

# WARRIOR



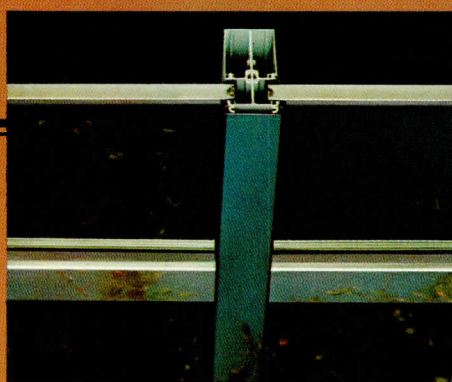
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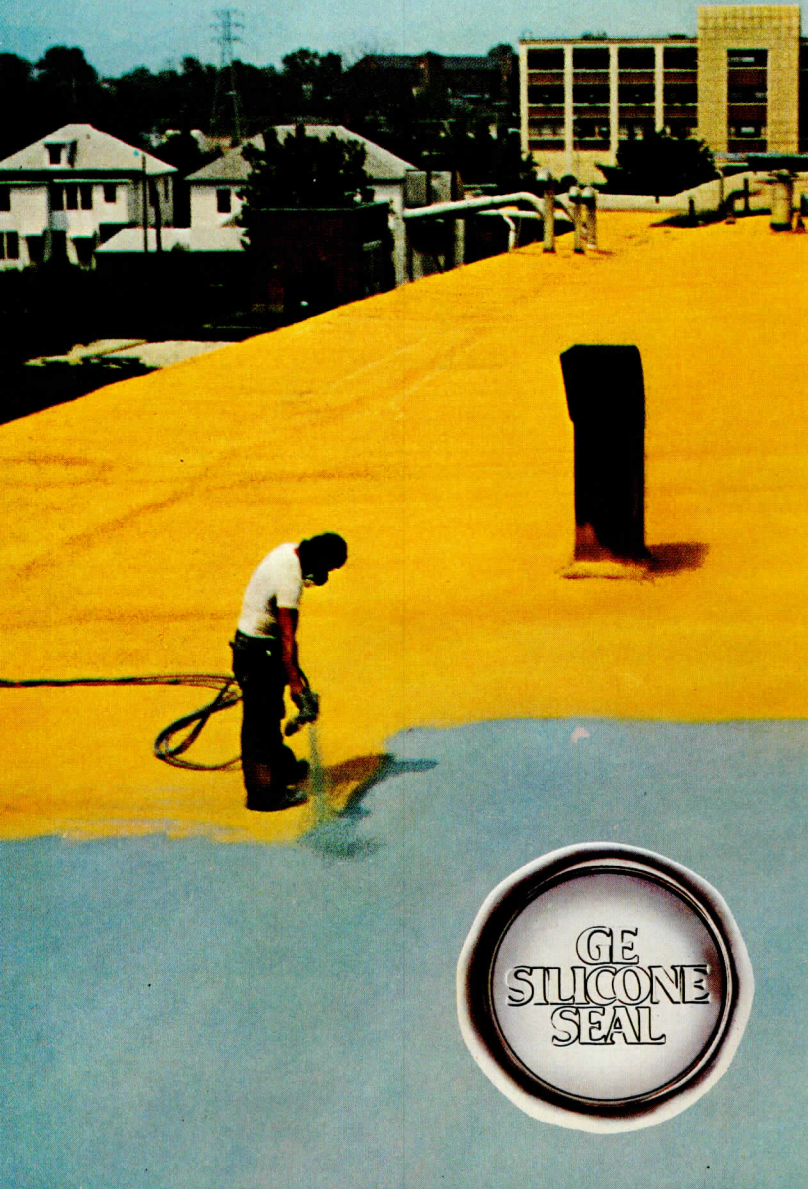
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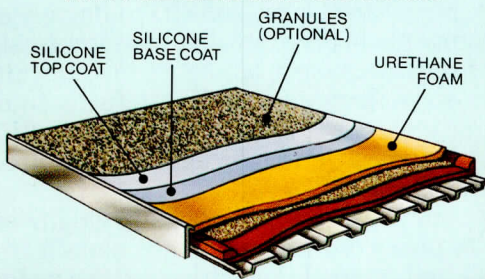
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**Cover:** Photograph by Joshua Freiwald of Marin County Civic Center designed by Frank Lloyd Wright.

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## EVENTS

**May 3-11:** Philadelphia Open House, tours of private houses, gardens and historic sites, sponsored by the Friends of Independence National Historical Park. Contact: FINHP, 313 Walnut St., Philadelphia, Pa. 19106.

**May 5-7:** Docks and Marinas Institute, University of Wisconsin, Madison.

**May 7-11:** Scandinavian Furniture Fair, Bella Center, Copenhagen, Denmark.

**May 8-10:** Utah Society of Architects/AIA annual conference, Park City, Utah.

**May 8-11:** Historic House Association of America annual preservation conference, Nassau Inn, Princeton, N.J. Contact: HHAA, 1600 H St. N.W., Washington, D.C. 20006.

**May 10-13:** Solar Systems Conference and Products Exhibit, Houston. Contact: Solar Energy Industries Association, Suite 800, 1001 Connecticut Ave. N.W., Washington, D.C. 20036.

**May 11-14:** American National Metric Council annual conference, Hyatt Regency Embarcadero, San Francisco. Contact: ANMC, 1625 Massachusetts Ave. N.W., Washington, D.C. 20036.

**May 11-14:** Solid Waste Processing Conference & Exhibit, Washington Hilton Hotel, Washington, D.C. Contact: American Society of Mechanical Engineers, 345 E. 47th St., New York, N.Y. 10017.

**May 12-14:** Structures, Structural Dynamics and Materials Conference, Olympic Hotel, Seattle. Contact: American Society of Mechanical Engineers, 345 E. 47th St., New York, N.Y. 10017.

**May 15-16:** Environmental Laws and Regulations Seminar, Washington, D.C. Contact: Government Institutes, Box 5918, Washington, D.C. 20014.

**May 16-18:** Florida Association of Architects/AIA spring conference, Daytona Beach, Fla.

**May 17-21:** International Council of Shopping Centers annual convention, New Orleans. Contact: ICSC, 665 Fifth Ave., New York, N.Y. 10022.

**May 19-20:** Social and Economic Effects of Earthquakes on Utility Lines Conference, San Francisco. Contact: American Society of Civil Engineers, 345 E. 47th St., New York, N.Y. 10017.

**May 19-21:** Computer Aided Graphics Course, Hartford Graduate Center.

**May 19-23:** International Heating, Ventilating and Airconditioning Exhibition, National Exhibition Centre, Birmingham, England.

**May 20:** Solar Energy for Camps, Churches and Auditoriums Program, Jordan College, Cedar Springs, Mich. 49319.

**May 23-25:** Old Buildings: Presents from the Past Conference and Exhibition, Union Station, Ogden, Utah. Contact: Utah Historical Society, 307 W. Second St.,

Salt Lake City, Utah 84101.

**May 28-30:** Industrial Design and Human Factors in Consumer Products Symposium, Tufts University, Medford, Mass. Contact: Industrial Designers Society of America, 1717 N St. N.W., Washington, D.C. 20036.

**May 28-June 8:** Workshop in Venice, Italy, honoring the 400th anniversary of the death of Andrea Palladio. Contact: Avram Lyon, Continuing and Independent Programs, Pratt Institute, Brooklyn, N.Y. 11205, (212) 636-3453.

**May 31-June 1:** Association of Architectural Librarians annual convention, Cincinnati. Contact: Stephanie Byrnes, AIA Library.

**May 31-June 4:** Architectural Secretaries Association annual convention, Cincinnati. Contact: Cathy Krieger, AIA Headquarters.

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

## LETTERS

**Health in Offices Follow-Up:** An article I wrote on health in office environments was published in the Oct. '79 issue (p. 38). The research for the article was aided by earlier discussions with Hal Levin at the University of California's center for planning and development research in the college of environmental design. Levin is an ecologically minded architect who is especially sensitive to the toxic effects of building materials and artificially controlled indoor environments and is a strong force in identifying this whole area of study. Because of the substantial response to the article, I wanted to get Levin's thoughts on what can be done by architects to avert potentially disastrous health consequences of poor building materials and practices.

Levin is a public member of the California State Board of Architectural Examiners and has a major commitment to encouraging architects to expand their societal role, including the questioning of product manufacturers, and ultimately trying to understand the subtle ecologies that are created inside buildings.

According to Levin, there are ways that architects can immediately begin designing more healthful buildings and building systems. Even though all health effect data are not in, it is evident that fiberglass and asbestos are sufficiently questionable to suggest alternatives to their use in reducing noise in air supply systems. According to Levin, we can "use bends in the system in order to dampen noise as an alternative to insulation that may have negative health effects." Sensitive architects should insist on more complete product information prior to specifying finishes and details. In areas that will be unvented for long periods of time, e.g.,

interior bays, one would want to avoid using synthetic materials, fire retardant chemicals and out-gassing paints. Enclosed areas that are saturated with these chemical products can be especially harmful for the elderly, the very young and the infirmed.

One of the areas in which the architect can play a great role is in the use of daylight or available illumination as an alternative to manufactured light. There is growing evidence that radiation emissions from fluorescent lights, leakage from ballasts and other electronic effects may ultimately be quite harmful.

Basically, a small number of environmental designers in this field share a vision of architects as being health advocates for the environment. Architects are trained to be sensitive to the effects created by the sounds, sights, smells and tactile qualities of the environment. They suggest adding to this array some minor training in medical and psychophysiological symptomatology. Architects could then play an important role as advocates of healthful environments. In doing so, they need not fall into stereotyped advocacy of "ecological design" or use of natural and biological analogies at any cost. Healthful environments merely require greater care and attention to how products are used. They need not involve a radical shift in the kinds of products employed.

It is in the builder's long-term interest to make sure that products are not producing toxic fumes, that zoning of airconditioning is done in a fashion that does not pass fumes on in series from one zone to another, that intake ducts are carefully placed so that they do not infuse street toxins into buildings and, finally, that minimal commitment is made to those subsystems—like fluorescent light—that may in the long run prove to be extremely harmful to some or all of our population.

*George Rand, University of California, Los Angeles*

**Competitions for Public Projects:** A news story in the November '79 issue (p. 36) says that the "Architectural Excellence Act of 1979 (S461), which would require A/E competitions for public buildings of \$25 million or more, has been opposed by AIA."

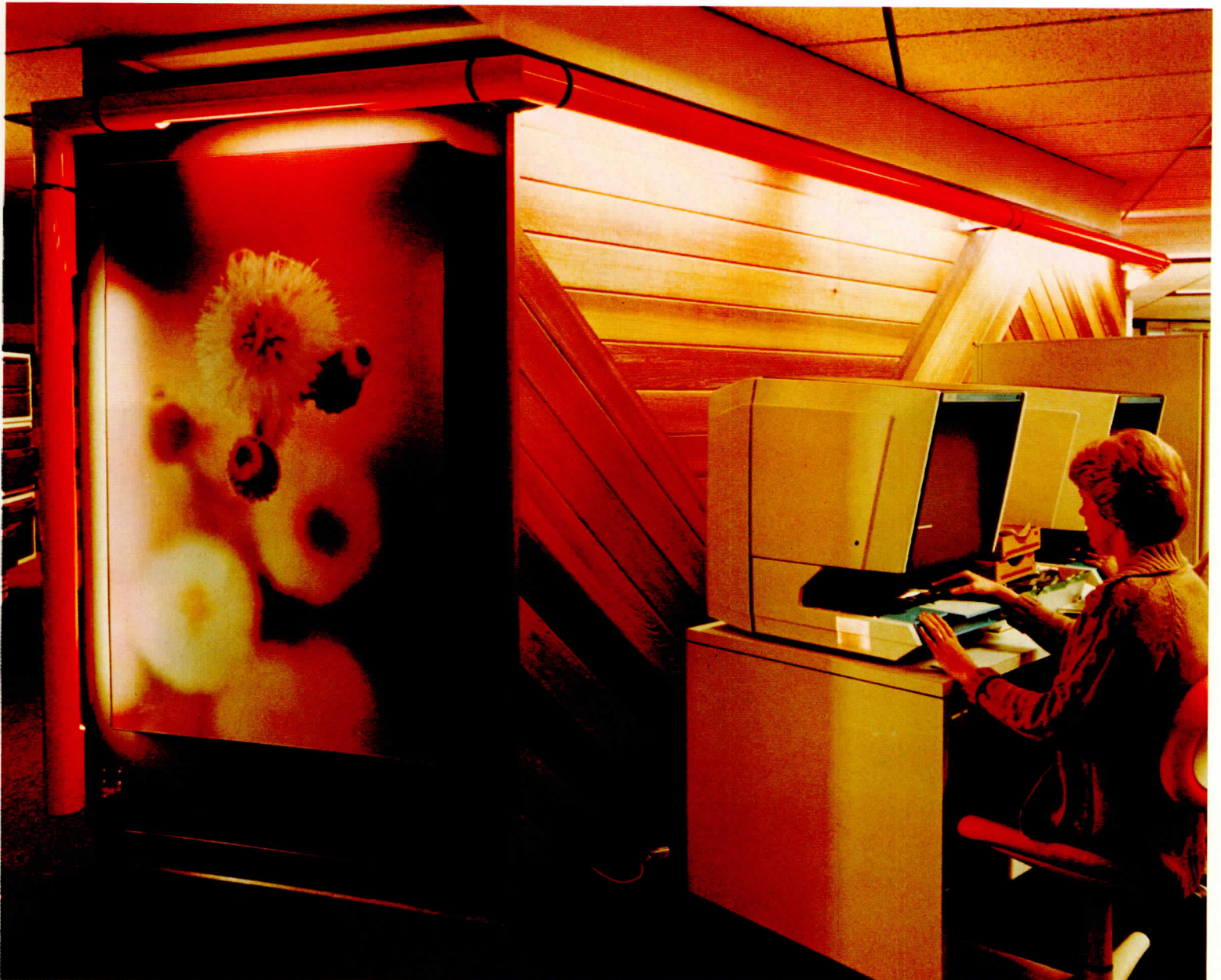
When did the board of directors and/or the membership vote on this stand? Also, I would like to know what AIA's policy is on "selection of design competence by recommended firms" and "competence and qualifications" as indicated in the article.

For example, in St. Louis were the architects selected from the competition for the gateway arch less competent and qualified than those for the Pruitt-Igoe housing project? *Edward J. Thias, AIA St. Louis*



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## The Institute

# Debate on New Ethics Code Will Go to Convention Floor

At its March meeting, AIA's board of directors decided to postpone until August any action on AIA's ethical code, thus allowing delegates to the national convention in June to express their opinion on whether AIA should adopt a new statement of ethical principles free of anti-competitive elements that would be mandatory and enforced or a new statement, also free of anticompetitive elements, that would be voluntary.

A tally of the membership at grassroots meetings earlier this year and additional investigations by the legal decision impact task force (chaired by AIA Secretary Robert M. Lawrence, FAIA) revealed that currently the membership prefers "to go beyond a simple revision of the existing code," but that further consideration should be given to whether a new statement, if adopted, is enforced or is voluntarily followed.

According to the grassroots tally, a simple revision of the existing code was preferred by 76 respondents, while 147 favored a new, mandatory code and 101 favored a voluntary statement of principles. A slight majority favored convention action over a board decision. The

tally led the task force members to believe that among the membership there may be a "strong preference for some form of mandatory, enforceable code of ethics," but that consideration should be given to the "substantial minority in favor of a voluntary code." The task force did not recommend either choice, although its members support the adoption of a voluntary statement of principles.

A draft of a proposed statement of ethical principles that would be mandatory says, in part, that members "who violate the standards of conduct . . . shall be subject to discipline by the Institute in proportion to the seriousness of the violation." A draft of a voluntary version says in the preamble that the statement "represents the aspirations set by The American Institute of Architects for its members' conduct of their professional activities, wherever they occur. These principles are voluntary and are designed to provide specific criteria for professional performance and behavior. . . . Although the ethical principles . . . are voluntary, members are subject to discipline by the Institute for any violations of their state registration laws or regulations."

Both proposed statements contain six canons, calling, among other things, for AIA members to "serve and promote the public interest in improving the environment," to "exercise unprejudiced professional judgment on behalf of their clients and employers" and to "pursue their professional activities with honesty and fairness," maintaining the "integrity and high standards of the architectural profession."

Under the voluntary statement, changes would be made in such words as "shall" and "shall not" in the mandatory code, becoming "should" and "should not."

Background information supplied the board indicates that between 1909 (the time of adoption of AIA's first ethical code) and 1970, there were 12 revisions of the code, but the following para-

phrased rules remained constant: prohibition against engaging in construction, paid advertising, participation of a design competition that did not conform to AIA standards, falsely or maliciously injuring another architect, supplanting another after steps had been taken toward his employment and competition with another architect on the basis of fees.

Other principles evolved that prohibited the architect from using commission agents, using contributions to secure a commission, submitting free sketches or offering free services on a contingency basis, violating registration laws, having any interest that would prevent the architect from acting in an unprejudiced manner or from serving the best interests of a client.

The task force report says that during the past decade "legal precedents and changes in the business atmosphere will have left AIA with only one of its 'original' ethical standards"—the one that prohibits defamation. Also, it appears that two other long-standing rules may be retained: the rule on conflicts of interest (R.407) and compliance with laws (R.501). The other rules currently in effect are fairly recent and without a long enforcement history. In brief, about 65 percent of the charges brought in the last 15 years are in areas that are no longer enforceable, the report says.

It also offers a summary of arguments for each of the two approaches. For a mandatory code: Without enforcement, ethical standards would be meaningless and peer pressure ineffective; licensing boards do not now enforce discipline and violations are treated as misdemeanors; flagrant violators could still continue as AIA members, and enforcement within the profession itself has an advantage over possible enforcement by government agencies.

For a voluntary code: This is the "safest" position legally; enforcement has not prevented incompetent practitioners; AIA's forces could be directed to more productive efforts if relieved of a constant defense of the current code; laws make it impossible to enforce ethical rules; rules can be circumvented or avoided, and voluntary adherence to ethical standards is a more "positive" approach.

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### The Institute

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## The Institute from page 11

The board also agreed that a proposed bylaw change on supplemental dues be presented to AIA members at the convention. Currently, every member who is an owner or manager of an organization employing registered architects to perform services for the public is jointly and severally liable for the payment of supplemental dues. The proposed change calls for every member who holds full or partial ownership in such an organization to be liable for dues payment.

Also, the date of the AIA convention in New York City was changed from 1982 to 1985, and Hawaii was confirmed as the 1982 convention site.

## Phased Implementation Sought On DOE Performance Standards

The AIA board of directors last month approved a recommendation calling for a two-year phased implementation period of the Department of Energy's building energy performance standards (BEPS). Such an approach was suggested by the AIA task force on BEPS because "the proposed rule addresses a very complex issue and important problems still need to be solved." A two-year period would allow for the "needed improvements" to be made and "workable standards" to be produced.

The proposed implementation plan calls for a dual path approach, in which both building performance and component performance standards could be used. Designers would be required to provide an annual energy use analysis of a proposed building. Permits could be issued by local building officials, even if the building did not meet the energy budget levels described in BEPS. At the end of two years, the component performance standards would no longer be used (unless their energy requirements were as stringent as BEPS).

"Such an approach allows for and stimulates the rapid development of more effective calculation methods," the task force's recommendation said. "It also provides the necessary time to educate and improve the skills of all members of the building industry."

The board reaffirmed AIA's support for the concept of BEPS as one means of achieving energy-conscious design. (See Mar., p. 42, for details of AIA's support of performance standards versus pre-performance approaches.)

AIA recommends that modifications be made to the existing standards to recognize daylighting and useful solar energy techniques.

AIA agrees with DOE that the determination of compliance may be made by a private design professional, but strongly

recommends that the definition of design professional be restricted to licensed architects or engineers.

AIA recommends that DOE make a change regarding the depletable fuel weighting factors used to calculate energy budgets. "The proposed standards include weighting factors based on fuel sources, cost and value to the nation. The present method allows energy inefficient buildings to be designed in some regions of the country and also permits different levels of energy efficiency within the same region," the task force maintains. To produce a more consistent quality of design for energy efficiency, AIA recommends a two-part energy budget that recognizes both building line energy use and source weighted energy use.

AIA recommends the development of reliable, inexpensive, easy-to-use energy consumption analysis methods for use by designers and code officials. Calculation tools and techniques must be created that match a wide range of design problems in terms of both scale and complexity. These programs should be adaptable to hand calculator methods as well as micro- and macro-computer programs.

The task force also presented to the board a list of educational activities that would be undertaken this year related to BEPS. Seminars on BEPS will be held in eight different regions; AIA is continuing to sponsor courses on energy audits and buildings energy analysis for existing and new building design, AIA is promoting the AIA/Research Corporation passive studio workshops this month and in May in six cities.

The AIA committee on architecture for health submitted concerns to the BEPS task force related to hospitals. Suggestions for improvement included an increased sampling of hospitals used in the determination of the BEPS; improved and more consistent computer modeling, and acknowledgement that a hospital is a 24-hour-a-day, seven-days-a-week operation.

## Advisory Service Established To Help Manage Competitions

The AIA Foundation recently received a matching funds grant from the National Endowment for the Arts for the establishment of a competitions advisory service. The aim is to give "assistance in verbal or printed form to any individual or organization contemplating the selection of an architect by design competition." The new service does not seek to take a stand either for or against competitions, but rather to help assure that the public is well served and the architectural profession is not abused by poorly managed competitions.

The purpose of the new service is to

respond constructively to inquiries about design competitions; to assist in the proper management of competitions by providing technical advice, documents and other pertinent information; to establish and maintain communications with architectural associations in other countries, with other professional and industrial organizations in this country and with AIA components on the matter of competitions; to establish and maintain a competitions reference archive, and to initiate and maintain a public information program on immanent, current and completed competitions, in the professional press.

William Lehr has been appointed assistant director for the competitions advisory service within the department of practice and design. He will work with the director of AIA's design and environment division and a task group of professionals, chaired by Paul Spreiregen, FAIA, to develop technical and public relations documents for the management of competitions. The coauthor of the book *Inside the Family: Toward a Theory of Family Process*, Lehr was associate producer of the documentary on a woman's battle with cancer, entitled "Joan Robinson: One Woman's Story." He holds a B.A. degree from Princeton University and is studying for a master's degree in public administration at George Washington University.

## 92 Are Advanced to Fellowship For Investiture at Convention

Fellowship in AIA is conferred on corporate members of 10 years' good standing "who have made notable contributions to the advancement of the profession in one or more of the following areas: architectural practice, construction, design, education, government or industry, historic preservation, literature, public service, research, service to the profession or urban design." Advanced to fellowship are the following 92 AIA members:

John D. Anderson, Golden, Colo.  
Paul L. Blanton, Moscow, Idaho  
Howard B. Bochiardy, Windermere, Fla.  
Laurence Ogden Booth, Chicago  
Chester Bowles Jr., San Francisco  
Conrad Buff III, Pasadena, Calif.  
A. Burns Cadwalader, Oakland, Calif.  
Richard Arthur Campbell, Portland, Ore.  
J. Henry Chambers, Akron, Ohio  
Junius Joseph Champeaux II, Lake Charles, La.  
Paul Damaz, New York City  
Jorge del Rio, Rio Piedras, Puerto Rico  
John M. Dickey, West Chester, Pa.  
Paul E. Dietrich, Cambridge, Mass.  
Eugene L. DiLaura Jr., Detroit  
Peter Hampton Dodge, San Francisco

*continued on page 19*





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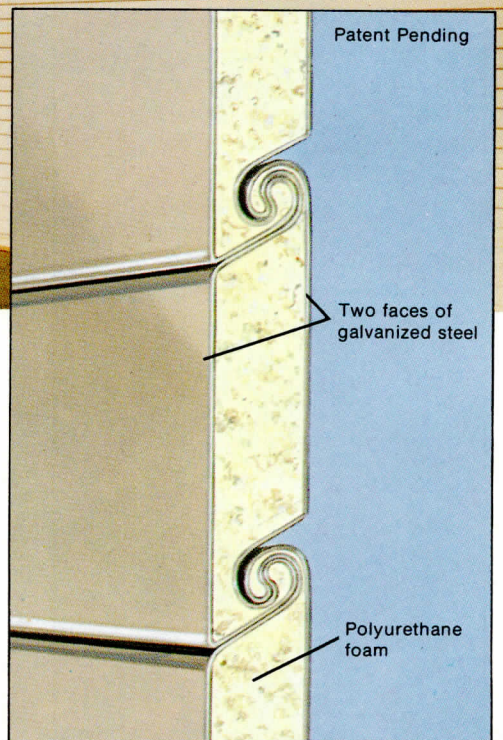
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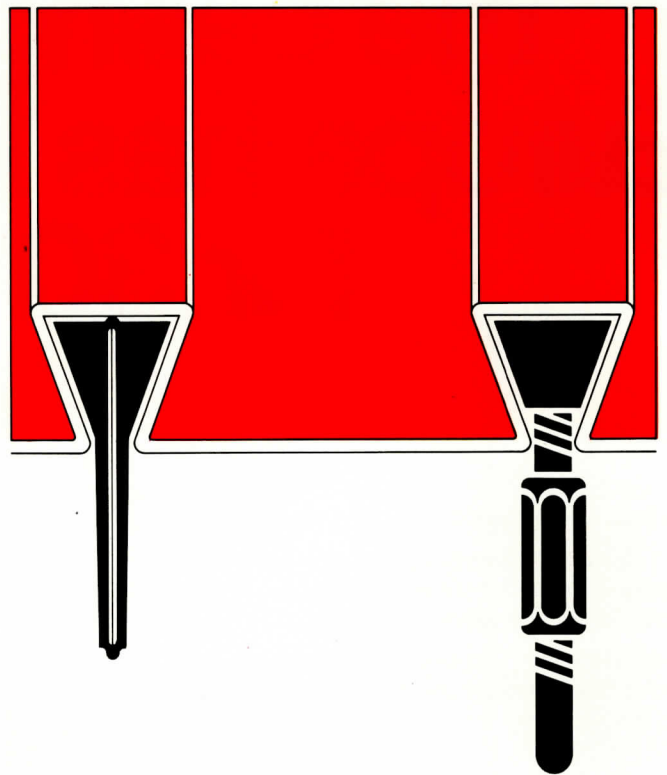
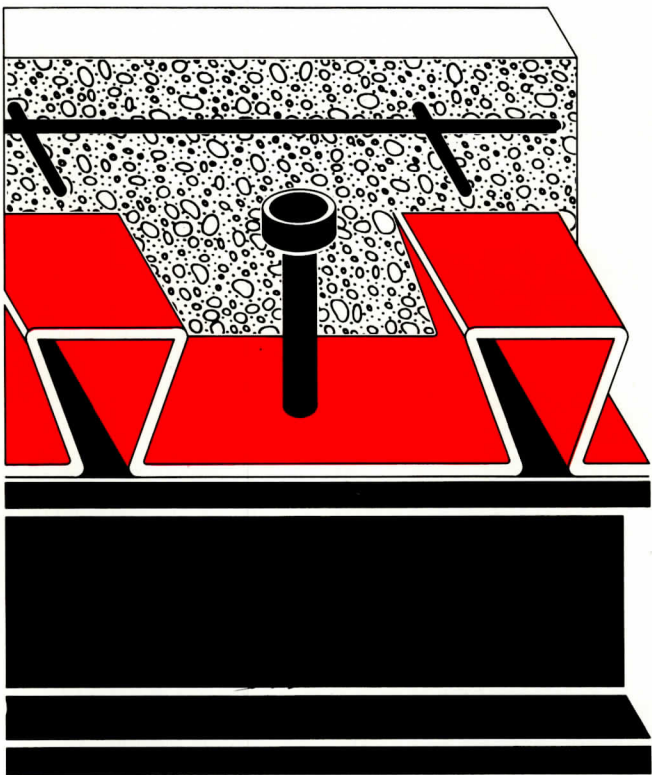
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### **The Institute from page 14**

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Thurston Hatcher, Miami  
William Ray Hawley, Palo Alto, Calif.  
John F. Hayes, Radnor, Pa.  
John D. Henderson, San Diego  
J. Robert Hillier, Princeton, N.J.  
Peter Jefferson, Stuart, Fla.  
Robert N. Kennedy, Indianapolis  
Kenneth F. Klindtworth, Staten Island, N.Y.  
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George Clayton Pearl, Albuquerque, N.M.  
Cesar Pelli, Hamden, Conn.  
Kalvin J. Platt, Mill Valley, Calif.  
Gerrard S. Pook, Chicago  
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Diane Serber, New York City  
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Murray Alfred Slama, Lafayette, Calif.

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Thomas A. Todd, Philadelphia  
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DeNorval Unthank Jr., Eugene, Ore.  
Harutun Vaporciyan, Huntington Woods, Mich.

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Frank D. Welch, Midland, Tex.  
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Formal investiture will take place at AIA's convention in June in Cincinnati.

### **Louisville R/UDAT Seeks Public Participation in Core Planning**

A clearly defined development plan, prepared and adopted through public participation, was the gist of an AIA Regional/Urban Design Assistance Team's recommendations for revitalizing the central business district of Louisville, Ky.

During its four-day study last month, the team discerned a "climate of distrust" among various interest groups—neighborhood and preservation organizations vs. the downtown business community and city hall. It heard that there is no consensus of what downtown should be in relation to the rest of the city (population 325,000) and the metropolitan region (nearly 900,000). "The problem is communication and understanding goals," explained a neighborhood activist from Old Louisville, an area of handsome Victorian houses just south of the core.

The team observed that many Louisvillians are concerned about their city's growth, development and identity. "We don't want to be another Atlanta or Toronto," said a preservationist at one of several R/UDAT meetings.

Repeatedly, the team heard complaints that neighborhood and preservation groups have been excluded from the downtown planning process—a process dominated by a group of business leaders called Louisville Central Area (LCA) Inc. This group has attracted outside investors for major projects downtown. Discord between preservationists and the business community was heightened last year when the historic Will Sales building of 1876 was demolished to clear a site for the LCA's proposed Galleria—a \$137 million mixed use complex along the mile-long, underutilized River City Mall. Other proposed LCA projects include an arts center, parking garages and possibly a sports arena.

Besides public review of planned pro-

jects, the team recommended:

- urban design standards articulated for downtown and a design review process set in motion;
- agreement and support for a single list of historic sites for local landmark designation through a negotiation process;
- a new approach to land use and zoning controls for downtown, adopted to provide more sensitive standards and incentives for development;
- appropriate mixed uses designed to encourage more nighttime activities;
- preservation of Louisville's Ohio River amenities to maintain the city's identity.

In its report, the R/UDAT outlined steps toward developing the downtown plan as well as a neighborhood planning ordinance. It also proposed development of 500 dwelling units for middle to upper-middle income residents downtown.

The nine-member team, chaired by Ronald A. Straka, FAIA, of Boulder, Colo., was invited by the city through the Central Kentucky Chapter/AIA. Other members of the team were Gordon Brigham, Boston public development official; Peter H. Brink, Galveston historic preservationist; William S. Donnell of Chicago, who coordinated development of Water Tower Place; Rodney S. Kelly, director of transportation programs for Dallas; Milton Kotler, executive director of the National Association of Neighborhoods; Barbara Yanow Lichtenstein, community planner from Cincinnati; Theodore Monacelli, AIA, an urban designer from Cambridge, Mass., and Donald E. Moore, president of the New York City Chamber of Commerce and Industry.

The team was assisted by architecture students from the University of Kentucky and the University of Cincinnati. Local efforts were led by Larry Melillo, AIA, H. Gibbs Reese, AIA, and Jay Stewart, AIA, and a community steering committee. The study was funded by the Louisville Board of Aldermen through a community development planning grant.

—Pete McCall, editor of AIA's MEMO

### **Assignments at Headquarters**

Among the recent assignments at AIA headquarters is the appointment of James A. Schuping as assistant secretary of the Institute. He came to AIA in 1977 and has served as administrator of component affairs.

Also, Alan B. Stover, AIA, is now acting general counsel, replacing Nancy Webb Truscott, who has returned to private law practice. Stover has been an AIA staff member since 1974 and was formerly director of the documents division and more recently deputy general counsel.

Newly appointed to the staff is David

*continued on page 22*

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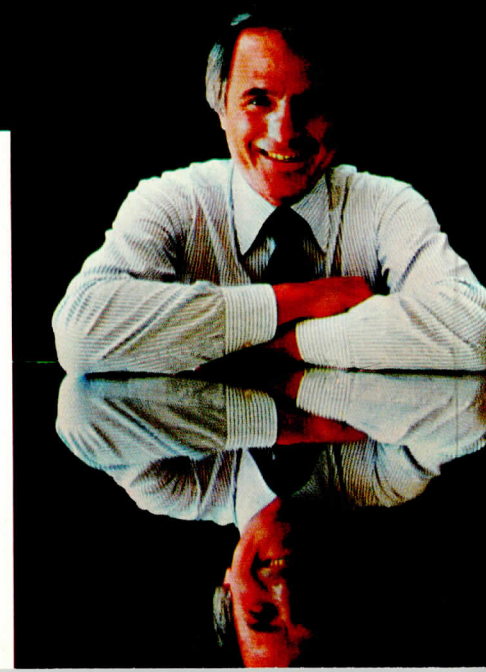
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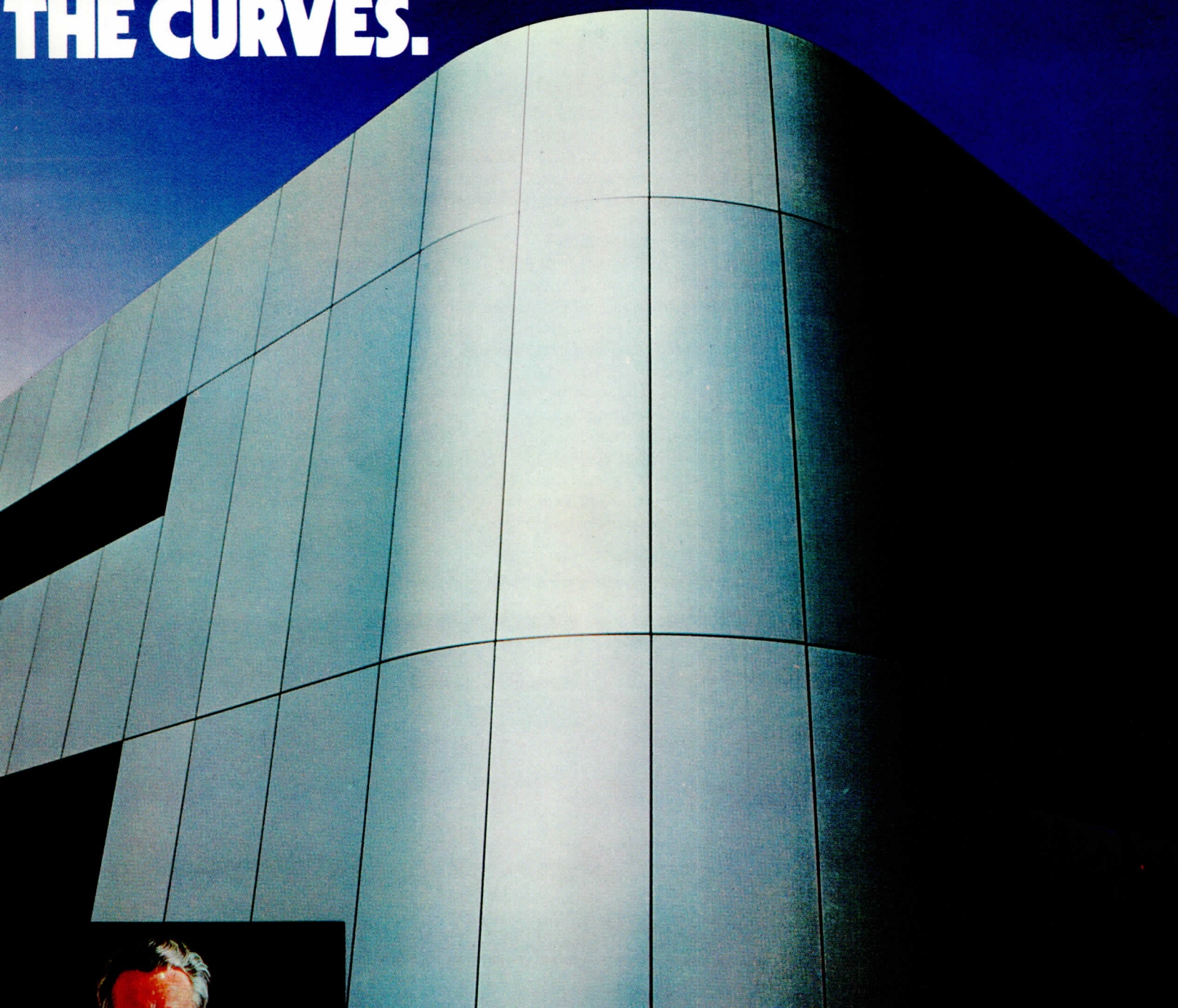
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### The Institute from page 19

Godfrey, who has been named director of AIA's publications department. For the past eight years, he has been assistant director in the publications department of the National Association of Housing and Redevelopment Officials. He will be assisted by Kathie Davis, who has been named deputy administrator, with responsibilities for marketing. Formerly, she was manager of publications marketing.

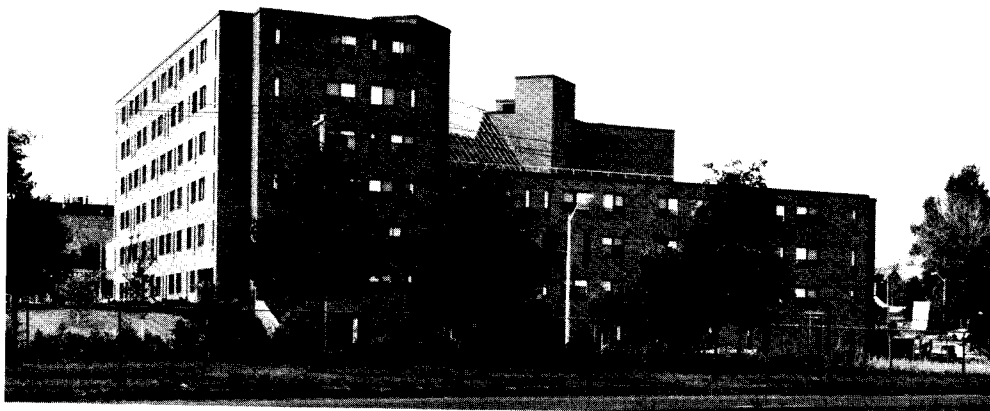
Terry L. Peck has been made JOURNAL circulation manager and AIA director of publications fulfillment.

Robert T. Packard, AIA, who joined AIA in 1976 after 15 years with an architectural firm in New Canaan, Conn., has been made deputy administrator of the department of practice and design, responsible for publications. Packard was recently director of the documents division/*Architectural Graphics Standards*. Replacing him as director of documents is Charles R. Heuer, AIA, formerly assistant director.

John Hoke, who was assistant editor for the new edition of *Architectural Graphics Standards*, has been made assistant director of the energy department.

Scott Jackson, formerly assistant of state and local government affairs, has been made director of government liaison.

*News continued on page 27*



**A First for New York:** In the January issue (p. 19), housing in Trenton, N.J., that officially opened in October '79, was called the "first nonprofit, architect sponsored and managed residential community for low-income elderly people in the nation." This statement is correct only to a degree, for the New York State Association of Architects/AIA formed the NYSAA Development Corporation in the fall of 1972—two years before New Jersey's Architects Housing Co. was formed by the Central Chapter of the New Jersey Society of Architects/AIA. The New York corporation, formed to develop a senior citizens' housing project in Utica (see March '73, p. 49), sponsored a competition in 1972 for the design of a low-rent complex for the elderly, which was won by the firm of Hawks/Garment Associates of White Plains, N.Y. In January 1973, a moratorium on federal housing subsidy funds made it impossible for NYSAA Development Corporation to continue sponsorship of the project, which was turned over to Utica's municipal housing authority. The 93-unit complex, called the Chancellor Apartments, was officially opened on May 18, 1978, as a result of the efforts of NYSAA/AIA, the city of Utica, the state of New York and the federal government. The winning design won for the firm the New York state division of housing and community renewal's "excellence in design" award in October 1978. Designed in the shape of a doughnut (photo above), the complex has two segments—one with three stories, the other with six. A 65-foot-square "winter garden" in the center, covered by a skylight, serves as a recreational and social center for residents. The \$3.149 million project, near Utica's main business district, has special safety features for its elderly residents.

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# AIA at Loggerheads with ASID On Interior Design Registration

AIA and the American Society of Interior Designers have reached an impasse on whether interior design is a distinct and separate profession, equal to architecture and other design disciplines. AIA's long-standing policy has been—and is—to protect the architect's right to plan interior space, holding that interior design is not a discipline separate from architecture. Since it issued a statement in 1978, ASID has contended that "in the public interest, the architectural profession recognize, as it does with landscape architecture and structural engineering, the divergence and diversity of equal but separate design disciplines."

Subsequent to this statement, Charles E. Schwing, FAIA, now president of the Institute, was appointed to represent AIA in discussion with ASID "to work out a satisfactory solution to our difference of opinion as well as the continued right of architects to be identified as interior designers or designers of interior space, and to be excluded from the interior designers' model licensing law sponsored by both ASID and the National Council for Interior Design Qualifications," in Schwing's words.

Recently, however, Wallace Jonason, ASID president, notified Schwing that his board refused to change the position it expressed in 1978 and "that architects must come under ASID's licensing law, if passed." Schwing says, "In short, if ASID's board got its way, it would take away the right that architects had for many years before the establishment of ASID or its two predecessors. While the licensing law being proposed is a title law and would not prevent architects from doing interior work, it would deny us the right to use or be identified by the title 'interior designers' . . . or any other substantially similar term such as 'designer of interior space.'"

A set of guidelines on licensing issued in 1975 by the National Council for Interior Design Qualification says that in recent years "the role of the interior designer in determining the ultimate characteristics of interior spaces in buildings has grown, and interior design is now an important special design service for a variety of projects." The document says that "public health, safety and welfare may be adversely affected by a long-term continuation of the present lack of regulation for persons offering to provide interior design services."

The public's interest is best supported, the guidelines say, by "support for the enactment of licensing laws to regulate interior designers and the establishment of standards for education, experience and competence to elevate the overall quality of design services being provided." A model statute is provided in the document, which states that "only a person licensed pursuant to the provisions of this act shall use or be identified by the title of interior designer." The model act calls for the appointment of a state board of examiners of interior designers and sets forth the requirements for licensing.

Membership in ASID is based, the society says, on "accredited education, rigid national testing and high standards of ethical practice." Since 1976, ASID has used a qualifying examination developed by the council. ASID recently said that the number of people taking the examination has more than tripled, with 526 standing the examination in 1976 and 1,786 in 1979. Lloyd Bell, chairman of ASID's membership program, said that the jump in membership is due to the "coordinated efforts by chapters and national headquarters to encourage candidates to take the exam." The examination, in October 1979, "resulted in a record 266 new professional members, a 59 percent increase over the number from the April exam."

Meanwhile, the Institute of Business Designers, the professional organization of contract interior designers, completed a research study in 1979 called "Issues in Licensing." The study was prepared, says IBD, not to challenge any effort at licensing, but as a basis for further discussion in policy and decision making. The report concluded that "as a matter of political reality," licensing of interior designers is "unlikely." Interior designers, the study says, "will have to show stronger reasons why licensing benefits the public if they are to hope for success in licensing efforts."

The study found that federal agencies—primarily the Justice Department and the Federal Trade Commission—are "neutral to negative on licensing." An attorney for FTC termed licensing "an unnecessary regulation which economically injures consumers without a corresponding increase in the quality of services rendered."

The study also points to the so-called sunset laws passed in several states in

recent years that require registration boards to justify their existence. Before the 1979 study, 32 states had enacted sunset laws. The report says that the "probability is low that many state legislatures—and particularly the 32 with sunset laws on the books—will enter new licensing laws." At the time of the report's completion, bills had been introduced in five states to license interior designers, but all failed.

Schwing asks components to notify AIA's state/local government affairs department at headquarters if ASID licensing becomes an active issue locally. "We must protect the architect's historical right to plan interior spaces and to be fully identified with this endeavor," he says.

## Three American Proposals Place Among Top Five for Les Halles

An international competition for an alternative to the official plan for the development of the Quartier des Halles in Paris, which drew entries from 25 countries, with more than 600 projects finally referred to the competition's organizing committee, has resulted in five winning proposals. Three of them are the designs of American architects. Four other projects received special mention, one of which was won by a team from this country; citations were given for six other proposals, including another American team.

The top winning proposals are by:

- Richard Ness, Sha Ming Tam, Ngu Aloysius Bongwa, James Dahlberg and Timothy Dray of Minneapolis;
- Greg Walton, a 23-year-old graduate student in architecture at the Georgia Institute of Technology (p. 30, a drawing of his proposal);
- Steven Peterson, Barbara Littenberg and David Cohn of New York City;
- Michel Bourdeau, Piero Baroni, Piero Carlucci, Maurizio de Vita, Maruo Galantino and Fernando Guerrini of Paris and Florence, Italy;
- Franco Purini, Marco Mattei, Renato Nicolini, Franco Amadeo, Domenico Geria, Marcello Sestito, Mario Trimarchi, Antonino Assuma, Vittorio Bitto, Anselmo Esposito, Fabio Ghersi, Renato Partenope and Rossella Passanti of Rome.

Among those winning special mention is the American team of Raimund Abraham, Kevin Bone and Joseph Levine of New York City. A winner of a citation is a group from the State University of New York at Buffalo, comprised of Shira Rosan, Jerzy Pankratz and Louise Woehrle.

The jury of international architects, chaired by Philip Johnson, FAIA, said

*continued on page 30*



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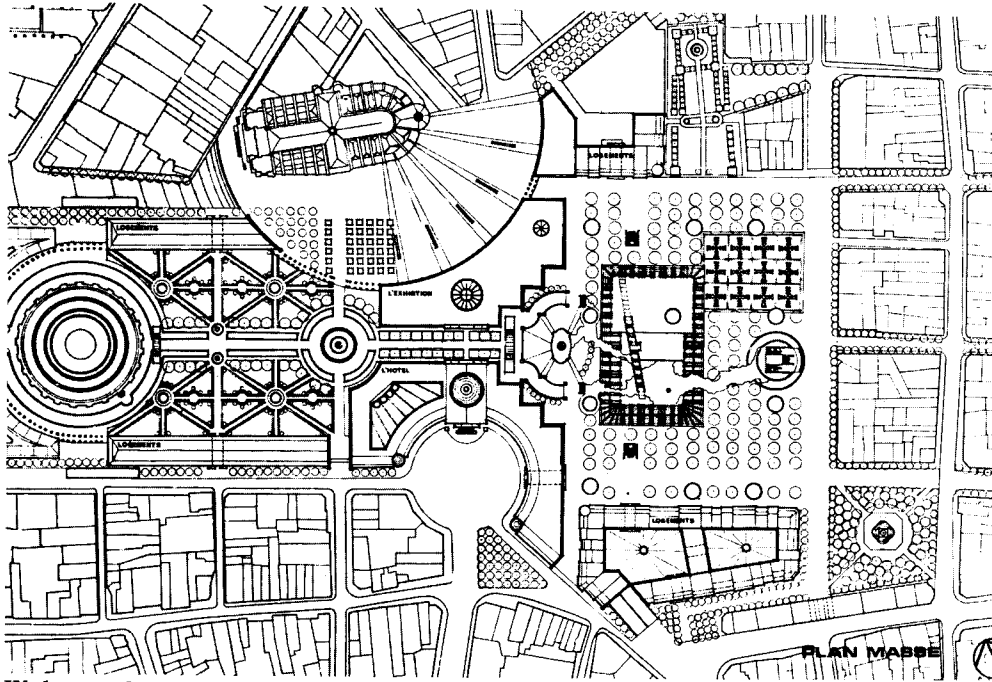
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**Practice from page 27**

that in the absence of participation by responsible Parisian officials, the objective of the jury was not to make a unanimous choice. The jury hopes that debate on the basis of the alternatives presented by the competitors will result in a different decision about the development of Les Halles than the plan now endorsed by the mayor's office. The jury asked Parisians to express a choice "based solely on love of their city."

Debate about the 25-acre site, razed in 1971, brought the competition into being last year when the Syndicat de l'Architecture and the French magazine *Architecture d'Aujourd'hui* protested the Parisian government's proposed plans for the development of the medieval market district in the heart of Paris. The plan envisioned a four-level underground shopping area at the site (dedicated last September), a hotel, a commercial area, a power plant surrounded by housing and another underground complex. The syndicate said that it would never be resigned to such "mediocrity" and that the official proposal "shows no great promise and expresses no great political, cultural nor certainly architectural purpose."

Martin Robain of the syndicate said in a letter to this magazine last fall that at first the mayor's office refused "any consideration of counter projects," and the mayor failed to reply to an invitation to participate on the competition jury. Mayor Jacques Chirac took a "slightly different position" on television. He said that the urban plan and development of Les Halles is a "closed matter," but "on the architecture which surrounds it, then naturally, I could not ask better than being inspired."

**Steel Construction Institute Cites 14 American Structures**

Fourteen structures have been singled out for "architectural excellence" in the 19th awards program of the American Institute of Steel Construction. Another two designs have been selected for "special mention."

The jury said that "clean, crisp details showing design control" is important in the development of an award-winning structure, but that "increasing importance" is being placed upon energy use and "finally, a building should esthetically be fun and inviting to those using it."

The winners are:

- John F. Kennedy School of Government, Harvard University (Architectural Resources Cambridge, Inc., Cambridge, Mass., architect);
- Indiana Bell Telephone Switching Center Columbus 37XESS addition, Columbus, Ind. (Caudill Rowlett Scott, Inc., Houston, architect, Boots-Smith & Associates, Indianapolis, associate architect);
- Michigan City Public Library, Michigan City, Ind. (C. F. Murphy Associates, Chicago, architect);
- Rust-Oleum Corporation international headquarters, Vernon Hills, Ill. (C. F. Murphy Associates, Chicago, architect);
- Hickory Hollow Mall, Nashville, Tenn. (Cooper, Carry & Associates, Inc., Atlanta, architect);
- Fournou's Ovens Restaurant and Lounge expansion, San Francisco (Esherick Homsey Dodge & Davis, San Francisco, architect);
- Calvary Baptist Church, Detroit (Gunnar Birkerts & Associates, Birmingham, Mich., architect);

- Environmental Health Laboratory, St. Louis (Holabird & Root, Chicago, architect);
- Deere & Co. west office building, Moline, Ill. (Kevin Roche, John Dinkeloo & Associates, Hamden, Conn., architect);
- Citibank satellite bank building, New York State (Ladow & Ladow, Commack, N.Y., architect);
- Atheneum, New Harmony, Ind. (Richard Meier & Associates, New York City, architect);
- Federated Building, Cincinnati (RTKL Associates Inc., Baltimore, architect);
- Mid America Center, Hot Springs, Ark. (Stuck Frier Lane Scott Beisner Inc., Little Rock, Ark., architect);
- West portal BART station, MUNI/METRO System, San Francisco (Tallie Maule and Reid & Tarics Associates, Inc., San Francisco, architect);

The two buildings given special mention are the pavilion for Pope John Paul II, Boston (Glaser/de Castro Associates, Boston, architect) and Sixty State Street, Boston (Skidmore, Owings & Merrill, Chicago, architect).

Jurors were Sarah P. Harkness, FAIA, The Architects Collaborative, Inc., Boston; Philip H. Hubbard Jr., president, Reinhold Publishing, division Penton IPC, Stamford, Conn.; George E. Kassa- baum, FAIA, Hellmuth, Obata & Kassa- baum, Inc., St. Louis; Ehrman B. Mitchell Jr., FAIA, Mitchell/Giurgola, Philadelphia; J. Albert Paquette, Paquette & Associates, San Francisco, and Daniel H. Shahan, Albert Kahn Associates, Inc., Detroit.

**Industrial Design Society Opens First National Awards Program**

The Industrial Designers Society of America has announced its first national design awards program to promote "greater public and professional recognition of leading achievements in industrial design, and to encourage an overall elevation in the quality of industrial design throughout the U.S." The program is open to all industrial designers in the nation in each of five categories: contract and residential design, consumer product design, equipment and instrumentation design, visual communication and environmental design.

Projects and programs introduced in 1978 and 1979 are eligible for the first year of the awards program. Entries will be judged by a nine-member jury. Winners of the first awards will be honored at the IDSA annual meeting in San Antonio, Tex., in October.

Entry forms may be obtained from: IDSA, 1717 N St. N.W., Washington, D.C. 20036.

*Practice continued on page 35*



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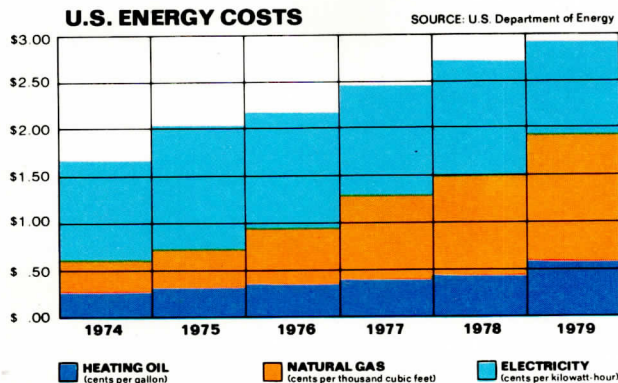
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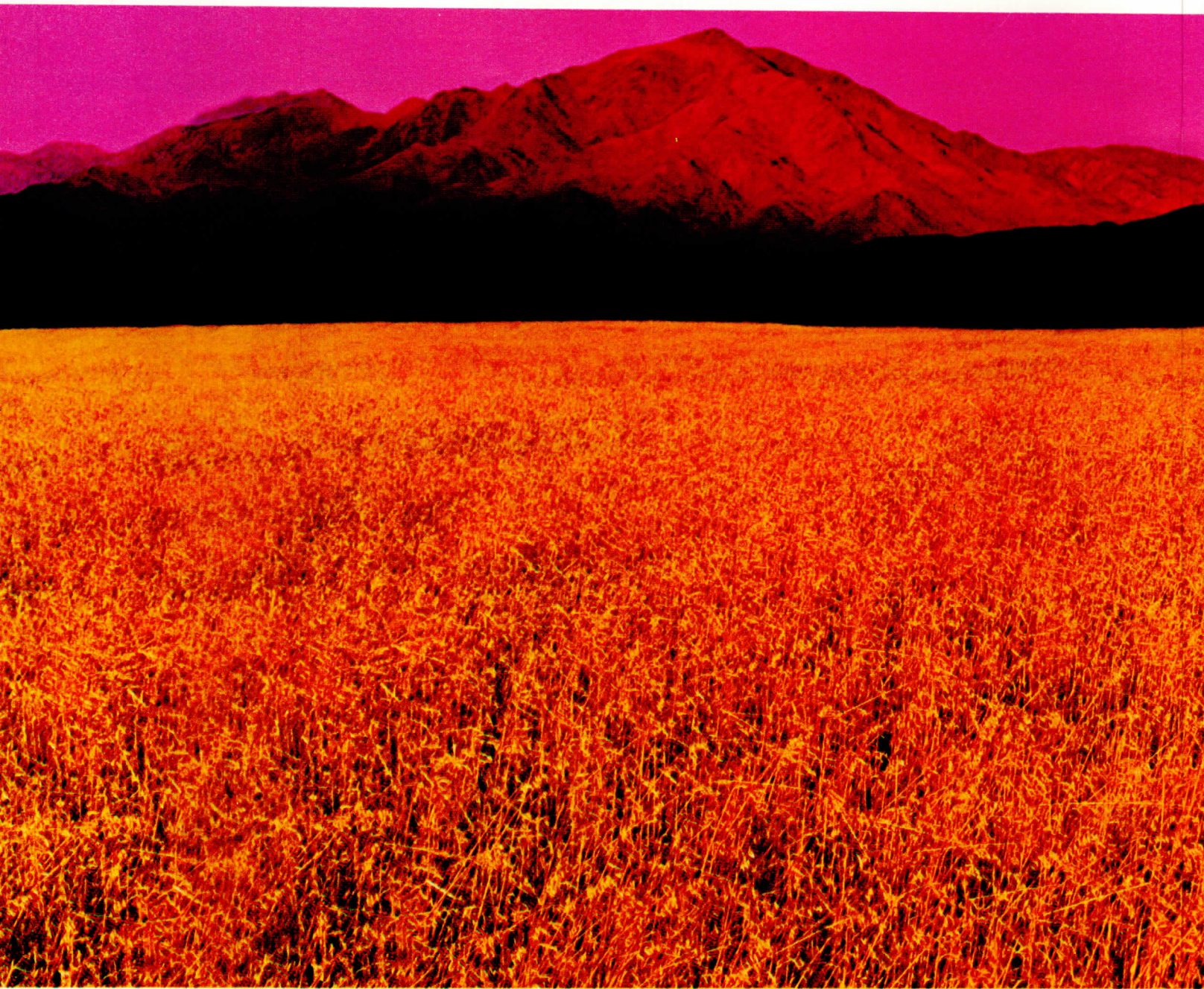
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## Building Stone Institute Announces '80 Award Winners

Six projects have been selected to receive the 1980 Tucker awards given by the Building Stone Institute for "architectural excellence in concept, design, construction and use of natural stone."

The new portico of First Church of Christ, Scientist, in Boston, whose project architect was Araldo Cossutta, FAIA, then associated with I. M. Pei & Partners of New York City, and now head of his own practice, Cossutta & Associates, received first place in the contemporary stone structure category. The new entryway to a Romanesque church completed in 1894 has broad steps that open onto terraced walkways and landscaped spaces flowing to other parts of the church center. Ten 42-foot limestone columns form the portico's classic half rotunda.

Sharing in the award in the category of a stone structure completed at least 25 years ago and still in use are the Penobscot Building, Detroit, and the Horace H. Rackham school of graduate studies at the University of Michigan. The Penobscot Building, for 50 years the tallest structure in Detroit, was designed by

Smith, Hinchman & Grylls Associates, Inc., of Detroit. Now renamed the City National Bank Building, the structure's four-story high base is of Massachusetts granite; from the second through the 42nd story, the tower is faced with Indiana limestone. The Horace H. Rackham school of graduate studies by the same architect has ivy-covered limestone walls. Its sculptural stone elements were carved by sculptor Corrado J. Parducci.

Awards were also presented for the first time in the categories of landscape and residential architecture. The residential award goes to Robert A. M. Stern & John S. Hagmann, New York City, for a complex of three buildings in Armonk, N.Y. Comprised of a house, a gardener's residence and a utility building, the complex uses fieldstone retaining walls and bluestone floors and terraces.

In the landscape category, two Japanese landscapes are honored: Myodo Kyo Kai, a new Buddhist temple complex in Shiga Prefecture, and the Aichi Green Center, a botanical garden and conference facility. The projects were completed while landscape architect Robert Murase of EDAW, Inc., Portland, Ore., resided in Japan. Both projects use stones and their arrangement to interpret the landscape in a contemporary context.

Jurors were Harry C. Wolf, FAIA

(chairman); Gerald Allen, Peter L. Gluck & Associates; the late Charles G. Hilgenhurst, FAIA; William H. Livingston Jr., AIA, and F. Thomas Schmitt, AIA.

## Polish Team Wins Madrid Prize

First prize (and the commission to execute the project) has been won by Polish architects Jan Czarny, Jolanta Singer-Zemla and Marek Zemla in an international competition for the design of the Islamic Cultural Center in Madrid. The competition, initiated by the 42 member countries of the Organization of the Islamic Conference, was conducted under the auspices of the International Union of Architects (UIA).

The competition, launched in June 1979, drew 1,058 architects representing 54 countries, with 455 of the architectural teams presenting proposed schematic designs for the center, which is to serve as a temple and an embassy.

The jury consisted of Reima Pietila, Hon. FAIA, of Finland (chairman); José Antonio Corrales of Spain; Hassan Fathy, Hon. FAIA, of Egypt; Mahdi Elmandjara of Morocco and Kenzo Tange, Hon. FAIA, of Japan. Louis de Moll, FAIA, of Philadelphia, president of UIA, was among the assistant members of the jury.

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## Tension Roof Competition

Helios Tension Products, Inc., of Redwood City, Calif., has announced an architectural competition for the design of a tension membrane covering for an outdoor theater. The judging, to be conducted in November, will result in awards totaling \$50,000 (first award: \$15,000; second, \$10,000; third, \$7,500, and seven honorable mention awards of \$2,500 each). The professional adviser is Elisabeth Kendall Thompson, FAIA, and a five-person jury will be announced in the near future.

The competition is open to all registered U.S. architects. Employees of registered architects may enter if the employer signs for the entry and is not also entering the competition.

The program and entry forms may be obtained from Helios Tension Products, Inc., 1602 Tacoma Way, Redwood City, Calif. 94063, (415) 364-1770.

## HUD Offers \$10,000 Grants For Innovations in Housing

HUD will make about 20 grants of \$10,000 each for "promising concepts of single-family construction that incorporate the use of industrial engineering, cost benefit trade offs and value engineering techniques." Called the "building value into housing program," the aim is to foster the use of innovative construction techniques and materials in order to develop low maintenance, energy conserving, marketable houses.

"The 18 years that it usually takes from the inception of an innovation to its accepted use in housing construction is too long," says Donna E. Shalala, whose office of policy and development research at HUD will administer the program. "This program, we hope, will help shorten that time span," she says.

In the first phase of the program, applicants are to submit preliminary plans and sketches of a concept, explaining the "value increasing" features. About 20 of the proposed concepts, judged to be cost effective in operation and maintenance and to have marketing potential, will be selected to receive grants to assist the applicant in development of the concept.

Phase two will embrace final design documents and an evaluation of cost estimates. Those concepts selected will receive further grants of \$5,000 to \$20,000 to assist in the construction and demonstration of the designs.

Applications will be accepted from architects, engineers, developers, builders, universities, nonprofit firms and other interested persons. Telephone (212) 755-0640 to request application forms, which must be returned by May 30.

## Environment

# Water Quality Threat Critical, President's Council Reports

The quality of the air improved in most parts of the country between 1974 and 1977, but the nation's water continues to be threatened by pollution, says the 10th annual report of the President's Council on Environmental Quality. And while the council applauded the overall improvement in the environment during the last decade, it singled out problem areas, such as hazardous waste disposal, acid rain and environmental risks of increased use of coal.

The environmental legislation and Administration measures of the past decade, the report says, proved to be "durable, largely workable and to a remarkable degree farsighted." The report also suggests that "environmentalism" has been embedded in the nation's consciousness: a belief that "no new project should be undertaken without first seriously considering its effects on the ecosystem of which we are all a part."

In its determination of air quality, the council examined data from 25 major metropolitan areas from 1974 to 1977 (the last year for which complete data are available), from which it was concluded that the number of unhealthy days declined by 15 percent, while the number of very unhealthy days declined 32 percent. However, New York City and Los Angeles registered in the "unhealthy" range for more than two-thirds of the days in 1977. The pollutants most often responsible for poor air quality were carbon monoxide and photochemical oxidants (ozone). Fossil fuel combustion can cause a buildup of carbon dioxide in the atmosphere, as well as acid rain. The amount of acid rain in the eastern half of the U.S. appears to have increased about 50-fold during the past 25 years.

While the council concluded that "there is evidence of improvement in water quality in many specific places," it warned that "the nation is still a great distance from the goal of restoring and maintaining the chemical, physical and biological integrity of the nation's water." As many as two-thirds of the nation's lakes may have serious pollution problems, the council estimates, and about 80 percent of the more than 3,700 urban lakes in the U.S. are significantly degraded. The council also closely examined trends in water pollution in major rivers at 44 cities. Of 149 comparison rates, 69 showed improvement in water

quality, 41 showed degradation and 39 showed no change. A major problem in the quality of ground water is contamination from surface and subsurface waste disposal and storage, including the burial of industrial wastes. And, too, the council says that the world's oceans have come under increasing ecological pressure from ocean disposal of ordinary and toxic municipal and industrial wastes.

For the first time, the report includes as environmental concerns urban revitalization, natural area conservation, historic conservation and rural preservation. Concerning urban revitalization, the council concluded that the "growing trend to conserve urban resources has important benefits in terms of conserving energy, materials and cultural expression and improving a city's economic base." But the council warns of the problems "involving displacement of minorities and the poor from low-income neighborhoods."

Tax approaches are becoming increasingly important in protecting historic buildings, the council concluded. Tax incentives resulted in an investment of more than \$420 million in predominantly private renovation of buildings. From March 1977 to June 1979, more than 900 historic preservation rehabilitation projects in 42 states had been certified by the Heritage Conservation and Recreation Service as eligible to use tax incentives according to the 1976 tax act. Nearly 1,100 single buildings had been certified as contributing to the significance of their districts and are therefore eligible as well, the report adds.

The report also mentioned the new National Heritage Policy Act which would expand the National Register of Historic Places to encompass neighborhoods and cultural landscapes and would create a National Register of Natural Areas to include ecological and geological resources of national, state and local significance.

On the topic of energy, the council highly favors the approach of conservation and development of renewable sources of energy as the solution to our energy problems. "The U.S. can do well, indeed prosper, on much less energy than has been commonly supposed." Basing its conclusions on a review of 44 recent studies, the council estimated that the gross national product could nearly double in the next 20 years, with an increase in energy consumption of no more than

*continued on page 40*



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**Environment from page 36**

25 percent—or perhaps, with a determined effort, no more than 15 percent. On solar energy, the council says that it has the “dual advantages of being inexhaustible and environmentally benign. . . .

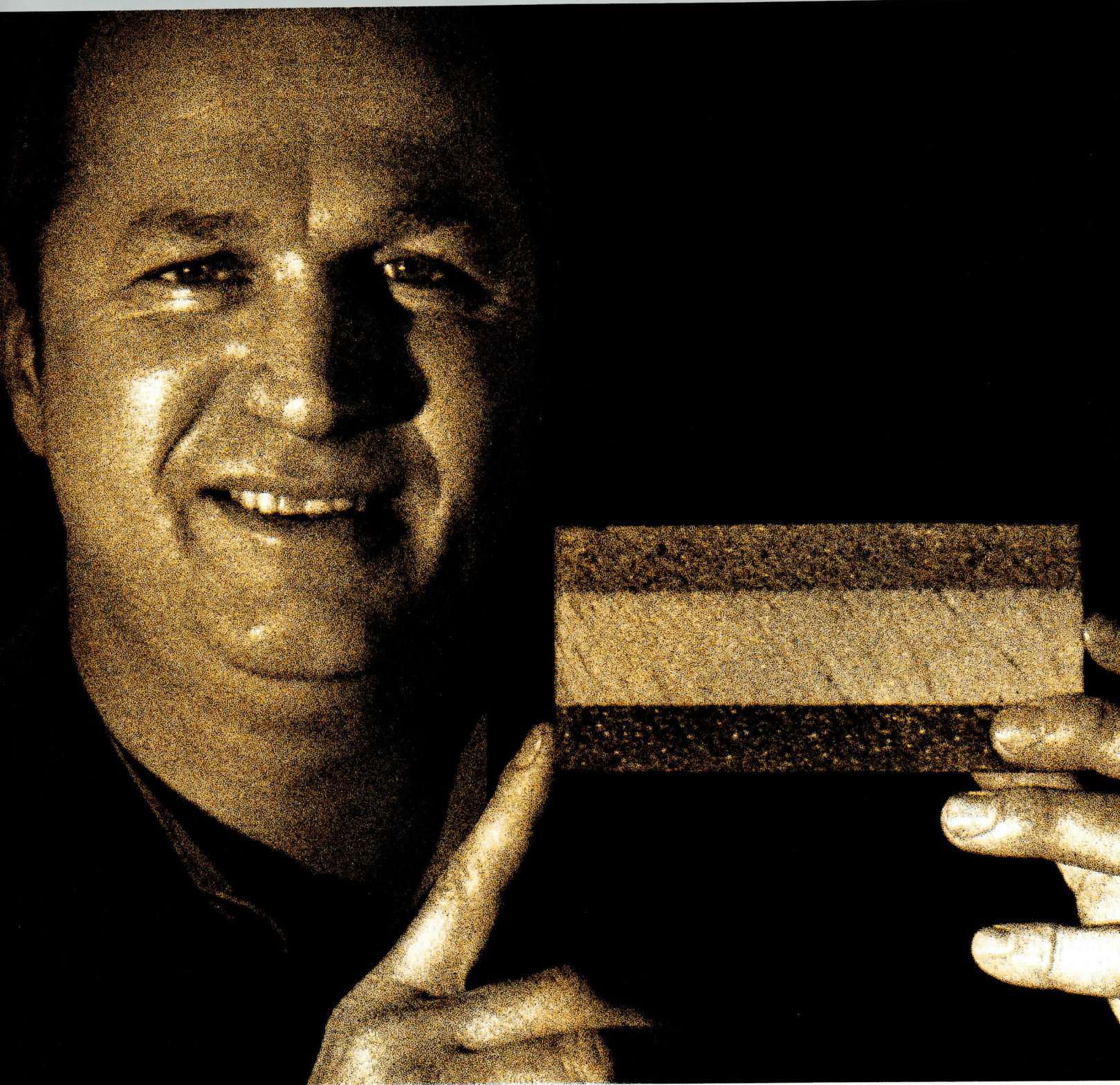
Active and passive solar heating and solar hot water systems should be encouraged in the construction of all new residential, commercial and industrial buildings.”

The council stresses that while solid fossil fuels are very abundant, they “tend to be environmentally damaging to mine, process and burn” and that “all fossil fuels pose the long-term threat of possible adverse climate changes.” The principal unresolved problems of nuclear energy, according to the council, are safety, weapons proliferation and waste storage.

Among the other findings of the 816-page report:

- Of the 32,000 to 50,000 disposal sites in the country containing hazardous wastes, anywhere from 1,200 to 2,000 may pose significant risks to human health or the environment. The Environmental Protection Agency estimates that only about 10 percent of hazardous wastes are being disposed of in a manner that would comply with regulations that the agency expects to adopt. The vast majority of toxic wastes (80 percent by weight) is being disposed of in nonsecure ponds, lagoons or landfills. Another 10 percent is being incinerated in a manner that pollutes the air or does not completely detoxify the waste residues.
- The second national water assessment of the U.S. Water Resources Council found shortages of surface water in several regions of the country (parts of the High Plains, Arizona and California). In central Arizona and southern Nevada, ground water levels are declining an average of 8 to 10 feet per year.
- Noise is the most frequently mentioned undesirable neighborhood condition in central cities.
- Throughout the tropical world, forests are disappearing at alarming rates. A United Nations estimate based on observation in 13 countries put the net loss at 11 million hectares (27 million acres) per year, which is roughly the size of Virginia. Estimates from U.S. government agencies indicate the losses may be closer to 20 million hectares (50 million acres) per year.
- Many scientists believe that the amount of carbon dioxide in the atmosphere could double over the hundred years ending in the middle of the next century, which could affect the extent and stability of Greenland and the Antarctic with consequent rising sea levels and inundation of low-lying coastal areas.
- Federal environmental legislation added, on the average, slightly more than

*continued on page 42*



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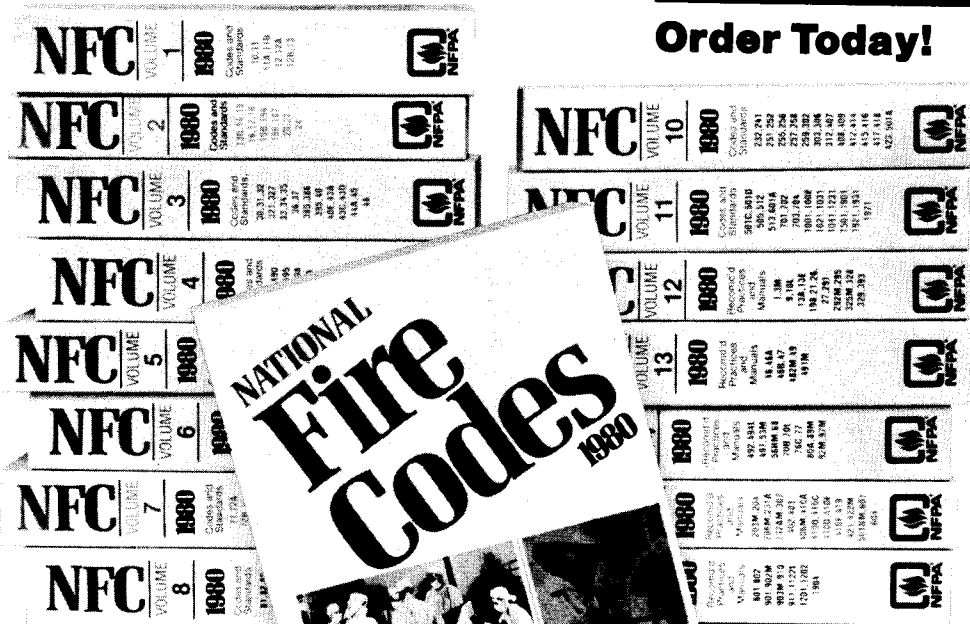
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**Environment from page 40**  
three-tenths of one percentage point to the annual rate of the increase of the consumer price index. Between 1979 and 1986 it will add between one to two-tenths of one percentage point to the annual inflation rate. But, says the report, these regulations allow consumers to enjoy more environmental amenities.

- From 1978 to 1987 total incremental spending in response to all federal environmental programs is projected at \$447.6 billion.

## Toxic Waste Disposal Called Staggering Problem for U.S.

One of the nation's most critical environmental problems is the safe disposal of toxic chemical waste, Douglas M. Costle, administrator of the Environmental Protection Agency, said at a recent press conference. The nation has been "shocked," he said, by the continuing discovery of hazardous waste incidents that threaten the environment and public health ever since the tragic Love Canal incident in New York state two years ago when hundreds of people were driven from their homes and "where abnormal rates of miscarriages, birth defects and cancer have occurred."

"We have seen the Valley of the Drums in Kentucky where barrels of chemicals hang from trees like Christmas ornaments," Costle said. "We have seen miles of North Carolina roadside deadened by ditch dumping of PCBs. We have seen entire mine shafts filled with chemical soup."

What is required, Costle said, is a "transformation in the way that American industry handles its waste." The problem is staggering, he said, in view of the fact that more than 750,000 generators now produce some 57 million tons of waste annually, "of which 90 percent is disposed of by environmentally unsound methods." The wastes turn up, often a decade later, in drinking water, in the nation's waterways, underneath housing developments and into people's homes, he said.

In order to deal with the problem, the EPA has issued three regulations to provide a road map of where waste is and where it is going. The regulations establish what is called a manifest system so that it is known at all times "who is responsible for hazardous waste, where it is going and whether it gets there safely," Costle said. It is directed specifically, he said, "at the midnight dumper who surreptitiously dumps wastes in sewers, in fields or in woods."

The manifest system requires the generator to determine if the wastes are haz-

*continued on page 84*

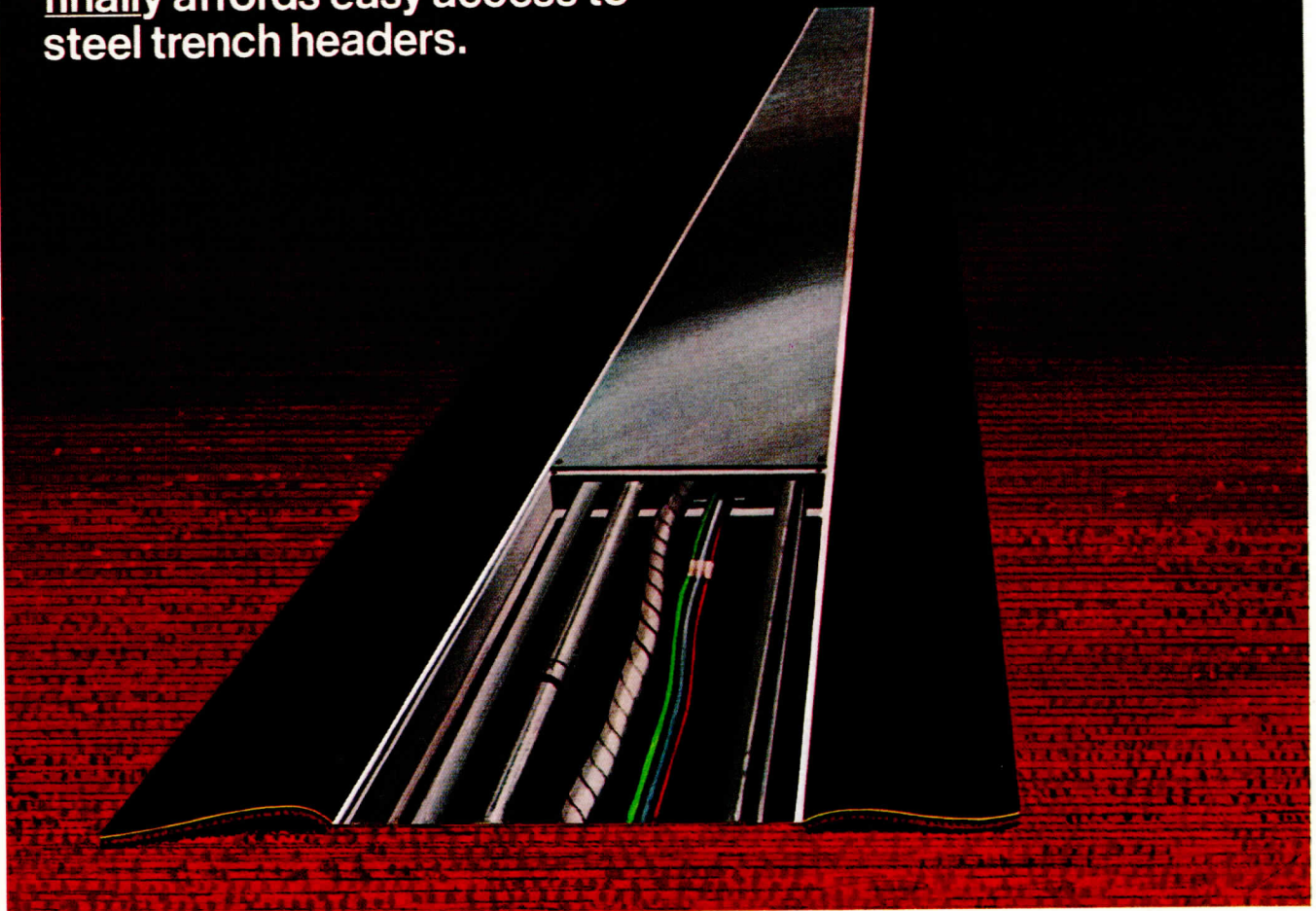
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## The Art of Architecture

The current schism in architecture recently was described as being between those who consider it “a science whose concerns are functional” and “an art whose concerns are formal.” It was an unfortunate construction.

It is true that too many of those who proclaim architecture to be an art pursue concerns that are preponderantly, sometimes solely, formal. This does not mean that those concerned about function deny that architecture is an art (much less depict it solely as a “science”).

Architecture is an art—but it is the art of architecture, not sculpture or painting. The most fundamental difference is that architecture is an art—the only form of art—intended for human habitation. As a corollary, architecture is an art intended for human use. Thus, to be successful it must be useful—or, to use a synonym, functional. It must work as habitat—the particular kind of habitat required by the particular situation at hand.

To be successful a work of architecture also must stand up. In this sense architecture is indeed part science as well as art. In other senses—delivery of a work within constraints of time and budget, respect for the overall environment of which a work is part—architecture is also a profession.

The real schism is between those who are concerned with architecture in all of its diversity—and richness—and those who would reduce it to just another adjunct of the visual arts. *D.C.*



# A Civic Center and Its Civitas

*Mr. Wright meets now-mellow Marin County, Calif., with still-unfolding impact. By George Rand*





Photographs by Joshua Freiwald

To approach the sprawling Marin County Civic Center the first time is a forbidding experience. Frank Lloyd Wright's last major commission spans across the northern California landscape, a large figure on soft marshland nestled between and supported by round, hilly bulges. During its early, controversial years it was dubbed acrimoniously the "supervisors' palace," "Wright's Taj Mahal" and an "oversized Hollywood diner." It has been called a "centipede coming out of the mountain" and a "10-story office building on its side." Yet despite its grand scheme, one discovers here an intimacy and an extraordinarily receptive atmosphere.

The Civic Center has a turbulent history that seems far removed from the serene profile it cuts against Marin's bright green hills and blue skies. The way this building became embroiled in local politics and came to represent a new style of government may be unmatched in modern American history. In some fitting way, the turbulence was a testament to Wright's ornery evangelism for individual liberty.

In the early '50s Marin, like many growth areas in the country, was struggling to assimilate the changes in the social and economic structure brought about by World War II. The war years had resulted in massive population migrations to areas needed for military production. Shipyards in the San Francisco region were full to capacity. Every building standing with a roof over it—fishing shacks, summer houses, garages, abandoned filling stations—was pressed into service to accommodate the tens of thousands working in the war plants. They came from all over the country.

By the mid-1950s, there had developed a political schism between the old guard, people who had been in Marin since before the war, and the newer arrivals, who questioned the existing political structure. The progressivists questioned the existing pork-barrel mentality and wanted to engage in serious philosophical appraisals of the role of government in a democratic society.

The older style politicians, known as "the court house gang," were led by a candy factory owner in San Anselmo, William Fusselman, first elected to the board of supervisors in 1942. Vera Schultz became Marin County's first woman supervisor in 1953, elected on a "good government" platform. She advocated a county administrator form of government to overhaul the piecemeal combination of small local city governments and 13 separate county departments, each of which did its own purchasing, right down to paper clips. Under the existing system, each supervisor was, for example, the road commissioner for his district. He could easily have county workers install black-topped private drives up to the front doors of farmhouses of supporters.

Schultz and Mary Summers, county planning director and Marin's first woman executive, were later to spearhead the selection of Frank Lloyd Wright as project architect for a new civic center. Through the years, as if gripped by an obsession, Fusselman became the foremost critic of the civic center idea

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**Dr. Rand**, a psychologist who teaches environmental design at UCLA's school of architecture and urban planning, acknowledges two important references in his preparation of this article: *The Bridge and the Building* (Carlton Press, 1974) by Evelyn Morris Radford, and *Frank Lloyd Wright: A Study in Architectural Content* (American Life Foundation and Study Institute, 1979) by Norris Kelly Smith.

## A landscape reminiscent of Chinese paintings.

and the hiring of Wright. The idea of a new government center was synonymous with the idea of the reorganization of government under a county administrator. Repeatedly, Fusselman's objections to the civic center and to locating it on a piece of property outside the city of San Rafael were outvoted. The battle became quite vehement, including the reading of an infamous letter which accused Wright of membership in the Communist party. This provided Wright the chance to declare his avid patriotism. On April 29, 1958, over dissenting threats of Fusselman and others, the board approved the Wright plan.

By the time of Wright's death on April 9, 1959, the master plan bill had grown to \$13 million from original estimates of \$5.5 million. This in a county with a population of only 150,000. Support for a plebiscite on building the center and the absence of Wright's persuasive aura created doubts as to the project's final success.

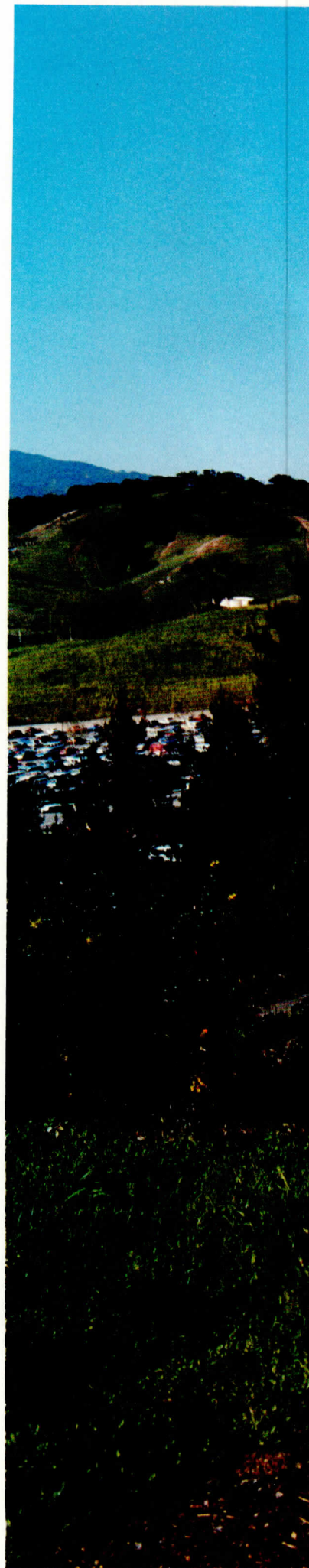
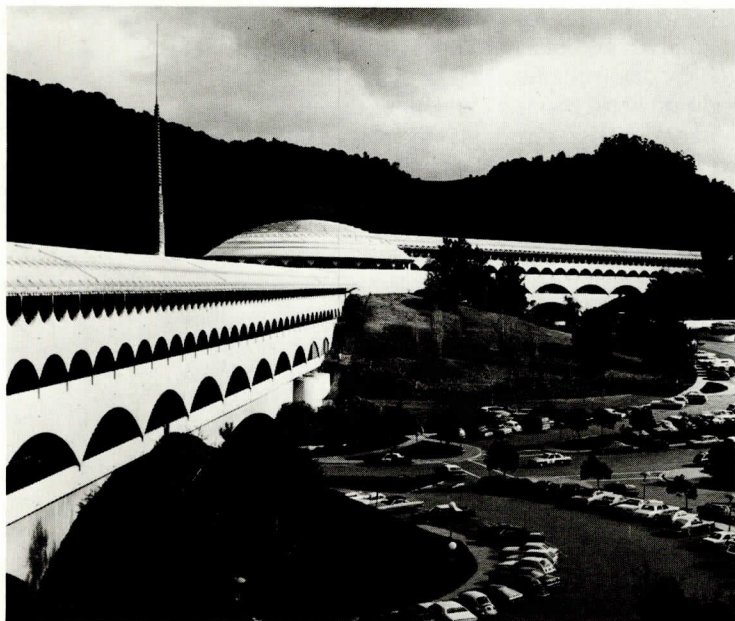
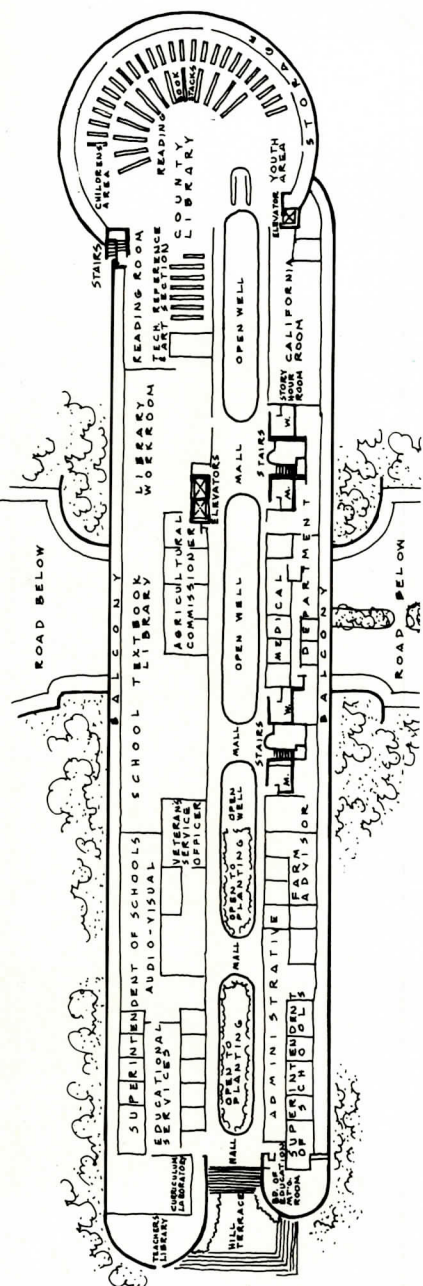
When in 1961 Fusselman became chairman of the board of supervisors, he immediately suggested that the partially completed Civic Center be converted to a hospital. With a 3-to-2 vote, construction was halted to examine the feasibility of the new proposal. But the new chairman had misread public opinion, which was now heavily in favor of the center. After a flurry of protests, the local newspaper, the *Independent Journal*, queried readers on the issue. The poll indicated Marinites were 8-to-1 in favor of continuing construction of their Wright center. Fusselman bowed to public pressure, and the project continued.

Aaron Green, FAIA, Wright's long-time representative in San Francisco, recalls those years: "The building was a good example of a project of a great architect that permanently affected the lives of people in a community. The idea of converting it to a county hospital was absurd. It may be the first time citizens banded together and actually picketed their courthouse in the cause of architecture. Their signs said 'Save Our Civic Center.' As a result a petition was started that led to the first recall of a county supervisor in California history. The building was the issue."

The Civic Center was a good marriage between Wright, the architect of Broadacre City, and the new Marin liberals. Both had the economic security and good taste needed to think intelligently in a grand manner. Unlike Wright's designs for projects in Arizona and in Madison, Wis.—other attempts to build large civic centers—this building had a chance of being built.

Wright was understandably infatuated with the bountiful beauty of Marin. Driving up to the site along Route 101, he must have been overjoyed to see a dozen oddly shaped hills reminiscent of a Chinese landscape painting. Wright rambled

*The two arched wings of the building span the site's rolling hills and meet at the circular library and pylon (whose main function is to hide boiler stacks). The 570-foot wing at right houses administrative offices and the 800-foot wing at left, built after Mr. Wright's death, is the hall of justice. Each wing is bisected by a skylit atrium and ends in semi-domes.*





## Great light wells open under wide vaults.

easily to the crest of one knoll and apparently had an immediate intuition about the building and the site. Aaron Green recalls that he waved his hand in an undulating motion after only a few minutes and muttered that he would "link these hills with three graceful arches."

Wright designed an administration building, hall of justice, post office, fairgrounds and memorial auditorium for the site. He placed most of the facilities in a long, ground-hugging building to reject the pomposity of traditional government architecture, and placed the main county library under the central rotunda to emphasize the importance of young people rather than the wordy deliberations of "old men" whose views he considered tired and inflexible. By not giving architectural expression to power and authority and focusing on his definition of governmental function, the Civic Center suggested the abolition of the old style of government. It became a political experiment and a project in social architecture.

Wright's view of government took a distinctly 19th century cast, centered on the "inner directed" man as opposed to the "other directed" man of the current century. He had a clear sense of personal destiny and, according to John Lloyd Wright, believed in "a Source that existed which, by its very nature, produced ideas in the mind which could be reproduced in the world. . . ." He was convinced that he had a role to play and a destiny to fulfill. His ideas about the functioning of the state were based on his analysis of a common kinship among men at the level of the deep psyche. Any man who is "true to himself" will find himself in harmony with other honest men, he thought, since the individual's "latent conviction" is inspired by the "divine idea" and is thus identical with the "universal sense" and is in tune with nature itself.

He saw the individual as a part of a piece of architecture called "the social state" and rejected both the cruel industrialism of the 19th century and the corporate giantism that replaced it. He dreamed of a day when every man would be entirely self-sufficient.

About places like Marin, Wright had deep intuitions and empathy for its style of family life and the woman who played an increasingly important role in egalitarian politics. His Usonian home, for instance, eliminated servants and formal parlors, and turned the kitchen into a "work-space." With its nondefensive, open, flowing plan, it rejected traditional notions about family life.

The Marin project did for the august councils of government what Wright had earlier done for the home and family. It insisted on openness both vertically and horizontally. The building is penetrated by auto traffic directly through its base under three great arches. The floors are opened up horizontally by Wright's traditional means of dissolving the box, using cantilevers to create overhangs on all sides and a resulting feeling of continuous space. Openings penetrate the skin all around, connected by a continuous ring of balconies. Great light wells open vertically under wide vaults, which allow visual connection from floor to floor. Each office is glazed above door height and decorative cornices overhang all windows facing both the court and exterior, contributing to an awareness of the space beyond. The long atrium was an original idea, at least at this scale, and it has been mimicked in shopping malls since.

Wright believed democracy to be the best kind of government, and the American variety the best kind of democracy. When practiced correctly, it was "the highest form of aristocracy that the world had ever seen—the aristocracy of the man, the individual . . ." a better and purer form of government than one based on lineage or wealth because it allowed people to rise by personal achievement. "Free growth of human individuality," moreover, was perfectly consistent with social harmony, because in developing self-respect people learned to respect and tolerate

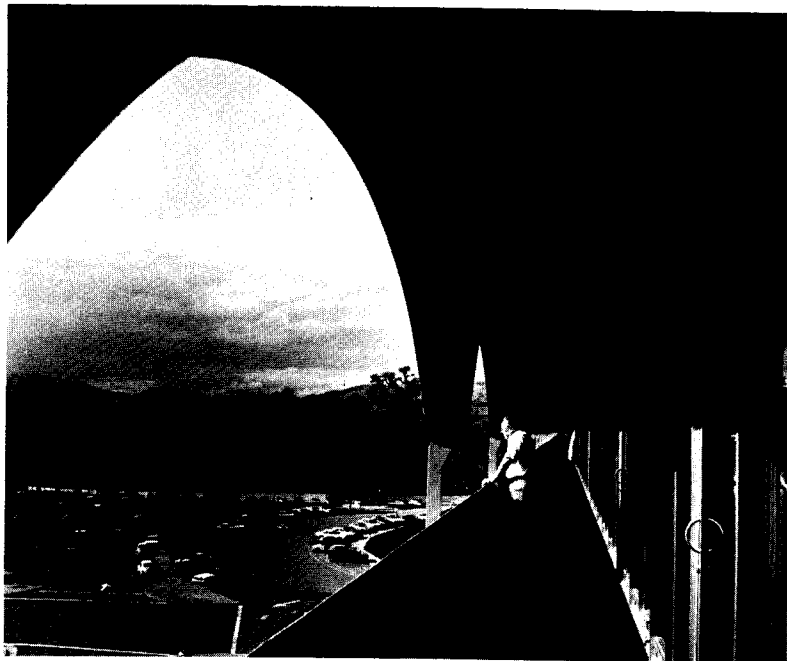
others. Natural to true individualism, Wright believed, was the Jeffersonian ideal of government being best when it governed least. Wright was convinced that the federal government had become "an enormity." Already it took "a good one-fifth of society," he complained, "to keep the other four-fifths in order." Nor did he limit his criticism to educational, welfare and social services, but also to oppressive government controlled developers—"pole-and-wire men," he called them, referring to the profit motive and lack of taste that prevented them from burying utility lines. There was an immediacy about the unitary relationship of form and function in his thinking that matched the struggle in Marin County to take government out of the hands of expediency. Through the building, the local political process changed.

Big Pink, as the building is called today by some critics, stands in their eyes for big government. For them it represents an obstreperous and confiscatory government that tells people they cannot divide and sell their property. To others it is a guardian of the environment and the physical beauty of Marin.

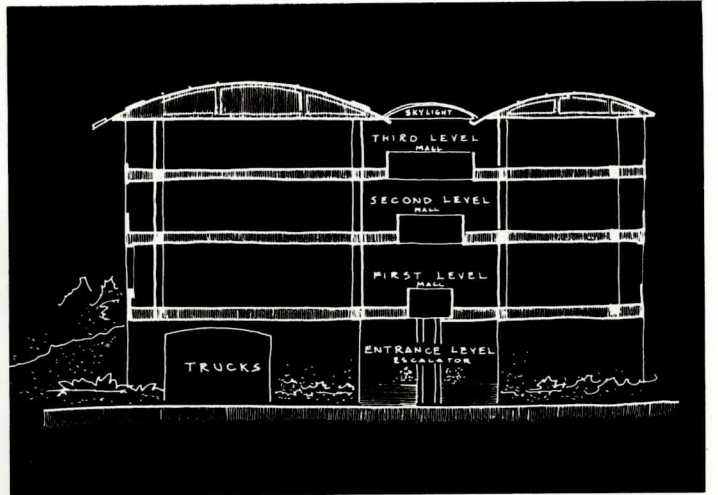
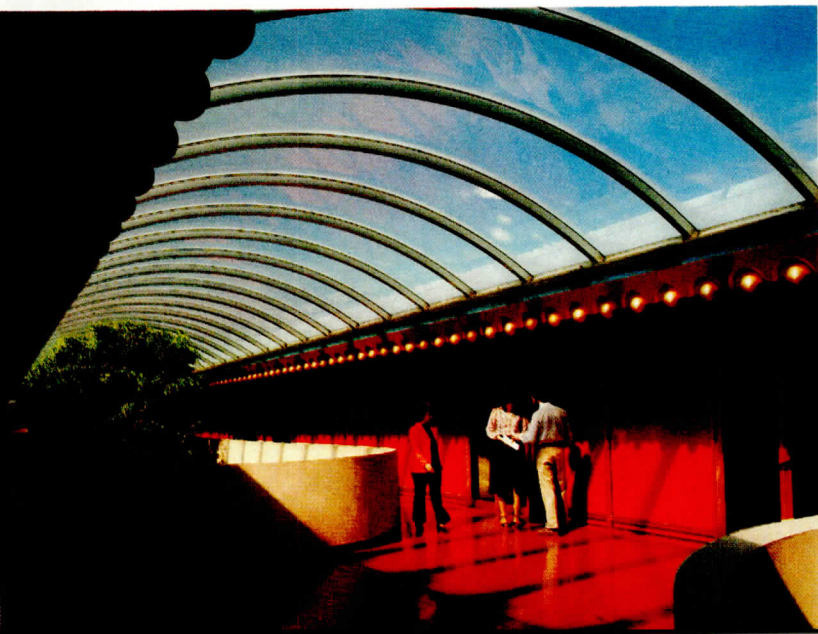
Ten years ago, a strong environmental movement developed in Marin. Freeway construction was stopped, development was drastically limited through a countywide general plan, the Point Reyes Seashore was preserved and laws were passed to save agricultural land from urbanization. Marge Macris, county planning director, says, "When the 1950s plans were added up, they called for tremendous growth and development with no public transportation to serve the anticipated communities. That much growth would have necessitated a great deal of road widening and an 18-lane Golden Gate Bridge."

Through the '60s there had been general acquiescence to both the growth of government and the expansion of the economy. Many saw the urbanization of rural areas as inevitable. The cost of maintaining a rural area in its undeveloped state was estimated at 500 times greater than the cost of allowing development to occur.

In the '70s, however, skyrocketing costs of services often came to outweigh economic benefits of land development, a phenomenon abetted by Proposition 13's limits on tax revenues from property. The Civic Center's available and predicted space needs



*Behind the arches are exterior corridors (above) usable much of the year in the temperate Marin County climate. Photos at right are of the brightly illuminated—and decorated—central atrium of the administration wing. Note in section how the width of the atrium opening increases as the floors go upward to bring natural light all the way down to the building entrance and permit views down to landscaping at that level.*



## Through golden gates and up stately steps.

have reflected attitudes toward development, fluctuating from a 1972 projection for vastly expanded office space by 1985 to a current possibility of a space glut.

These developments bring into question the original concept of the Civic Center project. Macris suggests that the building was an overly touted symbol of change that became synonymous with moving from downtown San Rafael to the country, a project much too ambitious for the county. She further criticizes the move as poor land use planning. For 10 or 15 years, until the trend was reversed by the surge of wealth in the county, San Rafael's downtown deteriorated, largely as a result of the center project. The Civic Center removed the county's largest employer, government, from its largest city, and also created problems for county workers who could not be readily served by public transportation—a problem becoming more critical as gasoline prices rise.

Most U.S. environmental designers at the time were sold on the automobile and the virtues of a national highway system. Wright was also imbued by a sense that good transportation could allow people to be properly "spaced" from one another so they could be self sufficient and yet be close enough to build a common culture. While no one regrets the absence of an austere county office building, some question the wisdom of the suburbanization of Marin that was sanctioned by the Civic Center project. In his first speech to the county, Wright had borrowed a page from his works on Broadacre City: "I don't think you can expect much from the cities now because they are doomed. . . . Every one of them is insolvent, still building broad freeways for the people to get in whereas they will only be used for the people to get out. . . . If the county was like Marin County, it would not be difficult to persuade most to come along. . . . I see a great chance for free, open spacing, leaving plenty of room. . . . Marin County has to plan this at least 20 years ahead. . . ." Twenty years later, one eye on the gas pump, we are left to wonder.

Some local politicians recognize that reputation of government—and its symbols—comes in cycles. Although there is now strong pressure to limit the role of government as a way of reducing the costs of environmental conservation efforts, one supervisor, Gary Giacomini, says, "there are still developers in the wings waiting for the economy and politics to change. They view Marin as a potential gold mine. Once the balance is tipped they will jump in, and the process could reverse."

Perhaps Wright treaded the line between endless urbanization and mindless suburbanization when he designed the Marin County Civic Center. He always had a keen sense of "scale" and a feeling for how big things could grow before they needed to

split off to re-create themselves according to organic principles. He often characterized flexible, expandable office buildings derisively (in Los Angeles, for example) as a "plate of tripe." He was drawn to the operation of established companies like Johnson Wax and saw their activities as stable and enduring. His goal may not have been to stop change as much as to spread and dissipate its impacts.

The Marin project was built in two phases: first, the 570-foot-long administration building, and, several years later, the 800-foot-long hall of justice. The two wings form a shallow angle meeting at the circular domed "hinge" that houses a community conference room seating 204 people and the library.

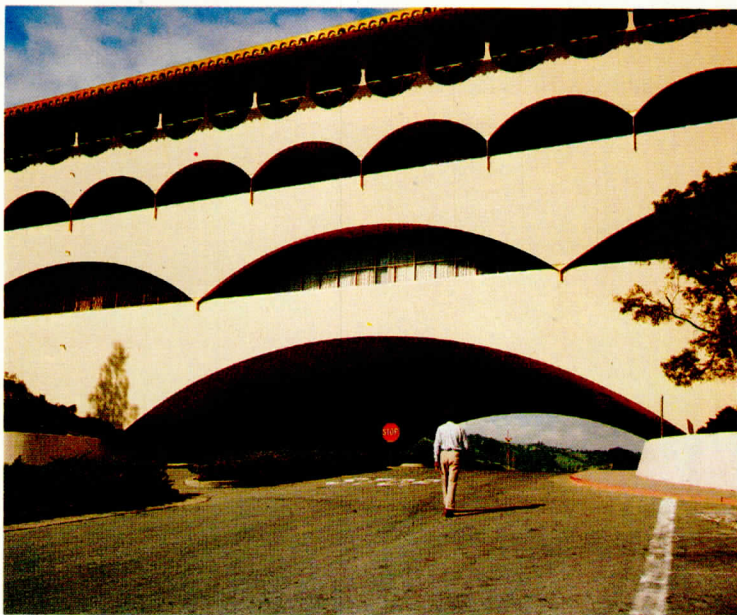
The hall of justice wing was financed by a special bond issue voted for by the county population in 1965. Construction began in 1966, and the building was occupied in January 1970. It houses the municipal and superior courts, the sheriff's department, prosecutor, public defender and the county jail.

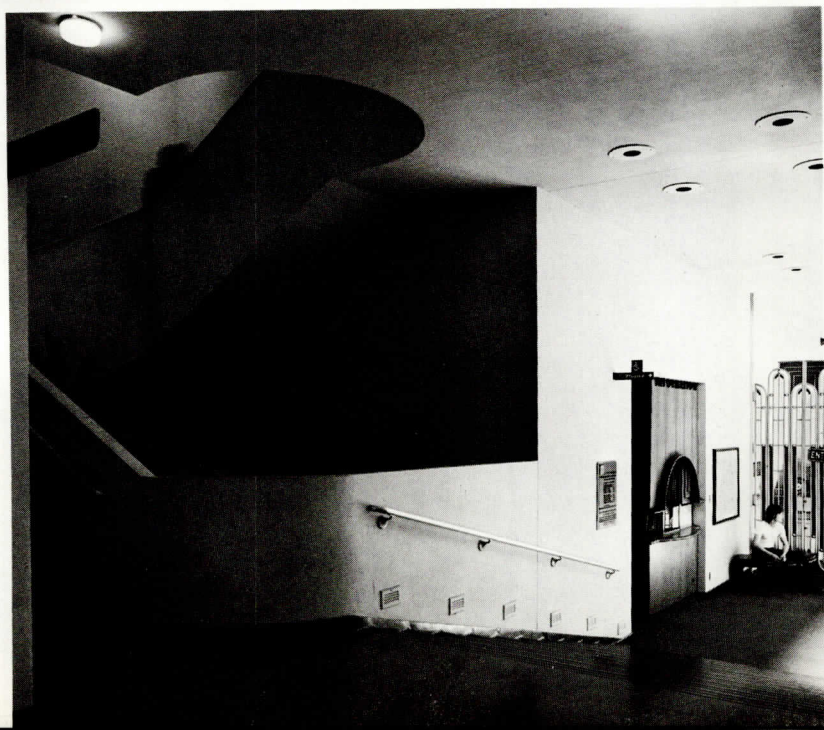
If lucky enough to stumble into the administration building's entrance under its large arch, the visitor is handled with admirable architectural deftness. Looking up from under the arch, one can see the terraced corridors, as in the Guggenheim. The eye is drawn by the light filtering through. Ornate gold anodized gates are off to the entrance side of the arch, and beyond there is an escalator. The combination of architectural space-defining mechanisms draws one inside. The entrance stairs have small risers, forcing the visitor to ascend slowly, somewhat regally. Farther into the building, light filters down through a geometrically sculpted stairwell to the right and from a skylight above, bathing the planted mall ahead in soft, filtered light. The escalator (not currently used due to energy conservation) takes the visitor up to the main floor where he is placed in the center of government activity.

The justice wing lacks the easy legibility and intimate scale of the administration building. It is more self-consciously an architectural statement than a statement about government through architecture. Then again, the functions it houses (police, courts, corrections) call for a certain amount of camouflage. The playful relationship of forms and function gave way to the art of disguise when it came, for example, to locating the jail in the justice wing.

Materials throughout the building are simple: Floors are lightly tinted concrete; walkways and stairs are terrazzo; partitions are sheetrock. Elements for the project were precast in a plant at Petaluma a few miles north and transported down the

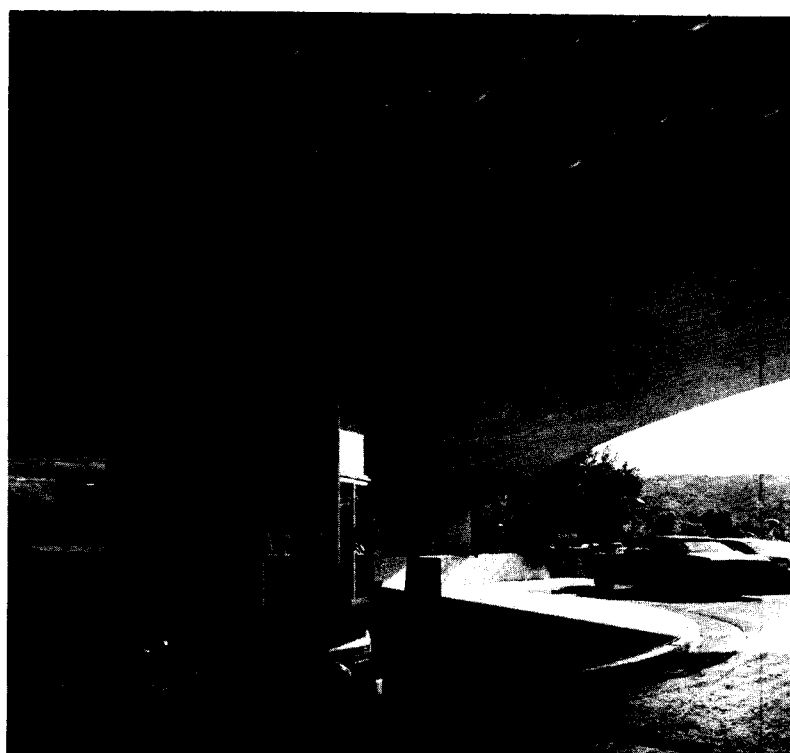
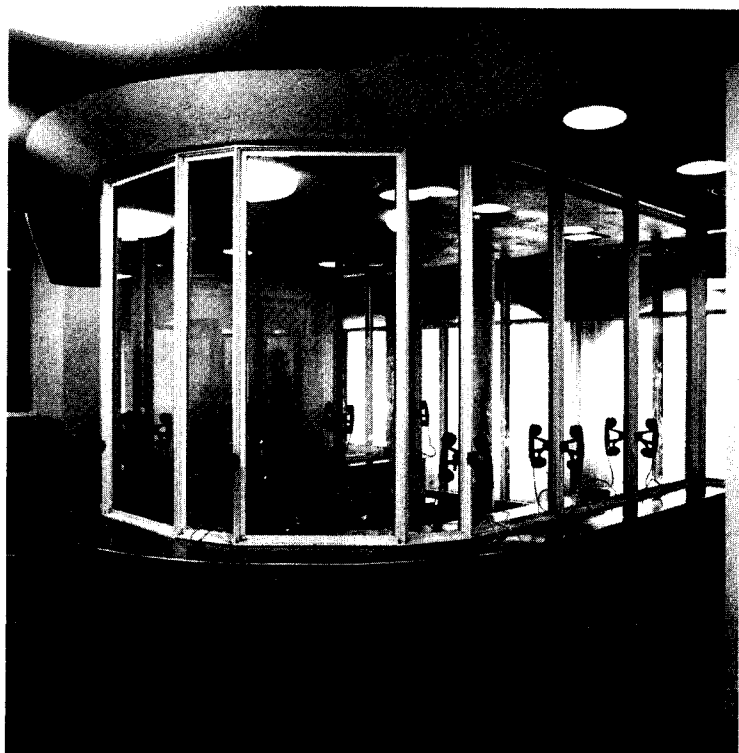
*The entry is through a wide, flat arch where the road penetrates the building (below) and into one of the building's handsomest spaces (above right). From there stairs lead to the first level where the drama of the atrium begins to unfold (right).*







*The hall of justice contains elegantly planned and finished circular courtrooms and a less elegant jail (visitors' room below) that bristles with security. Across page, a close view of the building's unrestrained exterior decor.*





## A sealed vs. a breathing environment.

freeway. Office bays are 26 feet wide on one side of the administration building and 40 feet wide on the other. Both bays in the hall of justice are 40 feet wide. The unified modules in the second phase simplified prefabrication.

It is basically post and beam construction, with exterior balconies and internal corridors cantilevered over the posts. The decorative arches are cement stucco on metal lath hung from the floor above (Wright christened them "pendant crescents"). The structure is highly segmented to accommodate expansion of building elements and to lessen the effect of earthquakes.

The roof is a lightweight concrete cylindrical shell, highly decorated on the edges with a circular motif. A gold treatment was to be used on the roof but it was impossible to find a method of surfacing the roof in gold that would not tarnish overnight. Borrowing from Wright's most recent project that was also domed, the Greek Orthodox Church in Milwaukee, Mrs. Wright and the Taliesin team had a blue rubber-based polymer sprayed on the surface. The choice of blue has been severely criticized. Gold would have harmonized with the dry grass of the summer and the green hills of spring. After almost 20 years, however, it is hard to imagine the building any other way.

If there is any single issue that has rocked the center in recent years, it is energy consumption. Kind critics say that Wright could not have anticipated the world oil crisis. Stern critics claim that there was a contradiction between his claims for organic architecture and the energy design of the building. All agree that at present it is operating as an energy guzzler and needs to be returned.

Initially Wright hoped for "natural airconditioning" of the center, in principle like his Larkin building in Buffalo. The climate was very temperate by comparison with Buffalo and was mostly dry like Arizona, eliminating the need for extensive control of humidity. Wright's impulse was to use the building itself to provide heating and cooling, for example, by cooling warm air in the shadows beneath the great arches and then using convection currents to drive the cooled air up through the office floors by opening doors and transoms. His idea of "bringing the outside in" was particularly well suited at the time to Marin, which prided itself on its environmental amenities, among them abundant fresh air, the antidote to urban "congestion," Wright's nemesis. Getting the air flowing and the building respiring was a way of achieving a healthy environment, and is probably not misguided, even by contemporary standards. Unfortunately, the building's users have never learned to use it in this way, that is, to systematically open and close doors and shut down the mechanical systems to exchange air and save energy.

Marin is not as balmy as the transient visitor might expect. It has very wide diurnal temperature variations (as much as 40 degrees Fahrenheit), and the temperature on the surface of the building can change radically in a matter of hours as dense fog rolls in and then is burned off by strong midday sun. The administration building had to be mechanically cooled and heated and not only lets the outside in but also lets the treated air out through holes in the atrium.

While Wright was hailed for his understanding of the daylight control through the artful use of overhangs and eaves, he did not insulate his "wall screens" very well and failed to control the thermal mass characteristics of the building. There is probably no reason why this building could not be modified to become highly energy efficient by recirculating the air and using the atrium to maintain rather than dispel treated air. But current proposals call for the opposite of the "organic" solution Wright would have sought. Plans are being drafted to close off the open entrances to the building with a sealed glass wall and to manage the indoor environment as in a conventional office building. Certainly this proposal is not in keeping with the spirit of the building, which would be better served by

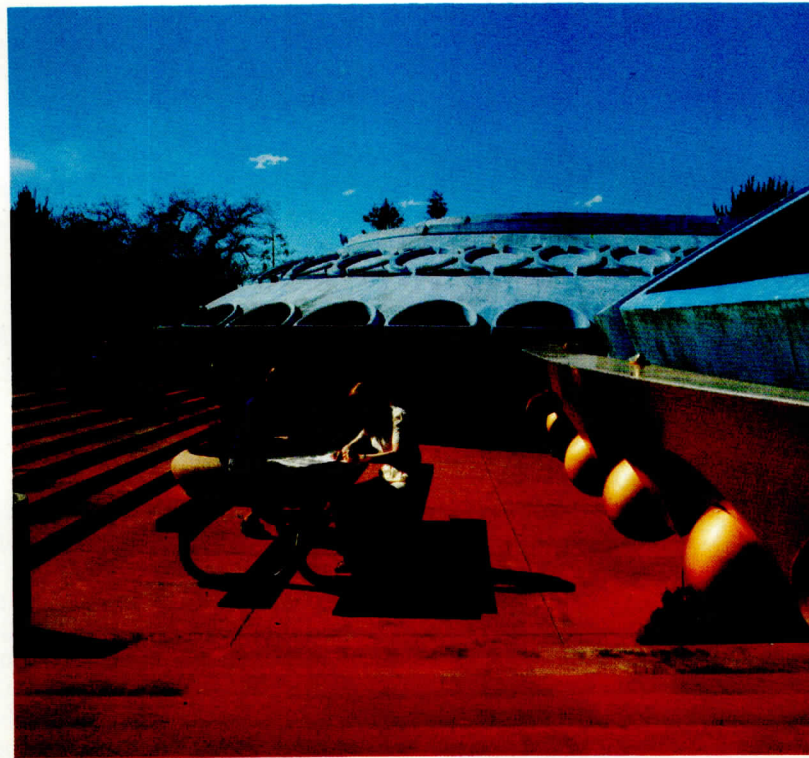
decentralized heat sources and systems of opening and closing doors to manage and store heated and cooled air. These appropriate technologies remain in conflict with the trend toward automation of buildings, and we no longer have Wright's crusading spirit to marshal a case to justify still more front end investment in government.

Soon after the opening of the hall of justice, Judge Harold Haley was killed there and Angela Davis was held in the third floor county jail. During the same year, a bomb blast destroyed a courtroom and bowed the floor above.

Just as Watergate revelations came as a shock to those who had invested great faith in government, bombings and killings cut through the mystique of Wright's masterpiece in Marin. Now in the '80s a relaxed atmosphere has returned to the halls of the Civic Center complex. The veterans' auditorium and lagoon that Wright envisioned in his original plan for the area have been built with some modifications. The borders of the once pristine site and the tops of once vacant hills have been filled with commercial developments. Applications are pending for large scale development of areas just north of the Civic Center. People may not be swept up in a sea of enthusiasm for the buildings, but the center has grown older with the county and is not in need of radical upgrading.

Wright's original idea for the Civic Center envisioned a highly participatory form of government at a time when it was not in vogue anywhere in the country. The offices for the supervisors were not protected from the public nor were they segregated by layers of secretaries and staff. They can be reached directly from the corridor near their hearing room, with only a simple screen separating them from the public. The supervisors' hearing room is adjacent to the planning commission hearing room. Their common wall can be removed for larger meetings (the two podiums turn on axis to form a single long podium). Both rooms are daylit by rear windows adjacent to exterior balconies. The feeling of accessibility created by these arrangements is unmistakable.

The placement of the library under the dome is a choice that has come under frequent attack from the point of view of function. It is difficult to find, especially for children. Lighting is criticized as inadequate when compared to exceedingly generous U.S. school standards. By traditional standards, especially by Wright's 19th century eye, the lighting is more than adequate. Wright provided for gradual adaptation to a lower level of illu-



## 'The building itself has exerted leadership.'

mination. Contrasts are reduced and the light is softened without necessarily reducing efficiency. In fact, we may find schools in the future reverting to this kind of illumination rather than bathing work surfaces in bright fluorescent light.

Despite the flexibility that Wright built into the office spaces (two-foot modules for office lighting, complete electrical grid running through the floor), office workers complain about the difficulty of laying out spaces within the established bays. The partitions have been changed countless times as testimony to their adaptability. Few of the original elements are left. It is true, however, that the interiors of office suites are often tightly packed and lack some of the flexibility of modern open plan offices. The workers agree, nonetheless, that shared amenities in the public areas of the building go a long way to compensate for the deficiencies of private offices. Open corridors allow them to see fellow workers in other offices and provide them with a sense of the "overall operation." They also have very easy access to the outside at the upper level of the administration building. Doors open directly to the "water conservation garden" that climbs above the roof line to the top of the knoll.

Some people complain about the decoration of the eaves with gold anodized aluminum balls that can be seen from every work station and from the top floor corridors. Willard Schwarz, the architect now responsible for liaison between Taliesin and the county, suggests that people feel uncomfortable with the gold balls because they are accustomed to seeing them at a great distance.

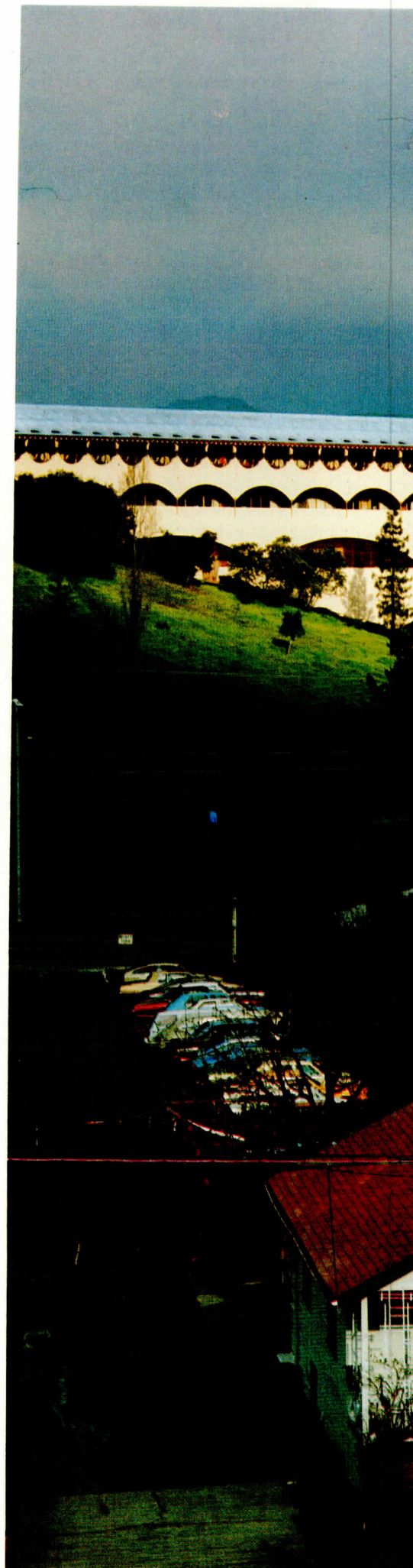
The court floor in the hall of justice must rank as one of the masterpieces of functional layout. Aaron Green worked with a number of jurists to develop a circular courtroom format that captured the spirit of Wright's thinking about justice and brought judge, jury and defendant into face-to-face communication. The circulation and plan of the hall of justice offers free movement to judges from their chambers to any one of the courtrooms through a restricted corridor behind the courtrooms. Prisoners are brought down to courts through a separate route from the jail and enter courtrooms from the rear. The courtrooms themselves offer acoustic privacy, visual simplicity and a sense of calm, partly due to the polished walnut furnishings custom-made by prisoners at San Quentin.

Perhaps the most incongruous part of the building is the jail, the design of which Wright left to Green. An undersheriff said, in response to a request to go through it: "There is only one way to see it, and that is as a prisoner." It is hard to imagine that 130 to 140 people are incarcerated in Wright's dramatic structure on its awesome site. There are no romantic views of hills framed in the "pendant crescents." It is a jail.

Theologian Theodore Gill gave the opening address at the dedication of the building. His words summarize the passionate feelings the building evoked:

"The artist's vision is supposed to break us open: Suddenly we see, enormous, solid, what one superbly disciplined dreamer saw and drew. . . . It is not a profile you will forget. Greatness startles every time it is encountered. . . . If this building is as great as I think it is, we will never get used to it."

This remarkable marriage of master architect and experimental client produced an unusually social building, that, despite minor flaws, continues to exert a powerful force on the political fortunes of the county. The pride of the building has always elevated the image of government and called a more talented and capable group to public office. In this odd way, the building itself has exerted leadership. Wright's ideas of government continue to shine through the building. His uniqueness is all the more evident in contrast with contemporary government buildings designed by postmodernists who search for cosmetically derivative, fugitive images to capture the essence of public life. Wright's approach was far more simple. He struck at the core. □





# Serge Chermayeff: Thinking Before Acting

*Reflections by the recipient of this year's AIA /ACSA award for excellence in education.*

*Serge Ivan Chermayeff, author of the following article—a lecture given at Ohio State University in February—is the recipient of the AIA/Association of Collegiate Schools of Architecture's 1980 award for "outstanding contributions to the field of architectural education." The molder of two generations of architects at Harvard, Yale, Massachusetts Institute of Technology, Chicago Institute of Design and Brooklyn College, his "wit, charm, bullishness, intransigence, knowledge, taste, prejudices and delights all contributed to the zest of a great teacher," said the nominating statement.—Ed.*

I am as old as this century. From the '20s to the '70s I was involved in making designs across a broad spectrum: industrial design, furnishings, interiors, architecture and urban design. I thought of this activity as a single field of professionalism and described it in the '40s as "environmental design." From the early '40s to the '70s I was a teacher, trying to get people to understand this unity of activities. Since my retirement I have had time to think at leisure, and this last decade has made it imperative that we think before acting. We have been approaching a crisis; everywhere, violence and the abuse of nature and of humanity have increased.

During my life revolutions and wars, great and small, have never ceased. They are now escalating. In the Western world, in which I have lived, I have witnessed growth and change, greater and faster than in any recorded period in human history. The industrialization process that began earlier moved slowly toward 20th century affluence. Abundant resources were obtained, too often, by questionable means, and, until recently, the first results have gone unquestioned in the developed world. The almost miraculous advances in science and technology have been accepted as compensation for tremendous casualties and the passing of great traditions. The older cautious steps, moving from simple things to complex ones, have been superseded by immediate acceptance of the "instant" benefits of material improvements, as soon as advertised.

Communications systems have become global and instantaneous. Mobility has increased correspondingly. Suburbias at short distance from the urban centers, "where the action was," grew in the early railroad age, and exploded with highways and their automotive vehicles, abundantly produced by mass production and fueled by the seemingly endless availability of cheap oil. Sprawl and chaos went hand in hand.

The car conquered the world. It became the universally desired chariot, not only a vehicle but a status symbol. In the U.S. the car, alas, conquered the railroads. The private vehicle, moving from target to target of individual whimsy, spread Tarmac wherever it rested, blighting nature and cities alike. We suffer from automania. Nonrenewable fuel no longer flows like water, and water itself is no longer in endless supply. Even clean air is at a premium. The developed nations, like dinosaurs, have overcropped their pastures and polluted the whole environment.

Growing expectations and appetites for more material comforts have coincided, unfortunately, with the exponential growth in world population. As Joan Robinson, an economist, has ob-

served, "An increase in the expectation of life is a clear gain, but an increase in the number of bodies (with all their mechanical extensions), in a given territory is by no means an unambiguous benefit. A higher density of settlement (above a threshold, that is soon passed, permitting adequate mastery over the environment) means a lower average availability per family of natural resources, including cultivable land, and it becomes professionally more onerous to make good the deficit by investment as density increases. . . ."

Biologist Heinz von Foerster underlined our dilemma in his preface to my 1971 book *The Shape of Community*: "The processes of change . . . initiated are even in retrospect difficult to comprehend. History—as it was and is now written—is merely descriptive, and even at that highly defective, because of arbitrary selection of descriptors in the absence of guiding concepts of communication and control.

"These conceptual difficulties, of course, arise because man's genetic pool is exposed no longer to a more or less stable ecological cultural system, a constant 'milieu extérieur artificielle,' but to an environment which itself evolves as a consequence of man's ability to project and objectivate thoughts and descriptions. It is not merely change one has to contemplate, it is the change of change that complicates the issue of a development devoid of almost all continuities, resembling a cascade of discontinuities, of 'quantum jumps' in kind.

"In the face of sociocultural eruptions, what does planning mean? How does it help? What can still be designed that is not obsolete by the time it is produced?"

Wilfred Owen, in the *Bulletin of Atomic Scientists* last November, wrote: "By the end of this century the world will be more urban than rural. . . . Everywhere the attempt is being made to accommodate growth and change by simply adding on to what is already there. . . . In earlier times cities were able to cope with imbalance caused by growth because neither growth rates nor changes in technology were great enough to damage the system. Today the changes affecting urban areas are massive and precipitous. Improvisation is not enough, and a process of consciously designing the environment and managing growth has become essential. . . . The effort must be aimed at substituting urban design and redesign for the accidental city. . . ."

Urbanization is a significant step in the evolution of Homo sapiens, the social animal. This process is not dissimilar in its nature to the evolution of the universe and other forms of life in it as we know them. On a general level the human community in man-made environments seems to follow some of the laws of natural evolution and mutation—interdependence, conflicts and adjustment—an interaction without end between living things and their environments. Man has simply added another dimension to ecology.

The new technologies of communications and movement are so pervasive that they now play the role of a cultural catalyst for every environment, induce an ever greater interaction between settlements and increase their interdependence. Industrialized (developed) societies have already become components in a global "urban" system; others are following at different speeds.

This universal interdependence appears to operate irrespective of the spatial, cultural or other dimensions of settlements; the traffic and communications of historic national and state capitals operate in a similar way to all metropolitan centers and their various extensions. Together they constitute a global hierarchy of settlements in constant interaction linked by movement and information subsystems, the two most conspicuous components of the technological supersystem now emerging.

In spite of this technological reality, a new condition in the evolution of man and his habitat, most societies continue to be directed by institutions rooted in the simpler, self-sustaining economies of an agrarian era, or in ideologies of the early industrial period. In the past the effects of the products of the land or of factories were comprehensible to all concerned. If something went wrong, it could usually be corrected by appeasing the gods or their delegates on earth, by throwing them out, by annexing neighboring resources or by migrating to greener pastures.

These relatively simple remedial steps have become ineffective rather suddenly. In the foreseeable future neither intervention, whether divine or military, nor increased production alone, holds much promise. Migration also will probably be limited to search for employment. (Thereafter, in a more distant and unimaginable, equitable future of genuine universal abundance, movement on earth may be limited for the majority of men to the search for rewarding leisure.) An educated, informed humanity in the process of redefining its sophisticated social needs and its control of technical means can no longer remain uniquely pragmatic, curative, palliative or opportunistic in action.



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Transition periods have always been critical for the societies involved. The present urban revolution has produced unprecedented crises. Existing, crowded cities are hardest hit, but the effects of change extend everywhere. Social and technical conflicts are only magnified in urban situations. Poverty, injustice, alienation, illness, pollution and congestion are failures that reach the existing cities first, but these and other technological and sociological plagues and absurdities threaten man's entire habitat.

In the U.S., technologically the most highly developed society in the world today, people, in James Reston's words, "... now have a more solemn vision of the tremendous scope and complexity of human reconstruction." It is the constant preoccupation of thoughtful men everywhere. The multitude of agonies are discussed daily and are too familiar to be described here. Their magnitude now transcends anything previously experienced. The collective crisis has become ecological in scope and effect and has a direct bearing on the environmental issues with which we are concerned.

The city dwellers in developed societies have suddenly become reluctant to leave their destinies in the hands of obsolete institutions controlled by invisible experts or all too visible politicians, who until recently were believed to be the dispensers of the technological cornucopia. The habitat of the most affluent societies where the citizens live, work and should find their pleasure has been deteriorating and becoming ugly and obsolescent at a frightening rate. Technology is racing ahead of social need.

Now even the most privileged of our citizens have suddenly been jolted out of their complacency. Everyone is looking for a tolerable accommodation to critical change: the depletion of natural nonrenewable energy resources and the need to reduce consumption on a scale never before envisaged. Some symptoms of general concern are already visible: The options of "hard" (technologically sophisticated) production systems and "soft" (simpler labor intensive) systems, and the Schumacher philosophy "small is beautiful" are being examined with appropriate seriousness. There is a growing mistrust of collective profiteering. Bureaucracies, big government, big industry and big business are generally suspect.

Rich people are again enamored collectors of anything antique or old looking, such collecting perhaps a symptom of sorrow for the vanished craftsmen as much as random acquisitiveness or hope of safe investment in inflated art. The fashion of 50 years ago (love of new shapes) is being reversed today. The "luxury" garbage advertised in full Technicolor in the pages of our magazines is evidence of cultural decline. I have become conscious of the trivialization of my profession.

It appears that man is confused by too many options. Historicism has supplanted history; simplicism (superficial answers), simplicity; estheticism (affectation of sensitivity), esthetics. The "creative," intuitive approach to a problem is made to appear superior to the processes of intelligence. Artists, while they claim superiority, refuse to accept responsibility for their actions. The facile pass for the gifted.

In all this I detect a return to the formalism and eclecticism that was the fashion at the turn of the century. Yet it has become clear that the difference between intuition and knowledge can no longer be so easily drawn. In any field whatsoever, the protagonist has to draw on many other sources to complete his own work. In the planning and design professions, of course, this broader frame of reference is essential. A simple sketch no longer suffices to project an image of something actually complex. A design process must employ a variety of skills and methods with both intuition and intelligence, in the search for a model.

Indeed, the process of designing complex things has become a technology in its own right. But we still have technophobes in our midst. Model building starts with the questions of general

need, precise purpose, organization of parameters and available means for action. Today we must address the more specific aspects of the education of future designers in the broad context of environmental design.

In the beginning of this century artists, painters, sculptors, architects, engineers, planners, natural scientists and philosophers joined forces with writers and film makers to project appropriate, significant, new forms to meet new situations. Optimism was predominant; opportunities for reconstruction, after the devastation of World War I, appeared immeasurable. In the wake of redeployment of intellectuals from many countries, "the modern age" was ushered in.

In the period between the two world wars, traces of which can still be seen today, designed products were part functional and part fashionable. The early definitions of "form follows function" were simplistic, largely mechanical in content and materialist in cultural purpose. We now recognize that functionalism is a complex composite that affects every aspect of our being. This was succinctly described by John K. Galbraith as the techno-structure.

Whatever was produced in the last few decades indicated a progressive movement away from making "things" to the understanding of "systems." We are beginning to abandon the notion of creating "complete" things. We are recognizing that we are participants in a process of evolution: "change and growth." Not only are we getting more, but, in the process, we are becoming different. In other words, a qualitative change is the inevitable companion of quantitative increase.

Analogies that compare an organism with its circulatory, digestive and nervous systems work for every member of the species, but they do not tell you much about the individual member of the species, who is full of variants, not only in time and space but within his own nature. Finger and voice prints are evidence of the infinite variety of humanity, which only appears to be the same.

Over the years my own preoccupation changed from things one imagined could be personally mastered, such as a painting or a sculpture, to structures of use, such as industrial design or architecture in which you could perhaps master the client first. But then one found, of course, that in addition one had to master the economy and compromise with the existing culture, in which you were supposed to be making an independent, creative judgment. Planning and designing cities is even more difficult.

After some lucky practice in design, I found this activity unsatisfactory and moved away to more theoretical involvements, trying to understand more of the larger environment and its physical and social complexities, generally, and its urban problems in particular.

Everybody at this moment is aware of the three aspects of our changing environment: that which exists outside human endeavor, that which is becoming more and more modified by our interference with it, and the man-made environment that is becoming more powerful and pervasive than nature itself. We can no longer step aside when we have made a mistake and hope that the jungle will cover up the error. We just have nowhere to go. Our mistakes haunt us, and everything that we pollute or interfere with remains a constant reminder of our follies, some of which have reached a point of no return.

The period of recognizing nature's reality as being complex was quickly followed by the even more baffling task of recognizing the complexities of one's own making. We have recently been able to develop techniques of examining this complexity, a very significant addition to our arsenal of tools: an electronic, computerized technology. We are winding up the first industrialized epoch and are entering an unexpectedly different one.

The differences are so significant that we can now speak of a critical transition. A historian could add that there have been many significant critical transitions in the past, but there is no

doubt in many scientists' minds that some transitional periods are more drastic and critical than others. There seems to be no question at all that our present technological quantum jump, whether it be more or less critical, is astonishing beyond measure. Of all the scientists mankind has produced in all recorded history, some 99 percent are living today. Ninety percent of our medical knowledge was acquired in the last 25 years. Our technologies have, so to speak, extended not only our knowledge and techniques but have extended our comprehension. Collective humanity itself has been transformed.

Methodology of comprehension followed the need to comprehend. We have gathered and still retain many significant symbols made by man "during his ascent," to borrow the wonderful phrase of Jacob Bronowski. Now we are faced with the search for the essential symbiosis for man among men and for man in nature. We are making an *ecology of our own*. Everything we now do or will do will change our environment in a fundamental way. This ecology may be identified as the third,

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after the *ecologies of the sea and land*. A fourth, the *ecology of space*, is already on the way. We are living simultaneously in all four. "We are no longer what we were."

We have not yet grasped the totality of planning anything in our time. No matter who plans what or where, the result will reverberate in the Pacific, in the Near East, in Africa, in Latin America, Russia, China or any places you would like to think of as physical, territorial or political, economical or technological entities. Man is global in his effect.

Whenever anybody now accepts the role of the designer, he or she must accept the burden of great responsibility. The myth of creative uniqueness and superiority must be forgotten. The jolly independent artist is out. So is the jolly hermit. So are the merry playboys of the Western world and their extravagant shenanigans. The shrinking of a skyscraper to resemble a grandfather clock is not an artistic, creative act. It's black comedy of contempt. J.B.S. Haldane, a biologist, wrote a witty essay, "On Being the Right Size," in which he suggested that nature had been very careful to evolve organisms that were totally appropriate as systems to the physical forces with which they had to contend, such as gravity, and pointed out that if a flea were the size of an elephant it would break its legs, and if a flea were the shape of an elephant, it would not leave the ground. The same principle applies to us.

We do not realize, when we want to have more of something that appears seductive, that more is going to become different, perhaps worse or perhaps better. When it becomes worse it becomes threatening and may even mean death and destruction. We don't have to wait for a nuclear holocaust to destroy our humanity. All we have to do is to continue to build cities as bad as the ones we are now building, and we will soon have destroyed our humanity without any chance of its return.

So then a question arises: What does a university do? What can it do? The main thing is that a university has become a very valuable place, inasmuch as it is, at least theoretically, outside the pressures of the marketplace or of politics, where one may think in an atmosphere of detachment about real things. However, one of the dismal laws that I have discovered is that

institutions always lag behind technological change. Technological evolution is now moving at a fantastic speed. There is only one technology; the most efficient and usually the latest. Anything obsolete can rationally be got rid of. But institutions have a dreadful way of hanging around long after their usefulness has ceased to function. Bureaucrats are always busy building more bureaucracies. All are concerned with maintaining their power, and all are, if allowed to be, self-perpetuating.

Theoretically, the university's administration, faculty and students do not resemble the bureaucracies of government, industry or business. On the contrary, inquiry into new realities is as much their purpose as the continuous transfer of accumulated knowledge and sensibility. Great changes are occurring in academe. Disciplinary and departmental boundaries are being crossed. Faculties are redeploying their expertise, drawing new energies from outside to supplement their customary values. They are in the process of reorganizing their methods and changing their commitments and priorities.

In this process of re-examination, bridges are being built between diverse interests, and new studies are established that are catalytic in character. Many different talents may be released rather than repressed through work in groups. The intellectually biased, reasonable characters can become complementary to others who proceed intuitively. Given a common purpose, complementary opposites may actually stimulate each other beyond their usual capacity.

In my own field, which I have come to think of as environmental design, irrespective of scale, I am convinced that the essential ingredient of research, now missing, must be immediately supplied. Our educational and professional spectrum must be extended beyond the conventional three to five years of "professional" training for the "business" of "architecture" or "planning." *Architects and planners must know more.* We require postgraduate, ongoing work in research as a career within universities, with room for theoretical work as well as applied work, in the larger framework of environmental design. I can imagine that such studies could be structured to include both individual and group work and would involve students and faculty from other disciplines in the very beginning. No school of "architecture and planning" can afford to work alone. We must be prepared to design and build new cities, and we are faced with the need for the drastic reconstruction and reorganization of existing ones.

May I suggest a few priorities for this giant enterprise:

Existing world cities are already linked by aviation. Continental and national cities are partially linked by rail and road transportation. Mass transportation systems must determine location of new cities and industries.

New cities must be structured by appropriate economic mass transit and public vehicles systems within. Private automobiles must be kept out of high density metropolitan and city cores. Movement systems and supporting flow systems of services and utilities should determine the location of the various container systems: the inhabited places, and their supportive facilities.

A painter friend, Welliver, confesses to be always looking at his surroundings irrespective of what else he may be doing. It is my belief that everything observed in nature or in the man-made environments is a vital aspect of the learning process. It follows that everything of excellence man creates, conserves or saves from destruction is an invaluable learning thing or place. Such places as are to be designed for the new technological environment must include those designed deliberately to promote social mix and awareness in concourse. There are few mixing places in our present culture as we move enclosed in our automobile from target to target leaving everything between unexplored.

We need exchanges between public transportation systems that become public places where pedestrians old and young, poor or rich, will find themselves as a matter of natural, daily necessity and observe each other at leisure and in security, while

sharing the amenities provided. We must learn to welcome strangers of different make-up and color.

Architect and urbanist Richard Williams speaks of "the urban stage" and its "settings" and stresses the need for "intensified perception to understand their wholeness." Robert Heilbroner declares: "In the end (democratic) socialism must seek to build a society that is at least as interested in the celebration and preservation of the timeless rules of cherished lifeways as in the continuous pioneering of ever new modes of social existence. . . . What socialism needs now is a philosophy that searches for elemental moorings along with programmatic change."

Without profound changes in our attitudes toward urbanism, which now appears to be the inevitable next stage in man's evolution, we shall not be capable of designing rich containers for life. If we succeed, these may never be perfect, but the desperate conditions bordering on disaster and despair may surely be vastly improved. Von Foerster points out: "It took our ancestors half a million years to add 10 million souls to reach the stone age population; contemporary man accomplishes this feat in just two months." In fact, the entire human pyramid that has accumulated since the dawn of man one million years ago amounts to 80 billion people, 5 percent of whom are living now. This means that one out of 20 men that ever lived is now alive, and in just two decades from now, in 2000 A.D., the ratio will be one out of 10.

We will need an enormous amount of humane places, and we will need them fast. The four ecological clocks—biophysical, sociological, methodological and technological—have for all too long shown a progressive synchronization failure. This has reached a critical stage. Man faces the options of revolution or catastrophe. Time is running out. I began this somewhat rambling discourse with a reminder of continuous alarms and excursions, wars and revolutions, which have been constant accompaniments of my life. The mosaic of my prejudices and preoc-

**'This mosaic of my prejudices and preoccupations . . . is not intended to alarm you but to challenge your generation to face harsh new realities.'**

cupations which I have laid before you is not intended to alarm you but to challenge your generation to face harsh new realities and, it is hoped, to overcome them.

The events of the last decade tended to change me, in my retirement, from a tentative optimist to a distressed near-pessimist. But, of course, the events of the next decades may well be drastically changed toward a better human condition, which you will enjoy. Meanwhile, I hope you will perhaps share some of my concerns and commitments or at least find them useful while developing your own priorities and responsibilities.

Perhaps you will remember the poetic warning of Auden's ". . . seekers after happiness, it is later than you think." Another poet, Anatol Kuznetzov, has provided a more eloquent closing than I can: "It is not my intention to be original, and what I have said is common knowledge. But I should like to mention vigilance once again. I want especially to remind all the young, the healthy and active, for whom this discourse is meant, of their responsibility for the fate of man. Comrades and friends, brothers and sisters, ladies and gentlemen, please pause in your pursuits and recreations for a moment. Not all is well with the world. Comrades and friends, brothers and sisters, ladies and gentlemen, civilization is in danger." □





# Profile of the Winner Of the 1980 Firm Award

*It is Edward Larrabee Barnes Associates of New York. By Cervin Robinson*

Over the roughly 30 years of its existence, the New York City firm of Edward Larrabee Barnes, FAIA, has shown itself awesomely disregarding of the winds of fashion and apparently happy to do major work whose special qualities, it happened, were mostly lost in publication (work that in consequence gets hardly a mention in critical histories of recent architecture). At the same time, the firm has been successful and has won the high regard of the profession (as evidenced by this year's AIA firm award), and the high regard in particular of the remarkable group of younger



*Barnes, center, surrounded by his associates: left to right, Hildegard Bergeim, Edward Jacobson, Alistair Bevington, Percy Keck, John Lee. Opposite, Scaife Gallery, Pittsburgh.*

architects who have passed through the office. Barnes' firm also raises intriguing questions of how a dominant and utterly confident designer can maintain control of his firm's work as the size of its jobs increases and as the firm consequently grows, of what he can or cannot delegate (and at what cost and to whom), and of how a design approach that has worked with smaller buildings can be transferred to larger ones.

Barnes himself, asked the key to his firm's success, says it lies in collaboration and generosity, rather than in ruthless efficiency, and in a willingness sometimes to start over from scratch. He says that a characteristic of his firm is self-criticism and that even the echelon below associate level often gets involved in this. He feels the size of an office is critical and that 45 or 50 people, the present size of the office, can handle most jobs, but adds that a price of small size is that sometimes jobs must be turned down and that doing so takes guts. On the other hand, the firm has always made a point of doing some houses, and the availability of such small jobs has helped it survive the recession. If this description suggests an easy give-and-take and modest goals, it is totally misleading, for this is an office in which design is the

**Mr. Robinson** is an architectural photographer and writer based in New York City.

product of a single hand and in which every move is intended to make the best use of that hand; it is also an office that is handling some very big jobs. The story of Barnes' firm is first the story of his personal mastery of a design approach and then of his absolute maintenance of this approach as the office grew first to a size that was ideal for the younger designers working in it and then grew further to its present size.

Barnes' training was that of many of his generation: at Harvard under Gropius and Breuer in the years just before World War II. Gropius offered, Barnes says, functional training

in analysis and problem solving; Breuer offered the example of an intuitive and almost magical manner of composing buildings. The influence of the latter on Barnes was strong, and it was only after a time that he acknowledged to himself that his own gifts were not similar to Breuer's. Yet, even before he resolved this conflict, the ingredients of his style were apparent: in his site planning, in his lucid design solutions and in his willingness to use local building technologies. One or more of these was apparent in his own house on a raised earth platform (1952), in the series of camp buildings he did in the '50s and in his consulate for Tabriz (built in 1966 but designed in 1959), which used local Iranian brick-vaulting construction.

Richard Moger, AIA, who joined the firm in 1953 and was Barnes' first associate, recalls: "When I started with Ed, I think I was the second person. It was Ed Barnes, Al Brownell and myself. And then, shortly after I went with Ed, Al left, so for a nice period of (I think) a year it was just Ed Barnes and me—and Mary Barnes was participating in the office. The period I spent with Ed Barnes was really the formulation of the practice: small residences, you know, going into housing areas, small college work and some small commercial work. [The office] grew very slowly: two people, three people, seven people . . . [by 1964] almost everybody had been there a long time, nobody

## From Mikonos, a lesson in continuity.

left. There wasn't any turnover."

Barnes says that a visit to Mikonos in the late '50s catalyzed his mature style, that it was the continuity of materials in Greek vernacular architecture—between roof and wall and pavement—that suggested a route for him away from the work of Breuer to an architecture of volumes, not of planes. One can wonder whether this visit to one of Le Corbusier's sources did actually suggest the change in Barnes' use of materials or merely offered a respectable justification for it. In either case, the first fruit of his mature style was his design for the Haystack Mountain School of Crafts (1959-62), a community of studio and dormitory buildings set on a steep slope, on either side of a flight of wooden steps that descend to just above the sea off Deer Isle, Maine.

The experience of Haystack is, on the one hand, of its relationship to the precipitous, wooded hillside and to the sea, and, on the other, of the simple order of the shingled, pitch-roofed buildings. In its use of wood Haystack illustrates Barnes' newfound continuity. The studio roofs at Haystack, bringing north light from under a steep pitch and south light from lower windows under a slight pitch, probably owe a debt to Aalto's municipal buildings at Säynätsalo (and—the roof's revenge—have had a history of leaking). Nevertheless Barnes' reuse of shingled surfaces and pitched roofs is of a different order of achievement than the more recent reuse of Corbusian forms in vertical boarding or even the recreation of shingle style images. The one offers a quality shared by New England materials and those from the Mediterranean; the others reused images of earliest allusions.

Haystack was pivotal to Barnes' work and to his office. It was a "dream project" to Giovanni Pasanella, AIA, who joined the office in 1959 and was put to work on the working drawings. A model of Haystack in Rockefeller Center brought one of the present associates, Alistair Bevington, to the firm in 1960, and Haystack accounts for the influx of bright young designers that followed. Charles Gwathmey, AIA: "When I was there and Bob [Siegel] was there, he had all of my generation's hot Eastern Yalies—he had Jaque Robertson, Gio Pasanella, Bob Siegel, Richard Weinstein, all the guys that went to Mayor Lindsay's group, right?—and he drew off Yale, I mean he came up there and taught, and he wanted us to come to his office because he believed in the criticism in those days and enjoyed it."

Richard Weinstein, asked to confirm that he had gone to Yale: "... Certainly not! (laugh) I spent a year at Harvard and I despised it, so I went to study with Lou Kahn at the University of Pennsylvania, where I finished my architectural degree. When I left Kahn, I asked him whom I should go to work for, and he said Ed Barnes. He felt that Barnes of all the prominent architects was the least doctrinaire with respect to the mod-



Ben Schnall

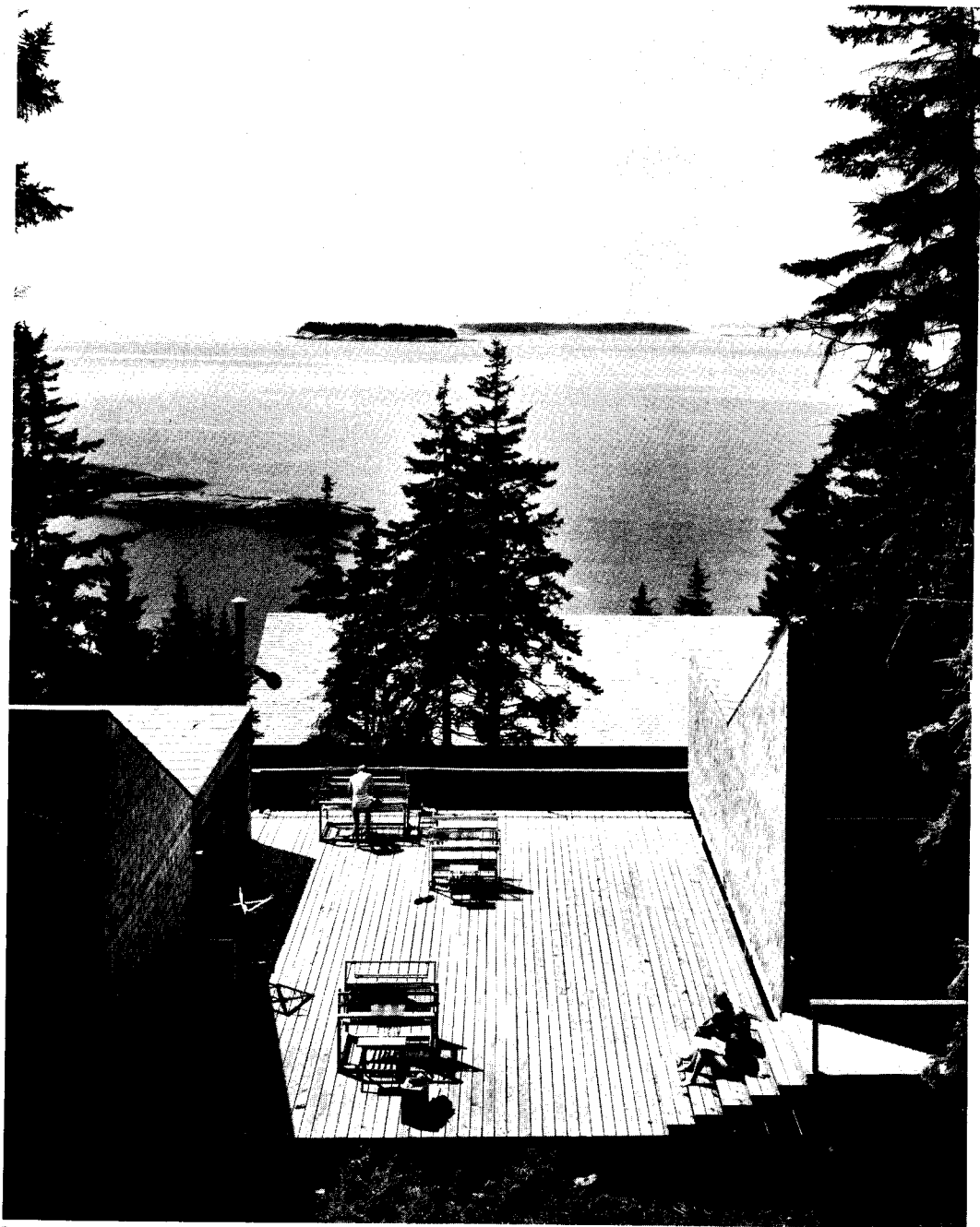


*Top, Barnes' admirably lucid 1952 house for his own family. Center, one of the series of camp buildings he designed in the '50s. Left, his 1959 design for a consulate in Tabriz, Iran, built in 1966 using local brick vaulting techniques.*



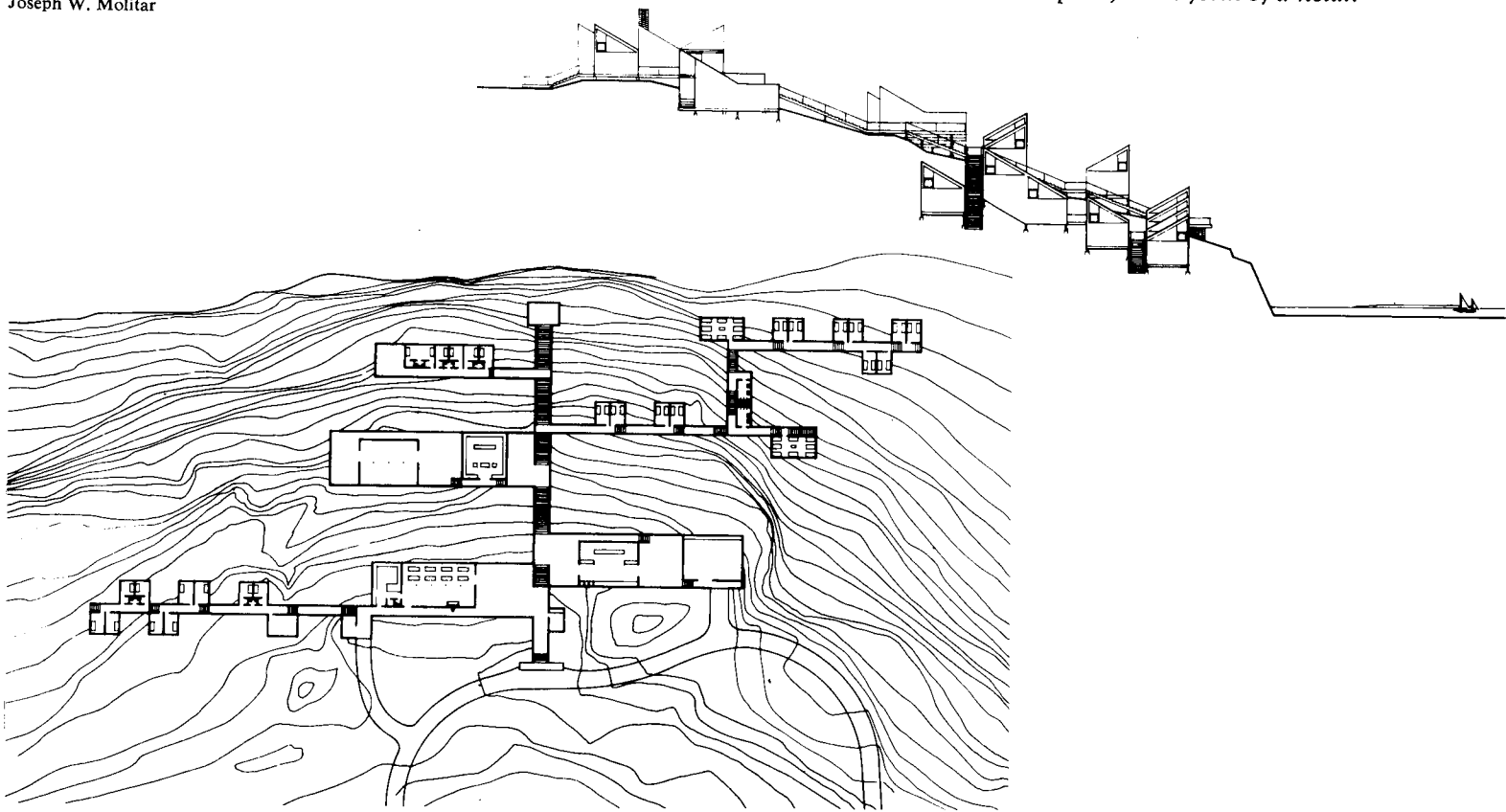
Cervin Robinson

*The Haystack Mountain School of Crafts, Deer Isle, Maine, also designed in 1959 and built in 1962, its composition of simple shed-roofed elements 'the first fruit' of Barnes' 'mature style.'*



Joseph W. Molitar

*Haystack, in both section and plan, gracefully accommodates its elements to the contours of a difficult site sloping down to the sea. Roof pitches either parallel or oppose the slope. Right, a tighter, more urbane circulation system organizes the galleries of the more recent Walker Art Center, Minneapolis, in the form of a helix.*



## Debate, but no doubt about the winner.

ern movement and the influence of history on architecture, and I think he also sensed that Barnes was an outsider with respect to the other major figures of his time in architecture.

"In Ed's office there was one designer—and that was Ed—the office was small, and there were extremely talented people working there. They all used their talents to interpret their understanding of what Ed was looking for. It was a discipline that every young architect can benefit from because Ed was extremely serious and focused. He's an extremely decent man, but he was absolutely certain and single-minded about what it was he wanted. There was debate and struggle, but there was never any question about who would win. He always knew exactly where he wanted to go and he could tell very quickly whether someone who was trying to help him solve a design problem was moving in that direction or in something that would be regarded by Ed as a byway. He had a very good, an extremely clear, logical mind. He could analyze a complex site plan situation with a kind of relentless, pure clarity that was very, very impressive."

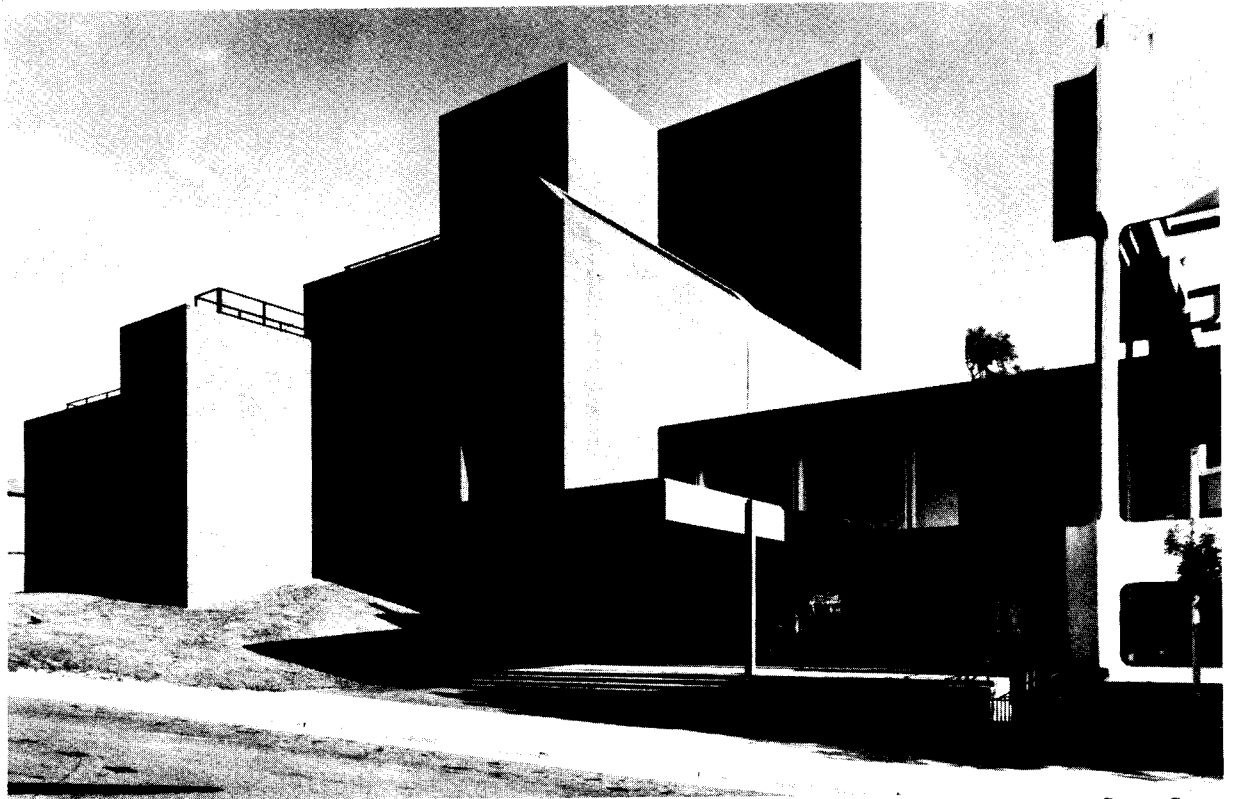
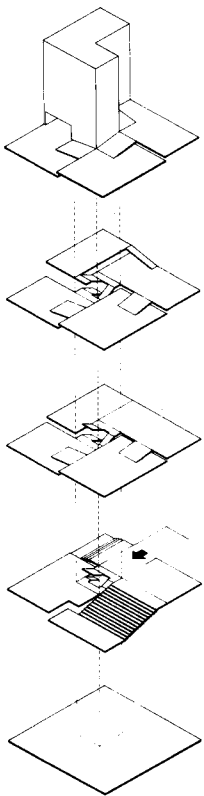
Weinstein says of Barnes now: "While having a very focused view of any problem that he works on, he nevertheless is very open to all the kinds of extra-architectural aspects of a job; he

has a terrific sensibility to contextual matters. It's the flip side of this determined, focused, stubborn, probing, self-directed way of making buildings: It's a tremendous openness to influence and variety and complexity and ambiguity—never in the buildings—but in the emotional and intellectual frame in which you make a building."

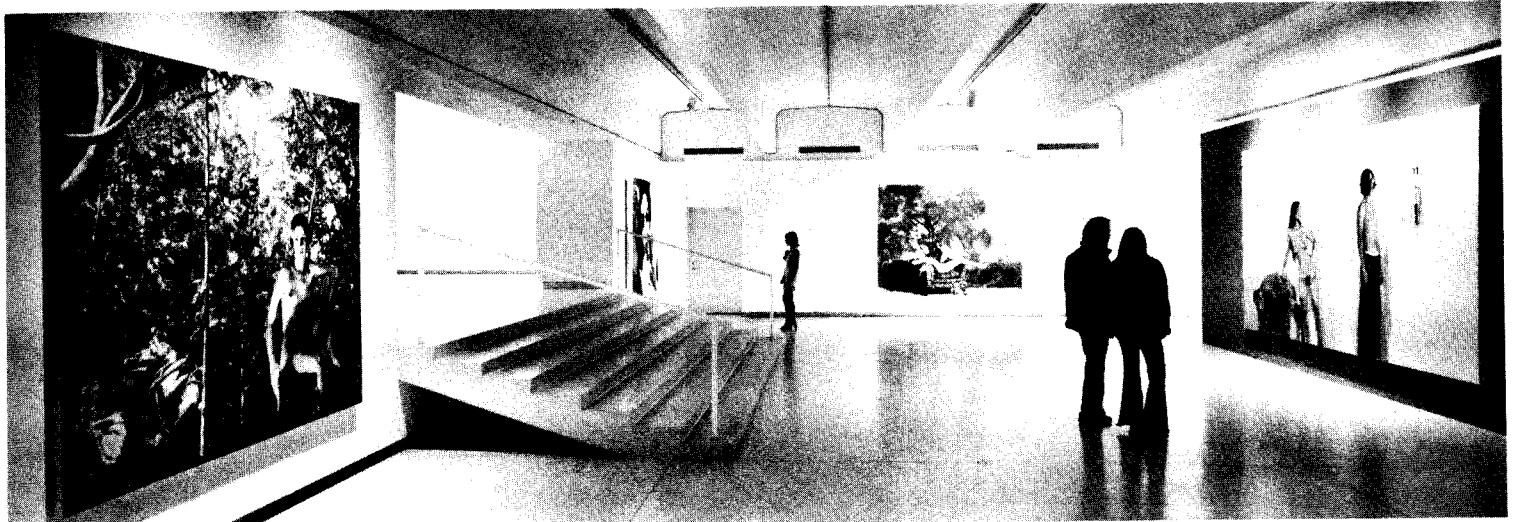
Bob Siegel: "He did design work at home in a very private way; he came in with his ideas clearly stated and drawn to scale; and the function of the people in the office was to take his point of view and develop that into a highly refined product. He could do something and want to hear what someone thought about it and take criticism quite well about it; but I don't recall an instance when he would synthesize or develop a design approach with somebody else—that was not his style."

Gwathmey: "He had a very definite point of view about organization and about how one assembled his notion of volumes, which was, I think, very simplistic in a way. His buildings didn't have any spatial complexity; they always were clear, very organized, well detailed but very simple, you know, and in a way it was almost an excuse from my point of view. You can go so far in a design and can stop; you can freeze it and not investigate the whole next layer of issues. Anything can be a shed, and you can detail a beautiful shed, and you're done."

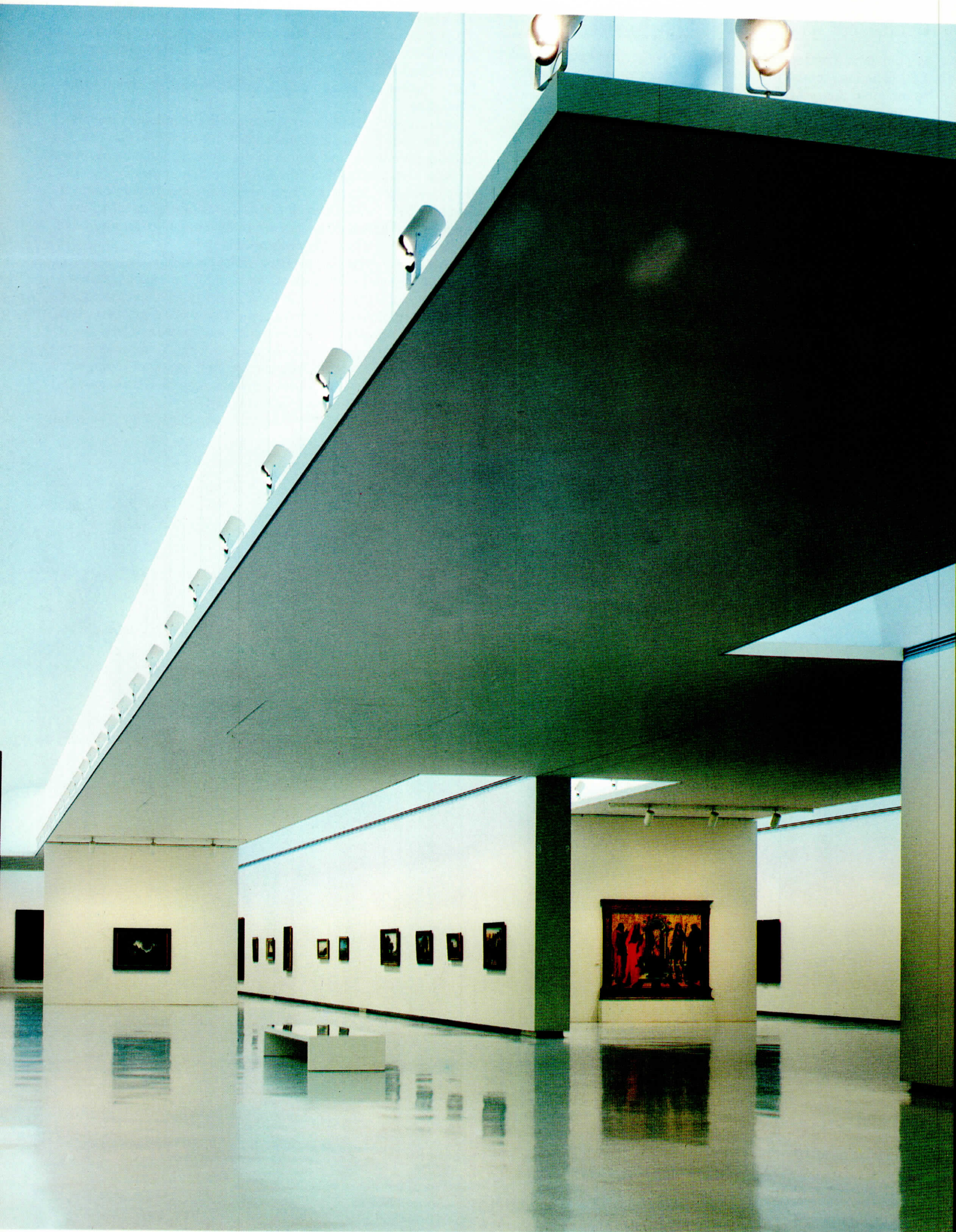
Moger: "The simplicity was very, very hard to do. The detail-

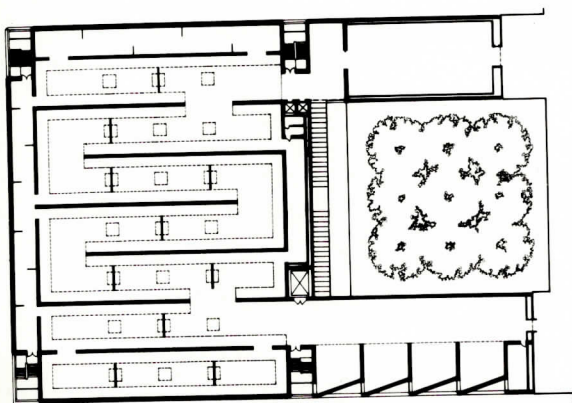


George Cserna



Eric Sutherland—Courtesy Walker Art Center





## Letting a simple initial concept dominate.

ing that looks as though it was perhaps something that automatically grew out of the form was very consciously worked out. We spent a lot of time detailing that simplicity.

“There were key numbers of people in the office. I would say that for the first 10 years that I was there the office never got over 10 or 12 people, and the morale was great. Everybody felt they were working for Ed Barnes; and then there were a couple of key decisions such as every architect makes along the way as to projects he will take, and he took the state university project at Potsdam, N.Y., and the RIT [Rochester Institute of Technology] project. So we went quite dramatically from a 12-person office to more than 30.”

Barnes handled the increased size of his jobs at the state university campuses at Potsdam and Purchase in part by enlarging his office, which reached 80 at one point, and in part by seeing that the parts of the projects that he couldn't do himself were done by designers he knew and trusted, some of them people who had recently worked in his office. He aimed to achieve unity in a whole campus first by his strong initial concept and second—as he had seen unity achieved at Mikonos—by continuity of surfacing materials, i.e., on the campuses by a standard brick, mullion and glass.

Barnes' primary interest is in “the initial concept [of a building] when you're trying to arrive at a simple sort of statement of the true meaning of the program and site. . . . If someone said to me: What's the idea of that building? I usually can explain it on the back of an envelope. I like those ideas to be original, strong, and to be dominating the design and to have grown out of the needs of the program, but I don't want to have them become a formula.” The dominating character of such concepts is apparent in the Walker Art Center (1971) in Minneapolis, where the galleries, joined by short runs of steps, rise in the form of a helix; or at the Scaife Gallery (1974), an extension to the Carnegie Institute in Pittsburgh, where Barnes' solution for the galleries to house the permanent collection, which the gallery's director, Leon Arkus, wanted in chronological order and under daylight, was a series of parallel walls, lit by skylights and covering, that the visitor negotiates as a field is plowed, a pattern of circulation that the suspended ceiling emphasizes. To a visitor this concept is strong, simple and clear, though visually the gallery nowhere competes with the art on exhibition and though the circulation plan can be short-circuited by a visitor at will by the use of doorways into smaller galleries that run on either side.

Barnes is not interested in sensual materials or in walls that explain a building by their pictorial qualities. The outer skin of a Barnes building is mute. We can accept that muteness or not, depending on our tastes. A camera, on the other hand, which can only deal with the surfaces in front of it, has nothing much to show of a Barnes building. It shows as bland and simplistic what is in reality “clean, rational, tough,” to use Jaquelin Robertson's description. Barnes' house of 1974 for August Heckscher is an example. It consists of four small buildings on a



Cervin Robinson

*The 1974 Scaife Gallery, left and above, is an addition to Pittsburgh's Carnegie Institute. Visitors negotiate its circulation pattern, above left, as a field is plowed.*

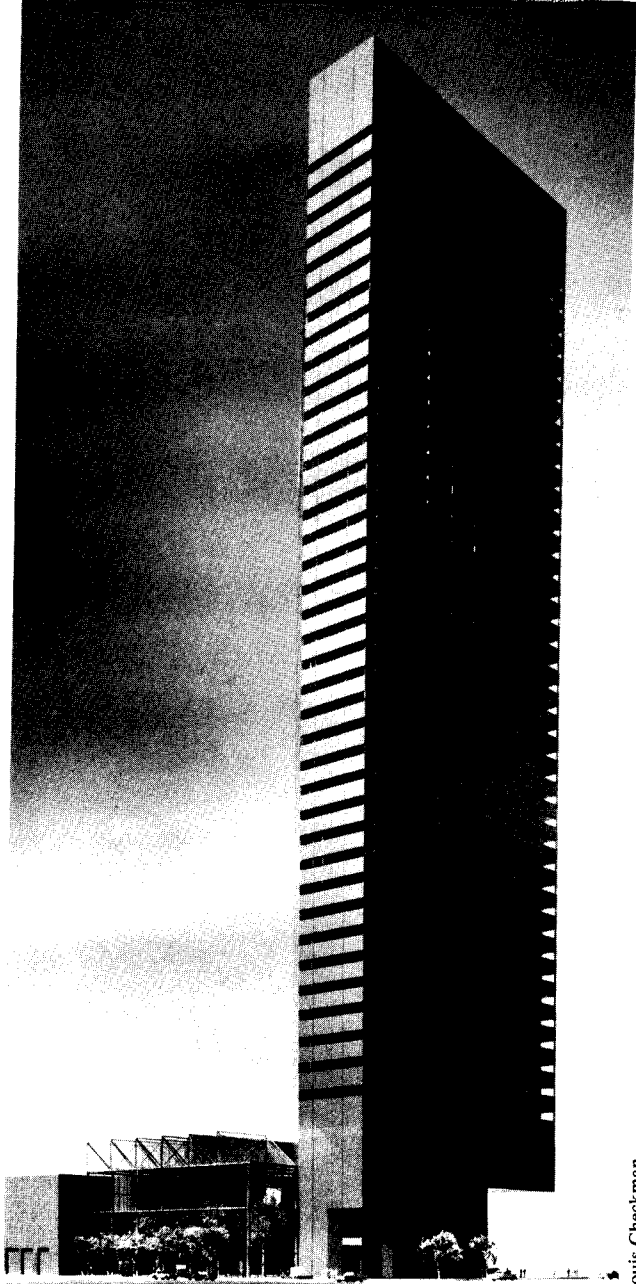
wooden deck in the woods at the edge of Mount Desert Island. The shingled volumes of the buildings provide a spare setting for deck spaces that open onto woods and sea. Even a skilled photographer can show this house only in terms of the buildings themselves, which photograph like houses from a Monopoly game set on a shapeless boardwalk. Barnes' buildings often photograph badly and publish badly. Historians, who can write only about what they can illustrate, have for the most part ignored him.

When the increasing volume of work and size of jobs forced changes in the office, maintaining Barnes' approach to design took precedence over maintaining the quality of the experience of working in Barnes' office and over maintaining the charms of being a Barnes client.

Moger: “Even when I left, there was very little delegation in the actual design. He had to make a trade off, that he just couldn't have the total design control in every aspect. But it wasn't easy for him. He was making some trade offs, but he never did that easily. There was this constant priority that he was trying to juggle, and it was difficult for the people in the office because they were getting some feeling that they weren't getting, in a sense, a vote of confidence at some level that they could handle some of these things.”

Bruce Fowle, who was with the office from 1970 to 1977: “I had always liked his work. Ed wasn't following the trends, going off half-cocked like most of the people at the time.

“He could take a fairly complex program and just see through all of the complications and come out with a very straightforward, simple solution. When a new job came into the office,



Louis Checkman

### A change of name, but not basic approach.

he would have somebody organize the program and develop what he called a design kit when he would have, usually, some sort of a graphic layout of the spaces involved and a functional diagram—a brief description of the requirements of the spaces. He would take that home over the weekend, and Monday morning he'd come in with a very simple sketch that invariably would have for me a remarkable breakthrough in the organization of the building. He would usually work with you till the schematic design was developed. Then he would begin to drop out of the picture because he was getting into the nitty-gritty of the job and trying to resolve bits and pieces and make it work. It was up to us to make it work within the grand scheme. Clients would invariably sense a withdrawal after the conceptual work was done. . . . His buildings are always so logical in retrospect; when you go back and see them, you don't look at them and say, gee, I never would have done that—or why did he ever do that?—because, compared to some architects, he was rarely on an ego trip. He wasn't manipulating to get an effect. It was always the effect being the logic of the conceptual idea."

Currently, Barnes' firm is doing three major buildings in New York City—two office towers and a building for the Asia Society—and a museum for Dallas, and there are about to be some changes in the firm, though none in the essential structure of the office. Barnes' largest building, his office tower for IBM at the southwest corner of Madison Avenue and 57th Street, takes an innovative approach to turning a New York City gridiron corner in that its entrance is angled toward the center of the street intersection, while the corner of the office tower above is canti-

levered out to the edge of the building lot, thereby reinforcing the city's gridiron street plan and the scale of Madison and of 57th Street. The entrance of the building will face—across the intersection—Walker & Gillette's Art Deco Fuller Building; behind the IBM entrance and visible through the lobby will be a glass-covered park on 56th Street.

The thought that it is ridiculous to credit this \$96-million dollar building to one designer has, in part, impelled Barnes to change the name of his firm, as of March, from Edward Larrabee Barnes Architect to Edward Larrabee Barnes Associates, which will give deserved credit to his five associates, each of whom has been with him for 10 years or longer. Other changes Barnes is contemplating will give his office more security despite the current inflation, which he says might make a profit-sharing arrangement logical. Not that any of this should suggest a change in his design procedures. He would like to do more teaching, which he enjoys, but he is unlikely to turn jobs over to associates in order to find time for that. (He has been known to quote Breuer to the effect that the greatest mistake he ever made was in taking partners.) Barnes' present associates work well with him and are unlikely to demand changes—the assertive egos who found a place in the office in the early '60s have all absorbed their experience and left. To find time for teaching, Barnes thinks he may give up the small jobs—houses for instance—that the office has always done and that take a disproportionate amount of his time.

Barnes says that what interests him in teaching is the idea that he is developing a student's psyche, that he's teaching people about themselves. He says that even in the '50s, when a teacher was expected to deliver a style that could be adopted by his students, who in turn were expected to act as apprentices or disciples, he, Barnes, wanted teaching to be something else (which is not surprising since there is no style easy to copy in a Barnes building). Instead, he wanted teaching to be a matter of finding out what a student had to say, of having the creative ones find themselves, though eventually, he adds, if you're to teach them how an office works, you have to become the dictator he freely admits to being in his own firm. So it seems quite possible that another generation of young architects will have the good fortune of being taught by Ed Barnes. As regards his firm, the last word of the man himself is that he "can imagine all kinds of things . . . more easily than I can really imagine saying to myself: . . . Behave yourself and let go!" □

*IBM Tower in New York, under construction, cantilevers office floors to the property line, freeing space at street level. 1974 Heckscher house, below and right, consists of four units reminiscent of 'houses from a Monopoly game,' also recalls Haystack's composition of simple forms.*

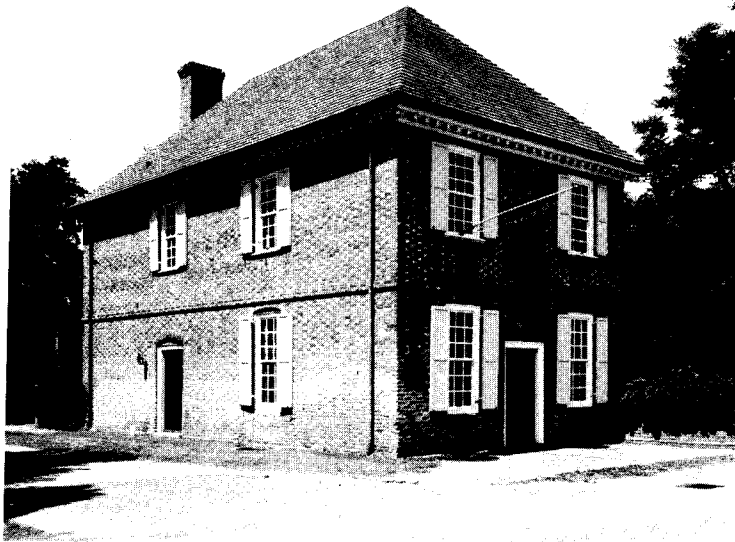


David Franzen





David Franzen



Virginia State Library



# Customhouses as Gateways to Progress

*Many still stand as monuments to the nation's early growth. By Judith Hedberg*

The customhouse was the symbol of federal authority at ports for nearly two centuries, beginning in the colonial era. Situated at ports of entry, customhouse collectors handled importation of goods and collected duties and other monies. Ship captains cleared their cargoes in the main business room, or call room. After the duties were paid, a release was sent to a pier inspector who verified the cargo, then permitted its release either to the local importer or for transfer to another city.

The duties collected by these and other customhouses made possible the defense, strengthening and growth of America: repaid the Dutch loan to Washington's ragged army, financed the War of 1812, built our nation's capitol, financed the Lewis and Clark expedition that led to growth on the Pacific Coast and, finally, helped acquire Florida, Texas, Alaska, the Louisiana Purchase and the Mexican Cession and finance the transcontinental railroad.

There are approximately 60 customhouses of historic and/or architectural significance located throughout our nation. A sampling follows:

Occupying one entire block, the New York City customhouse is heavily encrusted with stone carvings and adorned with grand statues. Completed in 1907, the seven-story building has three-story columns encircling it, each with a capital crowned by the head of Mercury. Sculpture embellishes the exterior—masks, shells and dolphins—while on pedestals advanced from the base are four gigantic sculpture groups by Daniel Chester French representing the four continents. Keystones of the main windows are carved with heads signifying the eight races of mankind, and over each of the columns are statues of the 12 commercial centers of the world. The main entrance on the Bowling Green is a monumental arch through which wide steps lead inside.

The interior is just as impressive. The collector's office is decorated with quartered oak, elaborately carved with pine-apple and cornucopia, and finished in natural tones. The ceiling, deeply sculptured with moldings of leaves, egg-and-dart, is considered one of the finest examples of plaster work in the city. Between the moldings are fluttering ribbons and the monogram shield of the collector. Balustrades, door handles, even grill-work, carry out the nautical theme.

In Yorktown, Va., where the surrender of British General Cornwallis practically brought the American Revolution to an end, stands the first customhouse in the original 13 colonies, built in 1706. Initially known as "Richard Ambler's large, brick storehouse," here Ambler collected revenue for the king of England. The building's original brick walls, laid in Flemish bond, have glazed headers and a carefully detailed cornice. A picturesque wall, built of the same type brick, encloses a lush lawn. The windows are large with 18 panes each; paneled entrance doors lead into a cordial interior containing valuable colonial and Revolutionary relics. It's obvious that this quaint structure neither opposed nor encouraged progress, merely survived it.

At the birthplace of West Virginia, the 1859 Wheeling customhouse had a noteworthy facelift. The first phase returned it to its original dimensions, adding a new roof and interior fire-tower, while new sandstone steps were aged to match the exterior stone. The second phase was sanding and oiling the original wood grain. The 22-foot doors were then installed, flanked by faithful replicas of original gaslight fixtures.

During the Civil War, burglars attempted to steal the million dollar contents from the customhouse's corner vault. Men working with crowbars and chisels cut a hole through the two surrounding walls, which, unfortunately for the burglars, revealed cleverly built-in iron bars. Frustrating hours passed as the men

**Ms. Hedberg** is a writer and preservationist in California.



Nathaniel Lieberman

*East Coast customhouses: facing page, left, in Yorktown, Va., and right, in Savannah, Ga. This page, the Bowling Green customhouse, New York City.*



Nathaniel Lieberman



## Varied approaches to symbolic significance.

labored frantically to pry open the bars. But the approach of dawn forced them to flee without the fortune.

Standing amid Baltimore's timeworn brick buildings only a few blocks from the harbor is the Baltimore customhouse, built in the early 1900s. The call room's murals and ceiling were painted by Francis Millet, a famous mural artist who went down with the Titanic. A masterful 68x30-foot ceiling canvas and 33 smaller ones illustrate the origin and development of the steamboat. Around each panel are cavorting sea horses and delicate scallop shells, while arches are framed by seamen's ropework. The painting depicting "The Evolution of Navigating" is a highly prized work of decorative art.

Southern states are also rich in customhouses. The Savannah building of 1858 features a line of graceful Corinthian columns weighing 13 tons each, brought from New England lashed to decks of sailing ships. A month was required to inch each column up from the riverfront to the site and another to raise each into place. Inside, a graceful, solid stone staircase lifts in a swift, unsupported curve. Heat was provided by leadlined tanks in the attic, while a nautical touch was afforded by a system of brass tubes for interoffice communication. On Mar. 8, 1861, the day after Georgia adopted the Ordinance of Secession, the Confederate flag was hoisted up the customhouse's flagstaff and a seven gun salute (one for each state in the Confederacy) honored the occasion.

New Orleans became an increasingly important trade center after the invention of the steamboat. In 1848, construction began on the Canal Street customhouse; the Civil War delayed completion until 1881. Built entirely of granite, the exterior style is Egyptian with lotus capitals, while the interior is pillared Greek revival. A romantic tale claims that the building rests on cotton bales, but in reality the foundation is of cypress planks. A spectacular shining dome was to be added to the building, but after the customhouse settled more than 30 inches, the plan was rejected. Also, 24 niches intended for statues of leading American figures remain empty after revised exterior plans eliminated such decoration.

The outstanding feature is the interior marble hall. The cathedral-like ceiling is supported by 14 massive attic-based columns 41 feet high and 4 feet in diameter, cut from white Italian marble. Alternative Mercury and Luna heads ornament the column tops. In 1880 this room was heralded "the finest business room in the world." A reporter for the *New Orleans Item* in 1878 wrote of the building, "A sense of weight and antiquity oppresses the beholder when he gazes on it." Existing records indicate that in the 1860s the building was taken over by Confederates who used it to make gun carriages for cannons. The building later became a federal prison, incarcerating some 2,000 Confederates.

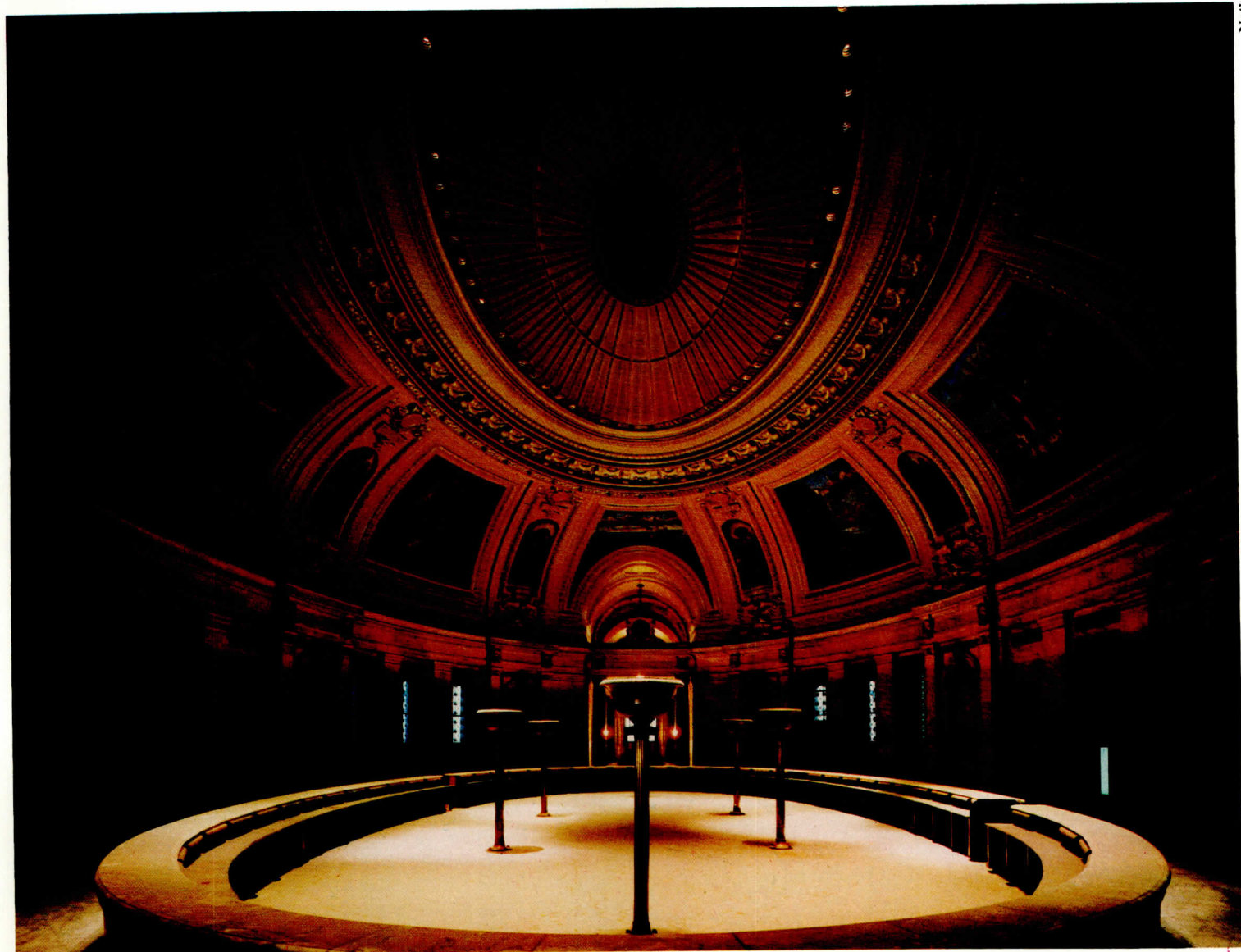
On the Pacific coast, the customhouse at Monterey is California's historical monument number one. During the Spanish and Mexican periods, it was the military and social capitol of Alta California. As the traffic increased through the Monterey port with Boston ships that traversed the Horn in search of trade, the adobe customhouse became a kinetic scene of grand fandangos, with the lanterns along balconies and guitarists strumming away the warm evenings.

The exact year the Spanish erected the adobe is uncertain. The oldest part is the north end built about 1822 by Mexico after declaring independence from Spain. Construction began on the American addition in about 1841. A small cannon from the ship *Inconstant*, on which Napoleon escaped from Elba in 1815, stands at the southeast corner. For years, this was the sole customhouse north of Mexico and consequently much of northern California's maritime business was conducted here. Its crowning historical moment was July 7, 1846, when Commodore Sloat landed and raised the Stars and Stripes on its flagstaff, proclaiming California part of the Union. Abandoned about 1867, the customhouse slowly fell into ruin. Not until the 1900s was it restored and opened as a museum.

The city of San Francisco took over customs in 1850. The present customhouse on Battery Street is actually the second building. An earlier one, completed in 1856, was one of the showplaces visitors were taken to admire. It was leveled in 1906 to make way for a newer one, but the 1906 earthquake could have saved the demolition crew the trouble. □



*Facing page, left, Marble Hall in New Orleans, and right, the adobe customhouse at Monterey, Calif. This page, Bowling Green's entrance and rotunda, New York City*



# Architecture, Psychology: The Passion Has Passed

*Yet the two fields 'can still come together as circumstances permit.'* By Robert Sommer

Those who were active during the beginnings of environmental psychology in the late 1950s, both architects and social scientists, shared a common vision of a field that would have both academic and applied aspects. It would be an accepted scientific discipline whose findings would at some point be useful to designers. Considering that more than two decades have passed since the field opened, it seems appropriate to take stock of what happened and to chart future directions. Not all aspects of the original dream have been realized. This is partly the result of changed circumstances and partly of naive assumptions on the part of those who held the early vision.

The academic branch of environmental psychology is alive and healthy. There are a dozen graduate programs in environmental psychology, under various titles, taught in universities around the country, and most schools of architecture have a social scientist on the faculty, either on a part-time or full-time basis. There is a professional society (Environmental Design Research Association) and half a division of the American Psychological Association (division of population and environmental psychology). There are at least six textbooks as well as numerous books of readings on the subject. Even more important for the acceptance of an academic field is that its assumptions, methods and concepts are no longer radical. Few people are surprised to hear that occupants are affected by buildings or that people's images of the environment may be distorted in predictable ways. The application of social science methods to issues such as occupant satisfaction and landscape perception are accepted. The epistemological basis of academic environmental psychology is securely grounded.

It is in regard to application that the current state of environmental psychology differs most from the early dream. The tangible realization of the field was expected to produce new jobs and new careers. Like the proverbial chicken in every pot, every major architectural office was expected to have an environmental psychologist to conduct user needs analyses, architectural programming and postoccupancy evaluations. There were to be private consulting firms which would perform these activities on a free lance basis. Behavioral consultants would be added to the roster of experts brought in to consult on large-scale projects.

For the most part, these developments have not materialized, at least in the form they were envisaged. There are very few professional behavioral scientists employed full-time in architectural offices. There are some private consulting firms scattered around the country that do behavioral work on design projects, but virtually all of them are run by principals who hold other jobs in teaching or research and most of them draw their support from government and foundations. Consultants are hired only on a per diem basis for the duration of a specific project without the opportunity to generate the information that might make their results relevant and without the continuity of working with the same team on several projects.

The supposition that architectural offices would rush out to

hire people trained to apply behavioral science techniques to architecture was naive in its neglect of architectural economics. The issue of who would pay the bill was rarely discussed. It had been assumed that if the need for these services were clearly described, someone would come up with the money. Those who were involved in multimillion dollar projects would recognize the value of spending a small amount of money to bring in a social scientist to conduct a user needs analysis. The logic of this argument proved more compelling to outsiders than to those familiar with the economics of the construction industry. A multimillion dollar budget for a new building seems large in relation to a several hundred dollar consultant fee until it is broken down into its various components. If the consultant's fee were to come out of the architect's 5 percent of the budget, it was no longer play money, but real money of significant magnitude.

It was expected that architects would be able to sell clients on the need for behavioral consultation once they themselves were convinced of its worth. This was the implicit assumption of those who attempted to reach architects through talks at professional meetings, journal articles or at schools of architecture. Had the building boom continued longer, this indirect approach might have had a better chance of success. As competition for architectural contracts increased and new demands were placed on offices by federal, state and local regulations, there was little inclination on the part of most practitioners to sell clients on the value of a new service.

Stating the problem in economic terms makes it easier to understand why behavioral consultation is more the exception than the rule in architectural practice, even on major projects. When it occurs, it often turns out that the social scientist has been hired with outside funds. This was the approach used by Neal Deasy who secured outside grants to bring sociologist Tom Lasswell into projects that his firm was doing. However, this meant that the behavioral consultation was a separate activity peripheral to the main design phase, with its own goals, budget and timetable. The long and tedious process of obtaining outside funds and the constraints posed made this a difficult and impractical means of including a behavioral consultant on a project with a tight deadline.

Proponents of the original dream can maintain that the time wasn't right for the development of a new profession. Environmental psychology came into its own when the building boom was ending, when money began to dry up and new government regulations increased the complexity of the construction process. The day was hardly auspicious for a new consultant who would add to the budget and raise issues that were not being considered by the client or required by government regulations. The timing was not good, to be sure, but I suspect that the timing is always less than ideal. As a character in Sartre's *No Exit* declared, "One always dies too soon or too late." Environmental psychology developed in response to changes that were taking place in the larger society for social accountability of the professions, participation of people in decisions that affected them and increased concern with the needs of the poor. Even if social scientists had never entered upon the scene, it is likely that architecture would have been affected by these currents. From the standpoint of the intellectual history of the period, books such as *The Silent Language*, *Notes on the Synthesis of Form*, *With Man in Mind* and *Image of the City* provided an intellectual focus for these new concerns, but the ideas in them were part of the larger intellectual Zeitgeist.

Behavioral consultation on design projects is still going on. The chief impediment to its effectiveness is the lack of a solid data base dealing with the behavioral effects of buildings. It is hoped that this deficiency is being remedied by researchers and that there will be social scientists with specific subject matter expertise, i.e., who know almost everything that has been written about the behavioral aspects of hospitals, shopping centers or

*continued on page 82*

**Dr. Sommer** is a professor of psychology at University of California at Davis.

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# BOOKS

## 'Big Apple' Is Cut Open In Five Revealing Books

**New York Chapter, AIA, Guide to New York City.** Revised edition. Norval White, FAIA, and Elliot Willensky. (Macmillan, Collier Books, \$9.95.) **The City Observed, New York: A Guide to the Architecture of Manhattan.** Paul Goldberger. (Random House, Vintage Books, \$7.95.) **Essential New York: A Guide to the History and Architecture of Manhattan's Important Buildings, Parks and Bridges.** John Tauranac; photographs by Dave Sagarin. (Holt, Rinehart & Winston, \$8.95.) **Under the City Streets: A History of Subterranean New York.** Pamela Jones. (Holt, Rinehart & Winston, \$12.95.) **Delirious New York: A Retroactive Manifesto for Manhattan.** Rem Koolhaas. (Oxford University Press, \$35.)

People who work for major U.S. book publishers are known to spend a good bit of their time on the streets of midtown Manhattan. Three or four years ago when the experts were predicting the demise of

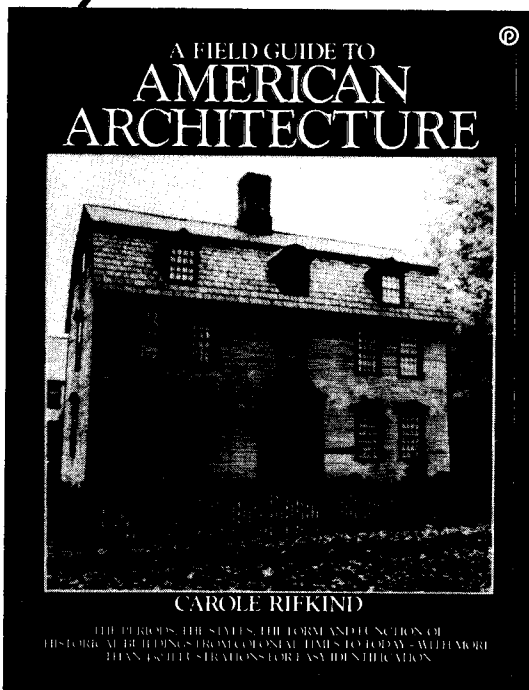
New York City, the publishing folk were observing at first hand a city of enormous vitality. Midtown, that area bounded approximately by 40th Street on the south, 86th Street on the north, First Avenue on the east and on the west by the Avenue of the Americas (still known to old-timers such as your reviewer as Sixth Avenue) was flooded with tourists, both foreign and domestic. It must have been evident that there was a market waiting for books explaining New York. We now have a rich outpouring of such books as the five listed above.

There is very little overlap among these five books. Each sees a different dimension of a very complex subject. The White and Willensky AIA guide remains the major encyclopedic work about the architecture of the entire city—all five boroughs. Its initial incarnation was as the customary guide for AIA members who attended the 1967 convention in New York. The demand for the book became so strong among the general public that the convention guide was on the verge of becoming a rare book. Collier-Macmillan

decided to publish a slightly expanded trade version in 1968. It continued as a solid best seller locally long enough for the publisher to commission a greatly expanded and updated edition (65 percent larger than the original) which appeared in 1978.

Although it is the best established and most "official" guide to New York's architecture, the AIA book retains all of the sprightly, sometime irreverent and controversial commentary that made it popular from the outset. It announces itself unashamedly as a very personal and idiosyncratic assessment by the authors (supported by an understanding editor). It is a marvel of compact and succinct writing about neighborhoods, buildings and their history. Many of the comments are sufficiently outrageous to give the entire book an air of openness which seems to invite users to see architecture and districts afresh, in their own way.

Paul Goldberger, architectural critic of the *New York Times*, treats a much smaller sample of New York architecture  
*continued on page 80*



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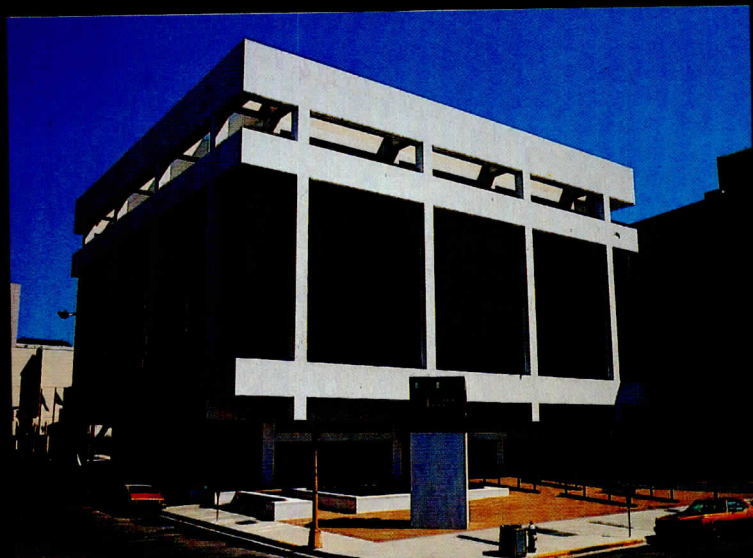
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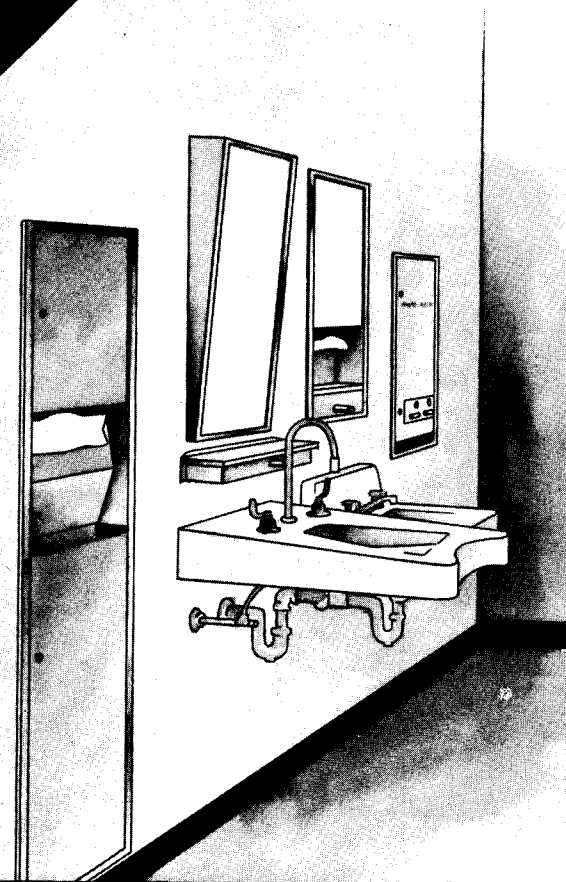
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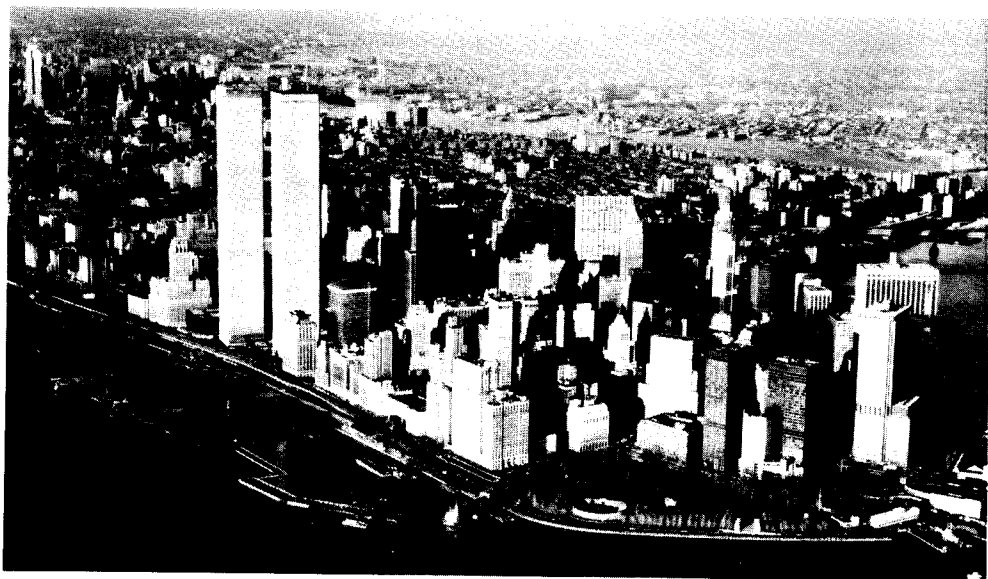
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than the AIA guide. He deals with Manhattan only. (The book is intended as the first of a series which will eventually cover the entire city.) Even so, only 62 of the 365 pages of the book concern the neighborhoods outside the central business district, the part of the borough where visitors are likely to spend their time. This is, of course, a most appropriate set of priorities for a book intended primarily for tourists.

*The City Observed*, thus, is highly selective rather than encyclopedic in the choice of neighborhoods and buildings it treats. Goldberger says a good bit more than the AIA guide about his subjects. He is no doubt accustomed to the vast open spaces available to be filled with words in the hefty *New York Times* published 365 days of the year. He is expansive rather than succinct. And, while his verdicts are no less bold than those in the AIA guide, they are more cohesive as they represent a new point of view. The not so hidden agenda of Goldberger's book is the exposure of the failures of the most "modern" architecture to create a quality of urbanism that, somehow, came naturally to the architects of the 18th and 19th centuries (and to a good number of those in the 20th century who were not converted to the modern movement).

On the basis of the examples selected and the photographs shown, Goldberger makes a compelling argument. Because of his special agenda, his book has the most complete, sensitive descriptions of neighborhoods and districts to be found in any book about New York. It is not difficult to discern his most admired and least admired contributors to the configuration of the city. The least admired is still very active in practice, and the most admired is long gone. (Readers may discover their identity for themselves.)

John Tauranac in his *Essential New York* has used architecture as a vehicle for a delightful social history of the city. His examples are also confined almost entirely to the downtown and midtown

sections of Manhattan. Most of his lengthy entries are introduced by a two- or three-line "headline" which is about as extensive as an entire typical comment in the AIA guide. The 175 buildings and other constructions (such as the wonderful "bishop's crook" lamppost that was introduced in 1876 and was a city symbol until it was finally phased out only a decade ago) in large part maintain historical continuity. In this way, some prototypical buildings of no great distinction are included. This kind of content gives the book a flavor which cannot be found in guides that confine their coverage to recognized "monuments."

On the other hand, Tauranac's book uses a fair amount of the ample text for straight description of design elements which the user would see easily enough in a visit to the site. For people who are content to sit at home, *Essential New York*, unlike the two guides discussed above, can be read from cover to cover. The AIA guide, with 1,831 major entries and many additional subentries (for example, the whole of Kennedy airport is treated as one entry with 15 subentries), or the Goldberger book, with 396 entries, become tedious unless the reader is actually touring the city or has previously committed the places to memory.

Pamela Jones' history of subterranean New York promises to help the reader understand the immensely complex "infrastructure" that makes it possible for a major city to survive. It is a book written by a nonprofessional in city buildings, a professional journalist, to explain the incredible complexities of New York's public service systems to nonprofessional readers. It is not unlike the essays on closely held areas of professional interest made available to the lay reader in the *New Yorker* magazine.

Had it accomplished what it claimed, this explanation of how the underground systems of the city really work and interact, segments of the book would probably

*continued on page 82*



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### Books from page 80

have been *New Yorker* material. But, alas, this text does not quite make it. Jones may have learned how our water, sewer, power, communications and other underground systems work as she tackled a very difficult research task, but it is no great surprise that she could not find a way to make the intricate maze of service systems interesting for lay readers. What she has written is a social, economic and political history which does not illuminate for the novice the great tendency of costly public works projects to mobilize powerful interest groups in competition for the large sums of money that once were available to utilities contractors and their political allies.

The book turns out to be a curious, unblended mixture of derivative political history and anecdotal descriptions of underground utility systems. Much of the detail of what is underground seems to come from the kind of press release which, through failure of imagination, tells people how many round trips to the moon could be made by the cable under New York's streets. The awe-inspiring and little known mutual accommodations made among utilities in such congested underground areas as Herald Square are not analyzed but merely characterized as enormously complicated. The book is not

dull, however. It reports a large number of anecdotes about the installation of the infrastructure interesting enough to be repeated at a cocktail party.

Rem Koolhaas and his colleagues are natives of Holland who have set up shop as theoreticians in the cultural hothouse districts that flourish in London and New York. They have produced what they consider to be the hidden agenda or "manifesto" (so European) for the developers and the captive architects who created the magic of midtown Manhattan in the 1920s and '30s. *Delirious New York* has two quite different sections.

In the first part of the book, the well-researched story of the creation of the recreational, magical places of Coney Island in the late 19th century is explored and interpreted (essentially as fantasy relief from a difficult, inequitable social structure). A case is made that some of the same people and all of the same motives inspired the high density development of Manhattan as a place of fantasy to amuse the multitudes.

The second part of the book shifts to a mode of explanation more closely related to art criticism than to architecture or planning. The lucidity of the first part seems to disintegrate toward the obscure style of the manifestos published by Dada, Futurists and other groups of artists. The

illustrations in this last section cannot be faulted as works of art. The concepts presented are delightful watercolor renderings of just barely possible future building designs. The logic of the argument in the book is captivating, but a bit difficult to accept: If the key motif of the skyscraper portion of Manhattan was indeed a fantasy for the developer and architect alike (not very likely), then the future should be designed with the fantastic as first priority.

Authors of the books discussed above have been critical of the way that the professional denizens of Manhattan have missed opportunities for an even greater and more astonishing metropolis than the one we have now. Only Koolhaas has the audacity to see New York as a giant stage set to which the fantastic designs of his group would be a wonderful, magical addition. It may be true that the best known buildings erected in Manhattan between about 1925 and 1935 were, in large part, confections, as Koolhaas would have us believe. Within their fantasy shells, architects had to provide attractive, rentable space at a competitive price. This last aspect of architecture is conveniently ignored in the Koolhaas book. It is hard to believe that the book is anything more than an elaborate artistic put-on. *Bernard P. Spring, FAIA* □

### Sommer from page 77

office buildings. It is questionable whether there will be sufficient work for such specialists on a full-time basis in architectural offices. The reality is more likely to be employment in a university or research unit and part-time consultation with architects. The gathering of information necessary for consultants to give valid advice will continue to be done under a separate budget since it is unlikely that private firms are going to pay social scientists to obtain basic data. As with other consultants, environmental psychologists will be paid to provide whatever information is currently known about behavior in a particular building type.

Those design students exposed to behavioral science ideas are just now arriving at management positions where they can influence policy. I think this augers well for graduates of the new programs in environmental psychology. There are more practitioners sympathetic to behavioral science information than there were 10 or 20 years ago. Receptivity aside, the crucial factor for the development of applied environmental psychology is a solid research base that will serve to legitimize its expertise. The future of behavioral consultation on design projects rests in the hands of today's design researchers.

The intense period of architecture's flirtation with the behavioral sciences has passed. I do not consider this a cause for regret. A young novelist commented that the intensity of a love relationship was inversely related to its probable duration. Both architecture and psychology have had a history of previous flirtations—architecture with the fine arts, engineering and currently with ecology. Psychology had its affairs with philosophy and phenomenology, environmentalism, the physical sciences and the laboratory method and now with physiology. Our two fields can still come together as circumstances permit. Although the passion in our association has dissipated, what remains, I hope, are respect, friendship and mutual assistance. □

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**Michael M. Sizemore AIA**  
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Building owners expect their architects and engineers to have the practical knowledge it takes to translate energy theory into a reliable form of practice.

This book, written by two architects and an engineer who have hands-on experience in energy-conscious building design and redesign, does just that. It presents a proven process that design professionals can use (or adapt) to study the present energy performance of a building, uncover opportunities for energy-conscious improvements, evaluate those opportunities, and see to it that they are carried out to the owner's best benefit.

The book describes in detail a manual technique for calculating energy usage and shows in a sample problem how that technique can be applied. This allows the reader to evaluate any energy design solution, including solar assisted alternatives. It also provides a basis for understanding computer-aided energy estimating techniques.

In developing their work, the authors have recognized that non-energy related concerns such as user comfort, environmental impact and visual appearance are as important in an energy-related design as energy performance itself, and they urge designers to identify

these at the outset of a project and to keep them in mind to the end.

An opening chapter offers a look at the basic concerns of energy planning, including such concepts as comfort; illumination and daylighting; the building envelope; heating, ventilating and air-conditioning; and the very concept of energy itself.

Chapter 2 takes up the roles and responsibilities of the team needed to carry a project through to a successful end. Team members discussed include the owner, the architect/engineer, the building users and operators, energy suppliers, product manufacturers and building officials.

Chapter 3, a key part of the book, shows how to study a building's present performance (or, in the case of a new building, analyze a set of building plans) so the energy planner can examine the impact of any proposed changes suggested as a way to greater energy efficiency.

Chapter 4 pinpoints those opportunities, describing the best way of identifying them. The following Chapter 5 then shows how best to narrow the list of possibilities to those that make the most sense in terms of cost, time, payback and technical feasibility. Two

levels of evaluation are given—"quick" and "detailed."

Chapter 6 shows what is needed to carry out the recommendations stemming from the evaluation, and offers much sound advice to the energy planner and owner for monitoring the results and maintaining the renewed building at a peak of performance.

This chapter is followed by a sample problem which illustrates the procedural steps presented in the various chapters.

Finally, an appendix includes discussions on system response and cost benefit analysis.

There is also a glossary and a practical reference list.

ENERGY PLANNING FOR BUILDINGS fills a serious need for a practical, process-oriented book which energy planners can use, and owners can refer to, as they embark on a new building project or go about redesigning an existing one for greater energy efficiency.

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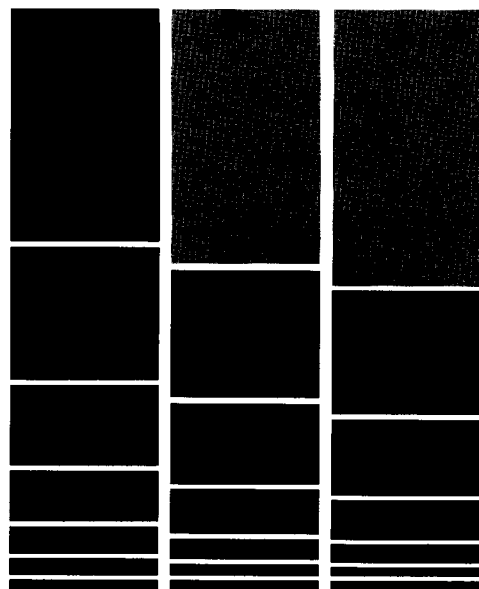
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## Environment from page 42

ardous. If so, they must be packaged according to Department of Transportation standards, and it must be indicated on the manifest that there is an approved facility where the wastes will go. The generator must give copies of the manifest to the transporter, with the manifest indicating, among other things, a description of the waste and the quantity.

The transporter also has responsibilities, acknowledging acceptance of the manifest. He must deliver the waste to the designated facility, and receive from that facility a signed copy of the manifest. Whether the facility is an incinerator, a treatment plant or a disposal site, the person who receives the waste must sign a copy of the manifest, returning it to the generator. If the generator does not receive a signed copy of the manifest, within 35 days he must notify the transporter and the designated facility to ascertain the status of the waste and must, within 45 days, submit a report to EPA.

The three regulations—standards for generators and transporters and requirements of notification, are the key element of the management system for hazardous waste under the Resource Conservation and Recovery Act, Costle said. This month, EPA will define what wastes are hazardous and will issue standards for treatment, storage and disposal facilities.

“By July,” Costle said, “all businesses which handle hazardous waste must notify EPA, giving us for the first time a national inventory.” By October, all firms that store, treat or dispose of hazardous wastes must apply for a permit. Also in October, when the program goes into effect, the manifest system must be used for all waste shipments.

Costle said that the regulations are not a “final solution.” But they are an “essential first step toward preventing the creation of new Love Canals.” The regulations, with those to be published in April, “will create a new framework which will fundamentally change the ways in which industry manages its wastes.”

## News/Energy

### Public Perception of Shortages Shown in Solar Institute Survey

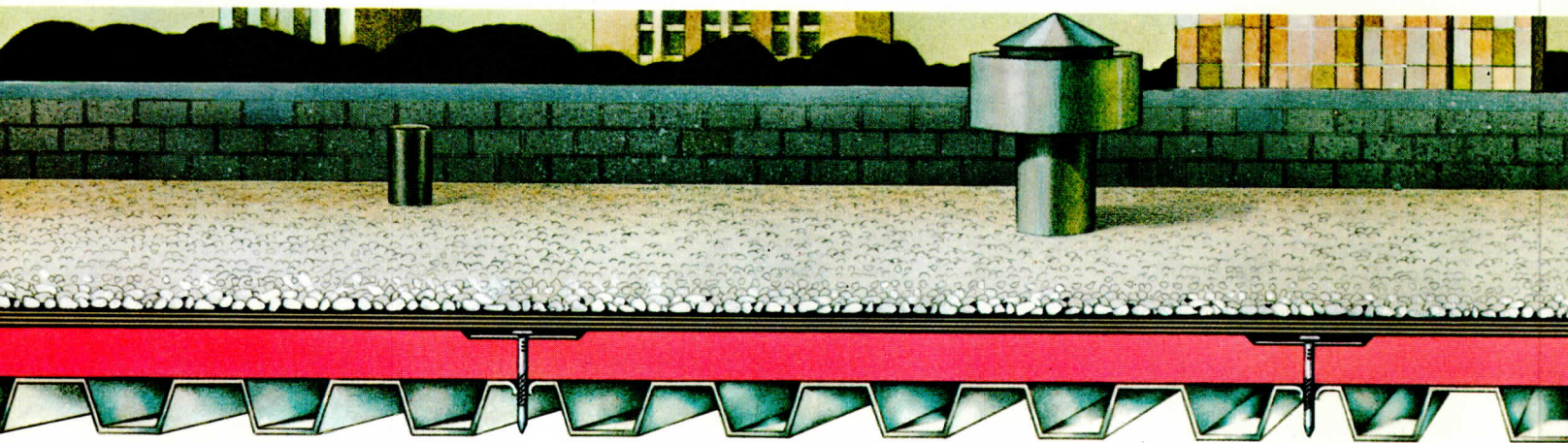
As recently as 1978, most Americans didn't believe there was an energy crisis in the U.S. Although about 40 percent of the people perceived the situation as “serious,” they viewed inflation, unemployment and crime as matters of graver concern. A majority thought that the nation faces energy shortages and rising energy costs, but a large minority said that the problem is contrived by oil companies and the

federal government. Smaller portions of the public blamed the OPEC countries, industry and business and environmentalists as contributors to the energy problems.

The higher the educational and occupational levels of the American public, the more the energy situation was perceived as serious and real. Higher income groups expressed a greater belief in the energy crisis than did lower income groups, although the lower income groups have borne disproportionately the results of energy shortages in such matters as job losses. Older people reported more adverse effects of the energy situation than did younger people, as did more non-whites than whites.

These conclusions are published in a report called “Public Opinion about Energy: A Literature Survey,” prepared by the staff of the Solar Energy Research Institute under the direction of Barbara C. Farhar and Patricia Weis. The data were collected between 1973 and 1978 in an analysis of more than 115 surveys of the public, including 82 national samples and 33 local and regional samples. The report points out that the data were collected before the 1979 gasoline price increases and spot shortages.

Price increases or incentives to oil companies are generally opposed, the report says. “Options such as a profit tax or controls on profits are favored, while gov-



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ernment ownership is opposed by study majorities." Coal, especially strip-mined coal, is viewed by the public as a way to expand energy supplies, but Westerners are concerned about air pollution and are less enthusiastic than people in other parts of the country about oil shale exploration as well. People in the South and Midwest are more enthusiastic about coal as a long-term resource than people who live in the Northwest and West.

About 85 percent of the public reports that it has engaged in at least a "fair amount of energy conservation," but the most frequently mentioned conservation activity is simply turning off the lights when not in use. Women favor energy conservation policies slightly more than do men. Younger groups are more inclined than older groups in believing that government and industry are not effectively conserving energy. Older groups tend to support policies that hold costs down, as do lower income groups.

About 80 percent of the public is opposed to raising gasoline prices to reduce consumption, and most people oppose gasoline rationing. "A major reason for opposing rationing is that no real shortage is perceived to exist," the report says. People consistently prefer residential conservation measures to reduced use of automobiles.

"Very few data concerning citizen atti-

tudes, knowledge and practices relative to solar energy exist on the national level," the report says, and the data used are derived largely from marketing studies of special, localized samples. According to the data, however, the public's attitude about solar energy is "positive," with the West being more favorable to its use than the rest of the nation and people in the South less favorable.

Regarding the extent of residential solar systems in the nation, the report says that the most recent data (collected in January 1979) are from one survey item. The findings show fewer than 0.5 percent of the people own solar-powered units for heat and/or hot water. The report points to "interesting demographic differences in solar ownership." Two percent of opinion leaders own solar heating systems. One percent of the following demographic categories own solar systems: "those aged 18-29 and 30-44; those earning \$7,000 to \$15,000/year; those in the Northeast and in the West; those in rural counties; those with at least some college education; executive-professional and blue collar workers; Republicans; political liberals; families with teen-age children, and employed females." Fewer than 1 percent of those in other categories own solar systems.

Other findings include:

- Nuclear energy is viewed as technically

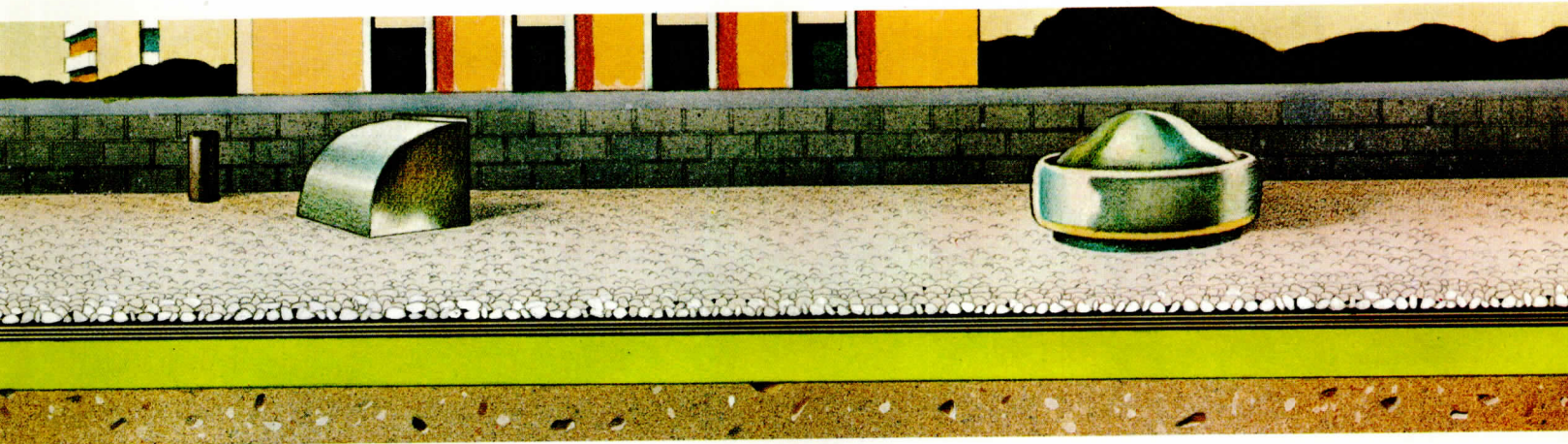
feasible by a majority. There is no variation by region, but Easterners are more concerned about nuclear safety than others.

- Women are more strongly in favor of environmental protection and conservation than men, and younger people consistently favor support of the environment more strongly than older people. In general, rural groups are more likely than urban groups to favor adequate energy over environmental protection. Support for environmental protection increases as education levels increase, and white collar workers are more supportive than blue collar workers.

- By 1975, according to one study, half of the people in this country did not know there was a federal energy agency. In May 1977 and April 1978 surveys, it was found that one-third of the people did not know that the U.S. imports oil from other countries.

- Men are more exposed to information about energy than women and are "somewhat more knowledgeable." The higher the educational level, the higher the level of knowledge on a variety of energy items.
- The major source of information about energy appears to be the mass media.

The report calls for more research about public awareness concerning energy in order to define information requirements. It also says that greater emphasis



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**The Green Stuff:** Tempchek®. It gives you the same high R values as Thermax, and is used on all types of decks, except directly over steel decks. Tempchek is reinforced with glass fibers to give it greater dimensional stability than other urethane foam insulations, so it resists "growth" and ridging. All of which makes Tempchek first choice for any application other than directly over steel. Talk to your Celotex representative about the stuff the best insulated roofs are wearing these days, or call Ed Levin at Celotex, Roofing Products Division: (813) 871-4545.

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Circle 32 on information card

AIA JOURNAL/APRIL 1980 85

is required upon government programs to extend the public awareness of energy facts and issues and technical knowledge, particularly in energy conservation and solar energy.

For information about the report, write National Technical Information Service, U.S. Department of Commerce, Springfield, Va. 22161. The report's number is SERI/TR-53-155.

## HUD Will Fund Local Projects That Promote Energy Savings

States and communities are invited by HUD to participate in an \$11 million grant awards program aimed at encouraging energy conservation activities. Ten to 20 projects will be funded to enable grant recipients to follow energy conservation activities and alternative energy supply technologies that can be applied in housing rehabilitation, neighborhood revitalization or other economic development strategies.

Funded activities must address one or more of the following: assistance to low- and moderate-income people in energy conservation, encouragement of energy conservation services and supplies and assistance to small and minority businesses to achieve energy savings.

Preapplications, due June 23, must contain a statement of energy conservation activities that have been undertaken or will be undertaken in the community and to what extent they have received public and private support, as well as a statement of commitment to community energy plans and programs. Selection will be based upon commitment and comprehensiveness of energy plans and programs, with emphasis placed upon programs that can be replicated in other states and communities.

Grantees will be required to participate in workshops, conferences and other presentations of their energy conservation activities. Projects that demonstrate a high degree of success in implementation may receive additional grant awards.

For information, contact: Community Energy Conservation Competition, President's Clearinghouse for Community Energy Efficiency, Suite 185, 400 N. Capitol St. N.W., Washington, D.C. 20001.

## ASHRAE Energy Statement

"Never before have so many people depended upon a single class of resource for their welfare and survival as we depend upon depletable energy resources," says a policy statement recently adopted by the board of directors of the American Society

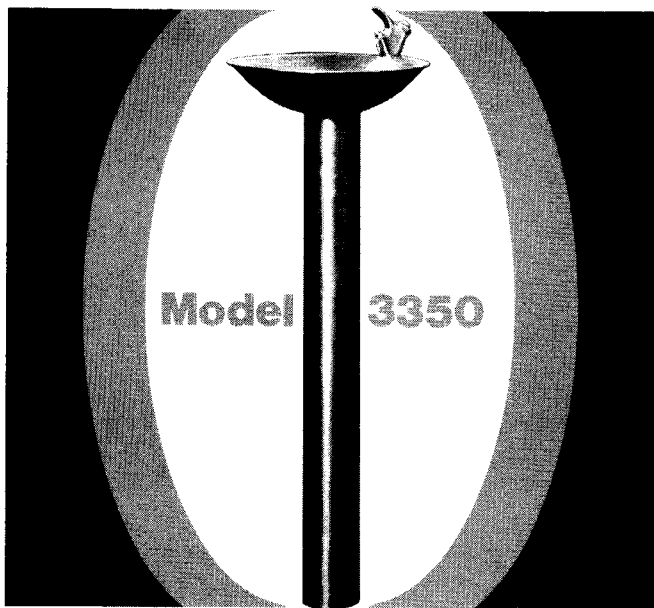
of Heating, Refrigerating and Air-Conditioning Engineers.

The policy is "to utilize existing and new energy resources efficiently and economically to satisfy human needs in heating, ventilation, airconditioning and refrigeration with judicious regard for human comfort, preservation of environmental quality and conservation of all types of resources."

There are 10 means of implementing the policy. Among them, ASHRAE says it will:

- "place emphasis on the efficient utilization of energy in facilities and systems and the development of energy efficient equipment and systems;
- "encourage continued development of nuclear technology, improved construction techniques in power generation, and industrial processes, and energy reclamation from waste materials;
- "encourage aggressive development of the practical applications of solar heating and cooling of buildings and other solar energy utilization;
- "participate in the formulation of reasonable energy-related policies, laws and regulations of governments and keep environmental and health concerns in balance, while recognizing the need to maintain an economically sound and productive society." *News continued on page 88*

# The Center of Attention



Dynamic, simple lines make this drinking fountain a focal point — even in the most elegant of surroundings. Haws Model 3350 features a push-button-operated bubbler and vandal-resistant bottom plate. Available in either bronze or stainless steel. For further information, contact Haws Drinking Faucet Co., P.O. Box 1999, Berkeley, CA 94701.

**Haws**

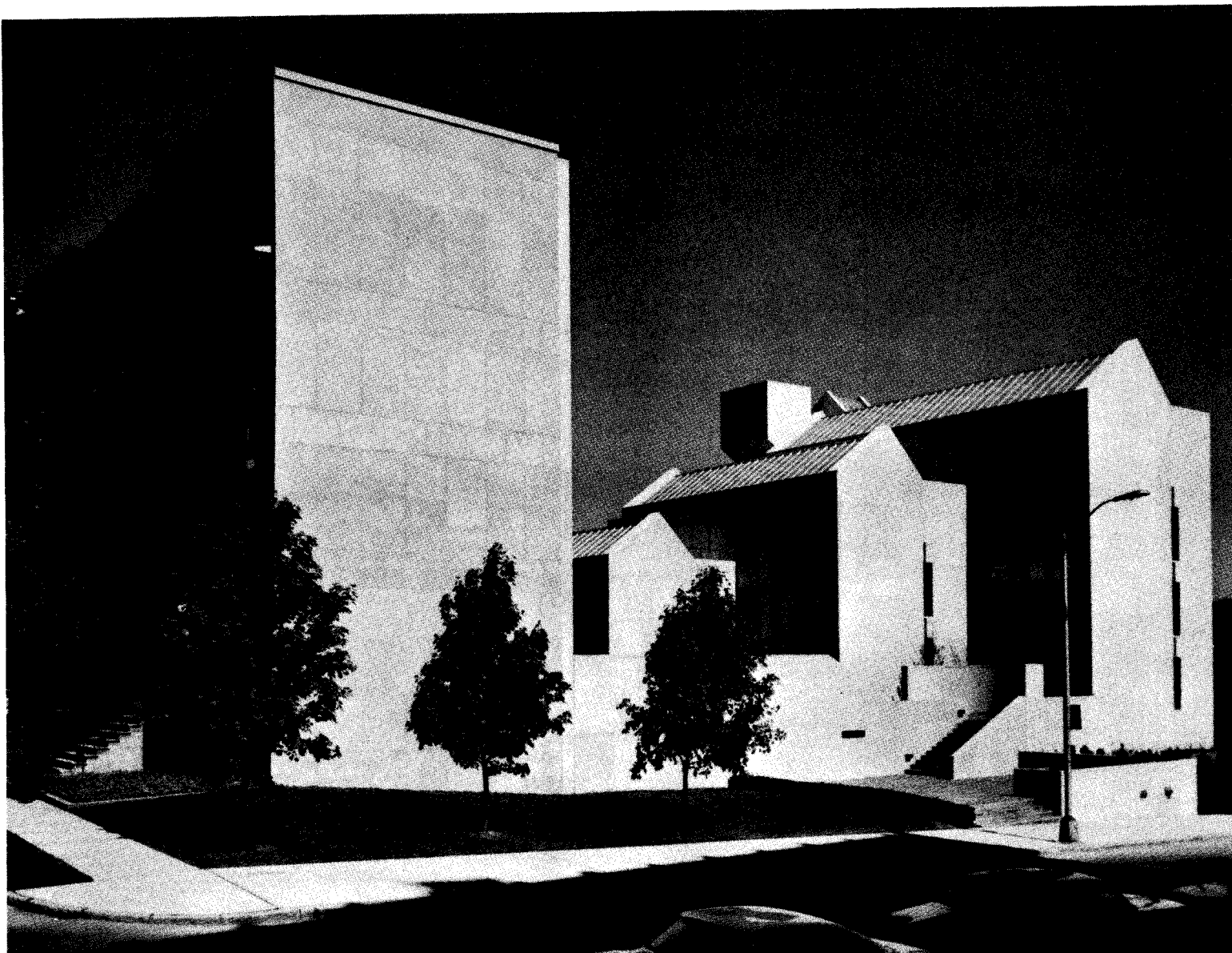
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Headquarters, New York State Bar Association, Albany, N.Y.

Architects: James Stewart Polshek and Associates, New York, N.Y.

Photographer: George Cerna

## TCS... and a "lesson in civilized architecture"

"The headquarters of the New York State Bar Association," as a most distinguished critic recently wrote, "is an object lesson in how to build intelligently, sensitively and well... In a happy alliance, the lawyers and the architects, James Stewart Polshek and Associates, have preserved a row of handsome 19th-century town houses and incorporated them, not as a false front, but as a working part of a completely and strikingly handsome contemporary complex built

behind them. The words that come to mind are skill, imagination and taste, qualities not encountered too often on the urban scene."

We at Follansbee Steel are particularly gratified that Mr. Polshek specified TCS (Terne-Coated Stainless Steel) for all pitched-roof areas on this outstanding building in which originality of design and integrity of site are so felicitously coupled.

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## DEATHS

**O. J. Baker**, Baton Rouge, La.  
**Ernest O. Bostrom**, Tannersville, N.Y.  
**Walter D. Burger**, Chicago  
**Ben H. Dyer**, Annapolis, Md.  
**Howard T. Fisher, FAIA**, Newmarket, N.H.  
**Gilman G. Hoskins**, Los Altos, Calif.  
**C. H. Jenkins**, Corvallis, Ore.  
**George E. Lafaye**, Columbia, S.C.  
**J. W. Lawrence**, Adelphi, Md.  
**Louis Lieberman**, Brooklyn, N.Y.  
**Oscar Liff**, Hallandale, Fla.  
**E. O. Murray**, Torrance, Calif.  
**Thomas L. Shepherd**, La Jolla, Calif.  
**Frederick G. Strauss**, Southgate, Mich.  
**J. Nelson Thompson**, Houston  
**H. James Tubbs**, Seattle

**Edward Melville Bridge, AIA:** Best known for the churches he designed, Mr. Bridge was the architect of the Ruggles Street Baptist Church in Boston, the Episcopal Church of Our Redeemer and the Reformed Church of Latter Day Saints in Lexington, Mass., and many other religious edifices. He died on Dec. 29, 1979, at the age of 90. A graduate of the Massachusetts Institute of Technology in 1913, he served as a professor at this institution from 1929 to 1946. He practiced architecture in Boston from 1927 until his retirement in 1966.

## BRIEFS

**"Conversations on the City"** is a five-week series of seminars running on Wednesdays through May 28 at the headquarters of the National Trust for Historic Preservation in Washington, D.C. Citizens who play key roles in the process of the city's urban evolution are the speakers, beginning with Wolf Von Eckardt, Hon. AIA, architecture critic for the *Washington Post*, and including Arthur Cotton Moore, FAIA, currently engaged in the restoration of the Old Post Office Building, and David Childs, AIA, chairman of the National Capital Planning Commission and partner-in-charge of the Washington office of Skidmore, Owings & Merrill.

**"International Architect"** is a new magazine, whose editor and publisher is Haig Beck, editor-in-chief of *Architectural Design* magazine since 1976. The review of international projects comes out eight times a year. For information, write: Editorial Office, *International Architect*, Box 85, London WC 1B 3EH (01), England.

**Response to the critical needs of urban women** is the subject of a competition sponsored by the American Planning Association's planning and women divi-

sion. Awards will be given for descriptions of projects and proposals that have responded to the urban woman's changing life. Deadline for receipt of completed applications is May 5. Contact: Mary Deal, Director, Planning and Women Division, APA, 1776 Massachusetts Ave. N.W., Washington, D.C. 20036, (202) 872-0611.

**The architect who drives a car** (and who doesn't?) may not know what it actually costs per mile to keep the wheels rolling. The Alliance to Save Energy, in quoting figures compiled by the Hertz Corporation, says a full-size car costs 43 cents a mile; a mid-size one, 38 cents; a fuel-conscious compact, 31.9 cents, and a subcompact, 30.1 cents. With an average cost of 36 cents per mile, says ASE, cutting back on driving by 15 miles a week saves the car owner \$5.40.

**"The Passive Studio: Design for Heating, Cooling, Daylighting"** is the title of a series of workshops developed under contracts between the AIA Research Corporation and the Department of Energy, administered by Professional Development Resources, Inc. The two-day workshops will be held in Seattle (May 2-3), Los Angeles (May 9-10), Washington, D.C. (May 16-17), Boston (May 22-23)  
*continued on page 90*

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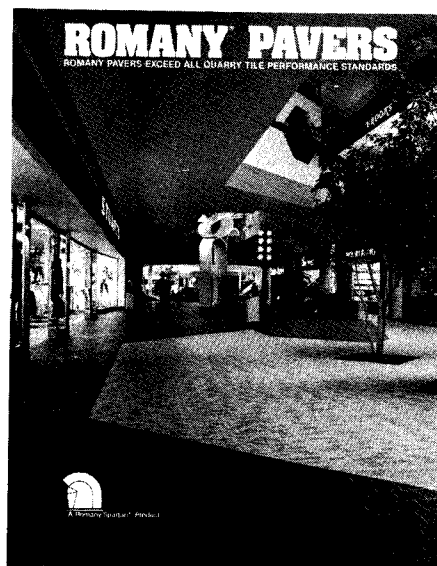
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Our client has specified two or three candidates who are well-trained both in design and in construction management and experienced in complex, large-scale projects—preferably airports. The successful candidates will be both forceful and tactful and will demonstrate significant leadership capacity. They will be able to function with limited staff resources. They and their families will be sufficiently flexible and adaptable to live and work in a very different culture.

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Interested, qualified candidates should send resume with compensation history to: **Gilbert E. Dwyer Associates, 99 Park Avenue, Suite 2000, New York, New York 10016.**

**Briefs from page 88**  
and Denver (May 30-31). For information, contact: Passive Studio, PDR Workshops, 1000 Connecticut Ave. N.W., Suite 9, Washington, D.C. 20036.

**The Inter-Society Color Council**, of which AIA is a member, has awarded its 1980 Macbeth award for "outstanding recent contributions to the subject of color" to William David Wright, the author of five books on color. Wright, who lives in London, has developed two colorimeters for measuring the chromaticities of paintings, which do not damage them by abrasion or radiation.

**Technical articles on roofing** will be published by the Roofing Industry Educational Institute in a new quarterly educational digest. To obtain a free subscription, write on firm letterhead to: RIEI, 6851 S. Holly Circle, Suite 250, Englewood, Colo. 80112.

**"Decorating with Photography"** is the title of a competition sponsored by Eastman Kodak and Professional Photographers of America, open to architects, designers and photographers. Entries must show actual installations of photography in the design of residential or contract interiors. Cash awards totaling \$4,000 will be presented in the two categories. For details and an entry form, write Linda Sommerfeld, PPOfA, 1090 Executive Way, Des Plaines, Ill. 60018, or call (312) 299-8161.

**The Association for Preservation Technology** invites papers to be presented at its 1980 annual meeting in Quebec on Oct. 2-4. This year's topic is "Preservation in the Urban Environment and the Craft Aspect of the Preservation Business," to be divided into four major headings: philosophy, legal aspects, economic aspects and technological aspects of restoration and preservation. For further information, write: Rita Rachele Dandavino, Speakers Committee, 7331 Avenue de Chateaubriand, Montreal, Que., H2R 2L7, Canada.

**The Association of Student Chapters/AIA** has awarded its first annual "most outstanding" student chapter award to the chapter at the Georgia Institute of Technology.

**Performance ratings of 11 solar collector models** for which certification by the Solar Energy Industries Association has been requested are contained in the "Directory of SEIA Certified Solar Collector Ratings." A copy may be obtained for \$5 from SEIA, Suite 800, 1001 Connecticut Ave. N.W., Washington, D.C. 20036. □

*Products on page 92*

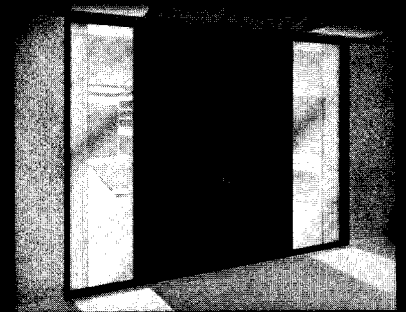



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## PASSIVE SOLAR DESIGN AWARDS COMPETITION

The Passive Systems Division of the American Section, International Solar Energy Society, in cooperation with the Solar Energy Research Institute, announces a program of Passive Solar Design Awards, to be held in conjunction with the Fifth National Passive Solar Conference.

Awards will be made in recognition of excellence in passive solar design in the categories of:

SINGLE AND MULTIFAMILY  
RESIDENTIAL  
COMMERCIAL BUILDINGS  
SOLAR REDESIGN OF EXISTING  
BUILDINGS

Judging will take place at the conference. Finalists will have work prominently displayed. A conference awards ceremony will highlight the event.

Deadline for Registration: July 1.  
Deadline for Submissions:  
August 31.

For information, call or write:

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Passive Solar 1980  
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Brattleboro, Vermont 05301  
802 254 4221

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## PRODUCTS

### Portable Light Box.

Craftlite has a stainless steel frame, double strength glass, built-in handle, press-to-start switch and an eight-foot cord. The light box features a light aperture that directs heat away from the working surface into areas of ventilation to keep glass cool and evenly illuminated. It is available in seven floor and table models ranging from 12x18 inches to 36x48 inches. (Alvin & Co., Inc., Windsor, Conn. Circle 190 on information card.)

### Reflective Glass.

Sunglas Reflective is designed to block up to 65 percent of the sun's heat. It combines a .40 shading coefficient and a 30 percent visible light transmittance. It has a neutral silver coating. (Ford Glass Division, Detroit. Circle 175 on information card.)

### Sauna.

Energy-Saver prefabricated sauna has a 1.5-inch thick foam insulation and uses a small heater (six kilowatts in the 8x8-foot model and four kilowatts in the 6x4-foot model). The exterior is oak paneling and the interior is pine or redwood. (Am-Finn Sauna, Valley Forge, Pa. Circle 174 on information card.)

### Whiteprinter Absorber System.

Filter Flo 2000 absorbs and neutralizes ammonia vapors present in the whiteprinting process. The absorber is 10x10x23 inches and is designed to be user-installed and maintained. (Teledyne Rotolite, Stirling, N.J. Circle 173 on information card.)

### Walkway Lighting.

Trailblazer provides low-mount lighting for outdoor walkways and lawns. It has a cast aluminum fixture, an injection-molded polycarbonate refractor and internal fluted prisms on the sidewalls and dispersing prisms on the bottom. Poles come in heights of 36 or 42 inches above grade. Poles are also available for internal anchor base mounting or direct embedment at 18 inches below grade. (Johns-Manville Corporation, Denver. Circle 172 on information card.)

### Roofing Products.

Econosnap renovation package is designed to repair faulty one-piece metal roof edges and perimeter water leaks. V-line Fascia panel system is a three-piece roofing system. (W. P. Hickman Co., Asheville, N.C. Circle 161 on information card.)

### Wall Mounted Light.

A new line of wall mount luminaires, WAL, is available for use with high pres-

sure sodium, mercury vapor or metal halide lamps. A clear lens model and a prismatic lens model are available, both with a one-piece polycarbonate cover, for use in walkways, courtyards, entrances, building security, loading areas, underpasses. (Crouse-Hinds Co., Syracuse. Circle 171 on information card.)

### Miniature Spotlights.

Shelf Lights can be used to highlight small objects or to accent china or crystal, among other things. They are available in four finishes—polished aluminum, satin bronze, brass and satin white—and in three sizes—18 inches (accommodating three lights), 29 inches (for five lights) and 40 inches (for seven lights). (Halo Lighting Division, McGraw-Edison Co., Elk Grove Village, Ill. Circle 162 on information card.)

### Rubber Flooring.

Raised square block pattern rubber flooring comes in 24x24-inch tiles in black, red, green, gray, mahogany, beige, walnut, birch and oatmeal. (R. C. Musson Rubber Co., Akron, Ohio. Circle 180 on information card.)

### Rustic-Stained Hardboard Siding.

Teton hardboard siding is available with a factory applied stain base. Panels are seven-sixteenths of an inch or one-half inch thick. It comes in 4x7, 4x8, 4x9 and 4x10-foot sizes. (Georgia-Pacific Corporation, Portland, Ore. Circle 163 on information card.)

### Nylon Carpets.

Three new carpet lines are available: Bright Spirit, a multilevel nylon loop pile with a geometric pattern; Proclaim, a cut-and-loop abstract pattern with Saxony textured finish, and Sheer Elegance, superthick Antron III worsted spun nylon heat-set by Suessen continuous yarn system. (Downs Carpet Co., Willow Grove, Pa. Circle 164 on information card.)

### Underground Waterproofing.

A two-layer water drainage composite of open nylon mesh heat-bonded to a non-woven filter fabric, ENKADRAIN, can be used for drainage problems of underground and conventional buildings. (American Enka Co., Enka, N.C. Circle 167 on information card.)

### Solar Attic.

Passive and active solar systems are combined for space heating and year-round domestic hot water preheating in Kalwall's solar attic concept. The system includes Sun-Lite glazing panels, reflective floor surface, domestic hot water tank, solar storage tubes and a movable foam insulation shutter. (Kalwall Corporation,

*continued on page 95*



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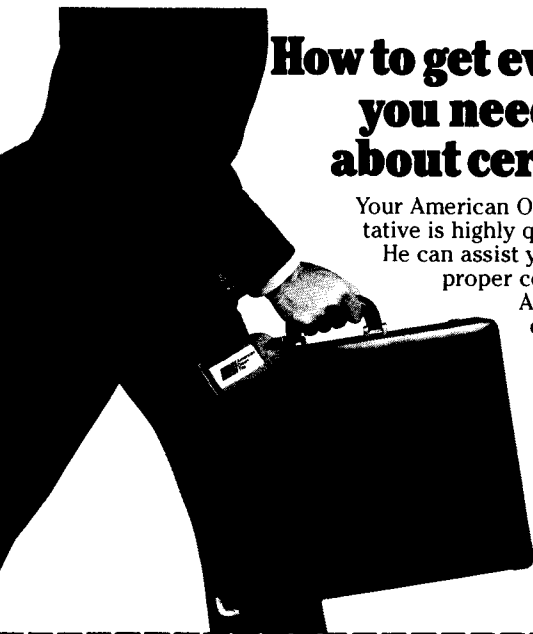
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**Products from page 92**

Manchester, N.H. Circle 168 on information card.)

**Document File.**

Two- and three-drawer Plan Hold file units store large documents up to 18x24 inches. Materials, filed in heavy-duty folders that can contain up to 60 sheets, are held in vertical position by spring pressure. (AM Bruning, Los Angeles. Circle 170 on information card.)

**Whirlpool Bath.**

Tranquil, a 6-foot-long, 35-inch-wide and 20-inch-high whirlpool bath, has Jacuzzi jets and one-half horsepower pump. Fiberglass is reinforced with steel rods and extra layers of glass in stress areas. (Pearl Baths, Inc., Minneapolis. Circle 181 on information card.)

**Spiral Stair.**

A new single pole stair (Model PS) is all wood, internally post-tensioned. It ranges in size from 4.5 to 6 feet and has full, rectangular treads. (Spiral Manufacturing, Inc., Baton Rouge, La. Circle 182 on information card.)

**Microwave Door Actuator.**

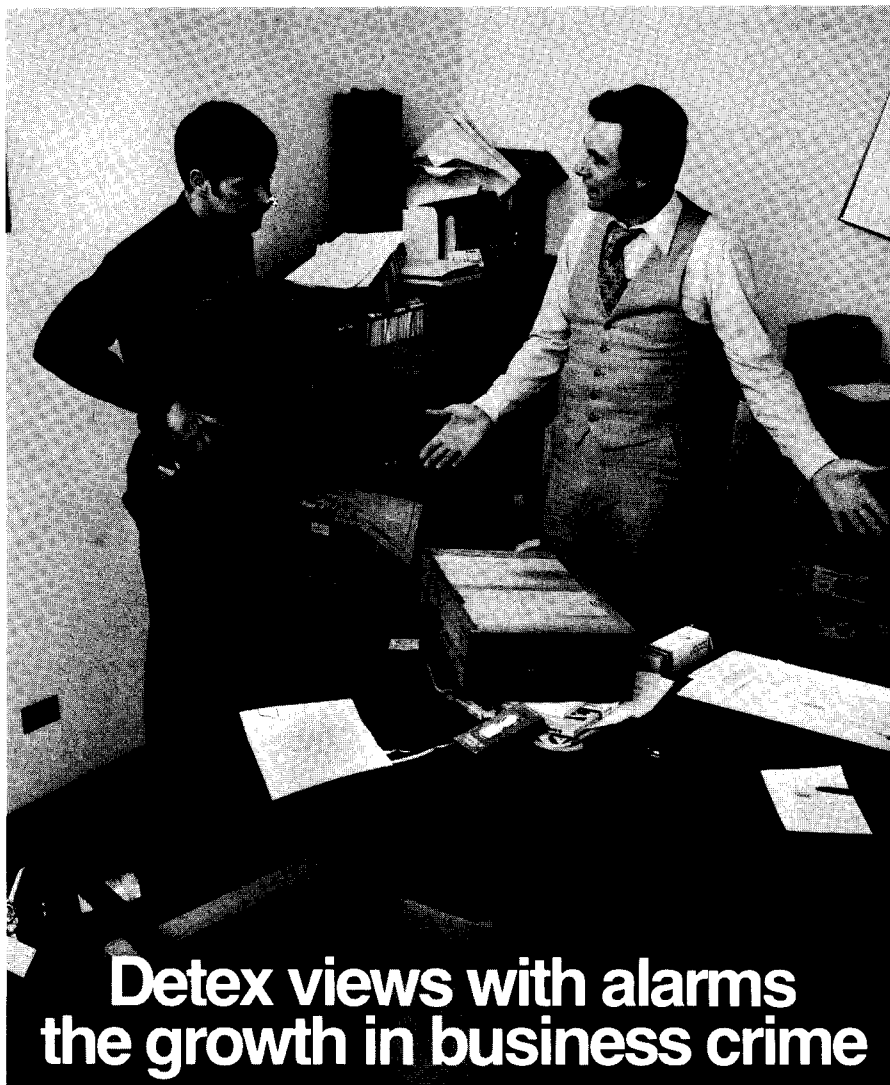
The Solfan Microwave Door Actuator system can open or close both sides of a sliding door or the approach side of a swinging door by motion detection. The system projects precise radio beams into a predetermined zone, and, when a person or object enters the zone, the projected energy waves experience a frequency shift which converts to a door-opening signal. (Solfan Systems, Inc., Mountain View, Calif. Circle 185 on information card.)

**Fan Speed Control.**

Fandial controls provide continuously variable fan speeds depending on the temperature of the room. For example, during warmer months air can be circulated faster to help reduce airconditioning costs and stuffiness. During cooler months, lower speed circulation brings warm air down from the ceiling to help reduce heating costs. (Lutron Electronics Co., Inc., Coopersburg, Pa. Circle 189 on information card.)

**Wash Center.**

The Bradpack stainless steel preassembled wash center has four-inch wrist blade handles, flat mirror, fluorescent light fixture, electrical outlet, storage cabinet with two shelves and piano-hinge door and paper towel dispenser. All accessories are located no more than 40 inches above the floor, which is accessible to wheelchair users. (Bradley Corporation, Menomonee Falls, Wis. Circle 188 on information card.) □



## Detex views with alarms the growth in business crime

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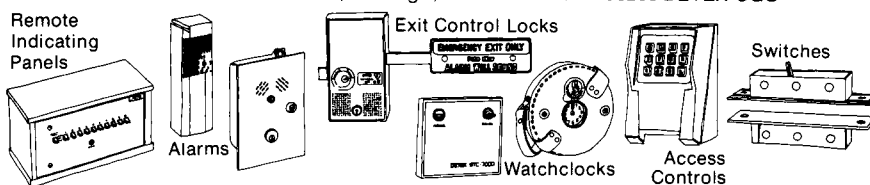
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