General Hospital Child Care Center, Riverdale; Cooper, Carry & Associates, and Jones & Thompson, architects for the Garnett Street MARTA Station; Thompson Ventulett, Stainback & Associates for the AT&T Long Lines Southern Region Headquarters; and FABRAP Architects, Inc. for the U.S. Pavilion at the 1982 Worlds Fair, Knoxville, Tn.

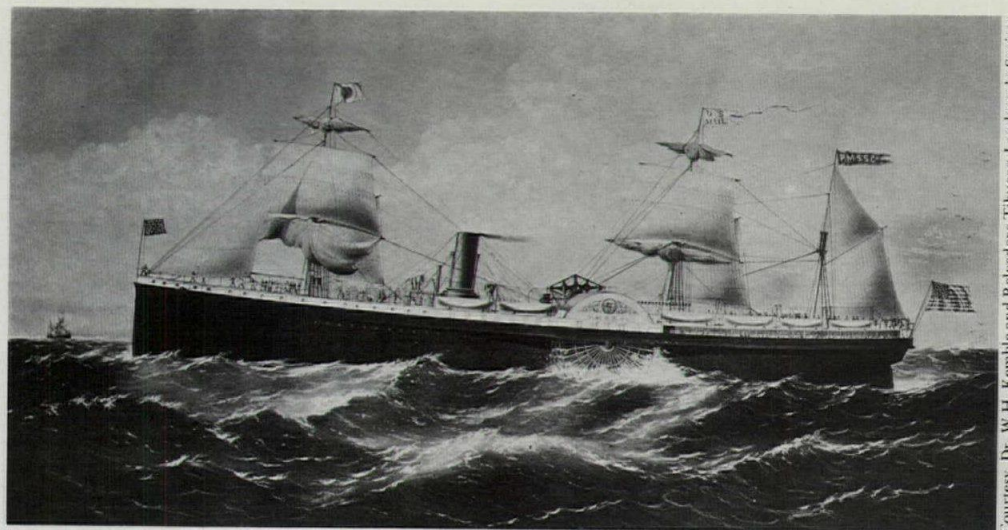
FABRAP also won a Design Award for the Black and Decker Manufacturing Company Corporate Headquarters to be built in Towson, Md.

The second Design Award went to Anthony Ames for the Pickering Residence to be built in Laurel, Ms. Jova/Daniels/Busby, Inc. received the third Design Award for a prototypical automated teller unit design for Bank-South Corporation.

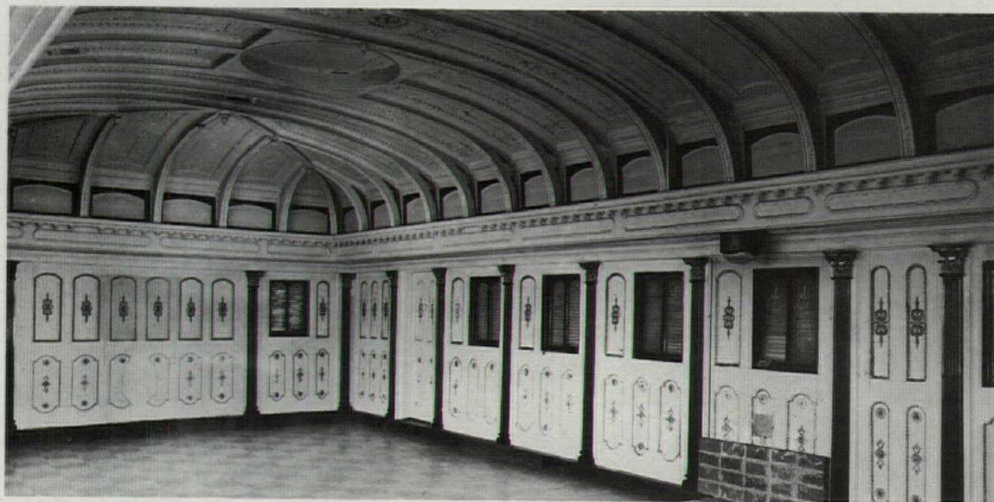
The jury included Chicago architects James L. Nagle, Stuart E. Cohen, and Ben Weese, and associate curator John Zukowsky at the Art Institute of Chicago. [Jon Carlsten]



Fabrap's Black & Decker headquarters.



Courtesy, Dr. W.H. Kemble and Belvedere Tiburon Landmarks Society



Photos: Philip L. Molten



Litho of SS China (top). Interior of cabin, now being restored (above). Exterior of cabin (left).

### Restoring a cabin from China

SAN FRANCISCO—Across the bay from here in Belvedere Cove near Tiburon, there sits a small structure on pilings called the China Cabin. It is not, as some have imagined, a cabin from China, but rather the cabin from the S.S. China (1866), one of the world's largest wooden-hull, steam-powered vessels ever built.

The China carried passengers and mail to the Orient during the 1870s, but the luxurious sidewheeler was scrapped in 1886 as obsolete. One enterprising soul, however, acquired the 40- by 20-ft main cabin, installed it on pilings at the water's edge and made it his home.

In the mid-1970s, Belvedere decided to clean up its waterfront, removing a number of unsightly shacks to create "open space." The Belvedere-Tiburon Landmarks Society entered the fray in support of saving the cabin and successfully pressured the city council to allow preservation.

Today this anomalous bit of maritime history is undergoing a meticulous restoration that is nearly complete. According to Philip L. Molten of the society, "We have raised and spent \$250,000 to date and need another \$125,000 to finish the project." The first task after acquiring the cabin in 1978 was the construction of a new set of pilings that now allow a deck around the outside. The cabin was totally rebuilt structurally.

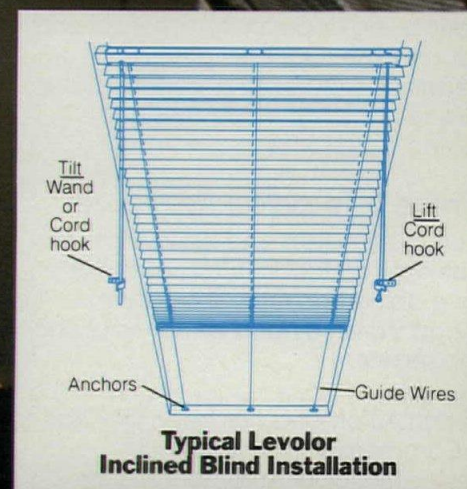
The society is currently concentrating its attention on the elaborate interior, the decorative trim of which will require \$30,000 worth of gold leaf. Newly etched glass to match the old has been installed in the doors and in the clerestory windows that surround the space (each window is a different size). The ceiling is ribbed and resembles the bottom of a ship.

The next task for the society (P.O. Box 134, Belvedere-Tiburon, Ca) is to find as much of the original furniture as possible. When complete, the former saloon of the S.S. China will be used for social functions and as a museum.

[Carleton Knight, III]

[News report continued on page 40]





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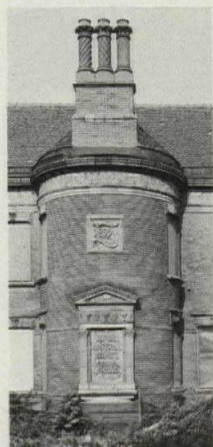
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Pencil points continued from page 21

*Terra Cotta Office,  
detail.*



Peter Mauss

tion. Citibank is hoping to sell the property and feels that its landmark status will discourage developers.

¶ Citibank's fears notwithstanding, a joint venture of the New York Landmarks Conservancy and Teitelbaum Holdings has been interested in the building. How much more does Citibank want?

## America celebrates Mackintosh

The New York shop Furniture of the Twentieth Century is importing a 12-piece collection of furniture, rugs, and decorative accessories designed by Charles Rennie Mackintosh.

¶ These re-editions are made in Spain under the supervision of Roger Billcliffe, chairman of the Charles Rennie Mackintosh Society, and are produced with fidelity to the originals.

¶ The collection includes silver-painted furniture originally commissioned for the Willow Tea Rooms (1903-4); rugs, tables, chairs, and candlesticks designed for Hill House (1903-8); a chair and table from the Chinese Room of the Ingram Street Tea Rooms (1911); and an upholstered armchair made for the Dug-Out Tea Room (1917).

## Segerstrom moves

Henry Segerstrom, the largest developer in Costa Mesa, Ca, is masterminding a large performing arts center that will be built in just over two years. CRS is designing it.

¶ Segerstrom's \$5 million plaza, California Scenario, which was designed by Isamu Noguchi and stands at the base of two new office buildings, was dedicated recently.

## Crocker Center progresses

The first tower of Downtown Los Angeles's Crocker Center (architect: SOM/SF; developer: Maguire) is complete, and 75 percent of it is rented to IBM.

¶ The second tower is topped out, and the center court, which will feature an art collection selected by the director and one curator from the County Art Museum, will be finished in early 1983.

## Victorian revival in Santa Monica

Several builders in Santa Monica have apparently decided that buyers are looking for replicas (not necessarily exact) of Victorian houses—with garages underneath of course.

¶ Victorian condos are sprouting on about a dozen sites in the area.

## Recognition

The firm of Welton Becket Associates is being honored by this year's LA/AIA Recognition Dinner.

¶ Robert Tyler of Welton Becket Associates is the next LA/AIA president.

## Shortlist

Arup Associates, Skidmore Owings Merrill Chicago, and Ahrends Burton & Koralek have been selected from among the seven finalists in the National Gallery competition in London (P/A, Oct. 1982, p. 29) to develop their designs further.

¶ Not selected were Richard Rogers & Associates (whose "high-tech" scheme caused a stir), Spratley & Cullearn, Sheppard Robson, and Covell Matthews Wheatley.

## Brits get their own Disneyworld

A new theme park called Wonderworld is being designed by Derek Walker (known for his involvement in Milton Keynes) for a town called Corby near Birmingham.

¶ The park, which will open in part in 1985, will use land and employ people left bereft after the closing of the town's steel industry.

¶ The park will have a monorail, a television dome, an energy dome, and so on.

## A mosque in New Mexico

Egyptian architect Hassan Fathy has built an adobe mosque near Abiquiu, NM, the first structure of a projected Islamic community called Dar al-Islam.

¶ The mosque was constructed by Americans who were taught to build domes, arches, and vaults by master masons from Upper Egypt.

## Waterfront framework

HUDSON 2001, a framework for a 30-year, \$2 billion development program for the New Jersey side of the Hudson River opposite Manhattan, has been designed by the architectural firm of Beyer Blinder Belle.

¶ The plan, prepared to stimulate discussion on ways to capitalize on the waterfront's potential and to prevent haphazard development, envisions the creation of three mixed-use centers at Edgewater, North Bergen, and Weehawken. The centers would be linked by ferries and by a light rail system along the River Road.


## Corcoran School conversion

The Hotel Employees and Restaurant Employees International Union, formerly headquartered in Cincinnati, is moving to Washington, DC, and has bought the 1889 Corcoran School in Georgetown for its new offices.


¶ Arthur Cotton Moore Associates has been hired to convert the school to offices and to build more office space and about 15 luxury townhouses.

[Pencil points continued on page 39]





## JG/62-63 Auditorium Seating/National Gallery of Art



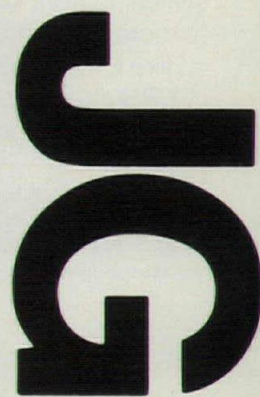
The JG/62-63 with its minimum side profile facilitated this continental layout. Concealed double articulating tablet arms blend with standard arms. Removable front rows add versatility.

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Installation: National Gallery of Art, Washington, DC  
Architect: I.M. Pei & Partners  
Product Design: Peter Dickinson

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#### O'Hare expands

Construction has begun on the \$115 million expansion of the Delta Air Lines Terminal at O'Hare International Airport in Chicago.

¶ The expansion, designed by the Perkins & Will Group of Chicago with Milton Pate & Associates, Atlanta, will encompass one-quarter million sq ft of terminal and concourse area, and three-quarter million sq ft of aircraft apron and taxiway improvements.

#### Daylight

From Feb. 16 through 18, at the Hyatt Regency in Phoenix, Az, the 1983 International Daylighting Conference will offer the most thorough program on the subject to date.

¶ It will feature a preconference workshop on daylighting design tools, a product exposition, and technical sessions on the availability of resources, the integration of daylighting and electric lighting, physical modeling, and calculation methods.

¶ Contact Marjorie Matthews at the Oak Ridge National Laboratory (615) 574-4346 for registration material.

#### Invitation to enter gate competition

The editors of *The Harvard Architectural Review*, Issue V, "Precedent and Invention," invite entries to an open competition for the design of a gate.

¶ The gate will provide a public "introduction" to Cambridge's Quincy Street, site of a number of illustrious buildings.

¶ Jury: Henry Cobb, Laurie Olin, Susana Torre, and Jaquelin Robertson.

¶ Cash awards: \$1000, \$500, and \$250, and \$100 for honorable mentions.

¶ Submission deadline: Feb. 8, 1983. Entry fee: \$20. Address: *The Harvard Architecture Review*, 48 Quincy St., Cambridge, Ma 02138.

#### Forecast: mild but not fair

A few notes from the Building Products Executive Conference held in Washington on October 28:

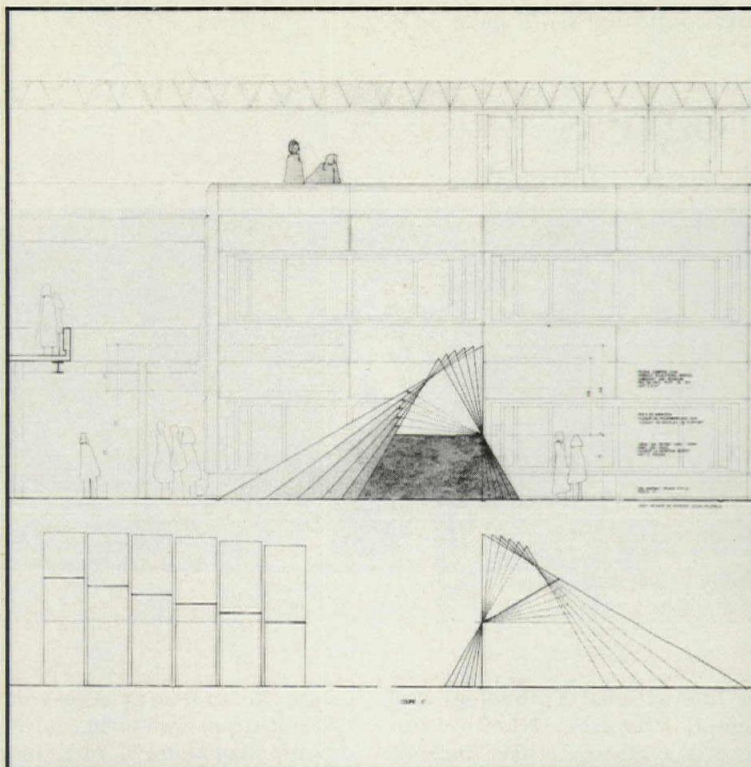
¶ housing starts in 1983 will be up roughly 30 percent, with an estimated 1.325 million units;

¶ recovery of the economy through 1983 will be weaker than in previous upswings, thereby precluding recovery in commercial and industrial building until at least the second half of the year;

¶ still, 1983 could be the start of a new recovery period and an expansion of the construction industry which will gather momentum over the next few years; architect Ezra Ehrenkrantz of New York predicts that the rehabilitation market will continue to increase;

¶ morning keynote speaker Senator Jake Garn of Utah claims we have a bigger political problem than an economic one: Politicians are more interested in getting elected than in solving problems, and the control of the money supply ought not to be politicized.

¶ Merry Christmas!



## ARCHITECTURES CONCEPTS, INC.

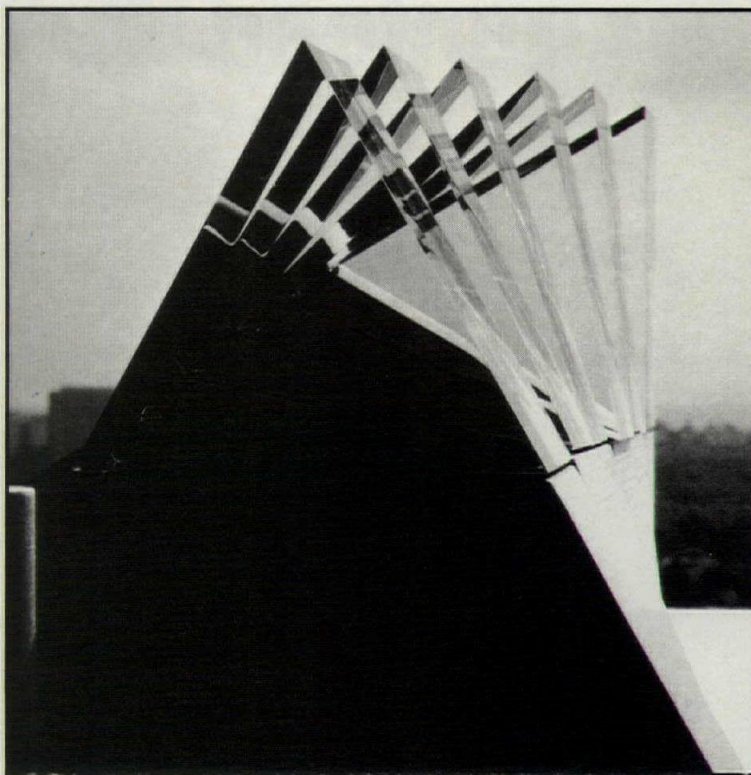
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## LIGHT, MOVEMENT, CONTINUITY

### Sculpture project, Optics Department, University of Lausanne

Six transparent prisms are set on inclined concrete blocks in the patio of the Optics Department of this important Swiss university. The work - at any hour - creates its own movement and color by reflection and refraction of available light. Passersby make and break the environment as they move and see different yet simultaneous aspects of the work and its surrounding area: direct and true; reflected and inverted; decomposed and iridescent, and, finally, personal and projected.

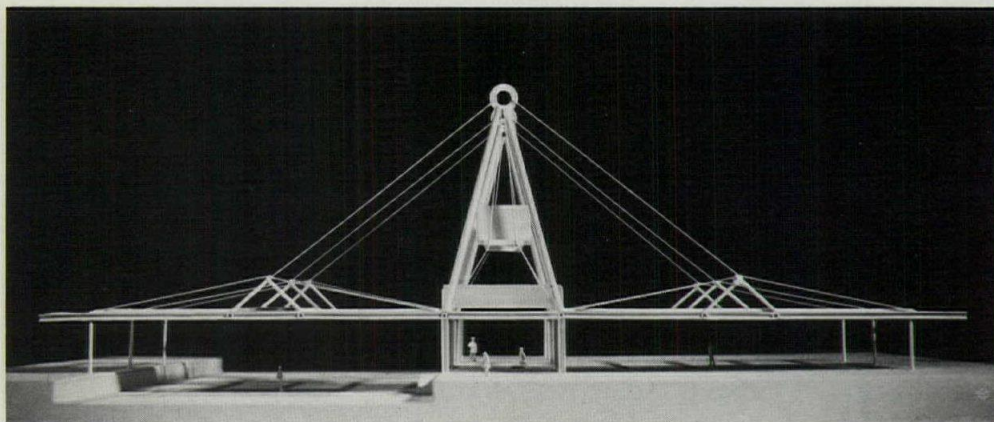
Six massive metacrylic plexiglass prisms, dimensions: 8' x 8' x 3 5/8'. Glass equivalent refractive index: 1.507. Prism incline variation six degrees with angle difference of 30 degrees between first and last prism. Supporting base: hard polypropylene. Blocks of brushed reinforced concrete. Overall height: 14'. Surrounding area: White cast asphalt. Floodlit in hours of darkness.



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## In progress



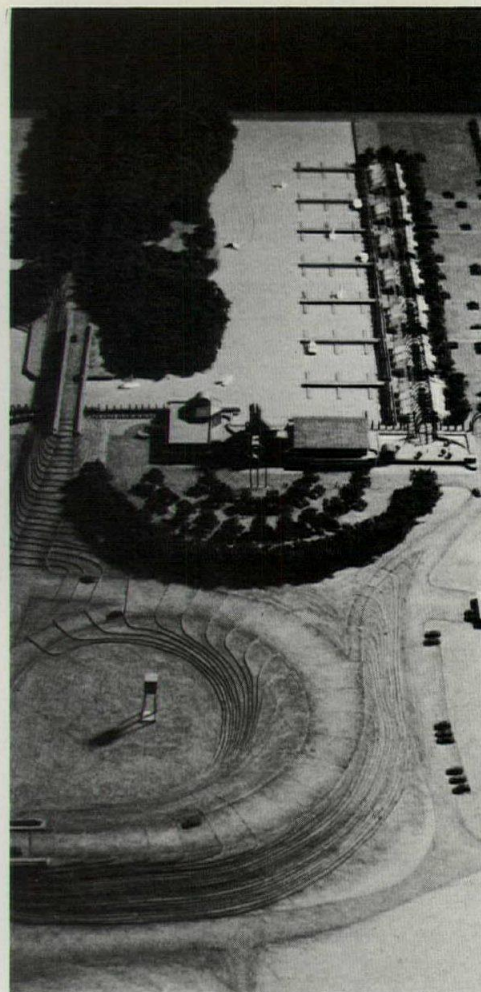
1

**1 Patcenter International Technology and Science Center, Princeton, NJ.** Architects: *Richard Rogers & Partners, London, England.* Associates: *Kelbaugh & Lee, Princeton, NJ.* The 5500-sq-m one-story research center will be constructed as a suspended steel structure from a kit of prefabricated parts. The intention is to create both flexibility and a strong image of high technology for the American headquarters of this British firm.

**2 Seagreen Commercial Development, Dania, Fl.** Architects: *Herbert S. Newman As-*

*sociates, New Haven, Ct.* A seasonal bazaar and two restaurants will form a novel commercial development along Florida's intercoastal waterway. A 15,000-sq-ft restaurant and banquet facility, a 7000-sq-ft exhibition hall, and 10,000 sq ft of small shops or stalls will focus toward an elaborate set of waterworks and fountains. Pleasure craft will dock along the spine of this light and purposely impermanent-looking structure. Total construction cost of the complex, to be completed next year, will be \$3,700,000.

[News report continued on page 42]

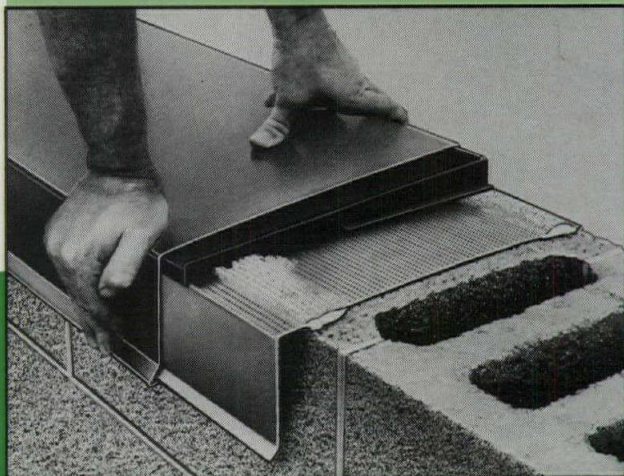


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## Calendar

### Exhibits

**Through Dec. 12.** Santa Barbara: The Creation of a New Spain in America. University of California at Santa Barbara.

**Through Dec. 18.** "Precursors of Post-Modernism: Milano 1920s/30s." Architectural League, Villard House, 457 Madison Ave., New York.

**Through Dec. 30.** America's City Halls. AIA Building, 1735 New York Ave. NW, Washington, DC.

**Through Dec. 31.** Computer Graphics: Work of the GSD Laboratory. Graduate School of Design, Harvard University.

**Through Dec. 31.** Ernst Lohse, drawings of imaginary architecture and 3D models. Philippe Bonnafont Gallery, San Francisco.

**Through Dec. 31.** Quaint and Secret Places: Philadelphia 1682-1982. AIA Gallery, 117 South 17th St., Philadelphia.

**Through Jan. 2.** Scandinavian Modern, 1880-1980. Cooper-Hewitt Museum, New York.

**Through Jan. 2.** The California Condition—A Pregnant Architecture. La Jolla Museum of Contemporary Art, La Jolla, Ca. Also **through Jan. 2,** Mies van der Rohe: Barcelona Pavilion and Furniture Designs.

**Through Jan. 3.** Erte 90th Birthday Retrospective. Dynasen Gallery, 122 Spring St., New York.

**Through Jan. 3.** "Buildings on Paper: Rhode Island Architectural Drawings, 1825-1945." The Octagon, Washington, DC.

**Through Jan. 9.** Josef Hoffmann: Design Classics. Fort Worth Art Museum, Fort Worth, Tx.

**Through Jan. 5.** Drawings of Ernest Born. AIA/SF Gallery, third floor, 790 Market St., San Francisco.

**Through Jan. 26.** Furniture by American Architects. Whitney Museum of American Art, Fairfield County, Stamford, Ct.

**Through Feb. 27.** American Picture Palaces. Cooper-Hewitt Museum, New York.

**Through Mar. 15.** Frank Lloyd Wright at the Metropolitan Museum, 60 objects by FLW. MMA, New York.

**Through Apr. 10.** Chicago Architects Design: A Century of Architectural Drawings from the Art Institute of Chicago. Art Institute of Chicago.

**Dec. 22-Jan. 14.** Bridges, Tunnels, and Hydraulic Works (19th Century). Gallery at the Old Post Office, Dayton, Oh.

### Competitions

**Dec. 29.** Entry deadline, International Open Competition for the Creation of New Office Furniture. Contact Concours Mobilier, Commissariat General du Concours, Pavillon de Marsan, 107 rue de Rivoli, 75001 Paris, France.

**Dec. 31.** Postmark date, registration forms and fees, Women In Design International Second Annual Competition. Contact WIDI, P.O. Box 984, Ross,

Ca 94957 (415) 457-8596.

**Dec. 31.** Proposal deadline, General Electric Lighting Design Competition for Architecture and Interior Design Students. Contact Daniel Hayes, GE, Nela Park #4635, Cleveland, Oh 44112.

**Jan. 7.** Application request deadline, Rotch Travelling Scholarship. Contact Norman C. Fletcher, Secretary, Rotch Travelling Scholarship, 46 Brattle St., Cambridge, Ma 02138.

**Jan. 10.** Entry deadline, Fourth Biennial Downtown Development Awards Competition. Contact Mary Dalessandro, Coordinator, New York (212) 889-5666.

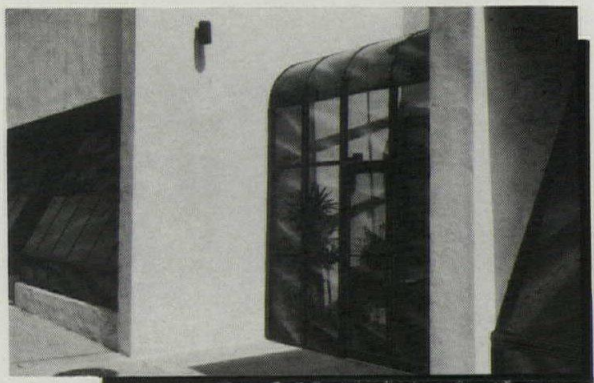
**Jan. 15.** Nomination deadline, National Trust for Historic Preservation 1983 Honor Awards. Contact National Trust, 1785 Massachusetts Ave. NW, Washington, DC 20036.

**Jan. 26.** Entry deadline, P/A Third Annual International Furniture Competition (see ad, page 15).

**Feb. 1.** Registration deadline, University of California, Santa Barbara Art Museum Competition. Contact University Art Museum, UCSB, Santa Barbara, Ca 93106. (805) 961-2951.

**Feb. 15.** Submission deadline, Formica Corp. "Surface and Ornament" Competition I (conceptual). Contact Colorcore "Surface and Ornament" Competitions, Formica Corp., One Cyanamid Plaza, Wayne, NJ 07470.

**Feb. 21.** Submission deadline, National Endowment for the Arts Design Research Recognition Program. Contact NEA, % BOSTI, 1479 Hertel Ave., Buffalo, NY 14216.



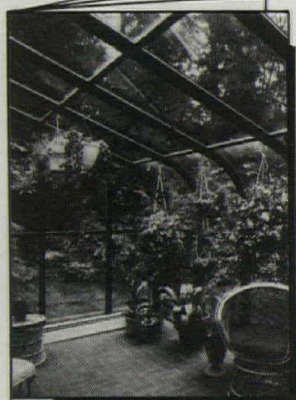
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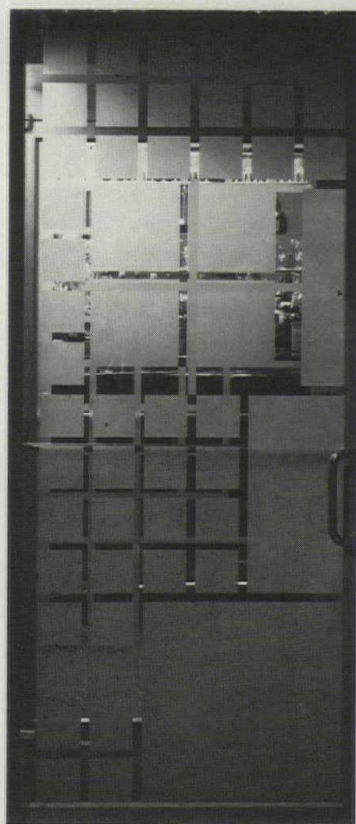
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# An upwardly mobile feast

**Voorsanger & Mills's design for a French restaurant casts current architectural questions into a new arena.**



The small-scale etched-glass entrance door of Le Cygne (above) opens to reveal a vestibule stairwell that runs the full height of the building (right). A series of 90-degree turns and pauses at three landings is the key to what the architects term "a theater of arrival, progression, and destination," in which the dining rooms are intentionally modest in scale, the better to focus on the lobby and stairwell as a device to propel (or seduce) patrons up to the second floor, which is intended to serve as a "surrogate piano nobile" without diminishing the importance of the main-floor dining room.



Post-Modernism has, it seems, produced a major restaurant design. While the presence of the past no longer raises eyebrows, its appearance in architecture has been confined largely to the more private realm of houses and apartments, offices, building lobbies, and showrooms. But with the completion of Voorsanger & Mills Associates' design for the new Le Cygne restaurant in New York, the pros and cons of this particular stylistic argument

can now be examined by anyone with a taste for *haute cuisine* (and a hefty expense account). In its role as architectural test case, Le Cygne occupies a position of importance not unlike that of Michael Graves's Portland Building: regardless of who deserves ideological credit (or blame), the project is a first of its type, and as such, merits serious consideration. A critique follows on p. 51.







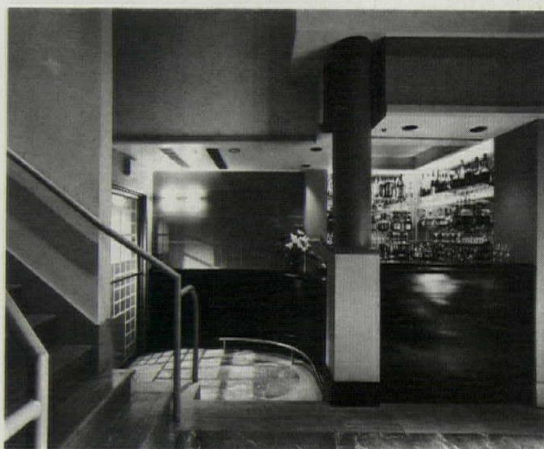
A tiny bar (below) greets patrons in a bit of tight-ship efficiency before the upward rush of the stairwell (left) is fully revealed. The essentially double-cube volume of the stairwell (18' x 20' x 44', minus several feet for the vault) is modulated in elevation by the moldings that establish datum heights in the various rooms.

Since it was not possible to add windows to the dining rooms, light was brought into them artificially. In the downstairs room (facing page, bottom), a series of louvered clerestory panels is backlit to create the illusion of daylight, while the cove lighting of the mural bays furthers the ruse, and mirror panels expand the narrow (42' x 20') room visually. In the upstairs room (this page, top and lower right), a vault, 13'-8" at its apex, is filled with backlit panels of fine mesh screen, creating a scrim that "lifts" the vault while the pitched soffits of the side bays compress space into it.

An exedra at the far end of the downstairs room (facing page, upper left) houses a banquette, but its importance is deliberately downplayed by the placement of a fascia identical to the one at the room's opposite end.

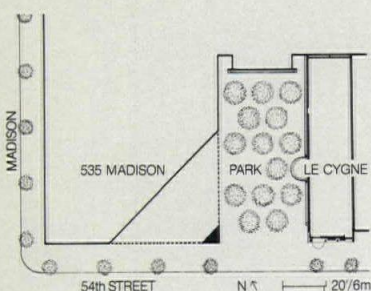
To connect the rooms of the restaurant, a "mediating concept" of color and detail derives from Impressionism, in which artists were preoccupied with the effects of light upon objects and surfaces. The downstairs dining room became "morning," with its cool blues, pinks, lavenders, and flower-garden murals by Barbara Goodwin. The vestibule/stairwell became "midday," with a transitional palette of rose, gray, and blue. Finally, the "evening" of the upstairs room is revealed in its warmer pinks, oranges, and ochres. Its landscape murals, by Mikhail Ivanetsky, evoke a more crepuscular mood.

A view from the landing of the upstairs dining room into the stairwell (facing page, upper right) reveals the original windows, which denote, at least intuitively, the placement of the building's original five floors. A "wainscot" of beveled gray glass, intended to recall stone courses, lines the route upward, and landings are paved with Tennessee pink and roja Alicante marble. Keystone-shaped elements over the columns in foreground conceal uplights.





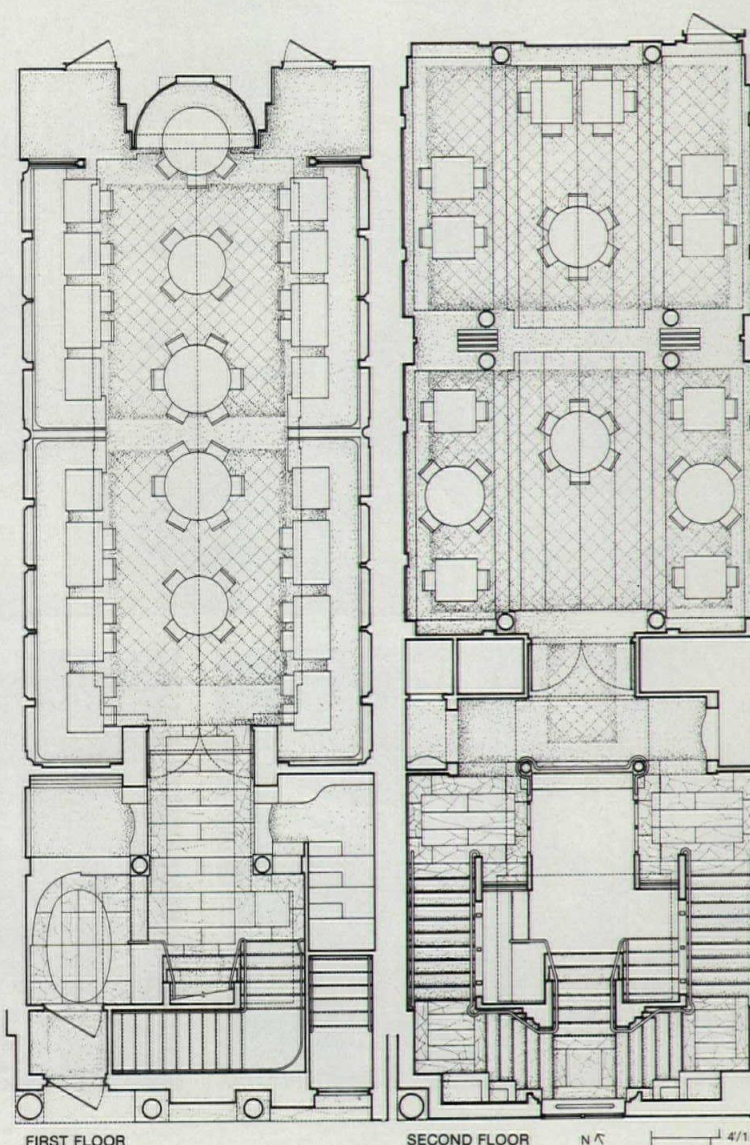
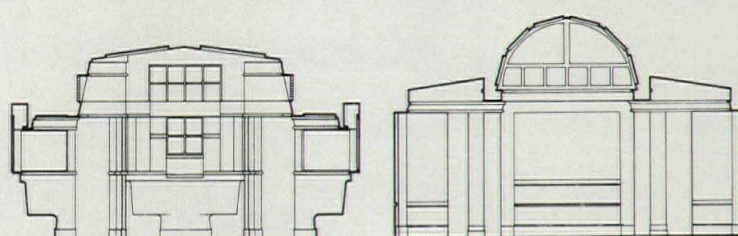
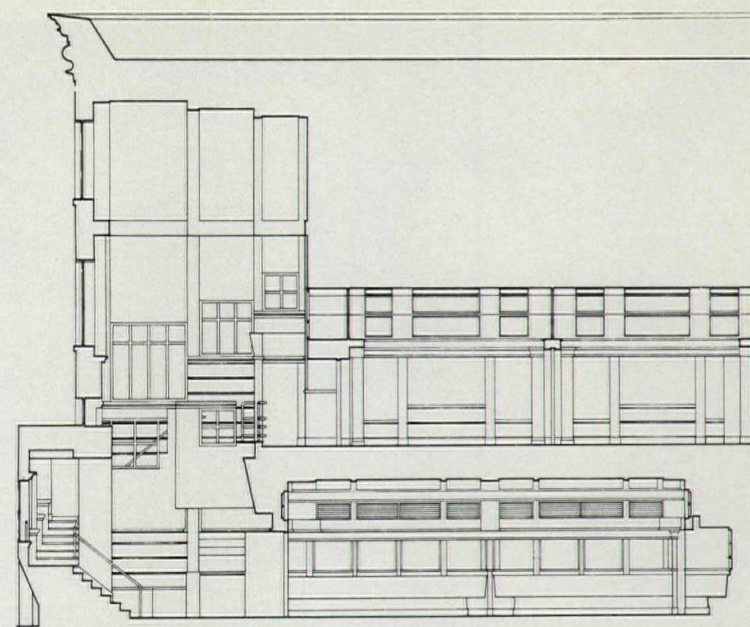
## Le Cygne, New York



The façade (facing page), which is still under construction, was modified by an addition, five feet deep, that houses stairs to the second level. A longitudinal section through the building (above) illustrates the winding progression from the entry, along the stair to the second floor. As a result of this "pulling out" of the lower façade, visitors pass in front of the old façade plane at the level of the first landing, and circle back behind it to get to the second landing (at the level of the small window). The stepped granite base, which follows the path of the stairs behind it, is meant to recall the monumental scale of the works of Finnish architect Lars Sonck, as well as to relate to the scale of the adjacent tower at 535 Madison Avenue, designed by Edward Larrabee Barnes (note façade and door grids). Surfaces above this base are layered stucco, denoting the "new use" of the interior, but the façade ultimately returns to its original brownstone and cornice.

The western edge of the façade illustrates the transition that will eventually be made from the restaurant front to the west wall of the building, which will be part of the Barnes design for the vest-pocket park intended for the site of the old restaurant (site plan, above).

Le Cygne's unusual two-story interior (behind a five-story exterior) results directly from its relationship to the tower now under construction at 535 Madison Avenue, designed by Edward Larrabee Barnes for developer George Klein's Park Tower Realty Corp. The restaurant's former home at Madison and



54th Street was pulled down to make way for the vest-pocket park that is part of the 535 package. Negotiations between Klein and Le Cygne resulted in the restaurant's moving east to the brownstone next door, No. 55, a five-story building. (Voorsanger & Mills, hired by Klein to design the building's exterior and core, were eventually commissioned by the owners of Le Cygne to design the restaurant interiors.) The restaurant's final form, however, resulted in part from Klein's decision to use eight floors of the brownstone's air rights (it had a floor-area ratio of 10) for the new tower. Thus, the architects faced the challenge of transforming five stories into two.

The second floor was originally intended to house banquet rooms (note folding doors between columns), since conventional restaurant wisdom has it that patrons prefer ground-floor dining rooms. But Le Cygne's second floor has proven so popular that it is now devoted to regular lunch and dinner use. By closing off the room with glass doors and installing a full sprinkler system, the architects were able to use the front stair as a legitimate fire exit.



# Critique

In its rather unusual design, Le Cygne attempts to deal with the issue of dining as theater, to answer the question, "What becomes a restaurant most?"

The restaurant's public areas consist of a vestibule/stairwell and two dining rooms—one downstairs, one upstairs (see photographs, drawings, and captions for a detailed description). The three rooms (the vestibule/stairwell is very much a room, albeit a transitional one) are discrete and even disparate, yet they make sense as an ensemble, offering two very different settings for dining.

The first-floor dining room's distinctly nautical air, with its emphatically repetitive bay system, predominantly blue-and-white color scheme, and (slightly overbearing) finlike elements that separate the bays and create porthole-like partial views of the murals and mirror panels, works perfectly—though perhaps not logically—with the murals themselves. Depicting a flower garden in full sunlight, they are lush but intimate in scale, with a sense of depth that counters the room's narrow proportions. The only anomaly in this otherwise refined space is the exedra at its north end; it seems neither fish nor fowl, with elevation, plan, and section colliding less than gracefully, and the mirrored pedimental fascia in front of the semicircular volume hanging about as if it had no place to go. The room isn't big enough for both of them. Bart Voorsanger maintains that he didn't want to overemphasize the exedra, yet the fascia calls undue attention to it.

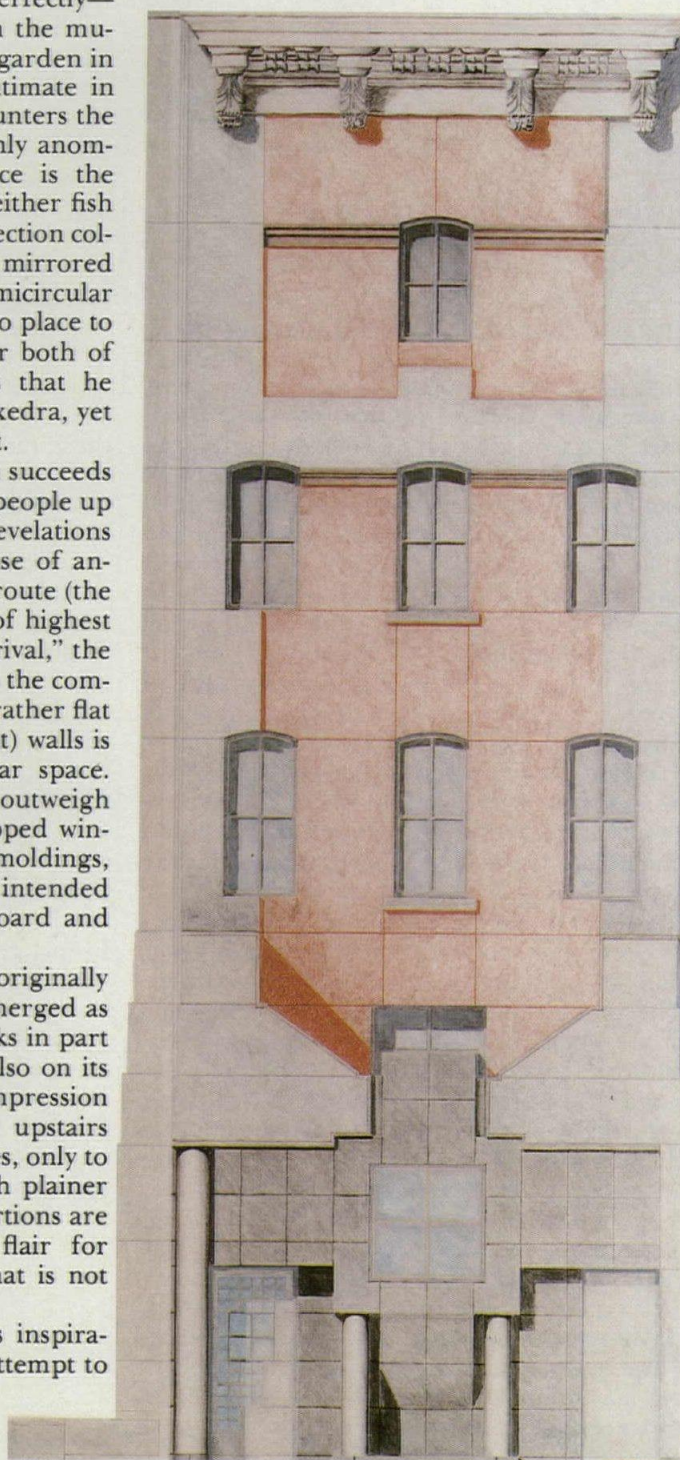
The vestibule/stairwell more than succeeds in its function as a magnet to draw people up to the second floor. Its volumetric revelations are shrewdly timed, creating a sense of anticipation that is rewarded both en route (the second landing holds the moment of highest mystery) and at the point of "re-arrival," the upstairs dining room. In contrast to the compelling volume of the stairwell, the rather flat articulation of its side (east and west) walls is the one real flaw in this particular space. While the merits of the former far outweigh the problems of the latter, the stepped window forms, topped by cornice moldings, typify the sort of referentially intended appliqué that has given gypsum board and paint such a bad name.

The second-floor dining room, originally meant to be a banquet room, has emerged as the more popular of the two—thanks in part to the power of the stairwell, but also on its own merits. While the sense of compression downstairs is fairly constant, the upstairs space is compressed in from the sides, only to soar upward into the vault. A much plainer room in decorative terms, its proportions are almost exalted, with a Baroque flair for drama and a sense of grandeur that is not found downstairs.

Voorsanger cites Impressionism's inspiration for the color scheme and the attempt to

capture the dematerializing effects of raking light on objects and surfaces. While the analogy holds for the skillful transition from one room's palette to another, it is nearly impossible to evoke painterly dematerialization in an architecture that is so palpably volumetric. But then, the Impressionists themselves never really tackled the question of indoor light; they concentrated far more heavily on outdoor effects.

The architects' manipulation of volume is, ultimately, the most rewarding aspect of Le Cygne, for it succeeds in imparting a sense of mystery and magic that all the ornament in the world couldn't match. That is not to say that the project's referential aspects are expendable; on the contrary, they create, at their best, an almost *fin de siècle* sense of richness and luxury. Nonetheless, it is to Voorsanger & Mills's credit that the presence of the past does not preclude the possibility of the timeless. [Pilar Viladas]



## Data

**Project:** Le Cygne, New York.

**Architect:** Voorsanger & Mills Associates, New York (building renovation and interior). Bartholomew Voorsanger, partner in charge; Richard Velsor, associate and project architect; John Ike (building); Charles Crowley (interior).

**Client:** Park Tower Realty Corp. (building); Le Cygne Restaurant (interior).

**Program:** for building (developer), a shell to include kitchens, mechanical and electrical systems, and exterior for tenant (Le Cygne). Five-story brownstone to be gutted and renovated to two floors, from grade to roof. Two full basements for kitchens, wine storage, staff rooms, etc., totaling 4400 sq ft, and a 5' x 20' piece added to front elevation. For tenant, a lobby dining room, and banquet room for restaurant, totaling 3730 sq ft.

**Major materials:** stucco; granite, anodized aluminum (exterior). Gypsum board; marble; wood, glass, acoustical tile (interior) (see Building materials, p. 112).

**Consultants:** Alfred Selnick, structural; Tassone, kitchen; Cosentini, mechanical; Paul Marantz & Jules Fisher, lighting; Savany Associates, interiors.

**General contractors:** HRH Construction (building); BIA Construction/Janco (interior).

**Costs:** withheld at client's request.

**Photography:** Peter Aaron, © ESTO.



# Cool, calm, and corrected

Delicately sidestepping the brouhaha of stylistic debate, architects Machado-Silveti employ Classicism to transform nothingness into being.

A replica of a classical marble (right) graces a niche in the wall of the salon. The vestibule (facing page) is marked by a marble floor and an antique Italian obelisk.



Instead of sweltering in the heat of the courtroom while the case of *Modernism vs Historicism* drags on, Rodolfo Machado and Jorge Silvetti prefer the oasis of "the conceptual continuity and permanence of architecture." As they maintain in an essay written for the 1980 Venice Biennale, "Since . . . the presence of the past is inevitable as well as unequivocal, its discussion and controversy should be dismissed . . . in order to concentrate directly on the production of an architecture that effects its own clarification by resorting to principles that are beyond style."

Having thus eschewed the tenets of Post-Modernism, which they term "a typical avant-garde inversion as an opposition to an immediate precedent," the Boston architects are free, as seen in the case of the Kramer residence in New York, to direct their collective energies toward the "architecturalization" of nondescript, neutral spaces into rooms. The rooms, on the top two floors (and roof) of a French Neoclassical townhouse on Manhattan's Upper East Side, were originally designed for servants and children, with little regard for architectural distinction, but the client wanted to bring to them some of the grandeur of the lower floors of the house. Applying their principle of "architectural correction" to these leftover spaces, Machado-Silveti created a sequence of rooms articulated by restrained Classical elements.

A tiny vestibule, paved with *verde antico* and white marble and adorned with a niche bearing an antique Italian obelisk, announces in no uncertain terms the project's architectural intentions. The single downstairs room,

called a *salon* by the architects, incorporates living, transitional, and dining areas in three zones defined by the parallel, tripartite bay division of the *poché* exterior and interior walls, whose niches, false beams, and columns are topped by squared brass capitals. The longitudinal axis of the room is established by the green marble fireplace, a monumentally uncompromising object that "takes over" the space in front of it. This *mise en scène* approach to interior architecture echoes the architects' work in the Downtown Club in Boston and the Harvard University Faculty Club in its concern for rigorous proportion, detailing, and execution. The monochromatic color scheme of pale pearl gray reflects their preference for the architectonic over the painterly, as in the Neoclassical French interiors they cite as precedent.

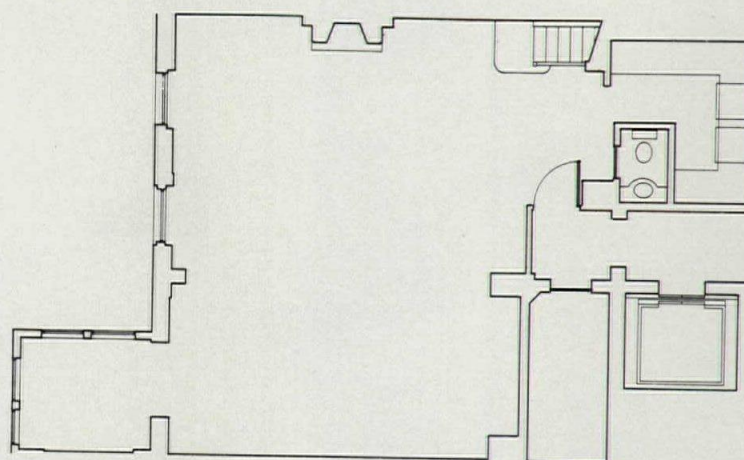
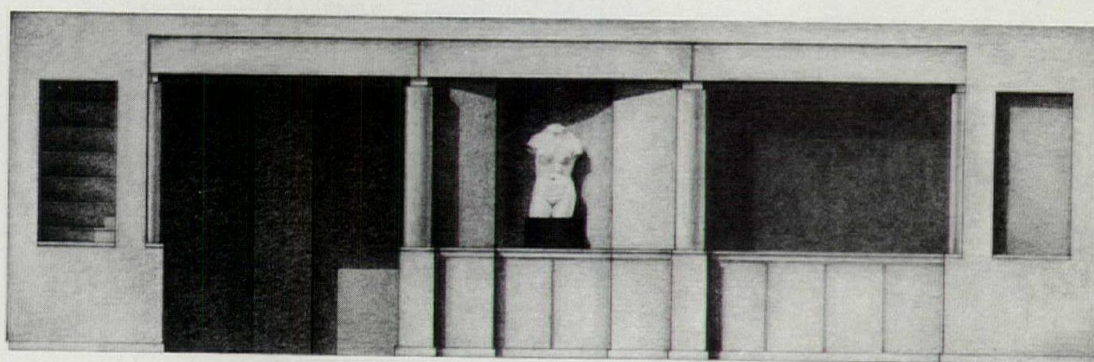
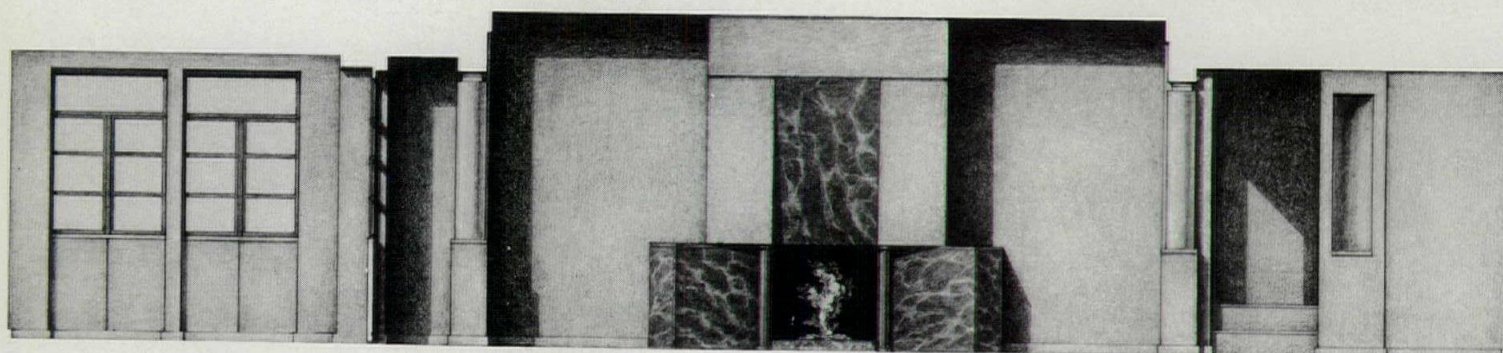
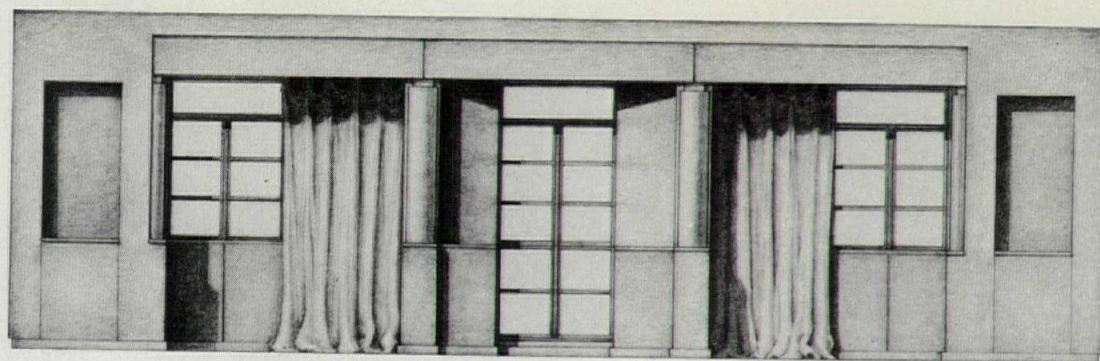
The eclectic mix of furnishings, arranged to mark "architectural moments," creates axes of symmetry that focus attention on those moments. The most romantic touch in the room, according to Machado, is the voluptuous tumble of pale-gray curtains, whose folds of heavy silk seem lit from within.

Upstairs (the second floor was essentially "cleaned up"), the roof terrace, which appears to hover magically above the treetops of Central Park, provides a "summer house" for a client with a fondness for sunbathing and outdoor entertaining. Again, architectural correction transforms a chaotic rooftop into two intimate rooms, whose blue-green lattice (the color of the copper on the mansard) defines the rooms while allowing transparency between them. In the second room, a false fireplace recalls the terrace of Le Corbusier's de Beistégui penthouse, whose Louis XV fireplace floated surreally against a severe white parapet. Machado-Silveti's terrace, however, forgoes such ironic commentary in favor of a more suitably lyrical stand. Considering the urban setting that dictates a garden above rather than behind the house, the ascension from grand entrance to jewel-like salon to intimate terrace can leave visitors serenely oblivious to the stylistic gridlock of the city below. [Pilar Viladas]

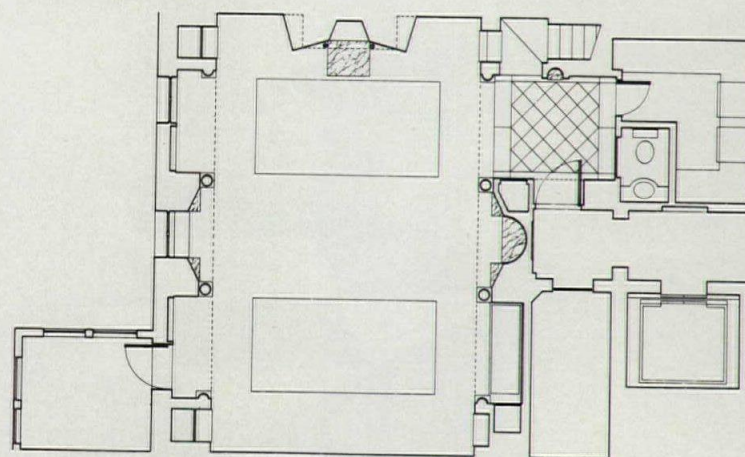








ORIGINAL FLOOR PLAN



REDESIGNED FLOOR PLAN

*Elevation drawings (this page) illustrate the tripartite division of the interior and exterior walls of the salon, as well as their articulation by means of niches, false beams, and columns. The "before" and "after" floor plans reveal the architects' extensive use of *poché* to give depth and life to what had been an anonymous space; the renovation involved moving the two windows. A small breakfast room (at lower left of plan) was left essentially unaltered. In the large downstairs salon (facing page), pieces of furniture reinforce axes of symmetry, and an eclectic mix, chosen by the architects, successfully combines Hoffmann armchairs with a contemporary sofa and a 19th-Century French Provincial table base with contemporary chairs. The Neoclassical objets bear out the rigorous scheme, standing in austere counterpoint to luxurious silk curtains. The monumental fireplace (facing page, lower left) establishes the room's longitudinal axis; objects recede into the depth of the niches in the long walls (facing page, lower right).*







**Kramer residence,  
New York, NY**

**Data**

**Project:** Kramer residence, New York, NY.

**Architects:** Machado-Silvetti, Boston, Ma; Rodolfo Machado, Jorge Silvetti, Robert Miklos. Patricia Maliar, construction supervisor; Bradford P. White, renderings.

**Client:** Oscar Kramer.

**Program:** renovation of the top two floors of a turn-of-the-century townhouse, totaling 1660 sq ft, and a new 1000-sq-ft roof terrace.

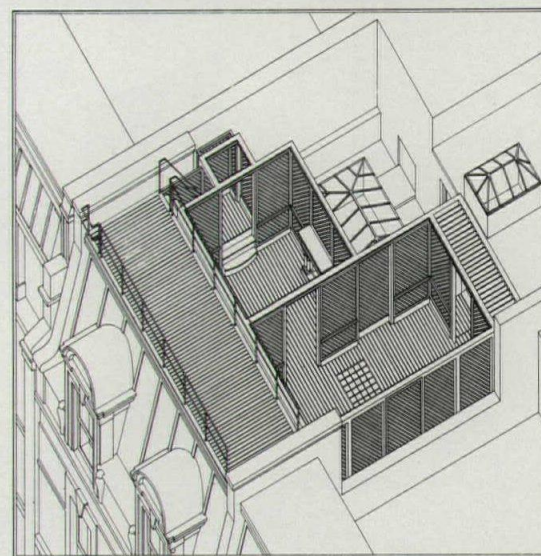
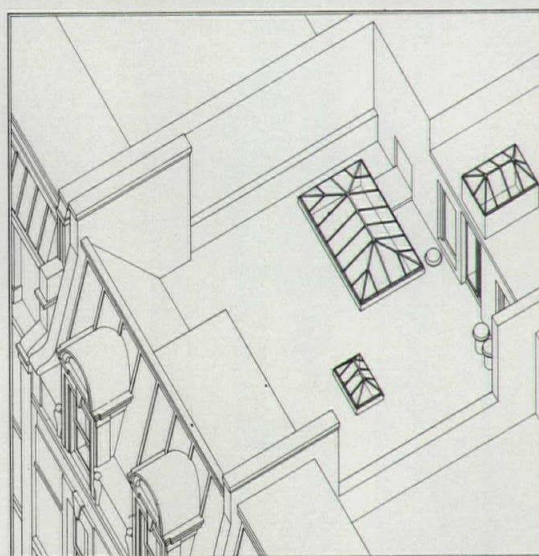
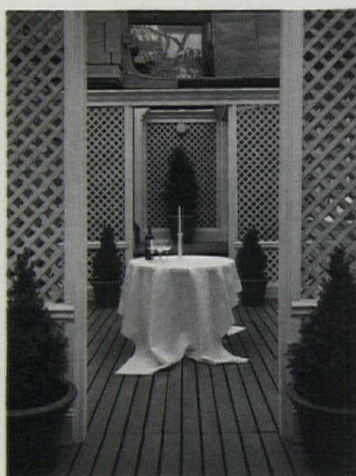
**Major materials:** Gypsum board on metal studs; marble, wood lattice (see Building materials, p. 112).

**General contractor:** Swim Construction, New York, NY.

**Costs:** withheld at client's request.

**Photography:** Norman McGrath.

The rooms of the roof terrace are defined by walls of blue-green lattice (right), and afford a spectacular view of the Carlyle Hotel in the distance. "Before" and "after" axonometrics demonstrate the effect of "architectural correction" on an unremarkable rooftop. A small storage room exists behind the "mansard" of the roof.





# Passing the buck

**Traditionally opposed, money and design have increasingly played a complementary role in successful architectural practices**



Money and design have a strained but inseparable relationship. Strained because, as an art, architecture represents qualitative values often in conflict with the quantitative, bottom-line judgments of business and finance. Inseparable because, as an expensive art, architecture requires money even to begin the design process and relatively large sums to bring it to fruition. The most successful firms strike a balance between the two, recognizing that too great an emphasis on one produces mediocre results in the other.

The architectural profession has long maintained a distinction between money and design. In the 18th Century, while builders and crafts people often called themselves architects, the profession in this country grew out of an aristocratic tradition of gentlemen architects who rarely accepted money for their advice. As firms grew in the 19th Century, architects maintained the distinction by a system in which different partners were responsible for design and business. While that division of labor recognized the differences among people's interests, it also reflected the concern that neither design nor money overwhelm each other.

Architectural education has further separated money and design. Few architectural schools offer more than a meager training in business or management, while few design studios give budget constraints as part of a project. Educators, as well as a large percentage of the profession, argue that schools should teach the art and not the business of architecture. The latter, they claim, is best learned in practice.

However convincing those reasons, our educational system has created its share of frustrations, both for recent graduates, who must quickly learn what it means to design within a budget, and for firms, who face the recurring problem of finding and training architects to market services and manage projects.

Our ambivalence toward the relationship of money and design has also created a somewhat misleading image of the architect in popular literature. The specter of Howard Roark, whose design integrity came at great expense, still looms large in the public's mind, even though it is an image perpetuated, to some extent, by the architectural community itself. Our heroes, however brilliant at design, rarely made much money or handled well what money they had.

Most architects forgo heroics, manage to

stay in practice, and make a decent, if somewhat lower, income than that of other professions. That lower income and the attendant decline in profitability have revived the debate over the relationship of money and design. Some architects have resigned themselves to lower incomes and profits as the price to be paid for architectural quality, as if architecture were an art that exists apart from its economic viability. Others have bemoaned the architect's decreasing control of the building process—a master builder role as much imagined as real—leading to an increasing number of architecture graduates who have sought to regain some of that control with further training in management, finance, and law. For them, architecture is strictly business, which cannot exist apart from the supply of money.

Many firms have adapted to the decline in profitability by instituting better business practices. They've established strong marketing and management departments, computerized budgeting and scheduling procedures, and carefully worded owner-architect agreements.

Many firms have also adapted by changing architectural services. Some have increased the variety of services that they can offer, from site surveys and programming to energy and maintenance analyses. Others have become, at one extreme, fine artists, receiving considerable income from the sale of their drawings. At the other extreme, some have become owners or developers in their own right, with in-house legal and financial expertise, or consultants to other architects, with a specialized knowledge in a particular aspect of the building process. Those changes have occurred almost in spite of the separation of money and design that pervades our teaching and thinking.

The following articles deal in several ways with the relationship of money and design. They offer more than specific advice and a few examples of how architects might adapt to a changing economy. They suggest that adaptation cannot occur without rethinking the fundamental relationship of money and design in other than antithetical terms.

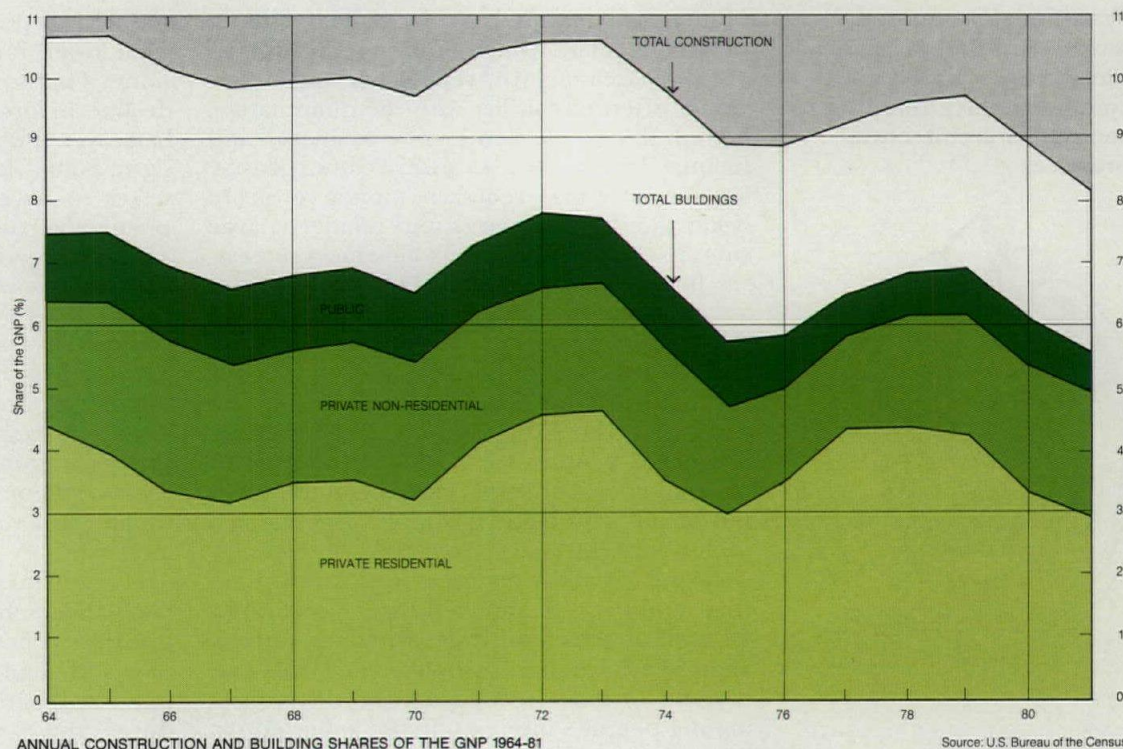
[Thomas Fisher]



# Building in eclipse, architecture in secession

Francis T. Ventre

**Investment in buildings and in architectural services is declining. Through building research, the architectural community can reverse that decline and more effectively serve clients.**



Analysts of the nation's building enterprise cite lower interest rates and a stronger economy as prerequisites for the recovery of building activity. A third element, not essential but nevertheless helpful, is expansion of now-curtailed public construction programs.<sup>1</sup> While changes in any two may suffice to prompt recovery of building activity, the recovery expected in 1983 should not obscure the likely resumption of two trends eroding the economic base of American building and transforming the knowledge base that guides building decisions. This article documents both trends. It examines the gradual shift in the nation's investment mix, and the more abrupt shift in the market share among the design professions. The article suggests reasons for these shifts and identifies possible responses by the design and consulting professions and, particularly, by the growing community of building researchers.

## The investment data

Building is, economically, much less important to the nation than it was just 20 years ago. Figure 1 illustrates that building, including reconstruction and rehabilitation, is a shrinking share of the nation's economic activity, when measuring the proportionate value of the building industry's final product to the Gross National Product.<sup>2</sup> There is no mystery

to this. The demand for buildings follows almost inevitably from cultural and socio-economic precursors, including the shift from a goods-producing to a service economy. While building activity in proportion to GNP has ranged between five and ten percent through most of this century, building activity of particular interest to the architectural and engineering design professions—nonresidential capital investment by American business and by governments—has persistently declined.

When the business sector's purchase of capital goods alone is examined, the fraction of investment in "structures" (buildings and public utility installations) is found to be falling sharply, with increased investment capital going to "equipment" (transportation equipment; office, computing, and accounting devices, including furnishings and fixtures; and production machinery). Business investment data in Figure 2, compiled by Patrick J. Corcoran of the Federal Reserve Bank of New York,<sup>3</sup> indicate that the share of private non-residential investment allocated to structures peaked at about 45 percent in the early 1960s and had declined to just over 30 percent by the late 1970s. Buildings simply are not competing successfully for scarce investment capi-

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tal. Moreover, as capital scarcity continues world-wide for the rest of the 1980s and into the 1990s, the fraction of private nonresidential investment going to structures is unlikely to grow. Conventional economic wisdom attributes that shift in investment to a combination of two factors: first, the effects of sustained inflation (which, although it has a beneficial effect on highly leveraged investment in real property, diminishes the value of tax writeoffs of long-lived investments, like buildings, making them less attractive than short-lived investments, like equipment), and second, the effects of tax policy (which depreciates equipment assets at a much faster rate than building assets, and makes equipment more likely to qualify for investment tax credits). According to Corcoran's econometric analysis, however, these two factors account for only one-quarter of the shift away from structures; three-quarters remains unexplained.

These results lead to an observation and further questions. First, many building decisions may be grounded in beliefs impervious to economic logic or unexplained by insights derived from straightforward microeconomic theory. Second, if Corcoran's analysis is correct, and inflation and taxes explain so little of business investment behavior, then will controlling inflation alter business decisions about building investment and will the sweeping changes in the asset depreciation rates and the investment tax credits embodied in the Economic Recovery Tax Act of 1981, and the Tax Equity and Fiscal Responsibility Act of 1982 make much difference to planners of private nonresidential investment?

Government investment in fixed nonresidential capital, measured in the same interval (1954-1979), shifted away from structures and into equipment even more decisively than the private sector's investment.<sup>4</sup> One consequence of this shift is the dilapidated condition of the nation's infrastructure of bridges, roads, sewer and water systems, and mass transit facilities.<sup>5</sup> Recent investment history suggests that even assuming an unlikely influx of investment capital, buildings will not capture a much larger share of the public sector's construction expenditures.

#### Data on design and consulting activities

The design and consulting segment of the building team has been realigning itself for some time, a change becoming obvious to others in the building community. Clients are allocating design and consulting fees differently, with engineering firms increasing their influence over building investment decisions by capturing an increasing fraction of design and consulting fees. Architectural firms lost one-fifth of their share of the building design and consulting market from 1967 to 1977, the date of the most recent Census of Service Industries.<sup>6</sup> As Figure 3 reveals, this shift of business from architecture to engineering-oriented firms preceded the 1973 Arab Oil Embargo. Therefore, it was not just the need for more exacting energy analyses that motivated clients to seek more engineering oriented services. Of course, building design

and consulting firms frequently provide both architectural and engineering services. The census form, however, requires firms to choose either one or the other, and in so doing, to classify themselves according to the activity or operation that "accounts for the major portion of (its) receipts . . . and which best describes (the) establishment." Consequently, the shift that Figure 3 illustrates could be interpreted in one of two ways: either as a real shift in the nature of building design and consulting work or as a shift in how designers and consultants present themselves to others, particularly clients in the highly competitive market for professional services.

#### Some plausible explanations

An understanding of the reasons for these shifts is needed to devise effective responses from the building sector and the professions that serve it. The decline of the building share of GNP may be a phenomenon common to all advanced industrial societies. This was an "important feature of the postwar years"<sup>7</sup> in Japan, that most-watched rival economy. Indeed, commentators on American design and planning, notably Buckminster Fuller and Daniel Bell, maintain that the etherealization of national wealth from physical stocks to information flows may be the distinguishing feature of the post-industrial era of Western civilization.<sup>8</sup>

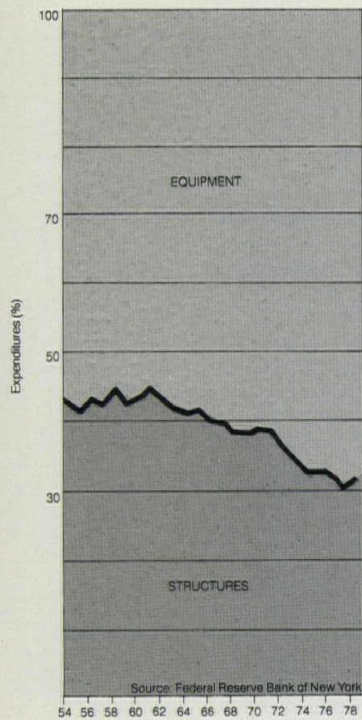
The unexplained part of the shift in fixed nonresidential private capital going to equipment rather than structures may reflect the reputed contribution to productivity now routinely expected from investment in equipment. Business equipment sales representatives increasingly provide evidence of enhanced productivity following equipment installation. Counterpart data on the contribution of the built environment to productivity are not commonly available. Little wonder, then, that executives in business and government have chosen the promise of enhanced productivity through equipment over the less specified advantages of investing in a new or rebuilt structure.

What are the advantages of building investments? Can they be rendered concretely enough to inform and perhaps influence the thousands of routine investment decisions of business, industry, and institutions? Fortunately, many owners who commission new buildings believe that greater productivity will result from their investment,<sup>9</sup> and many researchers have begun to document the effects of buildings on users.<sup>10</sup> The difference between *belief* on the one hand and the *demonstration of result* on the other lies in the quality of our knowledge about buildings and their effects.

#### References

- <sup>1</sup> Economics Department, McGraw-Hill Information Systems Company, "Construction-economy update," *Architectural Record* (Sept. 1982), pp. 35-39.
- <sup>2</sup> Based on current Commerce Department updates supplementing U.S. Department of Commerce, Bureau of the Census, *Value of New Construction Put in Place in the United States, 1964 to 1980*. (Washington, DC: USGPO, Feb. 1982) and Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, Bicentennial Edition, part 1 (Washington, DC: USGPO, 1975).
- <sup>3</sup> GNP is used as a basis of comparison for two reasons: 1) It is familiar, in at least a general way, to most readers, and 2) unlike net national product and national income, GNP includes the production of fixed capital that serves for replacement purposes. This last is too significant a factor to ignore in any discussion of the economics of building activity (See p. F1-9 of the Historical Statistics volume for further discussion.)
- <sup>4</sup> "Inflation, Taxes and the Composition of Business Investment," *Federal Reserve Bank of New York Quarterly Review*, Vol. No. 3 (Aug. 1979) pp. 13-24.
- <sup>5</sup> Estimates of the public sector investment mix are derived from U.S. Department of Commerce, Bureau of Economic Analysis, *Fixed Reproducible Tangible Wealth in the United States, 1925-79* (Washington, DC: USGPO, March 1982), Table B11.
- <sup>6</sup> Pat Choate and Susan Walter, *America in Ruins: Beyond the Public Works Pork Barrel* (Washington, DC: Council of State Planning Agencies, 1981). This theme has enjoyed cover-story treatment in *Business Week*, where costs to American business traceable to the crumbling infrastructure are detailed, and in *Newsweek*.
- <sup>7</sup> U.S. Bureau of the Census, 1977 *Census of Service Industries Subject Series: Engineering, Architectural and Surveying Services* (SC77-S-6) (Washington, DC: USGPO, April 1981), Table 6.
- <sup>8</sup> Kozushi Ohkawa and Henry Rosovsky, *Japanese Economic Growth: Trend Acceleration in the Twentieth Century* (Stanford, CA: Stanford University Press, 1973), pp. 61 and 155.
- <sup>9</sup> For example, Daniel Bell, *The Coming of Post-Industrial Society* (New York: Basic Books, 1973) and R. Buckminster Fuller, *Ideas and Integrities* (Englewood Cliffs, NJ: Prentice-Hall, 1963).
- <sup>10</sup> Karl Keller, "The Owners' Role," *Building Design and Construction* (May 1981), p. 53. BD&C surveyed building owners with an annual commercial-industrial-institutional building budget over \$1 million. In 1980, productivity improvement was the fourth-ranked reason for building, cited by 10 percent of owners. In 1981, it was second-ranked, cited by 26 percent of owners.
- Additional owner endorsements are quoted in "Architecture as a Corporate Asset," *Business Week*, Oct. 4, 1982, pp. 124-126. But the *Business Week* testimonials probably over-represent the relatively few occasions when a "flagship" building is designed to project a preferred image





ANNUAL COMPOSITION OF BUSINESS INVESTMENT, 1954-1978

of corporate headquarters or other prestige-laden structures.

<sup>10</sup> Building types occupied by highly valued employees of the service economy have drawn particular attention of late: "Social Sciences Help Coming to Design Research Building," *The Wall Street Journal*, July 30, 1982, p. 4 and *Environment and Behavior's* two-part "Special Issue on Office Design and Evaluation," edited by Jean D. Wineman, Vol. 14, No. 3 (May 1982) and No. 5 (Sept. 1982).

<sup>11</sup> Richard M. Levy, *The Professionalization of American Architects and Civil Engineers, 1865-1917*, unpublished doctoral thesis, Department of Architecture, University of California, Berkeley, 1980, pp. 293-294.

<sup>12</sup> Turpin C. Bannister (ed.), *The Architect at Mid-Century: Evaluation and Achievement* (New York: Reinhold, 1954), pp. 288-289, and pp. 445-446 containing the notorious Recommendations R-19 and R-24).

<sup>13</sup> "Probing the Productivity Puzzle," *Brookings Bulletin*, Vol. 16, No. 2 (Fall 1979), pp. 7-9.

<sup>14</sup> "Real Estate Bull Market Over, Firm Believes," *Washington Post*, Aug. 7, 1982, p. F4.

<sup>15</sup> Gideon I. Gartner, "Executive Workstations: The Obstacles Crumble," in *Office Today*, an advertising supplement to the *New York Times*, Oct. 3, 1982.

<sup>16</sup> "National Income and Product Accounts," Special Supplement to the *Survey of Current Business* (Washington, DC: Department of Commerce, Bureau of Economic Analysis, July 1981), Tables 5.5 and 5.7, pp. 44-46.

That quality of knowledge might explain the increased influence of engineering-oriented firms in the building design and consulting field. Engineers may not profess as wide a range of knowledge about the performance and effects of buildings as do architects, but as the professional periodicals show, the literature in building engineering is characterized by relatively sophisticated technical analysis and a precision of language. Architectural periodicals have become more esoteric, too, but the philosophical discussions there have emphasized the phenomenological at the expense of the empirical. While the abstract disputations among architects ensue, engineers may be making more design decisions for increasingly sophisticated buildings.

Who will guide the future development of building knowledge? Will it be the expanding architectural intelligentsia, issuing recondite rationalizations of design decisions, or will it be those who have undertaken more rigorous empirical evaluations of design methods and completed buildings. This unspectacular but essential work, required for the establishment of reliable knowledge, is needed to inform the choice or synthesis of building alternatives, and to test those alternatives against users' purposes. Whoever develops that architectural knowledge base will preempt many of tomorrow's building design decisions.

#### Architecture in secession?

Three times in this century the architecture profession has distinguished itself from the engineers. At the turn of the century, architects, in a move apparently taken with a specific marketing strategy in mind, ceded technics to the civil engineers;<sup>11</sup> in the 1950s, the architecture profession, speaking through the American Institute of Architects' Commission for the Survey of Education and Registration, labeled as "misleading" the term "architectural engineering" and formally dismissed its academic pursuit as qualifying a candidate for the architect's professional registration examination;<sup>12</sup> and in the 1960s, many university departments of architecture withdrew from colleges of engineering and were either granted autonomy or were combined with colleges of art. The architectural magazines, for their part, now include more engineering analysis. While *Architectural Record* has discontinued its mid-August "Engineering for Architecture" issue, it promises to increase its coverage of architectural engineering (*Record's* word for it) by devoting a greater number of pages per year to a new "Engineering" section in each issue. *Progressive Architecture's* coverage of technical subjects grew impressively in recent years. Its annual April "Energy" issue, and the numerous new energy- and solar-oriented building magazines, address design issues in a more

specialized and sophisticated manner than the more generalist periodicals serving the mainstream of the profession.

While architects developed a more exclusive self-definition, the interest of engineers in the built environment has quickened. Mechanical engineers and architects for some time have been renegotiating their relationships for a more effective pursuit of energy efficiency. The June 1981 *ASHRAE Journal* devoted over five pages of closely set type to that topic including detailed critiques by leading architects of standard practices and contract documentation systems now in wide use.

Other engineering specialties have been more assertive. As early as 1970, for instance, the monthly magazine of the American Society of Civil Engineers restyled itself from *Civil Engineering: the Magazine of Engineered Construction* to *Civil Engineering: Environmental Design/Engineered Construction*. A 1973 article entitled "Are Civil Engineers Qualified to Design Buildings?" answered affirmatively, prompting the publication of only a single protesting letter to the editor. And the January, 1982 cover story described how a structural engineering firm acquired an architect as a partner, transforming itself into an engineer/architect firm.

#### Productivity and knowledge

Economists and policy analysts in and out of government, seeking explanations for the nation's lagging economic performance, increasingly hold the view that an infusion of capital, whether allocated to structures or equipment, will not, by itself, restore economic growth. Edward F. Denison of the Brookings Institution has concluded that while such investment is important, it accounted for only one-sixth of our rapid economic growth during the years from 1948 to 1973. Those were extremely good years for the building industry, too, whose rate of GNP hovered near 8.0 percent, hitting 8.5 percent in 1955. (It is now two-thirds that figure.)

A more significant contributor to growth in those years, according to Denison, issued from advances in knowledge, particularly the "incorporation of new knowledge into all kinds of production."<sup>13</sup> Denison's conclusion reinforces the explanation that the shift in private nonresidential capital investment from structure and into equipment results from new knowledge being more rapidly embodied in the design, production, management, and use of new equipment. When that new knowledge specifies how a given article of business equipment can enhance the productivity and competitive position of the purchasing organization, the equipment probably will be bought, even if the dollar outlays are much higher than purchasers are accustomed to paying. If, for instance, a new computer terminal with a word processing capability can be shown to enhance productivity, then even that "big-ticket" item will be purchased while large building investments are either postponed or forgone completely.

Let two hypothetical, but plausible, examples illustrate comparative building and



equipment cost decisions faced by executives in business and the professions. Assume that a computer terminal just purchased serves a beginning lawyer in a New York office in 1972. The space occupied by the young professional (annual salary = \$35,000) cost \$2700 per sq ft per year, or 7.7 percent of the lawyer's salary. But by 1982, the cost of the space increased to \$11,250 per sq ft per year, or 26 percent of the new lawyer's 1982 salary of \$43,000.<sup>14</sup>

Now move upstairs to the firm's executive suite. In 1977, the firm's office manager, earning \$45,000 per year, assigned \$15,000 of the firm's budget to computerize her own work station, a one-time purchase of one-third her annual salary. By 1987, the executive in that position might be expected to earn a salary of about \$90,000, but the work station would be expected to cost \$3000, yielding a work-station/salary ratio of only 3.3 percent.<sup>15</sup> Decision-makers face these kinds of cost comparisons every day, making the incentive to modernize the work station (through equipment purchase) rather than to reshelter the firm (through an investment in structure) all but irresistible. While the figures just cited are estimates and should be treated with due circumspection, the trend that they represent is not easily dismissed. Between 1976 and 1979, private nonresidential purchases of furniture and fixtures, and of office, computing, and accounting machinery (all measured in constant dollars) grew 42 and 56 percent, respectively. Constant dollar expenditures for new and rehabilitated nonresidential buildings, on the other hand, grew by 37 percent in the same interval.<sup>16</sup>

Can design professionals describe the contribution that space makes to the law firm's effectiveness with anywhere near the precision and confidence that the computer vendor can? The computer vendor can probably demonstrate each year how much more information the equipment can process for less money. Can building designers and producers credibly demonstrate the (presumably) higher quality of the (manifestly) more expensive building? To be sure, economists have struggled for years to devise an appropriate procedure for treating quality change in capital goods of any kind, let alone something as socially and physically complex as a building. But unless we can better articulate how buildings matter, we will not stem the continuing erosion of investor confidence in the built environment.<sup>17</sup>

#### Building knowledge: The way ahead

What do we reliably know about buildings, their design, performance, and effects? Responsibility for developing the knowledge base for a particular field is shared, usually, among leading practitioners, the media, and the research institutions in industry, academia, and government. But responsibility

for the development of the architectural knowledge base has been diffuse and disjointed. Fortunately, a number of organized efforts to accelerate the systematic acquisition and codification of knowledge about buildings and their design, performance, and effects have begun. Notable instances are the formation of the Architectural Research Centers Consortium (30 schools since 1976), the Association for Computer Aided Design in Architecture (ten schools since 1981), and the Design Methods Group and Environmental Design Research Association, dating to the middle and later 1960s, respectively. This emergence of empirical research as a component of architectural education is timely because it coincides with a sharp curtailment of federal agency research activities addressing problems amenable to partial resolution through architectural design. In contrast, the programs of the National Endowment for the Arts and the National Science Foundation, the government's principal sources of academic research funds for architecture-related studies, remain in place with no drastic reductions, although competition for those funds is now much keener because of the curtailments in other agencies' research budgets.

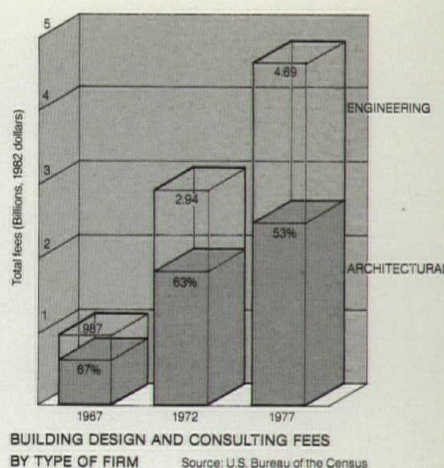
The American Institute of Architects also has committed itself to the development of a knowledge base for professional practice, exemplified by the 1982 AIA convention's adoption of a new purpose for the Institute. The Direction '80 Task Force, recommending the renewed knowledge orientation for the Institute, reported to the convention:

"Architectural knowledge and design ability are the basis of our profession. If the AIA fails to manage this knowledge for the benefit of its members and society as a whole, then other institutions and corporations may fulfill this vital role for the benefit of other groups and interests."<sup>18</sup>

The response to that challenge has been a shift in AIA priorities "from a primary concern for architects to a primary concern for architecture—from a service-oriented association to a knowledge-based national institute (concerned with) advancement of the art and science of architecture and advocacy of design excellence."<sup>19</sup>

#### Transition: From revelation to research

Receipts for architectural design and consulting services are a shrinking share of a shrinking market. This occurs because superior technical knowledge has increasingly replaced lore as the primary basis for decisions within the economy and within the building community itself. Architects can enhance their contribution to the building industry and the industry's contribution to the economy through the development of systematic and reliable knowledge about the design and use of environments. We must supplement, not supplant, lore-based intuition with research-based knowledge. While this prescription is hardly novel, changes in functional relations within the industry and shifts in the nation's investments have made the message more urgent. □



<sup>17</sup> "End of the Office Boom: Developers face financial ruin; bankers are left holding the bag," (cover story) *Business Week*, Oct. 4, 1982, pp. 94-98.

<sup>18</sup> *Direction '80s 1982 AIA Convention Report*, p. 3.

<sup>19</sup> "Convention Adopts Direction '80s and Nuclear Disarmament Policy," *AIA Journal*, July 1982, p. 13.

A note on data sources. Three important sources of data on building design and consulting activity are: the Census of Service Industries, occurring at five-year intervals since 1967 and aiming for complete coverage of the architecture, engineering, and land surveying field; and the annual surveys conducted by *Engineering News Record* and by *Building Design and Construction* magazines. The two magazine surveys rely on firms to cooperate voluntarily, and many do. Coverage of the smaller entities that abound in this area of professional services is difficult, however, and here is where the Bureau of the Census has an advantage the other sources do not. Response to the census questionnaire is required by law, and the same law (Title 13, U.S. Code) provides that the firm's copies of its responses to the census forms are immune from legal process. Finally, Census data on the hard-to-count smaller business entities are derived, in part, from the records of the Internal Revenue Service and the Social Security Administration.

All in all, the several surveys should be viewed as complementary, and what some achieve in timeliness, others make up in thoroughness. All are needed for a rounded view of the professions providing building design and consulting services.



# Life-cycle costing primer

C.W. Griffin

**Life-cycle costing offers several ways of predicting and thus controlling project costs. It can aid the architect in making design decisions and in reducing liability.**



Like the anxiously awaited economic recovery, life-cycle costing (LCC) inspires more talk than action. The sheer economic necessity of controlling costs, however, should overcome any lingering resistance to LCC. LCC analysis offers the owner a greater return on invested dollar, and greater control of the project budget, for it looks at total costs rather than just initial price as the sole economic criterion for selecting building components. Although the LCC process has its limits, the problem of accurately estimating project cost is magnified without it. LCC, for example, forces you to estimate operating and maintenance (O&M) costs when selecting an HVAC system.

For architects in a sagging national economy, the ability to control costs through LCC has become ever more vital. LCC techniques allow the architect to make better design decisions and product selections, and as buildings become more technologically sophisticated, those techniques can help establish a design professional's claim to competence.

Ignorance of LCC can even disqualify an architectural firm from competing for a project. A growing number of federal, state, and local governmental agencies, spurred by skyrocketing energy costs over the past decade, have legislated mandatory LCC studies for public projects.

Architects, hit with malpractice lawsuits, can cite LCC studies to document design decisions and product selections. Since many architects sued for malpractice often lack records justifying their design decisions as the culmination of diligent analysis, LCC can mitigate charges of careless product selection.

Guard against unrecorded, intuitive LCC. Even when one alternative offers enormous economic advantages over competing alternatives, a simplified, recorded LCC is better than a mental one. Fading images in an architect's memory are useless in a law court investigating his or her competence.

## Basic concepts

In life-cycle costing, instead of considering only the price of a project or building component, you consider all costs associated with the project over its service life. These long-term costs fall into two categories: initial or capital cost, and operating and maintenance (O&M) cost.

Initial cost includes all front-end project costs for everything from the purchase of land, through design and legal fees, to construction costs.

Operating and maintenance costs encompass, with the exception of mortgage principal and interest, all annually recurring costs for energy, maintenance, repair and replacement of equipment, real estate taxes, and insurance premiums. Costs that remain constant for different alternatives do not require consideration in an LCC analysis.

Initial cost must not be confused with price. Initial cost requires an assumption, preferably based on experience, about the service life of a building component. Price carries no such assumption.

As a simple illustration of this distinction and of LCC in general, suppose you are weighing the alternatives for batteries for a portable radio. Assume that a set of conventional dry-cell batteries costs \$3, with an estimated service life of three months, whereas a set of longer lived batteries costs \$10, with an estimated service life of one year.

For a one-year service life comparison, the longer lived batteries have an initial cost of \$10 with no O&M cost. The shorter lived conventional dry-cell batteries have an initial cost of \$3 plus O&M (i.e., replacement) cost for three additional sets of batteries replaced at the end of each quarter. Based on an annual 12 percent interest rate (3 percent compounded quarterly), the equation for Present Worth value is as follows:

$$\begin{aligned} \text{Total Life-cycle Cost (TLCC)} \\ = \text{Initial cost} + \text{Replacement cost} \\ = 3 + 3 \left[ \frac{\left( \frac{1}{1 + .03} \right) \left\{ \left( \frac{1}{1 + .03} \right)^3 - 1 \right\}}{\left( \frac{1}{1 + .03} \right) - 1} \right] = \$11.52 \end{aligned}$$

It is more economical in the long run to buy the higher priced batteries, regardless of their substantially higher price.

Despite the vastly more complex data required for architectural life-cycle costing and the varying nature of the problems with which it deals, that example, with its reduction of all costs to a common baseline time and its consideration of initial as well as re-

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curing costs, displays the basic LCC concept. Price is no better guide to long-term economy in a construction project than it is in the purchase of portable radio batteries. Admittedly, there is a dearth of reliable data for accurately estimating operating, maintenance, and replacement costs for many building components, but that fact does not disqualify LCC as a valid approach to building economics. It merely highlights the need for more reliable cost data.

### Types of cost comparisons

Despite the inherent simplicity of the LCC concept, cost comparisons must be presented in different ways for different purposes. The developer of a condominium project has different economic criteria from a public agency concerned with the annual O&M cost of its project. To satisfy these varying needs, LCC analysts have developed the following methods: total life-cycle cost (TLCC), equivalent annual cost, annual return on investment, payback period, and benefit/cost ratio.

Although these techniques are variations on the same theme, they speak to different needs. For an owner committed to building and operating a project, and thus concerned with selecting the most economical components, TLCC or equivalent annual cost is appropriate. To an owner uncertain whether to incorporate, say, a waste-heat recovery system in a project, annual return on investment might be most helpful. This method is especially good when tax credits or abatements weigh heavily in the economic equation.

The two remaining methods emphasize different time frames. For owners interested in quick profits, such as speculative builders or developers, payback period—the time required to recoup capital investment through annual O&M cost savings—may be the most important economic consideration. In contrast, for a public agency or a private owner interested in a long-term investment, benefit/cost ratio may be most meaningful. (If the benefit/cost ratio exceeds 1, you go ahead with the project.) Benefit/cost ratio also provides a rational basis for choosing among alternatives after the go-ahead decision has been made. The annual return-on-investment method would serve as well, simply by comparing the rates of return associated with different alternatives. With the single exception of payback period, all these techniques convey essentially the same message.

### Sensitivity analysis

In the process known as sensitivity analysis, assumptions made in the LCC process can be tested by recalculating the equations using different variables. For example, what are the economic consequences of a 40 percent overestimation in the service life of a packaged, rooftop HVAC unit. The answer, readily gained by running two sets of calculations through the computer, can help the designer

assess the risks if his or her assumptions prove wrong. The recent swings in interest rates, as well as the difficulty pinpointing the estimated service life and maintenance costs for building components, make sensitivity analysis that much more important.

Sensitivity analyses also may suggest design alternatives. The risks associated with rooftop HVAC units may justify a corrosion-resistant housing or an internally housed central HVAC system. Such alternatives should be studied early in the design process, when their advantages can be fully exploited. For example, a central HVAC system requires additional interior space, but it can mean reduced roof maintenance costs and lengthened service life through improved drainage, reduced flashing, and reduced rooftop traffic.

### Example

Life-cycle costing requires familiarity with basic principles, as much as an ability to follow tabulated forms. From a survey of conventional built-up roof system maintenance costs in Alaska, consulting engineer Haldor W.C. Aamot estimated annual maintenance cost savings at 4 percent of installation cost, for a protected membrane roof (PMR), a roof system with the membrane under the insulation.

Let's use LCC techniques to find out how much additional investment in the original roof system capital cost is justified by an annual maintenance cost reduction of 4 percent of installation cost. Over a 20-year life cycle, the present worth of the 4 percent annual maintenance cost saving (expressed as a percentage of initial cost, C) is computed as follows:

$$PW = .04C \frac{a(a^n - 1)}{a - 1}$$

$$\text{where } a = \frac{1 + m}{1 + i} = \frac{1 + 0.10}{1 + 0.12} = 0.982$$

m = maintenance-cost escalation = 10%

i = interest rate = 12%

n = number of years = 20

PW = .04C x 16.62 = 0.66C

Under these assumptions, a PMR is a more economical roof system than a conventional built-up roof system if its initial cost is less than 1.66 times the conventional system's initial cost.

That example depicts the potentially large economic benefits that can accrue from life-cycle costing. For larger scale decisions, the designer must consult reference books, such as *Life-cycle Costing for Design Professionals*, by Alphonse J. Dell'Isola and Stephen J. Kirk (McGraw-Hill, 1981). If this article stimulates further research and thinking about the subject, in addition to serving as an introductory primer, it will have served its purpose. □

### LIFE-CYCLE COSTING CONCEPTS AND FORMULAS

#### Present worth and future worth

Because of the interest, or "opportunity value" of money, all life-cycle cost comparisons must be computed for the same time, normally present worth (PW), but sometimes future worth (FW). Future worth is computed via the compound-interest formula:

$$FW = PW(1 + i)^n$$

in which PW = Present worth (e.g., invested capital)

i = interest rate

n = number of interest-compounding periods

By simple transformation of the above equation, dividing through by  $(1 + i)^n$ , Present worth is computed simply as follows:

$$PW = \frac{FW}{(1 + i)^n}$$

#### Total life-cycle cost (TLCC)

Reduced to the PW time baseline, total life-cycle cost (TLCC) can be presented either as (a) a total owning cost, or (b) as equivalent annualized cost. For total cost, there is a useful formula for the sum of a constant or escalating cost series:

$$TLCC = C + A \left[ \frac{a(a^n - 1)}{a - 1} \right]$$

in which C = Initial (capital) cost

A = PW of annual O&M cost (for current year, i.e., year 0)

$a = \frac{1 + e}{1 + i}$ , in which e = annual escalation rate for cost under consideration

i = interest rate

n = number of years (or other time unit if used consistently throughout equation)

#### Equivalent annual cost

The formula for equivalent annual cost includes the sum of (a) annual mortgage payments, plus (b) annual O&M cost (or cost savings if they constitute the financial criterion).

Annual mortgage payments are obtained by simply multiplying the principal amount of the mortgage by the debt service constant. Available in widely published tables, debt service constant, d, is calculated from the following formula:

$$d = \frac{\text{Annual payment}}{\text{Principal sum}} = \frac{i(1 + i)^n}{(1 + i)^n - 1}$$

in which i = interest rate

n = number of compound-interest periods

Equivalent annual cost is more limited than direct comparison of TLCC cost, which can more readily accommodate escalation of annual O&M cost.

#### Payback period

Payback period (time to recoup investment) can be calculated via two formulas:

(1) with assumed constant annual cost savings

$$n = \frac{\log \left[ \frac{S/C}{S/C - 1} \right]}{\log(1 + i)}$$

in which C = Capital investment

S = Annual cost savings

i = interest rate

n = number of years to pay off capital investment with annual debt service payment, S

(2) with assumed annual escalation of cost savings

$$n = \frac{\log \left[ \frac{C}{aS} (a - 1) + 1 \right]}{\log a}$$

in which S = Current year's (i.e., year 0) saving

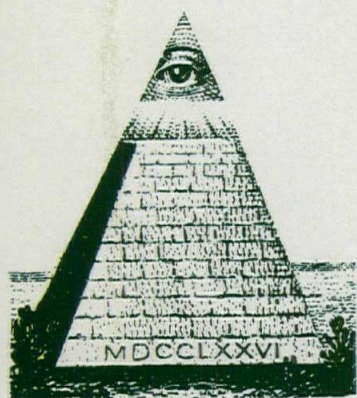
$a = \frac{1 + e}{1 + i}$ , (e = annual cost savings escalation)



# Building evaluation services

**Robert G. Shibley**

**Buildings need constant adjustment to the needs of their users. That adjustment can occur in a systematic manner through building evaluation, creating a new market for architectural services.**



Robert Shibley is a professor and chairman of the Department of Architecture at the State University of New York at Buffalo. His work through CAUCUS Partnership, also now in Buffalo, as well as through Federal Civil Service with the Corps of Engineers and the Department of Energy has led him to a specialization in building evaluation. He has participated in all the work cited in the article.

To evaluate or "put value on" a building is central to architectural design. Without evaluation, design becomes action without reflection, facilities management is left to those without architectural knowledge, and building owners are left to guess about the actual value of their building stock.

Both design and facilities management are often undervalued, contributing to the significant degradation of existing buildings and the impaired potential of new buildings. While there has been much discussion over the past 20 years of "building diagnostics," "post-occupancy evaluation," and "life-cycle costing," little has changed in the economics of building.

Comprehensive building evaluation is now going on in the New Zealand Ministry of Works and in the U.S. Army Corps of Engineers. The purpose of this service is to justify existing building programs, to promote the renovation and fine tuning of existing building stocks, and to contribute to the operational efficiency of building tenants. Another program at Georgia Tech, under a contract with the National Park Service, will explore routine maintenance inspections as a fundamental source of information about park management.

There are several types of building evaluation services. Some are offered as part of a specialization in programming, others as part of energy consulting, and still others as part of a package of services delivered by large management consulting firms. Often such services have a narrow focus. They are not conducted in ways that reap benefits beyond the specific problems they are designed to address.

In design, a building feature or form that offers multiple uses is felt to be better integrated or at least more efficient. The same is true for evaluation services; often what we find is different from, and perhaps more important than, what we expected. In the two case studies described below, the comprehensive evaluation services ensure multiple returns from each evaluation. They take maximum advantage of serendipitous findings.

## New Zealand Ministry

The New Zealand Ministry of Works and Development is that government's major landlord. Responsible for over \$200 million (NZ) of new construction every year, it services the military, power, health, and educational construction programs in addition to federal of-

fice and warehouse construction. The MWD is also responsible for the restoration, repair, and maintenance of the government's existing building stock in cooperation with tenant organizations. A full service design, construction management, and facility management agency, the MWD, in competition with the private sector, offers both in-house and contractual support services to its governmental clients. In New Zealand, a federal tenant may use the MWD or may acquire construction and facility management services from the private sector. The MWD is in business, therefore, because it can offer economies of scale with "learning curve" advantages.

In an effort to improve its services, the MWD, in collaboration with the School of Architecture at the Victoria University of Wellington, started a post-occupancy evaluation program in 1978. Apart from streamlining their internal operations, they wanted to show their clients they could use design, construction, and operations data to inform future construction, maintenance, and facility management decisions. They also wanted to extend their services to include management consulting, related to the trade-offs their clients always make between physical and managerial solutions to problems. This latter service was intended to develop a collaborative "self-help" program, in which clients would get better at those tasks for which they were responsible. The MWD would have a clearer understanding of their required work, and clients would have more realistic expectations of the results.

The four-year program involved an extensive review of evaluation methods, results, and cost benefits. A preliminary model of post-occupancy evaluation (POE) was derived and tested against MWD perceptions of the model's benefits, obstacles, and implementation strategies. The testing process involved a series of interviews and a workshop with MWD and its clients. Following the workshop, the evaluation model was adjusted and a series of three trial evaluations were conducted. The results were used as the basis for another workshop, which reviewed the strengths and weaknesses of the evaluation approach. This process of model development, testing, workshop review, and revision will continue, with each cycle requiring more involvement by MWD and its clients, and in-



crementally less involvement by the research/consultant team.

Each evaluation involves a walkthrough supported by a synopsis check, a photographic record, and finally an assessment of problems or opportunities that require more detailed inquiry. The walkthrough is a three-stage process. The participating groups meet formally for a briefing that introduces the research team, explains objectives, describes the special interests and organizational affiliations of each participant, describes how the evaluation will occur, and finally reviews the general activities housed in the building and the relationship of the participants to these activities. The second-stage walkthroughs search for what happens in the building, what works, what does not work, what should be kept, what should be changed, and what were the participants' reactions to the building. While a check list is used to guide the walkthrough, it is meant to facilitate observation, not constrain it. Each group spends about three hours on its individual survey. The final stage involves the formal debriefing where key points are discussed and explained, clarifying where conflicts exist in the participants' perception of the building's proper design intent and operation.

Both a synopsis check and a photographic record support the walkthroughs. In the synopsis check, the building's original program requirements are recorded on a standard sheet to review their conformance with such conditions as critical dimensions, environmental standards, and proper installation of fittings and equipment. This review is analogous to a final design review and punch list, occurring a full year or more after occupancy. Photographs record the building's internal and external condition and the particular physical or functional aspects of the building that were emphasized in the walkthrough process.

After the walkthrough sessions, two kinds of documentation are prepared. One is a formal record of the findings; the other addresses each participant's special interest, such as a policy change by management on the use of recreation facilities, a maintenance work order, or new design criteria for future servicemen accommodations.

Thus far, the results reported by the Ministry and its clients are positive. The evaluations have proven useful in the clients' management of their building stock as well as in the MWD's maintenance, restoration, and new construction responsibilities.

### U.S. Army Corps of Engineers

The evaluation program at the U.S. Army Corps of Engineers has no master plan. However, several programs demonstrate a growing use of building evaluation to support the Corps' military construction mission. Exam-

Victoria University of Wellington  
School of Architecture

POST-OCCUPANCY EVALUATION OF GOVERNMENT BUILDINGS

TRIAL EVALUATION 1: PAPAKURA BARRACKS

RECORD SHEET 1: WALKTHROUGH

Space	Comment	Recorder	Date	By	Classif.
bedroom	Privacy - can do what you want	AS	4/1/81	TM	A
living	skylights distract from TV. curtains put up to reduce reflections, glare			TM	E
telephone	no acoustic privacy			SD	E
kitchen	doors to kitchen a nuisance causes breakages - no use			JF	B
living	walls damaged by chairs			AS	B
	carpet hard to clean, lifts			JF	
bedroom	some isolation in arm rooms			CB	A
	single rooms don't restrict			TM	A
corridor	Corridors dent, marks left by boots, equipment			JF	B
showers	seat used as shelf for towel, shampoo etc.			TM	B
toilets	knobs stick on flush			TM	B
	ventilation not good enough			CB	E
bathe	used for soaking stiff muscles			TM	A
drying	line is theft risk.				A
laundry	dryers good, washing machine useless				B



The record sheet (left) used in the walkthrough of a barracks in Auckland, NZ (above), shows the thoroughness and attention to detail necessary when conducting a post-occupancy evaluation.

ples of such programs include the Design Guide Publication series, and the documentation of user-controlled functional requirements.

The Corps' responsibilities for over \$1 billion of military construction per year include schools, churches, hospitals, recreation facilities, housing, hangars, flight simulators, and tactical equipment shops. The Corps is also responsible for the life cycle of a building stock valued at well over \$125 billion, dating back 200 years, which makes it an excellent source of information on how to acquire and use building evaluation data.

In the early 1970s, the Corps began a program to upgrade its construction program for recreation and morale support facilities. As one step in the program, it wanted to revise the design criteria and procedures. The approach involved an initial evaluation of existing facilities, both within and outside the military, resulting in a "criteria search" report. That report covered the full range of design, organization, and procurement issues, and served as the cornerstone for each of the 18 guidebooks in the series.

The completed guide books can be used by design architects; Corps of Engineer Architects for in-house design review; tenant organizations for the development of their individual building programs and the evaluation of their existing space; and planners for the development of installation-wide construction requests, site planning, and physical master planning.

The initial phase of the guide book development involved a series of interviews and workshops, in addition to a physical examination of existing buildings. The information



collected assisted in the development of the operational as well as the physical aspects of recreation services. The guide books all have a general planning chapter which, in the case of recreation centers, is used by the staffs to help plan their social program, and is used by design architects to understand spatial zoning requirements and the range of functions their space planning must accommodate.

Another building evaluation program grew out of five years of research conducted through the Corps' Construction Engineering Research Laboratory in Champaign, IL. That program, structured like the New Zealand MWD project, developed methods for building users and managers to specify their functional requirements for new construction in collaboration with architectural and engineering professionals. A major component of the work involved the evaluation of existing facilities and operations. The results of this research have led to a programming procedure for the construction of new buildings not addressed by existing design guides and not encumbered by unusually complex technology (i.e., hospitals, flight simulators, etc.).

The initial results of the programming methods showed, in one case, a 70 percent reduction, from 190,000 sq ft to 57,500 sq ft, in the required area for Personnel Services Centers. A second example showed a net increase in required space from 11,200 sq ft to 26,800 sq ft for an airfield operations facility. In both cases, the Corps had greater confidence in the program for new construction as a result of evaluating existing facilities and operations.

An auxiliary benefit of a client's involvement in building evaluation is that, in exploring the question "what to build," he must also explore the background question, "why build?" That introspection on the part of users and managers almost always results in efforts to improve the management and operation of their organization. This benefit accrues to the organization independent of any new construction.

### Private sector approaches and implications

Many other approaches to building evaluation come from the private sector. Architects have recognized the need to increase rigor (and therefore compensation) in design, and to continue that rigor throughout the life of a building. Returns from energy-conscious design, for example, are usually not at their optimum until three to five years after occupancy, during which time the systems are tuned to match recurring loads. The same rigorous fine tuning might help other aspects of an occupant's interaction with a building. The work of the Facility Management Institute, in Ann Arbor, Mi, offers an example of that expanded evaluation. It encourages professionals, knowledgeable about both design and management, to stay with a building long after occupancy and keep it tuned to shifting organizational needs and environmental circumstances.

Many firms now offer corporate clients a range of maintenance scheduling services and ongoing space planning services. One opportunity that can be further developed is the acquisition of multiple returns from these services, increasing their value, and therefore the firm's compensation. Some of the prerequisites to being able to acquire multiple benefits involve:

- 1 a substantial knowledge of business management;

- 2 skill in the acquisition of data through observations, interviews, workshops, and survey research;

- 3 skill in group work and a knowledge of group and organizational dynamics;

- 4 skill in tailoring documentation systems to organizational rewards.

The evaluation process also needs a person within an organization who is specifically concerned about the evaluation benefits.

The knowledge and skill required for building evaluation could be acquired by architects, or others could be hired and managed by architects. Some have argued that such skills and knowledge are entirely the purview of other professionals and are unrelated to the work of architects, a premise that is becoming a self-fulfilling prophecy. Building evaluation services allow architectural firms to offer a more comprehensive service to their clients and to increase their ability to improve professionally through careful introspection on the full value of their work.

Architecture is in trouble. There are over 50,000 practicing professionals in the U.S., with over 100 schools producing more every year, and few new jobs. In the U.K. we find almost as many practitioners as in the U.S., with new construction at a virtual standstill. Something must be done. Two of many options involve reducing the size of the professional work force to be more consistent with present demand, or adjusting the demand upward to be more consistent with potential value. The former is occurring through unemployment while the latter requires a broader definition of the role of architects.

Expanding the role of any profession is a tricky business. There is always the danger of diluting the core or of offering services in advance of acquired competence. This article has not described areas where architects can do or are doing what more appropriately belongs to other professionals. It has described building evaluation as a service with benefits that could very well be marketed through the architectural profession. In the delivery of such a service, the profession would be better able to learn from each act of building, and thus offer an increasingly *valuable* service. □

### Acknowledgments

A team of architects led by John Daish, John Gray, and David Kernohan, joined later by Anne Salmond and the author, designed a four-year program to establish evaluation services as a normal part of the New Zealand Ministry of Works' service.



# Computer systems and professional liability

Paul M. Lurie

**The computer can improve the speed and quality of design services. Unless precautions are taken, it also can increase professional liability.**



BLOCPHIX® image by Ed Manning

New technology produces the materials, products, and information necessary for the design professional to create safer and more economical structures. In order to maximize technology's potential, architects and engineers must develop systems that organize technical information in ways that respond to the requirements of both their clients and society. This requires the use of computer systems. The increased reliance on computers, for all of its benefits, can create a potential for mistakes, unfulfilled user expectations, and increased professional liability.

A vast amount of useful technical information now exists for the design professional. Estimates show construction literature increasing at the rate of 250,000 books, periodicals, reports, and pamphlets per year, with millions of pages of product information distributed annually.<sup>1</sup> The 13 volumes in Sweet's Architectural File alone consist of 18,000 pages.

Before the computer age, architects and engineers had little hope of gaining immediate access to such a wealth of information. Not only had the information not been catalogued on any universally retrievable basis, but researchers seldom understood the interdependence of data, and practitioners seldom recorded their experiences in a manner useful to other design professionals or to the construction industry.

If the computer now makes this information readily available to the designer, it may also create the false expectation within society that the second coming of the "Master Builder" is upon us. This could make the public less tolerant of problems inherent in the building industry as it is currently organized. It has been society's willingness to accept less than perfect results without asses-

sing blame that has helped insulate the design professional from liability.

## **Potential for exposure to liability**

Even if we can minimize design errors through the use of computers, the construction process will still result in building failures, injuries, and dashed expectations. This will occur not because of a lack of information, but because of the poor communication of information, the unrealistic expectations of owners and users, the difficulty of predicting construction costs, the limited resources available for most construction, the ability of undercapitalized or technically deficient contractors to get work, the willingness of people to use these firms, and the reluctance of society to pay for serious quality control.

Since legal claims resulting from the construction process are inevitable, design professionals must avoid increasing their exposure to liability. Traditionally, the legal liability of architects and engineers has been judged not by the result of their effort, but by the reasonableness of their design and their conduct when compared to other design professionals under similar circumstances. They have not suffered the fate of manufacturers who often face "strict" responsibility without fault. This liability has resulted from the perception that manufacturers are capable of

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preventing product failures, a perception not held of design professionals by either the courts or society. As the Minnesota Supreme Court stated in the 1978 *City of Mounds View* case:

"Architects, doctors, engineers, attorneys, and others deal in somewhat inexact sciences and are continually called upon to exercise their skilled judgment in order to anticipate and provide for random factors that are incapable of precise measurement. The indeterminate nature of these factors makes it impossible for professional service to gauge them with complete accuracy in every instance. . . . Because of the inescapable possibility of error which inheres in these services, the law has traditionally required, not perfect results, but rather the exercise of that skill and judgment which can be reasonably expected from similarly situated professionals."

The Federal Government's recent attempt to mandate energy conservation as part of the design process may be a portent of society's changing expectations of the architect and engineer. If expectations are changing, then the design community must either convince the public that the possibility of error within the building process still exists, or help reorganize that process to minimize construction error and dissatisfied users.

Society's expectations of the design professional have always changed with the times. What differs in the computer age is the potential for the professional's increased responsibility. If computerized information that would avoid a problem is both available and accessible, the failure to search a data base could be professionally unreasonable, resulting in legal culpability. The office that does not have the capacity to search current data bases might face legal liability regardless of the professional responsibility evident in its other conduct. A court, under today's standards, could not expect a design professional to consult Australian government test reports in determining the suitability of a particular product. That expectation might differ if those test reports were available by subscription through a computer.

There is another reason for concern about new sources of liability in the computer age. Once design professionals use computers, programs, and data, they accept responsibility for the reliability of the results obtained from this technology. If they use a structural program containing errors, a court might hold them responsible for the incorrect result regardless of the difficulty or expense involved in detecting that error. This liability differs little from the liability that design professionals assume for the work of their consultants. Yet unlike most consultants, computer manufacturers routinely disclaim responsibility for problems with their hardware, while programmers and data base generators severely limit their responsibility for software and data mistakes. Even without disclaimers, these entities may not have had the insurance or financial responsibility to defend a major claim.

Properly understood and utilized, computers can increase design quality and reduce

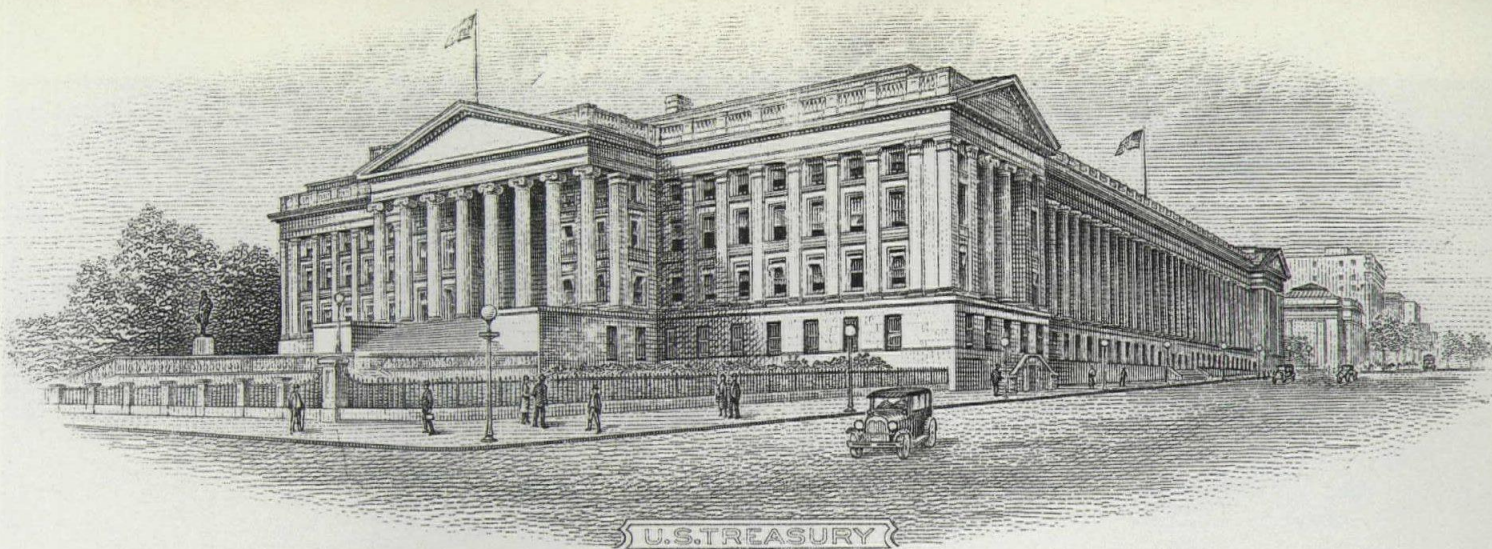
professional claims. That will require the design community to take the following action.

**Improve the quality of data bases.** An increased attention by the profession to the creation of useful and accessible data will improve the quality of design service and thus reduce the potential for error. Since information exists in documents that busy professionals have neither the time nor motivation to read, this information will have to be summarized in an accessible format, the interrelationship between data noted, and the information presented graphically, not textually.

There are many areas where improved data bases can aid the design professional. The computer can help architects and engineers obtain critical product information developed from improved testing procedures and field experience. Reliance primarily on manufacturers' literature should be the exception, not the rule.<sup>2</sup> As the number of codes and governmental regulations continues to grow and change, the need for improved data bases for this information has also become critical. This need will grow as firms continue to expand their practices across political subdivisions. The high cost of money has made clients extremely sensitive to problems having time or cost implications. Since design professionals have traditionally stayed away from cost prediction because of a lack of reliable information, data bases in this area could enable the architect and engineer to offer an expanded and more accurate scope of service.

Claims alleging that a firm negligently designed a structure to be wasteful of energy have begun to occur. Computerization can make energy studies, which must become part of the design process, feasible. Contractors' claims against an owner for delay or acceleration of the work have become a major area of litigation. Such claims usually involve the professional, either because the client blames the professional for the schedule change or because the professional must spend nonbillable time assisting the client. Computerized scheduling techniques can prevent situations that cause such claims, discourage contractors from filing the claims, and provide the evidence to defeat a claim. Many claims allege that the architect ignored a program requirement of the client, or that the client was not aware of the risks in a cost-saving solution. A computerized project manual available to all persons on the design team, distributed on a periodic basis to the client, could greatly reduce that liability.





U.S. TREASURY

**Expand the opportunity for improved communication.** Design and construction error often arises from the effort of an architect or engineer to preserve the integrity of a design concept through completion, even when field conditions demand that that concept change. Improved data bases that exploit audio-visual devices, such as interactive videodiscs, are ideally suited for designers who must adapt their original concepts to new conditions. Audio-visual training devices could also stem the public criticism of design professionals that they have not learned from the past, given the recent spate of spectacular building failures. The educational potential of the new mediums is illustrated by the innovative work of Zollman, Fuller and Campbell. These university physics professors teach the principles of wave phenomena using a 27-minute video optical disc medium, combining films of the 1940 collapse of the Tacoma Narrows Bridge with narrative eyewitness accounts and computer-animated film sequences, all tied into a computer program that supplies quantitative data while it controls and evaluates the learning process.<sup>3</sup>

#### **Guard against the problems of computers**

Mistakes can occur with the use of computers for many reasons. The hardware may malfunction because of a manufactured problem or because of a change in electric current or environmental conditions. Errors also may occur in the software, the programs, or the data base. To guard against liability for these problems, the design professional should consider the following procedures:

The financial risk of mistake should be placed on those at fault, and those risks should be adequately insured. Unfortunately, too many design professionals sign contracts to procure hardware and software in which the vendors of these products legally disclaim responsibility for many of their problems. These disclaimers, combined with the inadequate insurance and capitalization of many entry-level firms, may effectively place most of the risk on the architect or engineer. Firms must develop procedures to audit and diagnose the malfunction of these systems and to identify suspect output. Since people have a natural tendency to treat computer-generated output as authoritative, management must instill a healthy skepticism in employees using computers.

**Document the professional reasonableness of conduct.** As previously discussed, current standards determine legal liability not by the results, but by the professionalism of the approach. This requires that a firm be able to establish, many years after the fact, how it made a particular decision. The computer can help with that documentation.

When using a particular program at the request or consent of a client, consider having the client contractually obtain those services on a direct basis with an outside consultant, a situation similar to their contracting for surveys and soil tests. If the client does not want an outside contract, put a provision in the professional service agreement establishing reliance on the services of others over whom the design professional has no control.

Document the process by which the computer is being used, including the input, the output, and the methods of auditing the results. Also be aware of the latest improvements of equipment, programs, and data bases. Once committed to computerization, a firm's failure to keep current could be used to prove a lack of reasonable professional behavior.

**Maintain accurate and accessible fee time records.** Suing for fees constitutes a primary source of malpractice claims for the architect and engineer. These suits often develop between the professional and the client when the client feels inadequately advised about increased fee obligations, whether caused by additional service or by increased construction cost, when the fee is based on a percentage of that cost. Fees, unrelated to time expended, also create a temptation to cut the quality of service when the architect or engineer unexpectedly runs out of the fee necessary to complete contractual obligations. Computerized management information systems currently available can avoid many if not all of these problems. □

#### **References**

<sup>1</sup> A 1967 Study of the Canadian situation estimated that 20 to 30 million pages of product information was being annually distributed, of which 54 percent was being discarded upon receipt. Arkisyst Feasibility Study Final Report, *Reports and Papers in the Social Sciences* (UNESCO, 1981), No. 45, p. 14.

<sup>2</sup> Those interested in this subject should review the pioneering work of Robertson Ward, Jr., FAIA, which was published by UNESCO in 1981 under the title of Arkisyst Feasibility Study, *Ibid.* Also see an interesting discussion of a methodology to quantify product data in Rosen, Harold J., and Bennett, Philip J., *Construction Materials Evaluation and Selection: A Systematic Approach* (John Wiley & Sons, 1979).

<sup>3</sup> Zollman, Dean and Fuller, Robert, "The Puzzle of the Tacoma Narrows Bridge Collapse: An Interactive Videodisc Program For Physics Instruction," *Creative Computing*, Vol. 8, No. 10, Oct. 1982, pp. 100-109.



SAM BRYEN BASEBAL

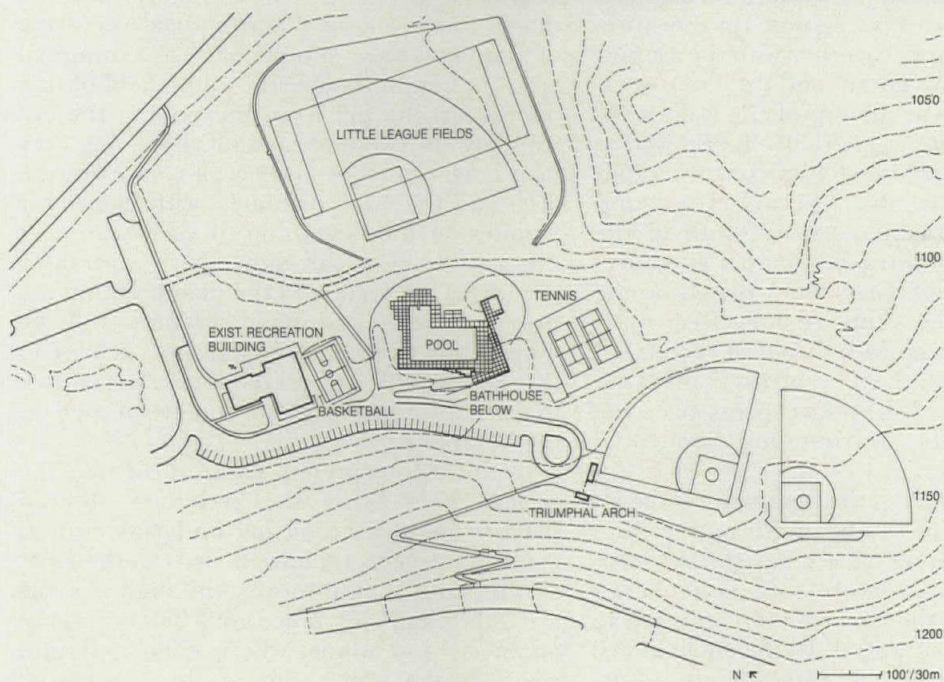
I TRUST  
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# Playful fragments

**With beginnings constrained by limited budget, vandals, and an extremely difficult site, a recreation facility seems to have won the battle.**



*Entry to the Little League ball fields, the Triumphal Arch (facing page and top, photo above) is in three shades of pink/red tile. Behind it are maintenance and garage buildings (right), while beyond it is the top of the "vent wall" above the pool house, peering across to the surrounding neighborhood.*



If we have childhood memories of municipal pool facilities and ball fields, most images would be of dank shower and change areas, chain link fence (not a universal negative these days), and meager buildings often designed by default by town engineering departments. But in the Brookline community of Pittsburgh, many of those recollections have been put to rest. For the most part, ball diamonds are ball diamonds and chain link fencing is chain link fencing, and Brookline has both, although the latter is called on to perform a few design feats in detail.

However, architects L.P. Perfido Associates challenged a number of the assumptions that surrounded the planning of earlier facilities. In studying the given park site, the designers discovered a situation not new to Pittsburgh, but often difficult to detect on the surface. Because of the mining and excavation of so much of the area, underground flaws often plague building sites there. But in a bastion of Little League activity such as Brookline, the architects found that the only suitable area for the new pool in the park would be where two of the baseball diamonds were located. Needless to say, this was not a popular find, and demand for the replacement of those fields took the area where there had been tennis and basketball courts. As the last shift, they, too, were relocated.

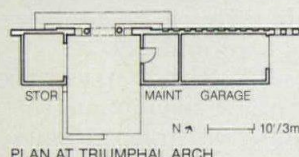
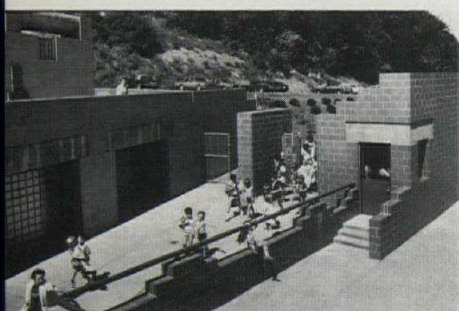
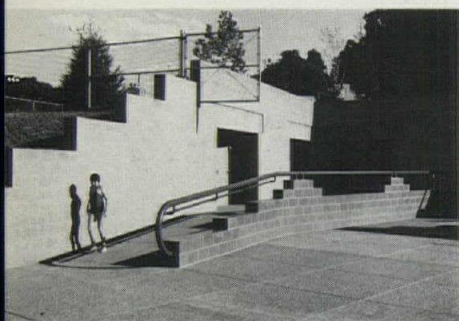
The site posed topological as well as geological problems that had to be solved before all of this could begin. Characterized by steeply sloping hillsides and a gully running across it and into the parkland beyond, the area for the fields and pool required the moving of 43,000 cubic yards of earth to make it suitable. The bathhouse wall serves to retain the slope leading up to the access road.

Noting that most of the swimmers did not really need extensive changing facilities—they came with swimming suits on to begin with—the architects proposed minimal areas for this activity. There is only one enclosed shower each for men and women, with open showers and lockers in recesses adjacent and at right angles to the bathhouse. From the uphill side, all that is visible of the bathhouse and shower/locker "wall" are the air and light shaft above the former and the stepped parapet walls on both.

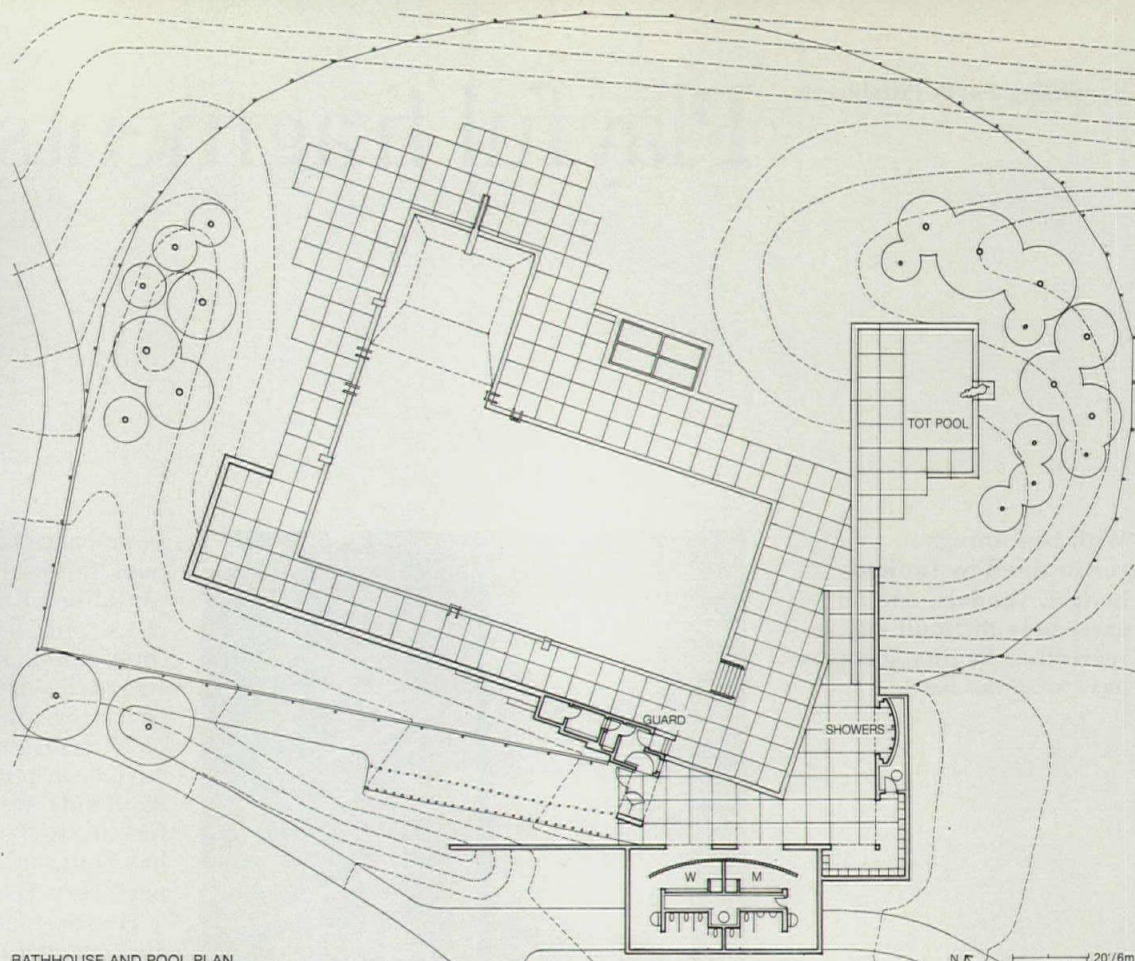
This combination air and light shaft has been called the "vent wall" by the architects and their solar consultants, Burt Hill Kosar Rittelmann Associates. Panels of glass block face south and allow sunlight to strike a black



## Brookline Park, Pittsburgh



Although designed as fan-shaped, the fence extension for keeping unauthorized entrants out (top) still delights by sailing off into midair over the entrance ramp extension. Passing the guard house, pool users are required to show identification on their way in (above, center). Opening day of each baseball season, the town intends to have a parade ending at the arch as it did on the initial opening (above).



BATHHOUSE AND POOL PLAN

surface on the block wall behind, storing heat. The heated air acts as a sponge for moisture-laden air below and, together with the air flow generated by low venting and the Venturi effect of the space at the top of the wall, helps expel the dampness generally experienced in such spaces. The half-cylinder concrete cap is designed to focus this Venturi effect, and even the trees planted to the south of the structure are intended to channel air movement into the vent. Glass block panels on the north side of the vent are for effect only, making "eyes" to go with the "nose" of glazed green block and the "eyebrows," the vent slots above. The Kilroy face peers over the bathhouse at the surrounding residential neighborhood.

On the same axes as the bathhouse is the tot pool, with its own low walls and a hippopotamus. Shifting off at an angle, the main pool and the guard house are another set of elements within the composition, attached to the entry and exit portal. In the small guard house, there are actually three rooms: a storage room for chlorine, the guard's changing room, and the room from which the guard can monitor pool activity and entrance.

### The meaning of art

Since the architects were required by the city's policy to direct one percent of the construction budget to art or other adornment, and since that budget was strained enough by the extensive earthwork, they had to do some rethinking about the meaning of art as it applied to this project. Two more functions were still left to be housed, and it was decided that the storage and maintenance areas would be housed in two small buildings, which would then form the backdrop for the "art."

Inspired by the fever pitch of Little League

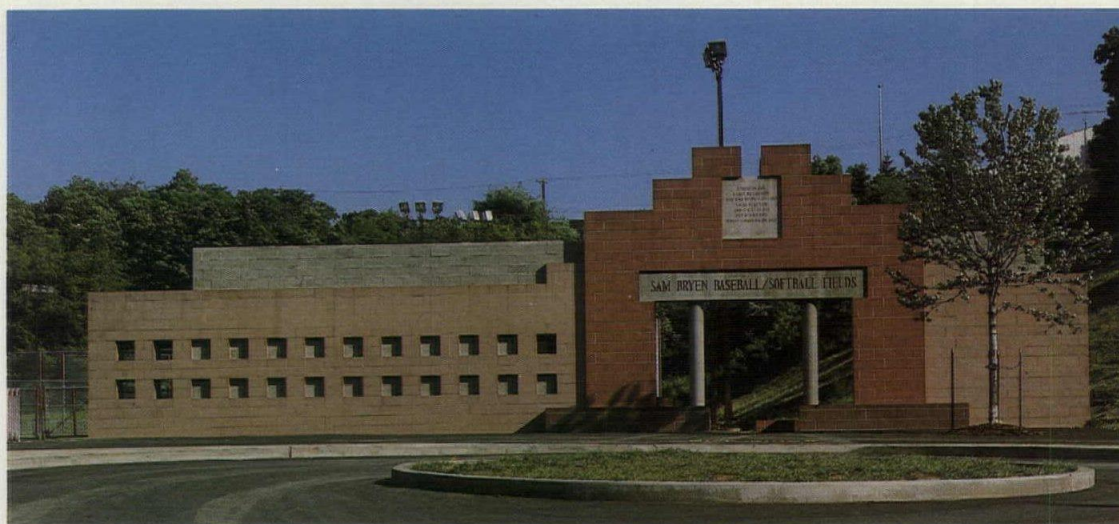
activity in Brookline, the architects decided that if the youngsters were indeed the pride of the area, they should have a "triumphal arch" to herald their entry to the field of battle. So, up the hill from the pool at the entrance to the two relocated playing fields, they now have one. The front wall comprises the arch and the "wall of fame," with niches for plaques; at the beginning of each season, if the city follows through, there will be a parade to the arch, and the plaque listing the previous year's winning athletes will be mounted in its niche. The wall and arch are in three shades of pink glazed block, in contrast to the water shades of blue and green used on the bathhouse.

In its reinterpreted classical forms, the project does bring the architects' desired playfulness to a municipal undertaking that could have been utilitarian. It is to the city's credit that it sought more. Although in some areas the chain link fence got a bit beyond the architects' intentions, where it flies off into space at the north end of the bathhouse/shower wall, it is fun even if it is not fan-shaped as called for. The elements form a cohesive set of fragments, and certainly are a superior solution to adding onto the adjacent recreation building, as was earlier proposed.

Having started out with the charge to do a facility that would resist recurrent vandalism, allow police cruisers good sight lines when driving through at night, save the ball fields, and use an "unusable" site, the architects have done these things well. But more important, they have given Brookline a fine facility that should delight and stand the test of time.

[Jim Murphy]





*In the wall flanking the arch, the design allows for niches into which commemorative plaques honoring each season's winning team will be inserted (left). Glass block "eyes" and projected block "nose" on the vent wall make a humorous face looking across the pool to the neighborhood beyond (below). Behind it is the naturally sloping terrain, as that from which the pool site was reclaimed. The small guard house (bottom) forms part of an entry pylon, another fragment.*



#### **Data**

**Project:** Brookline Park, Pool, and Bathhouse, Pittsburgh, Pa.

**Architect:** L.P. Perfido Associates, Pittsburgh, Pa. Design team: L.P. Perfido; Gilbert A. Rosenthal, Associate. Project architect, Stephen J. Hruby.

**Client:** City of Pittsburgh.

**Site:** 15 developed acres of a larger undeveloped park.

**Program:** bathhouse, guard house, maintenance building, concession stand, swimming pool and tot pool, 2 Little League fields, tennis courts, and a basketball court.

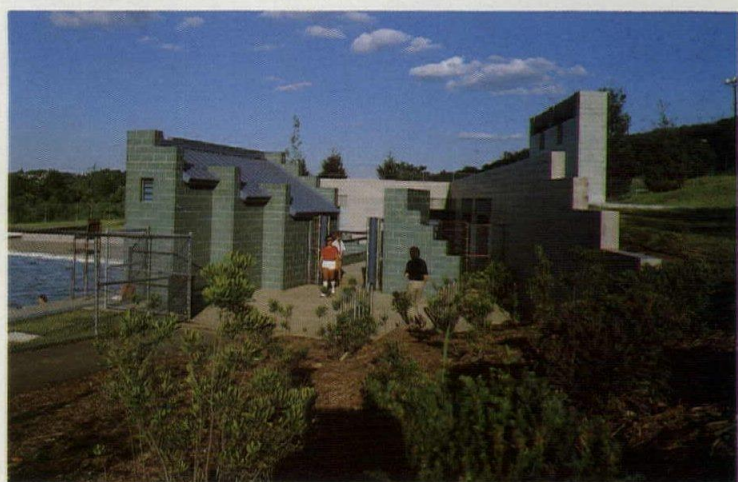
**Structural system:** reinforced block retaining walls on concrete foundations. Poured concrete roof decks, lintels, and columns.

**Major materials:** glazed concrete block, glass block and brick, and standing seam metal roof.

**Consultants:** Roth & Associates, structural; Shirey Engineering, mechanical/electrical; Burt Hill Kosar Rittelmann Associates, solar energy; Engineering Mechanics Inc., soils; Joseph A. Hajnas & Associates, landscape.

**Costs:** \$1.4 million.

**Photography:** Jon Reis.

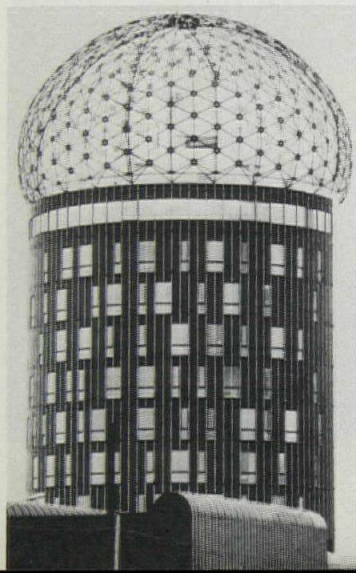
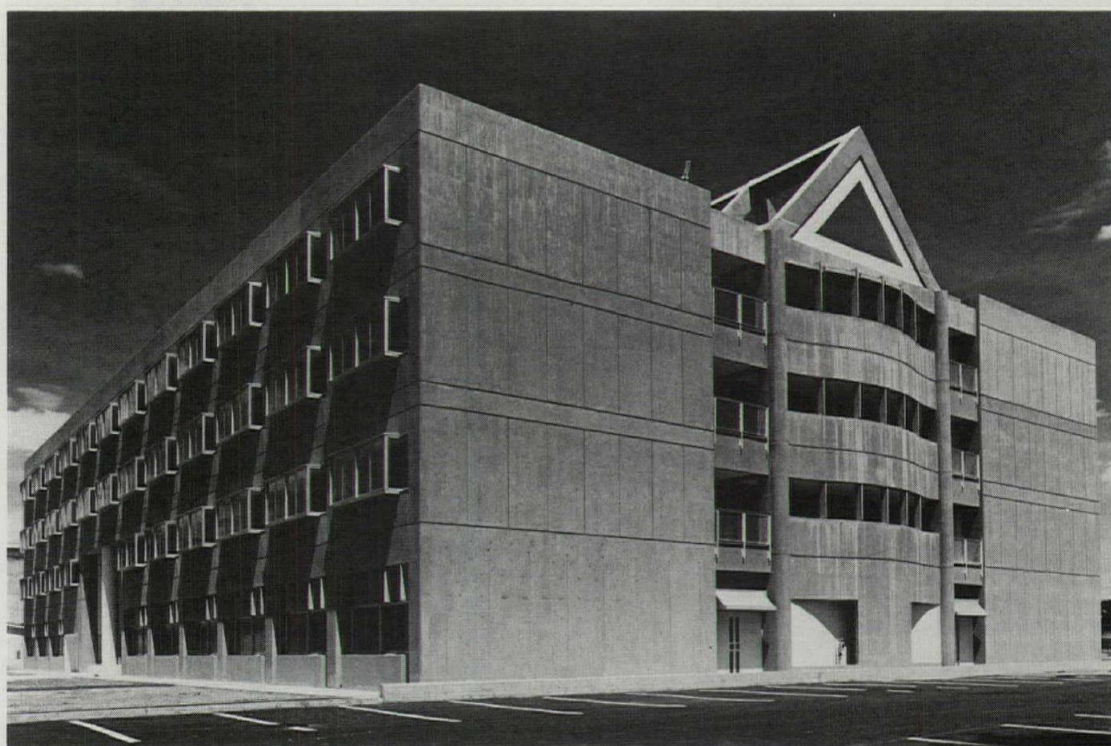




# Symbolic associations

An addition to an art university outside Tokyo seems to show references to both Eastern and Western architecture.

The new design facility (right), designed by Hideo Terada and Minoru Takeyama, shows some relationship to the latter's earlier works, such as *Ni ban Kahn* of 1970 (below) and the *Beverly Tom Hotel* of 1973 (bottom), in its symbolic manifestations of cultural associations. The building seems to show references to both Western and Eastern architecture. A void in the second floor (facing page) brings daylight to below.



Architecturally, Japan is extremely heterogeneous, but this condition exists within a highly homogeneous socio-cultural milieu, Minoru Takeyama has said (in "A New Wave of Japanese Architecture," *IAUS Catalog No. 10*, 1978). "One of the basic intentions of my creative work," he continues, "is to confirm the condition of heterogeneous expression and homogeneous content." He speaks of heterology in architecture as a process that identifies things, which might otherwise seem unrelated, as related through their level of symbolic meaning rather than through any particular formal associations.

An early stage in the development of this idea is seen in the now well-known *Ichi ban Kahn* and *Ni ban Kahn*, both of 1970 in Tokyo. These two high-rise structures represent rather exuberant forays into architectural assemblage, but their form or structure would not tell how they are related to anything else. That, instead, is revealed through an elaborate system of surface decoration, which makes it clear that these buildings, which house stacked layers of bars, clubs, and lounges, are closely related to the many smaller structures around them in the Shinjuku entertainment district. In a later example of 1973 in Yomakomai, Hokkaido, the 80-room *Beverly Tom Hotel* could suggest a part of male anatomy, but Takeyama has

pointed out that the cylindrical shape is also symbolically related to the silos and oil drums common to the area.

Takeyama's most recent building, done in collaboration with fellow professor Hideo Terada at the Musashino Art University, is a four-story, 50,000-sq-ft reinforced concrete facility for three departments of the design school of that institution, which is located about 30 km from the center of Tokyo. The building houses studios, classrooms, workshops, lecture rooms, and administrative offices for the basic design, visual communication, and stage design departments. These are arranged around an open atrium that rises from the second floor to the top, and they are entered by means of galleries at each level around the atrium. A large void in the floor of the second level is a light monitor for the lower level, but its upper perimeter is designed as a seating area for the second-level student forum, where mosaic ceramic tile is used for walls and floor.

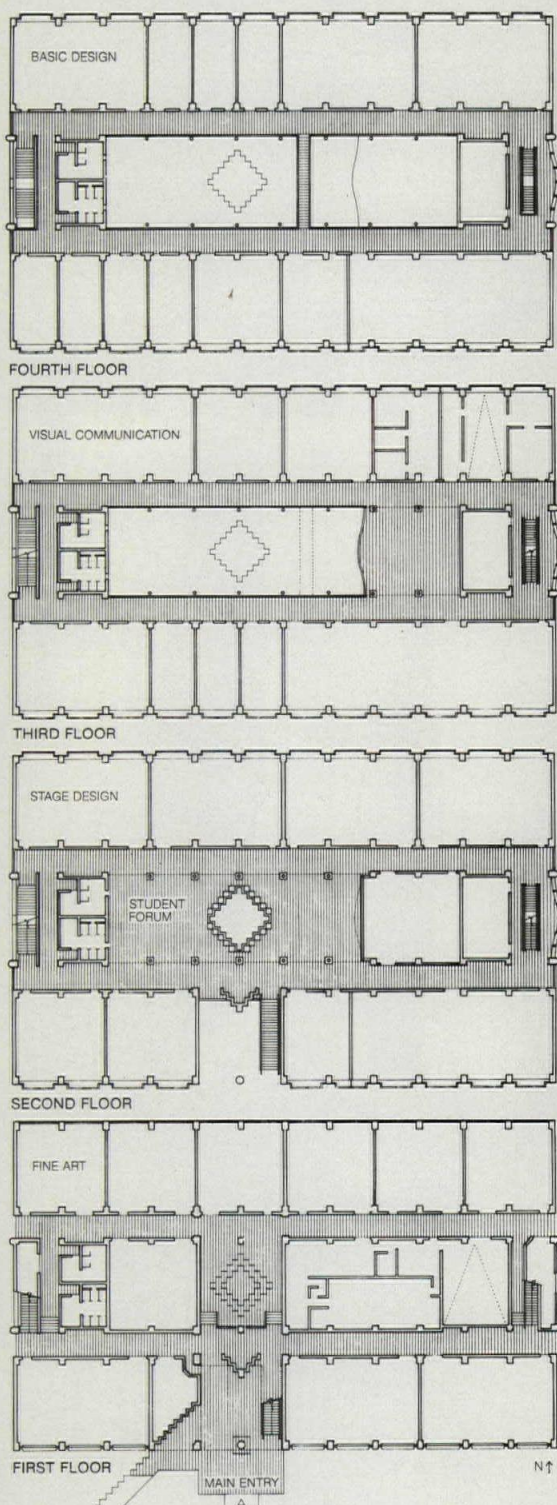
The original proposal for the building showed it designed with barrel-vaulted skylights forming the Chinese character for



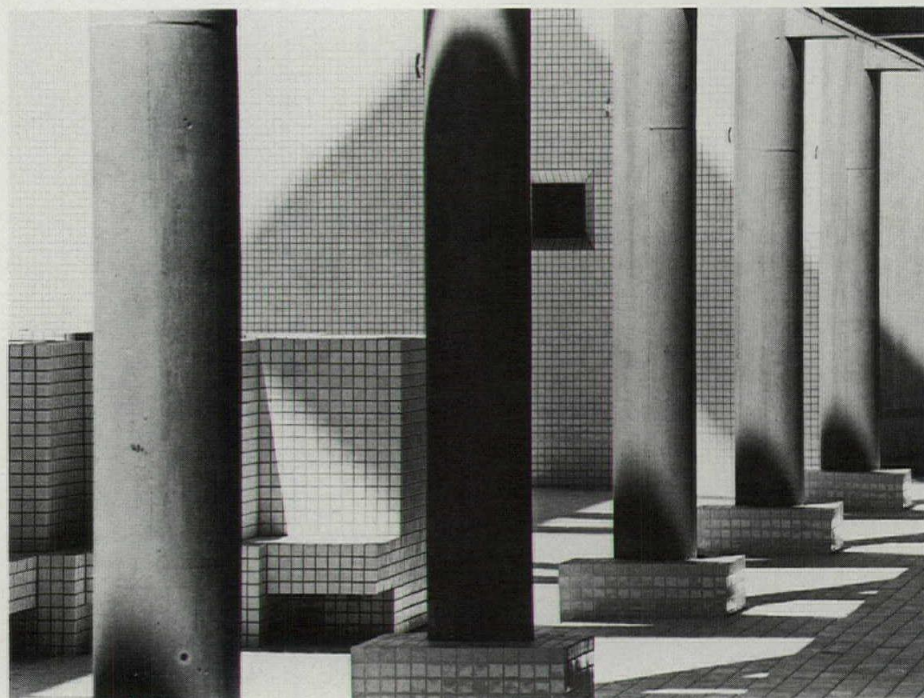




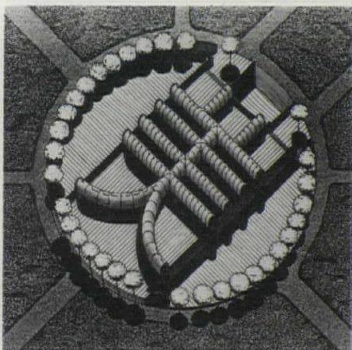
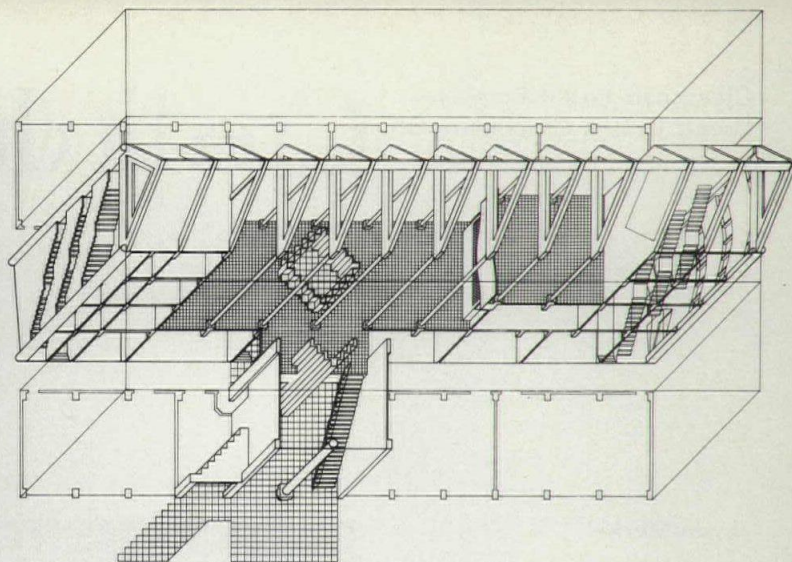
## Building No. 10



beauty. While that may have been appropriately symbolic for an art school, it was nevertheless changed. The final building is ostensibly more conventional, although it does seem to show certain relationships to other things. Certainly in the east façade, where symmetrically placed columns support the gabled roof of the atrium, one could see references to the feudal architecture of Japan. But in the same façade, one could also see columns supporting a pediment in the classical western tradition. And one might read into the interior, where study activities surround a common forum, clear traces of the academical village. Heterology in architecture, Takeyama might say, can be ambiguous. [David Morton]







The roof, originally designed as the Chinese character for beauty (above), is now an open gable structure (top). The second-floor student forum (this and facing page) is faced in both matte and glossy tile (right).

#### Data

**Project:** Building No. 10, Musashino Art University, Tokyo.

**Architects:** Hideo Terada, Minoru Takeyama, and United Actions.

**Client:** Musashino Art University.

**Site:** a campus 30 km from Tokyo.

**Program:** facilities for departments of fine art, stage design, visual communication, and basic design of the design department of the art and design university.

**Structural system:** reinforced concrete with steel-reinforced concrete for atrium roof.

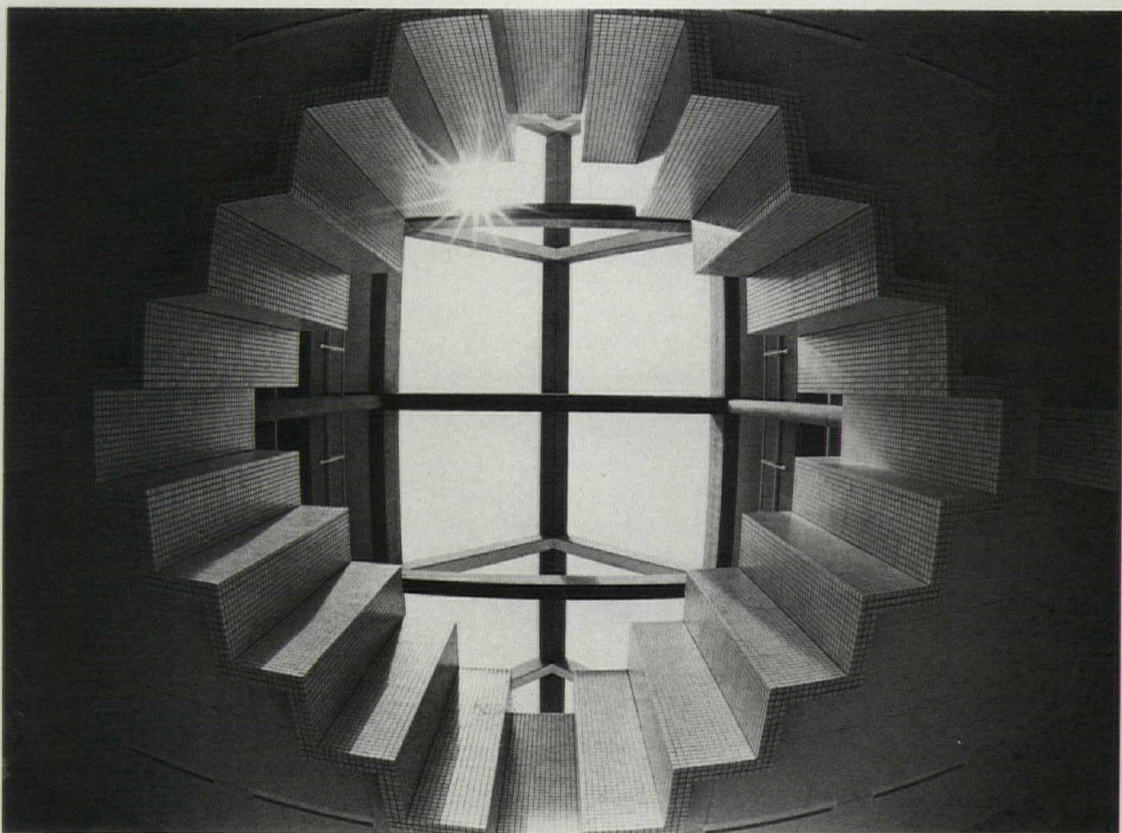
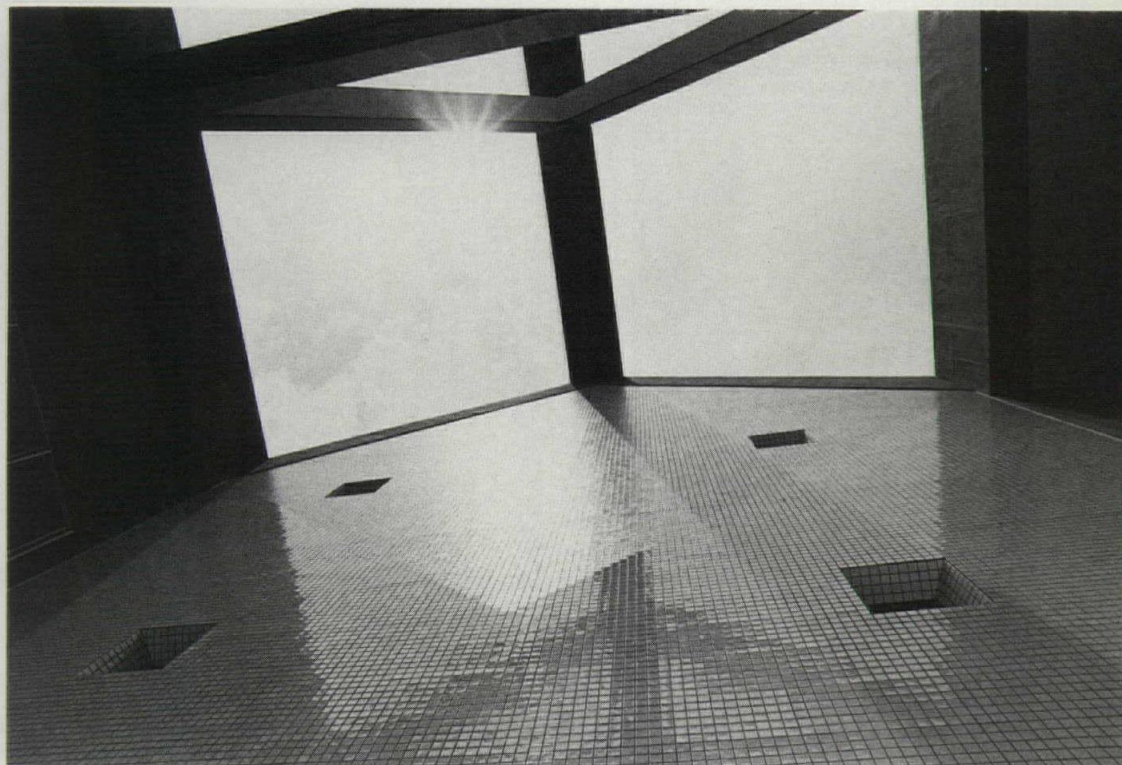
**Major materials:** exposed concrete, aluminum sash projecting windows, floor and walls of mosaic ceramic tile in atrium, asphalt tile floor, and painted plywood walls elsewhere.

**Consultants:** Takumi Orimoto & Associates, structural; Kenchiku Setsubi, mechanical.

**General contractor:** Taisei Kensetsu Co.

**Costs:** 901,190,000 Yen (1981).

**Photography:** Katsuaki Furudate.

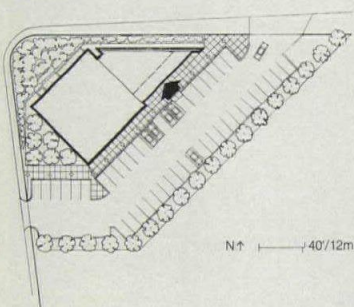




# Credit due

Jayne Merkel

A small credit union by Glaser & Myers in Cincinnati adds spark to a blighted area on a 24-hour basis.



The metallic structure is composed of a battleship gray cube of offices and a bright orange triangular lobby/banking room. The colors for both parts are maintained not only on the exterior, but on the interior also, where the gray wall above the tellers' counter is contrasted by the orange wall at its right.



The Cincinnati Postal Employees Credit Union is a little building in a big wasteland of an urban renewal industrial park on the western edge of the central business district. It is hard to imagine a more inhospitable environment for anything than this—an eight-lane-wide divided street, strewn with ugly small industrial buildings, automobile dealerships, warehouses, and parking lots. But the little (21,000-sq-ft) orange and gray metallic structure manages to hold its own and even make a mark on the dismal site. It enlivens its bland, scaleless setting without parodying it or making nearby buildings seem shoddy.

The Cincinnati Postal Employees Credit Union captures its corner site with bold but practical shapes and a dazzling but controlled color scheme—battleship gray and bright orange. It looks triangular, because the main block of the building has been rotated on its site, and the grand polygonal entranceway/banking room is almost three-sided in shape. This dramatic two-story space has one orange wall and one gray one. The third wall is of tinted glass panels supported by trusses, which are painted light gray like the exposed steel joist ceiling above it.

The walls look the same on the inside and out, because the insulated metal panels have the same smooth surface on both sides. And though the surface is not as crisp and machinelike as that in some high-tech buildings, the standard industrial imagery is appropriate in this locale. Floor and ceiling treatments further integrate interior and exterior areas in the banking room and its forecourt facing the parking lot. The exposed joist ceiling, to which extra struts have been added to approximate a space frame, and the exposed aggregate concrete floor extend beyond the glass wall to the edge of the parking area behind the building. The solid orange wall fronts the street, screening it from the tellers' counters and creating a big, car-scaled slab of color for passersby.

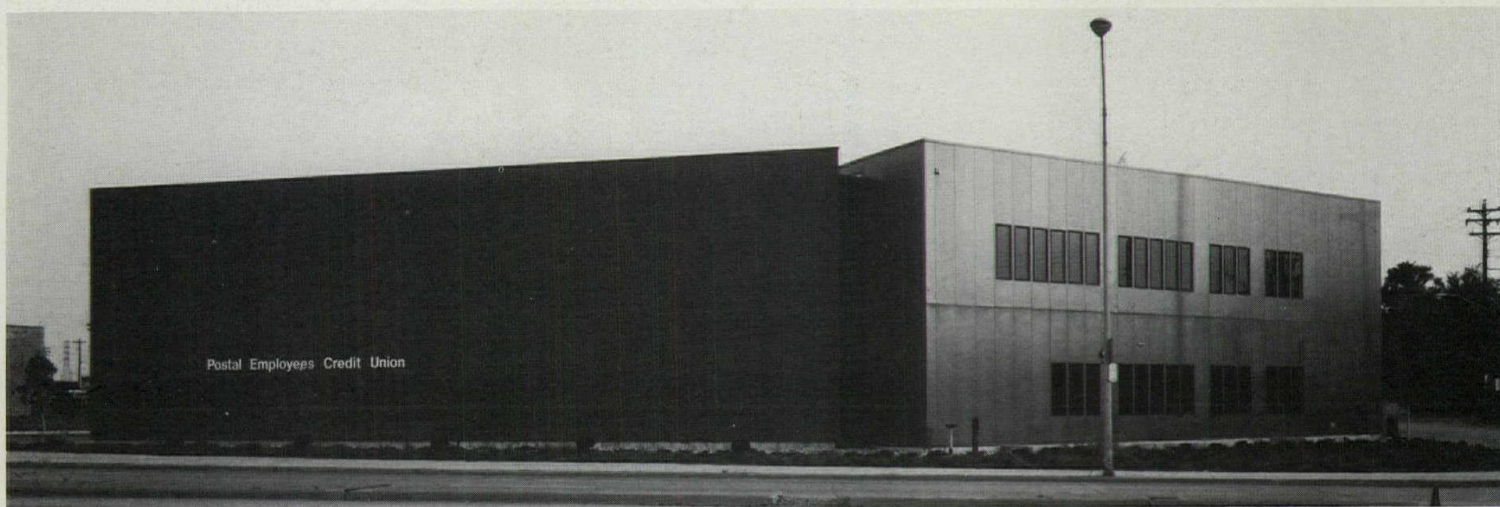
The gray walls of the banking room and building block meet the orange façade at about 45-degree angles, so the drama of angulation occurs on both sides. The square, two-story building block behind the tellers'

Jayne Merkel is *Architecture Critic* of The Cincinnati Enquirer, a regular reviewer for Artforum, and a contributor to other publications.









counters contains office space and loan officers' chambers. Ceilings drop from 30 to 10 ft here, and carpeting replaces concrete flooring, but the two-tone gray and bright orange color scheme is rigorously maintained.

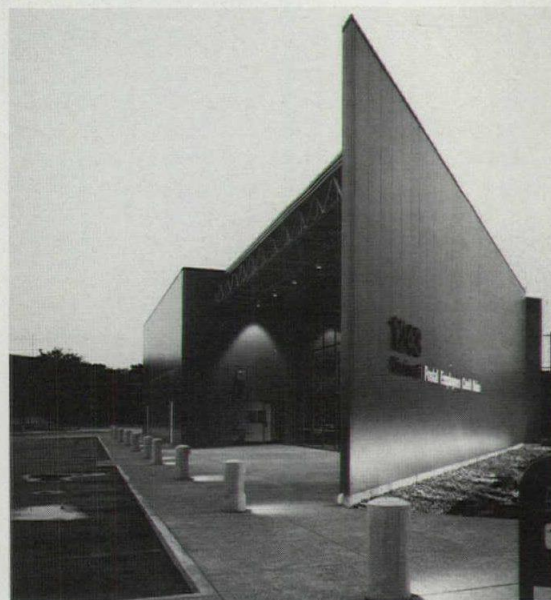
The rotated square—or diamond-shaped—configuration of the building block provides the lively look of triangulation without wasteful, wedge-shaped interior spaces. And the rotation also increases energy efficiency, according to the architects. "By placing it on an angle, we were able to create a solid wall on the north/northwest, where most of the cold winds come from, and to place the entries toward the south and east, where there is more sun and less heat loss," said Richard Glaser.

Tall, narrow, integrally gasketed windows in the tall, narrow, insulated metal panels also provide energy savings. In this economical building, space planning by SDI (Space Design International) of Cincinnati is equally basic and efficient, and compatible with the structure as a whole.

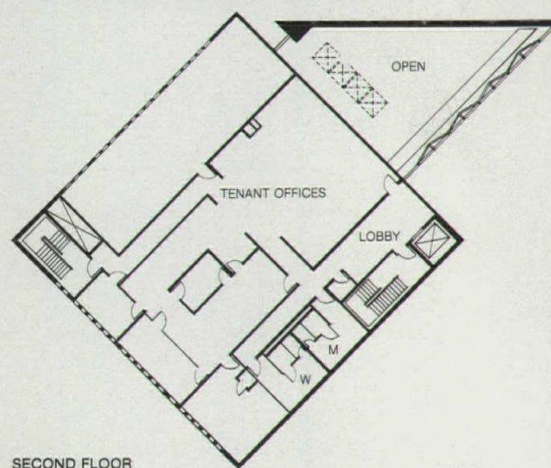
Private offices along one wall of the block are separated from the center work stations by glass walls, so light from exterior windows enters, acoustical privacy is preserved, and a sense of space is created in the relatively small area. This space is enclosed by loan officers' booths, which on their other side face a reception area. The booths can be entered by doors from both sides, like prison visiting rooms, so public and private office areas are kept separate.

Tenant office space on the second floor is occupied by the Cincinnati Ohio Federal Police Credit Union and the Cincinnati Ohio Federal Firefighters Credit Union. The logical tenant grouping enables employees of all three credit unions to exchange information and share equipment.

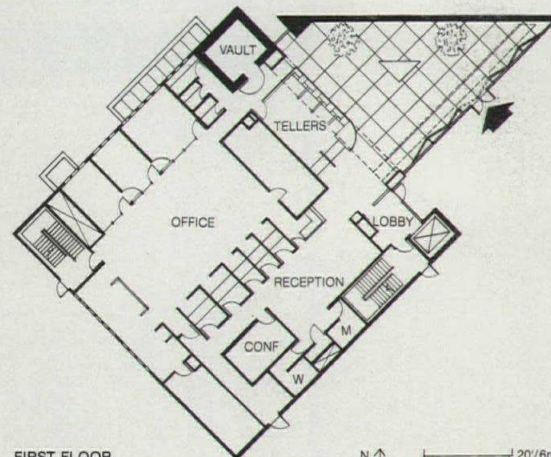
This small, no-nonsense project has won an Honor Award from the Ohio Society of Architects. It has provided a lively environment for government employee banking, and it has become a bright spot in an area of 24-hour-a-day visual blight. Aware of their contribution, the credit union officers keep the building lighted and spotlighted at night.



From behind (top) the building that appears triangular from the front (middle) is seen as polygonal, where again the orange of the lobby wall contrasts with the gray of the office cube at its right.



SECOND FLOOR



FIRST FLOOR

N ↑ 20'/6m

#### Data

**Project:** Cincinnati Postal Employees Credit Union, Cincinnati, Oh.

**Architects:** Glaser & Myers & Associates, Inc., Cincinnati; Dennis Malone, project architect.

**Client:** Cincinnati Postal Employees Credit Union.

**Program:** employee credit union with tellers' counters and other services for depositors; tenant office space on second floor; 21,000 sq ft.

**Structural system:** steel frame, floor joists, and roof deck.

**Mechanical system:** variable-volume.

**Major materials:** steel insulated exterior panels with integral gasketed windows, gypsum board partitions, suspended acoustical ceiling in office area; exposed steel roof structure in lobby and banking area; exposed concrete floor in lobby and forecourt (see Building materials, p. 112).

**Consultants:** THP, Limited, structural; Helmig, Lienesch, Doench & Associates, consulting engineers; Space Design International, interiors.

**General contractor:** Richard Argo Construction Company.

**Photography:** Ron Forth.



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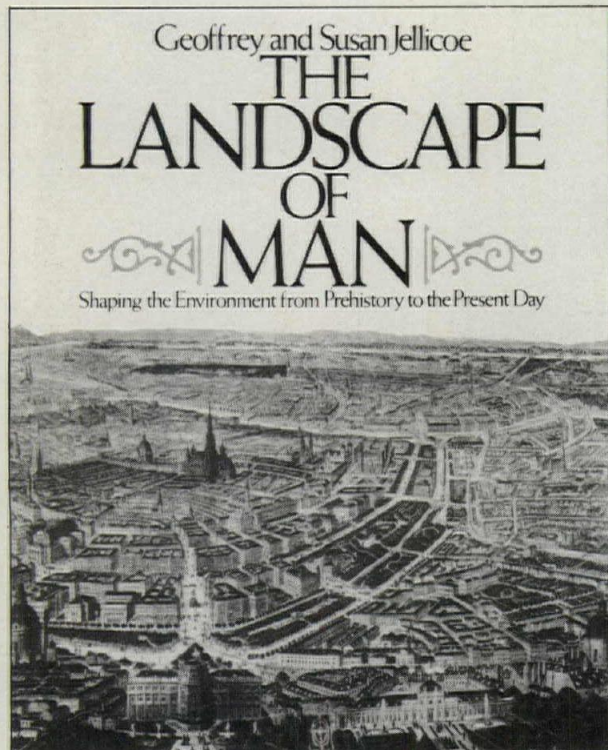
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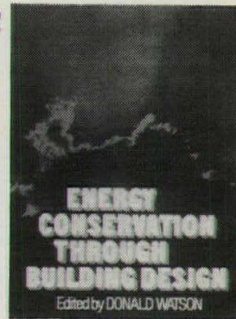


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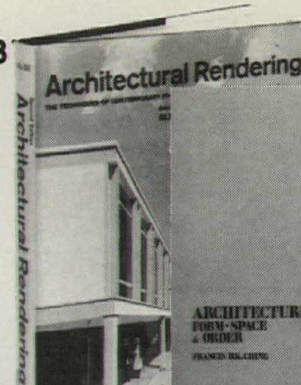
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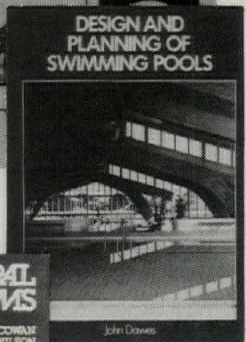
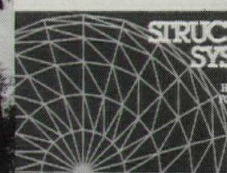


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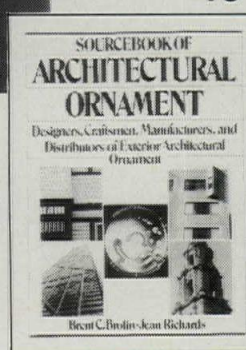
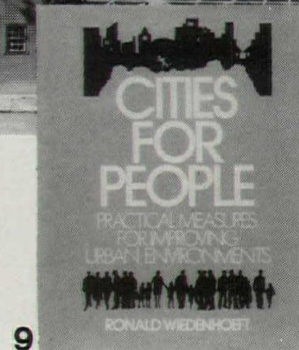
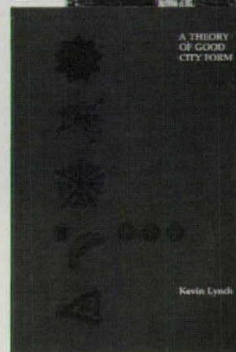
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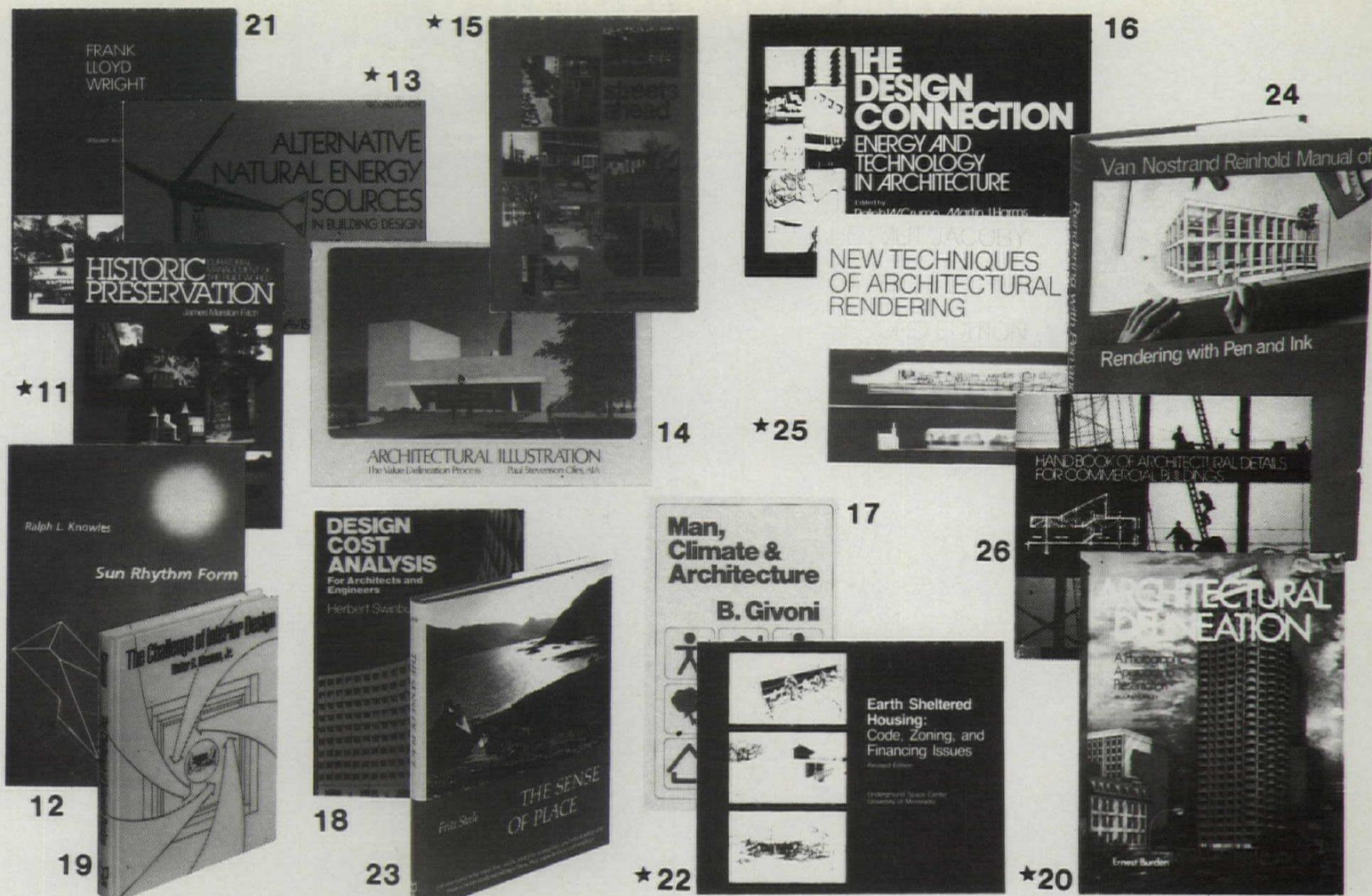
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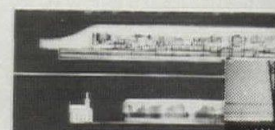
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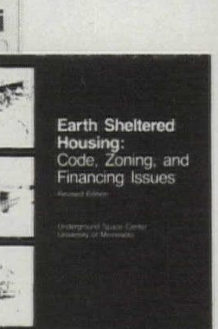
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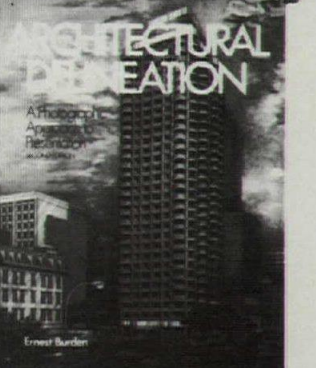
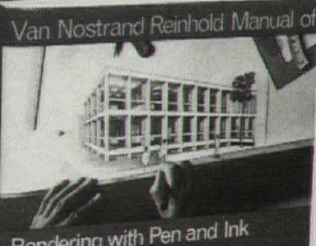
By Underground Space Center,  
University of Minnesota  
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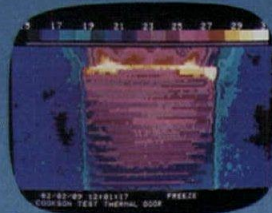
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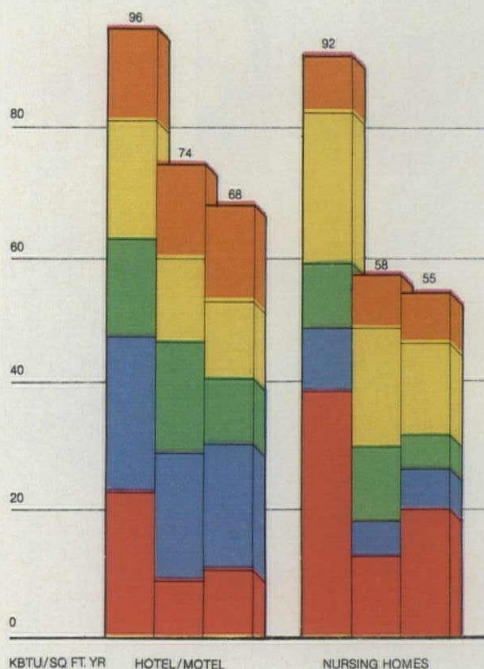
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# Bed, board, and Btu's

The diversity of nursing homes, motels, and hotels represents a continuum of increasingly complex relationships between sleeping rooms and service areas. Nonhousekeeping residential designs demand a spectrum of energy strategies.



**Contributors:** A number of individuals and organizations have contributed to the development of this article. Principal researchers: Joseph J. Deringer, President and Santiago Moreno, Associate, Gilford, Deringer and Company; Harry P. Misuriello, Principal, W.S. Fleming & Associates.

**Researchers:** James Binkley, Chief, Architectural and Engineering Systems Branch, DOE; John Stoops, Project Manager, and Ray Reilly, Program Manager, Battelle Pacific Northwest Laboratories; John H. Cable, Principal, The Ehrenkrantz Group; Richard Menge, Director of Architecture, Greenhorne & O'Mara; Roger Easley, Consultant to Battelle; Mike Gilford and Richard Meilan, with Gilford, Deringer & Company.

This effort has been funded by Battelle Northwest Laboratories under a program sponsored by the Buildings Division of The U.S. Department of Energy. For a complete description of this article series, see P/A, April 1982, p. 110.

At first glance it may seem odd to treat the energy redesign of nursing homes, hotels, and motels together in the same article. From a space use and energy standpoint, however, these building types are often deceptively similar.

Residential nonhousekeeping buildings (their collective, generic classification) share certain important functional space type relationships. Both a guest room and a patient room need a direct relationship to some type of service area such as a kitchen, dining, laundry, or assembly area. The resulting mix of functions yields an energy mix of both internally load-dominated service areas and externally load-dominated sleeping rooms.

The emphasis of the energy design, therefore, depends on the blend of these functional spaces within the individual building whose energy requirements (and conservation potential) can vary considerably. Contrast, for example, the functional complexity of the convention hotel and the ubiquitous strip motel. Nursing homes and geriatric centers also share this wide diversity, although not to the same extent. This considerable range of functional space combinations not only dramatically affects energy use and conservation potential, but also suggests separate scale-related energy targets and makes the prospect for a single residential nonhousekeeping energy target unrealistic.

Usage patterns, perhaps the most significant determinant in energy usage, are not only similar for buildings within this broad type (see Fig. 2), but are also inherently energy intensive because of their 24-hour-a-day nature. Like other residential buildings, nighttime occupancy levels are high. Nursing homes, however, have higher daytime occupancy than hotels and motels which reflects the restricted mobility patterns of long-term institutional care. HVAC equipment in both building types is normally available around the clock for heating, cooling, and ventilation to meet stringent comfort conditions.

Other shared characteristics influencing both energy use and conservation

opportunities in this building type are high domestic hot water consumption, high ventilation requirements, and the significance of circulation areas (especially in nursing homes), which can comprise up to 20 or 30 percent of the gross floor area.

With all these influences at work, this building type is among the most energy intensive of the 13 redesign building categories. The mean energy consumption for the original nursing home and hotel/motel designs was 92 and 96 KBTU's per sq ft per year respectively. Even this high level of energy use may be underestimated by as much as one-third because of data shortcomings, which radically underestimate service hot water demand, and the exclusion from the energy data of major "process" loads such as kitchen, laundry, and medical equipment (P/A, April 1982, p. 110).

A range of other problems contributed to our choice of combining the two building types into a single, all-encompassing type that would allow generalization. Two independent samples of nursing homes and hotels/motels yielded 18 buildings that are quite diverse in both size (4000 to 120,000 sq ft) and other characteristics. They include seven nursing homes, four geriatric centers, three motels, one "motor inn," two hotels, and a training center at a school for the deaf. The building research samples are geographically limited and skewed. The nursing homes and motels are located predominantly in colder climates, while the hotels are all in hot, humid climates; neither sample has many buildings in the southwest. Although the nursing home sample is large enough to have some confidence in perceived redesign trends, the hotel/motel sample of six is not. By combining the building types, there are several significant patterns for redesign that do emerge.

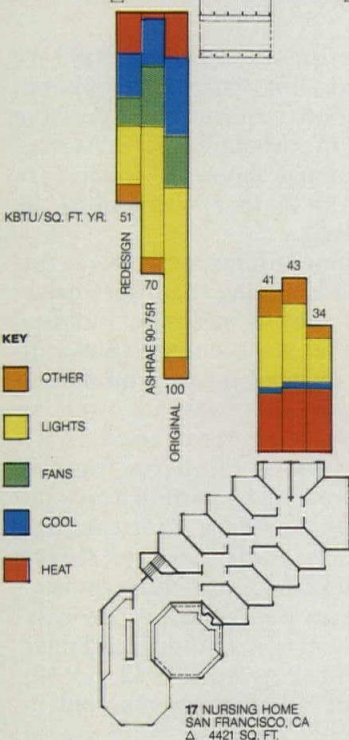
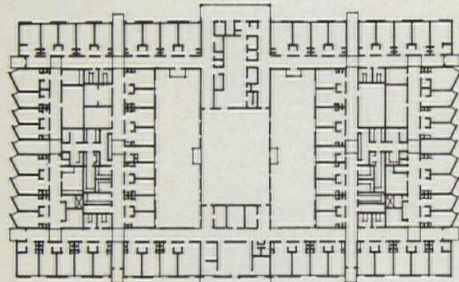
## Redesign strategies

Energy reductions achieved by the hotel, motel, and nursing home redesign teams ranged between 30 and 40 percent. Architectural strategies were prominent, with an emphasis on reorganization of building form, relocation of functional spaces, and reduction of

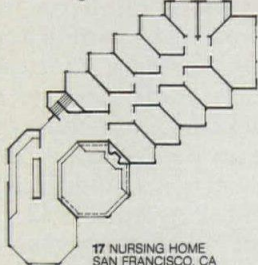


## Energy-conscious design series Nonhousekeeping residential

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BIRMINGHAM, AL  
△ 41570 SQ. FT.

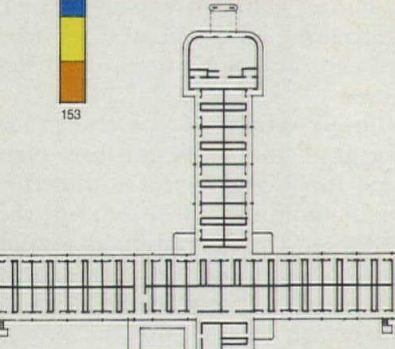


17 NURSING HOME  
SAN FRANCISCO, CA  
△ 4421 SQ. FT.

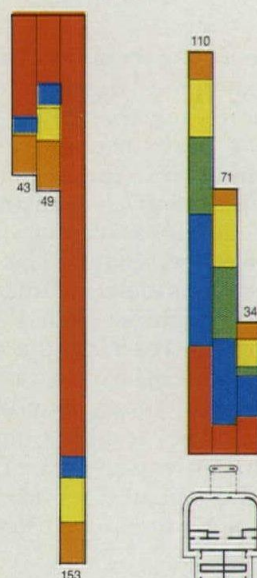
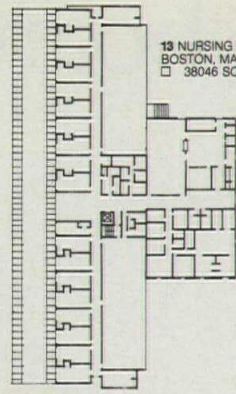


□ 100'/30m  
△ 100'/30m  
○ 100'/30m

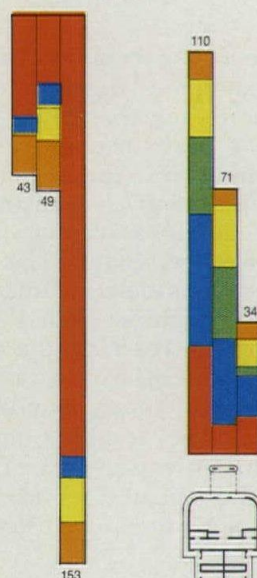
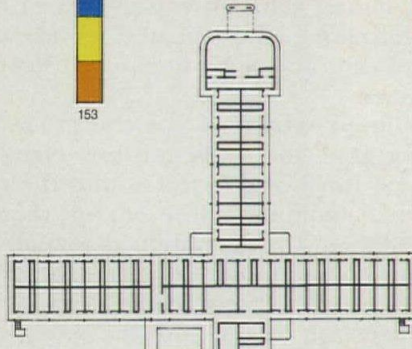
1 MOTEL  
MADISON, WI  
△ 17000 SQ. FT.



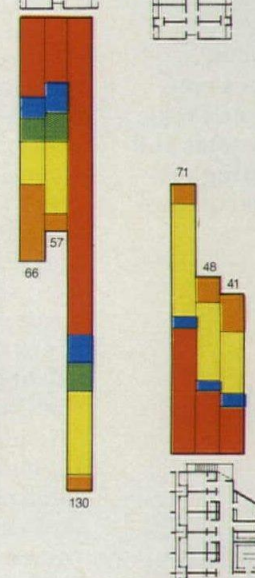
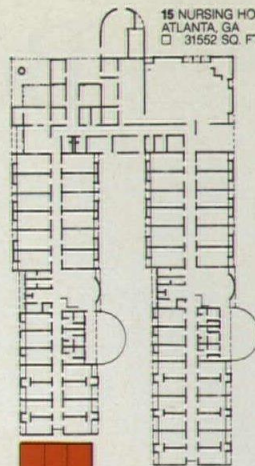
13 NURSING HOME  
BOSTON, MA  
□ 38046 SQ. FT.



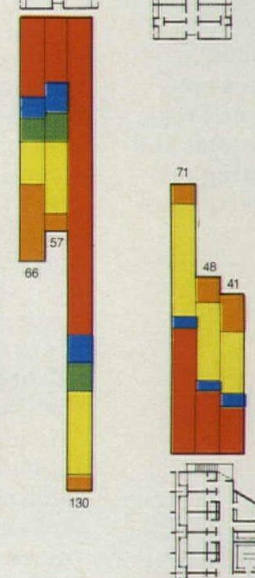
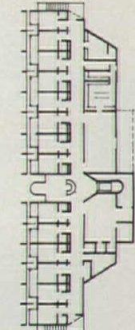
5 MOTEL  
DALLAS, TX  
□ 45104 SQ. FT.



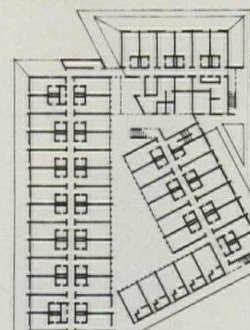
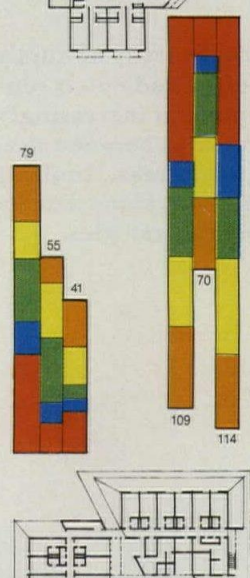
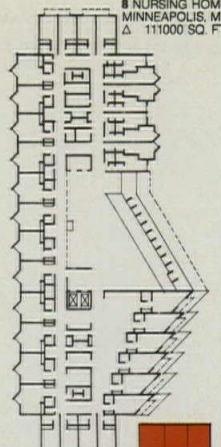
15 NURSING HOME  
ATLANTA, GA  
□ 31552 SQ. FT.



14 NURSING HOME  
PORTLAND, OR  
△ 15085 SQ. FT.



8 NURSING HOME  
MINNEAPOLIS, MN  
△ 111000 SQ. FT.



3 MOTEL  
LOUISVILLE, KY  
△ 40852 SQ. FT.

FIGURE 1: HOTELS/MOTELS & NURSING HOMES REDESIGNED PLANS AND COMPARATIVE ANNUAL ENERGY END USES

conduction losses (in colder climates) by increasing insulation levels or reducing exposed wall and glazing areas. Lighting strategies were effective in reducing energy usage as were (to a much lesser extent) those aimed at mechanical systems.

**Form and space organization:** In reviewing the redesign strategies, two general approaches to space reorganization and changes to building form can be distinguished: opening up the building for solar exposure (if advantageous) and tightening the building against the elements. Of course the emphasis on one or the other of these strategies varied according to the individual space mix and function of the building as well as its climate and location.

In sleeping rooms, control of conductive heat loss and gain is of major concern, not only because of the lack of internal gains to offset losses, but also because space temperatures are maintained at higher levels of comfort in this building type than in others. In heating climates, these spaces can benefit from

controlled solar gain by orienting them to the south, while in cooling climates a northern exposure is more appropriate.

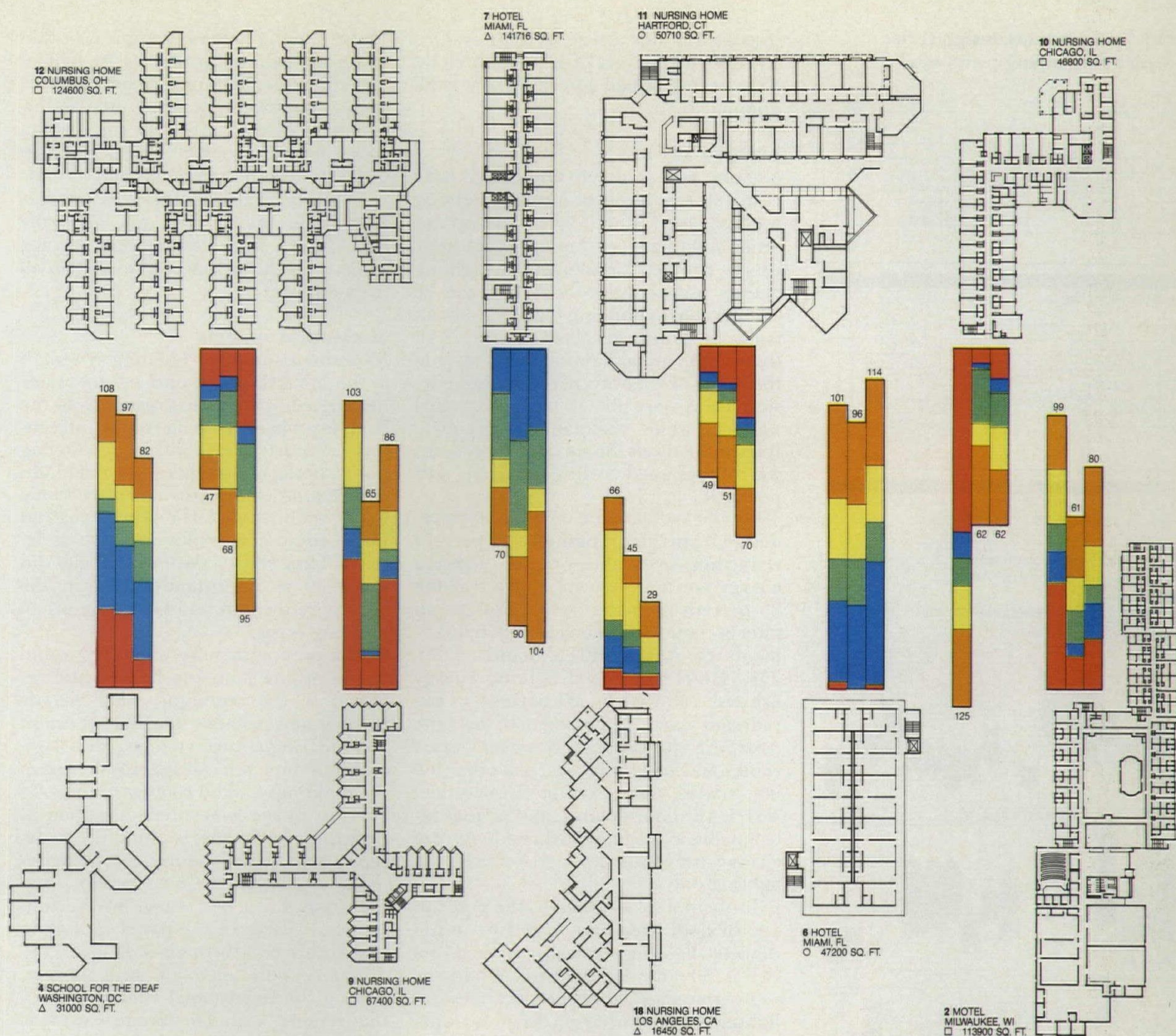
Other "back of the house" support areas such as laundries and kitchens are typically dominated by internal loads. Generally these spaces can meet much of their own heating requirements at fairly low outdoor temperatures. Thus in heating climates they were often relocated to the north. Lighting control and other heat sources demand attention, as does efficient means of cooling such as economizers. Often these spaces can be an energy resource, as unwanted or wasted heat can be tapped for other uses.

Where significant, circulation areas can be strategically placed to serve as barriers to weather-related loads in both heating and cooling climates. Mechanical and storage spaces have similar uses.

**Solar strategies:** The vast majority of the sample buildings shown in Fig. 1, especially the nursing homes, profited from solar access by reorienting to the south. In the design process, buildings were elongated on the east/west axis, fanned out, or sawtoothed in an effort to relocate the bulk of the fenestration to the south (Fig. 3B). There was also near universal use of both fins and overhangs to provide external shading.

The importance of solar control can be seen in a Miami hotel (#6). This unfortunate building not only had a major portion of its glazing reoriented to the south, but its shading coefficient was nearly doubled. Significantly more solar gain was able to enter the guest rooms and probably explains the steep cooling energy increase in the redesign. By contrast, another Miami hotel (#37) reduced solar loads using service areas with minimal glazing (and not critical for guest comfort) as buffer zones on the south and west.





In the nursing homes, passive solar applications included many direct gain systems as well as forced-air rock-bin storage systems and thermosyphon solar air collectors, which heated living areas directly. The energy analysis program used in the research, however, could not simulate many of these cases, and the energy savings from such strategies were not estimated.

In these nursing homes, the lack of data on energy performance is less conspicuous than information concerning how well they may have maintained comfort conditions, since passively heated spaces can experience substantial temperature swings.

**Tightening the envelope:** As a large portion of the envelope surrounds sleeping rooms in nursing homes, hotels, and motels, improved control of conduction was a natural strategy to use.

The redesign data (Fig. 3A) indicate that all but one of the sample buildings improved the composite U-value. Specific manipulation of wall, roof, and glass U-values varied by individual building.

Increasing thermal resistance levels was not the only kind of strategy used to control conduction. Since "UA" has an area component, some redesign teams literally shrank the building envelope to minimize glazing and surface area exposed to the weather. At the same time living areas and fenestration were often relocated to the south or the north, depending on the geographical location.

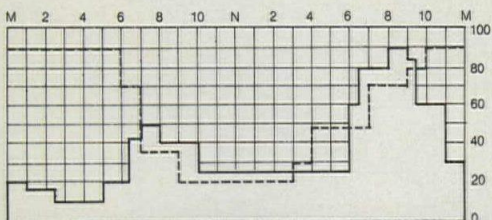
Motel and hotel redesign teams found this approach useful. In a Louisville motel (#3), for example, 92 percent of the floor space was devoted to guest rooms. The redesign team chose to compact the building form into a triangle with an atrium, which reduced outside surface area for control of conduction. This approach can be very effective for a building that is highly loaded externally.

Most of the sample buildings appeared to be fairly well insulated in their original designs, and have overall U-values equal to or better than ASHRAE Standard 90-75R requirements. Their wall U-values were significantly better than these minimum levels, in most instances by a factor or two. Roof U-values for most buildings, however, did not meet ASHRAE requirements, but were improved to that level in the redesign. The glass U-value remained unchanged in half of the buildings as designers used double glazing originally.

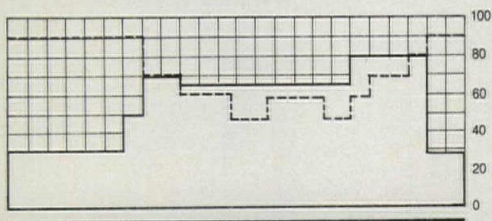
In this type of building, satisfying the ASHRAE insulation requirements may not be the best index of cost-effective envelope efficiency. The Standard was developed for commercial buildings, which have higher internal loads than are found in the sleeping room portions of the nonhousekeeping residential type. As with the multifamily buildings



## Energy-conscious design series Nonhousekeeping residential



WEEKDAYS: HOTELS/MOTELS



WEEKDAYS: NURSING HOMES

**KEY**  
 □ PERCENT INSTALLED LIGHTING CAPACITY  
 --- PERCENT DESIGN OCCUPANCY  
 ■ EQUIPMENT

FIGURE 2: AVERAGE OPERATION PROFILES

REDESIGN PROJECTS BY NUMBER

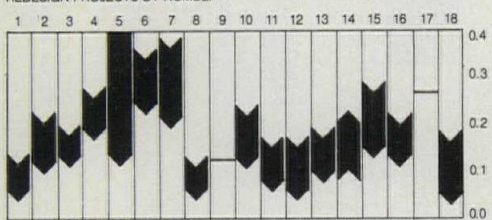


FIGURE 3A: COMPOSITE U VALUE (BTU/SQ. FT.)

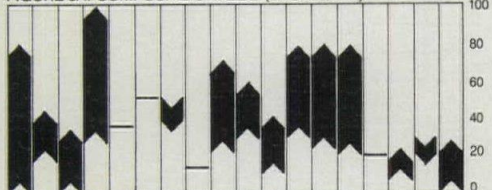


FIGURE 3B: PERCENT SOUTH GLASS AREA

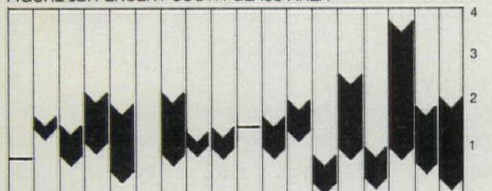


FIGURE 3C: POWER DENSITY (WATTS PER SQ. FT.)

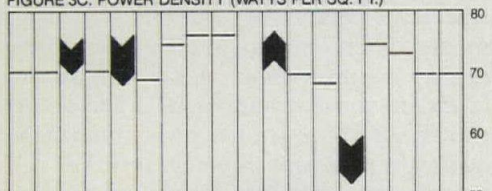


FIGURE 3D: HEATING SET POINT-NIGHT (°F)

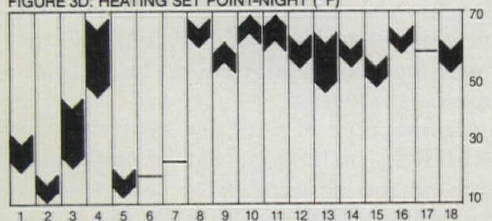


FIGURE 3E: INSTALLED HEATING CAPACITY (KBTU/SQ. FT.)

**KEY**  
 — ORIGINAL  
 — REDESIGN  
 — NO CHANGE

discussed in this article series (P/A, Oct. 1982) higher levels of insulation could have been justified for externally load-dominated spaces.

### Lighting systems

Nursing homes, hotels, and motels have relatively low levels of installed lighting wattage (see Fig. 3C) by comparison to other building types, but have a 24-hour usage profile. Consequently, lighting energy use on a per sq ft basis can be comparable to building types with about twice as much installed capacity. Although the initial lighting levels were in the range of 1.5 watts per sq ft, the redesign teams were able to reduce installed wattage while maintaining adequate footcandle levels. Some lighting systems were redesigned to less than one watt per sq ft.

On the average, the nursing home redesign teams accomplished a 42 percent reduction over the original lighting energy consumption in contrast to the 25 percent reduction resulting from an interpretation of the lighting requirements of ASHRAE/IES Standard 90-75R. Hotel and motel lighting energy use was reduced by 20 percent in the redesign and 22 percent by the ASHRAE procedure. However, guest rooms and patient rooms, like other living spaces, are exempt from these ASHRAE requirements, and savings attributable to the Standard resulted from changes to circulation and service area lighting only.

In the hotels and motels, the percentage of floor area illuminated by incandescent lighting typically ranged between 60 and 90 percent. While the redesign teams did reduce incandescent lighting with fluorescent fixtures, fairly high levels of incandescent lighting persisted in the redesign.

From a lighting standpoint, there is little difference whether guest rooms are located in a motel or a hotel. In either case, a lighting system design includes all guest room fixtures such as table lamps and swag lamps. This is an important distinction, because these types of fixtures are often supplied by tenants in other residential building types. In one typical redesign example, a Dallas hotel (#5), the original lighting system design totaled 835 watts per guest room. This was reduced to 136 watts by replacing the guest room incandescent fixtures with fluorescent ones. However, not all hotel and motel building owners find fluorescent guest room lighting attractive. In nursing homes, patient room lighting tends to be more institutional, and fluorescent lighting is considered more acceptable.

Daylighting has the potential for significant application in this building type because it is typically a low-rise structure and contains a high percentage of floor area for circulation. Several

of the nursing home redesigns reported using daylighting strategies in lobbies and corridors, but appropriate controls, such as photocells, were not used. A few examples of daylighting in conjunction with photocell controls were found in public spaces in both hotels and motels.

In mechanical and other service areas where the public does not generally have access, incandescent lighting was replaced with fluorescent lighting in all the subtypes.

### Mechanical systems

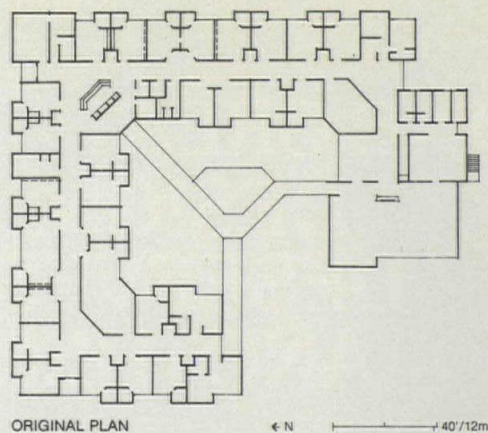
More than any other building system, it is the HVAC, plant, and service water heating equipment that responds to the complex mix of sleeping rooms and central support areas within a nursing home, hotel, or motel. Yet the data indicate that little emphasis was placed on a major rethinking of HVAC systems and plant equipment types in these redesigns. Thus HVAC system strategies did not play as important a role in the energy reductions as in other redesign building types.

The predominant system types found in the original nursing homes, and retained in the redesigns, were electric baseboard resistance heating, constant volume single-duct systems, and two- and four-pipe fan coil systems. Three of the buildings had no cooling systems. In contrast to the widespread adoption of heat pumps in the multifamily redesigns, only two of the nursing home redesigns switched to heat pumps, and then only for a percentage of the conditioned space. In the motel redesigns, two replaced through-wall air conditioners with air-to-air heat pumps, joining the third motel which retained that system. A similar change was made in one of the hotels, while for another a VAV system was chosen.

Internally loaded service areas can require cooling at outside temperature well within the effective range of economizers. Operating hours in these spaces are often long, and annual cooling energy savings can be considerable. However, the redesign teams chose to add economizers in only three buildings.

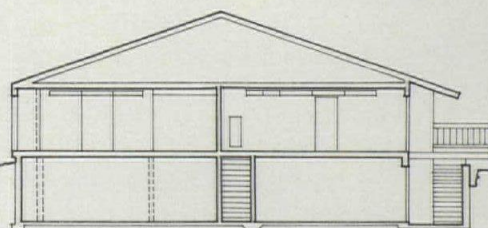
There was a tendency not to tamper with heating setpoints (see Fig. 3D), perhaps in consideration of the comfort requirements of an elderly clientele or the varied expectations of a hotel guest. With few exceptions, in the redesigns these temperature setpoints changed little with time of day or by season. Two of the motels used day setback control strategy, taking advantage of the hotel and motel occupancy profile.



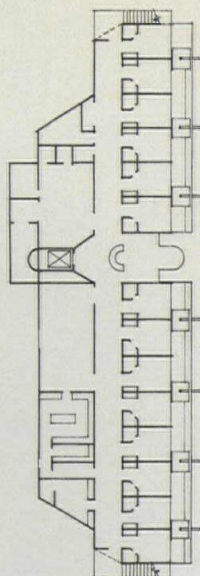


ORIGINAL PLAN

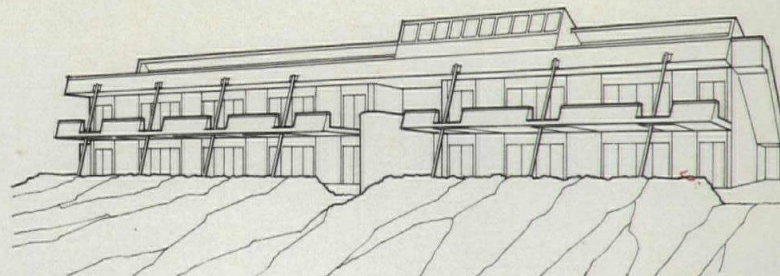
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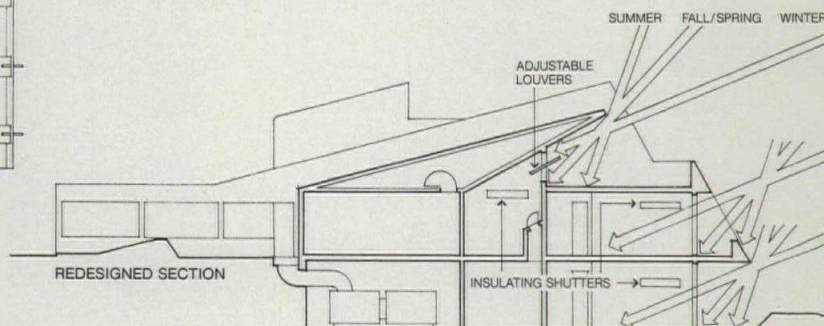
ORIGINAL SECTION



REDESIGNED PLAN

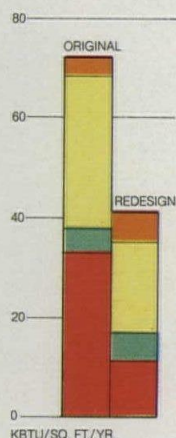


REDESIGN



REDESIGNED SECTION

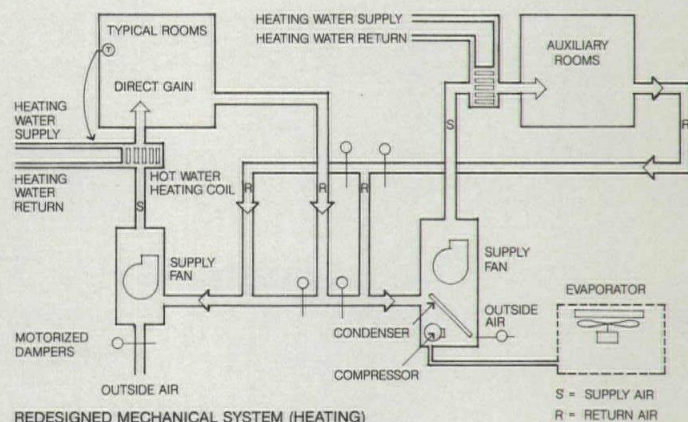
This typical nursing home redesign was a significant departure from its original plan. Support areas were relocated to the north, and all guest rooms were oriented to the south to accommodate a direct gain passive solar system. Heat storage is provided in masonry party walls. Movable night insulation minimizes heat loss, and operable louvers are used for solar control. Excess heat from guest rooms on the south is diverted to buffer spaces on the north exposure. The building form enhances natural ventilation. Air-to-air heat recovery is used for both conditioning outside air and kitchen hood makeup air. Campbell-Yost-Grube, PC; project architects: J.A. Macca, T. Clark; mechanical engineer: D. Pfaff.



KEY

- OTHER
- LIGHTS
- FANS
- COOL
- HEAT

END USE ANALYSIS



REDESIGNED MECHANICAL SYSTEM (HEATING)

FIGURE 4: REDESIGN EXAMPLE, 14 NURSING HOME PORTLAND, OR

Over half of the redesign teams realized the significant impact of 24-hour ventilation air on heating and cooling energy, and substantially reduced the original outside air requirements. Many of these redesigned air quantities in the nursing homes, however, were reported to be in violation of code requirements in effect at that time, and therefore the feasibility of this strategy is questionable. A more workable approach to this problem is to incorporate an air-to-air heat recovery system to precondition ventilation air with exhaust air as was done in two of the nursing homes and two of the hotel redesigns.

Other limited heat recovery applications were used to reduce service water heating energy requirements in the redesigns of two nursing homes, two motels, and one hotel. Waste heat from air conditioning was reclaimed for this purpose and, in another application, heat from laundry wastewater was used to preheat incoming cold water in one nursing home and one hotel.

Some of the major missed opportunities in the redesign were in the areas of mechanical systems and heat recovery. Nonhousekeeping residential buildings have many energy-intensive spaces, numerous "pass-through" energy-using devices such as dishwashers and clothes washers, and significant amounts of refrigeration, which designers should, as a matter of course, consider valuable resources. Even the lowly ice machine in the motel hallway can provide enough cost-effective condenser waste heat to heat water for a few guest rooms.

### Conclusions

Given that the objective of the research was to produce overall energy targets, information about the individual energy savings of a particular conservation strategy is not available without redoing the energy analysis on an incremental basis and in considerably more detail.

We feel that the overall energy reductions, for the most part, resulted from the following strategies: strategic location of externally and internally load-dominated spaces, outside air reductions, shell tightening, incandescent lamp replacement and, to a limited extent, heat reclamation. There appears to be much untapped potential, however, which could not be assessed at that time.

Shortcomings in the domestic hot water data, for example, precluded any accurate estimate of energy savings potential for energy recovery systems. The exclusion of all important process loads does not provide a complete picture as to the energy intensity, as well as conservation potential, in this building type. Nonetheless, the energy savings achieved by the nonhousekeeping residential redesign teams compared favorably to all the other building types, and brought out the generic conservation opportunities to be found in the continuum of space mixes that characterize this type. □



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# Cost control through specifications

**William T. Lohmann**

**Contractors often joke about bidding 'by the pound' on ponderous project manuals, but size is only one of many factors that they consider.**

As an integral part of the contract documents for a project, specifications have a pervasive effect on construction costs. Bidders study them diligently and search for hidden surprises. Some requirements bear directly upon material and labor costs. Others are psychological in nature.

Since it is beneficial to establish a competitive bidding situation in product selection, the type of specification to be used is a primary consideration for the specifier. Naming a single proprietary product without permitting bidders to suggest substitutions eliminates competition and increases cost. Specifications that require products to meet specified performance criteria are not enforceable if they are cluttered with "how to do it" phrases and conflicting requirements. Bids reflect the conservative solution. Limiting bids to three or more acceptable, named products and their manufacturers can increase costs, although the phrase "or equal" may alleviate that problem if the architect or engineer is willing to evaluate substitutions during the bidding period.

The basic rules of technical writing can further reduce costs, for they require clarity and elimination of ambiguities. Inconsistent terminology confuses (and alienates) the bidders. Bidders must allow for unknown conditions created in the bid documents, which include vague "grandfather" clauses and inapplicable specification requirements. The phrases "to meet code" and "as directed" without further amplification cost dollars. Inapplicable requirements will be bid with a contingency. Incorporation of industry standards is acceptable practice, but must be specific.

Sometimes the cost of work-related items can be reduced or eliminated. The owner's construction insurance might be added to existing policies. With thoughtful review, unnecessary sample and shop drawing submittals can be scratched. If a manufacturer's one-year equipment warranty from date of delivery is acceptable, bidders will not add the cost of extending it to one year after project completion. Only critical warranties should exceed the standard one-year period, since excessive requirements also reduce competition.

Costs can be reduced dramatically by improving the bidding process, which takes place under extreme pressure. Bidders' deadlines are tight and their comprehension of the project is critical. Therefore documents should be fully coordinated before release, and a complete set issued to each bidder, noting that contractors prefer detail drawings in

large drawing sets instead of project manual volumes. Clarifications and revisions should be distributed promptly by addendum. If a bidder discovers conflicts or errors in the documents, he will disclose them at the most advantageous time for him, usually after the contract is signed. A clause defining the order of document precedence might be helpful.

When requests for alternative and unit prices are included in the documents, they must be clearly defined and described to the same extent as base bid work. Requests for major construction options should be reasonable, respecting a bidder's investment in the cost of estimating. Too many requests sometimes discourage bidding. On the other hand, unit prices for unknown conditions, such as excavation quantities and length of piling, will eventually save money. When possible, as for tenant work, unit prices should be based on stipulated quantities.

Predictable cash flow is a significant factor in pricing a job, making it necessary to define contract payment procedures and timing carefully. Recovery should be allowed for stored materials on or off the site. Retention of funds during construction is costly, too, and should provide for reduction if the project is proceeding smoothly. Unnecessary changes in the contract should be avoided. Even credits for deletions in the work cannot return 100 percent of the bid cost.

William T. Lohmann, AIA, FCSI, is Specifications Manager for Murphy/Jahn, Chicago.



# The architect as contractor's agent

Norman Coplan

**Specific inclusion of the architect in the construction contract indemnification clause is protection against suits arising from the contractor's work.**

Construction contracts often provide for indemnification of the owner and its agents against claims arising out of the contractor's work. If the claim is asserted against the architect, however, an issue is then raised as to whether the architect constitutes an agent within the meaning of the indemnification clause and is therefore entitled to its protection.

The question of who constitutes an agent of the owner under an indemnity agreement was the subject matter of a recent decision (*Kenny v. George Fuller & Co., et al.*, 18 NYLJ 1). This case involved a claim against a construction manager for damages for personal injury sustained in a 35-ft fall by an employee of the structural steel contractor while working on the construction of a new building. His employer had not furnished him with any scaffolding, safety belts, netting, or other safety equipment in the performance of the work. Since the plaintiff was barred from instituting suit against his employer under the Workmen's Compensation Statute, he sued the construction manager on the ground that he had not provided appropriate supervision of the work.

The construction manager, under his contract, was required to analyze design programs, coordinate implementation of the design, recommend the establishment and implementation of a comprehensive safety program for the project, maintain coordination among the owner, architect, and contractors, and regularly observe the work being performed for the purpose of controlling quality and expediting and reporting construction progress. It was the contention of the plaintiff that the construction manager was liable to him under a statute which provided that the owner and the contractor and their agents had nondelegable duties to provide certain safety conditions at the building site, and that therefore the construction manager was subject to liability on the ground that he was both an agent of the owner and a contractor on the project.

Recognizing that the duties of a construction manager and a general contractor are not identical, the Court concluded that nevertheless the construction manager was a "contractor" within the meaning of the statute, since it had obligations relating to the coordination of the various trades and a function in connection with providing a safe work place. The Court felt that it would defeat the purpose of the statute to allow a party substantially in charge of the project to escape liability because he did not have all the "trappings" of a general contractor. Further, the Court was of the view that the construction manager was subject to liability as an "agent" of the owner within the meaning of the statute and was thus independently chargeable with the duties imposed by the safety requirements of such statute.

The construction manager, when sued by the contractor's employee, had filed a third-party complaint against the contractor claiming he was entitled to indemnification under the "save harmless" clause of the construction contract which ran to the benefit of the owner and "its agents." Under its contract with the owner, the structural steel contractor agreed to assume the "entire responsibility and liability for any and all damage . . . to all persons . . . arising out of, or occurring in connection with . . . the work provided for in this contract" and to "indemnify and save harmless the owner, its agents, servants and employees from and against any and all loss . . . that the owner, its agents, servants and employees may sustain as the result of any such claim."

Although the Court had ruled that the construction manager was the agent of the owner under the safety statute and thereby charged him with responsibility for safety conditions at the site, it did not necessarily follow that the construction manager would be deemed an agent of the owner for the purposes of the protection of the indemnification clause contained in the construction contract. The issue raised by the third-party complaint was whether under the "plain and simple" language used in the contract between the owner and the contractor, as well as the surrounding facts and circumstances, the Court should conclude that the indemnification provision required the contractor to indemnify the construction manager as agent for the owner for the liability with which he was charged. The Court concluded that the construction manager was "an agent" of the owner within the meaning of the indemnification provision of the construction contract, stating:

*"In this arms-length transaction between sophisticated business concerns, the designation of the (construction manager) as the owner's representative in the (construction) contract is susceptible of little misinterpretation. The words 'representative' and 'agent' have been deemed synonymous and interchangeable. . . . Moreover, the mere fact that (the construction manager) was designated as an independent contractor under its agreement with the (owner) does not supplant the clear intent to have fuller function as the (owner's) agent vis-à-vis the work to be performed under the structural steel contract with the (contractor)."*

Although in the case discussed the construction manager was found to be an agent of the owner for the purpose of the indemnification clause contained in the construction contract, it is far from established that an architect will be considered an agent of the owner under a similar indemnity provision. Specific inclusion of the architect, as well as the owner, in the indemnity clause is the only certain solution to this problem. □



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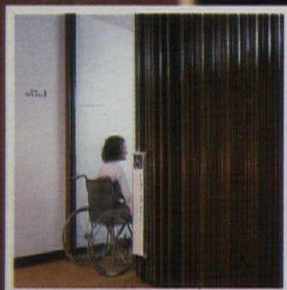
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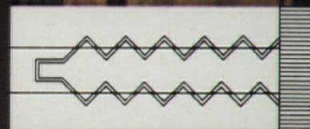


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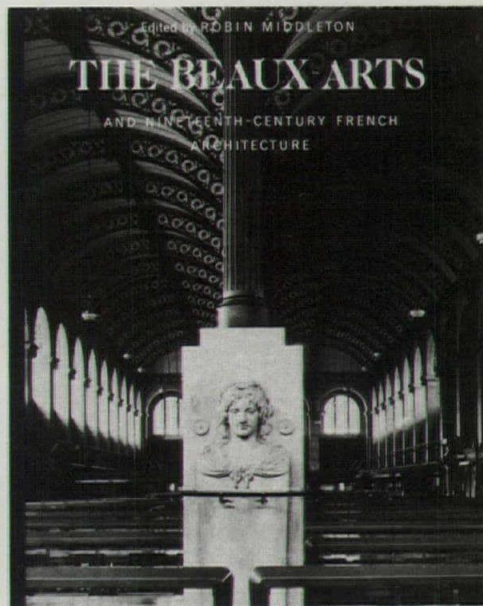
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# Encore l'Ecole

## Books



**The Beaux-Arts and Nineteenth-Century French Architecture** edited by Robin Middleton. Cambridge, The MIT Press, 1982. 280 pp., \$29.95.

*Reviewed by Aaron Betsky, Editor of Crit and of Perspecta 21.*

This year has seen the publication of some very expensive and expansive books on the architecture of the French academic tradition. It seems that great Beaux-Arts projects never die; they just fade elegantly and allow themselves to be conveniently reassembled by critics of every generation. The latest entry is formed by yet another collection of essays on various aspects of the teachings and projects of the École in the last century, this one edited by Robin Middleton. Faced with this well-versed, pasted-together coffee table book, one begins to wonder whether in this generation the inability of Modern architecture to achieve the kind of integrated and integrative solutions towards which the Beaux-Arts method strived is going to be paralleled by a matching inability of modern criticism to deliver a forceful, fully worked-out analysis of that methodology. The current forms of criticism suggest parallels to current practice, in the attitudes of both toward the architecture of the last century. Giedion's polemical abstraction of the history of Beaux-Arts design into a teleological vision of functionalist inevitables has been replaced by the kind of careful and humble close reading of selected elements of that design that seem to recall the inventories, codifications, and selective misreadings of the École. Post-Modernism, at least in its scholastic form, is a phenomenon obviously not restricted to architectural practice.

The individual essays collected in this handsome volume (it seems hardly possible to do an unattractive, or even reductionist design job on a book on the Beaux-Arts) are almost without exception excellent, although they sometimes tend towards a slightly tedious form of academicism. They almost all seem to lift themselves out of their careful cataloging of debates and projects with a slight illumination, shift of emphasis, or reinterpretation of the Beaux-Arts method. A case in point is David Van Zanten's essay on the polychromy controversy, which made the otherwise mediocre architect J.I. Hittorff famous in the 1830s. The debate, which is also discussed in an essay by editor Robin Middleton, concerned the interpretation of archeological finds which led Hittorff to reevaluate the standard conception of Greek architecture as a succession of dazzling white forms. The call for color led to an often violent series of exchanges, which—although Hittorff might be said to have won—had little direct result in terms of

[Books continued on page 98]



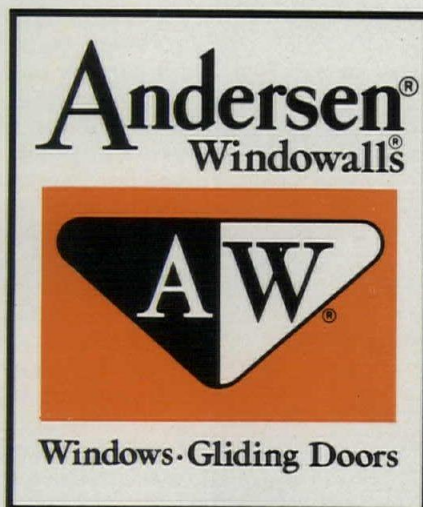
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Books continued from page 96

changing the prevalent concepts of Classical tradition. Hittorff's own polychrome work was just as soon forgotten. Colors were assimilated into some Beaux-Arts designs, but the real importance of the debate was its influence on the commercial and industrial structures in England and America, where color transformed the dour and majestic forms of the old orders into a style more befitting commerce and urbanity. The debate may seem boring to us now, but it did contribute to a realization of the division between decoration and structure, and between cultural specificity and absolute, academically defined orders of columns and walls. Eventually, as Van Zanten concludes, "Hittorff's division of design into abstract composition and elements to be composed begins the separation of form from content, which was to realize its clearest and most radical expression when Labrouste combined the separation with a real sense of temporal distance, cultural uniqueness, and decay in his Paestum drawings." The Modernist division of form from content is thus here carefully reinserted into the cultural context and complex academic and social intentions out of which it emerged.

The equally meticulous study by Georges Teyssot of the development of the program and design for a prison in the provincial capital of Le Mans in the three decades after the French Revolution again seems like a lot of scholarship and attention spent on an at best mediocre building in an obscure town, only making one realize how repetitive, oppressive, and bland the products of École teachings could become once they ventured out of the rarefied spheres of the Parisian metropolis. Yet it is the very mass-produced, authoritarian physical organization of the institutes of government of French society that was the assigned role of the École. It was, after all, a state school, a place where young men were indoctrinated into the development of a methodology for the physical description of the newly emerging bureaucratic state, and where the typologies for the new institutions of that state were developed. The process of design was codified at the same time as the elements were defined and ordered, thus creating, according to Teyssot, an architecture "reflecting general aims and generalizing the contradictory demands of society." Architecture had to emerge as an ordering element, as one of the guises under which modern society could organize and evidence itself.

The Ecole des Beaux-Arts had a great deal of success in this venture, as its absolute international authority and the enduring thoroughness of its influence attest. The ability of the architect trained at the École to articulate and rationalize human life, an ability fostered by the rigorous and competitive training of the École, embodied by the 24-hour esquisse, is one of the phenomena repeatedly discussed in this book. Yet that power was dependent on a particular ideology and social organization—not discussed here—which led the training to become suspect to its own students and its audience almost as soon as it achieved its first successes. As Neil Levine points out in his essay on Henri Labrouste's design for the Bibliothèque Ste-Geneviève, students started to doubt their ability to embody significance in building forms and structural relationships as early as the 1830s. Levine's article elucidates the influence of Victor Hugo's flat-out rejection of the relevance of architecture to modern society in the "Ceci tuera cela" chapter of *Notre-Dame-De-Paris*. Levine speculates that in fact Labrouste himself influenced Hugo's thesis that architecture had been replaced by the book as the central form of cultural expression of society. Labrouste had already started to disintegrate the massive organic tradition of classical typologies in his studies of Paestum, as noted above. If the meaning of an architectural structure did not lie in the orders themselves, or in the plan relationships which they enclosed, if instead meaning was an applied and culturally variable decoration, then Labrouste and his students saw little hope for an architecture that had to rely for its decoration and messages on an oppressive political and cultural regime using forms from another culture basically at odds with both the technology and the functions of the buildings. Labrouste had isolated what seemed to be important in architecture and realized that it was both extrinsic to the processes of construc-

[Books continued on page 104]



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tion and programming, and was controlled by authorities outside of the critical control of the architect. Labrouste's answer, according to Levine, was to transform his buildings into the very medium that did seem to have the critical power and ability to produce independent meaning in a public sense: the printed book. The Bibliothèque Ste-Genevieve, in Levine's analysis, becomes a very complex and sophisticated "duck," a building that says "book" in an almost Pop Art way. "The analogy of the printed book," he claims, "allowed architecture to break out of the confines of Classicism and develop a functional form of expression, and thus ever since Hugo declared the death of architecture as society's principal means of expression, the issue has been to make architecture out of building." The structure thus denies itself as building and attempts not only to conform to literary standards, but in fact—at least in this extreme case—to become literature. In other words, a definition of architecture as the manipulation of visual orders, bureaucratic organizing devices, mathematics, and technology was given up in favor of the ability of architecture to signify, to operate as an independent language in which an author (the architect) could engage in an unmediated dialogue with the viewer or user, and in which the actual medium was stripped of any function other than to further this ultimately rather private and intellectual dialogue.

Yet the education of the École des Beaux-Arts was essentially a public one, paid for by the state and in service of the state. In the end that seems to have been its downfall, both in terms of the increasing rigidity of its forms and because of the bourgeois needs for free expression claimed by its students. Yet it did provide its students with remarkable tools and solutions, as Levine points out in another essay collected here, a review of the 1824 competition for the Prix de Rome. The programs, Levine states, were not fantastical or unreasonable, but in fact very close to the kind of problems the students would face upon completion of their training. The first stage of the competition selected those students able to translate the diverse elements of the building and the demands of site and context into coherent syntheses, while the final judgment was made on the ability of the student to translate this solution into a forceful and compelling image, one which would not only serve, but enforce, clarify, and develop the institutions that it housed through its manipulation of the codified elements of architecture. Rather than a restrictive force, the Prix de Rome competition is thus shown to have been an important process for the formulation of conceptual models for the French state.

Yet Levine sees this process as only "a solution to the problem of education in an age of transition between the death of craft techniques and the birth of modern technology." The École produced a new kind of professional, but it was a professional who was also a servant of the state and of the dominant and slow-moving cultural biases of his time. Moreover, the methodology into which he was indoctrinated was, as Joseph Rykwert points out in another essay in this collection, an abstract and rigid one. It was divorced from history and tradition in any real sense, and thus unable to make itself relevant. In the end, it was based not on the values of the society it served, but on "the easiest . . . and most economical . . . repetition of elementary forms." Ironically, it is exactly this academic reductionism that modern architects wished to recapture when the Beaux-Arts methodology had become more culturally relevant, formally complex, and even contradictory after the influences of Labrouste and Viollet-le-Duc had become assimilated into its teachings. This collection of essays treats the products of the École as just so many cultural artifacts to be analyzed and made ready for adaptive reuse. There is no attempt to try to systematize or formalize the research in the way in which Durand's teachings, as Rykwert points out, became a coherent mandate for the creation of architecture. Just as one might wish for such a mandate in our rather incoherent present situation, so one might also wish that almost any of these authors would carry through their studies to the point where they would be able to present us with a well-structured model, or series of models, to help us understand the relevance of the teachings of the École des Beaux-Arts. □



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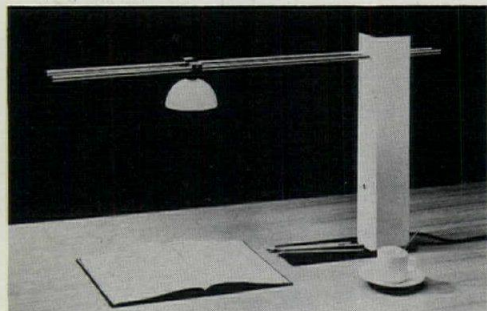
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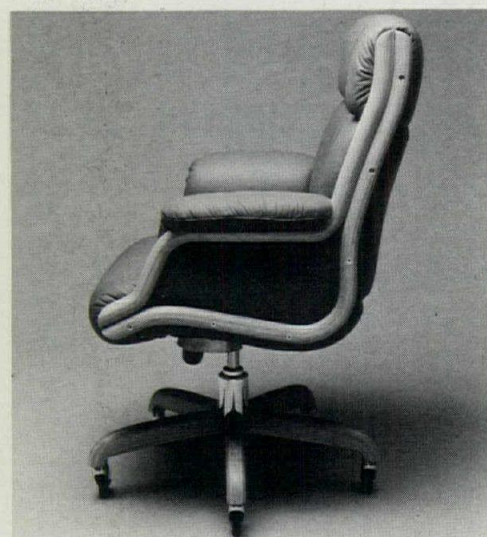
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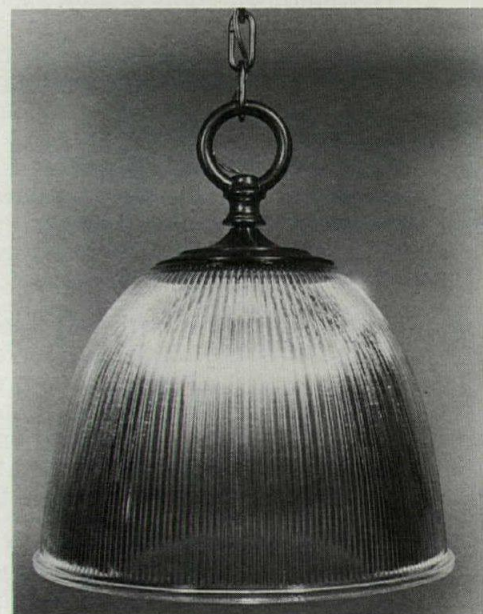
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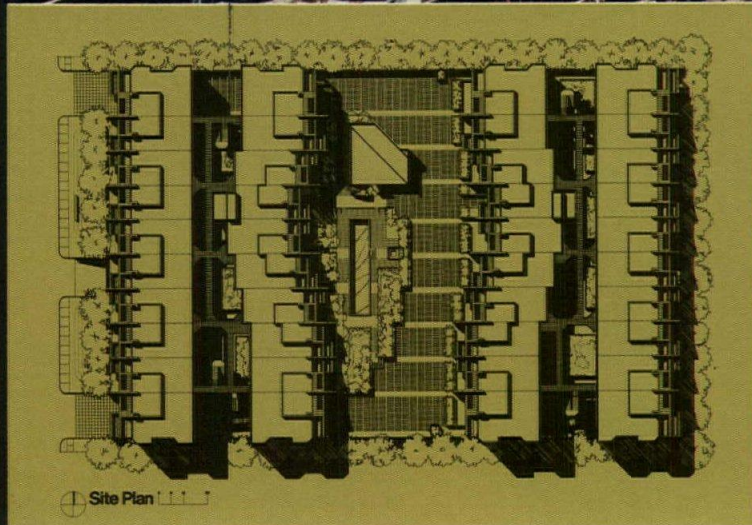
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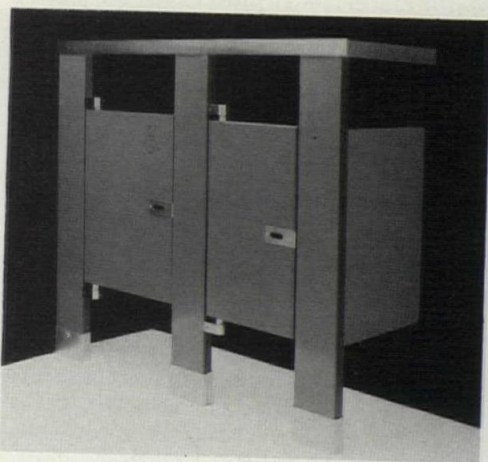
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**Inryco**

an Inland Steel company





**Toilet partitions** of solid plastic are waterproof, noncorroding, do not absorb odors, and are resistant to vandalism. Graffiti can be washed off easily. Components are predrilled for easy installation. Fashion, Inc., Subs. of Kidde, Inc.  
*Circle 110 on reader service card*

**Lighting and traffic control modules** and pedestrian signals can be accommodated on one structure that also can provide space for litter containers, telephone booth, emergency call boxes, parking meters, signs, and graphics. The elements are made from heavy-gauge steel with a Nicklad<sup>®</sup> coating from which graffiti can be removed with commercial cleaners. Standard colors are black or bronze, with custom colors available. Urban Systems Streetscape.  
*Circle 111 on reader service card*



**Conference or dining tables** supported by oval tubular steel frames compatible with the company's Interlock Stack Chair are available with oval, round, or rectangular tops. Designed by Warren Snodgrass, the tables have tops of white oak or mahogany veneers, plastic laminate with wood edges, or a polyurethane finish. Frames are chromium plated, brass plated, or have a powder coating finish. Thonet Industries, Inc.  
*Circle 112 on reader service card*

**Architectural Easy Folds** are fire-rated moldings of aluminum, with a bright or matte finish, coated with transparent acrylic epoxy enamel. They are available flat, prefolded, or prefolded with a fire-rated wood substrate. They can be trimmed at the job site with standard woodworking equipment and can be shaped to conform to inside and outside curves. PHD Industries.  
*Circle 113 on reader service card*

**The Modular Accessory System** incorporates a variety of modules of different sizes and a range of laminated plastic colors in a custom grid. The system can include ashtray, digital clock, drinking fountain, chiller, paper cup dispenser, waste receptacle, fire extinguisher and hose cabinet, and directory boards. Custom cutouts can be provided for central vacuum system, speaker, fire alarm, and other services. Cabinets are mounted with adjustable tabs that ensure a square fit in the wall opening. Bobrick International.  
*Circle 114 on reader service card*

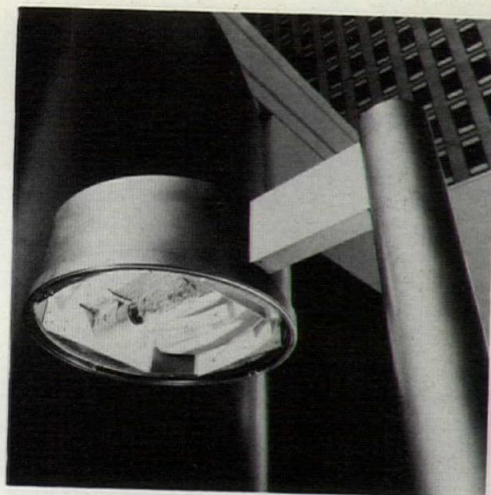
**Foamular<sup>®</sup> RI roof insulation** of extruded rigid foam board is designed for use under single-ply membrane roofing systems, either new or retrofit applications. It has an R-value of 5 per inch of thickness. The 2' x 8' panels are available in thicknesses to 3 in.; 4' x 8' panels are available up to 1½ in. thick. UC Industries, United States Gypsum Co.  
*Circle 115 on reader service card*

## Literature

**Precision scale lumber catalog** for model builders lists more than a thousand items: structural shapes, moldings, siding, and flooring. Strips and sheets, listed by size, are available in basswood, mahogany, cherry, and walnut. The 16-page catalog is \$1; order from Northeastern Scale Models, Inc., P.O. Box 425, Methuen, Ma 01844.

**VAX-11/730, an entry-level computer** with expansion capabilities, is described in a 12-page, full-color brochure. It can function as a stand-alone computer or, with up to 24 attached terminals, it can perform a variety of tasks, from information management to CAD/CAM and seismic applications. The brochure provides hardware specifications and lists software capabilities. Digital Equipment Corp.  
*Circle 200 on reader service card*

**'White Collar Productivity: The National Challenge'** is a 60-page report of a study conducted by the American Productivity Center and sponsored by Steelcase. Based on 140 responses to questionnaires sent to over 600 U.S. companies, the survey asked about programs undertaken to improve productivity, how the companies approached the challenge, and the results achieved. For a copy, write to Steelcase, Inc., Productivity Report, Grand Rapids, Mi 49501.



**'Guide to Outdoor Lighting,'** a 16-page full-color brochure, illustrates Form Ten luminaires that offer site-confined, glare-free lighting. Housings for the luminaires are round, square, or rectangular for pole or wall mounting. There are also square or round bollards of acrylic-enameled aluminum with acrylic lenses, and octagonal, cruciform, or cube lanterns. Parking garage lights have anodized aluminum housings and vandal-resistant polycarbonate lenses. Gardco Lighting.  
*Circle 201 on reader service card*

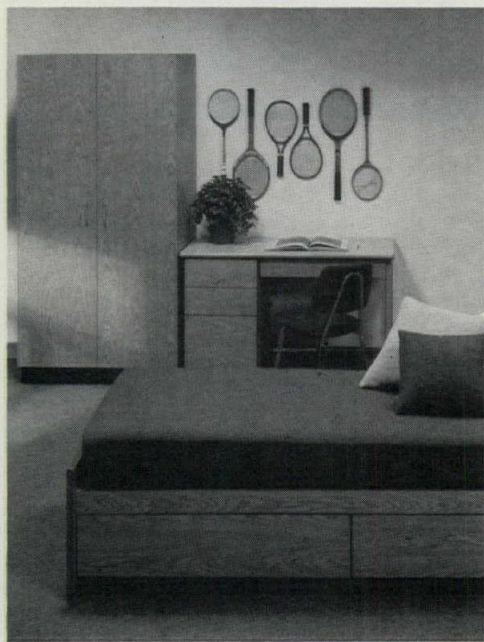
**Outdoor lighting catalog** covers roadway/area lighting, walkway and general lighting, wall brackets, specialty and custom lighting. Photographs and drawings illustrate each product, and information is provided about mounting and relamping. Photometric data and specifications are also included. Architectural Area Lighting Co., Div. of Walter Kidde, Inc.  
*Circle 202 on reader service card*



**Roll-up residential garage doors** of flexible continuous length steel, for any type of opening, are described in a four-page brochure. A strip of Nylofelt along each side reduces noise by eliminating metal-to-metal contact between door and track and by keeping the door separated as it rolls. A bottom weatherstrip compresses when the door is closed to form a barrier against dirt and weather. Porvane Roll-A-Door.  
*Circle 203 on reader service card*  
*[Literature continued on page 112]*



**A catalog of litter receptacles** illustrates in color a variety of containers and coordinated planters and sand urns. They come in a selection of colors, sizes, and materials; some have graphic designs and messages. Specifications are provided, and a chart lists features and options available. Clean City Squares. Circle 204 on reader service card



**Modular dormitory furnishings** are made of durable materials in a broad selection of colors and finishes. Included in the group, featured in a 12-page brochure, are several styles of wardrobes, storage chests, desks, and beds. InterRoyal Corp. Circle 205 on reader service card

**Hardware for the handicapped** includes special knobs and levers. There are knurled and abrasive-coated knobs for the blind to identify doors that lead to dangerous areas. They are described and illustrated in a four-page brochure. Schlage Lock Co. Circle 206 on reader service card

**Emergency eyewash and shower equipment** is described in a 12-page brochure. Eyewash units include portable, self-contained models. Showers, some with eyewash units, include overhead, multiple-nozzle, and walk-through decontamination styles. Haws Drinking Faucet Co. Circle 207 on reader service card

**Portable shelters** for security, revenue control, and bus stops are described and illustrated in an eight-page catalog. Shelters are wood-framed or steel models, and there is a knock-down model for export. The catalog provides specifications and lists optional materials and features. B.I.G. Enterprises. Circle 208 on reader service card

**Solid hardwood flexible tambour** consists of molding profiles bonded to heavy canvas backing. Profile choices,

minimum radius, materials, sizes, and finishes are provided in a six-page brochure. Illustrations show the product in use. Customwood. Circle 209 on reader service card

**Steel 'L' shelving** for stores, offices, bookstores, and libraries, shown in an eight-page brochure, can be installed on walls, freestanding, at checkout counters, or can be used for table or window display. The components, of durable steel, are designed to last for years. Shelves install flat or slanted and are adjustable to meet changing requirements. "L" Shelving Systems, Inc. Circle 210 on reader service card

**RS-18 standing seam roofing** is described in a series of brochures that are illustrated with photos and detail drawings showing procedures for installing roof panels and mansards. SpecData sheets cover Georgia-Pacific's Korad coatings for building panels and Armco flashing and sheet metal of aluminum-coated Type 2 steel. The information is provided in a three-ring binder. Roof Systems, Inc. Circle 211 on reader service card

**Fluoropon architectural coatings** offer color consistency and durability, resisting the effects of weather and atmospheric pollutants, according to the manufacturer. A six-page brochure provides specifications and performance property data, along with color photos of the products in use. DeSoto, Inc. Circle 212 on reader service card



**'Open Office Systems'** brochure illustrates work areas for management, information processing, and systems analysis. There are over 60 panel systems and over 20 freestanding work surfaces. High capacity raceways are available at desk height, base level, or both to accommodate electronic and communications equipment wiring. Modular units permit flexibility in layout. Pleion Corp. Circle 213 on reader service card

**Visual communication products** illustrated in a 28-page company brochure include message boards; cabinets that open to provide writing space, flip-charts, and projection screens; and rear-projection screens. Writing surfaces are porcelain. Cabinets are available with tackable fabric panels, or doors of plastic laminates, woodgrain vinyls, or wood veneers. Egan Visual. Circle 214 on reader service card

## Building materials

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

**Le Cygne, New York (p. 47).** Architect: Voorsanger & Mills Associates, New York. Paint: Benjamin Moore. Gray glass: Hamilton Glass. Sliding doors: Modernfold. Gypsum board: Johns-Manville Corp. Ceilings: Harrington & King; Johns-Manville. Marble: Miller Druck. Carpet: Ari Ekizian Carpet. Lighting: Lightolier; Edison Price. Custom sconces: Paul Marantz. Wood tables and banquettes: Rolhaus. Chairs: Empire Chair. Fabric: Brickel Associates; Design Tex. Wallcovering: Wolf/Gordon. Kitchens: Tassone. Exterior paint: Keim.

**Kramer residence, New York, NY (p. 52).** Architect: Machado-Silveti, Boston, Ma. Paint: Benjamin Moore; Pratt & Lambert. Carpet: Greeff. Lighting: Lightolier. Furniture: ICF; Baker; Jack Lenor Larsen. Fabric: Schumacher.

**Cincinnati Postal Employees Credit Union, Cincinnati, Oh (p. 78).** Architects: Glaser & Myers, Cincinnati. Foundation reinforcing steel and structural steel: Mound Steel Corp. Steel joists: Vulcraft. Formawall walls: H.H. Robertson. Window and curtain wall: Kawneer. Skylights: Plasteco. Office ceiling: U.S. Gypsum. Built-up roofing: Koppers. Kitchen units: Acme-National Refrigeration Co. Elevator: Dover. Lighting: Harry Gitlin Lighting, Day-brite, Emerson, Omega. Stalls: American Sanitary Partition. Washroom accessories: Accessory Specialties, Inc., Halsey-Taylor. Sprinklers: Cincinnati Sprinkler Co. Hot-air handlers: Trane. Tri-fuel boilers: Bryan Steam Corp. Terminal reheat boxes: Titus. Pumps: Bell & Gossett. Chiller and air handling: York. Controls: Johnson. Carpeting: Kemos. Furniture: Steelcase, Berco, Herman Miller, Thonet. Custom casework: Cincinnati Fixtures, Inc. Planters, cube tables, and accessories: Glassform.

**Brookline Park, Pittsburgh, Pa (p. 70).** Architects: L.P. Perfido Associates, Pittsburgh. Reinforced concrete Ivany block: Rennekamp. Spectraglaze tile: Duchini. Stone coping: North American Industries. Turnstile: Alvarado. Rolling overhead door: Apton. Standing seam metal roof: Berridge. Waterproofing/sealants: "Dynatrol," Pecora Corp.; Waterseal, Thomsons; Vulkem deck coating, Mameko. Deck drains: Josam. Glass block: Pittsburgh Corning. Toilet partitions: Metpar. Paint: Watson Standard. Hinges: Quality Hardware. Locksets: Sargent. Lockers: Coin Return, American. Worlds Fair Benches: Kenneth Lynch. Indoor benches: Sitecraft. Bikeracks: Blue Valley Industries, Inc. Stainless steel handrails: Specialty Pools Inc. Field lights: Sterner. Electric panel: GE. Pushbuttons, indicators: Westinghouse. Barrier-free lavatories: Bradley. Flush valves: Sloan. Water closets: American-Standard. Partitions: Metpar.



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greater value, specify  
Jute backing, naturally.





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## January- December

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# A synthetic rubber roof can go down in half the time of BUR—and stand up for years.



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- Hurley, David Jeremiah:** Merit award, Innovations in housing (Jan., p. 218).
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- Young, Charles G.:** First award, Innovations in housing (Jan., pp. 214-216).
- Zweig, Peter Jay:** Merit award, Innovations in housing (Jan., pp. 217).



# MANAGEMENT PERSONAL TIME

MONTHLY SECTION ON TRAVEL AND PERSONAL INTERESTS

"The old '21' Club in New York's a little noisy. But it's still a darned good, comfortable place to eat and it's got atmosphere. You run into a lot of your friends—and that *means* something," drawls the chairman of a Houston oil firm. "That's what business people want in a restaurant—good food and being comfortable. There are a lot of '10 bests' and some of those places are just overrated."

"Sure, Bookbinder's is good—but it attracts so much traffic. If you want to wait an hour, fine. I just prefer a much more intimate place where they recognize me and seat me immediately," says the Philadelphia consultant of his hometown favorite.

"I'm an eater but—being a woman—I like a lighter menu," points out the Washington, D. C., vice president. Her favorite of all? **Le Perroquet** in Chicago. "It's tiny and has just outstanding food."

"Well, I'm not a French food fan," speaks up a Chicago president. "They're usually overpriced . . . and I just don't care to take meat and cover it up with all those wines and sauces."

Trying to select the best restaurants around the U. S. is hardly a piece of cake, and agreement never will be attained. Nonetheless, a cross section of our readers were asked to share their favorites with other business leaders . . . to provide perhaps a bit more food for thought on future travels.

Readers were asked to name their favorite restaurant in each of a number of major metropolitan areas.

The old favorites—Anthony's Pier 4 in Boston, the Old Original Bookbinder's in Philadelphia, Brennan's in New Orleans—dominate the selections. Some of the critics' choices of America's greatest dining establishments—such as New York's Lutece and Le Francais outside Chicago, which ranked 1-2 nationally in a *Playboy* magazine poll of leading critics two years ago—don't fare as well here. The menu, please . . .

NEW YORK—The **Four Seasons** (so named because the menu changes four times a year) is generally acclaimed the finest large restaurant in the nation. Along with the "**21**" **Club**, it's first in the stomachs of our



"Fresh flowers, simple decor, clean tablecloths, and nice china" are what proprietor Patrick Terrail preaches for **Ma Maison** in Hollywood.

## RATING THE RESTAURANTS

BY JAMES E. BRAHAM

readers. At "21," critics sometimes carp about the food, but the atmosphere and service are unrivaled. "Even if they don't recognize you, I think they *pretend* to," one executive joshes. **Windows on the World** and the **Shun Lee Dynasty** are other favorites. As for shunning Lutece, one businessman complains that it is "overwhelmingly expensive, unnecessarily so. I always felt guilty eating there at those prices."

LOS ANGELES—The aristocratic **L'Ermitage** leads a lineup of **Perino's**, **Scandia**, **Ma Maison** (the "in" bistro of the film-makers), and the picture-perfect **L'Orangerie**. Stephen Michaelides, executive editor of *Restaurant Hospitality* magazine, favors **Ma Maison**: "The chefs are daring and creative, always experimenting. They

really *create* fine food. Also, it's a great place to people watch."

CHICAGO—"A landmark, best seafood in the nation!" a reader raves over the **Cape Cod Room** in the Drake Hotel. A Chicago marketing director agrees: "It does a better job with Bookbinder Chowder than Bookbinder's does." You also can't go wrong at the **Blackhawk**, **Arnie's**, **Nick's Fishmarket**, and **Cricket's**. They all finished ahead of the critics' choices as Chicago's finest—**Le Francais** and **Le Perroquet**, two of the dozen (along with New York's Lutece) restaurants that received the *Mobil Travel Guide* 5-Star Award this year.

PHILADELPHIA—Don't confuse the **Old Original Bookbinder's** down by the Delaware River with the "other" **Bookbinder's** downtown, our readers warn about their Philly favorite. **Le Bec Fin** is another Mobil 5-star critics' choice, which is, one businessman argues, "too elaborate and too expensive. Besides, it's a five-course, fixed-price menu and I just can't eat five courses." **Arthur's Steak House** also was cited in this survey . . . and the intimate place preferred by that Philadelphia consultant referred to earlier is **Maureen**, which some experts claim is the "best food bargain" in town.

SAN FRANCISCO—"The red-brocaded, Victorian elegance of **Ernie's** is San Francisco," the 1982 restaurant guide of *Travel/Holiday* magazine says of our readers' favorite. **Trader Vic's**, **Fournou's Ovens**, and **Le Club** are other executive choices.

BOSTON—Critics decry its "touristy" atmosphere but **Anthony's Pier 4** consistently ranks first in the annual executive-dining awards issued by *Sales & Marketing Management* magazine, and it is by far our readers' choice in Boston. "It probably is overrated," one executive agrees about what is one of America's largest restaurants, "but it's a must-type place." And, as *Travel/Holiday* notes, "There is still no better place for lobster." Other choices: **Copley's**, the dining rooms of the **Ritz-Carlton Hotel**, and **Locke-Ober Cafe**.

DETROIT—In lauding the clubby **London Chop House**, a Detroit-area business leader cites the "small



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## MANAGEMENT PERSONAL TIME

touches . . . when you make reservations you get matches with your name on it, things like that" . . . in addition to the "super service and outstanding food." And one of the finest wine cellars in the land. **Joe Muer's** is a first-class seafood spot, and the **Pontchartrain Wine Cellars** is another solid choice.

WASHINGTON—The maitre d' counts, too, and nowhere is he more important than at **The Jockey Club**, in The Ritz-Carlton hotel (known as the Fairfax Hotel until late this October). Paul deLisle, who came from the defunct Sans Souci, attracts such notables as Henry Kissinger and Art Buchwald with his charm and congeniality. Sharing the D. C. spotlight are **Le Lion d'Or** (a grand gastronomical delight described as "fit for Presidents and kings"), **Mel Krupin's** (a "Washington power center," as *Esquire* magazine noted in its recent spread of "125 Great Restaurants"), **Maison Blanche** (the favorite of White House celebrities), and **Tiberio**.

CLEVELAND—The **French Connection** is the readers' choice. Cleveland and editor Mr. Michaelides relishes this gourmet establishment in Stouffer's Inn on the Square, along with **That Place on Bellflower** and **Au Provence**, but his No. 1 choice is **Sammy's**, a new spot in the city's historic "Flats" which offers "a unique dining experience, offering very few items that can be found on any other menu."

DALLAS—In just a few years **The Mansion on Turtle Creek** has become the place to see and to be seen in Big D. It's run by the same management that operates "21" in New York but the atmosphere is "like out of a movie," one reader remarks. **Arthur's** (best steaks in Texas?) and the **Pyramid Room** of the Fairmont Hotel are other good bets.

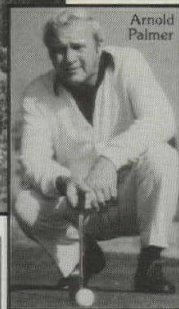
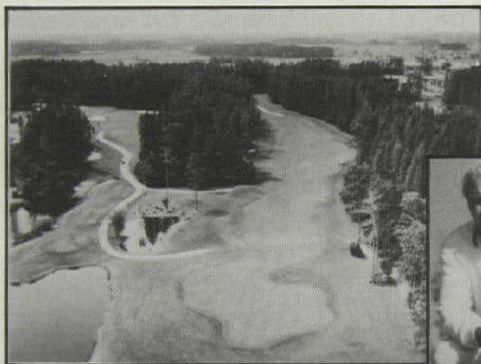
HOUSTON—"Most Houston restaurants are overpriced and none are really good," one VP notes . . . and he lives in Houston. **Vargo's** is his favorite. **Maxim's** reportedly has gone downhill since moving to the outskirts but it remains the readers' choice, followed by **Tony's** ("in the top 10 best restaurants in the world," gushes *Travel/Holiday*), and **Nick's Fishmarket**. But if you want to go where the oil money flows, try the **Confederate House**.

PITTSBURGH—**Le Mont** is a glass-walled showcase on Mt. Washington; from there the view is

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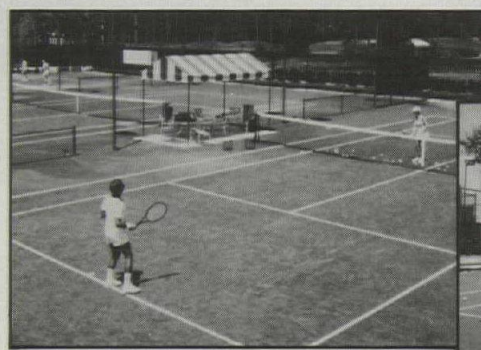
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## MANAGEMENT PERSONAL TIME

spectacular. **Louis Tambellini's** doesn't have the lofty view but many say the food is of a higher order. If you don't feel like social climbing, drop in at **The Common Plea** downtown.

**SEATTLE**—"Excellent food, nice setting above Lake Union, and unbelievable service," says one executive of **Canlis**. **Rosellini's Four-10**, **Rosel-**

**lini's Other Place**, and **Ivar's Salmon House** also merit a visit.

**MIAMI**—Everybody's favorite is **Joe's Stone Crab**, an informal "fun" place where the stone crabs are king, but don't forget the key lime pie.

**MINNEAPOLIS**—**Charlie's Cafe Exceptionale** is another hands-down choice. Should you desire something a bit lighter on the pocket book, try **Murray's Restaurant** and its "butter-knife" steak. The **Blue Horse** in St. Paul is another winner.

**ATLANTA**—One level below the lobby of the Hyatt Regency-Atlanta, **Hugo's** is the height of elegance in Atlanta. The **Coach & Six** ("best bean

soup in the world," says *Travel/Holiday*) and the Danish delight, **The Midnight Sun**, take place and show honors.

**ST. LOUIS**—A Mobil 5-star, **Tony's** is also our readers' favorite. Should you prefer French rather than Italian dishes, **Anthony's** (run by the same family) is recommended. As is the **Port St. Louis**.

**TAMPA**—**Bern's Steak House**, reported to have the biggest wine selection in the New World (6,500 different wines), and the Spanish **Columbia** have been joined in excellence by **The Cypress Room** at Saddlebrook, the resort owned by Penton/IPC.

**DENVER**—A Tennessee businessman says his party of 18 all were "amazed at the variety and quantity of fresh seafood offered at a place that far inland." This is **The Broker** (downtown), which shares readers' acclaim with **Tante Louise**, **Cafe Promenade**, and **Emil-Lene's Sirloin House**. P. S.: **Cafe Giovanni** is only a year old but many natives insist it's already No. 1 in Denver.

**BALTIMORE**—A "must" for any visitor is **Hausner's Restaurant**, another old and "fun" place featuring huge portions of reasonably priced German food and seafood. **Danny's** and the Spanish **Tio Pepe** are other favorites.

**INDIANAPOLIS**—The exquisite 35th-floor **La Tour** topped all other area restaurants in this survey. The natives, however, insist that **The Glass Chimney** has the best food. **King Cole** is another good choice.

**CINCINNATI**—"On a per-capita basis, we have more fine restaurants and more people dining out than any other city. That's my plug for Cincinnati and I really mean it," declares the president of a company there. He puts **Pigall's** a peg above the **Maisonette**, a French treat ranked 11th nationally by *Playboy* and almost everyone else's favorite in this survey.

**KANSAS CITY**—Superb steaks continue to make **The Golden Ox** the businessman's choice, followed by the **American** and **Plaza III**.

**MILWAUKEE**—The No. 1 question is: which German restaurant is first and which is second? Our readers rate **Mader's** and **Karl Ratzsch's** 1-2 here; in the *Sales & Marketing Management* magazine survey Ratzsch's was second nationally. Those desiring different fare should head for the **English Room** in the Pfister Hotel & Tower.

**NEW ORLEANS**—**Brennan's** (the place with the breakfast), **Antoine's**, and **Galatoire's**, in that order, all received raves from our readers... ahead of **Le Ruth's**, **K-Paul's**, and **Commander's Palace**. However, as one executive wonders, "How can you possibly pick one restaurant in New Orleans? They're all good." ■

## How to succeed in business.




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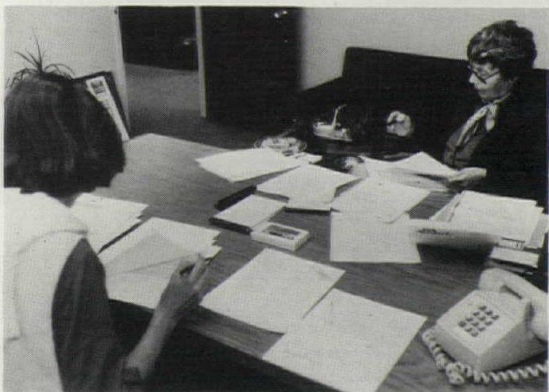
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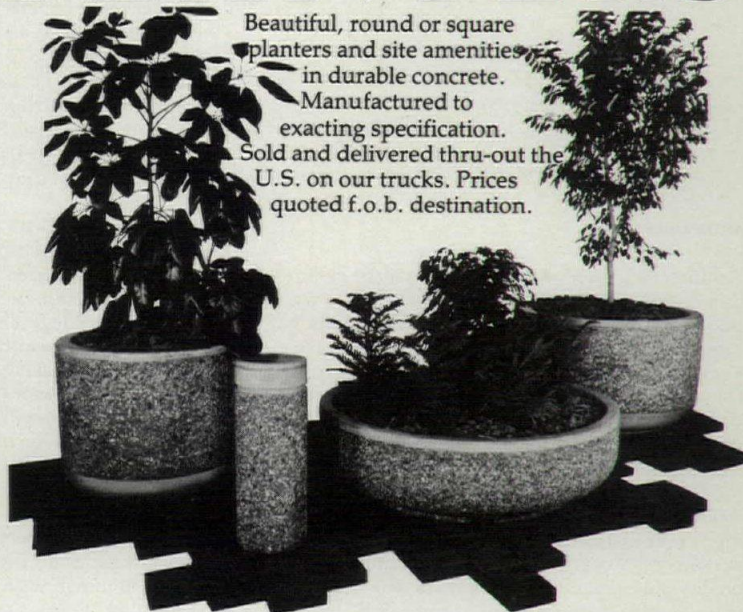
were scrutinized by members of the 30th annual P/A Awards jury, and 26 were chosen for recognition. Awards and citations in this extraordinarily competitive competition in architectural design, research, and urban design/planning will remain confidential until publication of the January 1983 P/A. As they do every year, the results will reveal new talents and shed new light on the state of American architecture.

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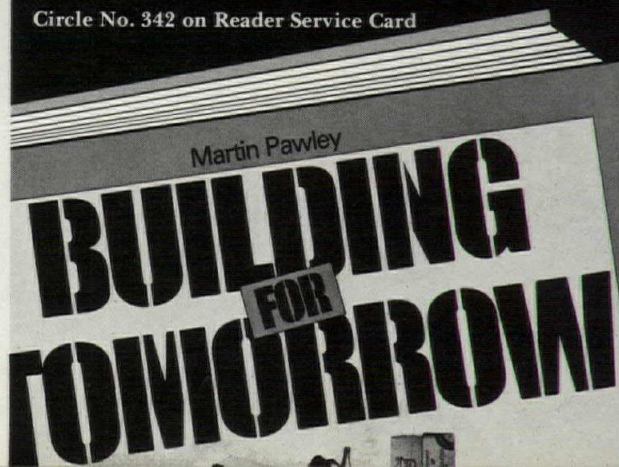
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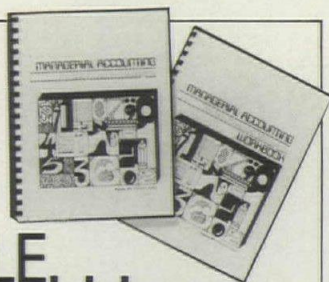
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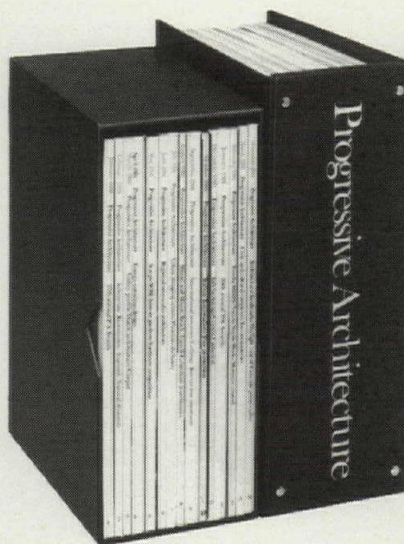
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