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Fabric-covered ceilings for elegant settings**



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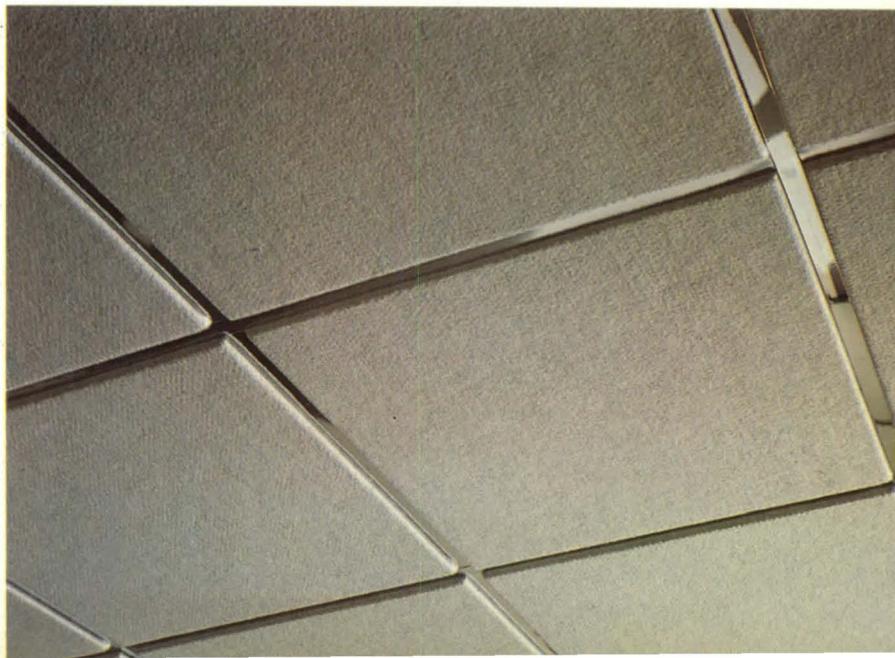
Panels are easily installed in an exposed-grid system and just as easily removed

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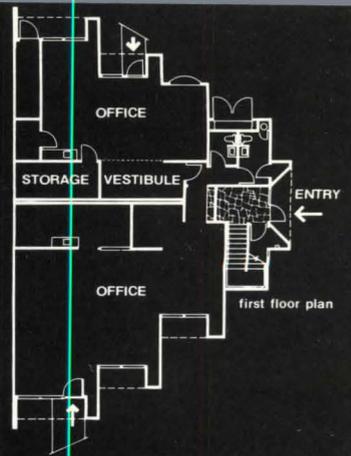
Soft Look, newest addition to the Armstrong Designer Series. For architects, interior designers, and their clients, it's an elegant, quiet touch for the most elegant settings.

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Red Cedar brings this bubble-windowed office back to earth.



Architect's office, Lafayette, California.  
Architects: Richard A. Dobell & Associates.

"Tall, strong vertical elements with horizontal and angular definition of entrances and circular projecting bubble windows contrast the natural texture and surfaces of the cedar shingles.

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—Richard A. Dobell

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

Insulative ("R") values of roofing products shown above. Source: ASHRAE Handbook, and California Energy Design Manual.



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



Cedar halibut hook, carved to represent man disguised in a sea otter skin. Hook is iron nail. Used by Makah, Kwakiutl and Tlingit Indians. Cedar. To touch the earth.

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## The American Institute of Architects

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**Cover:** Photograph by Marvin Rand of George C. Wyman's 1893 Bradbury Building, Los Angeles (see page 50).

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Paseo del Rio.

# How do you design the

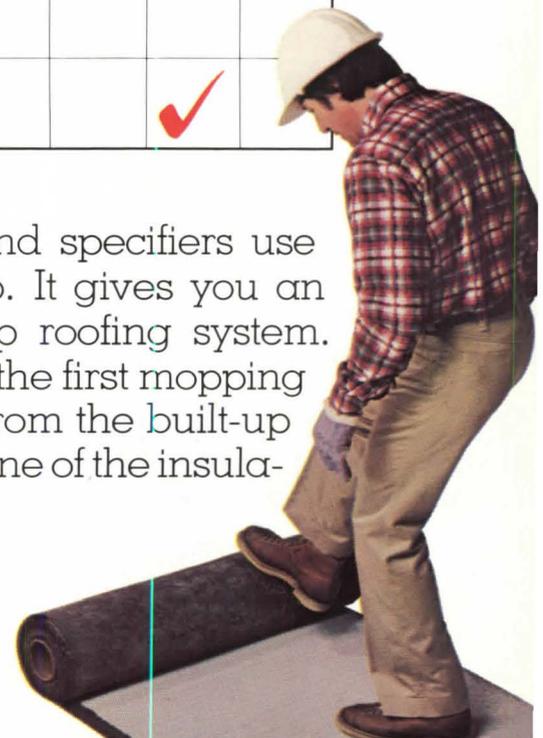
## You start with Owens-Corning

**S**tart with Owens-Corning Fiberglas\* Roof Insulation. It's the best base for your built-up roof. Check it against all the other bases on the market. Feature by feature, Fiberglas Roof Insulation wins going away. The comparison chart below should be proof enough.



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Owens-Corning Fiberglas Furi®	✓	✓	✓		✓	✓			✓
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TRADEMARK (R)

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## EVENTS

**Aug. 2:** Seminar on Law and the Architect, St. Louis. (Repeat seminars: Aug. 7, Boston; Aug. 9, Atlanta; Aug. 14, Denver; Aug. 16, Los Angeles; Sept. 10, Lincoln, Neb.; Sept. 21, Detroit; Oct. 8, Dallas; Oct. 19, Washington, D.C.) Contact: Peter Wood, Division of Continuing Studies, University of Nebraska-Lincoln, 1600 N. 33rd St., 156 NCCE, Lincoln, Neb. 68583.

**Aug. 2-4:** Michigan Society of Architects mid-summer conference, Grand Hotel, Mackinac Island, Mich.

**Aug. 3-6:** American Society of Interior Designers conference and international exposition of designer sources, Seattle. Contact: ASID, 730 Fifth Ave., New York, N.Y. 10019.

**Aug. 9-10:** Power Generation Conference. Convention Center, San Jose, Calif. Contact: Solar Energy Industries Association, 1001 Connecticut Ave. N.W., Suite 800, Washington, D.C. 20036.

**Aug. 9-23:** Women's School of Planning and Architecture, Regis College, Denver. Contact: WSPA, Box 102, Palomar Arcade, Santa Cruz, Calif. 95060.

**Aug. 12-17:** Association of Collegiate Schools of Architecture/AIA Research Corporation Conference on Energy Conscious Design, Cambridge, Mass. Contact: ACSA, 1735 New York Ave. N.W., Washington, D.C. 20006.

**Aug. 13-17:** Program on Value Analysis/Value Engineering, University of Wisconsin, Madison.

**Aug. 13-24:** Program on the Scientific and Mathematical Foundations of Engineering Acoustics, Massachusetts Institute of Technology, Cambridge, Mass.

**Aug. 15:** Entries deadline, Owens-Corning Energy Awards, 1979. Contact: Owens-Corning Fiberglas Corporation, Fiberglas Tower, Toledo, Ohio 43659.

**Aug. 20-24:** Workshop on Building Fire-safety Evaluation, University of Wisconsin, Madison.

**Aug. 22-24:** Conference on Fire Research, National Bureau of Standards, Washington, D.C. Contact: NBS, Center for Fire Research, Room B-260, Building 224, Washington, D.C. 20234.

**Aug. 22-24:** Conference on Earthquake Engineering (AIA a cosponsor), Stanford University, Stanford, Calif. Contact: National Conference on Earthquake Engineering, Department of Civil Engineering, Stanford University, Stanford, Calif. 94305.

**Aug. 23-26:** Alabama Council of Architects/AIA annual convention, Point Clear, Ala.

**Sept. 5-8:** Western Mountain Region/AIA annual convention, Keystone, Colo.

**Sept. 10:** call for papers, Energy Technology Conference and Exposition, to be held Mar. 24-26, Washington, D.C. Con-

tact: Lauren Unzelman, Energy Technology Conference, 4733 Bethesda Ave. N.W., Washington, D.C. 20014.

**Sept. 30-Oct. 5:** World Congress of the International Union of Women Architects, Seattle. Contact: Jean Young, AIA, UIFA, 5601 N.E. 77th, Seattle, Wash. 98115.

**June 1-4, 1980:** AIA annual convention, Cincinnati.

## LETTERS

**'Design Trends':** I enjoyed reading "Charting the Influence of Design Trends" (April '79, p. 42). Enjoyed, that is, until I found a partial quote of mine used as a bridge between those who don't care about design and those who do.

Since the author had previously published the speech from which this fragment was lifted, I am sure he is well aware that the paragraph quoted reads:

"What we need, and what the Institute's role is—is to provide the practitioner with the most up-to-date information on the technologies that are applied to the building, and let him work out the solution which represents what the owner needs and what he (the architect) thinks satisfies his concept of architecture."

I am very concerned about design excellence. What I "don't give a damn about" is the continuing pseudo-elitist attempt to set "styles" and anoint the select few. The agonizing discourses on style only heighten a public impression that the architect is playing with their needs and aspirations.

The most significant contribution of "style" in the last 25 years has been a deadly sameness in large-scale urban architecture and the almost total demise of regional architecture.

As Harry Wolf, FAIA, states succinctly, "I'm not interested in either being or being perceived as being fashionable—and that's what 'high-style' is, fashion. . . ."

David Olan Meeker Jr., FAIA  
Executive Vice President  
AIA

I am angry. The article in the April issue, "Charting the Influence of Design Trends," really tops it, in my mind, for arrogance. "Cringe" when clients want watertight roofs and buildings completed on time? Why should we cringe? Since when did the term "design" get hammered down to the narrow confines of the esthetic aspects of a structure?

If good design doesn't include proper site utilization, good circulation and space planning, energy conservation, proper materials selection and good detailing, we have ceased to be architects and have become sculptors on a large scale. Design *must* be all-encompassing. Of course, we "care"; we care about architecture, the

art of building—and that includes a responsibility to the *people* who will use the buildings we design.

I am familiar with buildings less than 10 years old that were considered gems of design by the standards touted in this article. Now the roof leaks, the masonry walls have major cracks and the exposed portions of the concrete frames show signs of severe decay, primarily because of poor detailing and materials selection. As far as I am concerned, this is lousy design, esthetics notwithstanding.

In the 19th century when the Beaux-Arts academic approach neglected the needs of the client for the "theories" of the academicians, more significant work was done by the engineers, concerned with needs, costs and durability, than by the architects, concerned primarily with self-expression. Let us not repeat the mistakes of the past. If we continue to climb toward our ivory towers and not face up to real problems, we will in time lose out to the civil servants, the developers and the hacks who may not care about "design," but at least know who pays the bills and who uses the buildings. What is more, we will deserve our fate.

Benjamin Stein, AIA  
Burlington, Vt.

*The architects whom the author saw "cringing" as they listened to a particular group of clients at a conference were doing so not because the speakers cared about watertight roofs and schedules, but because they evidenced a total lack of concern with esthetics. Also, the article did not "tout" any particular standards of design, but examined the ways in which standards are influenced by various factors.* Ed.

**Lincoln Memorial:** I lament the factual carelessness in the reporting of alternative proposals for recognition of Alaskan and Hawaiian statehood at the Lincoln Memorial in Washington, D.C. (See Mar. '79, p. 12.)

Public Law 94-556 asks for recognition "at" but not necessarily "on" the memorial. The National Park Service is not mentioned in the law. As an agency under the Secretary of the Interior, NPS is fulfilling the mandate to him to "study the feasibility of and make recommendations for" recognition. The law could not possibly be construed as leaving the placement to park service discretion.

Approval rests with the commissions and council named in the act. At the time of publication of the March JOURNAL, the Commission of Fine Arts had not yet met to comment on seven alternative proposals, so the commission could not have "opposed" or recommended any of them. Since that time, the commission has met

*continued on page 79*

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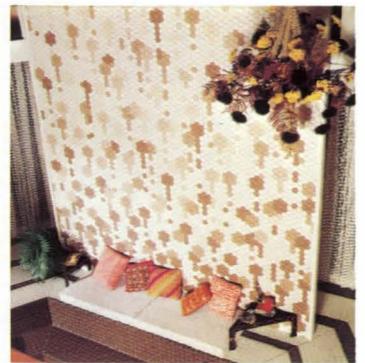
American Olean Tile Company,

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# Iowa's tallest building features steel plate-wall system.

## SINGLE UNITS INTEGRATE INTERIOR & EXTERIOR WALL!

The Ruan Center is the tallest building in Iowa—a 36-story office tower and banking pavilion located in the heart of downtown Des Moines.

A highly innovative feature distinguishes the Ruan Center: a steel plate wall system in which the plate wall and the structural wall are joined together into single units. Now, both parts of the wall can be fabricated and erected as one piece.

As an extension of the structure's grid design, the exterior is a system of interlocking one-bay wall panels with window openings. These panels were fabricated to full-story height in two bay sizes—32'8" (with 7 window openings) and 28'0" (with 6 window openings). The panels have 5/16" USS COR-TEN Steel plates on the outside, with painted carbon steel bar stiffeners and cover plates on the inside, forming an exterior/interior window wall.

USS COR-TEN high-strength, low-alloy steel was chosen for its resistance to atmospheric corrosion when its exterior surfaces are boldly exposed to the weather, and for its minimal maintenance needs.

The Ruan Center frame required 4,700 tons of structural steel. 1,600 tons of USS COR-TEN steel plate was used for the exterior walls. Columns were located on module lines to permit a large degree of office-layout flexibility. This resulted in an interior layout that is virtually column-free and approximates a center-core design.

Structural design simplicity in a modular scheme offered yet another dividend: erection at great speed. The high-rise was completed in less than two years.

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COR-TEN steels, allow architects and engineers every opportunity to be original and innovative.

Before developing any architectural applications for USS COR-TEN steels, the designer should review the suggestions, limitations and precautions contained in the USS publication, "USS COR-TEN High-Strength Low-Alloy Steel for Architectural Applications" (ADUSS 88-6659-02).

For copies of this book, as well as our Building Report and our Design Detail Sheets on the Ruan Center, call your U.S. Steel Construction Services Representative or write to United States Steel, P.O. Box 86 (C1124), Pittsburgh, Pa. 15230.

USS and COR-TEN are registered trademarks.

---

*Owner:* Ruan Center Corporation,  
Des Moines, Iowa.

*Architects:* Kendall Griffith Russell  
Artiaga, Inc., Des Moines, Iowa.

*Structural Engineers:* VanderLinden  
& Associates, Des Moines, Iowa.  
Rittweger & Tokay, Inc.,  
Park Ridge, Illinois.

*General Contractors:* Neumann Brothers, Inc.,  
Des Moines, Iowa.

*Structural Steel Fabricator and Erector:*  
Pittsburgh-Des Moines Steel Co.,  
Des Moines, Iowa.

*Curtain Wall Fabricator:* Venetian Iron  
Works, Inc., Des Moines, Iowa.



**United States Steel**

*Circle 106 on information card*

# An apartment tower on the waterfront. **ELEVATORS BY DOVER**

Marina Tower rises twenty stories beside the Intracoastal Waterway in North Palm Beach, Florida. The luxury apartment building is part of the 60-acre Old Port Cove community, which also includes Cove Plaza shops and offices, a yacht club and dockage for 300 boats. Residents of Marina Tower are served by high-speed Dover Geared Traction Elevators. For more information on Dover Elevators, write Dover Corporation, Elevator Division Dept. G, P.O. 2177, Memphis, Tennessee 38101.

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**The elevator  
innovators.**

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Old Port Cove Development Co.  
ARCHITECT:  
Schwab and Twitty  
Dover Elevators sold and  
installed by  
Miami Elevator Co.

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## Celebratory Convention in Kansas City

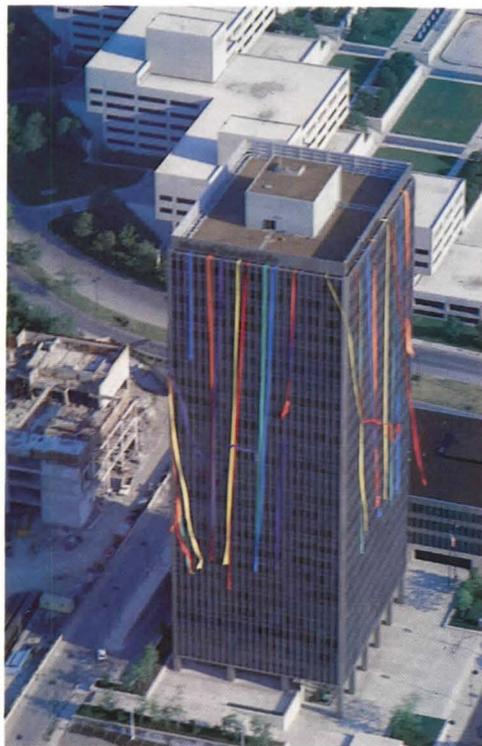
### Delegates Elect Vosbeck, Clark, Halpin, Teasdale and Barnes

R. Randall Vosbeck, FAIA, of Alexandria, Va., was elected first vice president, president elect, at the AIA convention. He will assume the office in December and will become president one year later.

Vosbeck, currently a vice president, was previously the board's representative for the Middle Atlantic region. He also has served on many committees and task forces addressing such issues as long-range planning, ethics, architectural education and federal architecture, and on the National Capital Planning Commission. He is a member of the U.S./U.S.S.R. working group on building design and construction management. A graduate of the University of Minnesota, Vosbeck is a partner in the Virginia/Maryland firm of the VVKR Partnership.

Three national vice presidents were also elected: Gerald L. Clark, FAIA, of Phoenix; Anna M. Halpin, FAIA, of New York City, and Thomas H. Teasdale, AIA, of St. Louis. J.W. Barnes, FAIA, of Austin, Tex., was elected to a two-year term as treasurer.

Clark, a partner of Clark/Van Voorhis



Marti Dodge

*The Mutual Life Building at Crown Center, beribboned for celebration (see page 18).*

Architects Inc., received his architectural degree from Arizona State University. He is director for the Western Mountain region and chairs the component affairs commission. He previously chaired the membership task force and served on the public relations committee.

Halpin represents the New York region on the board, chairs the public relations commission, is a member of the secretary's advisory committee and represents AIA on the construction industry's coordinating committee of the American National Metric Council. A graduate of the University of Illinois, Halpin practiced architecture for 18 years prior to joining Sweet's Division of McGraw-Hill Information Systems Co., where she is responsible for developing information programs for architects.

Teasdale represents the Central States

region on the board, chairs the practice and design commission, is a member of the product information task force and the long-range planning committee. A graduate of Washington University, Teasdale is a founding partner of K. E. Wischmeyer & Partners.

Barnes represents the Texas region on the board and chairs the AIA/RC's board of directors. He has served as president of the Texas Society of Architects/AIA and on the planning and natural resources committee. A graduate of the University of Texas, Barnes is a partner in the firm of Barnes Landes Goodman Youngblood.

Charles F. Schwing, FAIA, of Baton Rouge, La., was elected last year to serve as president in 1980. Robert M. Lawrence, FAIA, of Oklahoma City was re-elected last year to serve a second two-year term as secretary through 1980.

### Nuclear Power, Alaskan Lands Draw Prolonged Debate on Floor

The most heated debate at the convention's business sessions was over a resolution on nuclear power submitted by the California Council/AIA. The council stated that since the issue of "nuclear energy has not been a subject of specific policy of AIA," the board of directors should "expeditiously develop and promulgate a policy on nuclear energy."

Debate began in the board meeting held before the convention. Members of the board argued that an AIA policy should not single out nuclear energy but should be a broad energy policy. At the business session, some convention delegates agreed and clashed with the California Council and supporters.

The broad resolution was finally adopted: AIA should "demonstrate its leadership role by urging national reappraisal to bring about intensified actions to eliminate energy waste in buildings through favorable tax programs and other means, and to dramatically shift funding

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#### Convention

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# **PPG GLASS, ITALIAN GRANITE AND HISTORIC BOSTON. A FITTING COMBINATION THAT SAVES ENERGY.**

Owner/Developer: Cabot, Cabot &  
Forbes, Boston. Architects: Skidmore,  
Owings and Merrill, Chicago.



Sixty State Street. More than a powerful juxtaposition of granite and glass, this Boston tower stands as a thoughtful statement on the responsibility of growth in an area rich in historical significance.

That the building succeeds is due in no small part to PPG *Solarban*<sup>®</sup> 575-20 glass. The dual-paned glass, together with specially designed lighting and HVAC systems, enabled the

developer, Cabot, Cabot & Forbes, to realize an energy savings of approximately 40 percent per square foot over the neighboring properties.

But energy savings aren't the whole story. Tenants are. And Sixty State Street's tenants like the spectacular views of Boston harbor that the large-sized glass affords. Other tenant benefits include brightness reduction of as much as 75 percent in

the building interior, precision temperature and humidity control, and excellence as an acoustical barrier.

To find out which of PPG's *Solarban* reflective insulating glasses will work in your next building, see Sweet's 8.26Pp. Or write directly to PPG Industries, Inc., One Gateway Center, Pittsburgh, Pa. 15222.

PPG: a Concern for the Future



### Convention from page 11

to accelerate the development of renewable sources of energy, based upon regionally available and renewable natural systems. . . ."

Another controversial topic was the position AIA should take on the Alaskan land bills. An Alaskan land policy was adopted by the board supporting legislation which "provides for adequate continuing planning, classification and control of Alaska National Interest Lands based on sound knowledge of the natural environment and resources and which protects lands subject to damage and preserves lands of primary wilderness value for the continued and future use and appreciation of all peoples."

At the business session, delegates argued that the board's position was not specific enough. John McGinty, FAIA, proposed that AIA support the Udall-Anderson bill of the Alaskan Natural Interest Conservation Act of 1979 which passed the House on May 17. The Alaska Chapter/AIA felt that the Udall-Anderson bill is too restrictive and that AIA should recommend more flexible policy. The McGinty resolution was adopted by the delegates and by the board's executive committee in a later session.

The Alaskan lands bill, sponsored by Morris K. Udall (D.-Ariz.) and John B. Anderson (R.-Ill.), would set aside 110 million acres of Alaska's pristine wilderness as national parks, wildlife refuges and forests. Of this, 67 million acres is designated as wilderness lands which cannot be developed in any manner.

The House chose the Udall-Anderson legislation over two other bills which would have protected a smaller amount of acreage. At the heart of the House debate to take place was the fate of the potentially oil-rich 2.2 million acres of arctic national wildlife range.

The Udall-Anderson bill has been introduced in the Senate, but it is likely to face tough opposition. A similar bill, passed by the House last session, was defeated in the Senate. Henry M. Jackson (D.-Wash.) reintroduced last year's Senate version of the Alaskan lands bill which is more restrictive than the Udall-Anderson bill, setting aside 85 million acres, with only 35 million acres designated as wilderness. It is predicted that the Senate will not address this issue until next year.

Other business included the adoption of a resolution calling for AIA to continue to coordinate with the National Council of Architectural Registration Boards in improving the voluntary intern development program, but "opposing the adoption of criteria developed by NCARB by individual states as a mandatory prerequisite for licensing." A resolution was also passed calling for the components of AIA to actively promote student participation in local, state and

regional activities and encourage their members to become involved in architectural education.

Three bylaw changes were adopted: that the nominees for the first vice president, secretary and treasurer must receive a majority of the votes cast, and that the three nominees for vice president who receive the highest number of votes cast on a single ballot shall be elected; that the public director, currently Harold Fleming, Hon. AIA, be allowed to vote at board meetings, and that deadlines for nominating petitions for board officers be extended from 40 days prior to the opening day of the convention to 60 days.

An examination of the first year of design/build (see June 1978, p. 8 for background), by the design-build/construction contracting monitoring task force, revealed that of the 3,682 AIA member firms returning questionnaires, 3,308 indicated no experience with design/build; 10.2 percent reported some experience. Sixty percent of the firms without experience strongly supported the design/build concept. Firms with experience believe design/build will improve the quality of building without weakening the professional stature of the architect.

## Convention Speakers Question, Needle and Berate the Profession

A critical, sometimes pessimistic strain surfaced in convention lectures at Kansas City, and it served to deepen and lend resonance to the leitmotif of celebration.

Norris K. Smith, professor of art history at Washington University in St. Louis, began the series of talks ripping into basic architectural assumptions, including the notion that art and architecture express the "life of the times," and architectural expressions, including what he called the "hedonistic" play with forms and the creation of skin-deep images and corporate propaganda disguised as architecture.

Pietro Belluschi, FAIA, in an address to the convocation of fellows, vented criticisms of current trends to "fashion" in architecture. James Q. Wilson, professor of government at Harvard University, debunked urbanist theories which rely on architectural solutions to cities' problems and asserted instead that the human desire for community life is important. Even I. M. Pei, FAIA, in his gold medal acceptance speech, needled the profession for its split into two worlds: "the world of practice and the world of ideas, each in alienation from the other." (See p. 29.)

But an address by Nancy Hanks, former chairman of the National Endowment for the Arts, and an informal discussion among four AIA gold medal winners produced sessions that were

essentially optimistic and celebratory. Hanks' talk was a closing-day challenge to the profession that urged architects to see the public, with its growing esthetic and cultural awareness, as a new "client." The gold medal discussion, staged as part of a dinner honoring this year's recipient Pei, was a congratulatory series of reminiscences on careers and reflections on architecture.

Besides elevating the public's awareness of architecture, this year's celebration is intended to elevate architects' awareness and capabilities. At one point, convention chairman Bruce Patty, AIA, of Kansas City asked the audience, "What kind of a future can we build without a realistic assessment of the present?"

Said Norris Smith: "I [have] the profoundest misgivings about the new architecture of appearances, for it has lent itself all too handily, or architects have lent their services all too willingly, to the purposes of a class of image manipulators whose existence is one of the more frightening aspects of the situation we find ourselves in."

Pietro Belluschi: "Without belief in certain values, without discipline, without a sense of continuity, without an understanding of facts in their human context, we will have a difficult time of it. . . . In facing the real world, my question is whether an addition to contrived forms and styles, fashioned by taste makers, tends to weaken our perceptions, damage our natural instincts and in the end poison our best talents."

James Q. Wilson: "People today want to live in a self-sufficient society, one which includes homes with lawns, a safe place to raise children, accessible shopping, cars and mobility. We intellectuals spend much of our time arguing that those are not powerful human needs."

Smith's opening lecture was the most scholarly, the most far-reaching and the longest. For nearly an hour and a half, he criticized a variety of architectural notions on his way to a final criticism of the state of the art today. He started out optimistically, stating that the role of the architect always has been "to be affirmative in the face of crisis and instability, to create symbols of steadfastness when an order of things has been in jeopardy. So it is entirely appropriate that architects should convene in order to celebrate the importance of their art at a time when so many of us are uneasily anxious about what the future may bring." From there, Smith traced architecture from its traditional role as the embodiment of institutions to the 20th century, when the "spirit of the age" has been interpreted as the "chaos of modern life." Architects, he said, "took it upon themselves to save not the state but 'society' from that de-

*continued on page 18*

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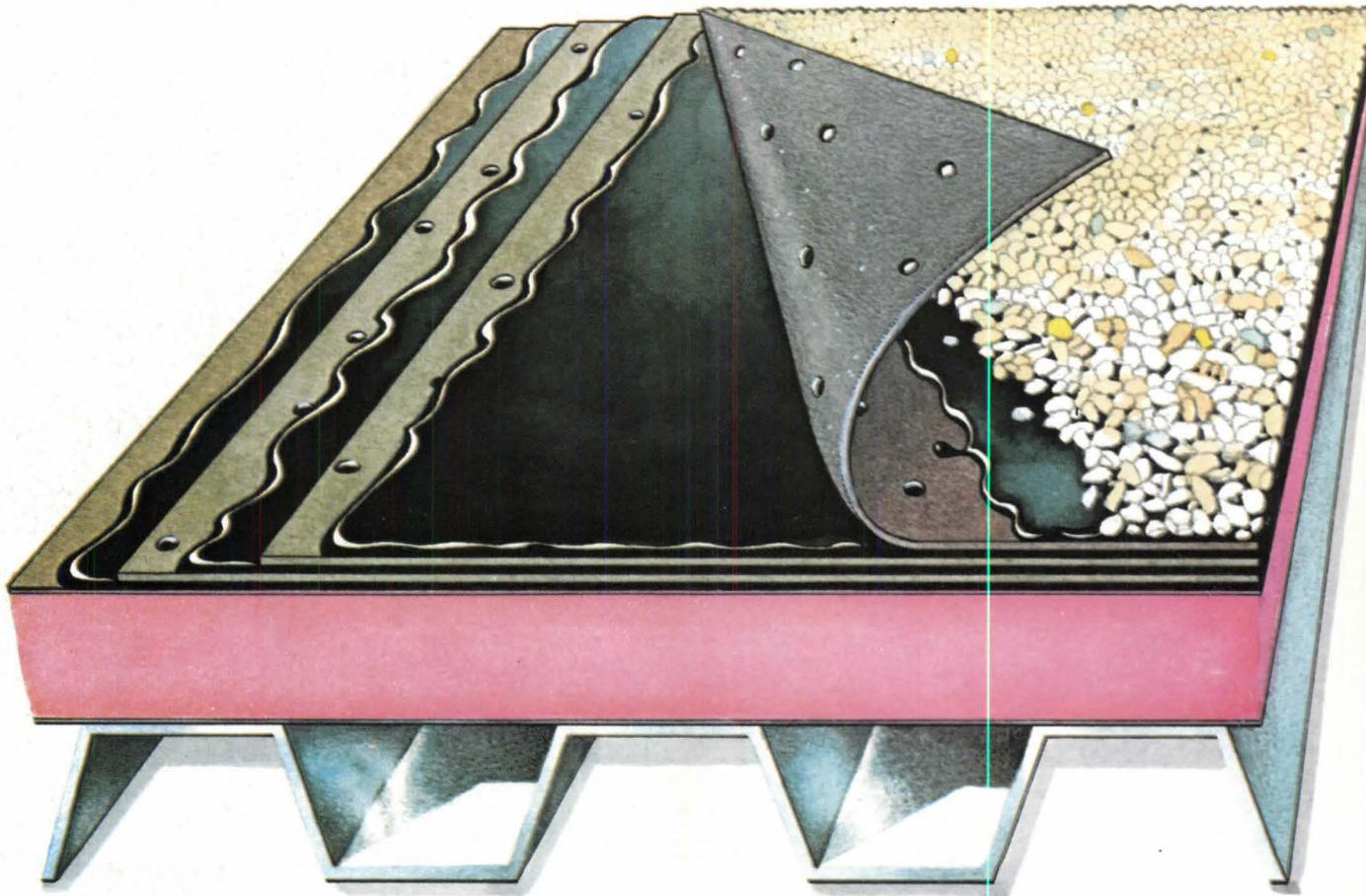
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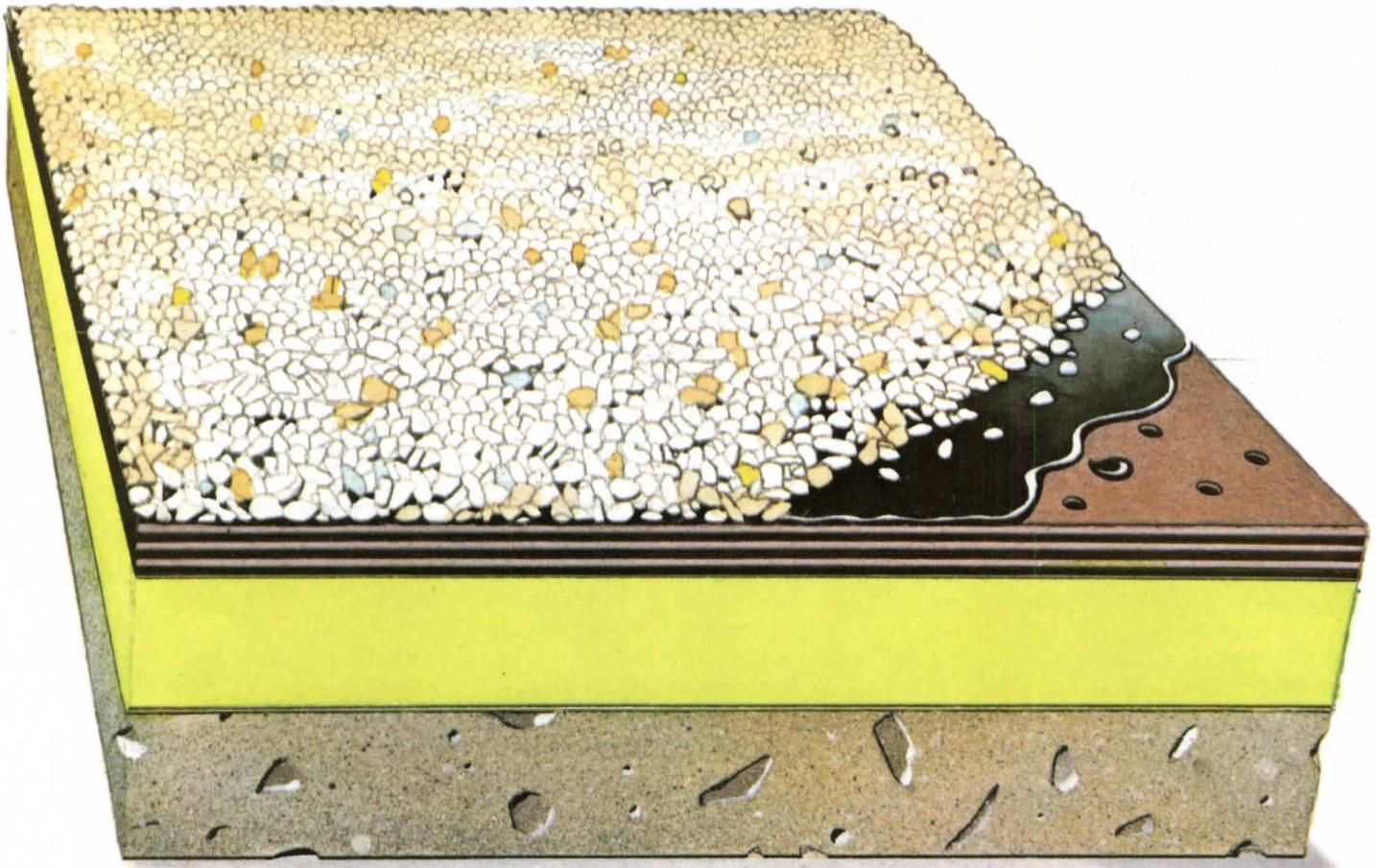
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At the gold medal dinner, from left: I.M. Pei, Pietro Belluschi, AIA President Ehrman B. Mitchell Jr., Wallace K. Harrison and Philip Johnson.

#### Convention from page 14

graded condition." The result was Le Corbusier's overly rational, overly ordered ideal city and, ultimately, the ill-fated Pruitt-Igoe, architecture with no basis in political or historical institutions and no tolerance for the diversity of life.

Smith argued that the "world-shaping and world-redeeming purposes of the generation of Wright and Le Corbusier have been abandoned, and what we are confronted with now is an architecture of sensations and of appearances." To Smith, this sort of architecture is direct kin to the worst of the business world, where the "winning image" is more important than the reputation for good work and to the political world, where the appearance of credibility is more important than integrity. "Now," he said, "if only the architectural profession would stop attacking the old traditions and forget about the world 'new-improved,' if it would stop spending so much time and effort on factitious images of a corporate seriousness that no one believes in . . . and would turn its talents to defending, instead, the best wisdom that has come down to us from our ancestors . . . then we all indeed might have a future."

Belluschi, in his address to the college of fellows, gave an emotional and heartfelt talk. He, too, criticized the new "hedonism" in architecture. "I have read," he lamented, "that a new historical watershed has been proclaimed with great tolling of bells—where *visual delight*, impatient with social, technical or moral restraints, is declared to be the only goal worth pursuing. This well-advertised hedonistic binge has revived in new ways the old conflict between those artistes-architects who believe that only a precious vocabulary of preinvented forms

(the Beaux-Arts syndrome updated) permit free and pure esthetic expression and those architects who believe that life in all its variety and richness is the true generator of lasting forms." Change, Belluschi said, is desirable. But change for the sake of change before an art is fully realized, he said, "is destructive of greatness. It is true that we have all been trained to exercise our profession in a society where the superficial aspects of things and events are systematically over-emphasized. Frivolous means get immediate attention. . . . It is the time when tomato can posters supersede Cimabue's "Resurrection" as artistic symbols of our humanity. . . ."

Wilson took architects to task for their assumptions about cities. Individual architectural projects will be relatively meaningless to solving urban problems unless there is a reason—a community—that makes people want to live in the city, he said. Traditional modernist solutions based on Le Corbusier's highrise housing schemes have failed, he noted. Wilson identified two basic desires that relate to cities: the desire for material abundance and the desire for personal freedom.

In the past, he noted, people "had to make the cities work because there was no alternative." But today, for the first time, people can flee the city in search of the abundance and freedom they desire—a fact that is making the revitalization of cities even more difficult. "Gentrification," or the return of affluent people to the cities, is not as widespread as it is made out to be, he said. Instead, according to Wilson, it represents the small percentage of people who always have enjoyed living in cities, a percentage which shows up in appreciable numbers only in the largest cities. "What has to be done is to give people a reason to live there. . . ."

In the long run, these situations will improve. But meanwhile, there will be some tumultuous times."

Nancy Hanks, closing the convention, spoke to the relationship between architect and the public. "Our citizens," she said, "are hungry for something better than our present environment. I see here a vital link to be forged between architects and a major new 'client' of the 1980s—the general public." But she also asked, "Can it be that architects are neglecting the care and feeding of clients? That architects are not taking the pulse of the public to detect the sense of excitement and well-being that comes from a pleasant encounter with a nice place or space? Why is it that your talents to make our communities livable and lively are all too often not even sought? Have we forgotten you—or have you passed us by? The debate on postmodernism . . . may be grist for your mill, but it is an exercise of noncommunication to most clients and certainly to the new client and the public at large," she said.

Hanks cautioned that in impending times of economic problems and a "new age of constraint," we must not allow amenity and quality to fall victim to tight budgets, that the "new alliance of the '80s be the architect and the public working together for "livable and lovable cities." On the other hand, she noted a "new spirit—a reawakening of the ethic of self-help and personal responsibility for improving the quality of life. This spirit and responsibility have been characteristic of much of the work that is now being done in cities and towns across the country . . . among students, professionals, civil servants and the lay public. Private initiative and public action have been, and will always be, a combination that can make a difference. . . . The public client needs your leadership. And the design profession needs to listen more perceptively to the public client." Ernest Wood

## Kansas City's Arts Festival Joins Institute's Celebration

On the eve of AIA's convention, dancer Marilyn Wood proved that she could inspire Kansas City people to dance in the streets in front of Union Station. They did the Charleston, the polka and disco. And when someone in the band yelled at them, "Do you love your city?" they answered "Yes!"

Between 8,000 and 10,000 people turned out that night, June 2, to watch a laser show, Wood's professional dancers, the Missouri Dance Theater, the Kansas City Ballet and the Conservatory Celebration Dancers.

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## Convention from page 18

join in the public dancing, the evening was the most celebratory event of the convention. The convention itself slanted its regular series of lectures and professional development seminars toward "celebration" by giving them an emphasis on design. And other events, such as the gold medal dinner, when four gold medalists got together for an informal discussion of architecture and recollections of their careers, had definite auras of celebration, too.

For a year preceding the convention, representatives of the Kansas City Chapter/AIA and local arts organizations put together a citywide arts festival to coincide with the AIA convention. The festival eventually came to be known as "City in Celebration." And so, the City in Celebration had been going strong for a week even before most architects arrived in town. AIA President Ehrman B. Mitchell Jr., FAIA, later said that when he told a cabbie driving him in from the airport that he was an architect attending the convention, the driver turned to him and said, "You guys have something started in this town that just won't stop." Mayor Richard Berkley in his welcoming address to the convention said, "This week we are looking at . . . the joy, the pleasure, the inspiration that come to us all from high ideals, imaginative planning and exceptional effort."

The idea, according to organizers of the City in Celebration, was to make people aware of architecture and (especially important for a city that is largely suburban) aware of urban spaces through a series of arts events in and around buildings and at the same time to make people more conscious of the arts by taking the arts out of their usual environments. A shopping center, for example, might be the scene of a "blitz," a series of free performances for shoppers.

For a budget of \$305,000—\$110,00 in cash (\$68,000 raised locally; \$42,000 in grants) and the remainder from in-kind services—the city staged 114 events in eight days, ranging from kite flyings, laser shows and a church service of liturgical music and dance to art and design exhibits (two—a retrospective of Charles and Ray Eames' work and a show called "Kansas City Abstractions"—were set up in the Crown Center Hotel). A children's opera was staged for students in schools of the more depressed areas of town, and it was unprecedented in that it was staged in Missouri with aid in part from the Kansas Arts Council. The organizers of the City in Celebration expect it to become a regular event in the city. And a long sought-after citywide arts council now may become a reality.

As for the convention, the word "celebration" kept popping up at regular inter-

vals. Sunday morning, there was a "Celebration Run" that attracted 65 architect-athletes to a five-mile course around the city. That afternoon, the first major convention activity was a celebration, albeit a somewhat serious one: the presentation of the report of the eight-member Regional/Urban Design Assistance Team (R/UDAT) which for five days has been studying a potential development framework for Kansas City's Northland, a 160-square-mile area of scattered development of uneven quality but of exceptional natural beauty.

The resulting recommendations centered largely on the concept of building with nature, as one team member noted during the discussion of siting: "Why not run with nature, go with it, rather than opposing it?" More specifically, suggestions included viewing Northland as a total unit rather than as scattered independent areas; modifying subdivision regulations to permit more creativity; using public funds to more directly attract private investments, and establishing a tax structure of abatements, deferrals or exemptions to encourage development. Even more specifically, the team suggested types of projects: mixed use development, a sports complex and a "rural village" development that would, through design, reinforce the rural image of the section while providing both residential and commercial development. For the three remaining days of the convention, some 40 architectural students from the University of Kansas, Kansas State University, Iowa State University, University of Nebraska and Ohio State University participated in a charrette to plan prototypical projects for these three suggestions.

The R/UDAT, noted President Mitchell, was envisioned as "the beginning of the real stimulation of the process of design" and a "fantastic beginning to getting to know one another." What's more important, he said, however, is the idea that "we get from our city a convention, we celebrate architecture and we leave a legacy" of design awareness.

On Monday, the U.S. Postal Service celebrated architecture at the convention with the first-day issue of four new postage stamps depicting Thomas Jefferson's University of Virginia Rotunda, Benjamin Latrobe's Baltimore Cathedral, Charles Bulfinch's Boston State House and William Strickland's Philadelphia Exchange. These are the first four of 16 stamps that will be issued over the next four years commemorating American buildings and their architects. "U.S. postage stamps like these we launch today," said Carl C. Ulsaker, senior assistant postmaster general at the first-day ceremony, "can be very powerful little pieces of paper. They tell the world what we think is important because they are really tiny billboards that

carry significant messages in millions of copies."

As the convention proceeded, the celebration theme was incorporated into the regular program of honor awards, investiture of fellows, lectures, seminars and other activities.

The professional development seminars attempted to use examples of real buildings—this year's honor award winners where appropriate—to illustrate discussions of broader issues, but at times became merely case studies of the buildings in question. The design excellence seminar, one which presumably would have attracted a lively give-and-take kind of discussion, turned out to be a detailed examination of Hugh Stubbins' Citicorp in New York City and MLTW/Turnbull's Pembroke College dormitories in Providence, R.I. There were arguments about whether Stubbins had pulled a "structural stunt" by floating Citicorp 115 feet off the pavement and over a church. There were questions about how delivery trucks serviced shops on the ground floor of the Pembroke dormitories if college quadrangles occupied the normal service areas behind the buildings. While the discussions were of value to architects interested in those particular buildings, they did not generate discussion of the broader issues envisioned.

There was applause several times for four gold medal winners who talked informally about their careers and about design at the gold medal dinner Wednesday evening. Mrs. Louis Skidmore and Mrs. Richard J. Neutra spoke briefly on behalf of their late husbands, and I. M. Pei, this year's gold medalist, was joined by Philip Johnson, Pietro Belluschi and Wallace K. Harrison for the discussion. They reminisced about designing the United Nations building ("the question always came around to whether form follows function or the other way around," said Harrison in describing arguments over designing seating arrangements for the delegates) and about designing Lincoln Center ("I never thought about form that much. I had trouble trying to make the damn thing work," said Belluschi, as he described how the program of the Juilliard School kept changing. Said Johnson: "I think Lincoln Center was a catastrophic period in all our lives. . . . I don't think it was any of our best work. I think all of us alone could have done better").

Pei described his efforts to design a hotel in China using neither traditional modernism nor resurrected traditional Chinese forms but an adaptation of Chinese forms instead. ("Once again, I have to learn from Philip. 'You cannot not know history,' " he said.) Harrison urged architects to become involved in

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making nuclear energy safe. Johnson said he was "hugely" enjoying the philosophical crisis in architecture today. "I've always enjoyed battles. It's just that the enemies are different." And he drew applause when he stated, "I'm not post-modern. I'm modern just like the rest of us." Johnson praised some of Kansas City's older buildings and the diversity of earlier periods, and he condemned some of its modernistic work. "We, all living architects should be damn well ashamed," he said. "I've done them and so have many of us sitting here tonight. . . . Architecture is something rich . . . ornament is integral to the way we look at the world."

As the convention was drawing to a close, Mitchell told a reporter that for the 4,000 people attending the convention, the celebration "exceeded expectations," but that he had hoped the convention could have reached the public a little better. For the first time, convention events—the R/UDAT presentation, lectures, the honor awards presentation—were open to the public. And, as the convention closed, Mitchell told the delegates, "This is the beginning and not the end. Now we have the impetus to really celebrate architecture all across the land. . . . Let's say, 'Goodbye, Kansas City,' and 'Hello' to the rest of the U.S." *Ernest Wood*

## Board Funds Continuing Review Of States' Registration Laws

Thirty-two states have sunset laws and a majority of these laws require periodic reviews of the state architectural registration board. In light of this, at its meeting prior to the convention, the AIA board of directors approved funding for a continuing program to support AIA components in reviewing and revising registration laws and in dealing with related issues such as license renewal programs.

The following are some of the states examining their registration law or regulation activities. In California, Gov. Jerry Brown recommended repealing the architectural registration law and abolishing the board of examiners (see Apr., p. 26). He is expected to reverse this position. However, sunset legislation is pending in the legislature and will require the review of the architectural registration law almost immediately. In Illinois, several sunset bills are in the legislature that would extend the registration board. In Wisconsin, the registration board will review a report which is expected to be critical of the National Council of Architectural Registration Boards and its examinations. In Florida, the sunset act was to repeal the architectural registration law and the Flor-

ida state board of architecture on July 1, unless legislation was passed to reverse this action. The Washington Council/AIA board of directors has approved a plan and timetable for review and preparation of an architect registration/licensing proposal for the 1980 or '81 legislature.

The board also adopted an overall policy on architectural registration to use as a point of reference for all registration issues: "AIA . . . will seek to facilitate entry into the profession; promote competition and discourage market restrictions; encourage public participation in the registration process, and promote competence and accountability to the public of those providing architectural services."

The board took the following action on other issues:

- voted to support legislation introduced by Senator Robert Stafford (R.-Vt.) to repeal the Federal Highway Beautification Act of 1965 and allow states and localities to control outdoor advertising without federal restriction. For many years, AIA has supported billboard control statutes and programs, specifically the Federal Highway Beautification Act. The outdoor advertising lobby has continually amended and weakened the act. Consequently, the statute has been so radically changed that now billboards are a form of federally protected land use and states and local governments are being prevented from enforcing their own control ordinances. Any federal effort to control billboards could result in an \$18 million price tag, although the Administration has requested no funding.

### Awards

## Design for Ferry Terminal Wins Reynolds Student Competition

George Kewin, a third-year graduate student at Harvard University's graduate school of design, is first place winner of the 1979 Reynolds aluminum prize for architectural students. The prize, sponsored by Reynolds Metals Co. and administered by AIA, is awarded annually "for the best original design in which creative use of aluminum is an important contributing factor." It is open to any student of a school which is a member or associate member of the Association of Collegiate Schools of Architecture, or which has an AIA student chapter.

The winning concept (drawing of interior perspective, p. 25) is for an "extruded" aluminum ferry terminal at Woods Hole, Mass. According to Kewin, the entry is designed "in the language of

- approved an application for a grant from the National Endowment for the Arts and approved \$9,336 of AIA funds to match the potential NEA grant for an AIA competitions advisory service.
  - adopted a policy so that in some unique situations where a local component is unable to sponsor a Regional/Urban Design Assistance Team it can be sponsored by local private or public community groups, but subject to the written approval of a local AIA component. A R/UDAT visit can now only occur in a locality where the AIA chapter is sufficiently funded and staffed to sponsor the visit.
  - voted to support restoration in-situ of the west central front of the U.S. Capitol according to the Ammann & Whitney report (which was requested by Congress as well as a report on the extension of the Capitol).
  - adopted a policy that in the future all voluntary dues invoice contributions would have to be added to the dues by a member. Currently, a scholarship fund contribution is automatically included in a member's dues unless the member responds negatively to the request.
- In addition, the board adopted the recommendations of the long-range planning committee; reaffirmed its support of the Equal Rights Amendment and urged all AIA components in states where the ERA has not been ratified to lend support to pro-ERA activities; revised honorary membership qualifications so that selection will be based on accomplishments of national significance, and approved the creation of a task force to evaluate the intern development program.

waterfront warehouse." A panel sandwich wall system uses corrugated aluminum cladding in 24-foot sections. Some sections are curved, and all are fastened to the building's frame. Despite its "high technology" airline characteristics, Kewin says, the terminal "can be quite simply put together."

Kewin will share his \$5,000 prize with his school. Also, an honorable mention award, with a \$1,000 prize to be divided equally between designers and school, went to Michael T. Albanese and B. Briggs MacDonald, students at the Southern California Institute of Architecture. Their project is for a space colony and is based upon the National Aeronautics and Space Administration's torus configura-

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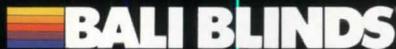
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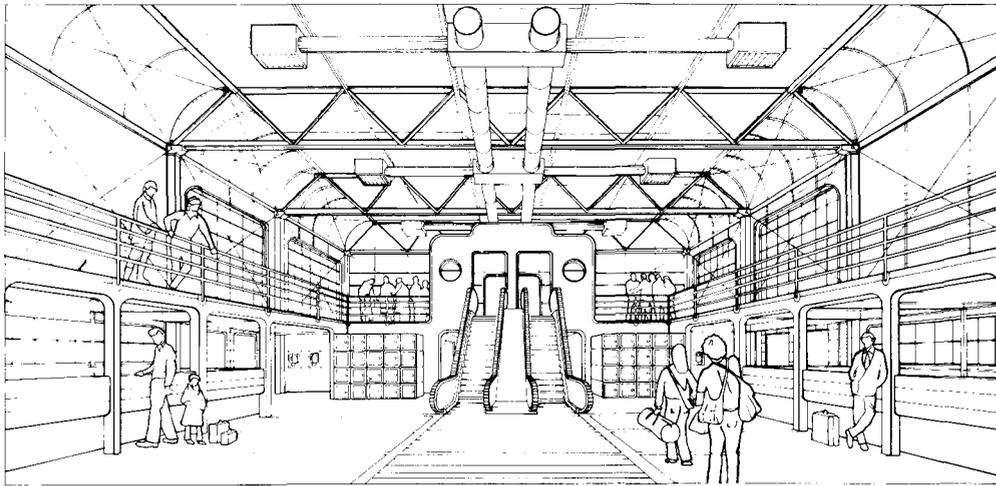
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Circle 114 on information card



### Awards from page 22

tion for the colony's basic form but expanded as the design of an internal living environment.

A certificate of excellence was awarded Don T. Ichino, University of California at Berkeley, for an aluminum modularized and demountable aquatic lodging center.

Serving on the jury were James S. Tuley, professor, school of architecture, University of Virginia (chairman); Edward J. Budnick Jr., student at Florida A&M University; Douglas Childs, student at California Polytechnic State University, and 1978 first place winner Roberto Paredes of Atlanta.

## Housing Magazine and Institute Commend Works of 23 Firms

Twenty-three architect-designed homes and multifamily housing projects received awards in the 1979 homes for better living awards program, sponsored by AIA in conjunction with *Housing* magazine.

First honors in custom designed homes went to Howard Barnstone, FAIA, Houston, for a private residence on Long Island (winner of an AIA honor award in 1978); Bissell & Wells, New York City, for Flintoft house in Nantucket, Mass., and Hugh Newell Jacobsen, FAIA, for a private residence in Wayzata, Minn.

Awards of merit in this category were given to Edward B. Sawyer Jr., AIA, Scottsdale, Ariz.; Gwathmey Siegel, New York City; Kirby Ward Fitzpatrick, AIA, San Francisco; Bull Field Volkman Stockwell, San Francisco; Fredrick Bentz/Milo Thompson & Associates, Minneapolis, and Tai Soo Kim, AIA, Hartford.

The jury for custom built houses consisted of P.G. Bohlin, AIA; Judith D. Chafee, AIA (chairman); E. Fay Jones, FAIA; Michael Rudden, AIA associate member; Walter Wagner, FAIA, editor of *Architectural Record*, and James Weber, AIA.

First honor awards for multifamily housing were given to Taft Architects, Houston, for 213-215 Tremont Street,

Galveston, Tex.; the Hillier Group, Princeton, N.J., for Princeton town houses, and Backen Arrigoni & Ross, Inc., San Francisco, for Rancho San Joaquin, Irvine, Calif.

Awards of merit in multifamily housing were presented to Jack R. Tucker, Jr., Memphis; Bernard Rothzeit & Partners, New York City; Booth Nagle & Hartray/Ltd., Chicago; Goodwin B. Steinberg Associates, San Jose, Calif.; Priest, Richmond, Rossi, Montgomery of San Luis Obispo, Calif.; Fisher Friedman Associates, San Francisco; Collins & Wraight of Irvine, Calif.; Burger & Coplans, Inc., Sausalito, Calif., and Huygens & Tappe, Inc., Boston.

First honor award in the merchant-built category went to Obie G. Bowman, AIA, of the Sea Ranch, Calif., for a house at the Sea Ranch, and award of merit went to George Cody, AIA, Palo Alto, Calif.

Multifamily and merchant-built entries were judged by Barry Berkus, AIA (chairman), Arthur Collins, builder, Leland Cott, AIA, Peter Doo, J.W. Stewart, AIA, and June Vollman, editor of *Housing*.

## HUD Promotes Solar Design With \$353,000 in 139 Grants

HUD Secretary Patricia Roberts Harris has announced the winners of solar design grants. From a field of more than 880 applicants, HUD has awarded 139 grants totaling \$353,000 for residential solar heating and cooling designs.

Twenty-five grants of \$5,000 each were awarded to community and neighborhood organizations to complete designs for solar systems in existing low- and moderate-income multifamily projects currently being rehabilitated. If the designs are deemed feasible, the groups will be eligible for up to \$50,000 to construct their systems.

In a second category, 114 single-family homebuilders received grants of \$2,000 each for the design of residential energy conserving solar systems. The completed

designs will be evaluated after Aug. 21 and, if the plans are workable, the builders will be eligible for additional funding for construction of solar homes. A HUD spokesman said, "It is expected that a majority of the plans will be feasible, based on the awardees' past records."

HUD Assistant Secretary Donna E. Shalala said, "The choice of project categories reflects our belief that energy conservation and solar energy installations in these housing types will have an early, effective impact on the solar market and on the developing market for solar energy."

To aid the award winners, HUD plans to hold a series of workshops on solar designs throughout the summer. According to HUD, "In these meetings, the latest techniques for designing and evaluating solar energy applications and documentation requirements of the design process will be reviewed."

The grants were awarded under HUD's residential solar demonstration program, which is part of the national solar heating and cooling program managed by the Department of Energy.

## Presidential Awards Will Cite Quality in Federal Designs

President Carter is expected to announce an annual Presidential design awards program this month. This program will be administered by the National Endowment for the Arts, AIA and the White House and will honor "meritorious examples of public design."

The program was announced at AIA's convention by Michael Pittas, director of NEA's design arts program. "A major development" in support of design, said Pittas, "is President Carter's intention to recognize the contribution of design excellence in the government's effort to uplift the quality of the built environment in America."

Precise details of the program are not completed at this writing. Preliminary plans call for the major federal design and construction agencies to establish internal design councils to report annually to the federal council assembly on design accomplishments.

The federal council may then nominate to the President design programs and individuals to be cited for achieving high quality in federal design.

The first awards, expected to be made in late 1980, will be given for excellence in architecture, landscape architecture, interior design, urban design and planning and graphics.

Pittas also explained the new organization of NEA, which will take effect with the 1980 appropriations. Pittas said there will be "greatly expanded grant opportunities for individual designers in that four

## Awards from page 25

new fellowship categories have been created." Grants range from \$800 for senior level design students to \$10,000 for professionals.

Design grants for nonprofit organizations have been grouped into three new categories: design explorations, design demonstrations and design communications. In the design explorations category, applications will not have to conform to a predetermined research agenda, such as earthquake analysis, solar energy or defensible space, said Pittas. NEA is looking for researchable topics which may include, for example, the esthetics, economics or ethics of good design. NEA is willing to assist in developing a "sounder theoretical and applied basis for excellence in design," Pittas said.

The design demonstrations category will provide support for such activities as the design of new cultural facilities, the preservation and conservation of the urban and rural environment, neighborhood planning and urban design, central business district design, parks and open space design. The design communications category will provide funding for exhibitions, conferences, seminars, workshops, films, books, manuals, etc., aimed at increasing public awareness of design.

NEA will promote continuing improvement of the design of art spaces—museums, theaters, concert halls, public parks and civic buildings. It is also encouraging the implementation of more open methods of designer selection.

## \$5,000 Grants Go to Architects For Laminate Prototype Designs

Four architects and a Finnish designer have won individual grants of \$5,000 each in Formica Corporation's 1979 design grants program. They will work with Formica's technical and design departments in the production of prototypes in the corporation's line of high pressure laminates and/or melamine component paneling. The finished designs, made by Formica, are offered for production by a manufacturer and are also used for display and advertising purposes.

The winners are:

- Alan Buchsbaum, Design Coalition, New York City, for research and design of energy-conserving window treatments.
- Charles Boxenbaum, AIA, New York City, for a modular seating, storage and ambient lighting system.
- William Turnbull Jr., FAIA, MLTW/Turnbull Associates, San Francisco, and Ristomatti Ratia, designer of Helsinki, Finland, and New York City, for cabinet storage units for a small space.
- Richard Hobbs, AIA, Hobbs/Fukui, Seattle, for a line of bank system equipment.

## Institute Sets Entry Deadlines For 1980 Honor Awards Program

AIA's annual honor awards program is open to American architects for projects constructed anywhere in the world.

Entrants for the 1980 program have two postmark deadlines: Entry slips and fees in the amount of \$50 for each submitted project must be postmarked no later than Sept. 24, 1979; completed submissions must be postmarked no later than Nov. 9.

Two categories of awards are given: current use (projects that remain unaltered and in their original use) and extended use (projects that incorporate restoration, rehabilitation or adaptive use). Projects in both categories must have been completed after Jan. 1, 1973.

The winning designs will be featured in the JOURNAL's third annual of new American architecture, scheduled for publication in spring 1980. All submissions will be considered for inclusion in the annual. Awards will be presented to the winners at AIA's annual convention in Cincinnati, June 1-4, 1980.

## Rome Prize Fellowships Given To Senior Editor Dean, 8 Others

Andrea O. Dean, who became an editor of the AIA JOURNAL in 1975 and is currently senior editor for articles, has been selected by the American Academy in Rome as the recipient of a six-months mid-career fellowship for 1979/80. While in Rome, she will study the life and work of Italian architect Bruno Zevi.

Other recipients of mid-career fellowships are Morley Baer of Monterey, Calif., architectural photographer; Patrick J. Quinn, AIA, dean of the school of architecture, Rensselaer Polytechnic Institute, and William Turnbull Jr., FAIA, of San Francisco.

Also, Rome prize fellowships for a year's study at the academy in Rome have been awarded to Thomas Gordan Smith, University of California at Berkeley; Andrea Clark Brown, University of Virginia; James L. Bodnar, Yale University, winner of the Steedman fellowship juried by the faculty of the school of architecture at Washington University; E. Michael Vergason, University of Virginia, and Russell Culp, a graduate of the University of Illinois.

Meanwhile, the academy has announced the opening of competitions for 1980/81. Deadline for receipt of application material is Nov. 15, 1979. For information and application forms, write: American Academy in Rome, 41 E. 65th St., New York, N.Y. 10021.

*News continued on page 74*

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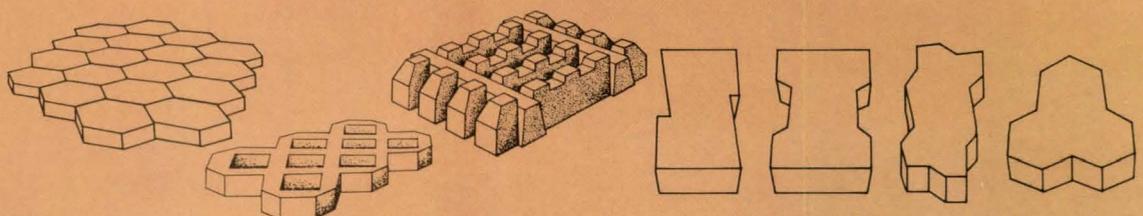
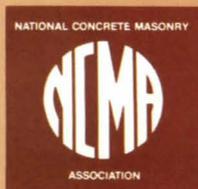


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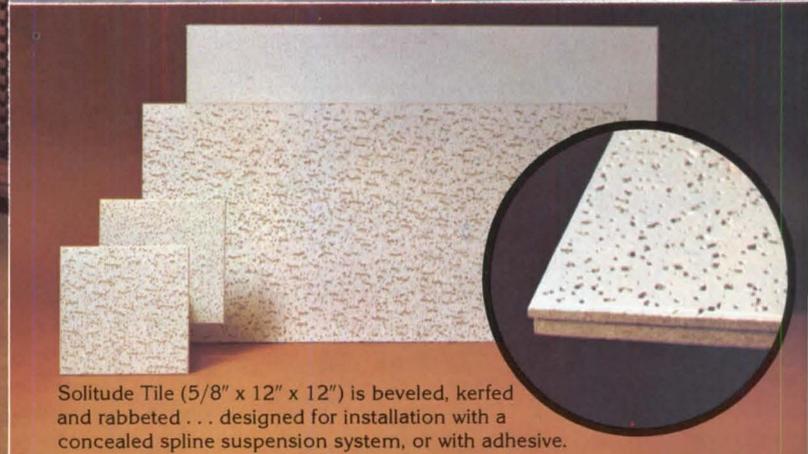
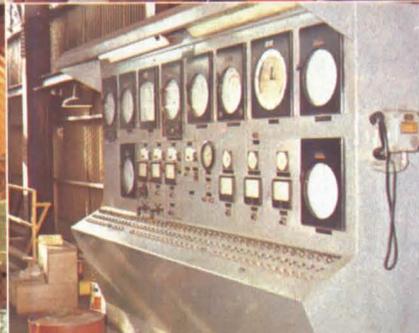
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## The Two Worlds of Architecture

*The following are excerpted remarks of I.M. Pei, FAIA, upon receipt of the gold medal. We reprint them here because they contain messages that should be heard by many more people than were at the gold medal ceremony. Ed.*

Today, the values which inspire those who have stood in this place before me seem to be in doubt and architecture appears to be in two worlds. I do not mean the world of modern architecture, which I do not believe is dead. Nor do I mean the world of what is called "postmodern" architecture. Instead, there seems to be the world of practice and the world of ideas, each in alienation from the other. As the world of practice struggles with the myriad demands of social, economic and political realities, it is all too easy to relax and resign from the real challenge by acquiescing to mediocre standards and myopic assumptions. I believe that we should pay heed, precisely because we must be practical, to the forces impelling philosophic adjustment in the field. For it is as important for an architect to specify what buildings stand for as it is to specify materials and technical means by which they stand up. It is our role, therefore, to determine priorities among contending forces, to establish order out of chaos and to defend our convictions in private councils and public forums. A failure of perception, effort and will on our part has resulted in the deplorable state of our built environment for which we must take responsibility.

Liberated after 50 years of dogmatic rigidity, architects are exploring alternatives to accepted modes of design. By questioning the conventions of the status quo, they place it on guard, sharpen its perception of self and thereby hasten the process of change. For the world of ideas, this new freedom demands that it accept the discipline of the real world. For ideas to be meaningful, they must have currency. We need to be aware of the false premises of personal caprice and the theoretical formulations that are apart from the realities of life. Architecture must speak to all!

Today, the schism that exists between the two confuses and divides the profession. While I believe that ideas and practice are complementary, I reject the notion that the world of practice and the world of ideas require two different sets of skills, insights and temperament—indeed, two different kinds of people.

They belong together in the one world of architecture. Only then can the profession regain its rightful role in a society that is increasingly dominated by others. The values we believe in, the things we want to do to help improve the physical and spiritual environments can be gotten across to others by our personal presence and participation in the affairs of our communities. Architecture is the most public art, and we architects must play a leadership role in our urban neighborhoods, rural communities and the towns and cities in which we live and work. If Thomas Jefferson could find the time to serve as a member of the local schoolboard in Washington while he was President, so can we find time for public service.

Finally, I believe with Philip Johnson in the paramount importance of the art of architecture. Architects, by design, transform mere buildings into the exalted realm we call architecture, for architecture, in its highest sense, is art itself. Architects, by design, investigate the play of volumes in light, explore the mysteries of movement in space, examine the measure that is scale and proportion, and above all, search for that special quality that is the spirit of the place, as no building exists alone.

History confirms the fact that architecture is a true mirror of life and time. The Greeks gave form to the concept of democracy on the Acropolis. The Romans expressed their genius in the organization of men in the forums and the stoas. The men of faith everywhere in the history of time dedicated their spiritual beliefs in great temples, mosques and churches. Architects of our time, from the design of a house to the design of a city, must search for that essential element in our lives which possesses that enhancing and ennobling quality if we are to create architecture that is great.

We would all do well to be reminded here of Frank Lloyd Wright's comment about the real source of our creativity, and finally, about the real meaning of our role as architects. "A civilization is only a way of life," he said, "a culture is the way of making that way of life beautiful. Culture is your office here in America, and as no stream can rise higher than its source, so you can give no more or better to architecture than you are. Why not go to work on yourselves—to make yourselves, in quality, what you would have your buildings be?" □

# San Antonio's Linear Paradise

*The making, and saving, of a unique urban amenity, Paseo del Rio. By Sinclair Black, AIA*

As American cities turn back to their central cores in search of life and vitality in an energy-starved future, the first task of each city will be to identify its opportunities and resources. San Antonio, Tex., may well be one of the luckiest cities in the U.S. Through a history of citizen action, public funding, a modicum of intelligent planning and an overdose of neglect, downtown San Antonio—specifically the river, first developed as a linear park in the late '30s—has survived essentially intact.

The San Antonio River is the downtown area's major amenity and currently is recognized as its most powerful catalyst for redevelopment. In the same way that the fate of downtown is inextricably tied to the quality of the river, the entire city's future will be greatly affected by the river corridor. Although it represents only 2 percent of the land area, the 10-mile river corridor contains most of the city's major open spaces, cultural facilities and important historic areas, as well as the majority of its future development potential.

The heart of this corridor is the river bend area, known as the Paseo del Rio, a U-shaped 1.2-mile-long loop in the original river around which the central core of the city developed. No portion of what one would consider the present active core of the city is more than four or five blocks away from the river. In fact, if one were designing a narrow corridor of amenity through a highly developed area in order to maximize its impact on that area, the solution would probably be very much like the Paseo del Rio.

A stroll through the Paseo is a trip through a linear paradise of infinitely changing vistas: impressive displays of texture and color from the plant material, the continuously entertaining movement of the water and the varied patterns of the walkway underfoot. The whole trip is animated by the presence of buildings, shops, restaurants and people. From 20 feet below the noisy street, the city is visible in small doses but is psychologically remote: The traffic noise ceases and the climate changes. In the summer, deep shade and the presence of water make the river walk 10 degrees cooler than the streets above, and in winter, the ever-present sun floods into the corridor, only partially filtered by the cypress trees. San Antonio's idyllic climate allows, even encourages, year-round activity within the protected corridor.

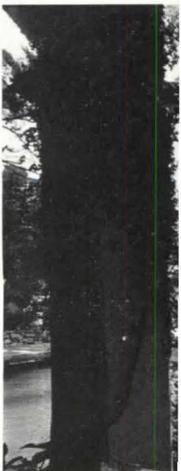
A strong sense of enclosure and definition prevails at the river level. One's visual field at any given time is dominated by foliage softening the edges of nearby buildings beneath the trees. The primary space definers are 60-foot cypress trees that provide vertical scale while defining the width of the linear space. Frequent bridges, 10 to 18 feet above the walls, set a smaller vertical scale and mark linear distances with their emphatic shadows. The bridges also frame distant views of the river creating a strong sense of anticipation, even mystery.

The water and the sky, often reflected in the water, provide

**Mr. Black** teaches at the University of Texas school of architecture and also practices in Austin.

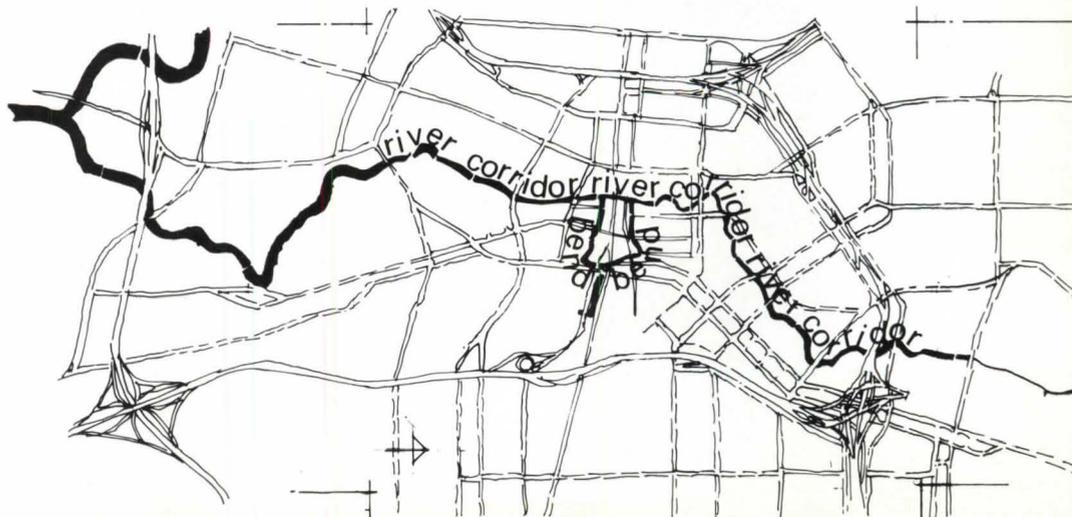
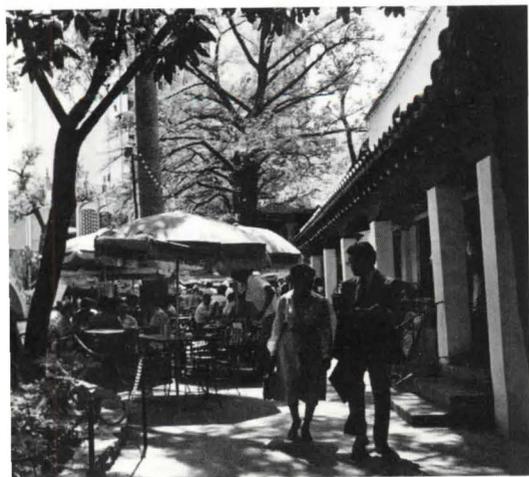


David Harrison





Sinclair Black





## A flood plan would have paved the river bend.

continuity. The edge of the walkway is only six to eight inches above the water, curving continuously and without railings—enhancing the sense of linear movement—while water and sky slip past all the other space defining elements, knitting the entire sequence of spaces together.

The plants, which are maintained by the parks department from a fleet of small barges, constitute one of the largest botanical gardens in the world. Many of the plants that thrive at the river level would not survive at street level. In the same way that the linear quality of the river maximizes the impact of its presence, the linear distribution of the plant material expands its visibility and accessibility for the city above.

Water always has played a significant role in the life and development of San Antonio. The city was founded in 1691 as a Spanish mission near a cluster of springs that fed the San Antonio River. Climate and cultural traditions made water a more valuable commodity than land, and San Antonio's location was ideal in terms of water. Spring water was carried to the fields several miles on either side of the river corridor by *acequias*, small stone-lined water channels built by Mexican Indian farmers. The city grew physically, generating more surface runoff, and as the density of building within the natural floodplain increased in the 1880-'90s, the inevitability of conflict between man and river became clear.

Numerous small floods and two fairly serious ones in 1913 caused a flood study to be commissioned in 1919. The firm of Metcalf & Eddy submitted a report predicting major loss of life and property due to flooding and included a set of recommendations on how to avoid such a disaster. Their plan called for the building of a dam on adjacent Olmos Creek to intercept runoff in a 900-acre open space, and the elimination of numerous bends in the small meandering stream, referred to by the early Indians as the "drunken-old-man-going-home-at-night," including the "big bend" in the rapidly growing city center.

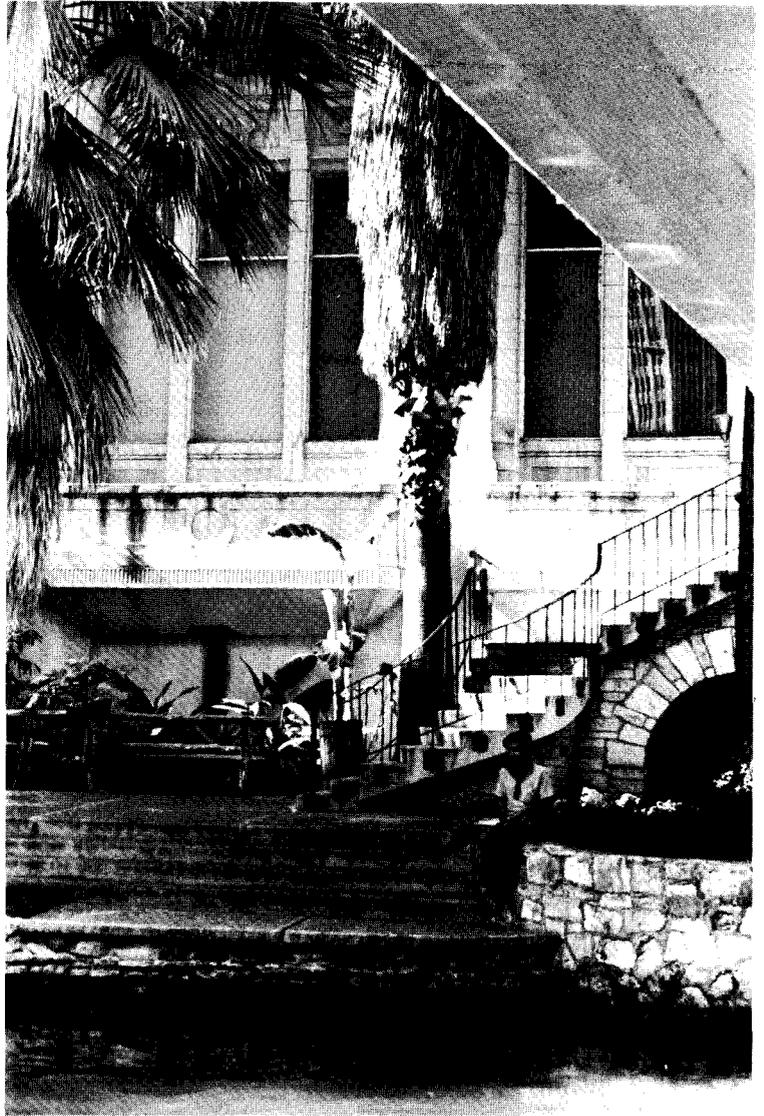
In September of 1921, the projected flood became a grim reality with 50 lives lost and \$50 million in damage, primarily in the downtown area. There was, of course, an immediate outcry to solve the flood problems at any cost, and the commissioned plan was adopted. The adoption of a plan which recommended filling the "big bend" to create a boulevard with sewer lines below it started a heated controversy that lasted until 1937.

The San Antonio Conservation Society, considered a model for preservation and conservation groups in this country, was founded in 1924 to protect the river bend from the proposed plan. Miss Emily Edwards, an artist and the society's first president, wrote, fabricated and produced a puppet show entitled "The Goose That Laid the Golden Eggs." She presented it to the city council. A puppet show may seem like a frivolous event but it may also have been the turning point in the efforts to save the river. In this case one visual-emotional occasion may have been more effective than a dozen thick and inevitably dull planning reports.

The battle continued for many years. Olmos dam, the major component of the flood protection plan, was completed in 1926, and the numerous smaller bends were eliminated one by one. Slowly but surely large parts of the river were widened, deepened and concreted into oblivion.

During the controversy, a local architect named Robert H. Hugman began to express his interest in the river in a way that architects know best—by preparing an elaborate set of drawings, maps and watercolors. His strong, clear images gave people a sense of the potential of the river bend. He presented his drawings to about 100 prominent people and collected their signatures. On the strength of the drawings alone, his plan appears to have become the de facto "official plan for the future of the big bend," although there were no funds for implementation.

Hugman's plan was simple and brilliant. He suggested a flood cutoff channel, or bypass, with gates to the entrance and exit of



## Architecture with a sense of place (mostly).

the big bend to protect it from high waters, thus freeing the bend from flood potential and allowing it to become a linear park. Any attempts to accommodate the flood water in pipes through the bend would have destroyed the linear space completely, and probably would have failed as a flood control device as runoff increased through the years.

The WPA (Works Project Administration) was in operation by then, and Hugman was employed as a WPA architect. He and a local hotel owner, Jack White, proposed to make the river development a WPA project and prepared plans and estimates for the work. The project required \$385,000, with \$75,000 needed from the city. The Depression was beginning to take its toll on the city, and the council declined to match \$30,000 donated by citizens interested in initiating the work.

The next episode demonstrated just how dedicated and creative the conservationists were in pursuit of their image for the river. Jack White and then U.S. Congressman Maury Maverick conceived a questionable scheme to create a special tax district including anyone who both owned property and lived within one block of the river. The plan effectively excluded nonresident businessmen, who supported the flood control plan, from voting. Much to Maverick's and White's chagrin, their new district included only five other people, two of whom also supported the flood plan. Some quick maneuvering allowed the residents of Jack White's Plaza Hotel to vote, and on Oct. 26, 1938, by a vote of 74 to 2, a special tax was levied on the district which raised the required \$75,000 to match WPA money. That \$75,000 and the WPA's \$335,000 were combined, and work began in March of 1937 with Hugman as the project architect.

Interested citizens had made minor improvements along the river before this time, but the majority of the walks, stairs, footbridges, planters and planting that exist today are the result of the WPA project. The scope of the work included 8,500 linear feet of river bank and 17,000 feet of walkway covering a length of 21 city blocks, and the total cost for the work was \$430,000. It was completed in March 1941, on the occasion of the opening

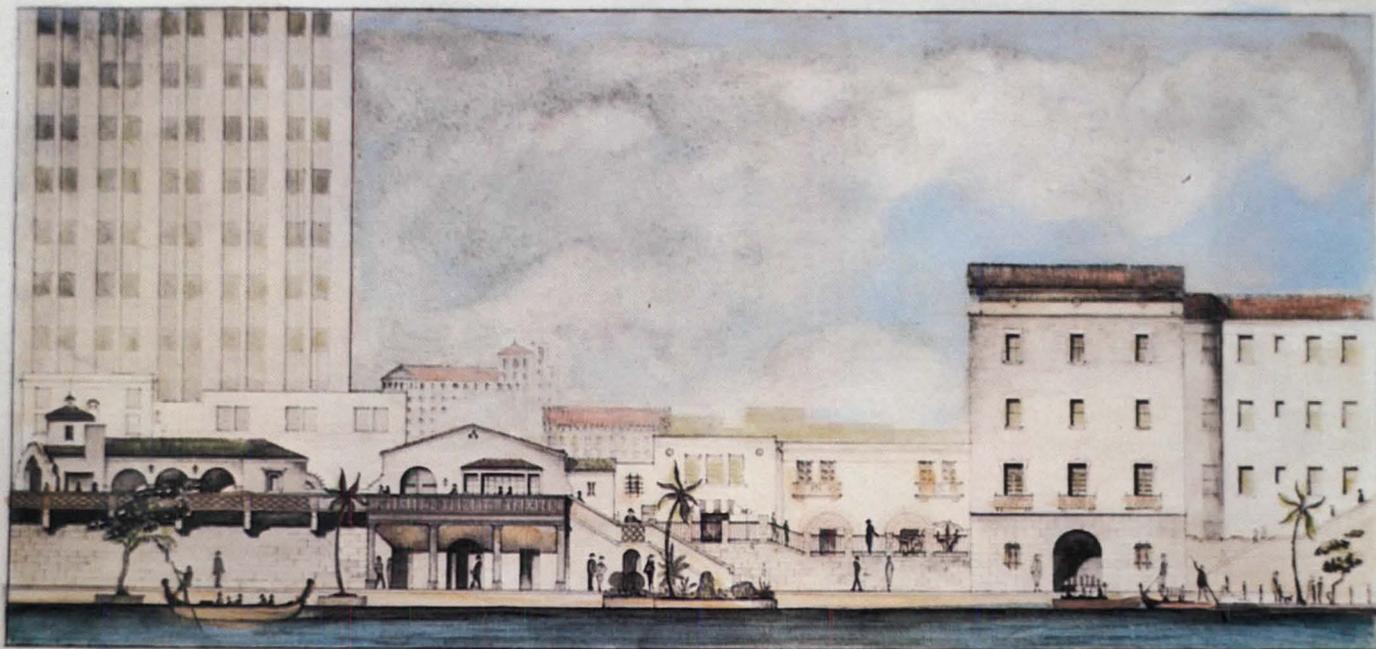
of "Fiesta," a celebration held in San Antonio each spring.

In 1939, under the sponsorship of the Conservation Society, renovation and restoration was begun on a small historic neighborhood adjacent to the river. Known as La Villita, the area is composed of dozens of small stone, adobe and brick houses possibly dating from as far back as its founding by the Spanish in 1722. It was transformed by artists, musicians and architects into an arts, crafts and entertainment zone that extends the space and activity of the river.

O'Neil Ford, FAIA, considered by many to be Texas' most important architect, was involved as a staff architect on the restoration of La Villita as an employee of the National Youth Administration. Ford tells of the time he and Congressman Maverick rowed up the river carrying two small cypress trees looking for the ideal place to plant them. The two trees, over 60 feet high today, are thriving across from each other at the southwest corner of the river loop, a tribute to the faith these men had in the future potential of the river. Throughout this 40-year story of the river's development, Ford's influence has been significant as an advocate of historic preservation, regionalism with a sense of place and an architecture of humanism. His influence both by virtue of personality and example has had an important impact upon the city of San Antonio.

General disregard for the quality of the environment during the war, and afterward during the '50s, led to a virtual abandonment of the river. Its original park-like quality was preserved and more or less maintained, but was used very little by the people. As in all American cities during that time, people were busy moving to the suburbs. Vitality left downtown as the population did. The river's life remained dormant except for the opening of the Casa Rio restaurant in 1945. This period of benign neglect now appears to have been a blessing in disguise for the river, if not for downtown.

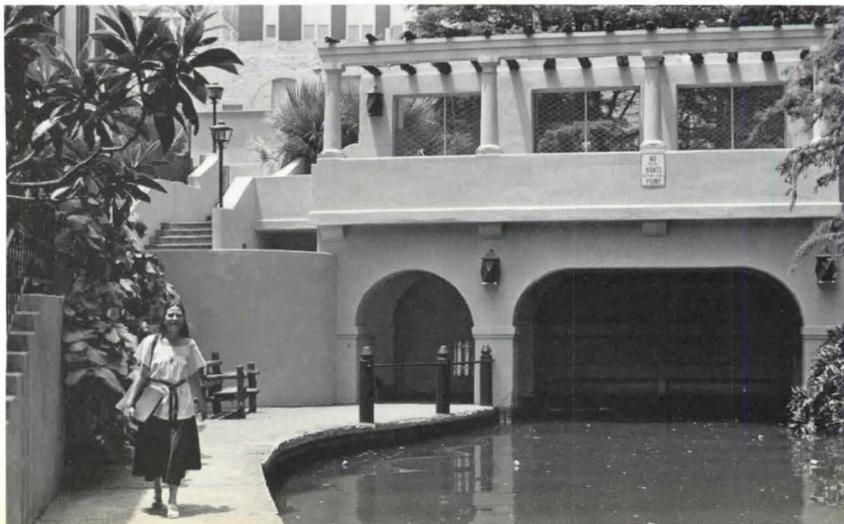
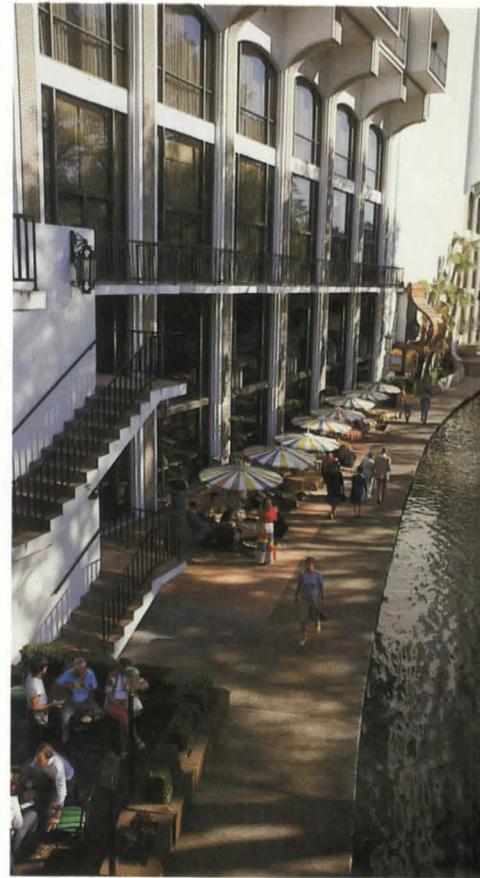
In the late '50s, a few people began again to discuss the future potential of the river. Suggestions for developing the entertainment potential along the river were made in the hope of stimulating tourism. Since the discussions involved tourist development and economic potential, they centered on the chamber



### TYPICAL RIVER SHOP DEVELOPMENT

Suggestions made for the future development of the River between the S.A. Public Service Co. and the Plaza Hotel.

R. U. HUGMAN  
ARCHITECT & CIVIL PLANNER  
SAN ANTONIO, TEXAS



*Opposite, one of architect Robert Hugman's early visions of the river's development. Above, La Mansion hotel, and left, a floodgate, both in the regional style which Hugman favored. The Hilton, above right, makes a few regional gestures but seems far less at home on the river.*

## An AIA plan, and a fair, bring new life to the river.

of commerce and specifically one man, David Strauss. At a time when the chambers of commerce in Texas were busy cramming freeways down everyone's throats in order to promote suburban growth, the San Antonio chamber was organizing to breathe life back into the city center. It is to the credit of the San Antonio chamber that it produced a man like David Strauss, who could see the river's potential as the catalyst for downtown revitalization.

A tourist attraction committee was created with Strauss as chairman. The committee raised \$15,000 which was matched by the city, and the planners of Disneyland, Marco Engineering, were retained to develop a plan. The plan was presented in 1961 and was quickly and fortunately rejected as being inappropriate and too commercial. The problem with the Marco plan may have been the overly flashy graphics of its presentation. Many of the ideas such as the boat rides, new access points to the river from the streets and major river events based upon the holidays and ethnic heritage of San Antonio's population were very sound and in fact most have since been implemented in one form or another. The most tangible result of the Marco plan was considerable discussion about the river and a consensus that San Antonio needed a more sensitive plan—one based upon its unique history, particular climate and variegated cultural composition.

The next step was the creation of the seven-member river walk commission and the passage of the river walk ordinance, whose stated purpose was: "... preserve and promote the natural beauty and distinctively quaint and romantic character of the river walk area which is so intimately connected with the history of San Antonio, the maintenance of the charm and atmosphere of Old San Antonio along the river walk area; and the promotion of an integrated shopping, entertainment and recreation area for visitors and the people of the city, to the end that the public welfare will be promoted and advanced through the preservation of property values and the resulting benefits to the economy of the city flowing from promotion and maintenance of San Antonio as leading attraction for tourists."

One of the first official acts of the river walk commission was to join with the chamber of commerce in asking the San Antonio Chapter/AIA to undertake the long-range planning of the river bend area. Getting the AIA involved eliminated the high overhead of an out-of-town expert and ensured a more sensitive response to local conditions and intentions.

An 11-member AIA committee was created in 1962, with Cyrus Wagner as the chairman. On April 15, 1963, the Wagner committee presented its plan to an auditorium full of groups and individuals interested in the river. The plan called for the knitting together of the major plazas, squares and nodes at the street level as well as new development at the river level. It recommended

public investment in the capital improvement of the river in order to attract more restaurants, shopping and housing along the river corridor; physical extension of the walks north to historic Ursuline Academy; a set of policies to positively guide future development, and a larger long-range study that would include the 10-mile river corridor through the whole city.

The model and the drawings, particularly Wagner's sketches of how the river could develop, were keys to the success of the idea. In the same way Hugman's 1929 set of watercolor images helped create the vision of what could be accomplished, Wagner's drawings seem to have inspired a strong image in the minds of San Antonian leaders in 1964.

Action swiftly followed the successful presentation of the river development plan. In 1964, the Paseo del Rio association was formed specifically to promote new vitality and economic life appropriate to the river and consistent with the Wagner committee concept. The same year, a \$30 million bond issue was passed to implement many of the ideas from the plan, as well as to add an extension of the river to the world's fair being planned a few blocks away.

The years between 1964 and 1968 were consumed with the planning and building of Hemisfair '68. The river continued to develop with ever-increasing levels of activity, more restaurants, shops and two major hotels. Both large hotel buildings contribute significantly to life along the river, both extracted a toll in historic buildings. The Hilton, distinguished by the speed with which it was built and little else, replaced several important stone buildings adjacent to La Villita at the river's edge. The building, a curious blend of precast concrete technology and a style that can best be labeled "conquistador contemporary," is overscaled for its site, unrelated to the scale of the river and unresponsive to the activity space at the river level. Nevertheless, it serves to make a very valuable point about the strength of the river as an urban design context. To have a measure of success, buildings need not be special or particularly well-designed when located on the river. The most appropriate solution is probably a quiet building which simply responds to the space defined by the river and its huge cypress trees, but even a self-conscious attempt inevitably and fortunately fails to dilute the power of the river space.

La Mansion, the other large hotel, fares somewhat better as a piece of architecture. The same building copying itself 10 miles away near the airport is very ordinary, but the one on the river has to be considered successful. The south-facing stucco wall, neatly folded in response to the giant cypress trees, serves to define the river space and animate its edge. The scale of the magnificent trees becomes more evident by their proximity to the building. La Mansion, currently undergoing an addition of 250 rooms, lends activity to one extreme end of the river bend area, but again there was a price. It was built around St. Mary's School, a significant three-story stone building dating from 1852. But the original has been so closely surrounded by new buildings that its presence in the city is lost.

Looking back it seems clear that David Strauss' and Cy Wagner's vision of renewed life for downtown, based upon the potential of the river and the occasion of Hemisfair, was amazingly appropriate and accurate. The impact upon downtown in general has been positive, and the renaissance along the river has been phenomenal. Hemisfair's fate has been the only real disappointment. The fair which precipitated so much attention, activity and economic life for the river and for downtown, sits curiously and disturbingly idle now, 11 years after its closing.

With the accuracy of a Monday morning quarterback, one can now find the flaws in the basic concepts and planning of Hemisfair with little difficulty. One obvious fault that strikes an observer is the lack of any clear idea as to what would happen to the area after the fair was over. Even more disturbing was the planners' disregard for the past. The fair site contained approximately 60 historic structures, mostly 19th century vernacular buildings, some with major significance, accented with a few



David Harrison



Sinclair Black



*Above, colorful floats on the river during the city's annual Fiesta. At left, a much-used amphitheater on the Paseo. Opposite, the restored village of La Villita above the river.*

However, a local developer bought virtual control of the fair with a \$3 million donation, ensuring its future, but essentially eliminating planning groups which included local architects. From that point on, sensitivity to the historic nature of the area and the importance of the connection to the river seems to have been lost.

People who were part of those boom days that preceded Hemisfair tend to describe that period in terms of battles and power plays among citizens, professionals, bureaucrats and politicians. Many incidents are characterized as "well, at least we stopped that mistake" or "we won the battle, but lost the war." Most people seem to miss the important point even as they tell their side of the many stories, i.e., a collection of mistakes avoided or partially repealed does not constitute a viable urban design process.

The important question, of course, is what does constitute a viable urban design process? The history of the river development a mere two blocks away probably held the answer all along. Most observers agree that it is the slow, cooperative, small-scale, incremental and democratic development over time that accounts for the success of the river. The dynamic balance of power between the public and private sectors may ultimately be considered the key to the river's happy ending. The citizens get credit for saving the river from the bureaucrats, but the infusion of public money is clearly the reason there has been so much interest and private development. Hemisfair had neither the aspect of power balance nor the luxury of time. The "get it done" mentality that prevailed in the planning got Hemisfair done, but the opportunities lost were great indeed.

Following the inevitable letdown after Hemisfair, things were quiet again for several years. The river area prospered as convention trade and tourism in general increased steadily. New restaura-

large pre- and post-Victorian mansions. About 40 of these, mostly the smaller ones, were demolished before then-U.S. Senator Ralph Yarborough forced the planners to preserve the remaining historic buildings in order to protect the fair's federal funding. Those few old structures remaining are the only signs of interest or life within the original fairgrounds.

The largest mistake in planning the fair has been the unfortunate location of the fair's largest building, the convention center. Placed precisely at the point where the activity zones of the river, the La Villita complex and the fairgrounds would have come together, this behemoth made any physical, visual or psychological connection between the river and the fairgrounds virtually impossible.

Other than the very short time available to plan the Hemisfair, the basic problem was money. During the early planning it looked as if the idea of a fair might fail completely for lack of funding.

## 'The river itself is the best teacher of success.'

rants continued to locate on the river and several older buildings were renovated as housing, probably the healthiest sign of life so far.

One of the key influences during the early '70s has been the Skidmore, Owings & Merrill, San Francisco, study of the river's role in the future of San Antonio. The river corridor study, completed in 1973, examined the developmental potential of the corridor in considerable detail. The study projects the entire length of the river within the city limits, approximately 10 miles, as the focus of future housing, shops, offices and commercial development. The river is even projected to be a pedestrian link between downtown and a 1,000 acre open space, two colleges, two museums, the major city bank, numerous older neighborhoods and the metropolitan zoo to the north, as well as between the major historical areas of the King William district, the new San Antonio Missions Park approved in April and several hundred additional acres of open space.

As with any downtown revitalization project, it is understood that housing, complete with self-supporting activities to provide self-sufficient life styles, is the ultimate goal. Although convincing housing opportunities are few at the moment, several interesting local developers, in particular a young man named Hap Veltman, are doing their best to provide new choices. Veltman is providing the impetus for a number of sensitive, well-planned condominium and apartment projects now underway.

While the ultimate goal of downtown living still seems a bit remote, there is no lack of tourist and convention activity, and no shortage of new hotels. In 1978, a total of 488 conventions, more than one per day, contributed over \$34 million to the San Antonio economy. Also during 1978, several national hotel chains and local hotels announced plans to build or expand. A 500-room Marriott and a 522-room Hyatt are currently under construction along the river, and the Plaza Nacional with 250 rooms opened in April, adjacent to La Villita.

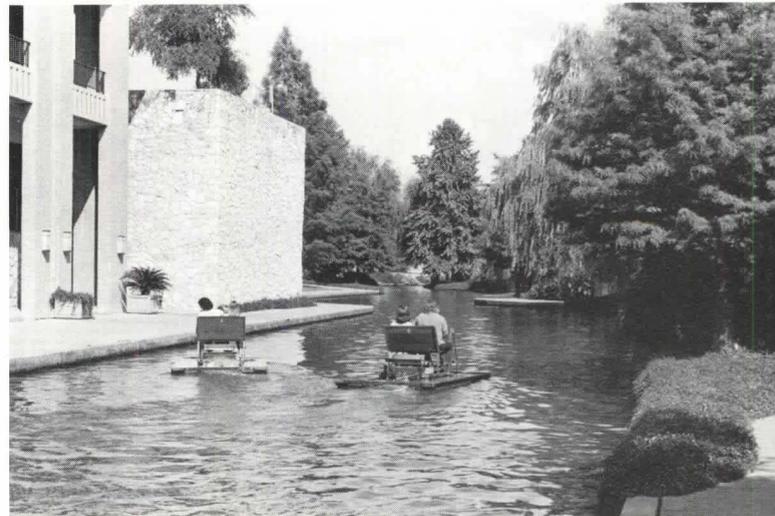
The new Marriott is nothing special, probably one of dozens built from a prototype plan, but its location is very fortunate. At

the end of the river extension into Hemisfair, it promises to generate pedestrian activity for that unused area. It also serves as an interesting visual terminus for the extension. The Plaza Nacional, a low-key, unself-conscious building preserving several historic structures on its site, makes every effort to respond to its historic context. The impact of the Hyatt Regency, which began construction on the river's edge in May, remains in question. The planners have tried to keep its scale down and relate its central space to the river walk. The river is being extended once again as a part of the Hyatt project. The new extension will penetrate the hotel's lobby space and then one block east connecting the recently redeveloped Alamo Plaza directly to the Paseo.

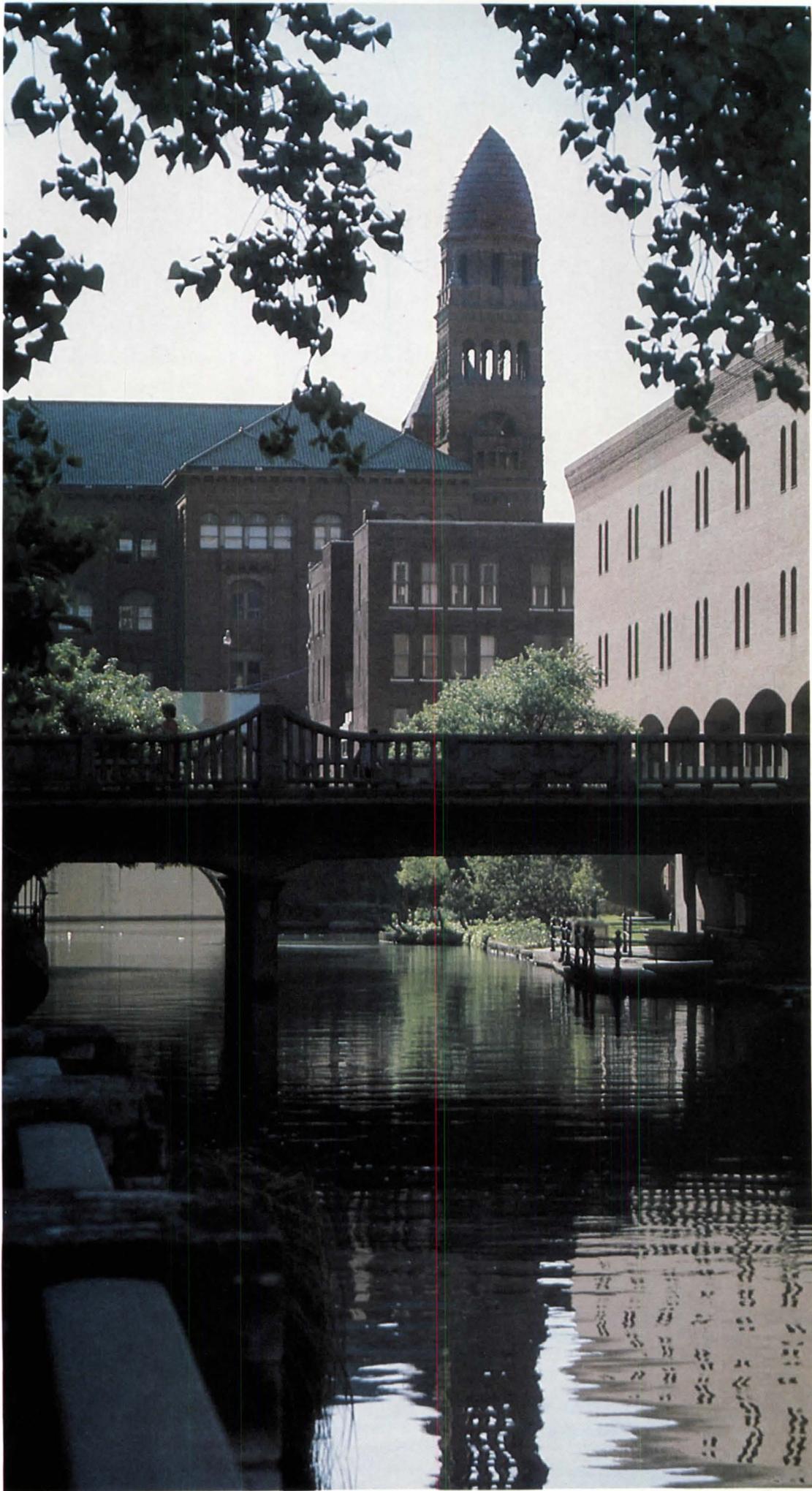
The danger of so much activity happening so fast is that those involved might lose sight of all that has been successful for San Antonio: cooperation between the public and the private sectors; small-scale, incremental work and careful attention to the physical as well as the historic and cultural fabric of the area. The river itself is the best teacher of success. While its history is instructive, sometimes disappointing and sometimes amusing, it is the river's impact as an urban space that teaches us most.

To be fully understood, the river simply must be experienced. Being a linear space, it can only be perceived by movement through it. Even after several trips, the variety of spaces and their sequence defy the best visual memory. This richness is amplified by the fact that it can be experienced in at least six separate trips: walking each side of the corridor in each direction, and riding in the river boat in two directions. There is also a variety of views possible from the streets and bridges above, and perception of the river is influenced by daily changes in light direction and quality, as well as seasonal differences. There are also four or five distinctly different activity zones within the bend area, not to mention the extension into the Hemisfair area and the extension of the walk several miles up the main channel.

Work on the river has proceeded as one large and continuous remodeling project. Every new act has of necessity been conditioned by the existing context. Even the early buildings that turned their backs to the river were forced to recognize the floodplain, thereby saving the trees. The Hugman design of 1929 was an extraordinarily sensitive response to the river space as defined by the trees, buildings and the bridges; Cy Wagner and the AIA committee found ways to develop commercial potential in order to bring people and activity to the river without sacrificing what Hugman had achieved. The architects who are adapting formerly anonymous basements into lively and economically profitable residences are contributing to the life of the river and deserve credit for the restraint and respect they have shown. A strong sense of place appropriate to the region came out of the WPA project that employed only local people, used only local materials and responded only to the sensibility of local history and culture. We can only hope that the future of design along the river will recognize and respect those same regional influences. □



Photographs by Sinclair Black



*The river was extended to meet the site of Hemisfair (opposite page). At right, the Bexar County courthouse and San Antonio public library.*



Jonathan Wilson

## Building with the Byproducts of Society

*The 'garbage architects' hold an international conference. By Forrest Wilson, AIA*

"God's own junkyard" was Peter Blake's catch phrase to describe the American scene in the mid-1960s. "Garbage is the only raw material that we are too stupid to use," wrote Sir Arthur Clark in *Profiles Of The Future*. Today the ideas expressed in *God's Own Junkyard* are as dated as the antibillboard sentiment that swept the country during that period. We know now that the problem is more than skin deep; it is lodged in our industrial bloodstream. The cosmetic solution Blake proposed is without curative power. We may also be a bit smarter than Clark allows, for a profile of the future will undoubtedly silhouette architectural forms generated by the use of junk and garbage materials against our skylines.

The first International Conference of Garbage Architects, held in May at Florida A&M University, examined junk as problem and solution. From evidence presented, it is clear that the term "garbage," applied to the secondary use of industrial materials in building, is as appropriate as the term "Gothic," once used to denote a "barbaric lack of taste" when describing medieval cathedrals.

From the first conference presentation it was clear that labels such as "junk" and "garbage" were of little meaning, for they defined no innate quality of building material or substance other than its availability. The byproducts of consumer societies—automobile tires, beverage cans, bottles and dovetailed sulphur blocks—were combined in ingenious assemblages.

As each architect displayed his work, it became increasingly evident that Blake's junk and Clark's garbage were "junk" and "garbage" only in the eyes of the beholder. The secondary use of industrial materials was demonstrated in completed designs ranging from a boutique in Milan to houses in the jungles of Guatemala.

However unusual these building accomplishments might appear, secondary use or garbage building is not a new idea nor

recently conceived stylistic passion. It is as old and as persistent as the building efforts of humankind itself.

It is difficult to determine when it began, for strictly speaking the first tools grasped in prehistoric man's apelike hands were the secondary use of rocks and twigs. Anthropological documentations of humankind's continuing building history record the construction of dwellings of every conceivable material throughout our history. Whale and mammoth bones were used for houses in prehistoric times, a concept not far removed in spirit from Martin Pawley's secondary use of an automobile carcass as a solar collector today.

In building, garbage is clearly an arbitrary term. Even our traditional building materials begin as secondary use. The brick is the secondary use of mud, lumber the secondary use of trees, stones the secondary use of quarried rocks. In fact, multiple uses beyond secondary use are limited only by the inventive imagination of the designer/builders.

In recent pioneering history, buildings frequently were built of prairie sod and baled hay, and some, still standing in Nevada, Alaska and Australia, were built of whisky bottles. In fact, bottle building has a long and honorable history. A fourth century Roman tomb on the Via Apia was dubbed "pigna terra" in honor of its dome built of clay pots. We do not know whether these were formerly wine jugs, but they might have been. We are familiar with the dome of hollow jugs of the orthodox baptistry in Ravenna which was begun in 400 B.C. and finished 50 years later. Once again we do not know what the pots once contained and we are not certain that the baptistry did not take half a century to complete because of the time required to collect the empties. Such well established building traditions are carried forward today by architects such as Michael Reynolds, a registered architect who builds self-centering domes of beer cans outside Taos, N.M.

Even Heineken, the "Cadillac of beers," once seriously considered bottle architecture. Heineken's WOB (World Bottle) project is a landmark in sensible solutions to the secondary use of beer bottles. Alfred Heineken visited Curacao in 1960 and was struck by the poverty of squatter shacks contrasted to the wealth of empty bottles strewn on the beaches. He quite intelligently planned to replace the standard 300 millilitre Heineken export

**Mr. Wilson** recently resigned as chairman of the architecture department at Catholic University to return to full-time teaching and research at that school. He moderated the garbage architects' conference at Florida A&M at the invitation of Richard Chalmers, dean of architecture, and host Prof. Martin Pawley, director of A&M's experimental low-cost construction unit.

bottle with a redesigned successor capable of serving as a house brick when empty.

In this capacity, Prof. Martin Pawley of Florida A&M pointed out, the bottle could be expected to lead a long and useful life while its unmodified contemporaries defaced beaches, clogged refuse systems, littered the countryside and caused injury. In this enterprise the orthodox economics of bottle production were designed to serve as a carrier for a secondary use article whose life would only begin when its primary use as a beer container ended. It was as if, Pawley noted, the shell of the humble breakfast egg were to become as valuable as the egg itself.

It is evident now that when Lou Kahn said, "I asked the brick what it wanted to be and it said it wanted to be an arch," he was talking delightful nonsense and telling only half the story. The brick is undecided. The arch, and sometimes upside down at that, was Kahn's idea, as it should have been. All materials inspire our imagination but are basically neutral. It is a measure of the inventive genius of the architect that makes them what they "want to be." The difference between usable housing, Clark's garbage and Blake's junkyard is the measure of the ingenuity that designers bring to bear on building materials to solve building problems.

The secondary use of ubiquitous industrial materials by craftsmen and industry alike can often be as deceptively simple and reasonable as Heineken's WOBO house project. The Mexican sandal craftsmen who make shoes from old tires return the automobile tire to the highway for many more miles of useful life on a person's feet. During the 1930's manufacturers packaged bulk flour in printed fabrics because people made clothes from flour sacks and there are nicer designs than the Pillsbury trademark to decorate one's petticoat.

Secondary use is most often associated with low-cost construction, but that is not necessarily the only application, for it may also provide a better building. Tamped earth tire houses designed and built by Michael Reynolds sell for a price equivalent to that asked for a comparable conventional building, but their performance has proven superior in terms of energy conservation. The insulated mass wall of aluminum cans Reynolds invented has also proven to possess superior climatic adaptability. It also provides a greater range of esthetic choices than traditional materials.

The design challenges of secondary use present an entirely new range of possibilities for architects in structures that involve a great deal of human energy bestowed in ways that it is often difficult to calculate. Secondary use buildings usually are not built by workers selling their labor in hourly increments. Commonly, they are constructed by the architect, those who will occupy the house, their friends and neighbors. Much of the building labor is unskilled and has no traditional trade designation. As yet, there are no specialists in tire dirt packing, Schlitz masons or beer bottle glaziers, although these may not be too far in the future. The use of secondhand tires in houses has become so popular in one area of the U.S. that they sell for 50 cents each and can no longer be found in city dumps.

However, despite its growing acceptance, secondary use building is still dominated by craftsmen and architects. As illustrated on the following pages, the range of formal and technical possibilities can stimulate the architectural, building and engineering imagination. The reader will find these to be very serious design efforts despite their "Gothic" labels and unusual appearance.

Much of "secondary use" is inspired by common sense build-

ing and engineering logic. When Dr. Gernot Minke of Kassel, West Germany, a former associate of Frei Otto, developed a bottle column, he was prompted by concern for structural efficiency. He sought, as Pawley expresses the idea, to "conserve the energy in the geometry." If recycled, over 10,000 pounds of pressure is needed for a crusher to reduce bottles to glass chards which are then reconstituted as aggregate in a concrete block. The bottle glass blocks' compressive strength is said to be 2,700 p.s.i., a quarter of the bottles' original strength.

One characteristic of the low-cost and experimental housing laboratories of the various universities represented at the conference—Kassel, Florida A&M and McGill—was that they tended to concentrate on designs for a major new architectural client, the earth's poor. Materials used were low cost because they were readily available. This does not mean that they were without value. As Pawley demonstrated, the embodied energy in the manufacture of a bottle is 1,800 BTUs, in an aluminum can 4,800 BTUs and in an automobile tire as much as 1 million BTUs. It was considered simply nonsensical to bury such precious energy expenditures in landfill when they could be employed in building.

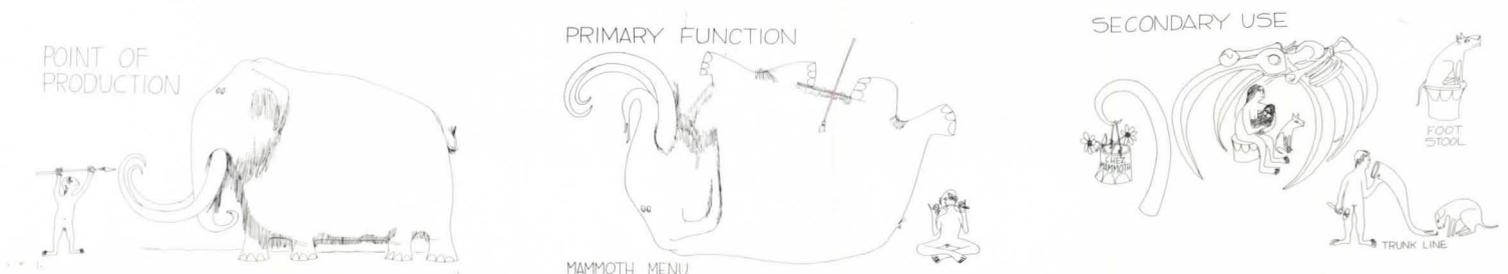
Most of the building techniques demonstrated at the conference were designed for those with little traditional building skill. For, as Witold Rybczynski said, the days of the indigenous builder, the designer of "architecture without architects," is almost past. Yet, the techniques that the "garbage builders" have successfully demonstrated may help restore craftsmanship on a different level not only to the people in the so-called underdeveloped countries but to the urban and rural poor people of the developed countries as well.

The connecting link between the members of the conference was simply innovation and ingenuity. The division between them was between recycling and secondary use. Pickett Scott, vice president of the Glass Container Corporation in Fullerton, Calif., has at his disposal the resources of a major corporation. He introduces material and research into the building system in known solutions by recycling it as raw material in the manufacture of "glassphalt" and terrazzo. Reynolds, Shiu-Kay Kan, Pawley, Minke, Rybczynski are searching for methods to reintroduce the products of manufacture into the building system at a level of secondary use. What Scott and industry do in the recycling of junk and garbage is anathema to the other conferees.

What is making junk and garbage construction attractive obviously is not stylistic appeal or esthetics, but simply the common sense of its application. It returns ingenuity to the building site in the mind and hands of architect and builder rather than leaving crucial questions of form to materials manufacturers marketing them in product catalogs.

Members of the conference demonstrated: Garbage and junk offer technical means for the semiskilled of the world to build houses from an abundant supply of material (Rybczynski). It is the only means by which an adequate amount of housing materials can be supplied in a consumer society without total disruption of existing production processes (Pawley). Its engineering logic is irrefutable (Minke). Its esthetic possibilities are unlimited, from tire houses to Italian boutiques (Reynolds and Kan). The possibility exists of enlisting the tremendous resources and latent intelligence of major industry (Scott).

As architects develop the raw materials that Clark accused us of being too stupid to use we are finding a gold mine in Blake's "junkyard."





**Michael Reynolds** says "if it is enough of a nuisance, it will become a resource." Since graduation from the school of architecture at Cincinnati a decade ago, Reynolds has been successfully building houses of "nuisance resources."

The geometry that emerges from Reynolds' work is not the result of self-conscious effort at form, but simply the outcome of building to the dictates of material and labor. He believes that people who choose solar or wind power to lessen their independence on the energy grid are apt to be people who want to free themselves from a material grid imposed by standardized building materials. And a freer order does prevail when cans are used as curtain walls between post and beam members, although cans do not determine form any more than noggling influenced the form of New England dwellings.

Although Reynolds' building forms are unorthodox compared to those generated by Sweet's catalog, the main virtues of his houses are their superior climatic and structural performance. Reynolds is sensitive to the uses of both human and natural energy, and he maximizes both. He uses each nuisance resource as he finds it and invests in people rather than machine energy. In the tradition of architects who have acquired technical knowledge and skill on the job, Reynolds hires, trains and works with his wife and crews on the buildings he designs. Trained masons and carpenters are employed to bring their traditional skills to bear upon the joining of untraditional materials.

Whenever possible, tests are made in laboratories, Reynolds says, but "we cannot get the money to pay the testing agencies the government demands." So he frequently must arrange with the building authorities to build on his own, subject to approval or rejection after the work is completed.

The first tire houses for which Reynolds was granted a state building permit were consciously designed to illustrate that such structures do not have to be "funky," but are efficient, sensible structures. They were solar heated. He now has a conventionally



heated tire house on the market for \$65,000, which is comparable in price to other houses in the area.

The rise in cost of building materials further focuses Reynolds' search for alternatives. Tires, cans and bottles are mixed when necessary. Whatever will work well is used. "We are experimenting with dirt roofs 12 to 18 inches thick," he says. "Many of our houses could be done in frame construction. But our 2-foot and 18-inch-thick walls seem to me to be more substantial. We could build cheaper, but it no longer seems to be a question of budget but one of what we can do best with the materials we can get."

Reynolds hopes garbage architects will influence the profession. "During the last few decades, architects have dreamed up things that were built because so much energy and money was available. We can probably make anything that our minds dream

of until the world runs out of stuff. Then we will have to make what we need, and that is what our efforts are all about.”

Reynolds' tire house idea originated with the need for an enclosed area to serve as a workshop. In building these structures, earth scooped out at the site is used to pack the tires, with the remainder used to bank against the house. Tires are packed solidly, for the dirt must be strong enough to support the weight of the tires above and solid enough to install lathing for exterior and interior plastering.

Conduit and piping is laid in the wall, which is then filled in with mud, lathed and plastered. At the plate, alternate tires are filled with cement to anchor rebar dowels. A two-layered circular tie beam of 2x10s or 2x12s is then anchored by the dowels. This ties the wall together and provides a nailing surface for the roof, which is conventional wood frame. Openings in the wall are made by framing windows or doors with wood or an oil drum.

Tire loops are built as additions to existing houses. In one instance, three tire loops were built in two weeks, increasing the space in the house by 65 to 70 percent.

Reynolds also fabricates building blocks from waste 12-ounce steel beverage cans and uses them the same way as concrete blocks. They have been tested by the University of Cincinnati and found to withstand an average of 4,500 pounds in compression, have passed building codes and have been approved for bank financing in New Mexico and Indiana.

Courses are staggered with horizontal and vertical mortar joints. Mortar—not masonry mortar—consists of sand-to-cement ratio of 1-to-3 or 1-to-4. Half blocks for corners, door jams, etc., can be made by wiring three cans together in a row.

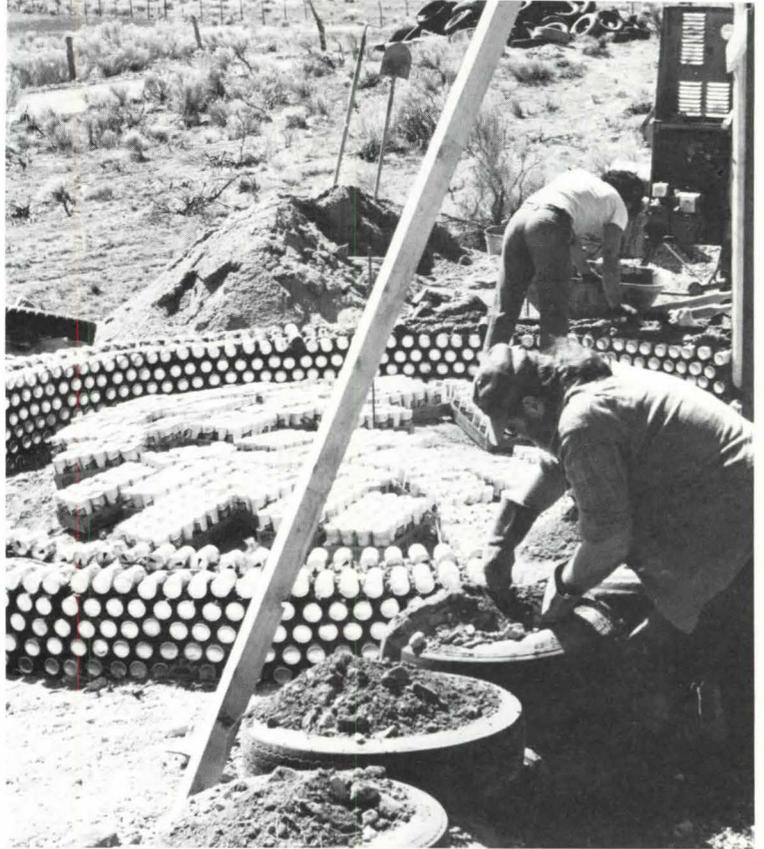
With plaster on both sides, a can block wall has insulation qualities similar to a typical stud frame wall with batt insulation. This is adequate for warm climates, but it can be improved with one and one-half inches of polyurethane foam sprayed on the outside of the wall after a scratch coat of plaster. This combines with the air space in the empty cans to improve insulation.

The can block wall can be used for bearing wall structures of one or two stories. Vertical and horizontal steel is not required in one-story construction. An eight-inch-deep concrete bond beam with two no. 4 continuous rebars is required every story. Walls have been successfully built up to 12 feet high to the first bond beam, but 10 feet is recommended as maximum for one-

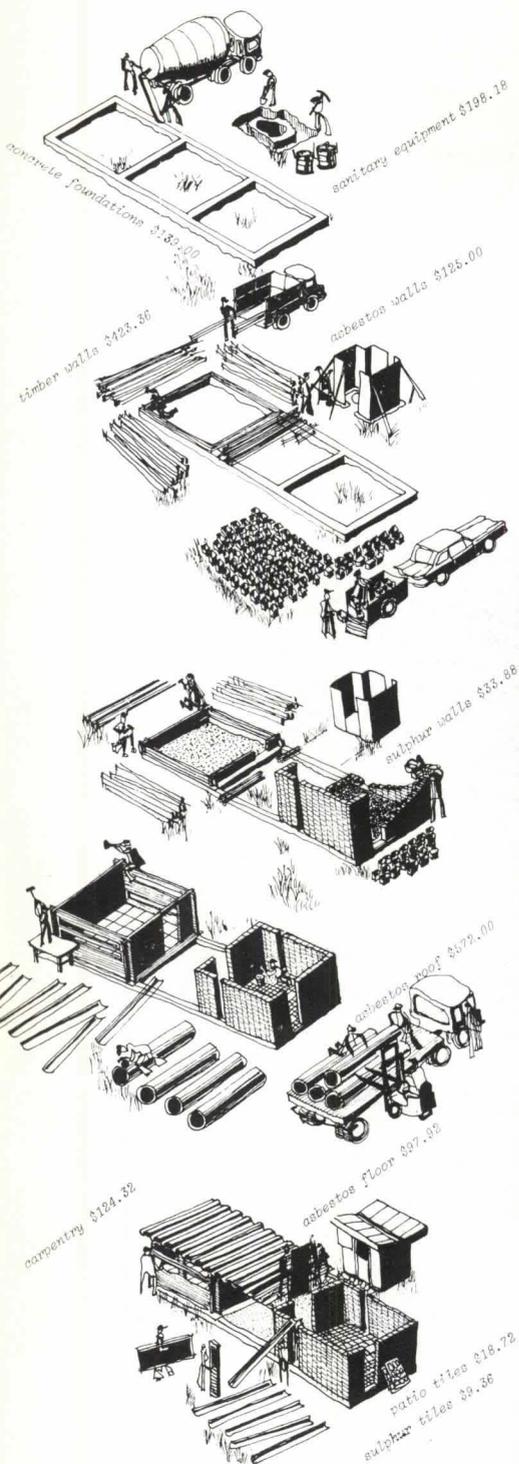
story construction. For two stories, the recommended maximum height between bond beams is eight feet.

These walls should be set a minimum of eight inches above grade, Reynolds advises, using a single ground course of eight-inch masonry block or an extended foundation.

Inside finish can be either painted or plastered. No stucco netting or any other preparation is needed for plaster. In warm climates, the outside can be stuccoed or merely painted. In cold climates, a plaster scratch coat with one and one-half inch spray polyurethane foam is advised. Window and door jam details are similar to those used with concrete block.



Photographs by Larry Birch



*Ecol experimental house combined sulphur block with more conventional materials. Drawings above show unit costs.*



Witold Rybczynski

**Witold Rybczynski** notes that the concepts of autonomous housing which provided humankind with dwellings over most of its history are again being considered as the means of relieving world housing problems. Experience has indicated that the most suitable and often the most economic choices are made by the user with a minimum of intervention by corporation or state, he says, pointing out that little attention has been paid to the building technology by which self-help and owner building can be realized.

According to Rybczynski's evaluation, the proponents of self-help housing base their arguments on two approaches to building technology. One assumes a return to indigenous building

methods and locally available materials and a consequent expenditure of large quantities of human energy. The second assumes a scaled-down version of conventional building industries and emphasizes labor-intensive methods.

A return to craft-based technology does not seem reasonable, he argues, because the social, political and economic conditions that produced them are no longer dominant. Traditional skills have been abandoned in the face of pressures of time, upward mobility and the division of labor. Small-scale or intermediate technologies, however, seem on the surface to have the greatest chance of success, Rybczynski believes, because they require smaller capital investment and can therefore be more responsive

to local needs. However, one of the main drawbacks has been the identification of specific suitable techniques.

Advocates of the small is beautiful concept are often forced to turn to 19th century technologies which are, in effect, hand-me-down techniques adaptable to small scale application, he says. But these technologies don't take advantage of recent scientific discoveries and are characterized by low productivity and low quality, as well as being based on the same raw materials and high energy demand that continue to price housing out of the reach of most of the world's population, he continues.

Rybczynski proposes a third approach: a building technology specifically designed for the owner-builder which takes advantage of an expanded resource base that includes industrial and agricultural wastes.

As director of the minimum cost housing group at the McGill University school of architecture in Montreal, Rybczynski's efforts are directed toward creating a building technology that is not craft-based, is available to a large number of people and at the same time preserves and extends the traditional ability of indigenous builders to transform valueless raw materials into building components. One example of this approach is the development of a building technology based on sulphur, available in many countries in increasing quantities.

A decade of research by the minimum cost housing group at McGill has proven sulphur to be a practical building material with a wide range of possibilities. Alvarao Ortega, who founded the group at McGill along with Rybczynski and Samir Ayat, first became aware of the properties of sulphur concrete when he was a graduate student. It has been in use in Colombia, his homeland, since the time of the conquistadores. After working for the United Nations on the development of the now widely used asbestos-cement channel roof, Ortega was able to initiate investigation into the use of sulphur as a low-cost building material in Panama and Guatemala.

Sulphur has several physical properties which make it a desirable building material. It is an excellent binding agent when combined with aggregates; nonporous and impervious; meltable at low temperatures; quick-setting (six to eight minutes); recyclable, and readily available at negligible cost. It is a waste material that rapidly accumulates in the refining of oil and the removal of pollutants from the air. It is also available almost worldwide in natural deposits.

**Shiu-Kay Kan** has proposed the organization of school dropouts and the unemployed in London to salvage discarded material which is expensive to transport from collection points to incineration plants. Pointing to the need for detailed research in this area, Kan emphasizes that feasibility of reuse depends on limiting the distance between the source of wastes and the place of use. He places this maximum distance at 20 kilometers.

Kan and Michael Poteliakhoff have developed a two-person dwelling consisting of two identical units, one for living and the other for sleeping and eating, each 4x4.2 meters (left below). The units are connected by a glazed area which accommodates a shower, toilet and greenhouse and acts as an acoustic barrier.

The units are alternately pitched. The 60-degree pitch on the southern exposure accommodates a solar collector. The opposite wall is vertical, with a double-glazed window.

Building components are prefabricated into portable sections assembled by two workers on the site. Floor panels are constructed of wooden beer crates joined as a space deck, supported by 20-liter oil drums and paving slabs. The tin can webbed beams, four meters in length, rest on the spot-welded can wall at 600 millimeters spacing. The external cladding is a plastic coated cardboard which sandwiches an insulating layer of shredded paper. The roof is 100 millimeters thick, covered with turf and drained toward the vertical wall. Rainwater is channeled into two pools and stored for gardening.

Kan's demountable greenhouse has crosswalls built of "spire" clips purchased at car shops. Beams are made from cardboard tubes with adjustable wire tensioning system which allows pre-stressing for large loads and a curved roof for drainage. The structure is clad entirely with corrugated plastic sheeting. Discarded commercial bread trays serve as plant boxes. Can walls are used for tool storage in the interior.

The greenhouse has been successfully dismantled, moved and rebuilt on two occasions.

For the interior of a high-style shop in Milan (right below), an Italian can manufacturer supplied sealed, reject catering cans. The design was required to be flexible enough to adapt to different display systems of garments and jewelry. It also withstood the buffeting of a continually crowded shop. Most of the units were built with spot welded joints. Where adjustable units were needed, plastic universal clips were developed.



Shiu-Kay Kan

**Gernot Minke** is director of the Research Laboratory for Experimental Building in Kassel, West Germany, and a frequent consultant on lightweight structures and low-cost construction techniques for developing countries. His wide-ranging experiments have included:

1. A seminar room for the school of architecture at Kassel made of low-cost industrially fabricated components covered with prestressed PVC-coated polyester fabric. Just two standard elements were used as a framework, a square and a triangle. The membrane was stapled to the wooden frames. To avoid wrinkles, the membrane cover was stressed by sofa springs combined with circular plates of extruded polyethylene foam to thermally insulate the support. Material costs were about \$4 per square foot, including foundation, insulation, ventilators, door and window.

2. Minke regards air as a surplus material, since it exists everywhere. A compressive material, air can be used to stabilize a thin membrane using a small amount of pressure. To show the potential of air for self-help construction, Minke designed this inflated kindergarten which was erected at Ulm by architectural students and its ultimate users—the kindergarten pupils. The structure is comprised of three elements attached to one another. Its total cost, including a blower, was less than \$500.

3. The walls of this dwelling are cotton fabric bags filled with loose pumice sand, stapled together and stacked one on another within a frame of wooden and bamboo posts. Before stacking, the bags were dipped in a solution of lime and water to prevent rotting and were given another coat of lime solution once in place. The building was completed in two weeks.

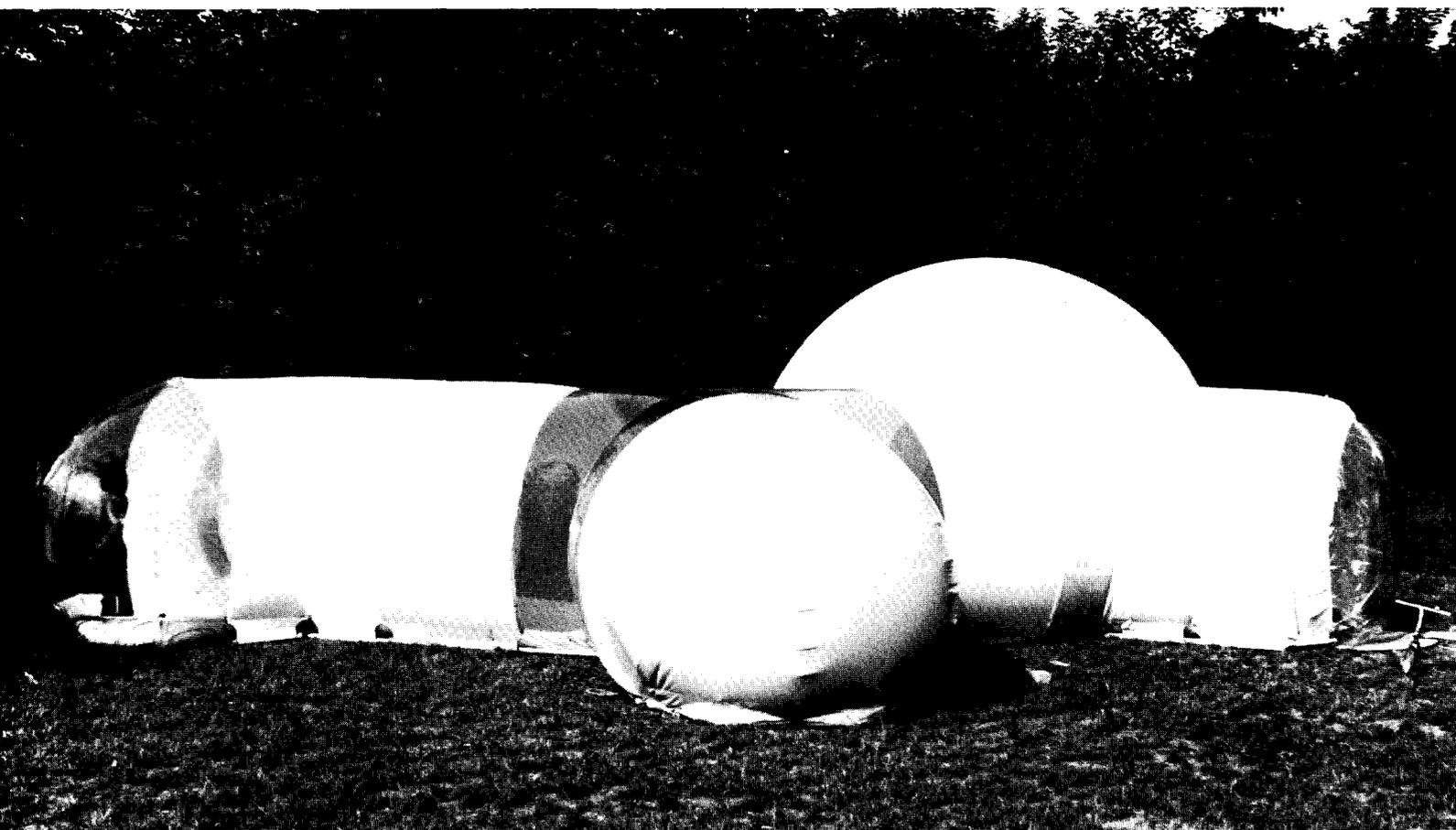
4. A prefabricated can and bottle structure erected at the Kassel laboratory. The roof covering is impregnated corrugated paperboard. Aluminum beer cans were collected at a nearby soccer stadium. The structure supported heavy wind and snow loads and, when tested after more than two years, showed no deterioration and only limited deflection.

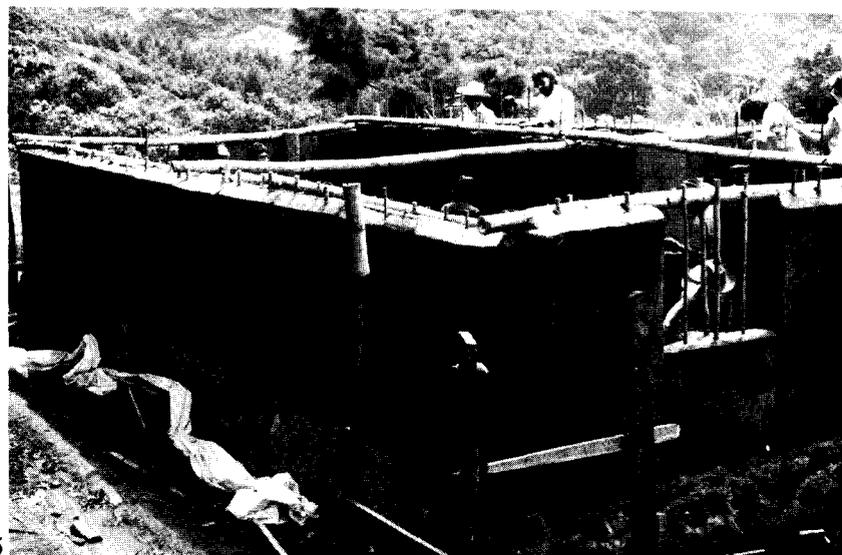
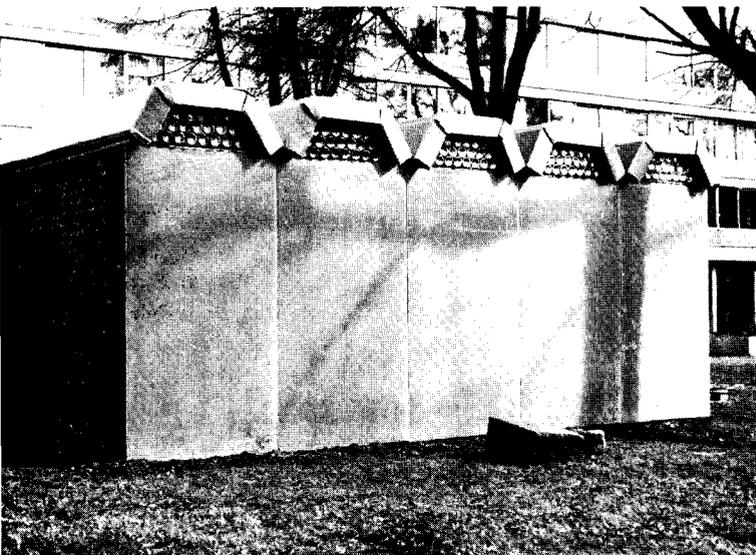
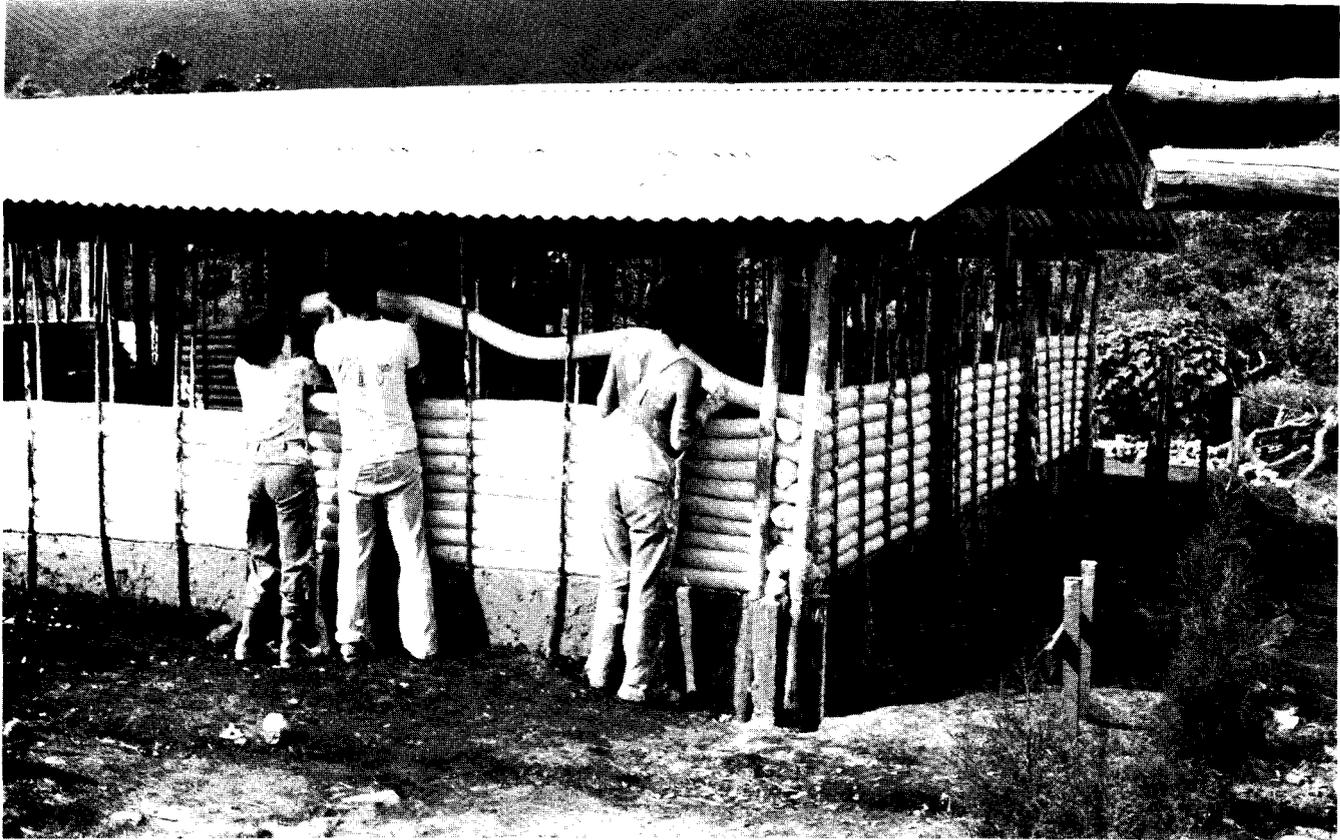
5. Bamboo reinforced rammed earth walls built in Guatemala with a T-shaped slip form serving as a container to compact the soil. Wall segments are separated by a narrow gap filled with mud or moss so that they move independently in earthquakes,

and T sections are joined by a ring beam to prevent tilting. The wall mixture was loam and volcanic sand reinforced with pine needles and stabilized by lime (due to poor clay content).

If such walls are tamped to sufficient smoothness, rain water will slide off them without erosion. They can be further protected by painting with animal blood, lime, waste oil or bituminous emulsion.

6. This structure actually grows its own protective cover. The frame is a ribbed parabolic timber vault and three grid shell parts in the shape of rotated parabolas. Stapled to the timber substructure were net bags filled with a mixture of earth, seeds and parts of plants (to stabilize the earth inside). After four months, the entire surface was covered with plants. The plants increase thermal and acoustical insulation, improve the microclimate and provide shelter from rain.





**Martin Pawley's** writings, lectures and research have provided a focal point for architects involved in the secondary use of industrial materials. His basic thesis was proposed in 1972 before the International Housing Conference in Chile, and his research has been carried out at Cornell, Rensselaer and Florida A&M.

The essence of Pawley's argument is contained in five points:

1. Massive building production required by world development can only be carried out using that which is already mass produced in vast quantities.
2. Waste materials of all kinds are produced in greater quantity than building materials of any kind.
3. Learning how to build with waste materials means the ability to draw from an infinite supply and mounting gains in terms of economics and energy as demand grows.
4. Secondary use makes better sense than recycling because the energy that goes into giving a product its distinctive shape can never be recovered if the product is recycled, and it is the shape or geometry of bottles, cans, tires, etc., that confers upon them their great strength.
5. Secondary use is the only means available that makes sense of consumer societies with their implied depletion of finite resources.

Pawley developed his thesis of the consumer society, the economics of waste and the details of the solution he envisions in four books, the best known of which is *Garbage Housing* (1975), and the most recent, *Home Ownership* (1978), both published by Architectural Press of London. The others are *Architecture Versus Housing* (1979, Praeger) and *The Private Future* (1974, Random House).

Among the current experiments at Pawley's Florida A&M workshop are a partially buried used car that functions as a solar collector (below) and a canopy made of tires (right) designed by student Larry Birch. The tires, which will be covered with earth, are in tension and are retained by a compression ring at the base of the canopy.

In the Cronch house, Troy, N.Y. (below right, the structural frame, trusses and columns are made from cardboard newsprint cores. The cores are joined with no. 5 steel cans pinned with galvanized roofing nails and the trusses and columns are secured with steel strapping. □

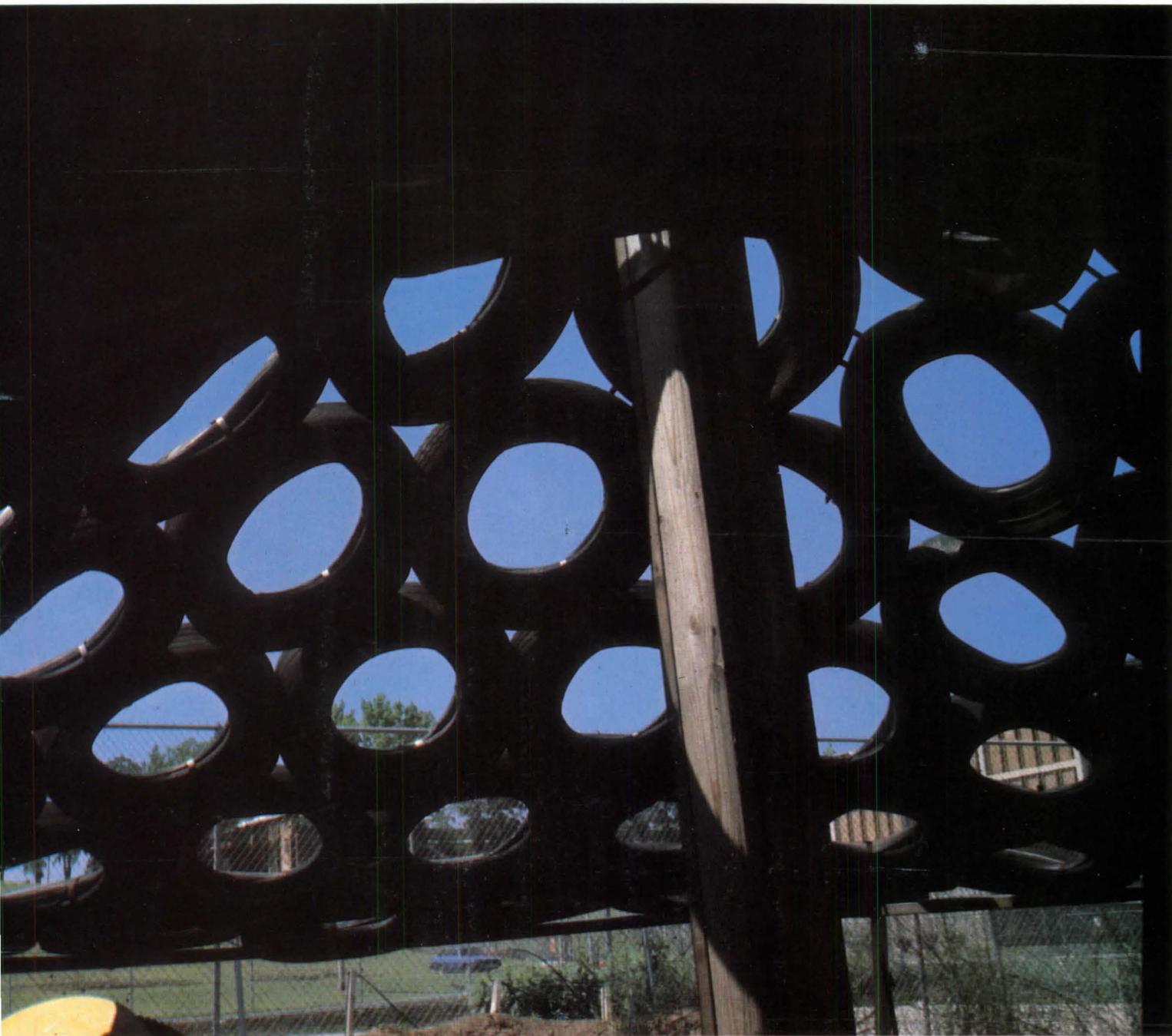


Jonathan Wilson



Jonathan Wilson





*Exterior walls of the Cronch house (left) are no. 10 steel cans in mortar except for a bottle wall at the living room and bedroom. Roof covering consists of a triple layer of packaging cardboard laminated with scrap polyethylene sheet and bonded with cold tar roofing cement. Over this are rubber tiles derived from butyl rubber cutoffs.*



Certificates of Design



# Those Proliferating Atria

*An ancient architectural device attains new popularity. By Andy Leon Harney*

No single architectural idea has spread so rapidly in recent years as has that of carving out the centers of buildings. Atria are everywhere: soaring skylit spaces, crisscrossed with escalators and festooned with exposed elevators; fountains gurgle and bright colored banners dance over the heads of crowds moving in and out of hotels, hospitals, offices, banks and, of course, shopping malls.

It seems impossible that it has only been 12 years since the atrium burst upon the contemporary scene and started a popular trend with architect-developer John Portman's Hyatt Regency hotel in Atlanta. The story and the building are too well known to recount in detail here: How Portman conceived the idea of the atrium lobby, failed to sell it to any major hotel chains, then caught the interest of the Hyatt Corp., managers of a motel chain with ambitions for larger-scale innkeeping—and how Hyatt made the atrium its trademark and grew into a major international hotel empire (see July 1978, p. 65). Hyatt stopped using Portman some time ago but has continued to build new hotels around atrium lobbies (although they have been getting smaller recently, reportedly because of corporate cost-consciousness). Such other major hotel groups as Sheraton, Loews, Hilton and Western International (a recent major Portman client) have

adopted atria, as have clients for a widening variety of other building types.

Portman did not quite invent the atrium, of course. As far as our historical knowledge goes, both the word and the building type date from the days of Pompeii when homes were built around open courtyards with tanks at the center used to catch rainwater. Later, early Christian churches, built on the same pattern, replaced the tanks with fountains used for ritual bathing. In America, the covered atrium became a popular building type in large commercial structures in the late 19th and early 20th centuries, large glazed spaces having caught the public's imagination with Paxton's Crystal Palace of 1851. One of the most lovely was George C. Wyman's 1893 Bradbury Building in Los Angeles, left for dead in a dilapidated part of town for years until its rediscovery and refurbishing in the 1950s. Tiers of cast-iron balconies promenade around the court, connected not only by stairs but by a romantic skeletal elevator. Period photographs show the building dotted with ferns. The heavy use of vegetation in today's atria is another throwback to the Victorian predilection for greenery in architecture.

*Facing page, First National Bank of Amarillo (Texas) by 3D/International; drawing, project for a temple, published in 1743, by Piranesi.*

**Ms. Harney** is a free lance writer in Washington, D.C.

## Making the interior 'light, airy and beautiful.'

Frank Lloyd Wright saw the atrium as a romantic tool with which to fight the smoke, dirt and noise of industrializing America. Describing his 1906 Larkin Building, he said: "The superimposed stories, necessary to accommodate the required number of clerks, are all aired, lighted and unified by a big, open sky-lighted central court preserving the occupation of the interior, the character of a family gathering, making the interior as a whole light, airy and beautiful altogether."

The Larkin Building was lost in 1950, but there is much other evidence of Wright's career-long fascination with great spaces, in his drawings as well as buildings such as the Johnson Wax headquarters and Guggenheim Museum.

Wright spoke of the freedom from standard architectural modes achieved in the Guggenheim. "Here for the first time, architecture appears plastic, one floor flowing into another instead of the usual superimposition of stratified layers cutting and butting into each other by post and beam construction." John Portman, in his book with Jonathan Barnett, describes his feelings, walking into the Guggenheim: "About halfway down the ramp, I began analyzing why this experience felt so good and worked so well. . . . Anybody who goes through a museum and finds himself being led from one closed compartment to another knows that he soon longs for relief. In that respect, the Guggenheim is very successful. You can go through it comfortably and leave without feeling fatigued or bored."

I. M. Pei & Partners likewise used a great glazed inner court contrasting with smaller galleries to avoid museum fatigue in the



Courtesy UCLA



Courtesy Frank Lloyd Wright Memorial Foundation

East Building of the National Gallery of Art. Another prime reason for introduction of the court, Pei acknowledges, was to make the building a sufficiently dramatic experience to compete with the other public attractions of the nation's capital.

That release from the confinement of an eight- or nine-foot ceiling in a hotel room, an office, shop or gallery is part of the excitement of an atrium. Architects have selected this mode because of romantic ideals about freedom of movement. Pleasant atmospheres created by massive shafts of space also cause a new experience—architecture that looks inward, that creates its own atmosphere with interior landscaping. The plantings become a kind of connector between people and the massive space. The building becomes a frame for that connection or relationship.

Whatever architectural motivations are behind the new popularity of the atrium, it is clear that the renewed interest in the form is in part based on the realities of the marketplace—in short, atrium buildings are a good sell. The point has been proved by the experiences of the Hyatt chain and numerous



Retoria/Y. Futagawa

*Facing page, George C. Wyman's Bradbury Building, Los Angeles, and Frank Lloyd Wright's Larkin Building, Buffalo. Left, Wright's Johnson Wax Co. Administration Building, Racine, Wis.*

shopping center developers, and was proved again by the popular success of the East Building.

"Atriums sell because they've got sex appeal," says Houston-based realtor and leasing agent Louis B. Cushman III, president of Cushman Realty Corp. "It's great for Houston," a city that boasts some 50 atrium office buildings and more going up every day. "You can put up a small atrium office building on a poor site and still have atmosphere. A shared lobby is a real marking plus." Nor is the atrium's popularity surprising in a city that spends much of the year indoors avoiding the humidity.

The atrium trend has also found a place in the revival of older buildings. The firms of Miller, Hanson, Westerbeck & Bell at Butler Square in Minneapolis and Louis & Henry at the Museum of Natural History and Science in Louisville have each selected the atrium to bring light and life into these late 19th, early 20th century buildings. Both firms have used the atrium to "sell" the interior architecture and to illuminate, with skylights, structural details.

Warren Platner Associates relied on atria of the urbane

travertine kind to solve the problem of a seven-story shopping mall in downtown Chicago: how to get the people to go up? The building is Water Tower Place, a multiuse complex designed by Loeb, Schlossman, Dart & Hackl with Platner Associates as consultants for the shopping center part. The architects used an escalator complemented by a garden, waterfalls and fountain to bring customers beyond the street floors of the anchor stores and into the mall in the first place. Then the mall is punctuated with one grand atrium that grows wider and then taller again as it goes up, maximizing the sightlines to stores, and dramatizing the space; and two smaller atria to either side. "We wanted to give maximum exposure to each store, but sacrifice as little space as possible to the atrium," says Platner. "After all, you can't lease an atrium, you can only lease the space around it."

Platner's solution to a vertical shopping mall is a twist on what has become a cliché in the suburbs where the atrium shopping mall reigns. The Rouse Co.'s latest suburban effort, designed by RTKL, is Beachwood Plaza outside Cleveland, offer-

## **From Wright to Portman to a variety of others.**

ing a series of atrium spaces around which shops are clustered. The Rouse Co. pioneered the larger atrium shopping mall in the late 1950s in a Baltimore suburban mall, also designed by RTKL. Says Rouse executive Scott Ditch, "An atrium is nice during the day, a wonderful pedestrian space providing maximum exposure for retail stores, a place where greenery can thrive and the weather and light are controlled."

Just as the atrium is seen as appropriate for selling merchandise, it is also a way to sell office space—witness the Houston experience. Vincent Kling & Associates found the atrium a useful

device for an office building in Washington, D.C., for International Monetary Fund. The architect was faced with designing offices for their high level staffers and everyone wanted a window. But with Washington's height limit and a downtown one-block site, that didn't seem possible. The solution was an atrium skylit, as about one-third of the building's mass. The doughnut form gives everyone a window—if not on the outside world, at least on something, like as not, even more pleasant.

"A central court is humanizing," says Kling. "A fat building which places people far from light makes them feel incarcerated."

While atria may provide the user with a more humanizing space, they also offer the architect another opportunity to leave



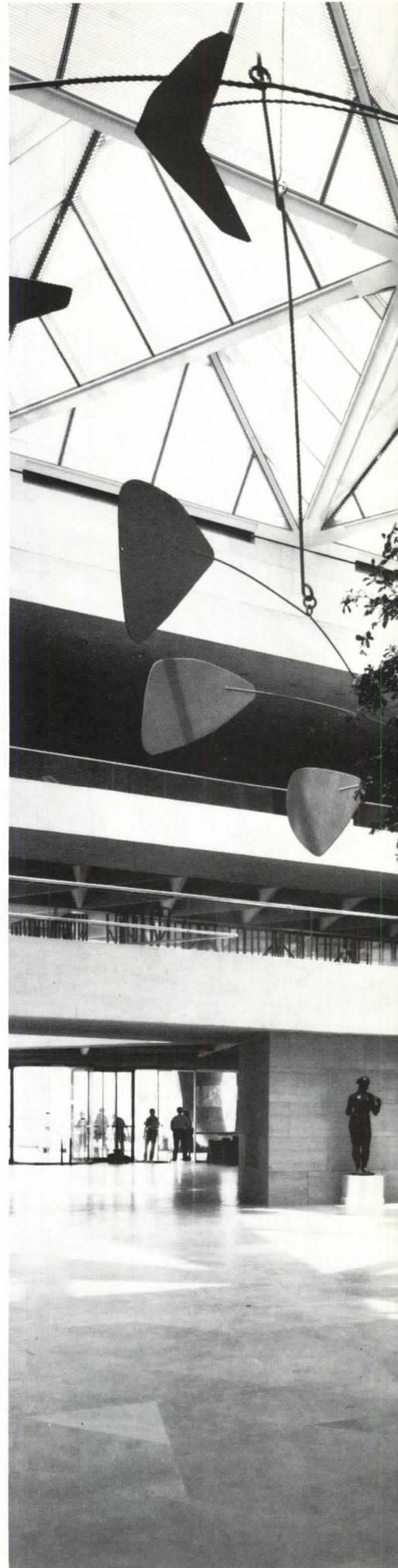
Retoria/Y. Futagawa



Alexander Georges

*Left, Wright's Guggenheim Museum, an acknowledged inspiration for John Portman's atria (Hyatt Regency Hotel, San Francisco, above).*

Cervin Robinson



Phillip MacMillan James & Associates



Tom Crane



## The opening of a wide range of building types.

his or her imprint. The experience of walking into an atrium building is a reminder of the presence of the architect.

Atria also provide energy conservation advantages. One is reminded again of Wright's Larkin Building, where fans pulled fresh air through the building and washed it in a sheet of water in one of the first attempts at airconditioning.

The Philadelphia firm of Harbeson Hough Livingston Larson (H2L2) used an atrium in the Children's Hospital of Philadelphia both for energy reasons and to multiply the number of windows. The hospital is a U-shaped structure made whole by an atrium court. It is fitted with fans and compressors designed to move the heat generated by occupants, machinery and the sun

*Facing page, clock wise from top left: Roche/Dinkeloo's John Deere & Co. addition, Moline, Ill.; I. M. Pei & Partners' East Building, National Gallery of Art, Washington, D.C., and Butler Square, Minneapolis, by Miller Hanson Westerbeck Bell. Left, Water Tower Place, Chicago, by Loeb, Schlossman, Dart & Hackl and Warren Platner Associates. Above, International Monetary Fund Building, Washington, D.C., by Vincent Kling & Associates.*



Roberts Associates

### Rejection of 'sterility' and reunion with nature.

pouring in through the skylights. In winter, the heat is directed to the perimeter of the hospital, where the building is experiencing the most heat loss. In summer, the ground floor is airconditioned and the atrium is used as a return air plenum. Slots in the surrounding balconies allow the air to pass through, minimizing the need for ductwork. To protect the building from summer sun, fixed exterior play decks are angled like permanent blinds to filter light as it passes into the court. The rooftop is reflective.

The proliferation of atria may even be another form of the rejection of strict and sterile modernism, although they are not yet explicitly called out for praise in postmodernist theology. It may also have something to do with the current yearning for nature that expresses itself in wilderness preservation and addiction to house (and office) plants. Certainly this had to do with the celebrated efforts of Kevin Roche/John Dinkeloo Associates to reunite man and nature in the climate controlled Gardens of Eden of the Ford Foundation building and the Deere & Co. addition.

However diverse the motivations for employing atria (one of which may be architectural narcissism), they are generally a humanizing influence on the interior environment. □



George Cserna

*Above, Hennepin County Government Center, Minneapolis, by John Carl Warnecke & Associates. Left, Wright State University Library, near Dayton, Ohio, by Don M. Hasaka. Right, Clinical Teaching Facility, Thomas Jefferson University Hospital, Philadelphia, by H2L2.*



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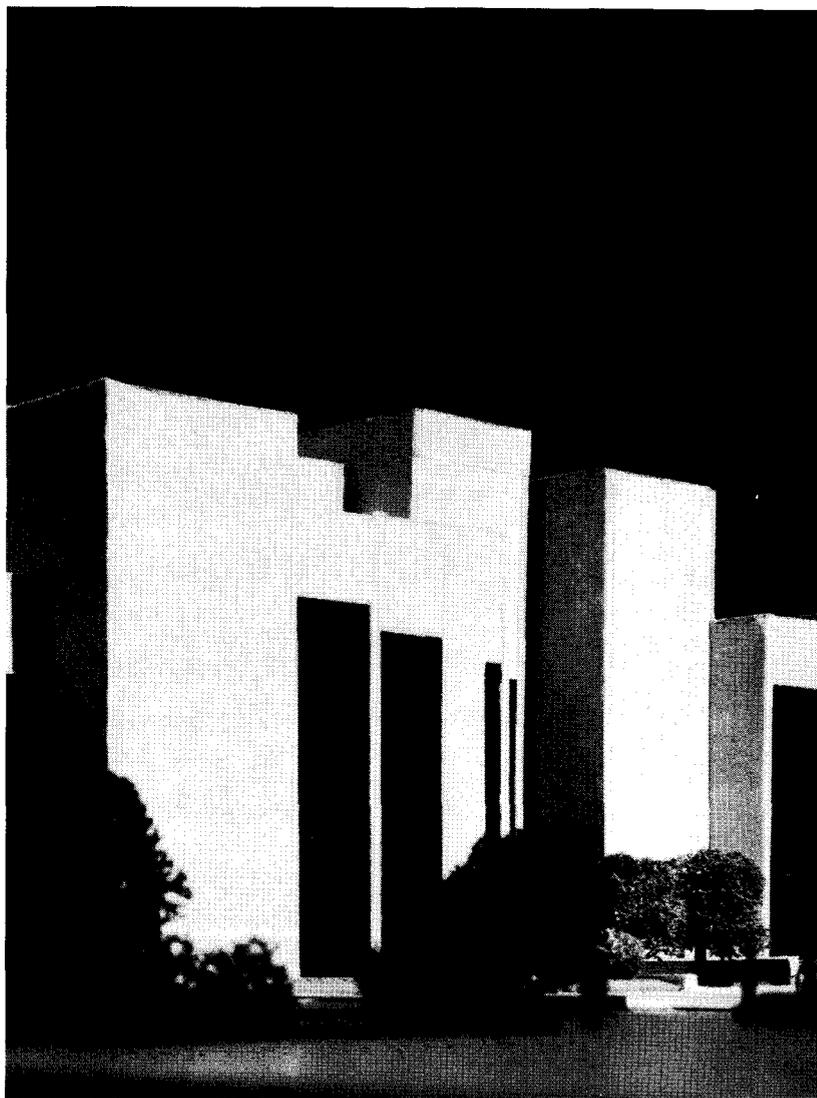
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# 'The Architect's Access to Information'

*A study examines the ways to 'stay on top of things.' By Mary E. Osman*

"Of making many books there is no end; and much study is a weariness to the flesh," said the writer of the Book of Ecclesiastes centuries ago. Despite this weariness and the undeniable fact that getting quality current information and making it one's own is time-consuming and troublesome, there are many reasons in this era of information explosion and constant change that make it imperative for the contemporary architect to stay on top of things with current knowledge at his command. The problems are addressed by Charles Hamilton Burdette, AIA, in two documents on architects and information, commissioned by the AIA Research Corporation and the National Bureau of Standards' center for building technology's design and construction application program. The volumes are *The Architect's Access to Information* and *Making Information Useful to Architects*.

The first volume, the subject of this overview, provides insights into the constraints placed upon the architect's access to information which derive, Burdette explains, from "his status as a professional, his background, work habits and practical circumstances and the building industry in which he participates." The second volume, less useful to the architect as consumer of information, is directed to those who provide the information. Burdette says his purpose is not to propose detailed solutions in the first volume, but rather to give a brief guide to the information problem and the nature of its effects.

Access to new and relevant information, accumulated knowledge and the ability to apply the information and knowledge appropriately distinguish the professional from the layman, Burdette says. These capacities, traditionally, have resulted from the individual architect's interests, education and experiences. In today's world, however, with the complexities of architecture and construction ever increasing, a single individual cannot possess all the knowledge required. "Well-balanced and informed professional judgment is therefore increasingly dependent on direct access to information and to the appropriate techniques for applying it, rather than on personal knowledge and experience," Burdette says. The architect's approach to information must of necessity take into account not only the joys of scholarship per se, but some very important practical considerations.

The only means society has to be assured that its trust in a professional is justified is through the licensing process. One of the crucial matters debated at AIA's recent conventions pertains to whether there should be periodic tests of knowledge for the maintenance of a professional license to practice and whether AIA should require continuing education for membership. While Burdette does not go into all the pros and cons of periodic testing, he asserts that those who call themselves architects must be able to demonstrate an "acceptable level of education and experience."

While the licensing procedure's purpose is to assure the public that the professional does possess a minimum level of knowledge and demonstrable competence, it also "assigns the legal responsibility" for the possession of these attributes squarely on the individual architect and not on any legal entity such as a corporation, Burdette says. Consequently, the need for the assimilation of current reliable information is "personal and acute." The architect's only protection is "that his judgment need not be

infallible, just reasonable within the norms established by the judgments and practices of other qualified professionals." This dependence upon the performance of peers is constricting, Burdette says, in that it is "highly dependent on the work setting, organization and complex service relationships which characterize modern practice."

The subsequent confusion, he says, leaves the architect increasingly vulnerable to liability claims and increasingly dependent upon his professional organization. In turn, the professional is forced to become better informed in order to reduce his exposure to liability claims. Burdette points to comments by Victor O. Schinnerer & Co. that liability claims can result from alleged negligence, services performed while acting as an owner's agent, improper use of both new and old materials and products, the increasing influence of governmental regulations, constraints imposed by time and money to get a project finished quickly and from "changing attitudes of the courts and society in regard to the accountability of professionals for the consequences of their acts."

Hence, access to reliable information "is increasingly recognized as an important way to reduce exposure to liability claims," Burdette says. One of the major carriers of professional liability insurance recognizes this fact, he says, offering a \$50 premium credit to architects who use Masterspec, the standard specification system offered by Production Systems for Architects and Engineers, Inc. "Even in the event of specification failure," Burdette says, "the use of a national industry standard is important liability protection since it implies the exercise of appropriate care and consideration in the preparation of specifications that conform to a recognized standard for professional performance."

Burdette points to the paradox between legal liability and the architect's professional responsibility to serve society in a creative way. The architect may be rewarded with lower insurance rates by sticking to the tried and true, but if he would advance the state of the art, receive the respect of his peers and achieve personal fulfillment, he has to find and apply untested information sometimes. In this dilemma, the architect generally assumes the conservative approach, Burdette says, resorting to "his own familiar resources and instinct," rather than pursuing "vague, untested and unsubstantiated claims." But, he adds, conservatism is no guarantee of security.

There are risks in conservatism, and in today's world the architect has to face the realities of the marketplace. As he becomes aware of new opportunities to get new clients, he must search for information to help him understand the client's problems in order to render the services needed. As an example, Burdette points to the demographic shift, recognized a decade ago, away from a youth-dominated population toward a population of older people. The knowledgeable architect has found it necessary "to identify growing numbers of organizations and power centers, the new funding sources and client groups, the relevant legislation, consultants, information resources and educational opportunities which were emerging in response to this shift."

Other shifts have had a profound effect on the need to seek new information. Among them is the greater participation of

governmental agencies in the building process, compelling the architect to seek out and assimilate the knowledge needed to be eligible for government work. For example, GSA's seismic pre-qualification for public work has been an incentive for the architect to learn more about seismic design. Also, legislation relating to such matters as occupational safety and to barrier-free architecture has caused the architect to obtain and use new information, not only for design purposes, but also for organizational management, Burdette points out.

Such building experiments as Operation Breakthrough and the Social Security Administration building demonstrations project, Burdette says, have led to "entirely new methods of organizing the work . . . required of suppliers, while the preparation of environmental impact statements, advocacy planning documents, building programs, life cycle cost analysis and research reports have become typical artifacts of architectural work." The increase in federal expenditures on research and development also calls for the public obligation to communicate the information—a fact that will have a "substantial impact" on information services growth for the building industry.

Given the diversity and complexity of modern architectural problems and the increasing necessity for access to information sources, what is the cost to the architect who, to be successful, must spend a major portion of his time in seeking, selecting, reformulating, presenting and editing the information? Typically, Burdette says, the time spent in such matters as consultant services, purchase of published materials and conference attendance are treated as a direct expense, charged to project cost or indirectly to office overhead. "Very rarely is the actual cost of obtaining information measured in terms of the process by which it is obtained in relationship to the service which provided it."

He sees several influences at work that will change the cost of obtaining current knowledge. Probably the most important influence is the approach in which client and architect work together on the services needed, with the architect supplying cost figures and justifying them for each service component. "Unlike the traditional fixed fee schedule approach which offered no incentives to determine the cost of information, cost-based compensation offers the architect the opportunity to justify expenditures for information which he must obtain to meet the client's needs."

Consequently, the architect has to know what it will cost to acquire information not already in his possession, whether this requires the employment of consultants, the acquisition of appropriate literature or whatever. There is a corollary in office over-

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## **Raising questions on who should provide and pay for data not incorporated in traditional services.**

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head "where government procurement practices and increasing client sophistication require the justification of these costs as well." And related costs in the overhead are such matters as actual maintenance of information, more costly information services, increasingly specialized personnel and more complex reproduction and information processing equipment. "In traditional practice," Burdette says, "architects have not had to weigh these costs against other modes of accessing and handling information."

Increasingly, management decisions must be made as whether to obtain information through external or internal means. Issues also arise, Burdette says, as to who should pay for information not previously incorporated in traditional services and also who should provide those services. Burdette cites as an example the HUD-sponsored study by the Environmental Research and Development Foundation in Tucson, Ariz., on the provisions of

postoccupancy evaluations. When 401 respondents were asked who should pay for the evaluation from a list of 15 possibilities, six of eight professional groups said the developers should pay for evaluations in the private housing sector. Builders said HUD should pay; bankers said consumers and builders should bear the cost. Interestingly enough, Burdette says, it was found that architects conducted postoccupancy evaluations at a significantly lower cost per unit (\$75.16) than professors (\$140.49) and researchers (\$206.61), performing them in less time and at less cost per hour. The study also concluded that 60.6 percent of the evaluations were conducted at a cost of \$5,000, or less, and that 73.6 percent of them needed 1,000 man-hours, or less, to produce.

"This kind of cost of information is rare," Burdette says, "but indicative of the efforts to assess costs that the government must increasingly make in order to plan and justify its expenditures of public funds." It is also indicative of the impact that the government is having on the understanding and conduct of infor-

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## **Cost-based compensation permits justification of expenditures for information needed to do the job.**

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mation transfer, he says. More accurate accounting of information cost will come through increased use of computers, more sophisticated office machines and a wider variety of information services.

Burdette quotes appropriately from Christopher Alexander's introduction to his *Notes on the Synthesis of Form*, pointing to the fact that "design problems are reaching insoluble levels of complexity," producing a "growing body of information and specialist experience." The information is diffuse and unorganized. "Moreover, not only is the quantity of information itself now beyond the reach of single designers but the various specialists who retail it are narrow and unfamiliar with the form-maker's peculiar problems so that it is never clear quite how the designer should consult them. As a result, although ideally a form should reflect all the known facts relevant to its design, in fact the average designer scans whatever information he happens on, consults a consultant now and then when faced by extra special difficulties and introduces this randomly selected information into forms otherwise dreamt up in the artist's studio of his mind."

Burdette tells how Alexander's description is underlined by a study made by the British Research Station in an effort to improve the impact of its literature on architects. The results revealed that "traditional sources of technical information still have not been supplanted by newer methods." The main sources of information for the majority of the architects were trade literature, periodicals, telephone and personal contact with trade representatives.

Given the architect's personality characteristics, education, method of working and immediate need for information, it is not hard to understand his reliance on informal contacts and ready references, Burdette says. He points to the Case & Co.'s 1974 survey of AIA members which revealed that a quarter of the membership was unfamiliar with more than half of AIA's programs, activities or services. Most of them did not know or use the Institute's research and library benefits available to all AIA members. Nonetheless, AIA is the "single most important organization for the dissemination of information to architects," Burdette says. Although the Institute does not represent the entire profession, "its services, programs and publications are pervasive." Burdette also says that the emergence of the AIA Research Corporation in 1972 is the "most notable hallmark of change within the profession." Its principal purpose, to explore

and create opportunities for architects to participate in research, serves to broaden the profession's role in national policy making and problem-solving, says Burdette. Since its establishment, more than 1,000 architects and other professionals have taken part in more than 89 research projects.

But the typical architect works in a small office or on a project team of fewer than 10 persons, Burdette says, and a "significant" number of the firms are located outside large urban centers. Hence, the architect relies on AIA for information and upon other long-established sources such as Sweet's catalog file, he says. The typical architect is "largely unfamiliar with institutional services, poorly disposed toward formalized information search procedures and unable to support the cost of many desirable services."

Backing up the British Research Station's findings, the 1974 Case study showed that AIA members rely on a traditional resource: periodicals. Among AIA resources, the JOURNAL ranked first in order of usage by 93.8 percent of the respondents, while such information tools as seminars and workshops ranked sixth in usage by 31 percent. Also, among non-AIA resources, architectural magazines ranked first by 94.9 percent of the respondents, with university-related educational programs receiving a mere 12.8 percent of the votes.

But, as Burdette says, the architectural profession is only a small segment of the building industry, and it lacks "both the economic and political means to assure the coordinated and responsible flow of information within that vast and fragmented industry." There is no public institutional base as exists in other countries, despite the fact that several federal agencies have a specialized interest in some sector of the building community. The institutional resources that do exist "are generally unfamiliar

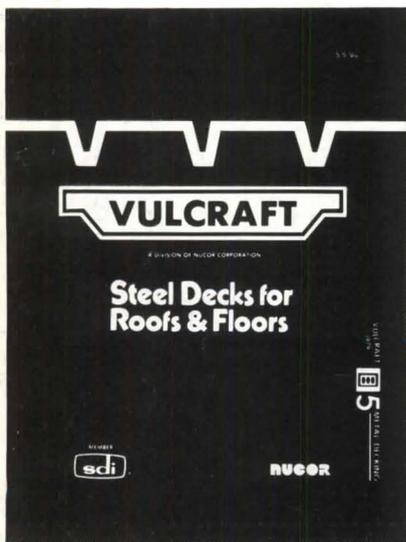
to the architect, and, therefore, largely inaccessible to him."

Burdette does see some pressures at work to improve the public support of the architect's access to information sources. The energy crisis is one such pressure. Also, new materials are emerging, and there is also "growing recognition that the current emphasis on technical data at the work place must be augmented by information supporting more complex design decision making." There is also improved office equipment as well as increasingly specialized and knowledgeable staff. "There is, however, almost nothing being done to measure the effective performance or promote the use of existing information services by architects and only uncoordinated outlines of largely unbudgeted and untested programs for improving the information services that exist."

The "applicability gap" between research and practice is due to several reasons, one being, says Burdette, that research has not been part of an architect's basic professional training; hence, its usefulness and importance have not been accepted. Burdette says that although "courses and faculty related to social science, energy and even research methods are growing in number, there is little to suggest that a new paradigm for the profession is emerging or that there are substantially improved methods of considering information during design. One is still likely to find specialized advocates of participatory design methods producing designs of little technical sophistication or esthetic merit, energy apostles designing unlivable and ugly machines to transfer heat and designers creating beautiful but impractical and culturally isolated esthetic exercises."

*The Architect's Access to Information* is available in a limited edition for \$6 from the U.S. Government Printing Office, Washington, D.C. 20402 (stock number: SN003-003). □

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# BOOKS

## A Lasting Legacy from Sullivan and Wright

**The Drawings of Louis Henry Sullivan: A Catalogue of the Frank Lloyd Wright Collection at the Avery Architectural Library.** Paul E. Sprague, with a foreword by Adolf K. Placzek. Princeton, N.J.: Princeton University Press, 1979. 72 pp., 63 plates. \$25.

On April 14, 1924, Louis H. Sullivan, long ill and then close to death, put his portfolio of drawings into the hands of Frank Lloyd Wright, saying: "Frank, you will be writing about these some day?" Wright would rather not have written about them, but he replied: "Yes, lieber Meister, I will." Twenty-five years later, in *Genius and the Mobocracy*, he did.

Sullivan's portfolio contained 122 drawings, of which Wright published 39 in his book. In 1965, the collection was obtained from the Wright estate by the Avery library at Columbia University through the financial support of the Edgar Kaufmann Charitable Foundation. The entire collection has now been published in a catalog.

The book is a handsomely presented volume with a brief introduction to Sullivan and the drawings as well as extensive catalog information and stylistic commentary on each drawing. The reproductions are beautifully done, although they leave one desiring to see the originals, as most of the drawings were done in pencil and the full character of pencil line and shading cannot be conveyed in reproductions.

Looking at the sensuous organic plant forms in Sullivan's drawings, two questions came to my mind. First, what is the relationship of these free (yet geometrically derived) organic forms to Sullivan's buildings, which are quite classical in form? And second, what is the relationship between Sullivan and Wright, both of whom spoke on "organic" architecture, but whose work is so different?

The first question led me to a small volume, *A System of Architectural Ornament According with a Philosophy of Man's Powers*. Written by Sullivan shortly before his death, and reissued in 1967 by the Eakins Press, this book presents Sullivan's philosophy of the innate spiritual powers in the human individual. It then gives, through a series of geometric progressions, his ornamentation as it grows from organizing principles just as

he believed human nature grows from strong central principles.

It is also interesting to read what he said about democracy. Today, we use the term to mean majority rule, but for earlier Americans majority rule was the means in democracy, not the end. The end was the release of the open-ended evolving human spirit of self-realization which resides in each individual person. For Sullivan, this realization was to be achieved through the human making of our reality through craft. Thus, Sullivan's ornament, his buildings and his philosophy are related in being an "affirmation of man as a newly discovered normal self-regulating power. . . ." (From *A System*.)

What of Sullivan and Wright? Wright's side of the story is powerfully told in *Genius and the Mobocracy*, originally published in 1949 and recently reissued in an enlarged edition by Horizon Press. The title, of course, tells us much of what Wright has to say about ". . . the work-life of a great master, Louis Sullivan, and of the pencil in his hand—myself." Wright admits that writing this book was painful for him. The seven years he spent as Sullivan's chief draftsman were his learning

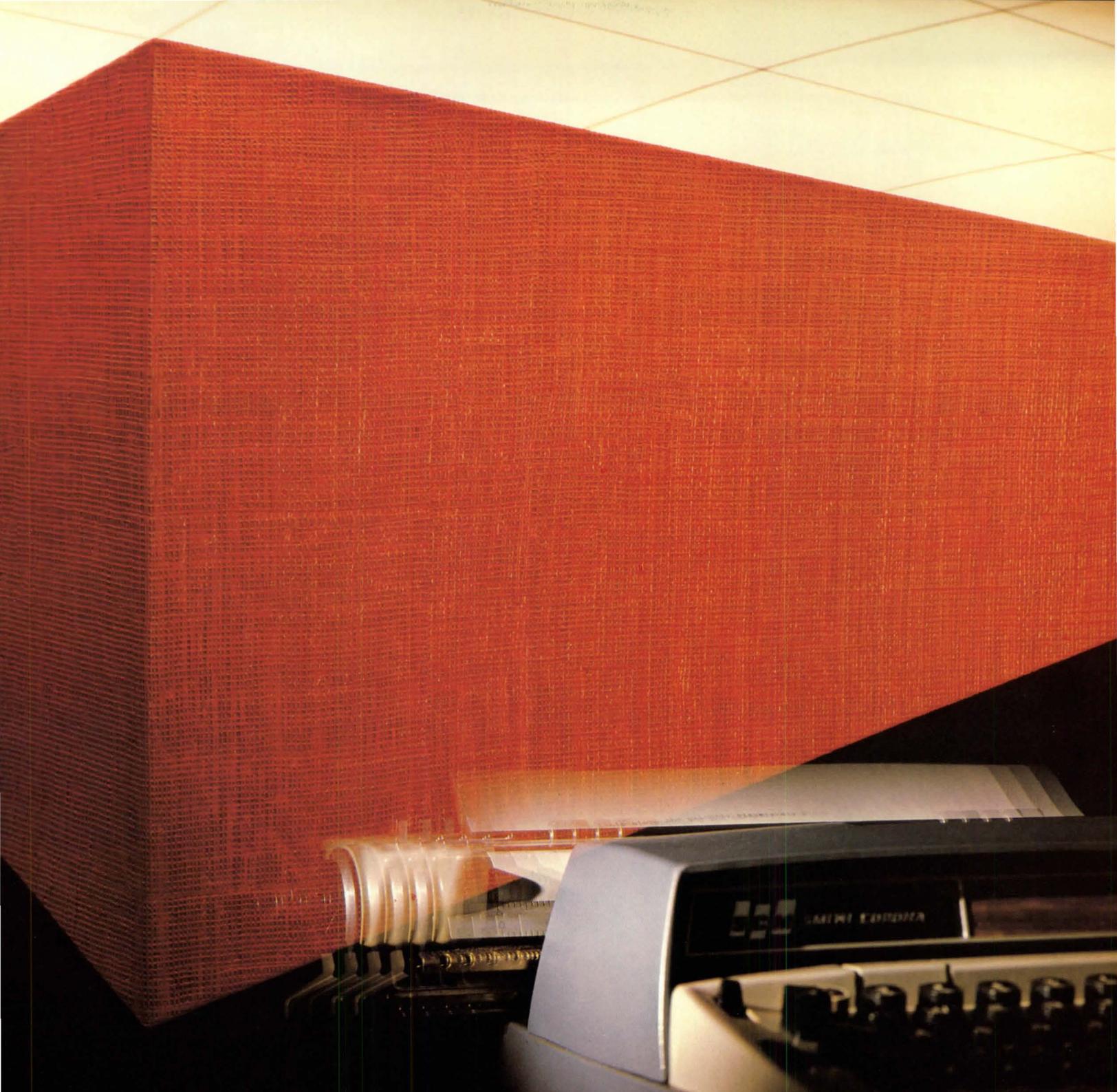
of architecture, but those years came to a bitter close when Sullivan fired Wright for moonlighting, doing houses in Oak Park, Ill. The two men did not speak for 20 years, and when they met again, Sullivan was ill, bitter and broken.

Both men were extremely creative, egotistical and individualistic. Their relationship could only have been difficult. Wright's account of it is brilliantly written, directly communicating its joys and pains as well as its deeper significance of the master-apprentice relationship. Wright also took the opportunity to polemicize for "organic architecture," and here his insights into Sullivan's architecture are telling. While crediting Sullivan with the vision which brought the skyscraper into being as an esthetic unity, he pointed out that Sullivan's realization was applied only to the facade, and did not affect the inner reality of the building. Similarly, Sullivan talked about the nature of materials, but, in fact, did not really care what material his ornament was cast into. Thus, there is no difference between Sullivan's drawings for large terra cotta tiles and his drawings for a small bronze

*continued on page 69*



**Building with Frank Lloyd Wright: An Illustrated Memoir.** Herbert Jacobs with Katherine Jacobs. San Francisco: Chronicle Books, 1979. 147 pp. \$14.95, hardbound; \$8.95, paperbound. Herbert and Katherine Jacobs were client for two of Wright's landmark houses, both in Wisconsin: Usonian No. 1 and the so-called solar hemicycle (shown above). With the building of the \$5,000 Usonian house in 1937, a lifelong friendship began between architect and client. The solar hemicycle, for which the Jacobses acted as contractors and into which they moved in 1948 before construction was completed, was rare then, as even now, in its energy-saving design. The semicircular shape, a sunken garden in front and a shaped berm combined to produce an airfoil to keep the house warm in winter and cool in summer. Karel Yasko, FAIA, says in the introduction that this house has no similarity to the Usonian concept. "Gone are the sharp angles of the plan; instead, a flowing single space reaching out to embrace the garden and to gather in the solar energy production with a bosom of glass. . . . Entry to this great single room is through a tunnel through the earth berm—quiet, simple and low key—and you're in a great dazzling sunlit and sun-heated curved flowing space. It is THE experience." It's also an experience to read this fascinating book, rare in itself in that it is a client's full report on a genius.



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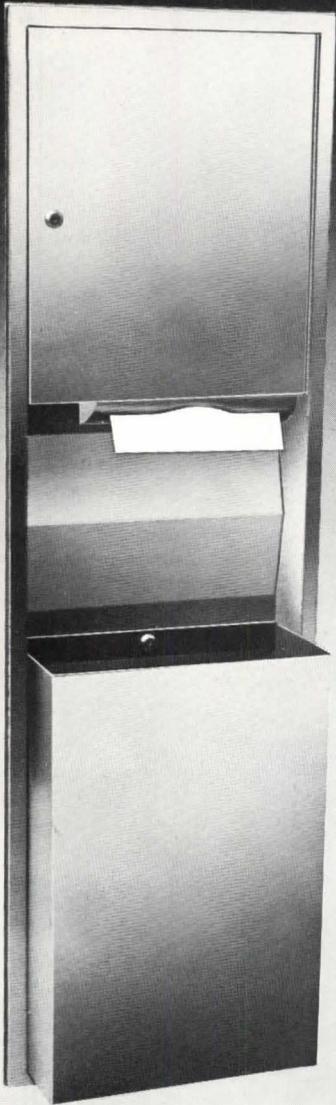
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**Books from page 66**  
 medal. Wright became impatient to extend Sullivan's realization into the heart of the building, and that is, of course, what he eventually did.

And then back to Sullivan's drawings. After all analysis, they are still there, standing on their own for us to confront. *John Lobell, Associate Professor of Architecture, Pratt Institute*

**Cambridge, Massachusetts: The Changing of a Landscape.** Alan Emmet and others. Cambridge, Mass.: Harvard University Printing Office, 1978. 87 pp.

The discovery of the urban landscape is important to architects, landscape architects and urban designers, providing the setting for their work and a basis for synthesizing the several activities involved. The historical evolution of the urban landscape has been reinforced by widespread application of historic districting, but this study breaks important new ground and offers a model that could be usefully pursued in cities like Dallas, Minneapolis or San Francisco where recent urban design studies have shown an awareness of their historical context.

Emmet's work is based on a Harvard graduate school of design seminar conducted by Professor Albert Fein whose introduction notes its debt to Pierre Couperie's *Paris Through the Ages* and its maps to uniform scale over many centuries documenting urban topographic change. In addition to the maps of Cambridge, "one of this nation's most significant communities over 300 years of recorded history," the study relies on land records, old photographs and archeological evidence as well as published works that are summarized in an excellent bibliography.

Through the years, the drainage of the Charles River and the reclamation of its tidal mud flats, and the changing nodes of urban transportation, appear to have been the major influences on the form of the city. Read in conjunction with Robert Rettig's *Guide to Cambridge Architecture*, the book prepares one to better understand urban evolution here than in any other American city. *Frederick Gutheim, Hon. AIA, Washington, D.C.*

**Metropolis—and Beyond: Selected Essays.** Hans Blumenfeld. Edited by Paul D. Spreiregen, FAIA. New York: Wiley, 1979. 420 pp. \$23.

This is the second book Paul Spreiregen has edited in a compilation of essays by one of the most illustrious and prolific urban planners to have led and instructed us. The first book, *The Modern Metropolis*, published in 1967, was a thoughtful collection of Blumenfeld's essays on the modern city, its origins, growth and form. In the last 12 years, Blumenfeld has done some additional thinking on many of the

same subjects and his evolving thoughts are collected in the new volume which comprises 45 essays.

This highly readable book includes sections on historic perspectives, reconsiderations, government, economics, housing, transportation and future prospects. While we all have our favorite Blumenfeld essays, I would like to mention one that is included in the book which is particularly interesting to me.

It is called "Megalopolis: Fact or Fiction?" Blumenfeld did this for the international fraternity on land economics (Lambda Alpha) in 1976. What Blumenfeld has basically shown is that at least in so far as communication systems are concerned, Jean Gottmann's megalopolis

does not represent a new form of urban settlement pattern, but rather an extension of metropolitanization. Like many of Blumenfeld's essays, this one is hard-hitting, pragmatic and well argued.

Many will find the second collection of Blumenfeld's essays fascinating because he reassesses his positions and conclusions on many of the subjects he has been thinking about for 50 years. For example, in earlier years, he argued for mixed-use development. Now that this idea is becoming establishment, he is expressing new fears that the mixing of all kinds of uses, household types, income groups and structural forms could produce chaos rather than urban vitality.

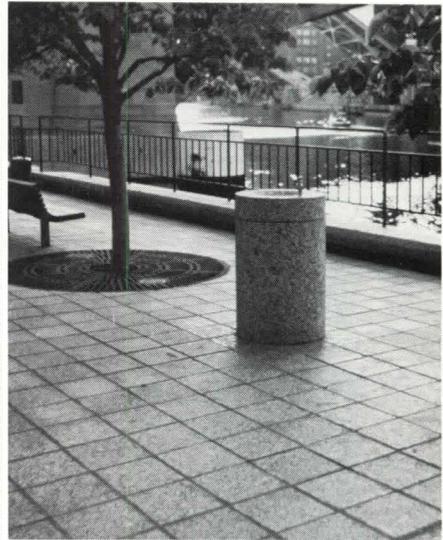
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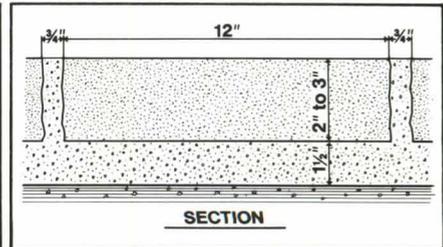
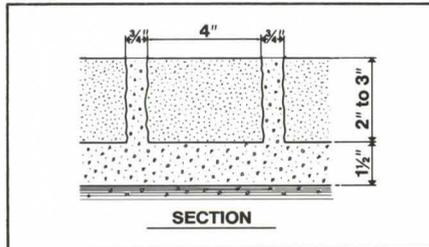
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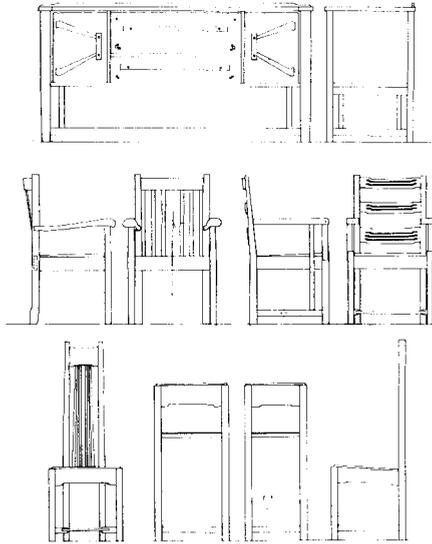
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**Books from page 69**

When *The Modern Metropolis* was published, Blumenfeld points out, it was hailed by a reviewer as his legacy to the field since Blumenfeld was then 75 years old. He concedes that while the remark was well intentioned, to paraphrase Mark Twain, it was slightly premature. We wonder what Blumenfeld will have for us 12 years beyond *Metropolis—and Beyond*. This book is a must for those who have anything more than a casual interest in cities. *Michael B. Barker, AICP, Administrator, AIA Department of Practice and Design*

**Greene & Greene: Furniture and Related Designs.** Randell L. Makinson. Salt Lake City: Peregrine Smith, 1979. 162 pp. \$27.95. Available for \$25.15 to AIA members from the Institute's department of publications marketing.

The domestic architecture of the California designers Charles and Henry Greene, renowned during their heyday in the early 20th century, has been in continuous and well-merited esteem since their "rediscovery" in the 1940s, near the end of the brothers' lives. Until the appearance of this volume, a companion to the same author's *Greene & Greene: Architecture as a Fine Art* (see Oct. 1977, p. 82), the furniture and other accessories



with which they equipped many of their houses has not received comparable attention.

The best known of the Greenes' furniture is that produced for their famous "ultimate bungalows" (Makinson's term) of 1907-09, but the author shows that the brothers were active furniture designers for almost 35 years after 1900. He groups their work into several periods, roughly paralleling their architectural development. Their first pieces were heavily influenced by the arts and crafts movement, particularly by the published writings of

Gustav Stickley. They moved quickly to works that reflect an interest in Oriental modes, then to the more familiar bungalow furniture, and gradually restricted the volume of their production during the many years that they worked separately.

Makinson penetrates the Greene and Greene facade to examine the individual contributions of each brother. Charles was the more prolific designer, and took an active part in the shopwork as well. The author also touches on the careers of the Hall brothers, the craftsmen who actually built the objects.

There is much to commend here. As one would expect from the curator of Greene and Greene's Gamble house, his book evidences a familiarity with the architects' work that is at once extensive and intensive. In addition, the volume is fully illustrated with the original drawings and with photographs of most of the pieces discussed. Even better, many of the latter were taken at the time of construction and were made either in the workshop or in the original architectural setting.

But Makinson's quarter-century involvement with the Greenes has its liabilities as well. Too little discussion of the work in its artistic context is offered. After acknowledging the brothers' early debt *continued on page 72*

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# Steel framing saved more than \$150,000 in four-story retirement complex

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**General Contractor:** J. R. Slaughter Construction Co., Irvine, CA  
**Framing Contractor:** W. C. Froelich, Inc., Buena Park, CA



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Circle 129 on information card



### Books from page 70

to the arts and crafts movement, Makinson grows less and less willing to see these designs as manifestations of anything but the Greenes' "enthusiasm," "creative drive" and "romance with form." Thus, any creative influence of the Halls in the realization of the architects' designs is discounted. Worse, repeated opportunities to analyze the interplay between the artistic ideals of the early years of the Greenes' very real genius is passed over. For instance, after showing that Greene and Greene had no direct contact with Charles Rennie Mackintosh, the author's consideration of the similarities between the two firms' furniture designs (the chairs on pp. 46-47 in the book are intriguing in this account; see previous page) is restricted to the statement that "their works suggest a natural identification between the two firms."

If the analysis is scant, critical evaluation is nonexistent. Seldom is heard a discouraging word, and those are reserved for Charles Greene's often high-handed personal treatment of his clients.

Despite Makinson's effort to produce an independent treatment of the Greenes' decorative art, then, this book more nearly resembles a catalog than a monograph. Readers must consult the architectural volume of the set to understand the pieces

in their proper context. Still, Makinson's descriptions are helpful and the illustrations alone make this attractive book indispensable to any student of American design who can afford its price. *Dell Upton, architectural historian, Richmond, Va.*

### Financial Planning for the Independent Professional. Herbert T. Spiro. New York: Wiley, 1978. 235 pp.

This anthology has to do with investments. It includes contributions by attorneys to complement Spiro's expertise in the world of finance as well as excerpts from previously published material. For the architect with little knowledge of investing beyond the local S&L, this book will help some.

The legal forms discussed (proprietorship, partnership, corporation) apply to investment entities, as do accounting conventions, analysis techniques, security markets, the mathematics of interest and direct investments. Consequences for the investor are covered by subjects such as tax planning, the financial plan and tax shelters. Insurance programs and retirement plans come in for their share of attention.

The chapters on complicated economic and tax considerations of professional practice are worth reading even if you don't contemplate any near-future invest-

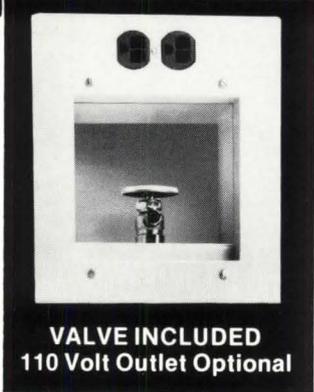
ments. Those on avoiding the pitfalls of poor investments can put the reader in the right frame of mind for gearing up for the first few stabs into unknown territory. And those on sheltering income and exploiting capital gains opportunities will fill out the sound knowledge base needed by sensible investors.

Spiro's book is replete with graphics to illuminate a text which requires concentration by readers to whom the subject is new territory. *Robert Allan Class, AIA, Director of the Institute's Practice Division*

### Architect's and Engineer's Office Practice Guide. Jack R. Lewis. Englewood Cliffs, N.J.: Prentice-Hall, 1978. 246 pp.

The practicing architect or engineer will find the information in this book too cursory to be of much value. The student who wants an introduction to what practice is all about might find it helpful, however. It gives information on registration, office organization, consultants, construction documents. Each chapter concludes with a summary of contents and questions, further indicating its intended aim at students. There are lists of references, some associations in the construction industry and accredited schools of architecture. The address given for AIA is incorrect and outdated by years. □

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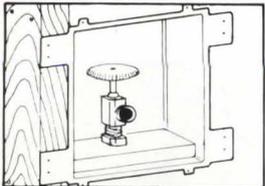


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## TUES., OCT. 16 Contractors Day

(In cooperation with A.G.C.)

10:00 A.M.  
Ribbon Cutting  
10:15-11:45 A.M.  
"Who Guarantees What To Whom"  
12:00-1:45 P.M.  
LUNCHEON  
F. Stuart Fitzpatrick Award  
"Your New Office Of Construction"  
Chairman: Mr. Thomas E. Dailey  
2:00-3:15 P.M.  
"Effective Methods of Contracting"  
3:30-4:45 P.M.  
"The Changing Building Materials Market...Who's Buying What From Whom"  
Exhibition Hrs. 10 A.M.-5 P.M.

## WED., OCT. 17 Architects Day

(In cooperation with A.I.A.)

9:00-10:15 A.M.  
"Barrier-Free Design"  
10:30-11:45 A.M.  
"Solar Energy Systems"  
12:00-2:00 P.M.  
LUNCHEON  
Speaker: Elmer E. Botsai, FAIA  
2:15-3:15 P.M.  
"Engineered Brick Masonry Development and New Innovations"  
3:30-4:45 P.M.  
"Glass and Glazing Design"  
IMPORTANT: The A.I.A./P.C. Continuing Education Program will provide Continuing Education Units for participating A.I.A. visitors.  
Exhibition Hrs. 9 A.M.-5 P.M.

## THURS., OCT. 18 Builders Day

9:00-10:15 A.M.  
"What Builders Need to Know in Today's Market"  
10:30-11:45 A.M.  
"How to Get Front-end Funds for Residential Development"  
LUNCHEON  
2:15-3:30 P.M.  
"Marketing Ideas for Better Market Penetration"  
1:00-4:00 P.M.  
"Truss Plate Institute and Component Manufacturers Council Market Meeting"  
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## No Problems Foreseen Insuring Well-Built Home Solar Systems

Whether a piece of property can be insured often determines its desirability. In an effort to determine whether the solar heated house is insurable at reasonable rates, the National Solar Heating and Cooling Information Center made a survey of representatives of major insurance companies and associations regarding insurability in the purchase of a new solar heated home or the conversion of a conventionally heated house to solar heating. According to the center, the insurers say that they "foresee no major difficulties in providing coverage to homeowners with well engineered and soundly constructed solar energy systems."

Additional information on the subject was obtained by HUD through surveys of agents of companies which insured homes constructed privately as part of the residential solar demonstration program. Their responses reveal that insurance companies currently make no differentiation between homes with solar and with conventional heating for insurance purposes. Agents in the HUD survey "who expressed some concern over such problems as wind damage or the need for special repairs to equipment did not include a clause in their policies to offset these risks," the center reports. And unless future claims data show that solar energy systems are more hazardous than conventional ones, the insurance procedure of making no exclusions or rate adjustments for solar equipment is expected to continue.

The primary concern of all the insurance companies is whether the solar system has been properly constructed and installed. And, the center warns, owners who have installed solar systems themselves "may run into obstacles in obtaining insurance." The insurer will probably require that the system meet all local building codes and standards.

Among the potential hazards that insurers say can be avoided in a properly installed and well constructed solar system are: broken glass caused by hail, high winds, the weight of snow and ice or vandalism; roof collapse of an improperly reinforced roof; water leakage because of improperly welded joints or corrosion due to the use of incompatible metals, and explosion due to the failure of pressure relief valves on storage tanks. The center emphasizes that many of these possible hazards are remote and, as far as the insurers know, have not occurred.

Few statistics have been collected to date because solar equipped homes are such a small part of an insurer's business, nor have sufficient claims been made to draw any hard line conclusions. But many

insurance companies "are requesting their agents to isolate information on solar systems they insure and to alert them to solar related losses." It will be three to five years, the insurance companies say, before valid conclusions on risks can be made.

## DOE Airs Proposal to Require Federal Life Cycle Cost Analysis

Public hearings were held in May and June regarding a proposal by the Department of Energy that life cycle cost analysis be required in all new construction or retrofitting projects in federal buildings. According to the proposal, life cycle costing methods would be used early in design and planning to determine which energy saving investment to use. For existing buildings the proposed change would require that retrofit investments be ranked by cost saving.

The aim, says DOE, is to reduce the consumption of scarce fossil fuels through the use of solar and other renewable energy sources. The change in building regulations for federal structures would also "influence private sector decisions to balance initial investment costs with potential life cycle savings from investments in energy saving building systems and designs."

Also, the proposed code, says DOE, would help determine if an alternative design for a new structure would minimize life cycle energy costs. It would help determine the payback time for solar demonstration projects and the cost and benefits of a solar demonstration project compared to a conventional, nonsolar alternative building system.

The proposed regulations were published in the *Federal Register* for April 30; written comments were accepted through June.

## Research Corporation Publishes Climate and Architecture Report

"Climate and Architecture: Designing for the Dynamics of Nature" is the title of the spring 1979 issue of *Research & Design*, published quarterly by the AIA Research Corporation. It gives a report of a conference held in Washington, D.C., last February on climate and architecture, organized by AIA/RC (see May, p. 88).

The magazine contains a summary of the conference, written by Kevin W. Green, editor of *Research & Design*. Pointing to the fact that this is the first conference on climate and architecture to be held in 29 years, Green says that the mutual goal of the conference participants—architects, engineers, homebuilders and climatologists—was to design "buildings that save energy by responding to the dynamics of climate."

The participants agreed, he says, that a "standard building climatological summary for each of the nation's 138 major weather stations" is required to give designers a "quick and accurate tally of the assets and liabilities of local climate."

The interpretation of these data, the conferees agreed, should be augmented with published guidelines covering "everything from understanding climate data to designing solutions for specific problems," Green reports. Most important, designers should understand two fundamentals regarding climate-conscious architecture: (1) that all elements of climate be considered in a "holistic approach to energy conservative design for human comfort" and (2) that the "climatic matrix differs from region to region."

The conferees developed a format for the climatic factors that affect human comfort. Following Green's report on the conclusions of the conference are pages devoted to the key elements of that summary format. With diagrams and drawings, the summary gives basic data regarding the climatic elements of a single region. Beginning with definition of the climatic character, the summary moves on to give detailed data.

Single copies of this issue of *Research & Design* are available for \$4 from the publishing office, 1735 New York Ave. N.W., Washington, D.C. 20006.

Meanwhile, Interior Secretary Cecil D. Andrus has announced a plan aimed at finding out what's happening in the climate "of the moment," so to speak. Interior's Bureau of Reclamation has awarded a grant of \$1.5 million to Electronic Techniques, Inc., Fort Collins, Colo., for the development and construction of a solar-powered network of portable meteorological monitoring stations.

Research scientists will be able to monitor weather developments as they occur over large areas many miles away through the meteorological surface observation network (MESONET) and its satellite computer link. A total of 150 stations will be constructed in the coming months, each operated by batteries that draw power from photovoltaic panels that convert sunlight to electricity.

The stations will measure and report windspeed and direction, temperature, relative humidity, barometric pressure, precipitation and the status of the batteries. Measurements will take place every five minutes and will be transmitted hourly by radio to a satellite overhead. The satellite will relay the information through ground receiving stations to a computer complex in Denver.

This experiment in solar meteorological stations is an example of how climatologists hope to have precise information to give future designers of energy-conscious buildings. *News continued on page 76*

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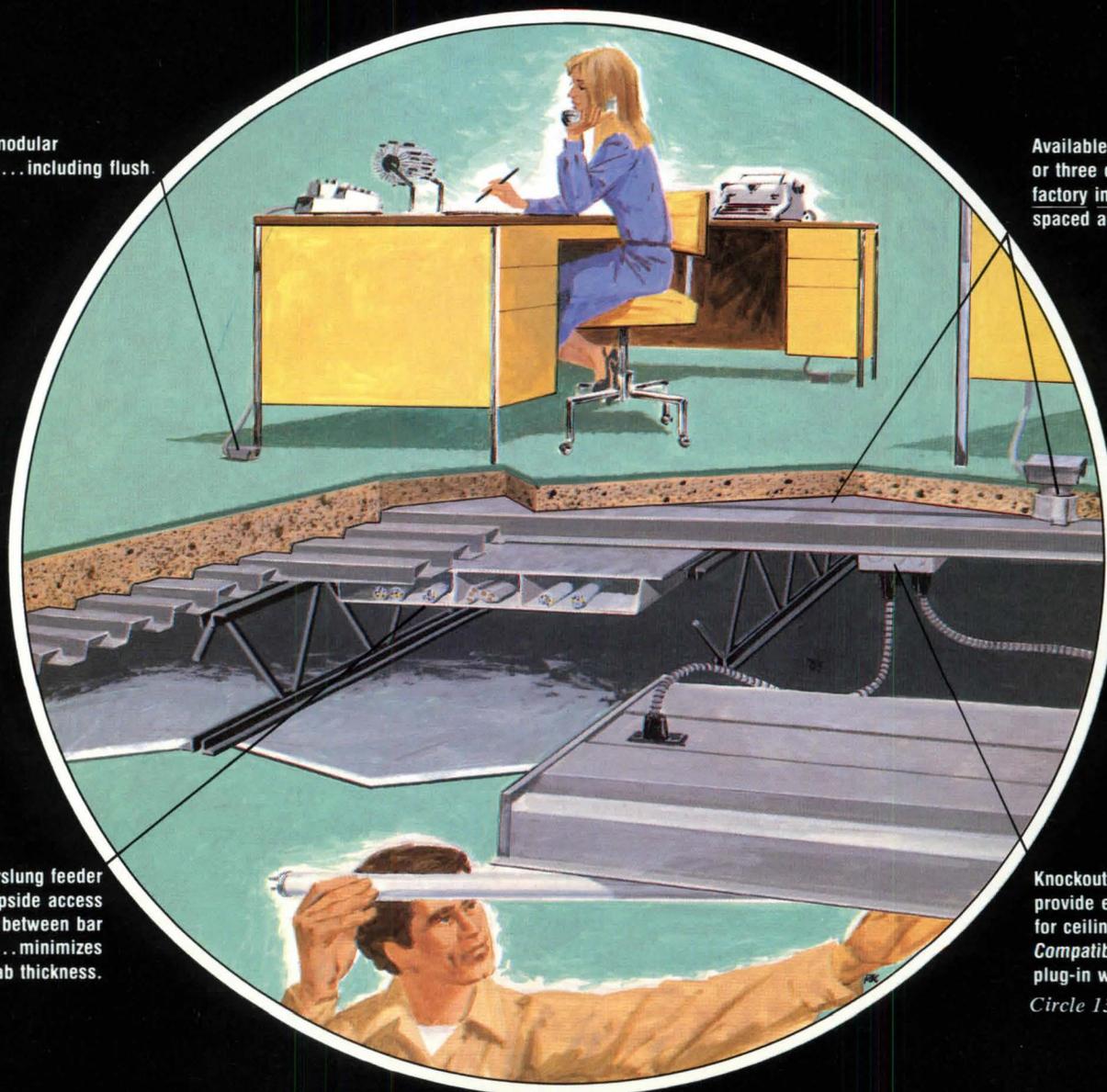
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## HUD Finds Most Happy In HUD-Assisted Housing

More residents of HUD-assisted housing developments are satisfied with their environment than those not satisfied, according to a recent HUD report, "Residents' Satisfaction in HUD-Assisted Housing: Design and Management Factors." Of the residents surveyed in 37 developments, 66 percent were satisfied, 19 percent were dissatisfied and 15 percent were neutral.

The report summarizes the research undertaken in 1972-77 by the University of Illinois housing research and development program (funded by the Ford Foundation). It is not "intended to be a how-to-manual," but an analysis of direct observations of physical characteristics, observations of residents' behavior, questionnaires and interviews. Ten of the 37 developments studied are public housing; the others are privately owned, but receive some public assistance. Twenty of the developments are lowrise, five are high-rise apartments and three are rehabilitated medium size structures.

"When properly designed and managed," concluded the report, "HUD assisted housing was as satisfactory as, or

more satisfactory than, housing in the open market. Other conclusions drawn from the survey include:

- the three major criteria for resident satisfaction were satisfaction with other residents, pleasant appearance and economic value;
- the more residents perceive others in the development to be like themselves, the higher their level of satisfaction with other residents and with the environment;
- not feeling stigmatized for living in assisted housing was strongly associated with overall satisfaction (only 15 percent of the respondents were stigmatized);
- perceptions of spaciousness and privacy were moderately strong predictors of overall satisfaction;
- density, per se, was not a determinant of resident satisfaction . . . smaller developments tended to be only slightly more successful;
- there was no significant difference in overall satisfaction between residents living in highrise and lowrise developments.

The report also concludes that an important component of residents' satisfaction was the appearance of the physical environment, including "variety in shapes and materials, bright colors, good landscaping and pleasant views, a sense of elegance and newness and the lack of an institutional look."

The site layout that ranked highest consists of two buildings located at some distance from one another. One of the buildings is a highrise structure; the other consists of a complex, imaginative and tight arrangement of lowrise walk-ups. The second ranked layout consists of lowrise buildings laid out in court fashion, in which parking branches off from a central roadway.

The development that ranked best on appearance consists of row houses, in which each unit is somewhat different in appearance because of differing materials and textures, roof shapes, trim and size. The second most liked design achieves variety by changing the shape, size and placement of windows and balconies and by breaking down the total volume of the buildings into smaller units. The lowest rating was given to a development with an "institutional look"—a continuous row of dwellings, with no variations of facades, no protruding design elements and flat roofs.

"Our research suggests," concludes the report, "the continuing need for consulting the residents and for feeding back the results of these consultations into the housing delivery and operating process. A program of education stressing the residents' viewpoint and sensitizing all people concerned to the residents' needs and expectations would, in our opinion,



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have great potential in ensuring more satisfactory housing for low- and moderate-income households."

The report can be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

## EPA Warns on Pollution Control As States Assume Regulation

The Environmental Protection Agency warns, "If you are planning to construct a new facility or modify an existing one which would increase air pollution, you must obtain a special permit before construction is begun." Persons planning to build large projects should obtain a state permit before applying to the EPA for a prevention of significant deterioration (PSD) permit. Permit applications should be made as early in the planning process as possible and a minimum of three months is required for the permit application to be processed.

The EPA's emission offset ruling will be terminated in most areas of the country this month. It requires any new construction that affects air quality in a dirty air area to "achieve the lowest possible emission rate for the problem pollutant" and "obtain emission reduction from already existing polluting projects."

However, the same requirements should be picked up by state adopted "source review requirements." If a state fails to come up with an acceptable plan to replace the emission offset ruling, no new permits for major construction affecting the air, applied for after June 30, will be issued.

At this writing, several states had not submitted plans and no states had yet had their plans approved by EPA. An EPA spokesman said the issuing of building permits will not, for this reason, grind to a halt. He added, "It is my understanding that partial and conditional approval might be given to some plans. The world will not turn into chaos on July 1."

### News/ Preservation

## Report Links Urban Rebirth With Rehabilitation Districts

Richard H. Jenrette, chairman of the Advisory Council on Historic Preservation, says that preservationists have been aware that the rehabilitation of historic districts has contributed greatly to urban revitalization, but there was no documentation of this fact. Now, he says, the council can provide the proof. The council, has issued two reports of interest to community decision makers, "The Contribution of His-

toric Preservation to Urban Revitalization" and "Assessing the Energy Conservation Benefits of Historic Preservation."

The first report, states that the historic preservation of districts in cities creates new jobs and services, new business profit from increased trade and tourism, a decrease in crime and better housing. The second report gives a method for measuring energy investment in rehabilitation and new construction with three case studies provided. Formulas show in each instance that rehabilitation saves energy over demolition and new construction.

The report on urban revitalization through historic preservation is based upon four case studies in cities of varying sizes, geographic location and economic, social and environmental conditions: Old Town, Alexandria, Va.; the Strand, Galveston, Tex.; the historic district in Savannah, Ga., and Pioneer Square in Seattle. Each case study examines the preservation activity within the district, giving information on acquisition and financing methods, property protection and reuse techniques and the roles played by the public and private sectors. The current condition of each district is discussed, concentrating on the physical, economic and social changes that have occurred due to preservation.

Of all the changes to occur due to preservation, the report says, the most obvious

*continued on page 78*

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## Preservation from page 77

are physical ones. In these historic districts, with a "visible heritage," the diversity of architectural styles provides the "interest and sense of neighborhood" that is critical to the maintenance of integrity. The report also documents that in each case preservation has benefited the entire community through the creation of new jobs, improvement of housing stock, stimulation of retail sales, increased property and sales taxes, increased real estate values, more compatibility in land use patterns, greater investment of private funds, increased tourism, dramatic decrease in violent crime, dilution of pockets of deterioration and poverty and, "without exception" increased the quality of life.

The report points to the fact that some displacement has occurred because most the renovations were beyond the means or the credit ratings of low-income residents. The study does not make an extensive investigation of displacement, but the council is funding research on this subject. Although there is the disadvantage of displacement, the report says that advantages "far outweigh the disadvantages."

Copies of the study are available from the U.S. Government Printing Office, Washington, D.C. 20402, for \$4.75 each (stock no. 024-000-008-57-6). A 20-minute slide show summarizing the results of the study is available on loan from the council, 1522 K St. N.W., Suite 430, Washington, D.C. 20005.

The council's report on "Assessing the Energy Conservation Benefits of Historic Preservation," gives formulas for determining the BTUs required in rehabilitation and construction projects. The formulas have been used to compute the amounts of energy needed to rehabilitate or replace three National Register of Historic Places properties: Lockefield Garden apartments, an early federal housing project in Indianapolis; the Grand Central Arcade, a commercial complex in the Pioneer Square historic district in Seattle, and a three-unit apartment building in Washington, D.C.'s Capitol Hill historic district. "In each instance," the report says, "analysis shows that renovation, instead of comparable new construction, results in impressive energy savings."

For example, the Grand Central Arcade in Seattle, originally an 1899 hotel, was restored in 1972 as an office and commercial complex at a cost of 17 billion BTUs. According to the council, a comparable new structure of modern materials would require 109 billion BTUs to construct—85 billion to make the materials required in construction and 24 billion to put them in place. "In this instance, the energy saved through rehabilitation is enough to heat and cool the huge structure for 15 years." The study finds that the arcade "will have

a net energy investment advantage over an equivalent new structure for the next two centuries."

The report says that the methods used in the analysis of the three case studies can be applied in any existing building to assess the potential energy conservation benefits of rehabilitation. It gives three analysis models: building concept, building survey and building inventory, providing procedures and tabulations.

Copies of the energy study may be obtained from the U.S. Government Printing Office, for \$2.75 each (stock no. 024-000-008-56-8). A 10-minute slide program summarizing the study results is available on loan from the council.

Both studies were prepared for the council by Booz, Allen & Hamilton, Inc. For the report on urban revitalization, four architects served as advisers: Ralph D. Anderson of Seattle; Robert D. Gunn, AIA, Savannah, Ga.; David R. Rosenthal, AIA, Alexandria, Va., and Robert T. Timme, Houston.

## Chicago Aldermen Refuse to Give Jenney Building Landmark Status

The recent decision not to designate William Le Baron Jenney's Leiter II building (1891) as a historic landmark points out that preservation in Chicago is political.

At a city council committee meeting, two Independent aldermen were for designation and six Democratic aldermen voted against landmark status. Those for landmark designation agreed with several qualified experts and with the city's landmarks commission that the building does satisfy designation criteria of the city's landmark ordinance. Those against said that the building was unimportant, unattractive, not "esthetic" and that it looks like a warehouse.

The building (photo below) was de-



scribed by architectural historian Carl Condit as "Jenney's triumph . . . one of the most impressive works of commercial architecture in the empirical spirit that the nation can show." It is the oldest building of this type left in Chicago.

So far, the building is not in jeopardy. The owner, Sears Roebuck & Co., recently completed exterior restoration of the structure on State Street. If the State Street mall, when completed, succeeds in attracting more customers, Sears is likely to keep the building as a retail store. But the committee's vote reflects action in 1972 that left the Chicago Stock Exchange building (1893, Alder & Sullivan) vulnerable to demolition. One question remains: whether newly elected Mayor Jane Byrne will give more priority to preservation of the city's landmark buildings.

## Federal Procedures Streamlined For National Register Inclusion

The Advisory Council on Historic Properties has amended its regulations which protect properties included in or eligible for inclusion in the National Register of Historic Places. The new regulations, which are binding on all federal agencies, simplify and speed the process of comment when new federal undertakings will affect such properties.

The basic framework of the commenting process first established in 1974, is the same. Essentially, a federal agency must confer with the council and a state historic preservation officer as to the effect a proposed project will have on a national register or eligible property. However, seven new sections have been added that implement other presidential environmental directives. For example, in designating historic properties, an agency must comply with the national environmental protection act to ensure that historic and cultural properties are given proper consideration in the preparation of environmental assessments and environmental impact statements. A new section deals with historical and cultural resources discovered after construction has begun. Time limits have been established to expedite the process while encouraging maximum public participation. Also, the council chairman can appoint a panel of five members to consider undertakings in lieu of consideration by the full council.

The council is an independent federal agency charged by the national historic preservation act to advise the President and Congress on historic preservation. It is composed of 29 members: 12 private citizens appointed by the President for 5 years, cabinet level representatives of 15 federal agencies and two representatives of national preservation organizations.

## Letters from page 6

and approved the incising of the names of the two states and their dates of admission directly on the marble wall behind the colonnade on either side of the portal.

The proposal for two flagpoles on existing pedestals near the encircling roadway was for the American flag, representing the Union of States, to fly every day from one pole; the flags of each of the states, beginning with Delaware, would fly sequentially from the other pole, thus accommodating any future changes in the composition of the Union without further architectural or site modification.

The sequence of states, beginning with Delaware, is that of the chronology of admission to the Union. This is the sequence of state names on the two friezes which are part of the existing design of the Lincoln Memorial.

To say, as the article did, that any proposal did "not seem to be getting very far" was meaningless. Until the Commission of Fine Arts met on March 27, each of the proposals, while not necessarily of equal merit, had equal standing in the designated approval process. The plaque mentioned in the article, proposed in one alternative, would be a piece of exterior or interior furniture, probably of bronze, and would be descriptive of circumstances calling for recognition of Alaska and Hawaii at the memorial.

At this time, there is no need for a further detailed study of alternatives. The presentation made to the Commission of Fine Arts will be submitted in the near future to the National Capital Planning Commission and the Advisory Council on Historic Preservation. *Paul Goeldner, AIA Chief, Historic Resource Services National Capital Region National Park Service Washington, D.C.*

**Correction:** In our June issue, we referred to "the Ionic capital known so well to AIA members." The capital is, of course, Doric.

## DEATHS

**Carl N. Atkinson Sr.**, St. Petersburg, Fla.  
**Louis W. Ballou**, Richmond, Va.  
**Julian F. Eckles**, St. Louis  
**Harry M. Griffin**, Daytona Beach, Fla.  
**Cecil T. Griffith**, St. Paul, Minn.  
**Gouverneur Peek**, Deland, Fla.  
**Ward Swarts**, Reston, Va.

## BRIEFS

**Henry Armand Millon**, author of many books including *Baroque and Rococo Architecture* and *Key Monuments of the History of Architecture*, has been appointed professor-in-charge of the National Gallery of Art's center for ad-

vanced study in the visual arts in Washington, D.C. The center will be housed in the gallery's East Building, designed by I.M. Pei & Partners. The first group of resident scholars will come to the center in October 1980.

"**Architects in Government**" is the title of a recently published AIA folder which explains that the architect in government is "a unique resource—combining creativity with decision making, problem solving and management skills." For information, contact: Director of Federal Agency Liaison, AIA Headquarters.

**The Building Seismic Safety Council** was recently formed under the auspices of the National Institute of Building Sciences by representatives of 51 organizations, including AIA. For information, write: Secretary, BSSC, National Institute of Building Sciences, 1730 Pennsylvania Ave. N.W., Suite 425, Washington, D.C. 20006.

**George H. Nelson, FAIA**, of New York City has received an honorary doctor of fine arts degree from the Parsons School of Design. The citation read in part that he is a "dreamer and innovator whose ambitious design concepts have transformed our methods of utilizing space and form."

**The American Academy and Institute of Arts and Letters** has conferred its gold medal for architecture upon I.M. Pei, FAIA. Also, the organization presented to Charles W. Moore, FAIA, its Arnold W. Brunner memorial prize in architecture.

**The next round of golf matches** between AIA and the Royal Institute of British Architects will take place in the summer of 1980 in London, with a reciprocal tournament planned in 1981 at Pebble Beach, Calif. For information: Robert E. Clark, AIA, 825 Colorado Boulevard, Suite 241, Los Angeles, Calif. 90041.

"**Windletter**," a quarterly published by the American Wind Energy Association to further the art and science of wind use in energy conservation (see April, p. 102), should be addressed at AWEA, 1621 Connecticut Ave. N.W., Washington, D.C. 20009.

**Art Deco International Society** has been formed, an organization of architects, collectors, art dealers and others interested in the subject. For information, write: Miami Design Preservation League, 1630 Euclid Ave., Miami Beach, Fla. 33139.

"**Seismic Design for Police and Fire Stations**" is a report recently issued by the

AIA Research Corporation. The design manual discusses ways to improve the seismic safety of police and fire stations and contains information on what the architect needs to know about the responsibilities of such facilities during an earthquake disaster. For a copy, write: Earle Kennett, AIA/RC, 1735 New York Ave. N.W., Washington, D.C. 20006.

**Vernon F. Stone, AIA**, professor of architecture at Iowa State University, has been awarded a faculty citation by the university's alumni association "in recognition of long and outstanding service to the university."

"**Urban Design International**," a new periodical written by and for urban designers, is issued bimonthly. It and other benefits are available through membership in the Institute for Urban Design. For information, contact: IUD, SUNY at Purchase, Main P.O. Box 105, Purchase, N.Y. 10577.

**John E. Flynn, AIA**, professor of architectural engineering at Pennsylvania State University and a practicing consultant specializing in the architectural coordination of environmental systems, has been elected president of the Illuminating Engineering Society for 1979-80. He is AIA's delegate to the Inter-Society Color Council and a member of AIA's committee on lighting in the environment.

**A retrospective exhibition of the works of Alvar Aalto** is on view at the Cooper-Hewitt Museum in New York City through Sept. 12.

**The daughter of Frank Lloyd Wright**, Catherine Baxter, died recently at the age of 85 in Laguna Hills, Calif. Known in her own right as an interior decorator, she was the mother of actress Anne Baxter.

**E. J. Thias, AIA**, of St. Louis is in his 27th year of teaching architectural students. He recently received a 10-year "certificate of appreciation" from the St. Louis Community College at Meramec. In 1961, he was given a similar award by Washington University where he taught for more than 14 years.

**The William E. Lehman architecture award**, given by the Newark Jaycees for contributions to the "character and development of the city of Newark," was presented recently to the firm of Becker, Bendixen & Murphy for the renovation of town houses on James Street. The awards program was established in 1956 in honor of the late Newark-born architect William E. Lehman, "to encourage civic pride in Newark." □

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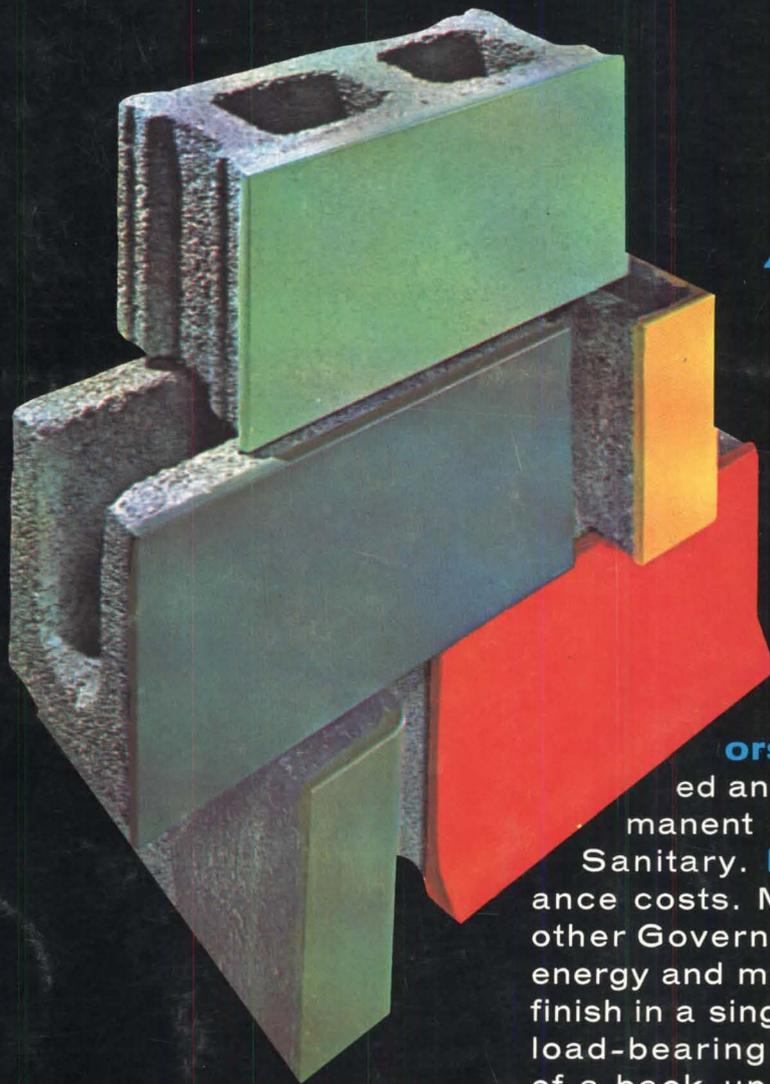
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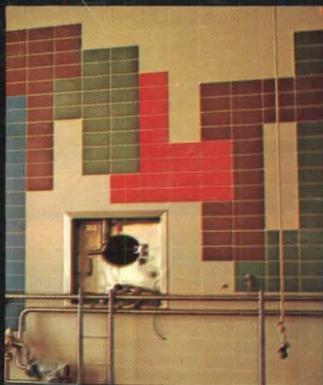
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