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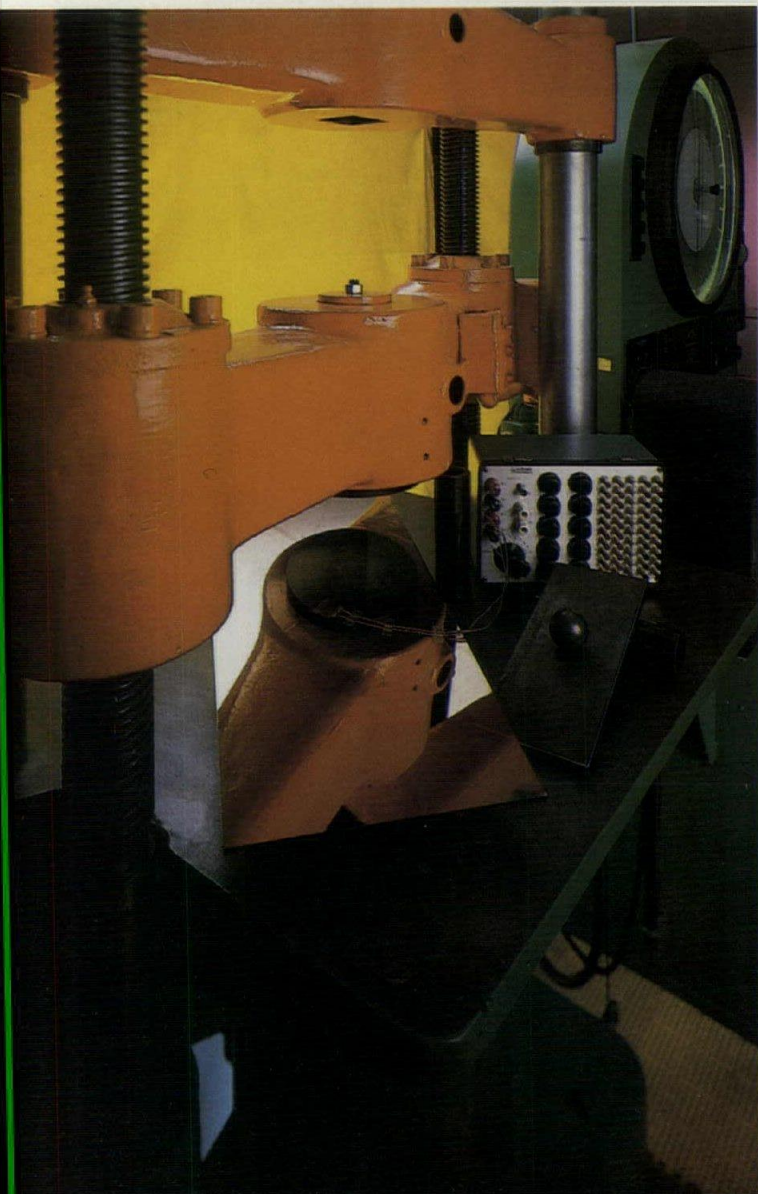
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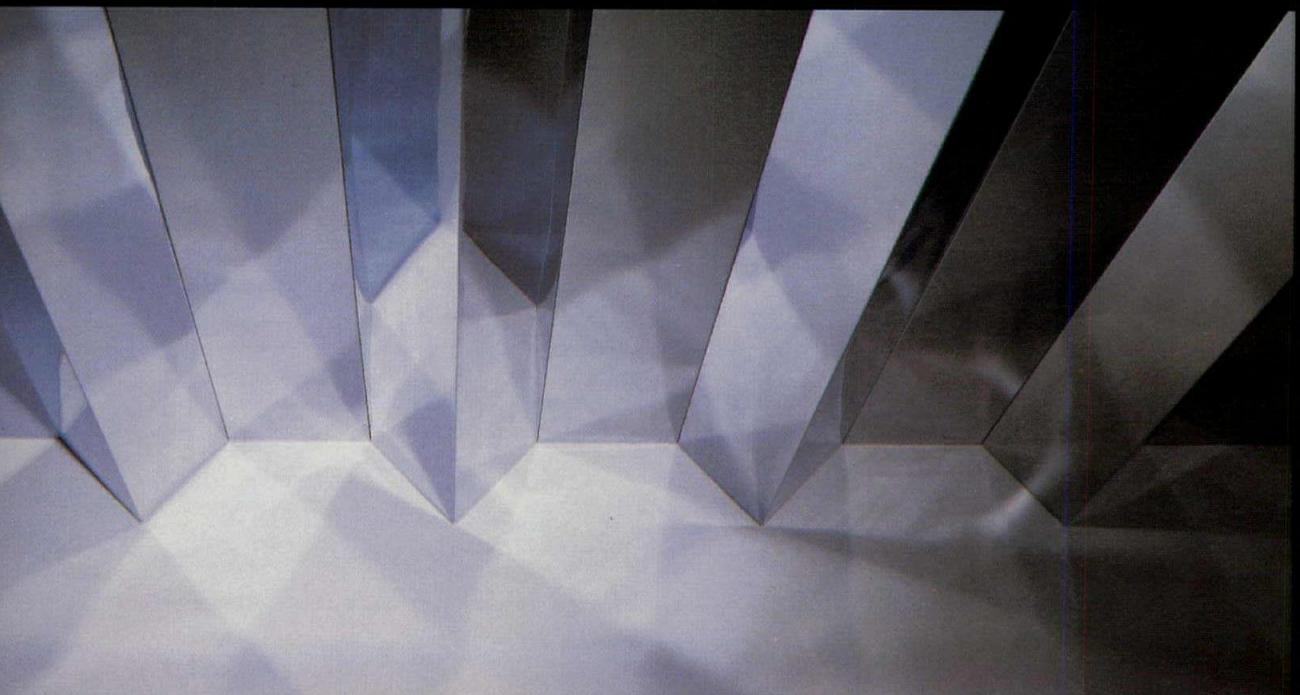


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Cover: Photograph © F. Harlan Hambright of one of eight stairways whose granite treads are cantilevered from walls in the Old Executive Office Building (see page 80).

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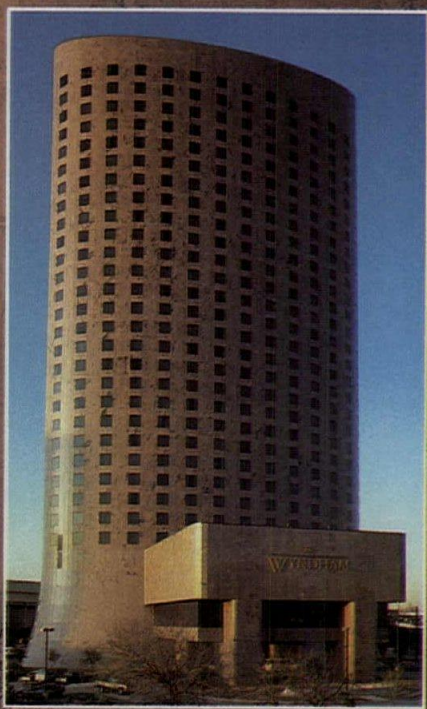
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Apr. 12-13: Louisiana Design Festival with Ralph Rapson and Charles Gwathmey, Lafayette, La. Contact: Louisiana Architects Association, 521 America St., Baton Rouge, La. 70802.

May 6-7: Course on Planned Maintenance: Productivity and Energy Conservation, Universal City, Calif. Contact: Marilyn Jackson, Association of Energy Engineers: 4025 Pleasantdale Road, Suite 340, Atlanta, Ga. 30340.

May 6-8: American Consulting Engineers Council Annual Convention, Boston. Contact: Connie Neuman, ACEC, 1515 15th Street, N.W., Washington, D.C. 20005.

May 6-8: American Institute of Plant Engineers Conference, Boston. Contact: Robert T. Slater, 163 Highland Avenue, Needham Heights, Mass. 02194.

May 6-10: Course on Radioactive Waste Management for Nuclear Power Plants and Other Facilities, Alexandria, Va. Contact: Gloria Greene, ASME/Professional Development, 345 East 47th Street, New York, N.Y. 10017.

May 6-10: Course in the Application of Infra-red Scanners to Detect Building Energy Losses and Roof Moisture, Shelburne, Vt. Contact: The Infrasppection Institute, Juniper Ridge, Box 2643, Shelburne, Vt. 05482.

May 14-15: Conference on Space As Function—Space As Image, San Francisco. Contact: Charles Yourd, 44 Montgomery Street, Suite 500, San Francisco, Calif. 94104.

May 14-18: Clinic for Marketing Coordinators, Chicago. Contact: Weld Coxe, The Coxe Group Inc., 2 Mellon Bank Center, Philadelphia, Pa. 19102.

May 16-17: Workshop on Economic Development: Management and Finance, San Diego. Contact: Christine Barbetta, AICP, 1313 E. 60th Street, Chicago, Ill. 60637.

May 16-17: Concurrent Meetings of AIA housing and regional development and natural resources committees, Seattle. Contact: Ravi Waldon (202) 626-7429 at Institute headquarters.

May 17-18: AIA Historic Resources Committee, Denver. Contact: Ravi Waldon at Institute headquarters, (202) 626-7429.

May 17-19: Preservation League of New York State Annual Conference, Coopers-town, N.Y. Contact: Preservation League, 307 Hamilton Street, Albany, N.Y. 12210.

May 19-22: Annual Spring Meeting and Management Conference of the Ceramic Tile Distributors, Scottsdale, Ariz. Contact: Stan Gaskins, CTDA, 805 East Broadway, Suite A, Glendale, Calif. 91205.

May 20-21: Conference on Hospitality Industry Investment, New York. Contact: Alison Chase, 420 Lexington Avenue, Suite 215, New York, N.Y. 10170.

May 20-23: Symposium of the Steel Structures Painting Council, Cincinnati. Contact: Harold Hower, SSPC, 440 Fifth Avenue, Pittsburgh, Pa. 15213.

May 21-22: Conference on Trends and Applications Utilizing Computer Graphics, Washington, D.C. Contact: Joseph Collica, NBS, A245 Technology Building, Gaithersburg, Md. 20899.

May 21-23: Adjustable Frequency Drive Seminar, Milwaukee. Contact: Louis Ellis, 427 E. Stewart Street, Box 2020, Milwaukee, Wis. 53201.

May 21-24: Office Landscape Users Symposium, Washington, D.C. Contact: Frank J. Carberry, Office Landscape Users, Box 11182, Philadelphia, Pa. 19136.

May 22-24: Symposium on Structural Steel, Chicago. Contact: The American Institute of Steel Construction, 400 N. Michigan, Chicago, Ill. 60611.

May 23-24: The Canadian Society for Color Annual Conference, Niagara-on-the-Lake, Ontario. Contact: David Chesterton, Humber College, Rexdale, Ontario M9W 5L7, Canada.

May 23-26: AIA Committee on Architecture for Health, San Juan, P.R. Contact: Mike Cohn at Institute headquarters (202) 626-7366.

May 24-25: Seminar on Regional Loss Prevention, Chicago. Contact: ASFE, 8811 Colesville Road, Suite G106, Silver Spring, Md. 20910.

June 9-12: AIA Annual Convention, San Francisco.

June 11-14: NEOCON 17, The Merchandise Mart, Chicago.

LETTERS

Too Much Marketing? As an architect teaching at a large university, I serve on the university building committee, which acts as the institution's client representative. Among the client duties are interviewing and selecting architects for major capital projects. After spending hours and hours absorbing architects' presentations, I've come to the conclusion that marketing of architectural services has gone too far.

Most major firms, through seminars and their own resources, have developed ever more dazzling marketing presentations with media, computers, and stand-up recitations on design quality. Unfortunately, by the completion of a series of interviews, usually from four to six per commission, over a period of up to eight hours (in two or more sessions), the client committee is experiencing information overload, has heard overlapping treatises on design, and has viewed slides and flow charts too numerous to digest.

Obviously architects are taking marketing seriously. Some firms allocate 10 percent of their budgets to marketing. This seems excessive. Couldn't those resources

be more prudently spent on professional development, improved services, or increased remuneration to staff members. Most critically, the keen competition is leading to questionable behavior.

The condition became particularly acute to my view recently when five firms (all approved by a state governor's appointee) interviewed for a \$12 million cancer care unit at University Hospital. In the course of the presentation, three of the five firms misrepresented themselves in regard to work done by their offices and work attributed to joint ventures.

The typical case was regional offices of large firms claiming work done by other offices in the network. The misrepresentation was exacerbated by one principal's outright untruth in response to a question regarding his firm's performance vis-a-vis that of another firm in a joint venture on a local hospital. The spokesman initially claimed total responsibility for the project and only after a pointed inquiry proceeded to admit, but belittle, the other firm's involvement. In fact, the project was an equitably shared responsibility with statistically equal performance and remuneration.

Having had some knowledge of the joint venture, I was quite dismayed by the discussions. Whatever happened to professionalism? Is it a victim of marketing?

It is understood that an objective process of selecting architects is desirable and that this includes interviews at which firms project themselves as positively as possible. And clients have a responsibility to listen and be responsive. So far, so good; but if the presentation includes untruths, whether or not known to the client, has the architect acted professionally? I submit that in the absence of the Institute's once proud ethics, fundamental principles of truth and honesty should still permeate the profession. Where do we go from here?

Robert W. Dorsey, AIA
Head, Department of
Construction Science
University of Cincinnati

Sea Ranch Postscript: Here is an anecdote as a followup to my Sea Ranch article (Dec., page 56). It's from a big members' meeting—a kind of brain-storming session—of the Sea Ranch Association on Jan. 26 as reported in the *Independent Coast Observer* from Gualala:

"Among the suggestions for improvements on Sea Ranch was one by Shirley Coltin to use a magnetic card as a means of identification for association members; among the complaints was one by Alan McPherson, who told the group that when he had braced a person he found looking in his picture window, the person had responded, 'It's all right; I'm an architect!'"

Jim Burns
San Francisco



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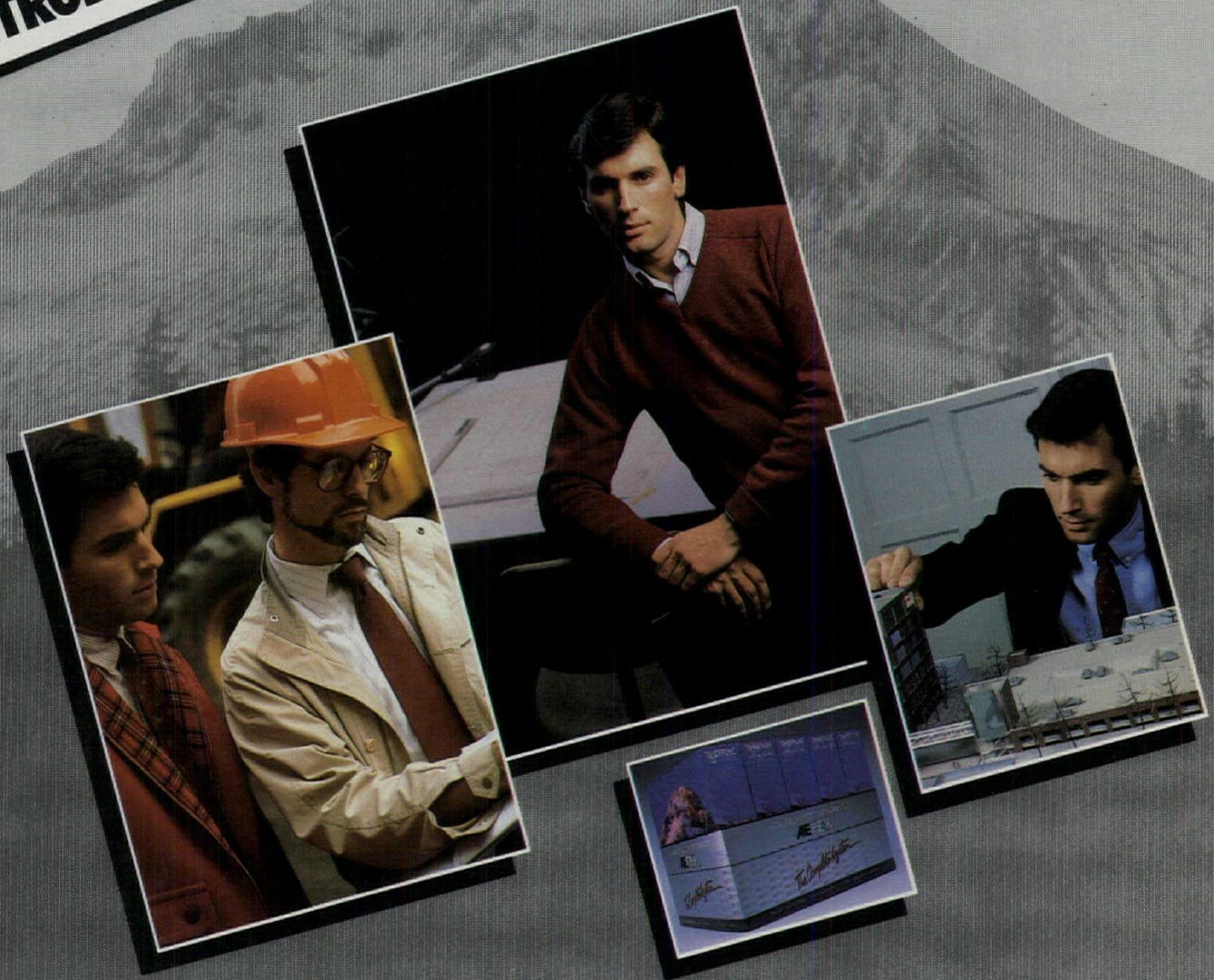
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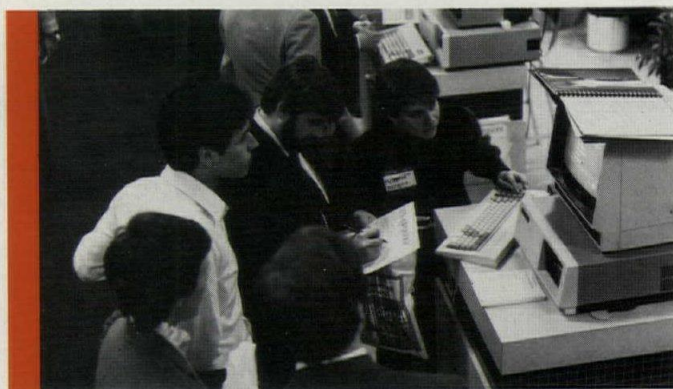
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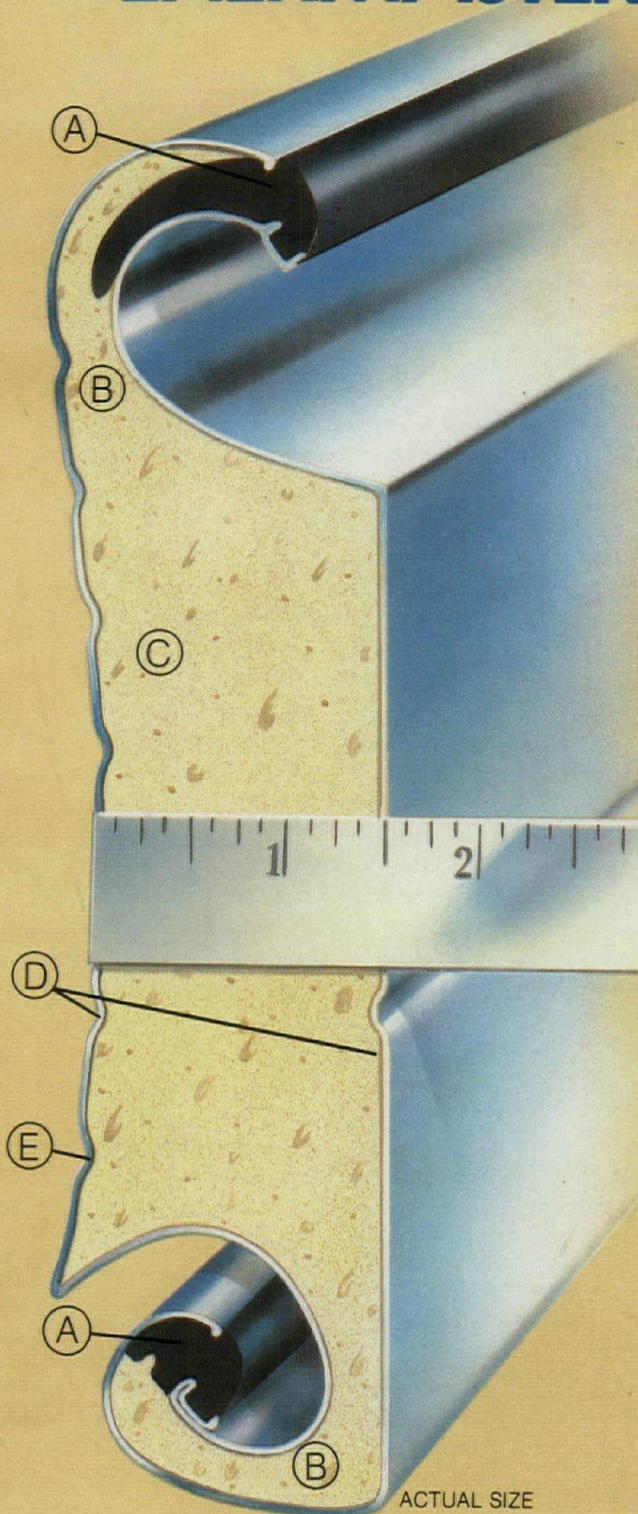
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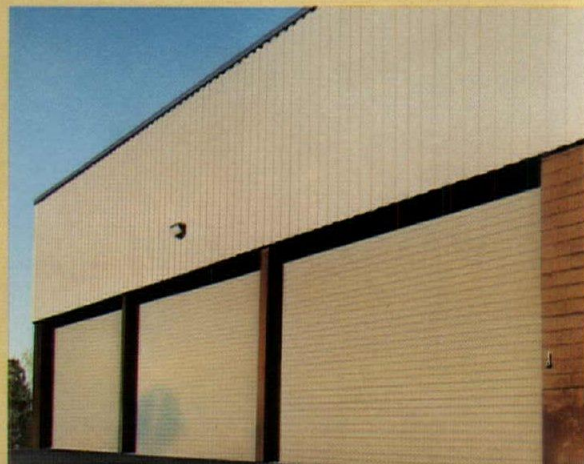
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Awards

Saarinen's GM Technical Center Receives AIA's 25-Year Award

Eero Saarinen's sprawling General Motors Technical Center in Warren, Mich., has won this year's AIA 25-year award. "From its breathtaking landscaping to its legendary technical advances, from its unique use of vibrant color to its elegant solutions to functional problems," stated the jury for the award, "the center is the epitome of quality industrial architecture."

Actually, the project commenced as a collaboration of father and son, the work of both Eliel and Eero Saarinen. A 1945 preliminary plan by the two for the corporate campus not far from Detroit showed the Technical Center as a collection of five building clusters surrounding an auto test track, which in turn surrounded a large, irregularly shaped lake dominated by a water tower.

The project sat idle due to postwar material shortages, but with the boom in auto sales, work on it began anew in 1948. By this time Eero had been placed in charge of the project and took a fresh approach. A variation on the Cranbrook theme was GM's original request, but Saarinen convinced the corporation that the research center for as technological an enterprise as GM should be expressed forthrightly. He wrote at length about his work on the Technical Center and the image he sought to convey through the complex: "General Motors is a metal-working industry; it is a precision industry; it is a mass production industry. All these things should, in a sense, be expressed in the architecture of its Technical Center."

While the parti of the earlier scheme was retained (that of five building clusters around a central, man-made lake) the composition of the ensemble and the buildings themselves were clarified. The buildings are based on a five-foot module, exuding machine precision. The steel frames are infilled with glass or, in the spandrels, a porcelain enamel panel. At the end of each long, linear building (none of which rises higher than three stories) is a shear glazed brick wall in one of nine vibrant colors, making the buildings appear like extruded sections, sliced clean.

The buildings, 25 in all, are arranged

on the 320-acre site in five clusters representing the five staff areas: research, process development, engineering, styling, and the service center. In each of the clusters the central lobby serves as the "identity" of the staff area, as Saarinen explained it. "Each wanted its own 'personality.' We tried to answer this desire architecturally in the main lobby of each of the five groups. In four of these the visual climax to the lobby is the main staircase. These staircases are deliberately made into ornamental elements, like large scale technological sculptures."

The five clusters are sited around the central, rectilinear lake on three sides with ample green space and heavily planted with trees. In an earlier scheme, Saarinen had proposed a 10-story central administration building to be placed on the lake itself to provide a strong, central focus, but this building was later dropped from the program. Saarinen then included other elements in the pool to provide vertical focus. Four islands of trees encroach upon the 22-acre lake like barges, each at a compass point. On the pool's west side, placed where the administration building would have been and ending the axis of the entry drive, is a linear fountain that creates a

wall of water 115 feet wide and 50 feet tall. To the north are smaller fountains by Alexander Calder.

In the northeast corner of the lake Saarinen placed what is perhaps the Technical Center's most dramatic structure. "Water tanks can be very handsome," he wrote, "and instead of hiding the water tower, we designed it to be a proud, 138-foot-tall, stainless steel clad, spherical shape and set it in the pool as a vertical accent in the whole composition."

The arrangement of the buildings around the lake has been compared to Mies van der Rohe's 1940 plan for the campus of the Illinois Institute of Technology, which in like manner grouped rectilinear steel frame structures with brick infill around two central pools. Saarinen, however, saw the Technical Center as a continuation of an older architectural precedent in the region. "It has been said that in these buildings I was very much influenced by Mies," he wrote, "but this architecture really carries forward the tradition of American factory buildings, which had its roots in the Middle West in the early automobile factories of Albert Kahn."

The first three buildings of the complex were completed in 1951 and roundly praised in the architectural press. "Here is precision in details without wasteful pomposity, perfection without pomp," declared *Architectural Forum*, which went on to describe the complex when it was completed in 1956 as "GM's industrial Versailles."

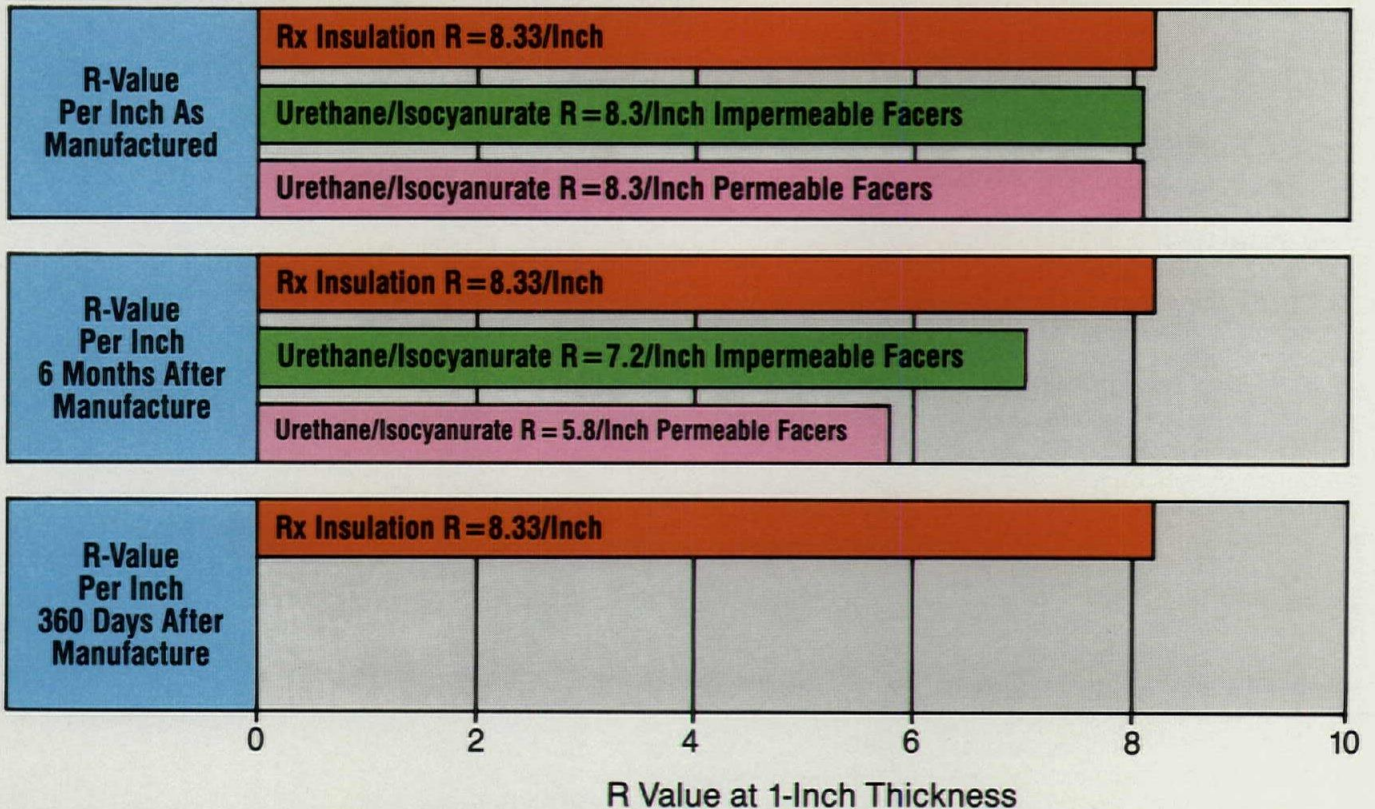
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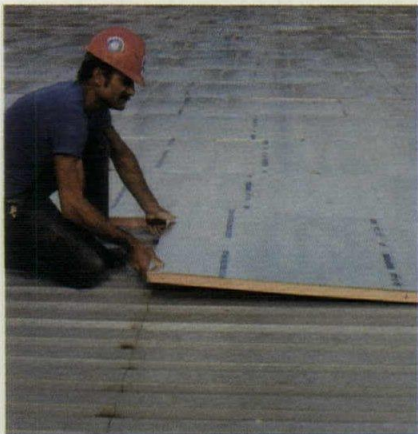
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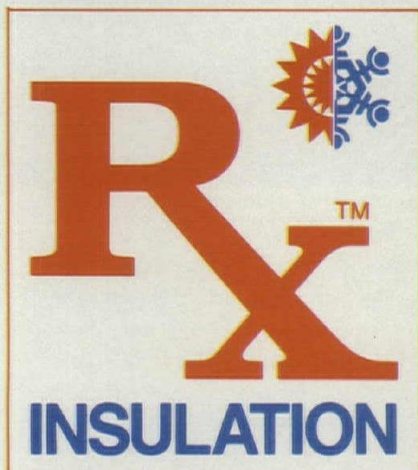
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Awards from page 11

The awards jury cited Saarinen and consulting architect Smith, Hinchman & Grylls for the "legendary technical advances" in the Technical Center, many of which have since become commonplace. For example, the airconditioning system was incorporated into the ceiling grid of the office spaces, the outlets appearing as circular bosses alternating with sprinkler heads. The light pans within the grid could be shaded with diffusers or covered completely to vary lighting effects. The ceiling grid was coordinated with the structural grid, with the airconditioning and sprinkler nodes serving as anchor posts for the movable partition system, insuring that the partitions are placed according to the grid.

Saarinen worked closely with GM to develop the exterior cladding system, which consisted of two pieces of porcelain enamel skin bonded to a paper honeycomb core with granular insulation. These two-inch-thick panels and the double-pane windows were inserted into mechanically sealed neoprene gaskets, similar to those used on automobile windshields. The flexibility of these systems allowed the exteriors to be easily changed to accommodate new interior uses, and many of the buildings have been added onto.

Saarinen made a varied use of color, such as in the shop machines, which were painted different colors to brighten these interior spaces. To fire the ceramic glazed bricks of red, dark red, tangerine, orange, yellow, gray, dark and light blue used inside and outside, GM built a special high temperature kiln. Saarinen also collaborated with GM stylists to design the lobby furnishings for each building cluster.

Shortly before his death in 1961 Saarinen wrote of this project: "Every time I go to the Tech Center, I think what a great client General Motors was. The buildings are perfectly maintained. And they prove that in the long run good materials pay. The engineering group is eight years old, but it looks as if it had been finished yesterday." M.J.C.

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Unless otherwise indicated, the news is gathered and written by Allen Freeman, Nora Richter Greer, Michael J. Crosbie, and Lynn Nesmith.

The Institute

Ten To Be Honored by AIA for 'Distinguished Achievements'

AIA has announced 10 winners of 1985 Institute honors that recognize "distinguished achievements that enhance or influence the environment and the architectural profession." The honors will be conferred in June at AIA's annual convention in San Francisco.

Robert Geddes, FAIA, of Princeton, N.J., chaired the awards jury, which also included Peter Bohlin, FAIA, of Wilkes-Barre, Pa.; Thomas R. Vreeland, FAIA, of Los Angeles; Massimo Vignelli of New York City; Steven Oles, AIA, of Newton, Mass.; Roslyn Brandt, Associate AIA, of New York City; and Nursel Erdener of Jackson, Miss.

The 10 winners are:

- Ward Bennett, New York City designer of furniture, pottery, tableware, and interiors, cited for "transforming industrial hardware into sublime objects and creating a new vocabulary for the whole design profession."

Bennett left his home at an early age and attributes much of his "creative fecundity to the stimulus travel affords." At the age of 20 after four years of extensive travel through Europe he enrolled at the Porto Romano School of Art in Florence and later studied in Paris under Brancusi and in New York under Hans Hoffman.

In 1946 Bennett traveled to Mexico and designed jewelry that was later exhibited at the Museum of Modern Art. Bennett returned to Europe in the late '40s and was befriended and encouraged by Le Corbusier, which contributed to his involvement in residential interiors and furniture.

Tiffany commissioned Bennett in 1963 and 1971 to design china, glassware, and silver; his glass vases, a paperweight, and a flatware pattern are in MoMA's permanent collection.

- The Central Park Conservancy and New York City department of parks and recreation for the "excellence of their restoration achievements and their visions for the future."

Founded in 1980, the Central Park Conservancy supports and complements the parks department to achieve restoration and conservation goals. Central Park was built between 1857 and 1873 on 830 acres of what was then New York City's northern fringe. Designed by Frederick Law Olmsted and Calvert Vaux, the park's plan is an urban design landmark.

By planting trees, restoring structures, cleaning lakes, providing security, and



Ward Bennett in his Scissor chair.

making the park beautiful again, the conservancy and the parks department have contributed to Olmsted's notion of the park as a "single work of art."

- The Cranbrook Academy of Art in Bloomfield Hills, Mich., was honored as "the quintessential school of visual arts for more than 50 years."

The academy was founded in 1932 through the collaborative efforts of George and Ellen Scripps Booth, Detroit newspaper publishers, and Eliel Saarinen, who designed the grounds and most of the buildings. Finland's leading architect at the time, Eliel Saarinen came to Cranbrook with his wife Loja—who lead the weaving studios—his daughter Pipsan, and his son Eero.

Some early participants in the Cranbrook community were sculptor Carl Milles, whose works are displayed around the campus; potter Maija Grotell; weaver Marianne Strengel; Charles Eames; and city planners Carl Feiss and Edmund Bacon. Students have included Harry Bertoia, Jack Lenor Larsen, Ralph Rapson, FAIA, Harry Weese, FAIA, Neils Diffrient, and Gretchen Bellinger.

"The academy has been unsurpassed for the beauty of its physical setting, for the simplicity and integrity of its open education philosophy, for its eminent faculty, and for its contributions to the surrounding community and to the greater community of arts," said the jury.

- Kenneth Frampton, architecture critic

continued on page 18

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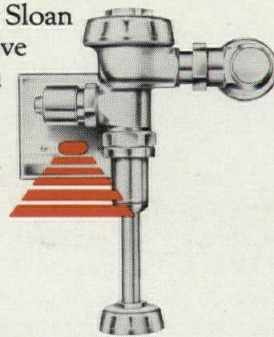
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The Institute from page 15

and historian and professor of architecture at Columbia University, cited by the jury for his "intellectual force in the development of modern architecture."

Born and educated in England, Frampton worked as an architectural assistant in London and Tel Aviv before coming to this country. He is one of the founders of the Institute of Architecture and Urban Studies in New York City, and its publication, *Oppositions*. He has written numerous articles for various publications, as well as five books, including *A Critical History of Modern Architecture*, which the jury called an "extremely important reinterpretation of the history of the modern movement."

In addition to teaching at Columbia, Frampton has taught at Princeton, Harvard, and the Royal College of Art in London and served as a consultant editor for Rizzoli International.

• Architecture critic Esther McCoy of Los Angeles for recording the history of architecture and architects in Southern California. "She writes from a personal knowledge of the craft of architecture. . . . It is sound writing, unmarred by idle speculation or far-fetched analogies," said the jury.

McCoy has devoted more than 50 years to studying and writing about particular

buildings, architectural styles, and architects. She has written numerous books, articles, and monographs about diverse and less well-known California architects.

In support of her nomination Robert Venturi, FAIA, said, "Her *Five California Architects*, published in 1960, was one of the most important books for me in my education as an architect."

Her other books have included *Case Study Houses*, *Richard Neutra*, *Craig Ellwood*, *Vienna to Los Angeles: Two Journeys*, and published in 1984 *The Second Generation*.

• New York architectural photographer Norman McGrath. The jury said that he "has enriched our perception of architecture with images that express the essence of a building, space, or an interior."

Born in London and educated in Ireland as an engineer, McGrath came to this country in 1956 and worked with consulting engineering firms for about five years before pursuing a career in photography.

The nomination called his work "consistently sensitive, documentary, and accurately interpretive no matter what the scale or the complexity of the project involved. He is a dedicated craftsman, a disciplined technician, and a photographer without overbearing stylistic preconceptions."

• The Games of the XXIII Olympiad. The jury praised the "unique vision of its designers, who were able to pull together 30 athletic sites and 54 cultural sites scattered through a wide area—some literally hundreds of miles apart—into a single, quickly recognizable image by the use of lively colors (hot magenta, vermilion, chrome yellow, and aqua) and playful architectural forms achieved with scuffolding, Sonotubes, canvas, and balloons."

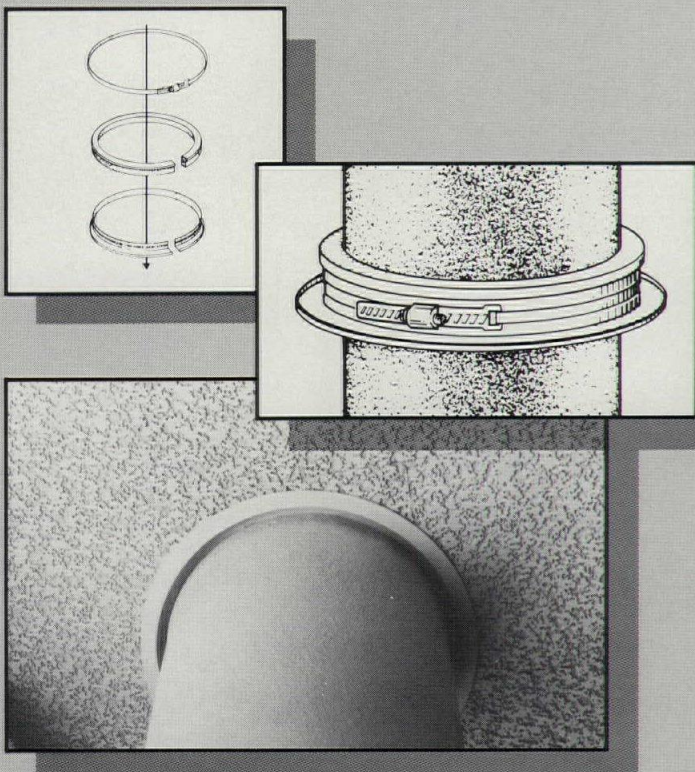
The detailed structures and graphics were a collaborative effort of 43 firms, including architects, engineers, landscape architects, artists, and designers. Led by design director John Jerde, AIA, and design manager David Meckel, and creative directors Deborah Sussman and Paul Prejza, the program solved circulation, life safety, and security requirements.

• Rep. John Seiberling (D.-Ohio), recognized for his role in protecting the environment and preserving the nation's natural and historic heritage.

As chairman of the Interior Committee's subcommittee on public lands and national parks, Seiberling authored the National Historic Preservation Act Amendments of 1980, which increased state and local roles in the preservation of historic buildings. He is a member of the bipartisan executive committee of the Environ-

continued on page 24

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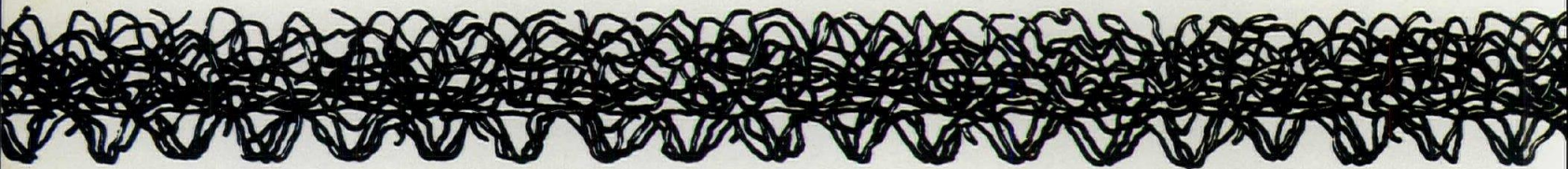
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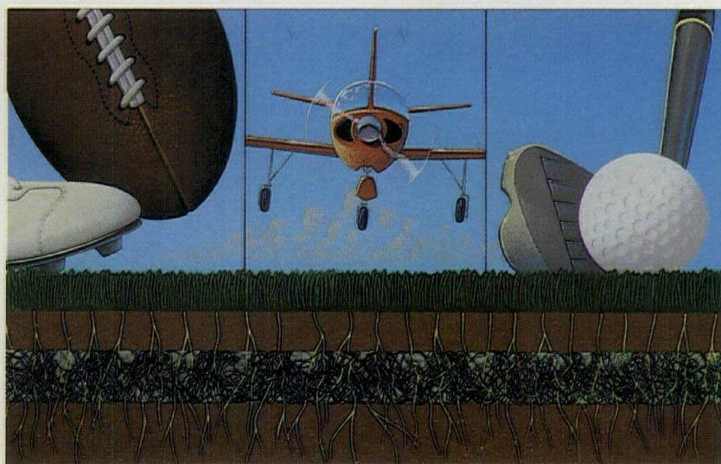
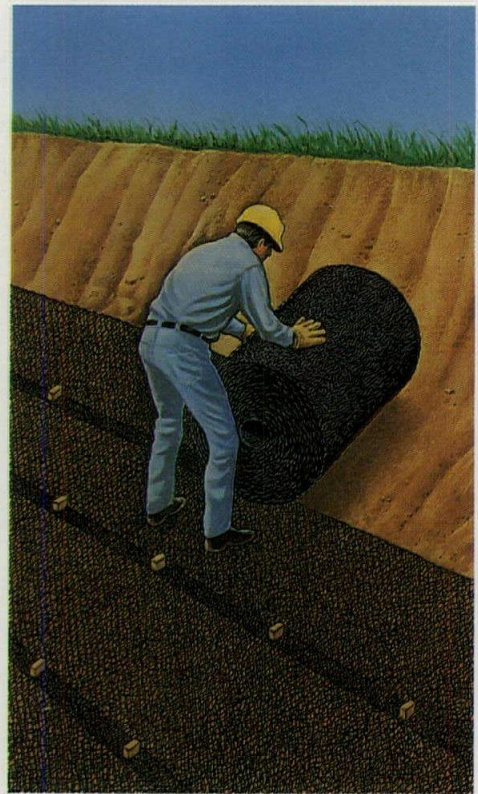


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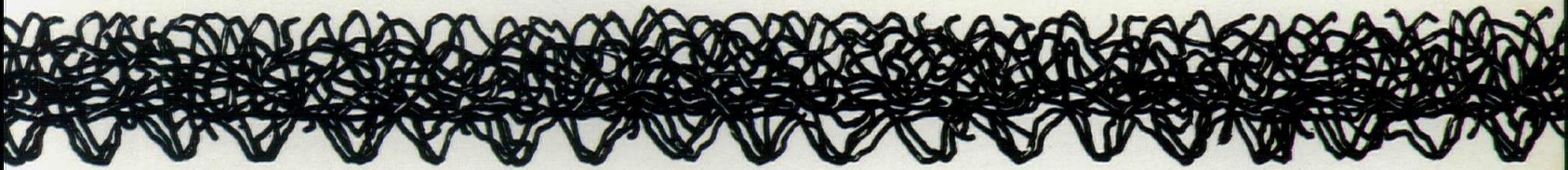


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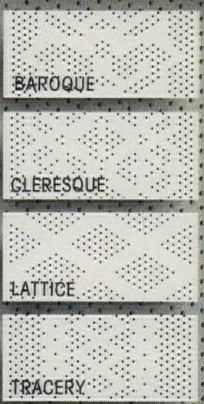
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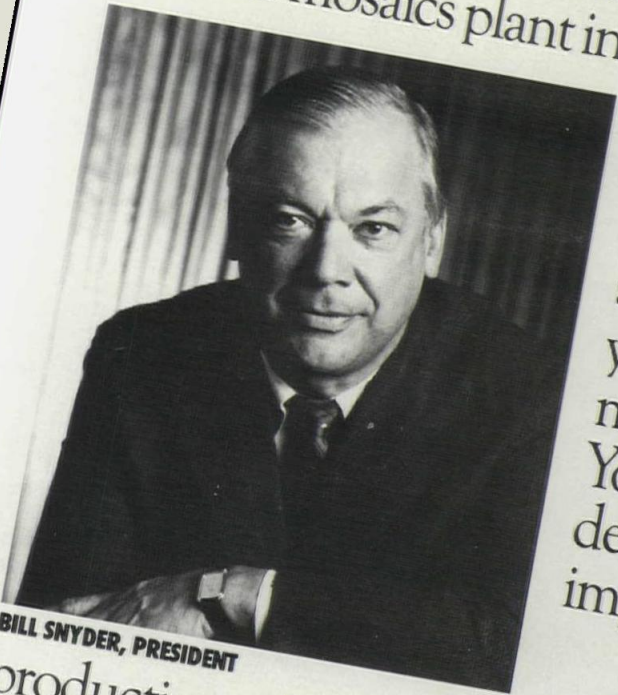
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The Institute from page 18

mental and Energy Study Conference that provides basic research and coordination on environmental and energy issues. He worked on the passage of the Alaska Lands Act and drafted legislation that added six million acres to the national wilderness system.

Seiberling was born in Akron, Ohio, and first elected to Congress in 1971.

• The New York City engineering firm Weidlinger Associates for its role as a pioneer in the field of structural design. The jury said that the firm's "original structural design work in the areas of air-supported, tensile, prefabricated, and long span truss structures has shown the way for a generation of engineers."

The firm was established originally as

Paul Weidlinger Consulting Engineer in Washington, D.C., in 1949. Five years later Mario G. Salvadori joined the firm and established a section for basic research in applied mechanics and mathematics, and during the 1970s a civil engineering division specializing in bridge design was formed.

In 1958, the firm designed the first pneumatic roof in this country for the McBAC theater in Cambridge, Mass. Other structural designs have included the *Reader's Digest* Building in Tokyo, which expresses the traditional Japanese qualities of lightness and grace in concrete and steel; a radical design of three tiered parabolic arches in the Priory Church in St. Louis; and a stepped and skylit facade sandwiched between two sheer fin walls in

the New York City Marriott Marquis hotel. • Nick Wheeler, cited by the jury as an "architect's photographer."

Wheeler earned a degree in architecture from Stanford University in 1969 and later attended the San Francisco Art Institute. He worked as an architectural photographer for three years in San Francisco before moving to Massachusetts. He designed and built his own house and studio in Townsend Harbor, Mass.

His work has been exhibited at the Museum of Modern Art and M.I.T.'s Hayden Corridor Gallery.

The jury noted that Wheeler's "architectural training and dedication to his craft have honed his remarkable ability to perceive and communicate with a striking clarity the intentions of the architect. His skills in handling the elements of light, color, and composition have consistently produced graphically powerful images without obscuring the visual reality of the architecture."

Eighty-five to be Invested As AIA Fellows in June

Eighty-five members of the Institute will be invested into the College of Fellows June 10 at the AIA convention in San Francisco. Fellowship is conferred on members of 10 years' good standing "who have made significant contributions to the advancement of the profession in one or more of the following areas: architectural practice, construction, design, education, government, industry, historic preservation, literature, public service, research, service to the profession, or urban design."

The 1985 jury of fellows was chaired by Robert P. Madison, FAIA. Other jurors were Tommy Hayes Jr., FAIA; Charles Herbert, FAIA; Norman J. Johnston, FAIA; Peter Samton, FAIA; Norman J. Schlossman, FAIA; and Pat Y. Spillman, FAIA.

The new fellows are:

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Robert E. Allen, San Francisco
Robert Edward Allen, Longview, Tex.
J. Timothy Anderson, Cambridge, Mass.
George Anselevicius, Albuquerque, N.M.
Ray Bedford Bailey, Houston
Louis J. Bakanowsky, Cambridge, Mass.
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continued on page 29



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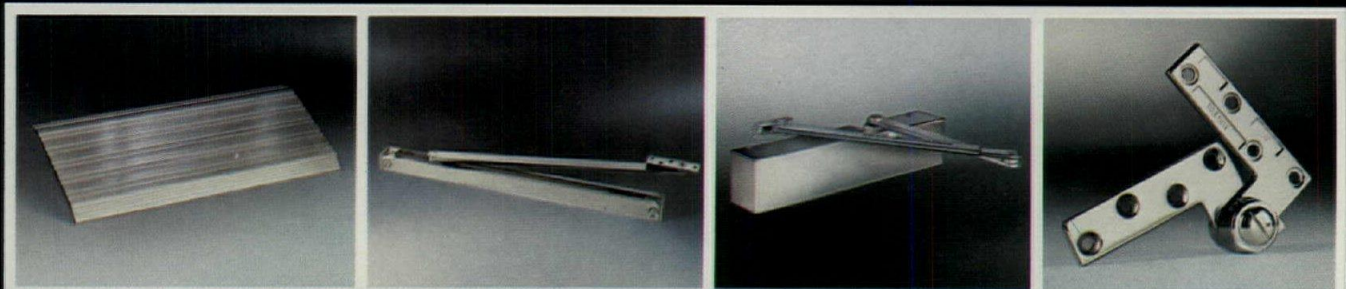
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Thomas Edward Woodward, Dallas

Deaths

Olgivanna Lloyd Wright, Guardian of the FLLW Legacy

Olgivanna Lloyd Wright, widow of Frank Lloyd Wright and for the past 25 years president of the Taliesin Foundation and head of the Frank Lloyd Wright school of architecture, died last month at Taliesin West, near Scottsdale, Ariz., at the age of 85. In February Mrs. Wright stepped down as president of the foundation and the school and was succeeded by William Wesley Peters.

Mrs. Wright was born in Cetinje, Montenegro, the daughter of Montenegro's chief justice and the granddaughter of a Montenegrin general who distinguished himself in battles preserving his country's independence. When she was 9, Mrs. Wright was sent to live with her sister and to attend school in Batum, in the Russian Caucasus. She later attended the Georgi I. Gurdjieff Institute in Fountainebleau, France, a commune where the teachings of Gurdjieff's transcendental philosophy were combined with "learning-through-work" programs.

In 1924 Mrs. Wright came to the U.S. to divorce her first husband, by whom she had had a daughter, Svetlana. Shortly after her arrival she met Wright while attending the Russian ballet in Chicago. Wright, who was more than 30 years her senior, was then in the process of divorcing his second wife, Miriam Noel. He and Olgivanna had a daughter, Iovanna, in 1925 and were married three years later following his divorce.

In 1932 the couple founded the Taliesin Fellowship in Spring Green, Wis., the perpetuation of which was to become their life work. Trained as a dancer, Mrs. Wright also composed music and shared an interest in theater and the musical arts with her husband. Mrs. Wright wrote in one of the five books she produced on her husband and his work that, while planning the curriculum for the fellowship, "we believed that knowledge of music should be part of [an architect's] training; love of music would give him a strand of inspiration in yet another direction." Along with pieces written for performance at Taliesin, Mrs. Wright composed the music for the "Work Song," whose lyrics by her husband expressed the philosophy of the Taliesin commune. Mrs. Wright also urged her husband to write his autobiography, which was published in 1932.

"Mrs. Wright was a very strong person, an indomitable lady throughout her whole life," remembers Eleanore Pettersen, AIA, president of the New Jersey Soci-

ety of Architects/AIA, who studied at Taliesin in the early 1940s. Pettersen says that Mrs. Wright's experiences at the Gurdjieff Institute contributed to her effective running of Taliesin. "Her training came through in her personality, in her discipline," says Pettersen. "She was in charge of running the household and its cultural activities, planning the menus. It wasn't easy because she had to keep this body of people together that were from every corner of the world."

Wright often referred to her as "Mother," and her role at Taliesin often took on the dimensions of matriarch of a large family. She interviewed students for admission and served as counselor to many of the apprentices.

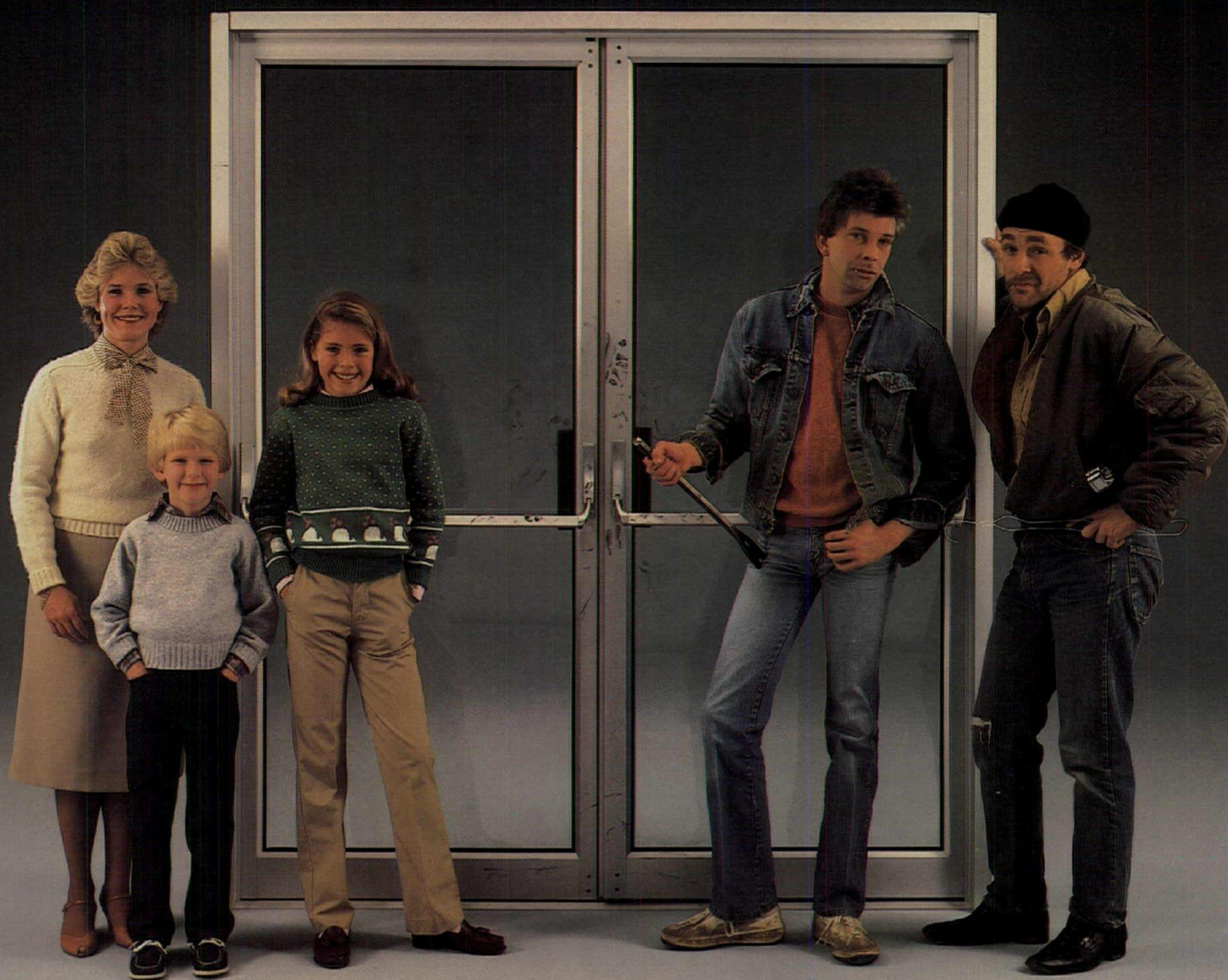
After Wright's death in 1959, his widow became the head of the Taliesin Foundation and Fellowship, perpetuating the school and its work and acting as guardian of her husband's legacy. Although she had no formal training in architecture, Mrs. Wright was involved in the projects designed by Taliesin Architects, according to Charles Montooth, AIA, an architect at Taliesin. "She often looked over the work we were doing and made suggestions," says Montooth, "based on her experience of 35 years with Mr. Wright." Montooth adds that she was involved in the interior design of many of the projects, choosing colors and furnishings. Mrs. Wright was a member of the American Society of Interior Designers and received an AIA citation last year at the Institute's convention in Phoenix.

Victor Steinbrueck, FAIA, Urban Activist in Seattle

"A good city ought to have well-defined and diversified cultural, social, and economic resources that are expressed in the physical reality of its layout and form," Victor Steinbrueck, FAIA, wrote in 1973. "All of my life I have been exploring and looking at this city called Seattle. I cannot name any place here that I have not watched change, grow, or decay during the last half century."

Steinbrueck, who the *Seattle Times* called "the city's conscience," died Feb. 14. Among his accomplishments were leadership in a successful campaign in the late 1960s to preserve Pioneer Square, which resulted in a city ordinance establishing the Pioneer Square Historic Preser-

continued on page 34



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The Masonry Institute of New York City and Long Island announces its financial and promotional support of the Statue of Liberty-Ellis Island Foundation Inc., which is currently engaged in seeking to raise \$230 million to restore both landmark structures.

The Institute, directed by trustees of labor and management representing the unionized masonry construction industry of New York City and Long Island, gives its whole-hearted support to The Statue of Liberty-Ellis Island Centennial Commission, chaired by Lee Iacocca. In addition to a monetary contribution, the Institute is encouraging all facets of the construction industry in the greater New York area to give their financial support as well.

The structural masonry pedestal for the Statue was designed by Gustave Eiffel, the engineer who later designed the Eiffel Tower. The Statue itself was designed by Fredric Auguste Bartholdi, a French sculptor. For this undertaking the French raised \$400,000. After its completion it was presented to the United States, in Paris in 1884, as a gift of the French people. The Statue was then dismantled and shipped to America. Americans, meanwhile, raised an additional \$270,000 to build the masonry base for the Statue. Finally, on October 28, 1886, President Grover Cleveland dedicated the Statue at a gala celebration in New York Harbor.

Echoing the, "We Supported Her Then; We Support Her Now" theme, the Masonry Institute urges all those involved in the greater New York construction industry to join the Institute in supporting this monument dedicated to liberty by making their own financial contributions. These should be sent to: Mr. Lee Iacocca, Chairman, Statue of Liberty-Ellis Island Centennial Commission, The Statue of Liberty-Ellis Island Foundation Inc., P.O. Box Liberty, New York, New York 10117.



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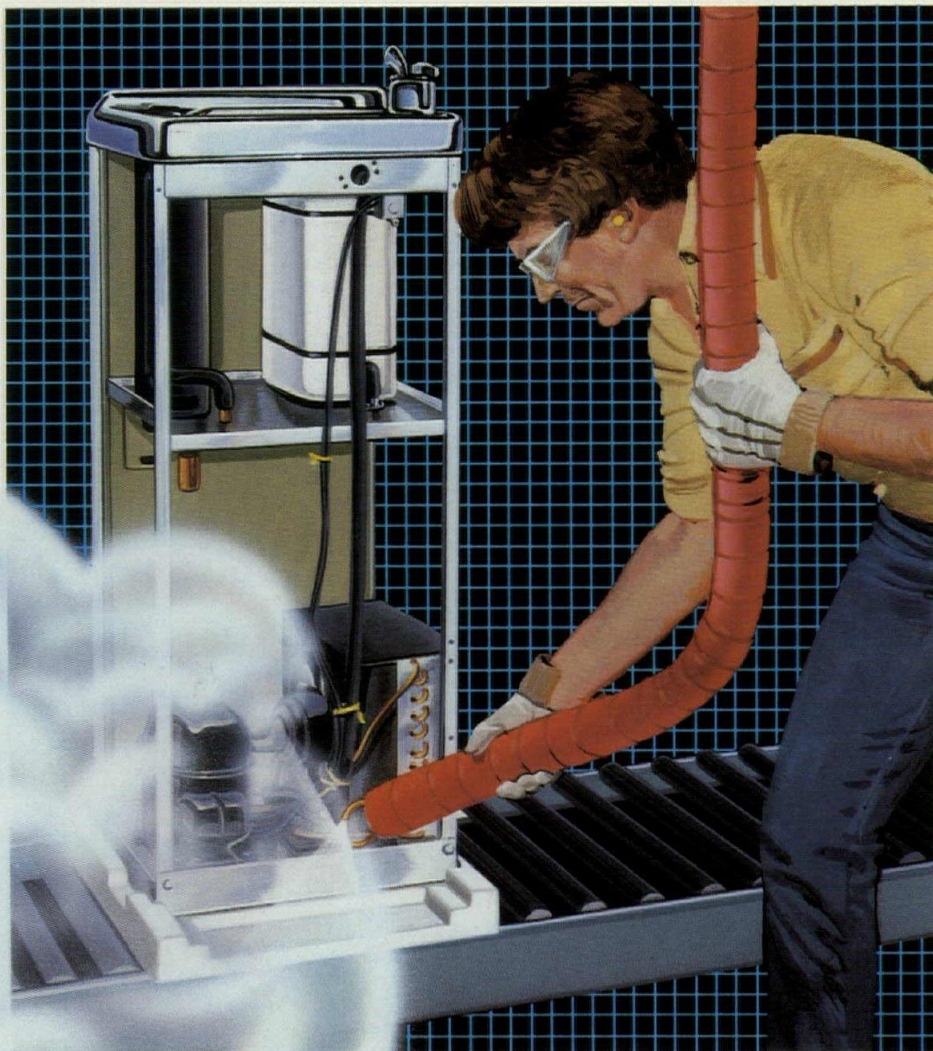
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Deaths from page 29

vation District, and preservation of Pike Place Market, threatened with redevelopment in 1971.

Born in Mandan, N.D., in 1911, Steinbrueck moved to Seattle at the age of 3. He graduated from the University of Washington with an architecture degree in 1935 and joined the faculty a decade later, the same year he established a private practice in which he designed mainly houses. In 1957 he took a leave of absence from the university to work in Detroit for Yamasaki, Leinweber & Associates, architect of the federal pavilion of Century 21, the 1962 World's Fair. Then, in 1960, as consultant to John Graham & Co., he participated in the design of the Space

Needle. The year of the fair, he published his first sketchbook, *Seattle Cityscape*, and 11 years later a companion, *Seattle Cityscape #2*. He also authored the 1953 *Guide to Seattle Architecture*.

A week after his death at age 73, more than 250 gathered in the University of Washington Faculty Club to remember and celebrate Steinbrueck's life and accomplishments. Seattle's mayor said Steinbrueck never got personal, vicious, or negative in his campaigns, while Senator (and former governor) Dan Evans, in a letter of tribute to the family, said Steinbrueck above all was a teacher. "Thousands care more about this community because Victor taught them to care," Evans said.

Henry Hill and Worley Wong, Celebrated Bay Area Architects

Two San Francisco Bay architects, Henry Hill and Worley Wong, both noted for their strong regionalist approaches, recently died within two months of each other.

Albert Henry Hill who practiced as Henry Hill, Architect from 1947 to 1965 when his long-time associate, John W. Kruse, AIA, became a partner in Hill & Kruse, was particularly known for his houses in the San Francisco Bay Area. He was representative of the second phase of Bay Area architecture, a generation whose houses in the postwar years were characterized by the redwood post and beam box. With Wurster, Bernardi & Emmons, Joseph Esherick, and others, he helped to popularize the tradition of turn-of-the-century Bay Area architects Willis Polk, Bernard Maybeck, and Julia Morgan.

Hill had to his credit some 500 houses and commercial buildings in a career that spanned 45 years. Hill houses, large and small, are located throughout the Bay Area, Carmel, and Southern California, as well as in Illinois, Connecticut, Kentucky, and San Salvador.

A 1953 house in Orinda, Calif., is characteristic of Hill's work. It is a large, one-story house that skirts the outer edges of its sloped site, leaving an interior court. The rising floor level changes the character of the living spaces, with the formal living room having the highest ceiling, the dining room next, and finally the family room, an intimate, low-ceilinged space. Exterior materials vary, with gray-gold stained horizontal redwood siding on the lower level and vertical board-and-batten redwood stained gray-green on the upper levels. Sally Woodbridge, in the 1976 book *Bay Area Houses*, remarked on the "complex and painterly articulation of the design" of the Orinda house.

Hill graduated from the University of California, Berkeley, with a degree in architecture and then went to Harvard's graduate school of design, studying under Gropius and completing his master's degree in 1938. He began his career in the San Francisco office of John Ekin Dinwiddle, which after World War II became the partnership of Dinwiddle & Hill. Erich Mendelsohn joined the firm for a brief period beginning in 1946.

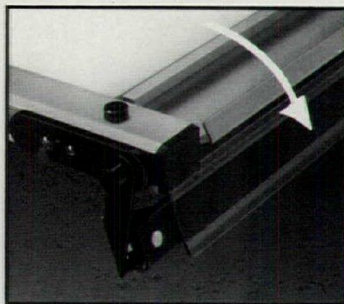
For two years in the 1950s, Hill was a consultant to U.S. Steel, for which he designed a prototype steel house. Also during the '50s, he designed U.S. Embassy staff housing in Vienna for the State Department, which was completed in 1959. Hill's nonresidential buildings include the 2,300-seat hiring hall of the International Longshoremen's and Warehousemen's Union on a block-square site near Fish-

continued on page 39



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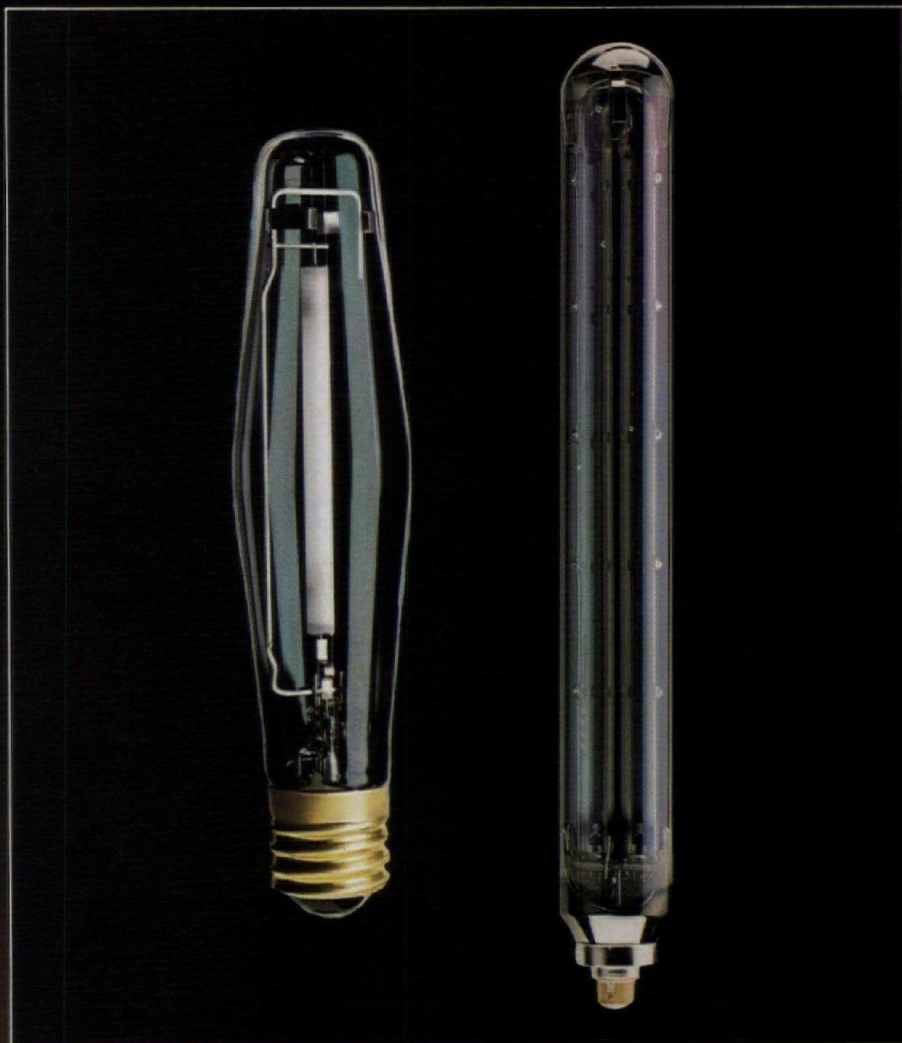


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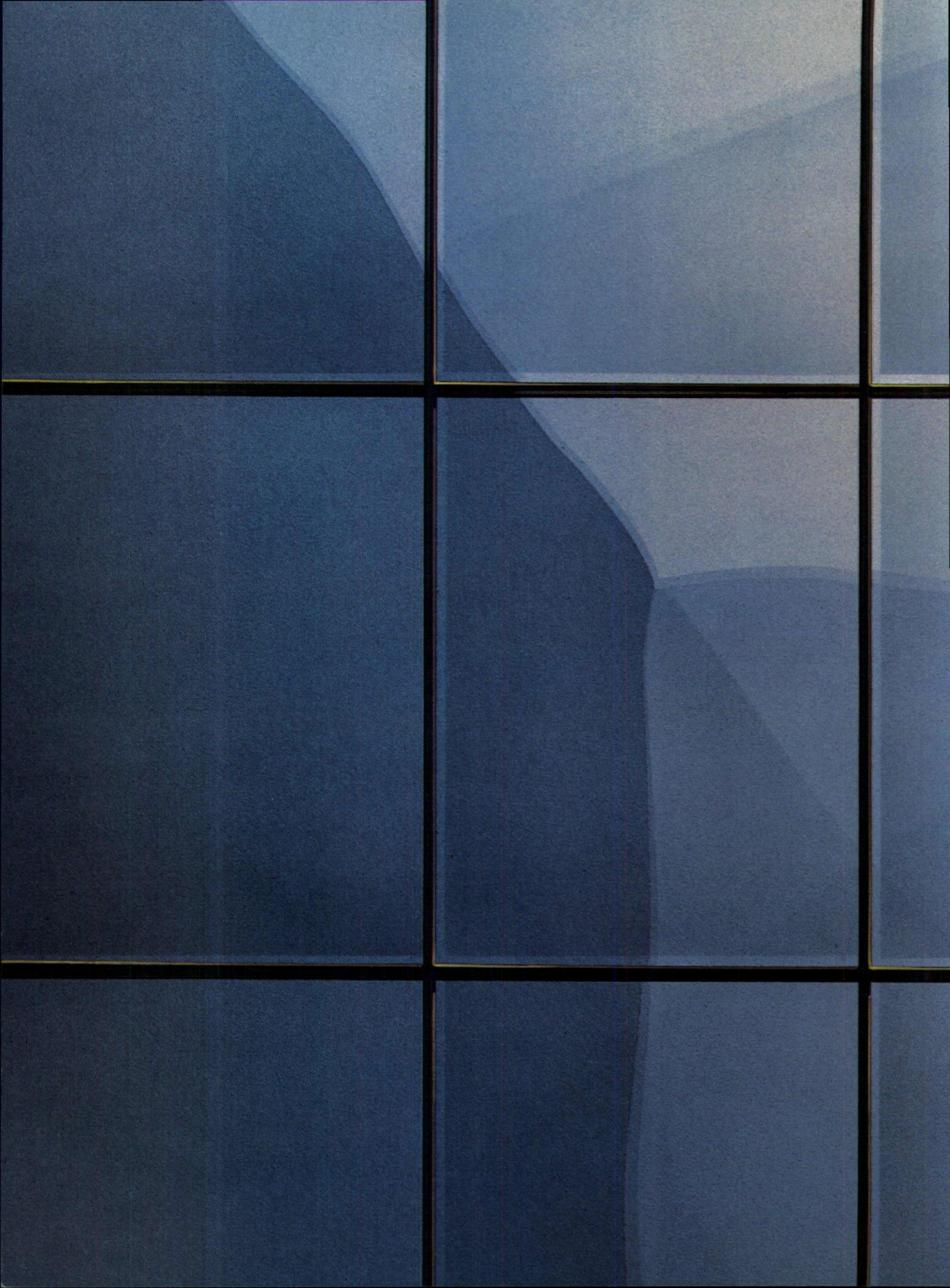
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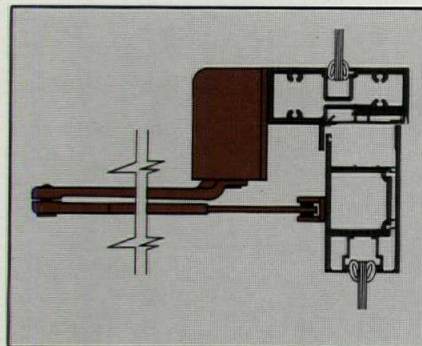
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erman's Wharf in San Francisco, a commission won in a 1955 limited, invitational competition. He also designed the small chapel at the Public Hospital in Moline, Ill., as well as shops, small commercial buildings, and professional offices.

From 1949 to 1967, he was a lecturer in architecture at Stanford University and a visiting lecturer at Cornell, Mills College, and the universities of California, British Columbia, Kansas, Oregon, and Utah. He moved to Carmel in 1971 and died there Dec. 5 at the age of 72.

Worley K. Wong, FAIA, was a contemporary of Henry Hill who earned an early reputation as designer of serene redwood houses in the regional Bay Area style. His San Francisco firm, established in 1946 with John Carden Campbell as Campbell & Wong and reorganized in 1968 with Ronald G. Brocchini, FAIA, as Wong & Brocchini, won a competition during the administration of Gov. Edmund G. Brown in the early 1960s to design a new California governor's mansion. The Sacramento house was never built, however.

Wong's work in recent years included larger scaled projects, including Merrill College at the University of California at Santa Cruz, student housing at Stanford, Buddha's Universal Church in San Francisco, and the Hong Kong U.S.A. office and Lincoln Neighborhood Center in Oakland.

At the time of his death Feb. 16 at the age of 72, Wong had completed the design of a visitors reception center for the Hearst Castle at San Simeon, which the San Francisco *Chronicle* says "typified his warm, courteous approach to architecture."

Wong was an Oakland native and graduate with honors from the University of California, Berkeley.

Jules Gregory, FAIA, Champion of Urban Design

Jules Gregory, FAIA, of Princeton, N.J., in 1983 won the Kemper award for service to AIA and the profession.

Gregory practiced for more than 30 years in central New Jersey. His Princeton firm of Uniplan, formed in 1969, is noted for its work in community design. The Kemper citation recognized his "promotion of the concept that the architect's responsibility goes beyond the design of fine buildings but must also involve a leadership role in enhancing the quality of life."

As AIA commissioner for design and environment, Gregory helped create the Institute's Center for Urban Affairs in 1967 and the first AIA Urban Design and Development Corporation in 1969. He also served for 10 years as chairman of AIA's

continued on page 43

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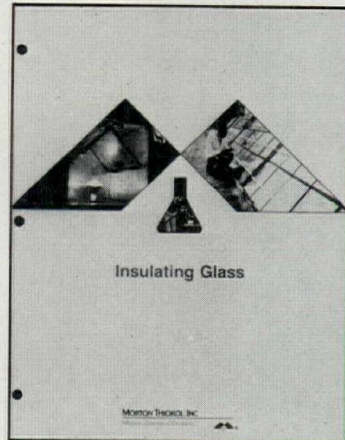
News About Insulating Glass

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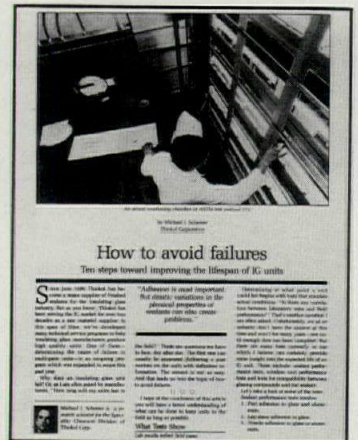
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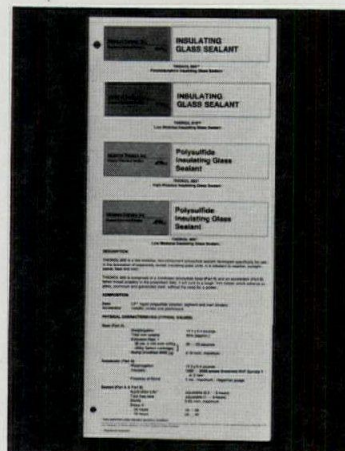
"How To Avoid Failures"

Article lists 10 steps toward improving the lifespan of insulating glass units.



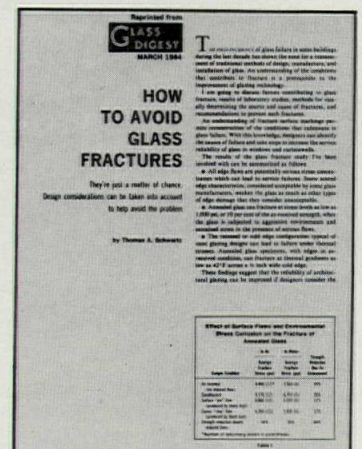
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Literature describing THIOKOL 800® THIOKOL 805® THIOKOL 810® THIOKOL 850™ insulating glass sealants.



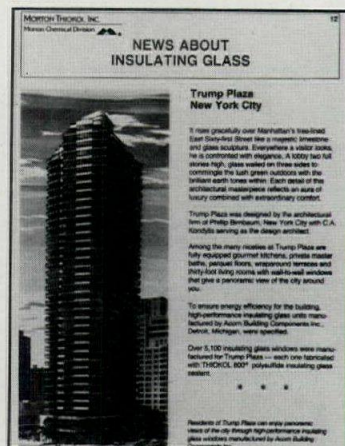
"How To Avoid Glass Fractures"

Article discusses the high incidence of glass failure in the last decade and the need to reassess traditional methods of design, manufacture and installation of glass.



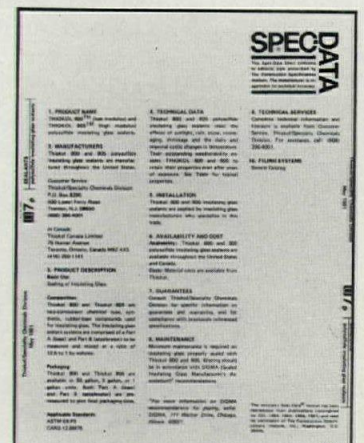
"News About Insulating Glass"

Quarterly newsletter describes attractive buildings which utilize insulating glass fabricated with THIOKOL 800 THIOKOL 805 THIOKOL 810 insulating glass sealants.



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Deaths from page 39

Regional/Urban Design Assistance Team program, during which time he helped obtain three grants from the National Endowment for the Arts to monitor achievements of the first 80 R/UDATS. He coauthored a book about the program.

Gregory, a graduate of Cornell's school of architecture and winner of a Fulbright for a year's study at the Ecole in Paris, taught and lectured in urban design at Pratt Institute and at Yale, Princeton, and Columbia universities.

He died March 13 at the age of 64 in Lambertville, N.J.

Education

Five Honored by ACSA as 'Distinguished Professors'

Five teachers selected for their "sustained creative achievement in the advancement of architectural education through teaching, design, scholarship, research, or service" have been named as recipients of the first annual distinguished professor awards given by the Association of Collegiate Schools of Architecture. The awards were presented at ACSA's annual meeting in Vancouver last month.

The five are:

- Alfred Caldwell of the Illinois Institute of Technology, cited for his "notable teaching approach and demand for quality [that has] had a significant influence upon numerous students for more than four decades";
- Robert S. Harris, AIA, of the University of Southern California, cited for his "efforts to broaden the base of design consideration by the inclusion of knowledge of many disciplines and intimate involvement with the 'Oregon Experiment'";
- E. Fay Jones, FAIA, of the University of Arkansas, who has, "in a quiet way, produced a body of ideas and work that has provided significant insight into the advancement of architecture and its education through his sensitivity to materials and the environment";
- Charles W. Moore, FAIA, of the University of Texas at Austin and UCLA, whose "plethora of writings, lectures, and design work have stimulated students, faculty, and practitioners to search for new understanding of architecture and its relationship to people and site";
- Ralph Rapson, FAIA, of the University of Minnesota, cited for his "outstanding leadership at Minnesota for over 25 years in the advancement of architectural

education," and whose "early teaching and execution of a set of ideas had an important influence upon architectural students at numerous schools."

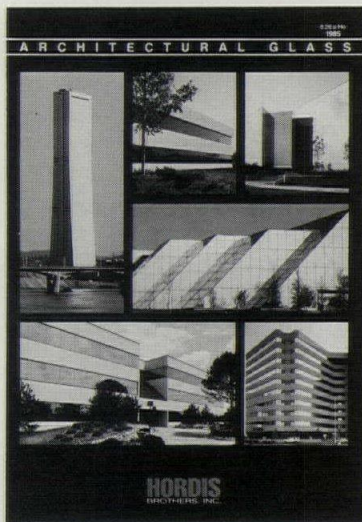
According to Richard C. McCommons, AIA, executive director of ACSA, the new awards program was established to broaden the association's acknowledgment of outstanding teachers, which had been limited to its joint award with AIA of excellence in architectural education. "We felt that there were a lot of unsung heroes out there that devoted their lives to teaching and were doing an excellent job," says McCommons, "and we wanted to give them some kind of recognition." At the nationwide request of ACSA, schools are invited to nominate teachers for the award. Since the award recognizes significant achievement, there is no minimum limit on the age of nominees or years of service in education, which allows younger professors to be recognized.

The jury for this year's distinguished professor award included Charles Hight, AIA, of the University of North Carolina, Charlotte (chairman), Richard C. Peters, AIA, of the University of California, Berkeley, and Blanche L. van Ginkel of the University of Toronto.

News continued on page 109

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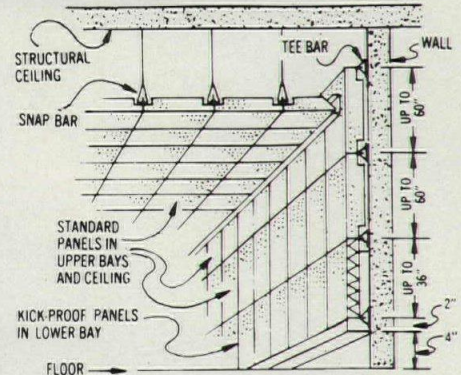


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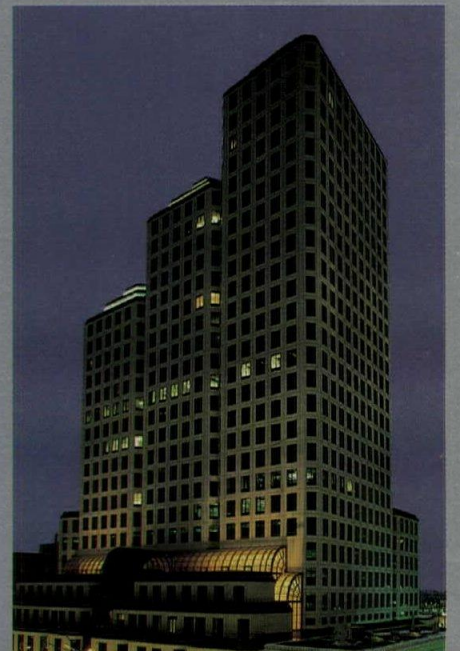
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Illusionary 'Stage Sets'

Huberto Calzada paints pristine architectural environments that are realistic yet contain dreamlike elements. His colored forms, weightless cantilevered stairs, and controlled planes are reminiscent of the architecture of Mexican Luis Barragán.

A native of Cuba who came to this country at an early age, Calzada draws on Latin American traditions and Mediterranean influences to provide powerful subjects for his acrylic paintings. His use of bright sunlight and deep shadows, reflections, portals, and pictures within pictures create three-dimensional spaces that suggest isolated stage sets. Perspectives through open doorways lead the eye to a single point on a blank horizon.

His objective reality and "art of illusion" is evident in "Reflections as Completion IV" (right); the reflected colonial stained glass image in the "painting's painting" has a broken section, but its shadow remains whole. In "A World Within #16" (below), Calzada opens a contained space to the sky above and the horizon beyond the doorway to contrast his "inner and outer worlds," while "The Manuscript" (below right) has his recurring archway framed within a Vitruvian ruin.

Calzada's recent show at the Baumgarten Galleries in Washington, D.C., was entitled "Architecture is Frozen Music" because as he says, he uses "aspects of representation like a composer uses notes, rhythms, and harmony to establish a melodic line." LYNN NESMITH



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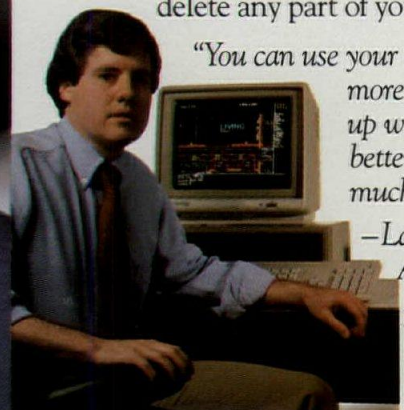
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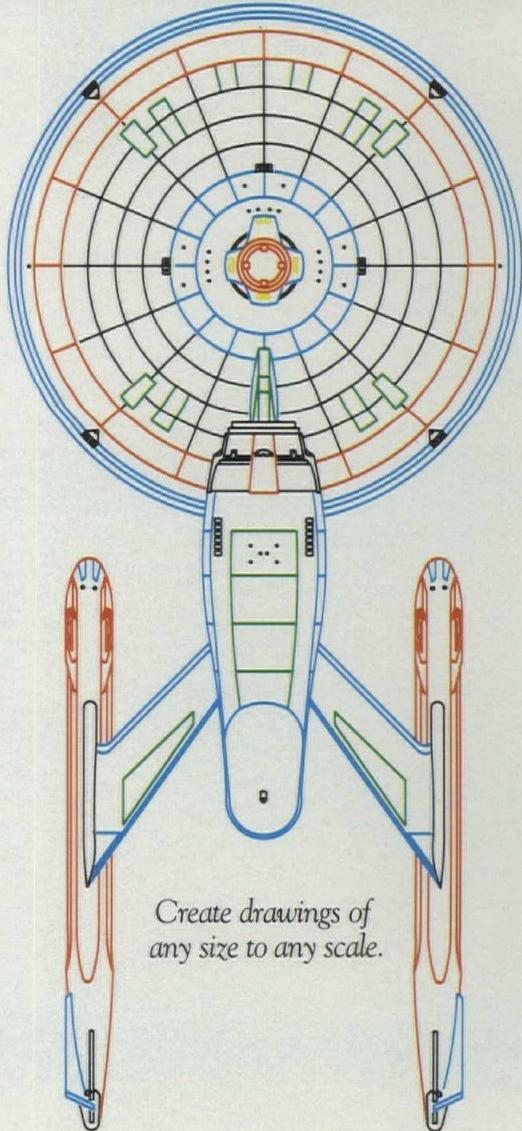
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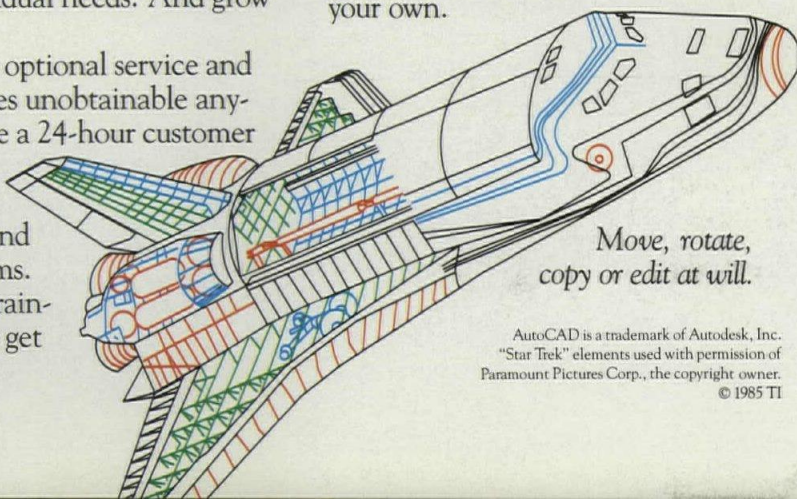
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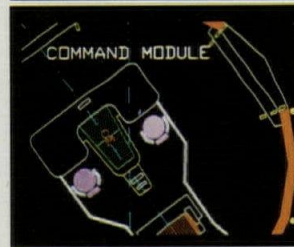
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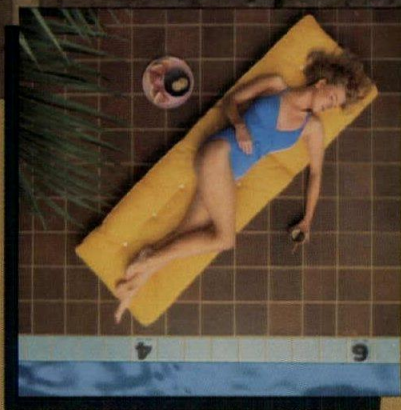


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ARCHITECTURE

Has the architectural profession, as is alleged of the general population, turned inward? Is there more emphasis on compensation than conscience, on computer software than social and environmental values?

To seek some answers to such questions we look this month at two concerns that have been on the profession's collective conscience, each in its own decade: participation of racial and ethnic minorities and the efficient use of energy.

The results are mixed: Again as in the general society, there has been a diminution of concern in both areas. Yet there remains a heartening number of architects who continue to care deeply about each, and each remains, at least residually, in the consciousness of the profession at large.

We are sad to report in the news section the loss of a number of greatly valued figures in the profession. Among them were two who cared very much about matters that went beyond the bounds of day-to-day practice, and who made their caring lastingly effective. Victor Steinbrueck was for decades an environmental conscience for Seattle, a wonderful city the more wonderful for his efforts. Jules Gregory thought and practiced design on an urban scale, and tirelessly prompted AIA to think that way too. He was a guiding spirit behind the R/UDAT program, perhaps the Institute's most effective public service program over the years.

Such practitioners are reminders that the answers to our initial questions must be sought, not just in terms of national issues and aggregate performance, but at the local level as well. Here the answers are clearer. In communities across the country architects, individually and collectively, are to be found exercising leadership on environmental issues, from preservation and regulation to sheltering the homeless (see March issue, page 28). *D.C.*

Commodity, Firmness, Delight —and Energy?

How deeply is it embedded in architectural consciousness? By Andrea Oppenheimer Dean

A little over a decade ago, during the OPEC embargo, we were sitting in gas lines lusting after small, fuel efficient cars. A few nights ago, a television commercial showed a woman half hysterical with enthusiasm for a svelte 1985 sedan, exclaiming, "It's just gorgeous. I don't care what the gas mileage is." Meanwhile, an energy specialist at a major professional association predicts, only half facetiously, that the next energy shock will be oil for \$15-a-barrel. (It is at this writing about \$28.)

Ten years ago, a typical editorial in a national architecture magazine proclaimed, "Energy is going to rank right up there with commodity, firmness, and delight when it comes to judging architecture—or architects." In a recent interview, architectural historian James Marston Fitch, Hon. AIA, lamented, "Energy is treated with complete contempt at least among the avant-garde architecture firms. Look at the stuff *you* publish month after month. It's very photogenic but demonstrates the shallow formalism that dominates the field."

Contradicting his views on energy, is the avowed reason for this year's termination by Owens-Corning of its 11-year-long, annual energy design awards: "because the consciousness of the design community toward energy efficiency in buildings has been raised to a very, very high level, and we feel further promotion isn't needed," according to Peter Detgen, vice president of interior products. In a similar spirit, Richard Bender, dean of the college of environmental design at Berkeley, says, "Every few years there'll be a passionate plea for something else—handicapped access, seismic safety, systems analysis—and energy was one of these. For a time it seemed nothing else was more important. The way the field works is that there's a lot of attention paid, a lot of involvement, and then we shift to something else, partly because we have a short attention span, partly because the issue becomes absorbed into our ways of doing architecture. Once you get past the crisis stage, the amount anyone's going to invest in better quality gets down into the marketplace."

Fitch's despair about our attitudes toward sensible energy design and Owens-Corning's as well as Bender's conviction that it has been adequately incorporated by the profession constitute poles in a range of opinions. Nor do marketplace factors alone explain the reduced emphasis on conservation, though they are a good place to start in attempting to understand what has happened.

"The energy situation stabilized itself without buildings contributing nearly as much as automobiles going from 8 m.p.g. to 25 and industry getting real efficient, which the media hasn't picked up on," says architect Peter Calthorpe of Calthorpe Associates in Sausalito, Calif. In fact, a recent Department of Energy document entitled "Energy Conservation Multi-Year Plan: FY 1986-FY 1990" acknowledges that energy use by the residential and commercial building sector "has changed little over the past 10 years," though its share of national energy consumption rose from 33 percent in 1973 to 36 percent in 1983, mainly because of overall expansion. Conversely, industry reduced its use of U.S. energy from 42 percent in 1972 to 37 percent in 1983.

As evidence of a cooling trend in conservation, homeowners

slashed their energy consumption by 7 percent each year between 1979 and 1981, mainly because of recession combined with inflation. By 1983 energy use per household dropped only 1 percent, though utility rates are still rising in most parts of the U.S.

"A few years ago nobody had any idea where the upward price spiral would lead. When you're going from \$2 to \$28 a barrel and throwing the world economy into enormous recessions, you're going to attract everybody's attention," says Richard Rittleman, an energy specialist with the A/E firm of Burt, Hill, Kosar, Rittleman of Butler, Pa. "As soon as prices started leveling off," he says, "and started having some predictability, it seems we were able to accommodate increases."

Confirming his view is a comparative study of attitudes toward energy in a small Swedish town and in Foley, Minn. (population 1,600). The study is by Rita Erikson, a doctoral candidate in social anthropology at the University of Minnesota. In Foley, she says, "ninety-nine percent of people in 1980 thought prices would never go down again. They were prepared for doubling and tripling of costs, and they got mixed messages from the government that were driving them crazy. So everyone was rushing around talking to everyone else and trying whatever seemed to fit. They were fearful and confused. But being farmers they were willing to experiment and take risks, and they did cut consumption and have kept it down. It was like they were lone cowboys scratching out whatever information they could get."

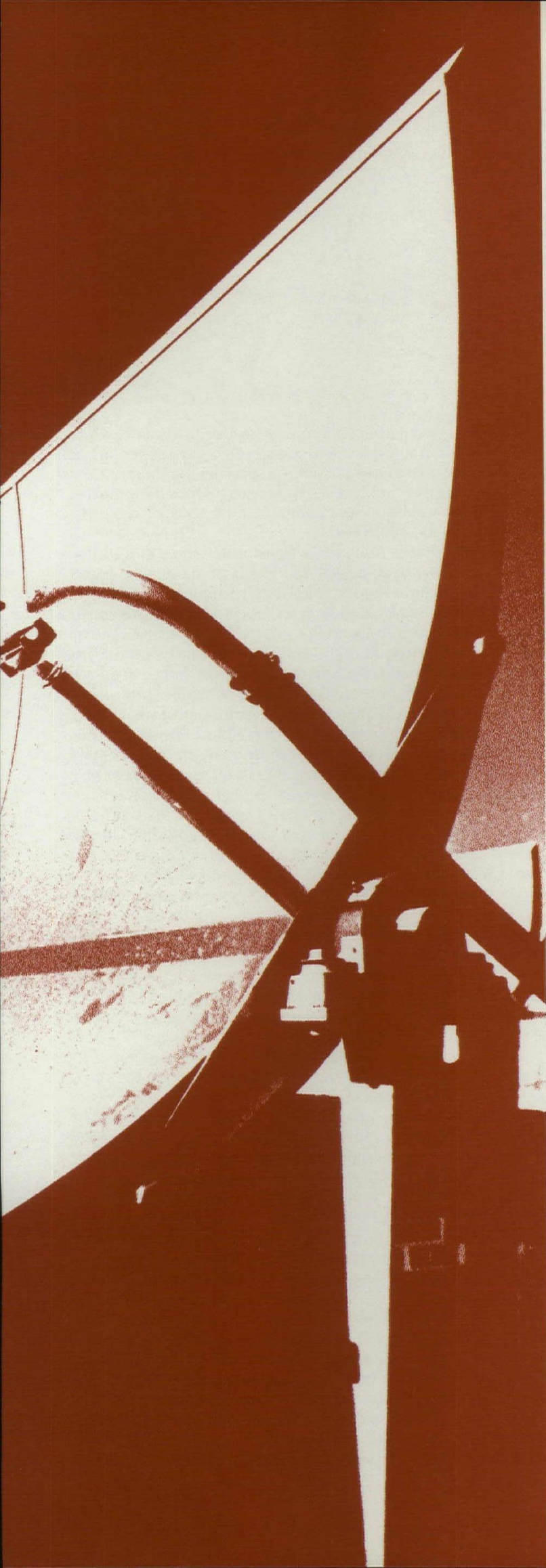
By contrast, in the town of Munka Ljungby, Sweden, Foley found a far more confident attitude because construction codes and standards have consistently been strict, government energy policies comprehensive, and energy consultants readily available.

What also happened in rural Minnesota and other parts of the U.S., as social anthropologist Luther Gerlach of the University of Minnesota points out, is that people started burning wood for fuel, which before long created new problems. There were chimney fires; rodents and vermin collected in wood piles, and soon attacked houses. Also people who were superinsulating their houses ended up with internal condensation and constant patch and repair problems. The result was an "if it ain't broke, don't fix it" attitude.

Tightening and insulating building envelopes also produced a new "movement" in architecture. John Eberhard, FAIA, former president of the AIA Research Corporation and now a consultant, tells of being in San Francisco recently for a meeting on indoor air pollution. It was scheduled for eight o'clock on a rainy Saturday morning. "I thought no one would show up," Eberhard recalls. "One hundred and fifty people came. I forgot: I was in ecotopia." He sees this as one of many recent new causes that "have a lot of selfishness to them. It's saying, 'You're not going to dirty up my air, so I'm going to get the architect to design a building that provides me with my own air so I don't have to breathe in other people's dust and horsefeathers that might make me sneeze.'"

But to return to the cause of such problems, energy conservation and the reasons for its recent loss of vigor, Princeton sociologist Robert Gutman, Hon. AIA, contends that business and industry seem to feel that they have cut fuel costs about as much as they can and are trying to reduce expenses in areas they believe will give a larger return, such as increasing productivity. Energy is still relatively inexpensive and constitutes a very small part of the overall cost of operating workplaces, as Rittleman observes. "If you include the salaries of the people working in a building, you're usually talking about \$200 per square foot per year, and the energy isn't more than \$1.50 per square foot per year. Would you risk saving half of this if it means risking a 5 percent loss in productivity? So, I'm not about to chastise designers for what may seem a relatively apathetic attitude."

One area where energy considerations continue to have primary importance is in remodeling. The cost of oil has dropped only 15 percent, so for old buildings it remains astronomical. The main reasons for rehabilitating them is to reduce operat-



ing (meaning mainly energy) expenses, while upgrading and enlarging interior spaces, which also lowers energy consumption per square foot.

MIT's Timothy Johnson also points out that even if energy costs drop dramatically, we will continue to use improved insulation and glazing techniques for reasons of comfort. On the whole, though, he observes, our fascination with passive design peaked some time ago, and "our society still treats energy as a commodity rather than a finite resource."

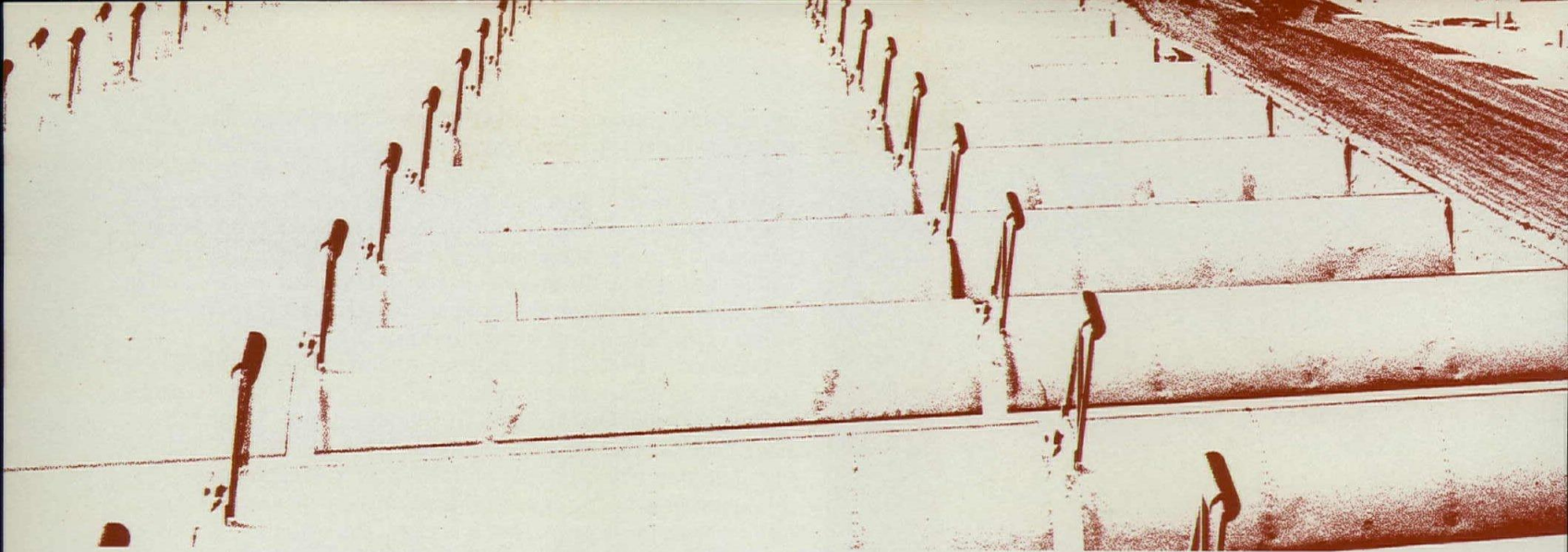
During the 1970s, the compelling themes were finite resources—small is beautiful, small technology, no growth—explains social anthropologist Gerlach. If you accept the idea that the size of the pie that must be shared is fixed, you are left with distribution problems. "Part of the appeal of Reaganomics," he says, "is that we don't have to share shortage, that we can solve all problems by growth. That is a powerful vision and solves so many conceptual problems. The main one is guilt about being successful." We know there are discrepancies in wealth and power, but we also want to believe in equality of opportunity, an idea hard to sustain in the absence of limitless growth.

"The way we view the energy issue now is a lot like the way we're reacting to the federal deficit," adds Calthorpe. "Until the deficit problem is translated into pocketbook issues everyone can feel, nobody's going to worry *too* much about it. As long as the wheel isn't squeaking, we're not going to oil it even though we're told it's going to fall off."

John Cable, former director of DOE's building systems division and now vice president of a consulting firm, attributes our national reluctance to look into the future to "a foolish confidence in our technical ability, and that we'll figure out a way to deal with the future when it comes." One among several signs of increased interest in technology is the recent transformation of *The Whole Earth Catalog* into *The Whole Earth and Computer Magazine*. And, not surprisingly, among the most compelling new trends are "smart" buildings and total building performance, apparently two of the three issues that Owens-Corning is considering for a new design awards program, "to put us on the cutting edge in sponsorship," according to a spokesman.

American attitudes toward energy have paralleled not only economic trends but larger societal ones as well. The first energy shock in 1973 legitimized issues that until then had appealed mainly to a cultural fringe, the hippie ecologists of the late '60s. The movement started with specialists holding conferences and workshops and providing self-help information, while leading protests against new power plant construction. The moral overtones were unmistakable. Robert Shibley, formerly with DOE and now chairman of the architecture department at the University of the State of New York at Buffalo, says, "My interest was sparked by the larger recognition that every act of building is a public act with public consequences. When it stopped being a religion and became just good business some of the passion vanished." Energy as a moral imperative, in fact, ushered a post-World War II generation of idealistic architects into professional life. "One cannot easily imagine a Young Turk exercised about interior design or the high cost of plumbing," explains Thomas Vonier, AIA, another former AIA Research Corporation staffer who is now a private consultant. "Without energy as a banner to wave, where might some of us have been, and what would we have done?" he ponders.

Epitomizing the hippie-ecologist turned energy-conscious designer was Sim Van der Ryn. A professor from 1961 to 1975 at U.C. Berkeley, Van der Ryn became increasingly disillusioned with "architecture with a big A," and turned to ecologically sound, small-scale organic architecture. He left the university, faulting it with not adequately dealing with such concerns, moved to a cabin he had built in the hills of tiny Occidental, Calif., and there founded the Farallones Institute, a commune-like school for teaching and applying his beliefs. In October 1975, California's then Zen governor Jerry Brown



appointed Van der Ryn state architect, a position he held long enough to launch a program of new energy-conserving state office buildings and resigned shortly after implementation and its hassles began. He again teaches at Berkeley, and was until last month in partnership with Peter Calthorpe. His main interests now are in working with spiritual and other communities whose values he shares, designing "less hierarchical, more creative office environments, exploring regional vernacular styles, translating natural forms to urban areas, and learning something about the economic game." The interest in ecologically sound design, he says, "is of little interest now to architects, which I think is a reflection of their tendency to follow rather than make trends. I'm still an unreconstructed idealist. I think we have to try to teach people what environments can really do."

Jerry Germer, an energy enthusiast who practiced in Utah for eight years and is now architecture editor for *Solar Age* (whose circulation has dropped from just under 80,000 in 1982 to 50,000), says, "It's not so much that interest is off energy but that many of the once exotic strategies have been mainstreamed." Indeed R-19 walls and R-30 ceilings are now routine. By contrast, in 1974 when the Federal Housing Administration increased minimum standards to R-7 for walls and R-11 for ceilings, it was regarded as substantial progress. Says Germer, "Many of us have continued in energy conscious design, but we don't trumpet it as that. Many in my old network have changed their firm names to downplay energy."

Daniel Scully, AIA, is a good example. Along with others, he broke away from TEA (Total Environmental Alternatives), which was founded by Bruce Anderson (now editor of *Solar Age*). It is, sad to say, again a one-man firm with little work. After leaving TEA, Scully and some colleagues set up Equinox, which, in turn, split into several firms. "I'm now running my own office," says Scully. "It's Dan Scully Architects. Pretty straightforward. I'm determined to be an architect known for my design work, of which energy is just one important part."

During those halcyon days of the late '70s there was the dream that the energy issue "would resensitize people to their environment, natural light would stream into passive houses," says Calthorpe. Indeed, the one indisputably direct influence of the energy movement on the art of design is a more widespread and imaginative use of natural light, though it provides more pleasure than energy savings. As Calthorpe says, "You solve the lighting overload problem by going from four watts per square foot to one watt, and daylighting becomes more of an amenity than an energy conserving strategy."

Nevertheless, buildings have become narrower and light wells, atriums, and indoor gardens have proliferated. As Sarah Harkness, FAIA, of The Architects Collaborative says, "hopes that atriums could act as sources of energy have not materialized, though if properly designed, atrium spaces can have no energy cost."

Another hope of energy and ecology proponents was that built

environments would become more sensitive to climate, which has happened in some residential and relatively small scale construction, but not in large buildings, especially those on restricted sites where new technologies—tighter envelopes, new glazing materials, and the like—have diminished the need for often more expensive passive solutions.

Passive design has also seen a transformation from the almost caricature-like early experiments, which were often far more complicated than necessary, to relatively simple solar techniques that now make passive buildings indistinguishable from conventional architecture. In fact, what the public seems to want is solar colonial houses. Says Edward Vine of Lawrence Berkeley Laboratories, "People don't want to stand out, but they do want energy savings. It's become less of a status symbol or emblem of deviance than an economic issue." As for active solar devices, most share Calthorpe's view that "they're just crazy."

One indication that the energy movement has had no appreciable influence on design other than in increased use of natural light is the absence of "energism," or some such label, in Charles Jencks' Darwinian system of stylistic classifications. Energy consciousness certainly has some relationship to the new emphasis on better craftsmanship and use of more durable materials, which have stopped "both planned obsolescence and the sheetrocking of America," in Calthorpe's words. It is surely also related to new concerns with regionalism, contextualism, with particularizing and humanizing spaces, and with bringing back discrete rooms where we formerly had flowing open spaces. But though such recent developments have paralleled interest in energy and ecology, they were transformed into built form by the postmodernists and their reaction against the spare puritanism of the modern movement.

As Marguerite Villecco, special adviser to the director of the design arts program at the National Endowment for the Arts, points out, postmodernism prevailed over energy and ecology in part because of increased interest in color, rich materials, fun, and fantasy, and a turning away from the austerity implicit in energy-conscious design. Furthermore, the latter produced no "stars" in a field that remains star dominated. In fact, as Villecco says, the early energy gurus often did not have the design skills to become stars.

How important is energy-wise design to the stars of architecture? Says Fitch, "They have complete disdain. Philip Johnson is putting up exactly the same kinds of towers in Philadelphia as in San Francisco."

How do you plead, Mr. Johnson? "I do exactly that," he responds. "You see the minute the issue arises you have to talk to the mechanical engineer. It doesn't affect design in any way. It never has. True, we have less glass, more mirror, and double glazing, but these things we should have done many years ago. So, it's more a question of materials and engineering than architecture. It's all up to the engineers."

Fitch also bemoans Cesar Pelli's Battery Park project for New



York City, saying, "He's put skins on the buildings that are two-dimensional, inept, third-rate, illiterate copies of McKim, Mead & White. And all four elevations are the same."

Mr. Pelli? "The Battery Park towers," he replies, "are very efficient; orientation in buildings that tall and massive plays a rather minor role. We are using a moderate amount of vision glass, and it is reflective and insulated. If we changed the orientation we might raise efficiency by 1 percent, which is not as critical as using reflective glass." He disagrees, however, with Johnson's opinion that the engineers are in charge. "The architect," he says, "has the key role, because he's the leader of the team and will decide what mechanical strategies to use, and what tradeoffs to make."

Over the last 10 or 15 years, "architects have lost a lot of turf," says Earl Kennett, administrator for research at the AIA Foundation, "and I can't think of one area where they've increased their territory except for energy design." Engineer Fred Dubin of Dubin Bloome Associates in New York City feels that "the integration of engineering and architecture that we've been preaching for so long has come about because of the energy situation, and it's continuing."

Dubin goes on to say that the "big name architects, with the exception of TAC, CRS, and a few others [which use the best engineers, including Fred Dubin] by and large have not adapted as much as many smaller firms who were looking for a foothold to get into the field." Perhaps this is due to the big name firms' greater interest in style and the fact that clients whose priority is energy savings are not likely to beat a track to Johnson's or Pelli's doorstep. Then, too, as Tom Vonier says, energy isn't all that interesting once you've mastered the basics.

"What was a specialized issue has become part of the general process of design. It's no different now than keeping leaks out of buildings. Clients expect you to deliver an energy efficient building," says Barry Elbasani, AIA, of ELS, a firm known for its distinguished energy-conscious designs and based in Berkeley, Calif., a state that, unlike many others, applies high minimum standards. "We're finding," says Elbasani, "that being able to say we specialize in energy design is no longer a major marketing tool or anything special."

One reason is that many designers have become conversant with computers and quantification methods, which are direct outgrowths of the energy movement. Says Donald Watson, FAIA, of Yale, "If anything came out of the '70s it was this new tool that could simulate a building's performance before construction began. This phenomenal innovation would not have occurred without the energy emphasis."

It follows that energy management and control processes, which also got their start in the '70s, are becoming a major concern. Cable says that the greatest portion of his firm's work is fixing mechanisms that don't work properly, "and we see a major move toward more sophisticated controls." Management is

another strong theme, which is not surprising, since the work world is becoming evermore management-oriented.

Michael Sizemore, AIA, of Atlanta, who retrofitted the AIA headquarters building for better energy performance six years ago, explains that for his firm and others, "What has happened is that our energy expertise has given us a better knowledge of how buildings actually work. As a result the energy emphasis has expanded into a stress on whole building performance. It's also enabled us to do buildings with more amenities at less cost." As example, he cites a speculative office building he has under construction that has 10-foot ceilings without raising budget or operating expenses.

Although it's misleading to assume that all practicing architects are now skilled in energy-wise design, a "small percentage, maybe 10 percent, really understands its concepts and applies them on a regular basis," says Cable, adding, "My sense is that the percentage is growing as younger people enter practice."

This raises the question of whether energy-conscious design has been integrated into the curriculum by schools of architecture. Fitch laments that "We have young people in the office who have never heard of energy and couldn't care less." But most of these, he admits, are from Ivy League schools, which place far less emphasis on building performance than on esthetics, and have, in Marguerite Villecco's view, been preoccupied in recent years with establishing stylistic vocabularies distinct from those across the Atlantic. There are, however, exceptions such as Columbia and the University of Pennsylvania, both of which place strong emphasis on energy design. In other parts of the country, the California schools have an excellent record, as do those in the Southwest. Also giving energy due emphasis are the universities of Virginia, Florida, and Georgia Tech in the South; Wisconsin, Michigan, and Minnesota in the Midwest; Carnegie Mellon in Pittsburgh; and MIT, RPI, and SUNY at Buffalo in the Northeast.

As John Eberhard, a former dean at SUNY, Buffalo, says, "The people who joined faculties when energy was in its heyday were researchers. They're good applied thinkers and turned out to be good design teachers as well. Since most still stress climate, site, daylight, and overall environmental issues as generators of built form—from massing, to siting, to organization of spaces, to mechanical interfacing—they are pushing integrated design and total building performance."

Predictably, energy no longer stands by itself as a star issue in architecture schools. As evidence, Richard McCommons, AIA, executive director of the Association of Collegiate Schools of Architecture, observes a recent loss of interest in the annual ACSA/DOE energy design competition.

"But people who are in school now were toddlers when the first embargo came, and they are living in a much more energy-conscious world," says Tom Vonier. "In some ways it's ingrained outside the curriculum itself."

Partly it's a matter of new energy codes and standards that

are becoming increasingly refined and stringent but vary widely from one region, or even locale, to another. They are far stronger in the West and Southwest generally, and in the Northern tier states than in the East. Moreover, some utility companies that are near their generating capacity are creating incentives and demonstration programs for energy conserving design to avoid the far more costly—and controversial—construction of new power plants. Among these is the Bonneville Power Administration in the Pacific northwest, Western Electric and Northeast Utilities in New England, Gulf States Power, Georgia Power, and Southern California Edison.

Local building associations have also drawn up voluntary energy guidelines similar to the E-7 program in the suburban Maryland and Northern Virginia areas around Washington, D.C. In addition, there are the so-called model codes of the Council of American Building Officials. These are based on ASRAE 90-75, which, in turn, is now being revised to stiffen standards of thermal protection in both residential and commercial buildings.

In almost all cases, however, speculative builders—residential and commercial alike—will invest in energy conserving strategies only if it makes their buildings more competitive and they can recoup the costs, which depends on local market conditions. Unless sales are very slow or other builders are already using energy performance as a successful marketing tool, but haven't yet cornered the market, a builder isn't likely to make the investment because market conditions and not builder costs determine sales prices.

A significant prod for some builders, however, is that the National Association of Home Builders has convinced both Freddy Mac and Fannie Mae to give financing at a higher debt to income ratio for houses built to NAHB voluntary guidelines, according to Mike Bell, the association's director of energy research. This means, he says, "that a builder can put an extra \$500 to \$1,000 into energy, raise his price accordingly, and still have buyers qualify with \$4,000 to \$5,000 less annual income than is usual."

Still, those builders who are producing the most energy conserving houses are not necessarily getting the most credit, says John Crowley, director of research for Ryan Homes. The public, he says, "isn't that knowledgeable, and those builders who are doing half the job use the same terminology to capitalize on the market." As an example, he cites the fact that many builders advertise low air infiltration, which is probably the most cost effective way to reduce energy use in residential buildings. But many of these same builders don't use quality construction, which is critical to controlling air infiltration. And, as in nonresidential buildings, energy-conscious design consists mostly of better technology having little to do with design per se. As Mark Maves, AIA, a former AIA Research Corporation staffer who now works for a Washington, D.C., architecture firm, laments, "Not a single residential client comes to us with ideas of energy conservation through site-specific planning. They're interested only in technological stuff."

What homeowners are excited about is the "smart" house. They "are fascinated with the wizardry and gadgetry that naturally have an energy component built into them," says Crowley of Ryan Homes. General Electric has already developed a device that plugs into the family television receiver to become an energy, security, and communications control monitor. The device can transfer a message left by phone to the screen, and then turn the lights on or off, adjust the temperature, and monitor the security system.

And this is just the beginning. David Sellers, AIA, one of the earliest energy gurus, is now on indefinite leave from Yale working on, among other things, a "house of the future," which, he says, "will take up where Bucky Fuller left off with his Dymaxion house and where Wright stopped during his Usonian period." Sellers' house of the future will have hard wired into it the functions of the old rolltop desk, which was replaced by the home

computer. "It will be manipulable, by the user," Sellers explains, "but have its own way to respond and manipulate the building. If you think about it, you realize it's inevitable."

That's believable when you consider that a few years ago when designers talked about the office of the future it sounded like science fiction and today it's a fact.

The driving force behind energy-conscious design and smart buildings happens also to be the largest sector of the building industry, corporate, and institutional clients, who themselves have to pay the operating costs rather than turning them over to a tenant. "They are the ones imposing energy conserving and whole building performance design, not the architects," says Watson of Yale. He does consulting work for Xerox and large institutions and finds there is a new interest not only in smart buildings but with comfort, especially visual comfort. "Everyone's work station will have a CRT in five years," he says, so lighting and measures to reduce glare and the added heat load created by electronic gadgetry are becoming evermore critical. Watson says, "You start with one little piece, like how to prevent glare from CRTs, and soon you're designing all 10 pieces of the environment."

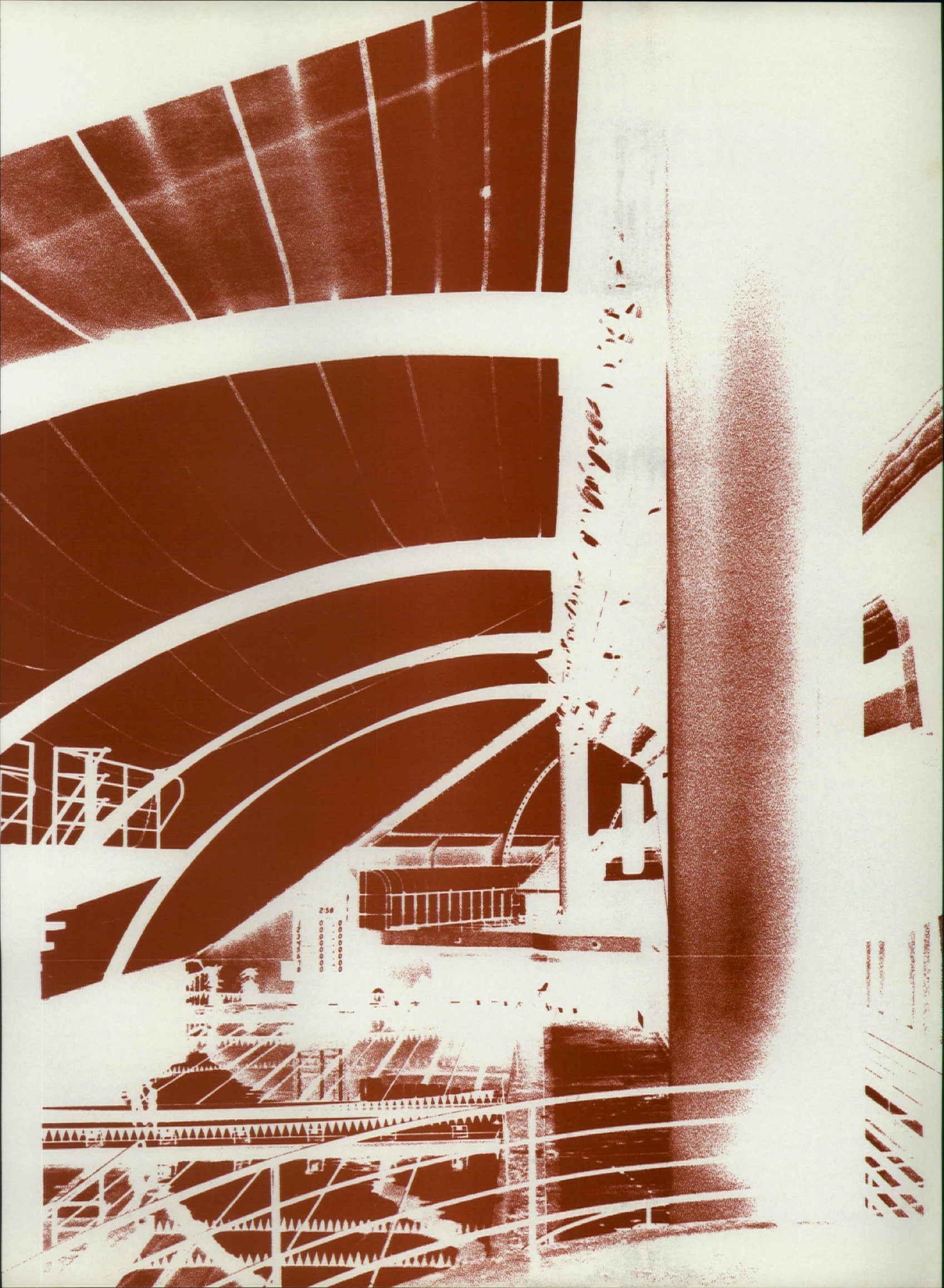
Technology is also the area of greatest innovation for improved energy savings and comfort, plus total building performance. Continuous membranes have been developed for use as building envelopes that are far more energy efficient and comfortable than conventional truss systems. These continuous panels are able to provide more interior volume as houses become smaller. And, says Crowley, "the country is being pushed into low emissivity glazing that doubles the thermal resistance of double glazing."

Glazing research being done at Lawrence Berkeley Labs and Pilkington's glass laboratories in Great Britain could result in a dream building material that gives the thermal performance of a cavity wall while having the optical properties of vision glass. Also being studied are technologies that can change the properties of glass at the flick of a switch, obviating the need for screens or blinds, as well as "smart" glass that can change with weather and light conditions without human intervention. Research is also finding new ways to guide natural light into deep buildings without light wells or atria. The fairly low-tech way employs simple conduits with reflective coatings to channel light. Others rely on lenses and prisms to direct daylight into buildings.

LBL is also studying low conductance, high transmittance materials like silica aerogels, and a new generation of low emittance coatings, while experimenting with sprays for improving the ability of light colored floors and walls to absorb energy.

The new emphasis on innovative and high quality products and materials will inevitably affect design, says Princeton architect Douglas Kelbaugh, AIA. He believes that "the cutting edge is going to be the materiality, the physical quality of architecture, which has been so poorly attended to, particularly by the postmodernists. I think the public wants a higher quality of materials and craftsmanship, and architecture that grows out of tectonics, which is being made possible by lower labor and higher energy costs."

Similarly, the new emphasis on total building performance is forcing architectural researchers to focus more on multi-disciplinary or trans-disciplinary issues, according to Vivian Loftness of the Carnegie Mellon Institute. She says, "People are now looking at the way energy affects air quality, how acoustics affect lighting, what the influence of adding a window will be on thermal comfort, light, and air quality, and how it will affect the long-term ability of a building to withstand degradation." This "ability of a building to withstand degradation" is another new hot issue. In plain English it means that people now want buildings to have long, healthy, and productive lives, rather than short and parasitic ones. □



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The Plight of Minority Architects

*They remain painfully
underrepresented in the profession
and the schools.*

By Nora Richter Greer

In an impassioned speech before the AIA convention in 1968 Whitney Young, then the executive director of the National Urban League, exhorted, "You are not a profession that has distinguished itself for your social and civic contributions to the cause of civil rights, and I am sure this does not come to you as any shock.

... You are most distinguished by your thunderous silence and your complete irrelevance." Now, almost 20 years later, if Young were alive, he probably would be aghast, though not surprised, at the situation for minorities in the profession. Their numbers have not appreciably increased, and, given the current anti-affirmative action posture in this country, it seems highly probable that the situation will get worse before it gets better.

Statistics documenting the make-up of the entire architectural profession are hard to come by, but the AIA membership figures are telling in themselves. As of November 1984, minorities comprised only 4.8 percent of the Institute's membership—a total of 2,130. Of that, 2.3 percent were of Asian background, 1.3 percent Hispanic, .7 percent black, and .1 percent American-Indian.

"I would say that if you are looking in terms of formal progress, some would say we have stood still, some would say we have gone backward," says Wendell Campbell, FAIA, of Wendell Campbell Associates Inc., in Chicago, who was a founding member and former president of the National Organization of Minority Architects and a recipient in 1972 of AIA's Whitney Young citation (a citation given in recognition of a significant contribution to the social responsibility of the architectural profession).

Others agree. Says John S. Chase, FAIA, of John Chase Architects in Houston, who was the 1982 Whitney Young honoree: "I think minorities are underrepresented and underutilized. Look around you in any American city and you will find that there is nowhere near the participation as compared with the population. What city has any appreciable representation of minority architects? ... When I received my license to practice architecture in the state of Texas, I was the only black architect with a license. Now, 30 years later, we have, and I'm guessing, 10 practicing black architects. Do you think that 10 architects in 30 years is progress? You can't tell me that there weren't other qualified people."

Minorities are participating in larger numbers in other professions, although not always in larger percentages. According to the Department of Labor, in 1984 there were approximately 107,000 architects in this country. Of that, 2.4 percent were black (2,568) and 3.6 percent were Hispanic (3,846). Percentages are similar in law and engineering, although there are more minorities in these professions. Of the approximately 646,000 lawyers, 2.3 percent were black (14,858) and 1.6 percent were Hispanic (10,336). Of the approximately 1.6 million engineers, 2.6 percent were black (41,600) and 2.1 percent were Hispanic (33,600). Percentages are higher in the medical profession. Of the approximate 520,000 physicians, 5 percent were black (26,000) and 5.1 percent Hispanic (28,200).

The underlying historical reasons for the small numbers of minorities in the architecture profession seem fairly obvious. "Architecture started out as an elitist profession in this country," says Marshall Purnell, AIA, the current president of NOMA whose firm, Devroux & Purnell, is located in Washington, D.C.

"You didn't market it. You just more or less put up a shingle, opened your doors, and people would come to see you. And the people who could afford to use architects were, for the most part, well-to-do or rich. Historically, the rich and well-to-do don't really have much use for minorities—they usually don't come to a black man or woman, or an Asian, or an Hispanic and say, 'I want you to do something for me.'"

This elitism "really deals with the link between power and architecture as culture, because one of the ways that any group expresses its power is through control of cultural activities," says Max Bond of the New York City firm Bond Ryder James and a professor at Columbia University's school of architecture. "One sees that in a lot of cultural endeavors there are great limits put on blacks. Look at ballet. The traditional white ballet companies are awful in hiring black dancers and promoting them. Or in art. There are few blacks that get exhibited in prominent museums."

It is also apparent that the limited minority participation in the architectural profession can be traced, in part, to the inadequate education that many minorities receive in this country. "One of the problems that we face is that many minorities are penalized by the public school education that they get in our urban centers," says Robert Tainham Coles, FAIA, the 1981 Whitney Young recipient whose firm works out of Buffalo, N.Y., and Washington, D.C. "They really don't have the background necessary to get into college and to sustain themselves there. The colleges that in the '70s had started programs of support for the minority students have in the last five years withdrawn those."

And, too, role models are scarce. Stan Britt, AIA, a former NOMA president who is a principal with the Washington, D.C., and Baltimore firm Sulton Campbell & Associates, says, "I think the role model is a prime resource for increasing the numbers within the profession. There are still a lot of kids at the high school or junior high school age that don't even consider architecture as a profession simply because they either don't know of anyone who is an architect or they don't know clearly what architects do. So there is no way for them to make a decision to go into architecture. It is an unknown."

As Diane Cho, AIA, of Cho/Wilks/Burns, Baltimore, says, "It has to do with numbers and seeing them around. In my own lifetime I saw it happen with women going from practically none to quite a few. Role models can make you more goal oriented; you feel you can achieve it. If there are other Asians or Hispanics that have made it, and there have been, it is sort of a stimulus."

An enormous barrier to a member of a minority group wanting to become an architect is economics. As the cost of tuition at architectural schools around the country has risen, the earnings of the profession have lagged behind. This low return on investment besets all entering the profession but is a greater burden for minorities, many of whom come from families in lower-income brackets. "There are few minority students that can afford the education and who can imagine coming and then getting through it all and not being able to earn much," Bond says. The result is that minority students who do make it through college tend to choose more lucrative professions. Currently the problem is being exacerbated by cutbacks in other student aid. These

cutbacks, says Britt, "are going to really play havoc. I think they are going to have a drastic effect." As Britt recounts, when he was a graduate student at Columbia in the late '60s most of the minority students were on scholarships supplemented by student loans. At that point minorities comprised about 10 percent of Columbia's architecture school. Now, Britt says, out of a total population of about 700 or 800 students, there are only three blacks. These numbers are not unique. According to the National Architectural Accrediting Board, during the 1983-84 school year, out of a total of 5,597 students in the accredited masters of architecture programs, 528 were minorities while 1,465 were women. During the same time period, the number of undergraduates in accredited and nonaccredited schools was 32,278, with 4,477 minorities and 7,397 women.

Once in the architectural schools, minority students face the cultural bias to which Bond alluded. "A person who goes to architecture school and has to study the status quo, who has to look at the old masters in architecture, and who has to study under professors who come from a particular culture needs to observe and accept those standards in order to make it through school," says Carlos Batista, an architect who heads the Tucson Barrio Association, a neighborhood redevelopment organization in Tucson, Ariz. "They need to design to that culture that is not their own, which is one that has the money and the power and the influence to make things happen. So they either end up not making it or they end up joining the majority as compared to the minority. If they make it through architecture school, they lose a lot of their cultural background. . . . Maybe the whole issue of being strong enough to adhere to principles and concepts that may not be understood and accepted by the establishment is one of the most difficult parts of a minority trying to maintain his own individuality." Says Frank Sata, AIA, of the Sata Collaborates Inc., in Pasadena, Calif. "We never studied Asian architecture. Architecture was always the Greeks and the Europeans, always a Western idea of what architecture should be."

Sharon Sutton, AIA, a professor at University of Michigan's school of architecture, believes that architecture needs to become more "relevant" to the "life experience" of minorities. "Architecture, the big-A monumental stuff, is something that frankly I think would not appeal to a majority of minority students who have some sort of social commitment," she says. "That is a bigger program, to me, than economics, because if people felt that they really wanted to learn this, they would find a way."

Faculties at the architecture schools are by and large white males. According to NAAB, during the '83-'84 school year out of the 3,347 faculty members at accredited architecture schools 251 were minorities and 346 were women. James E. Vann, AIA, a professor at the University of California, Berkeley, says, "There is no school where the faculty composition has changed for the better. Most schools are still predominantly white, and I'm not aware of minorities being added in tenured positions. Minorities are not being hired to teach at universities. The hiring system and the tenure system is really arcane. The whole system is set up to perpetuate the old boys' network."

Having incurred tremendous financial debts during school, minorities upon graduation often seek employment in the larger non-minority architecture firms. Britt cites two reasons for this:

*Problems in getting
ahead in large
firms and getting
started independently.*

"They can probably generate better compensation, and a lot of larger firms with affirmative action programs find it easier to hire a younger minority architect and pay him less than a more experienced one." The catch seems to come in being advanced in a large majority-owned firm. "I don't have the statistics, unfortunately," Bond says, "But I do think it's hard to believe how bad the architecture firms really are in that regard. There is hardly any valid excuse that the firms can make. Certainly you would expect to see some minorities rising in these firms."

At a certain point the minority architects, having been passed up for promotions in these large firms, leave in frustration and set up their own firms or join already established minority-owned firms. "That is one of the reasons I formed my own firm," Campbell says. "I have been in practice on my own for about 20 years. When I first started it was almost impossible to even consider becoming a partner or to some extent an associate in the large firm." Campbell illustrates his point with an article appearing in a 1972 issue of *Reporter*, a magazine published by the United Churches of Christians and Jews, which surveyed the large architecture firms in Chicago as to their percentage of minority participation. "It was shocking that almost none of them at that point had any minorities in principal roles," he says. "Even now you find that most of the large firms in Chicago have no minorities as principals or even associates. The article came to the conclusion that the architectural profession in Chicago was one color. . . . We have to change our thinking in terms of the qualifications of who we hire rather than in terms of what colors they are."

If these young minority architects choose to go it on their own, getting started is particularly problematic. "I guess I could get really angry about it," Sutton says, "I've been trying to get established since 1976. Either I have clients who can't pay for what they want to do or I don't get the job because I don't have the experience. But how do you get the experience if you don't know people with money who will hire you? And yet I see non-minority architects whom I went to school with who barely made it through, whose parents hired them to build a house and then their uncle hired them to do an office. Now they are in business. It has to do with connections. That is how you get started on a small scale."

The most logical place for minority architects to find work when they first begin practicing is in their own communities. But those communities most often have no financial clout and seldom need the services of an architect. As Purnell says, "A black lawyer, for instance, can probably set up a very good practice here in the District of Columbia and have a number of black clients. The same way with a doctor. An architect does not have that luxury. An architect cannot go set up shop in Harlem or in the far Southeast [section of D.C.] and have only black clients. An architect is looking for someone who wants to build something or wants something designed. Historically that has not been blacks or other minorities."

Obviously, the situation varies from ethnic group to ethnic group and from region to region. Hispanics seem to be well established in cities like Miami and in parts of the Southwest. Asians can do fairly well in some larger metropolitan areas and can point to ethnic colleagues who have built up strong reputations

and thriving practices, like I.M. Pei and Minoru Yamasaki. Blacks seem to be fairing better in cities such as Washington, D.C., Chicago, Atlanta, Philadelphia, and Los Angeles, where there are more black professionals and where blacks have made inroads into the local political structure. The few American Indian architects tend to congregate in areas where other Indians live, such as Oklahoma City and other places in the West.

The place where many minority firms have been able to find work and build up their portfolios has been the public sector. Since the late '60s/early '70s, goals for minority involvement have been mandated in federal, state, and local building projects. Black architects participated extensively in federally subsidized housing programs of the 1960s, but the first major affirmative action program that drew upon the talents of minority architects was established in the Department of Transportation in the late 1970s. It called for 15 percent minority involvement in the department's construction projects, from architectural services down to construction. Under DOT Secretary William Coleman, a major DOT project was the \$4 million Northeast rail reconstruction between Boston and Washington. While critics of the program said, in Purnell's words, "there's no way we'll find that much minority talent to do this," the project in fact achieved an approximate 28 to 30 percent minority participation.

"If it weren't for the government requirements for minority participation," John Chase says, "I'm sure a lot of minority architects would have closed their doors." Robert Coles calls the set-aside programs "one of the most stabilizing influences for minority architects in this country." These programs have helped minority firms gain experience that the firms otherwise would not have had and also have helped to elevate their capabilities. "I think a lot of what happened in the late '60s and early '70s forced a certain amount of interface between majority and minority firms," Britt says. "In some ways it got rid of a stigma about whether or not there were capable people out there." Alex Camayd, AIA, of the Scranton, Pa., firm Leung-Hemmler-Camayd, says, "Quality architecture is being produced by these minorities, and they are making a professional contribution that is significant to the country in general and the communities where they live. I think that is very important."

An outgrowth of these governmental programs has been an increase in joint venturing between majority and minority firms. The joint venturing concept was advocated by Coles when he was AIA's deputy vice president for minority affairs from 1974-76: "We developed it as a model for a firm becoming successful and growing beyond its size and its geographic region and its expertise. Firms that have followed this model have been extremely successful." Britt agrees, "Most of the minority firms initially get started doing housing, and housing is a very difficult field to make a living in. Most of the minority firms that have been able to branch out and really get thorough and sound experience in other areas have done it through joint ventures."

But joint ventures, either in the public or private sector, have their drawbacks too. Bond speaks of a double standard: "There is an assumption on the part of the person or the organization hiring minorities that they can't really do the work and that they're really being hired because of a mandatory requirement. The whole process is set up for the architect to fail or to make it

more difficult because the clients do not have the sort of trust that they would have in another architect. They don't trust the design intentions and thus make the process not work well."

Tai Soo Kim, AIA, a principal of the Hartford Design Group in Hartford, Conn., says, "In some cases in the eyes of the interviewer there is a stigma about the requirement for minority involvement. Somehow, I sense that I am at more of a disadvantage than an advantage."

"Sometimes a majority firm forms a consortium of maybe four or five minority firms where each of them may be getting 5 percent of the total job," Campbell says. "That is not enough to give any of them a feeling or recognition of accomplishment in terms of being able to expand their portfolio. It is just another way of forming a work pool of architectural technicians instead of practitioners. Minority firms are usually thrown into the role of providing draftsmen and technicians."

With the decline in government work, many minorities are turning to the private sector. But there the opportunities for minority architects have been minimal at best. "The records of the *Fortune* 500 companies in terms of hiring minorities is almost zero," Campbell says. Coles adds, "We don't have access to the AT&Ts, the IBMs, and the GMs. I see almost no inroads."

One thing that NOMA is currently undertaking is an attempt to make "corporate America aware of some of the policies that they have and how they're hurting minority professionals," Purnell says. NOMA also casts a critical eye at AIA: It is concerned by what Purnell calls the Institute's "benign neglect," as regards to the problems of minorities in the profession. "We have been witness in the last few years to the sort of demise in emphasis on minority focus programs and minority concerns within the Institute," he says, "It concerns us."

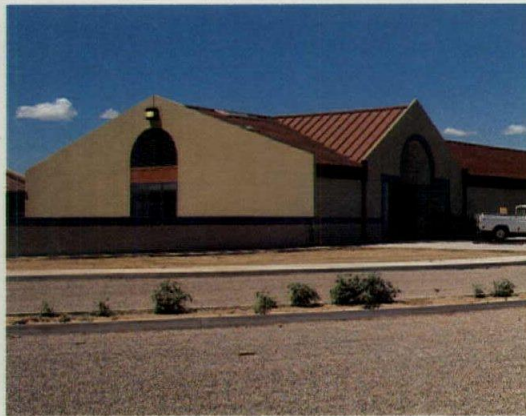
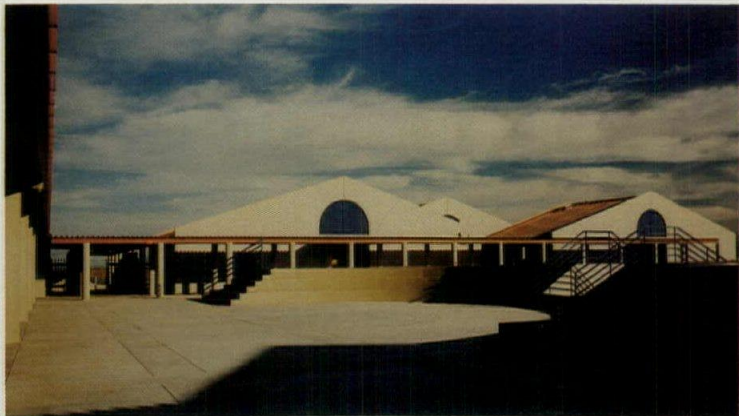
In the end, it may be that even a tremendous effort by the profession may not be enough to significantly improve the climate for minority architects in this country. Says Leon Bridges, AIA, of the Leon Bridges Co., in Baltimore and the sole black member on AIA's board of directors: "The subject of the betterment of minorities in architecture is not only determined by what the architectural profession itself does, but it is also determined by political and social mores that are prevalent in the country. . . . What we have to do is accept that fact, and there are some enlightened people that accept the fact, that there are differences and they don't need to apologize, in fact don't apologize for them. Those enlightened people really are at the forefront of us making any progress. You first must recognize that there is no such thing as color blindness. There is a difference, there is no need to apologize, no reason to be guilty about that. There is a lot of strength in that."

Probably no black, or Asian, or Hispanic would deny that since the Civil Rights Act was passed in this country in 1964 there have been great strides toward a more egalitarian society. Now, the pendulum seems to be swinging back as the anti-affirmative action sentiment grows stronger. The goal of the minorities, as explained by Batista, is "when they don't make it because they are minorities or not minorities. They make it because they as individuals have what it takes to get there. And they don't have to overcome more or less obstacles than anybody else." We still have a long way to go. □

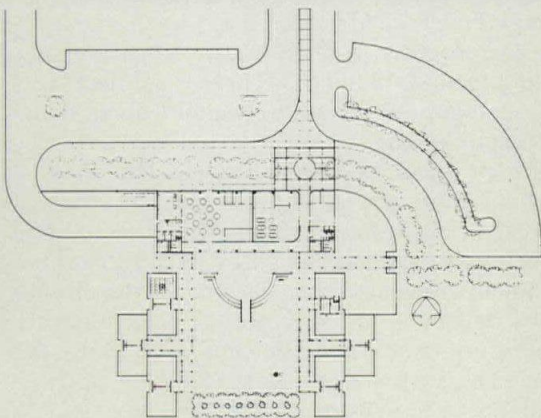
Some Recent Works of Minority Architects



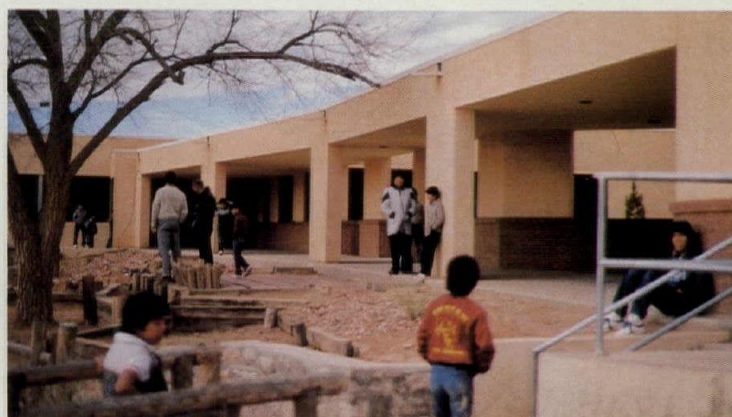
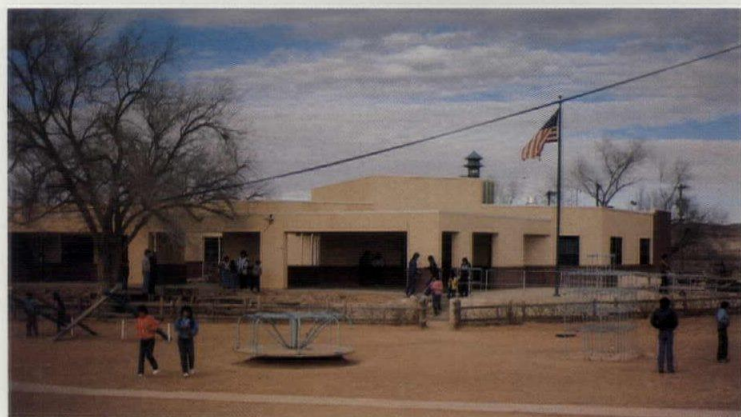
Timothy Hursley/The Arkansas Office



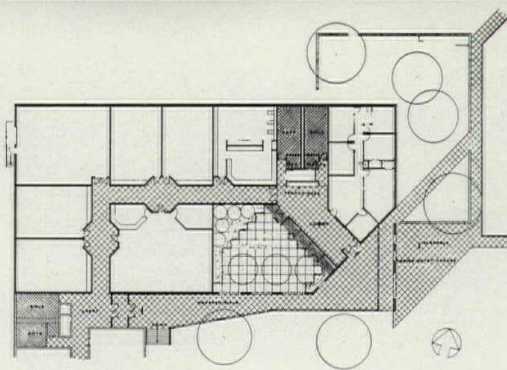
Michael French

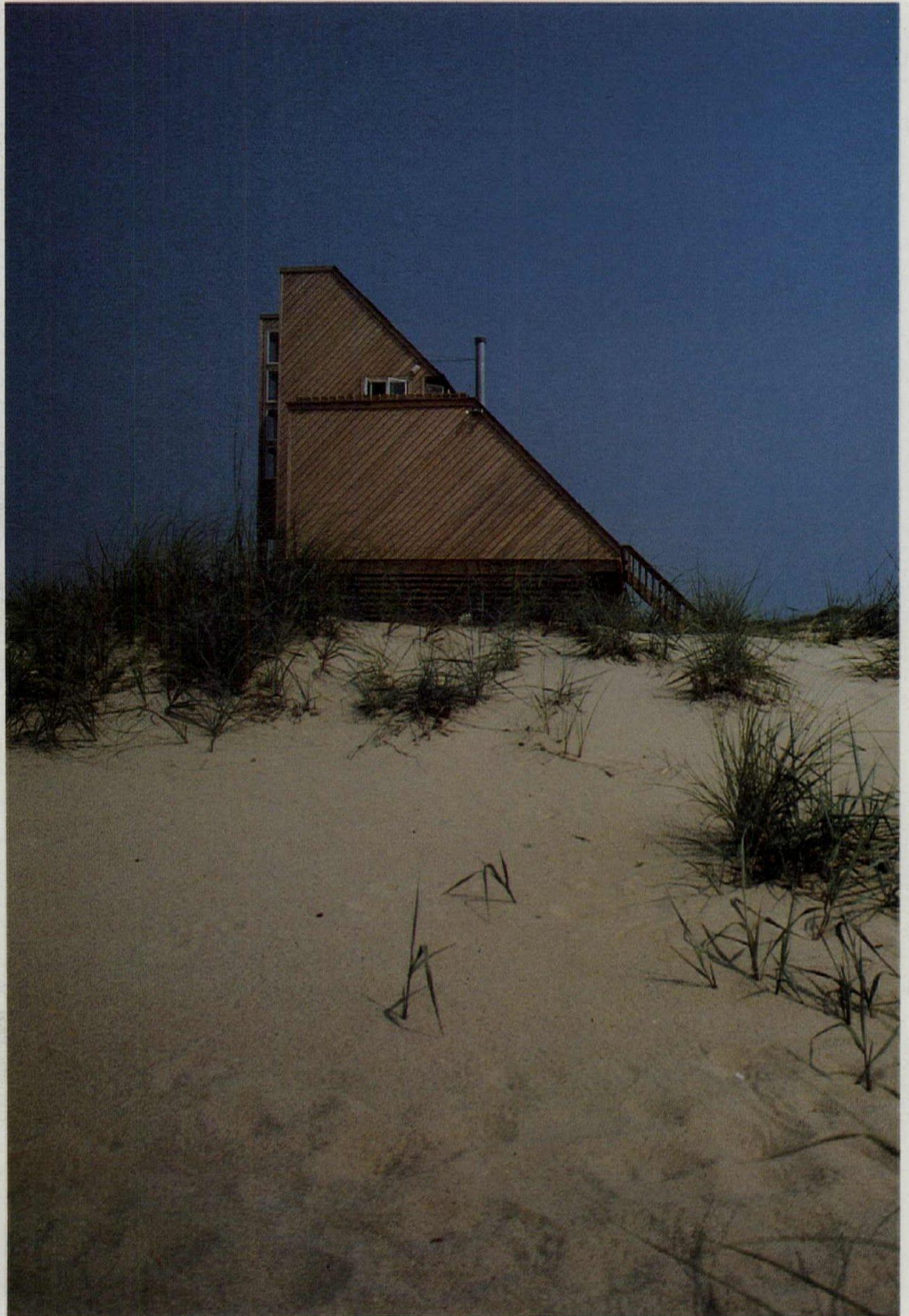
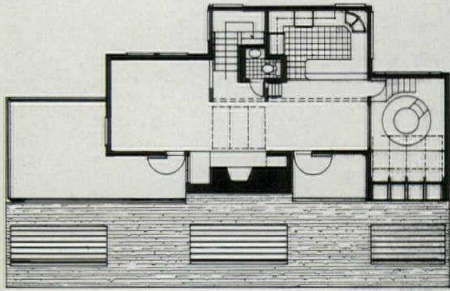


To create a campuslike atmosphere, the 28,000-square-foot Roadrunner Elementary School in Marana, Ariz., is housed in clusters of one-story buildings (top and above). Designed by Anderson DeBartolo Pan Inc., of Tucson, a firm with Chinese, Hispanic, and white members, the largest houses a cafeteria, library, offices, and multipurpose room, and runs east-west on the site. Eighteen classrooms are in three clusters of three buildings each, the buildings being large enough for two classrooms. These clusters run north-south. All buildings are connected via an outdoor circulation system, and at the center of the campus is an outdoor amphitheater. The classrooms are straightforward in design, while in the cafeteria the ductwork was left exposed and brightly painted. Materials are tilt-up concrete walls with a standing seam metal roof. The design is to accommodate future expansion up to double the original size.



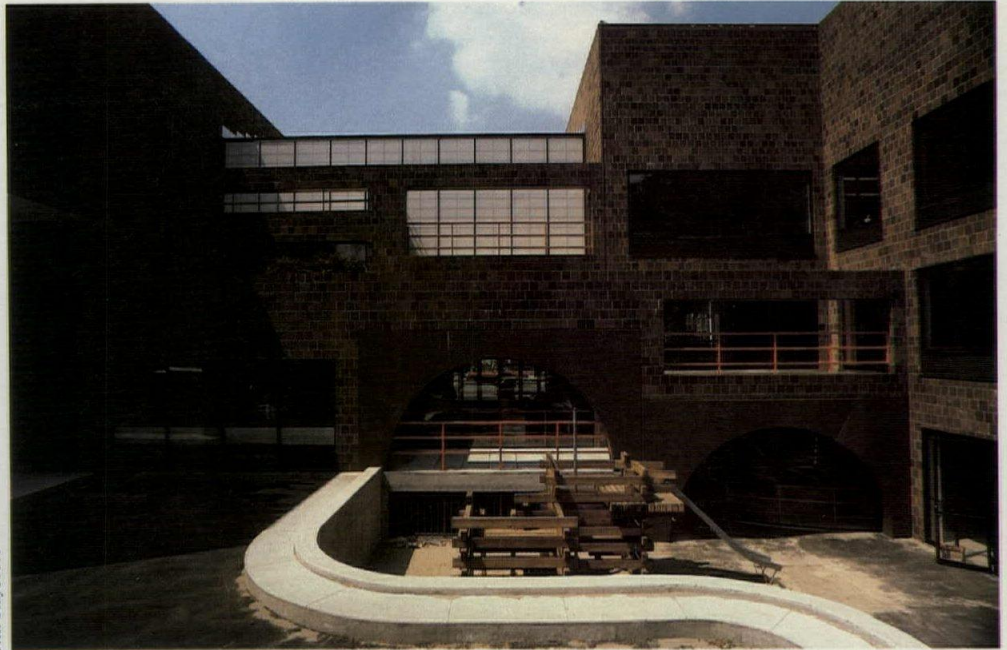
Relating new to old was the guiding principle behind the addition to the Dennehotso School (above), designed by the American Indian-owned FKW, Inc., of Oklahoma City. Located on a Navaho reservation in Monument Valley in northern Arizona, the Bureau of Indian Affairs school's addition houses six classrooms, a media center, restrooms, and administrative offices. The 13,500-square-foot addition lies to the north of the original 10,000-square-foot school, and its exterior, like the old building, is stucco with a brick wainscoting to protect the lower portion from dirt. A new main entrance was created, which is linked to the original by a brick floored arcade. The arcade also acts as two sides of a centrally located, small courtyard, the prime outdoor area for the school, which unlike the rest of the arid grounds is irrigated and green. The brick is meant to reflect nearby red stone monuments.





The Carter beach house sits on a 100-foot-wide lot on the coastal dunes in Corolla, N.C. Its design by Devroux & Purnell, a black-owned firm located in Washington, D.C., responds to the special characteristics of this site. It is wedge-shaped for protection against the intense hurricane winds, which are meant to swoop over the building. The wood siding blends into the dunes environment. Because of the dunes, the internal arrangement was reversed: The four bedrooms are located on the first floor as well as a receiving/recreation room. All four bedrooms face the ocean, and standing at this level one can just see over the dunes. On the second level are the living room, dining room, and kitchen, and off the dining room is a hot tub. A ladder leads to the loft space, which can be used as a spare bedroom. The loft also becomes a lookout to the historic Currituck Beach lighthouse. Other features are five balconies facing the beach, a large fireplace set into a wood-paneled wall (above left), skylights, and a three-story stairwell, the shape of which is meant to reflect that of a ship's lantern.

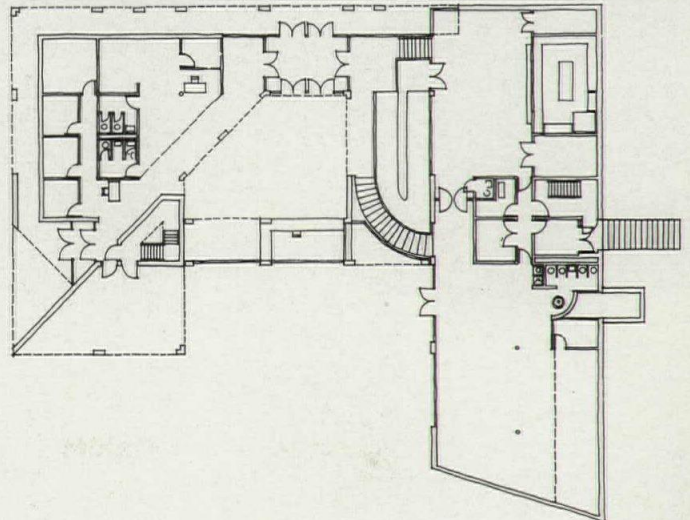
Jim Raycroft

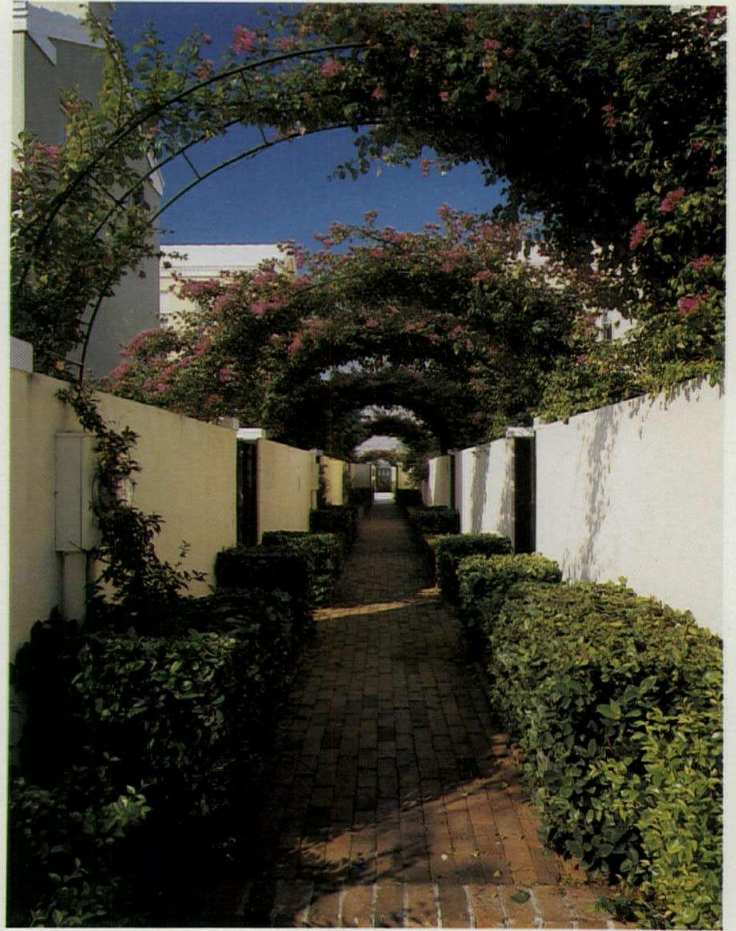
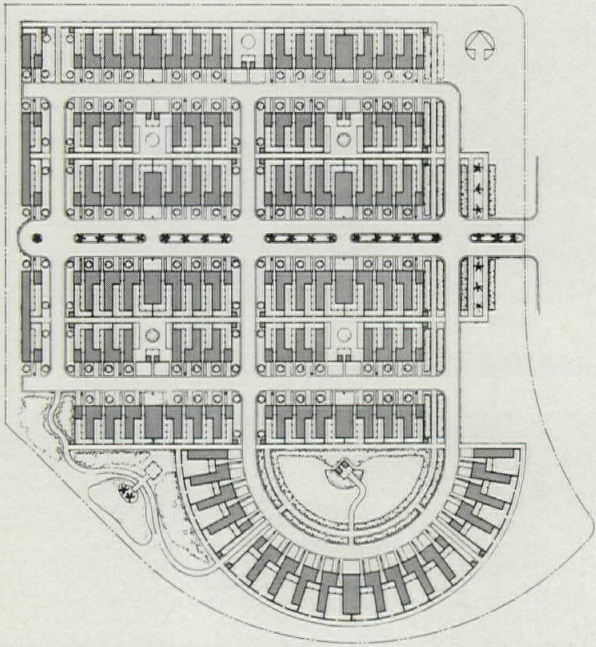


Jim Raycroft



The Harriet Tubman center is a 24,500-square-foot multiuse neighborhood facility located in Boston's South End. Its design, by the black-owned Boston firm of Stull & Lee, is meant to blend into this neighborhood of three- and four-story, 19th century brick town houses and also to "symbolize the strengths and objectives of Ms. Tubman," in the architect's words. The exterior is brick, which is pulled away and cut out at the entrances to create both dramatic entryways and arcaded walkways. The cutout brick wall is repeated as a diagonal element in the squarish, skylit main lobby. Lining and criss-crossing this three-story atrium are brick arcades and walkways. Natural light enters through the atrium's skylight and creates "animation in the lobby," says Donald Stull, FAIA. Like the brick, other materials were chosen for their simplicity—iron pipe rails, natural oak benches, potted plants. The building, which has day-care and elderly care facilities, a library, and offices of welfare and employment agencies, is a modified U-shape. At the center of the U, the brick walls step down, creating outdoor terraces.



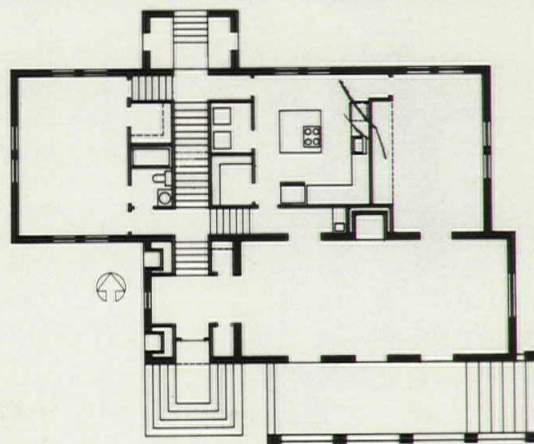


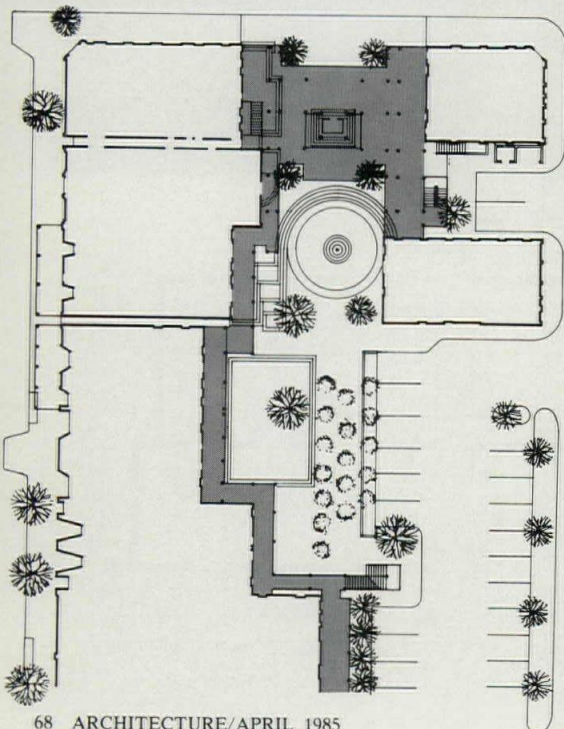
Photographs by Steven Brooke



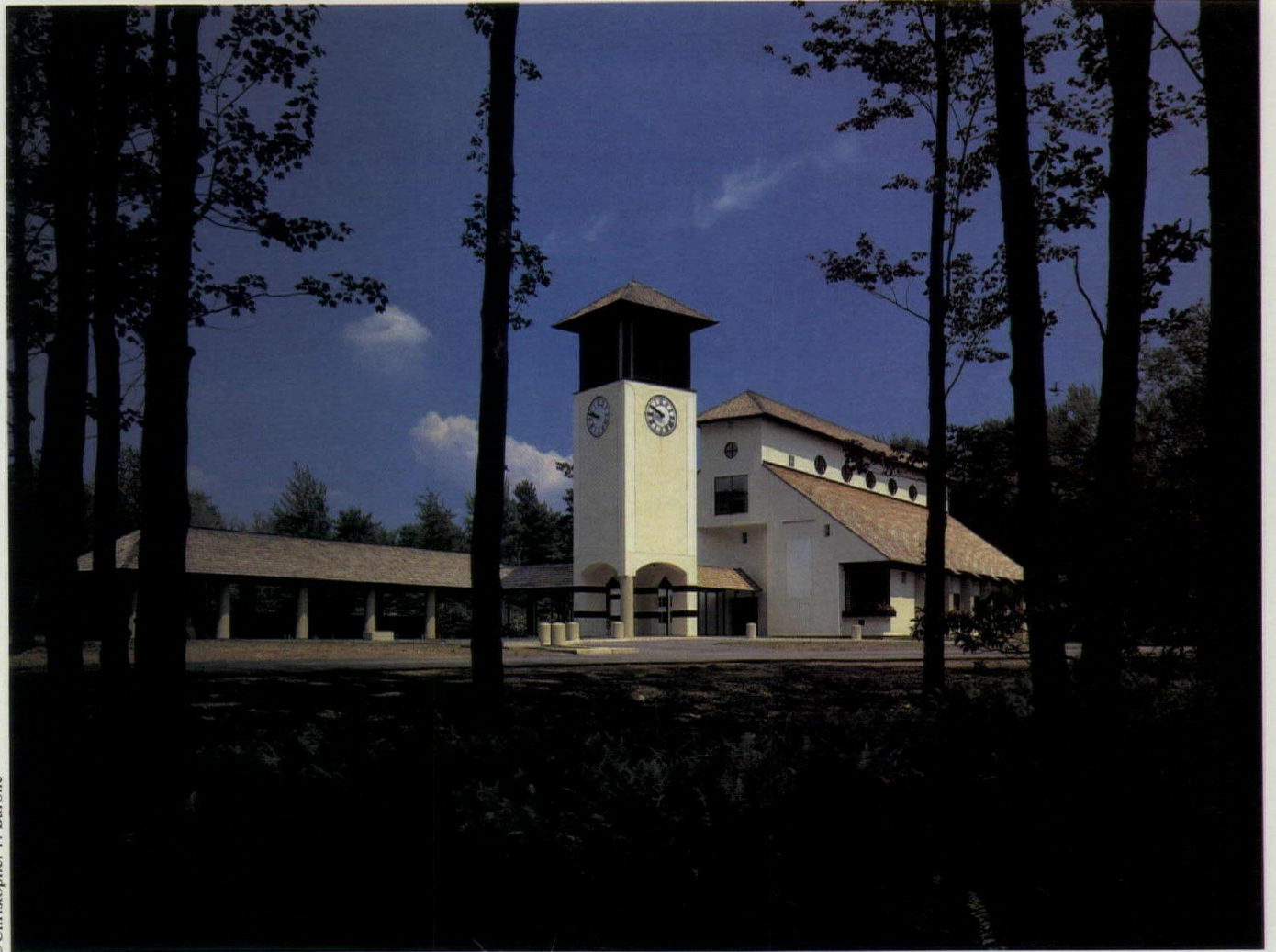
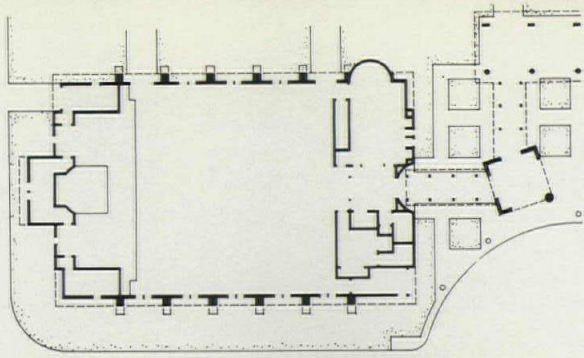
South Florida is full of new housing developments, but few are laid out on a traditional, orthogonal urban street grid. One exception is Charleston Place (left), a 110-unit medium density housing development in Boca Raton, designed by Andres Duany and Elizabeth Plater-Zyberk, Architects, a Coconut Grove, Fla., firm comprised of Hispanics and women. Charleston Place's 16-acre site has a linear street grid defined by the symmetrical gabled houses whose facades only slightly vary. A semicircular extension adds a flourish to the site's south end. The two-to-four bedroom town houses, ranging in size from 1,632 to 3,103 square feet, are predominantly L-shaped, with the foot of the L housing the garages. The longest leg of each L has a blank wall facing its neighbor, which for that neighboring structure creates a private side yard. The side-yard pattern was the inspiration for the development's name, the example being the side-yard houses found in Charleston, S.C. The units are concrete block with stucco and concrete tile roofs and are painted a luscious variety of pastel colors. Throughout, sidewalks are paved in brick, and at the center of each of the six blocks are a pool and pool house.

A second project by Andres Duany and Elizabeth Plater-Zyberk, Architects, the 3,500-square-foot Hibiscus House in Coconut Grove (above and right), is meant to "recall that period when the local classically trained architects first encountered European modernism," in the architect's words. This is achieved by the use of "traditional composition devices . . . freed from ornament." From the front elevation, the house appears as if three separate buildings were placed one behind the other, with each segment being slipped to the left and stepped up. The first and smallest is the terrace with its squarish, white stucco columns supporting a canopy. Behind that is the entry and living room rectangle, which for contrast is painted a pale green. The third is two stories and on the first level houses a dining room, kitchen, and bedroom and on the second three bedrooms, two of which open onto another terrace created on the roof of the green portion. Placed together these three structures create a complex two- and three-dimensional building.



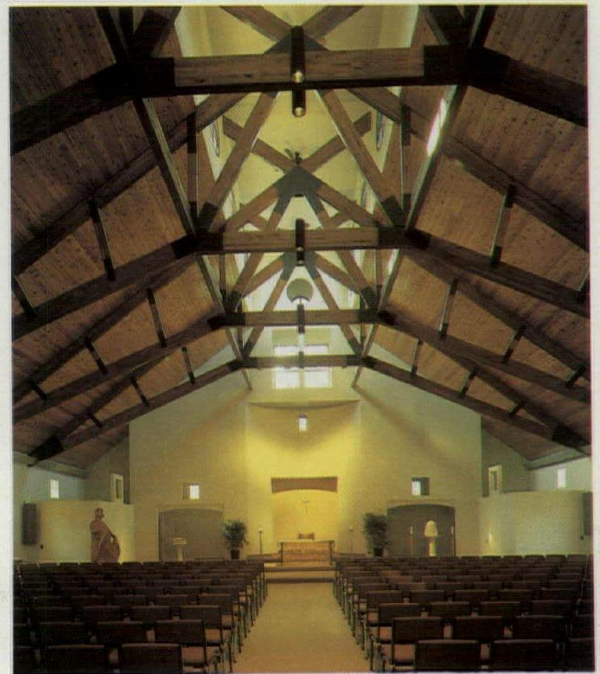


Originally developed in the 1870s, Saint Paul Square in San Antonio, Tex., was at its peak of prosperity during the 1940s and '50s, but began to decline as the city's commerce migrated to other areas, particularly the suburbs. By the 1980s, the turn-of-the-century buildings were terribly dilapidated, and Saint Paul Square, which is carved into the center of a block of these buildings, had in essence become a trash bin with its own collection of partially fallen down make-shift additions. Bringing life back into this area called for the development of site amenities: parking, landscaping, walkways, and elevators, a task that was undertaken by O'Neill & Perez, a partially Hispanic-owned firm in San Antonio (which was recently reorganized into two groups), in joint venture with Joe Stubblefield. Of primary concern was providing access for the handicapped to the upper levels of the buildings. The solution is a glass-enclosed, three-story elevator tower set in the middle of the square, which is connected to the buildings via overhead walkways. The elevator is steel with a concrete deck; the walkways are wooden. On the ground level, the surface adjacent to the elevator was paved to accommodate weekend neighborhood activities as well as provide entertainment space for a restaurant. Currently, the buildings around the square are 85 percent occupied, with professional groups being the main clientele.

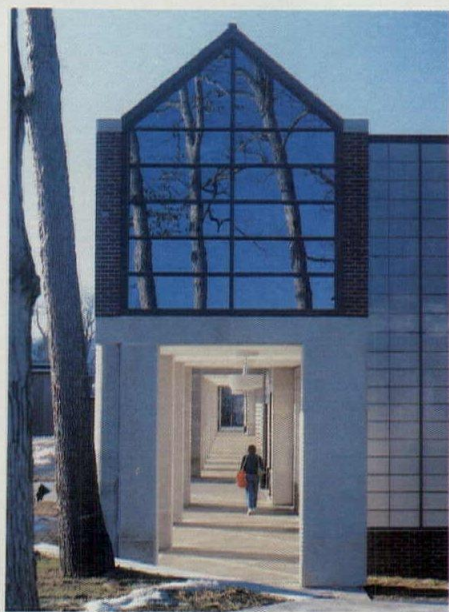
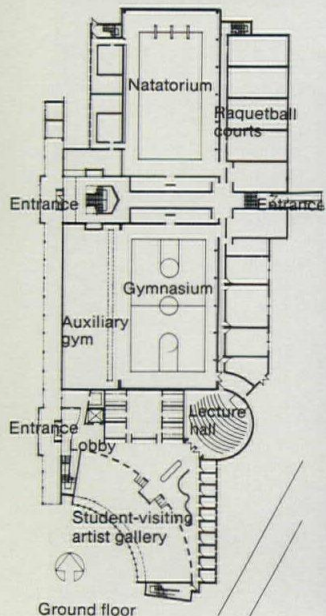
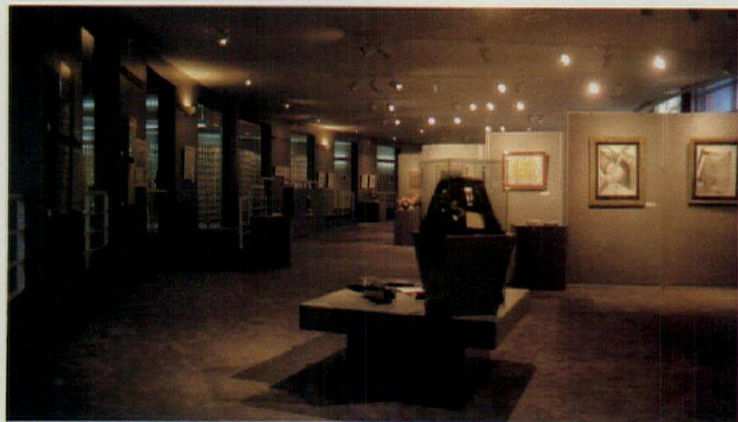


© Christopher P. Barone

The parish of Saint Peter the Fisherman is in the small town of Jim Thorpe in Pennsylvania's Pocono Mountains. For its new church, the major requirement was that its design blend into the Alpine environment. To achieve this, the Scranton, Pa., firm of Leung•Hemmler•Camayd (a firm with a Chinese, a Hispanic, and a white principal) borrowed from the Alpine esthetic. Dark-stained wood trim is set against off-white stucco on the building's exterior. The stucco walls are further broken by exterior columns that visually support the wood-shingle roof. Windows are prototypically Alpine—wood-shuttered and decorated with flower boxes. Rounding out this Alpine imagery is a stucco and wood clock tower, which while marking the entrance to the church becomes the focal point for the complex. The lowest portion of the tower is cut away for pedestrian traffic through it and into the church with only the columns and minimal support walls remaining. Next to the clock tower is a covered walkway. Inside, the sanctuary is a straightforward processional space and is rustic in feel and has a series of timber trusses layered on top of the wood-paneled ceiling. Natural light floods the interiors from a clerestory, which was created by raising the central portion of the nave. In keeping with the esthetic, the altar is unadorned and simple: stucco walls, dark wood framed windows, and coves created by wall cutouts.

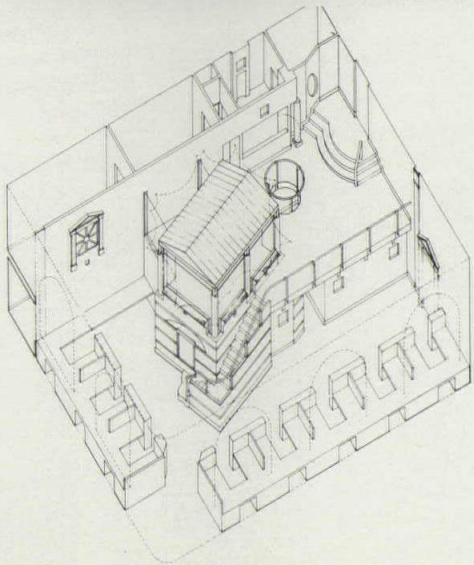


© Christopher P. Barone



Marywood College in Scranton, Pa., needed its 1951 physical education building upgraded as well as a new permanent facility for its fine arts department that was housed in four buildings with studio space restricted to a small prefab metal structure. Rather than add a third story to the rectangular field house, as the college had originally planned, Leung•Hemmler•Camayd choose instead to rehab the field house and to construct a fine arts center as a party wall neighbor to the east, with the two segments being visually linked by a south-facing, 200-foot-long pedestrian arcade (above and lower left). On this arcade, the entrances to both facilities are marked by monumental porticos, and in the future, this arcade may become the backdrop of a larger quadrangle. The arts facility has a curved glass wall on its eastern end that houses two galleries, one for student and visiting artists and the other for a permanent collection (left). Other spaces in the arts center include offices, classrooms, and a lecture hall on the first floor and classrooms and an outdoor terrace on the second. The materials are brick with limestone trim, exterior surfaces that are found on a majority of the campus buildings.

The former grand ballroom on the top two floors of the landmark 1886 Grand Army of the Republic building in Scranton, Pa., was converted into the architectural offices of Leung•Hemmler•Camayd (across page). In redesigning this lofty space a mezzanine was added, which on two sides overlooks the two-story studio space. Clients enter the office on this fourth floor level, that besides the reception area houses the marketing department, computer room, and secretarial space. The mezzanine's main attraction is a "temple-in-the-clouds" conference room, a "postmodern temple playfully juxtaposed against the original architectural interiors and the 19th century exterior," in the architect's words. The witty temple sits underneath a yellow cutout in the otherwise gray ceiling. Steps lead from one of the temple's sides down to the studio. The original details that were carefully restored include a series of windows with stained glass arched tops depicting a variety of Masonic symbols and several overscaled doors with classically detailed wood trim. N.R.G.



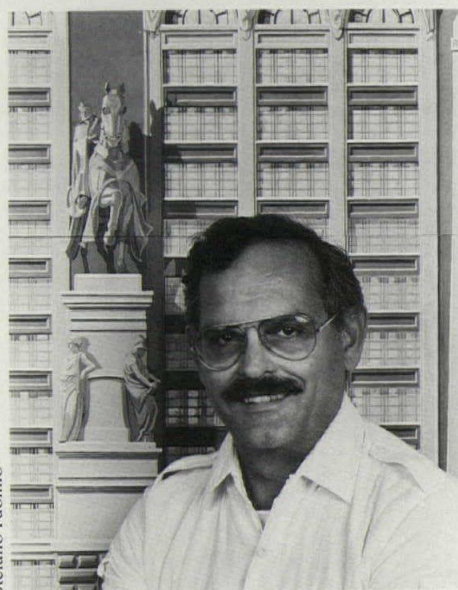


Painting Architecture on Buildings

Recent works of the remarkable Richard Haas. By Allen Freeman



Srenco Photography



Stefano Paolillo

The large lady is carried aloft by four barers. Her arms are outstretched in a gesture of peace, and she is surmounted by a hollowed globe of the world. A sort of Midwestern Portlandia, she is the centerpiece of urban muralist Richard Haas's most recent and perhaps most conspicuous large-scale work.

Executed by 12 painters between July and December of last year, the mural spans three sides of a formerly bleak 1926 warehouse on which some 200 selected windows were covered with cinderblock to yield a total painted surface of 110,000 square feet. This Edison Brothers shoe company building and its mural are prominent from U.S. 40 on the western approach to downtown St. Louis; as the elevated expressway passes close against the south elevation, motorists see a second heroic figure, a representation of St. Louis on horseback. Obelisks hold the building corners, and the top edge of each painted facade bears make-believe semicircular windows alternating with painted figures of stone angels in seeming high relief. Meanwhile, very

Above and opposite, Edison Brothers warehouse in St. Louis, where painters finish equestrian statue. Left, Haas with Edison maquette.

realistic painted eagles fly about, land, and nest on the building as a sort of second-layer *trompe l'oeil* kicker.

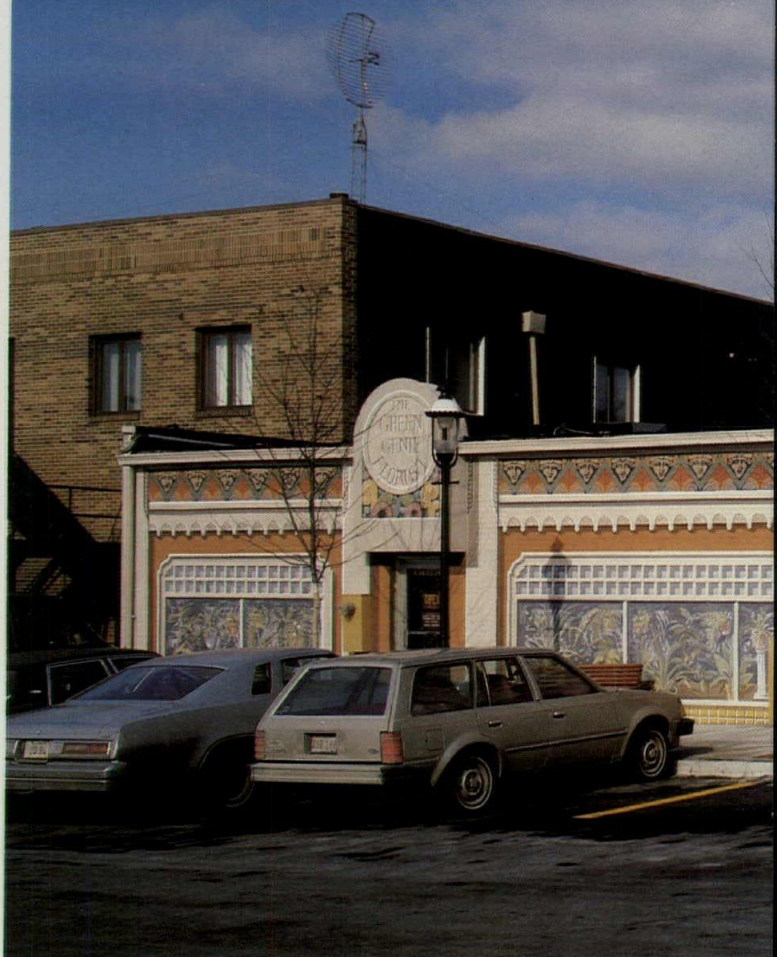
Haas, who gathers indigenous fragments of urban environments and interprets them in superscale realism, found a wealth of material in St. Louis. He restated bits from the 1904 St. Louis fair, including the globe and equestrian statue, and borrowed from Sullivan, whose Wainwright isn't far away, and from an eclectic wonder of a 1930 highrise courthouse with a step-pyramid roof. There *are* eagles in the St. Louis area, and presumably angels, but the lady, who, he says, "started out as the goddess of commerce and moved toward a representation of peace," was modeled from life in his New York City studio.

Last month, in that fifth-story loft on West 36th Street in the still-ungentrified garment district (although Gwathmey Siegel and Richard Meier are soon to be neighbors), Haas bared some of his urban insights and prejudices. "I like cities as I find them," he said. "I like the mix and mess—mostly the mix—and the residue of a city that has to be discovered because it isn't perfect. I think American cities are mostly about that: gems amidst chaos.

"I was recently in San Diego for the first time. What impressed me first was the lay of the land and how that city was sensitive to it, putting prominent buildings—schools and churches—on hilltops. Then, that wonderful circumstance of having a fair gave a real focus; Balboa Park saved that city. It was the result of some magnanimous, sweeping civic planning by idealists at an early date in the city's history.

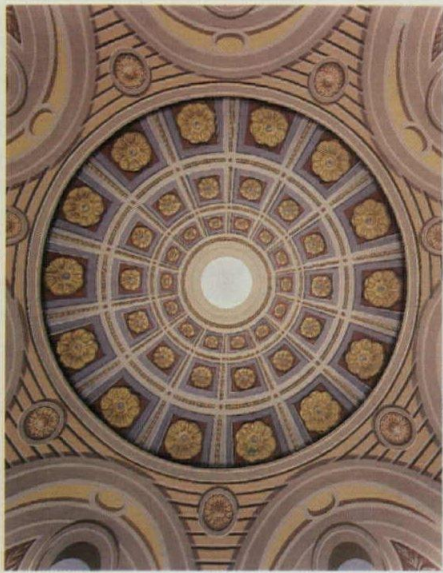
"Other cities, like Houston, are still cities in the raw. They are yet to make a grand gesture toward themselves. New York, in contrast, has had many phases, the last being the one Robert Moses put together as emperor of city planning for 30 years. Besides doing a lot of damage, Moses managed to make a network, a civic structure, that was able to accommodate what would otherwise have resulted in an impossible situation."

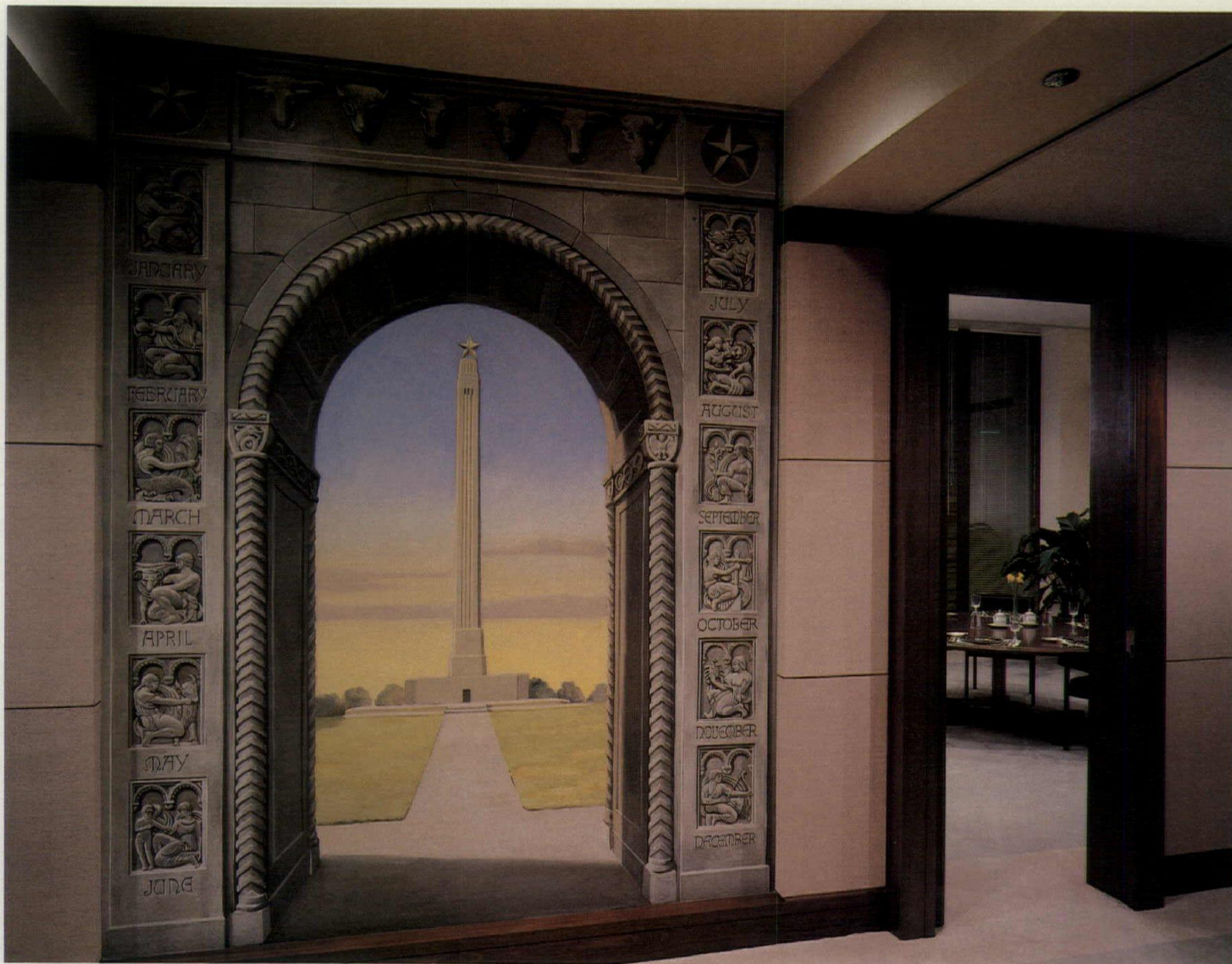
Right and opposite below, two of a series of murals on buildings in several contiguous blocks in Homewood, Ill., business district. Theater front with nostalgic marquee is derived from real movie house a block away. Below, 'rusticated' drive-in stations, First Bank & Trust Co. of Corning, Corning, N.Y.





Photographs © Peter Mauss/ESTO





Does the current direction of architectural design promise to result in cities that are more interesting?

"Along with the disassembly of other modernist notions had to come a scaling down of the ambitions toward unified field theories in both architecture and city planning. My gut feeling is that this chaos is the way life really is and that it has led to a more rich, heterogeneous, idiosyncratic, regionalist approach, with all the good and bad things that go with that.

"The buildings labeled as postmodern that have started to come on line are definitely more interesting than those immediately preceding. But they also have to match up against the greatest buildings of the previous generations, and that is a different story."

Haas, now 47, knew great architecture first-hand from an early age, growing up in Spring Green, Wis., and working for two summers at Taliesin. Frank Lloyd Wright was, to Haas, "the entry person, the hero I latched onto. I focused on his personal history and his architecture when I was first starting to think of the possibilities in my life. I fixed on his early drawings, liked less the ones being done when I was there, the late ones with colored pencils.

"Wright was my foundation, but I soon started moving off in other directions, escaping the dogmatic biases that were indig-

Opposite page: above, Times Square, one of eight Manhattan views by Haas in New York University Midtown Center, and below, rotunda and vaulted ceiling of Bar Building, New York. Above, Lone Star tower through Romanesque arch in Johnson/Burgee's RepublicBank Center Houston, with interiors by Gensler & Associates. Right, air shaft made atrium in Alwyn Court apartments, New York. Beyer Blinder Belle was renovation architect.





enous to the Wright orbit. I had to disconnect, although it wasn't a conscious decision."

Haas stayed in the Middle West through art school and a period of teaching, moved to New York's SoHo in 1968, and did his first building mural in 1974, on a SoHo loft whose cast iron front he replicated on an exposed party wall. In the decade since, he has painted scores of murals in U.S. cities and towns. His work has moved from the literal, strictly architectural SoHo mural to the transitional classical domed cutaway on the Boston Architectural Center of 1977 to today's fantastic dissolved walls and sculpted figures. He offers in self-appraisal: "Over the years, my ideas have, for one, complicated themselves. And my range has enlarged so I now feel more comfortable handling more complicated things and inventing situations."

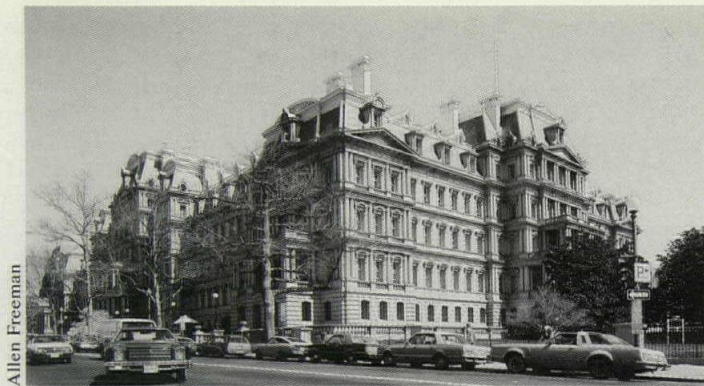
As a commercial artist, Haas is hugely successful and widely imitated. The demand for his work has remained high as the range of subjects and scale of individual works have enlarged. But how does one deal with the fickle nature of popular taste and critical evaluation? "You have to do enough work, well enough," he says. "Then you count on your own hunches, and it will either hold or come back. Because popularity *will* go away in terms of fads. That's a given. The real challenge is with yourself and with each piece as you take it on, making each the best you know how, the best statement, as it accumulates. You build a body of work and hope that enough of it sticks." □



Above left, two 'Johnnys' at entrance to executive dining rooms in Philip Morris headquarters building, New York City; left, a Johnson & Johnson-commissioned Haas mural on a transformer substation in New Brunswick, N.J.; above, mural on Kroger Co.'s annex building in Cincinnati is a fantasy on themes of Piranesi as well as a tribute to Cincinnatus, a Roman for whom the city is named.







Allen Freeman

The White House's Next Door Neighbor

The robust Old Executive Office Building undergoes restoration. By Carlton Knight III

Once upon a time, a teenage mail clerk at the White House, assigned to pick up a chair that had been in storage, discovered an incredible room in the attic of the Old Executive Office Building (OEOB), the monumental pile of granite Victoriana next door to the Presidential residence. Opening the door to the storeroom, the clerk was in for quite a shock. Boxes, chairs, and furniture were piled everywhere, but looking beyond the dust-covered detritus of earlier administrations, he saw an amazing, ornately detailed open space, three stories high and framed in cast-iron columns with extensive foliate decoration, all under a frosted-glass skylight. The once-elegant War Department Library with its Minton tile floor had been relegated to a new, and singularly inappropriate, use. Lost in time, this secret chamber was seemingly overlooked by nearly everyone, and might have remained that way.

But this is not a fairy tale, and despite the happy ending, further horrors would befall and befoul the exquisite space until its mail clerk/savior could return and rescue it. That was six years later, when the clerk, John F.W. Rogers, came back to OEOB, this time as assistant to the President for management and administration. He had not forgotten the long-neglected room and was anxious to see it once again. Excitedly, Rogers, the official in charge of administering OEOB, described the luxurious but underutilized space to several associates as he led them up to the fifth floor at full speed. On entering, they were in for a rude awakening.

An even worse fate had transpired; the opulent storage space

Across page, the elegant War Department Library, now the White House Law Library, had been converted to use as a briefing room, below, with gold-colored drapes hiding the cast-iron framing and details. Top, exterior of the Old Executive Office Building.

had been defoliated, turned into a briefing room, complete with gold-colored drapes covering the cast-iron-framed open bays, wall-to-wall carpet, plasterboard partitions, and a dropped ceiling to hide airconditioning ducts cut in for a cafeteria on the floor below.

That was 1981. Today, it is a considerably different story. Rogers, now 28, was determined to do something, and, as the individual responsible for overall White House space allocations, including libraries, he did. The former War Department Library was put back to proper use, this time as the White House Law Library. That task required merely a simple clean up and removal of the recent additions; this summer it is to get a full-scale repainting and cleaning of its deteriorated ironwork, which is to be bronzed and coppered to appear once again as it did originally.

This elegant space is but one of many in OEOB, a massive ark of a building that because of its French second empire style never fit in with official neoclassical architecture of Washington, and thus was threatened from the day it was completed in 1888. It was the design of architect Alfred B. Mullett and later Richard Von Ezdorf. Like the Romanesque revival Old Post Office at nearby 12th Street and Pennsylvania Avenue, OEOB was slated for demolition (as recently as 25 years ago), but again like the post office it was saved in part because it would have cost too much to destroy. Robert Sangine, who worked on a 1964 OEOB renovation study by Nicholas Satterlee & Associates for the U.S. General Services Administration, recalls hearing that the cost of demolition alone in the late 1950s would have exceeded the expense of a new building on the site.

Consider these statistics: more than 380,000 square feet of space, almost 30 percent of which is in the nearly two miles of corridors; 553 rooms, most of which have 14-foot ceilings; 1,572 windows, many of which used to be covered by awnings; 1,314 interior doors; and 4,000 bronze stairway balusters. When completed after 18 years of construction and at a cost of more than \$10 million, OEOB, with its 900 exterior columns, reportedly was the largest building in the world.

Prior to the thoughts about demolition, consideration had been given to converting its facade to the classical, Greek temple look of OEOB's neighbor on the other side of the White House, the Treasury Building, which has a similar floor plan. That idea, which surfaced more than once, was dropped because of the expense (\$3 million in 1932). By the mid-1960s, things were looking up. The Satterlee study had been completed, and GSA had cleaned the exterior, leaving OEOB shining in the sunlight. That signal, just as GSA gave with the Old Post Office a decade later, meant the old building was here to stay.

It was a welcome about-face, for, over the years, OEOB attracted a rich collection of detractors. Writer Henry Adams



White House Photograph



Above, the former State Department Library, now the general library for the White House. Right and across page, the Indian Treaty Room with its Minton tile floor and marbled walls is perhaps the most elaborate room in the building. Note view through window of Old Post Office and U.S. Capitol.

called it architect Mullett's "architectural infant asylum," while President Truman did not want it torn down in 1958 because, he said, it was "the greatest monstrosity in America." On the other hand, architectural historian Henry-Russell Hitchcock has described it as "perhaps the best extant example in America of the second empire."

The building is not only rich architecturally, but culturally as well, because of its association with noted personalities. Theodore Roosevelt, William Howard Taft, Franklin Delano Roosevelt, and Dwight D. Eisenhower did time at OEOP in years prior to their election as President. All vice presidents since Lyndon B. Johnson have had their offices there. In addition it was home to the secretary of state (until 1947), the secretary of the Navy (until 1920), and the secretary of war (until 1938). Gen. William Tecumseh Sherman worked there as did Gen. Douglas MacArthur, on two separate occasions.

The treaty permitting the United States to build the Panama Canal was signed in OEOP as was the United Nations Declaration. The Spanish-American War started and ended diplomatically there. More recently, many of the Watergate principals were housed in OEOP. If those diamond-patterned black and white marble floors could talk. . . .

In *Washington Itself*, a guidebook to the nation's capital, author E.J. Applewhite recounts a story Dean Acheson told him on being assigned to duty at OEOP in 1945. The day he arrived as undersecretary of state, the secretary, Gen. George C. Marshall, gave him the task of examining where the department ought to be housed, at the stately OEOP or the War Department's new headquarters, which was empty because of the building of the Pentagon. Marshall, Acheson recalled to Applewhite, asked his opinion and Acheson indicated he had no idea. "Well there's no hurry," Marshall said. "I'll be here until 5 o'clock so just let me have your recommendation before then." Following an afternoon's thought, Acheson suggested the department move. Marshall agreed, a step that set the stage for the Bureau of the Budget, later the Office of Management and Budget, to take over the space. And, notes author Applewhite, "Since that time the building has been closed to the public, as if budgets were more secret than diplomacy."

That is in sharp contrast to the adjoining White House, which is open to tourists. In fairness, however, it must be pointed out that the only areas open for tour are the museum-like spaces of the Presidential residence. The OEOP is considered an annex to the West Wing, the White House office area that the public





Photographs © F. Harlan Hambright



cannot visit. That unfortunate, security-related necessity of the age in which we live is too bad, because the interior of OEOB is spellbinding.

Eight curved stairways are topped with either a skylighted dome or rotunda. The treads, cantilevered from the walls, are carved granite slabs, and each is interlocked with the ones above and below. In addition to the War Department Library mentioned earlier, there are other major spaces such as the State Department Library, four stories high and ringed by balconies, the secretary of the Navy's office, now used by the vice president, and the Indian Treaty Room. That marble-walled and encaustic tile-floored space is among the building's most elaborate, and, according to records it was assuredly the most expensive.

The source of its name remains a mystery. In the room at a Jan. 30 ceremony honoring recipients of the Presidential awards for design excellence, President Reagan noted, "This being Washington, it would be no surprise that the room that witnessed the birth of the I.M.F. [International Monetary Fund], the signing of the treaties of peace with Bulgaria, Italy, and Romania—but never any Indian treaties—is known as the Indian Treaty Room."

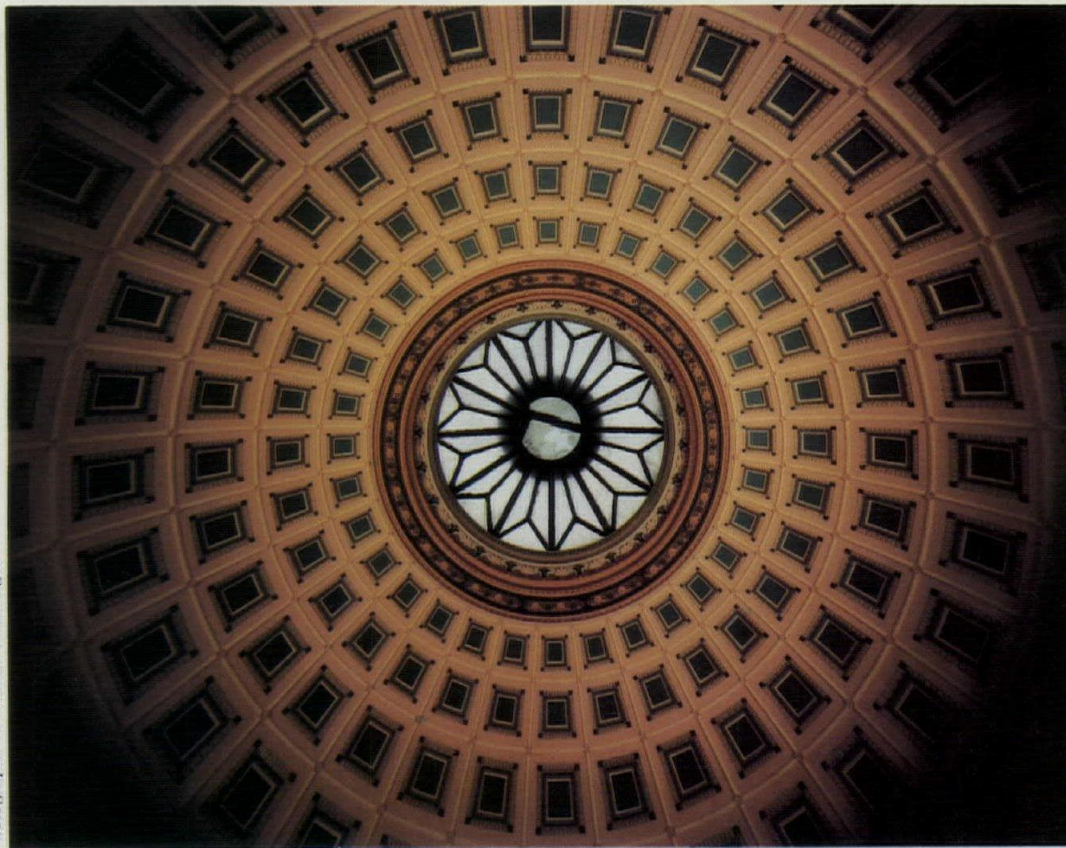
The magnificence of these rooms—an apparent case of architectural one-upsmanship among the departments of state, war, and Navy when OEOB was built—combined with the deteriorating condition of the building—not only were there leaks in the roof, but nearly 100 years of mechanical and electrical additions—demanded action. Spaghetti-like bundles of cables run along the cove moldings and are cut through transoms, airconditioning units are installed in windows, fans have been cut into mahogany door panels, transoms covered over, and closets added to replace recessed doors. The walls are festooned with all kinds of esthetically inappropriate additions—bullhorn loudspeakers, pipes, water coolers, pay telephones, and fire extinguishers. Finally, the richness of the polychrome color and the details in the cast-iron framing are blotted out in many places by layer after layer of white paint.

This lack of respect for the architectural integrity of OEOB distressed Presidential aide Rogers, who recalls he first saw the building after leaving the White House during a tour as a child. "I didn't know what it was, but it looked to me like a wedding

cake," he says. Rogers was determined to find out more about the building, which he did. "It was such an anomaly in Washington, it needed saving," he believed, and set about on a two-track approach to do just that. First, he couched the task in terms of maintenance, noting, for example, that the longer the delay, the higher the eventual cost. "We built projects into the maintenance schedule. It is not restoration," he says. Mina E. Wright, an architectural historian Rogers hired in 1983 to oversee the effort and who has become a sort of unofficial curator of OEOB, adds, "We use the word preservation very loosely."

It seems that preservation and politics do not make terrific bedfellows at the White House, but Rogers and Wright believe that if maintenance work is to be undertaken, it ought to be done right. There is no reason, they thought, not to attempt to return spaces to their original look. They are making every effort

Across page, double stairway on the building's east side is topped with a newly restored stained glass, skylit rotunda. Below, recently painted domes—bottom one has 13 colors—top stairways. Skylights are to be restored this summer.

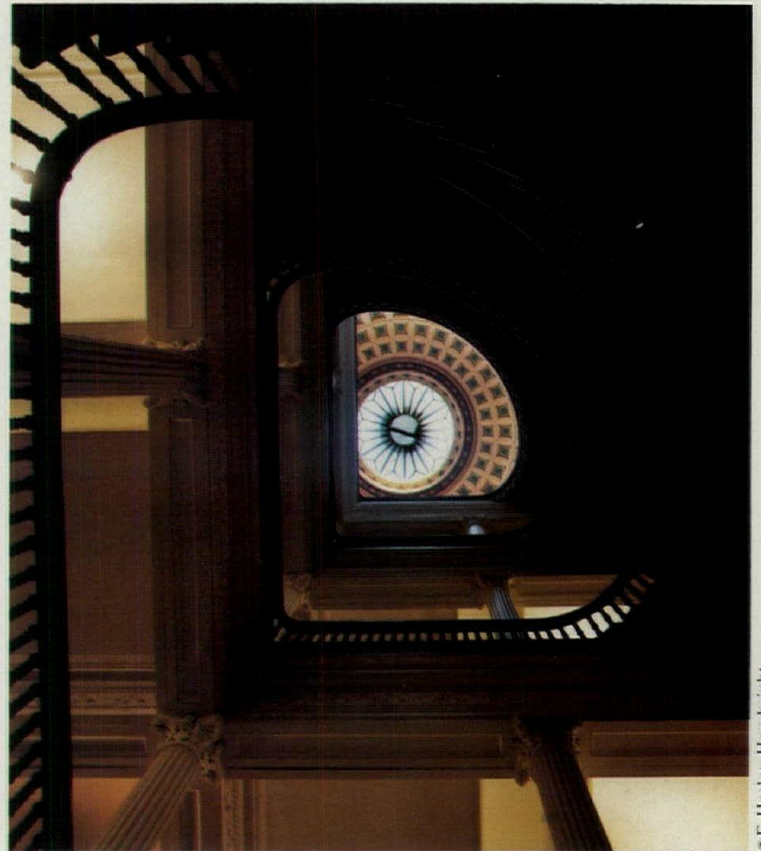


Photographs © F. Harlan Hambright

to utilize government resources, from historical photographs and plans at the Library of Congress and the National Archives to conservation specialists at the National Park Service, where paint analysis by the North Atlantic regional office confirmed the original colors. She also reports great assistance from conversations with people who have worked in the building, including the maids who cleaned it regularly. One recalled riding a bicycle with mops attached up and down the hallways to polish the floors.

To Rogers and Wright, the most exciting part of the job was seeing the gusto with which the GSA painters, so used to covering everything in government green, took to their jobs. "If you'd been painting drywall your whole life, you'd love to get up in an old dome," says Wright. Adds Rogers, "It increased the morale of workers. They could demonstrate their craft as painters and see the result of their labors." The new look, says Rogers, has also increased the morale of the staff working there, since OEOB looks less and less like a dungeon.

The other track toward saving the building leads to a full-scale renovation under a master plan that Wright notes will take 10 years to implement. The first effort in this direction—"to get the dialogue going," says Wright—was commissioning Hardy Holzman Pfeiffer Associates to take a look at the building and see "how it should be helped," in the words of Hugh Hardy, FAIA. He points out that OEOB is an extension of the White House and yet they are not related. The privately funded study, which suggested new construction of a press facility and of a staff restaurant in the two interior courtyards—an idea proposed in the Satterlee report—as well as underground parking and landscaping, was completed in August 1982. The report concluded,



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© F. Harlan Hambricht

Above, vice president's office, originally used by the secretary of the Navy, features elaborate fireplace with mirrored mantel and multi-pieced wood floor. Top right and across page, the extensive curved staircases. Granite treads are cantilevered from wall and interlocked; balusters are cast iron.

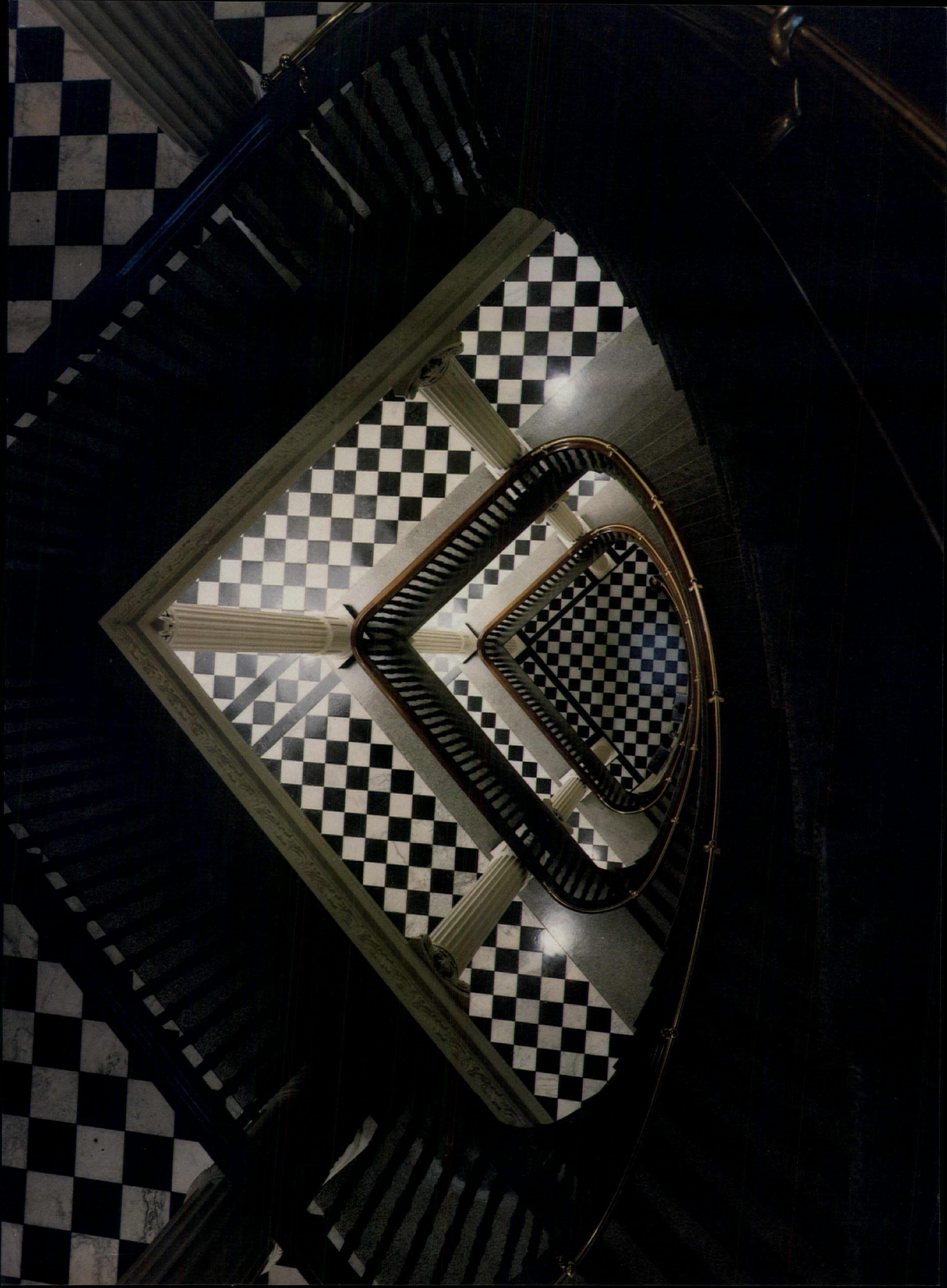
"OEOB is a great piece of architecture. This generation has the capacity to make it better." Notes Hardy of the document, "It got the government to realize it has a treasure and ought to think about that."

Since then, Lee-Thorp Engineers with the Cooper-Lecky Partnership as architectural consultants have undertaken a total evaluation of the building including analysis of the structure, roof, mechanical systems, and grounds and a study of the proposed new construction.

Wright reports that President Reagan and White House chief of staff Donald Regan are committed to a full-fledged renovation and that the President is set to sign an order establishing an official commission to oversee the work. She expects to see representatives of government, architecture, real estate development, and business named to the 10-member panel. One of the commission's first tasks will be to hire the necessary architectural, engineering, historic preservation, and landscaping consultants to develop a master plan.

In the meantime, the systematic maintenance program for special areas is to continue. At the same time, Wright says that she and others are trying to establish an OEOB Historical Association, similar to the White House Historical Association. It will publish books (the U.S. Government Printing Office has just published a monograph on OEOB called "The Old Executive Office Building: A Victorian Masterpiece") and eventually receive gifts. Architect Mullett's granddaughter and great-granddaughter have donated gold leaf—which the maintenance program cannot afford, economically or politically—to be used in work on the Indian Treaty Room set for this summer.

As for Rogers, although he left OEOB in February to become assistant secretary of the Treasury for management, he does not intend to give up his interest in the building. It is likely that he will be named to serve on the OEOB commission. And he has now set his sights on preservation of another building—his new quarters at the U.S. Treasury. That ought to keep young Rogers busy for a few years, or at least until he goes peering into another attic. □



Evaluation: Well Used 'Pathway'

Josep Lluís Sert's Harvard Undergraduate Science Center. By Bernard P. Spring, FAIA



Josep Lluís Sert's Harvard Undergraduate Science Center, completed in 1973, may well be one of the last major, unhyphenated modern buildings in America. For some years, the complex, multiuse building was the subject of a detailed case study for incoming students at Harvard's graduate school of design (where Sert was dean from 1953-1965). From it a neophyte could learn almost all the canons of modern architecture as set forth by the European founders of the *Congres Internationaux d'Architecture Moderne*.

CIAM publications consistently emphasized the primacy of urbanism and urban design over the design of individual buildings. In addition, CIAM ruled that there had to be a rigorous, intellectually sound basis for every design decision, large or small, which could also be deciphered by the public. A tall order!

In 1981, when he received the AIA gold medal, Sert said, with characteristic humility, that he did not believe that modern architecture had yet found a sufficient vocabulary; modern urban design had not found any. The Science Center is a didactic building. Sert and his office used it to teach themselves and expected it would teach architects worldwide how the needs of people can be translated to form and space. With reference to another Harvard building, Le Corbusier's Carpenter Center, Sert wrote about this university as a client: "Regardless of understanding and appreciation and in spite of criticisms and protests, Harvard had the courage that other patrons lacked."

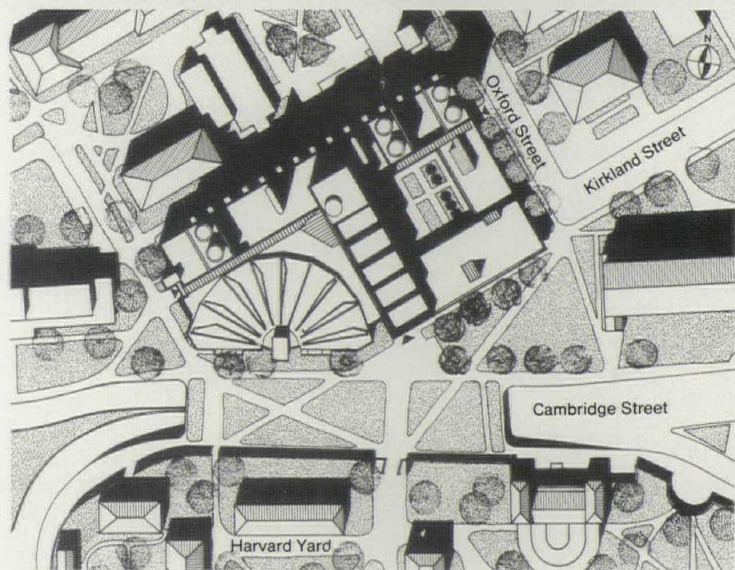
Mr. Spring is president of the Boston Architectural Center.

In the late 1960s Harvard, at considerable expense, decked over the roadway that created a treacherous pedestrian crossing between the admirable old yard and the newer, equally large areas of the campus to the north. This created a site for the Science Center at the linchpin of campus pedestrian traffic.

Rather than follow the Harvard tradition of setting buildings politely beside the pedestrian paths, Sert put this building directly astride the foot traffic. The main lobby and pedestrian ways are intended as one and the same, demonstrating Sert's concept of urbanism. The building form took its direction from what were considered the strongest pedestrian desire lines.

The pedestrian traffic that moves through the building from 9 A.M. to midnight, seven days a week, does not follow the predicted desire lines. It was expected that users and passers-through would walk to the crossing of the two major corridor "streets," turn right or left, and emerge from the ends of the laboratory slab. Instead the vast majority of those who walk through the lobby go through a mirrored door and a rear staircase exit straight ahead. Today's apparent desire lines form an "I," not a "T." What shape would the Science Center have had if this had been known from the outset?

Eight years before, Sert had tried a similar idea at Harvard's Holyoke Center, which has a covered (but open to the weather), seldom-used pedestrian way through the middle of the building mass. This path connects Harvard Yard to the dormitory area to the south. The fully enclosed Science Center lobby pathway is much more heavily used.



Left, Science Center from the west, with humped steel roof trusses over lecture halls. Above, main entrance and site plan; building is linchpin north of Harvard Yard. Right, popular greenhouse cafe.

Today the path leads not only through but to four major campus magnets within the building. One of these, the student computer center, was not anticipated in the original design. Another, the "greenhouse" cafe, would probably still be crowded if it were three times its present size. The lobby leads as well to what turned out to be, in terms of sight-lines and acoustics, the best auditoria on campus: four large lecture halls with a total capacity of 1,250. Finally, there is a popular library with 400 seats.

Sert and his client, the science faculty, were determined, in the late 1960s when the building was being designed, to make it likable, even lovable. Students at Harvard, as at other campuses at that time, were (with varying degrees of disorder) asserting their right to make more of their own choices. Student interest in the sciences was at low ebb. The hidden scenario for the architect and client was to sell science to the students passing through. A resurgence of interest in the scientific disciplines has taken place as hoped. Since it happened simultaneously at many other campuses, no one is claiming the change was created by the design of the building. However, it certainly was enabling. More likely, surging student interest in medical studies and a new, more directed core curriculum (requiring some science courses) have been primary causes for the current high level of student interest.





Left, huge Constantine Nivola plaster mural, originally installed in Olivetti's New York City showroom and now on the wall of the Science Center's west arcade. Right, from top: stairway at intersection of building's T plan; chemistry lab, supported by concrete girders penetrated by utilities; and one of four lecture halls, which together form the fanlike element in building plan below. All laboratories are located in the long, north block of the plan.

Paul Kreuger, Sert's partner in charge of the Science Center project, explains how the office wing of the building was stepped down toward the height of the older buildings on campus. The huge total volume of the lecture halls was mostly submerged below grade. This very large (290,000 gross square feet) building was carefully shaped to fit its context of smaller buildings.

Beyond the effort to integrate the building's size and scale, other opportunities for the kind of contextual design popular with architects today were neglected. For Sert's generation, the use of strong, connecting axes and the emphasis on a visually grand entry still smacked of European totalitarianism. For example, two main pathways from Harvard's old yard emerge through ornate gates on to the plaza in front of the building. There, these clear, conceptual paths die away without formal response.

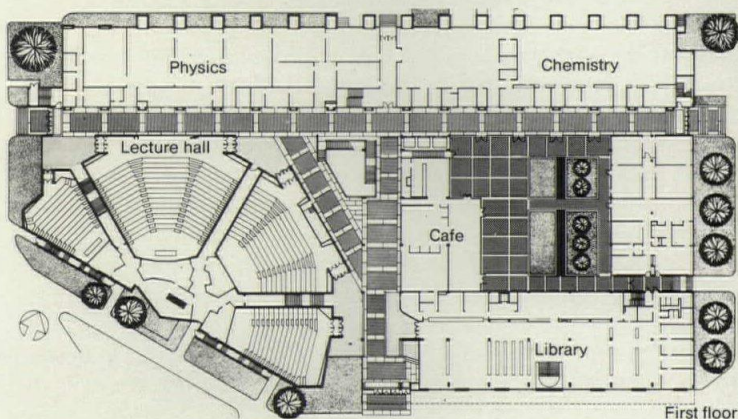
The front entry is modest, even reticent. Newcomers to the campus often found it difficult to locate the doors until an equally modest "Science Center" sign was added.

Sert's building also sits at the intersection of two extensive Cambridge street grids. How many architects today would be able to ignore this kind of major urban event? Had this design idea been current, its use could have helped shape better the awkward space at the intersection of the two major corridors of the T-shaped lobby.

Students and faculty appear to have been brought to accept and admire the interior space of the lobby. Not only do they pass through in great numbers but linger to talk and snack. Opinion about the exterior is mixed. Time has not softened the discomfort some people sense when they confront a building with an outside finish of raw concrete. The color and texture of the Science Center are a long way from the mellowed exteriors of the beloved older brick or stone buildings on campus.

It is clear that an enormous amount of imagination and design skill went into the lively articulation of the form and color elements of the facades. Variety and richness are all there created by metaphors of the program and the technology. Each articulated element (e.g. sunshades, structural bays, color-coded walls) signifying the branch of science being taught is backed by some aspect of the program or the latest available technology. A relentless visual logic lies behind every detail of the building envelope. The ability to create lively but completely rational surfaces inside the building and out is among Sert's great achievements as a designer. Lay people interviewed in the plaza did not "read" the formal and functional messages of the facades. All liked the building better on the inside.

Technology also played a major role in the genesis of this design. There were many unanticipated changes 12 years later. The laboratory wing at the back of the site is built with precast



First floor



Allen Freeman



Allen Freeman



Allen Freeman

Left, the central, multilevel pedestrian intersection of the Science Center; right, east end of the laboratory block from an office in the south wing. The university's central chilled water plant is located under this enclosed courtyard.



concrete girders spanning the entire 50-foot depth of the lab and preparation spaces and a 10-foot cantilever supporting the single-loaded outside corridors. These girders are opened up with a trusslike pattern to allow free passage of utilities. The flexibility provided has not been used to any great extent. Most of the changes made have had to do more with computer cables than with ducts or pipes. A cable tray (which looks like an add-on) below the intended utility spaces runs down each corridor just above the doorways. It was, however, a part of the original design. Faculty members insisted on a place where they could themselves install and alter computer connections without calling in the building trades, as would be required for work within the flexible utility space up in the trusses. The student and faculty users of the Science Center 12 years after completion have found the initial program and building basically sound. They enjoy working there.

The system of laboratory workbenches was studied with much care to provide for a large degree of flexibility. During the programming phase the science faculty was projecting a new, more independent and varied range of lab experiments of students' own choice. This still could happen in the future, but for now more traditional laboratory teaching is used. This has yet to put more than minor demands on the available flexibility.

Another place where program and technology seemed to want to mesh was in the design of the huge (6x8-foot), hollow vertical shafts ranged along the seldom seen north facade. These are designed to resist the horizontal shear forces placed on the stick-built precast members. They are also able to carry vertically more ducts, pipes, and wires than the building will ever need. All of the fifth and sixth floors of the laboratory wing are given over to mechanical equipment. Even with this unused (for how long only time will tell) flexibility the cost was below that of a conventional laboratory. It was only \$52 square foot, almost 30 percent below then-prevailing laboratory building costs.

There is more. In addition to providing undergraduate science activities, the building also contains the university's central chilled water plant. Airconditioning demand for the entire campus was estimated (before the onset of the energy crisis) at 20,000 tons of cooling capacity. When the university brought this figure to Sert's office, along with a request to include a 58,000-square-foot chilled water plant and three huge cooling tower enclosures (40x60 feet each in plan) within the building envelope, he was pleased. He felt the addition of all this mechanical equipment could lead to a better design for the roofline. But by the time the space was ready, Harvard was acting on an energy conserving program that reduced the chilled water demand to only 6,000 tons. Two of the three looming rooftop cooling-tower enclosures are now, and probably will always be, empty.

Another consequence of the energy program is that the closely spaced fluorescent lamps in the lobby ceiling are turned off except when the floor is being washed. This makes what was supposed to be an inviting space somewhat gloomy.

The building, in all, clearly demonstrates that Sert was a pragmatist as well as a dreamer. Major elements in the design were derived from popular, well-tried forms of technology (parking lot girders were used for the 50-foot-span laboratories) and marketing (the ground floor lobby looks and works like a shopping mall).

I expect that Sert's design vocabulary will be revived in newer forms a generation hence by architects who are not yet in high school. □



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Courtesy of AIA Archives/copy work, John Tennant

1985 Resource Directory

The following pages present a sampling of services, publications, and audiovisual resources covering a variety of architectural and related subjects. AIA materials are available through the departments listed, Institute headquarters, 1735 New York Ave. N.W., Washington, D.C. 20006. Contacts for resources from allied organizations are noted individually. The illustrations for this directory are from the archives of AIA and from publications of the AIA Foundation's Octagon House. LYNN NESMITH

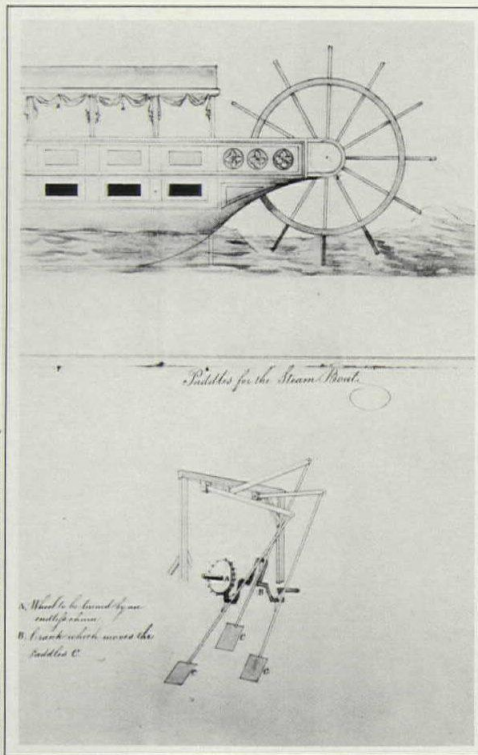
Outreach

The Forum for Architecture is the Institute's new public membership program for nonarchitects interested in learning more about the design process and the benefits of good architecture. Gift memberships are available for clients, prospective clients, family, and friends of AIA members. Benefits include a subscription to ARCHITECTURE QUARTERLY; the *Forum*, a newsletter published four times a year; members-only guided tours of the Octagon; and discounts on books and gift items available through the AIA bookstore in Washington, D.C. One-year memberships are available for \$35.

The AIA Foundation, the Institute's nonprofit affiliate, conducts applied research on architectural issues, sponsors exhibitions and educational programs, maintains a prints and drawings collection, and operates the historic Octagon House. Posters and catalogs from exhibitions mounted at the Octagon are available at various prices. These include "William Thornton: A Renaissance Man in the Federal City," "The Travel Sketches of Louis I. Kahn," and "The Japanese Prints of Frank Lloyd Wright," in addition to the current exhibit, "Honor and Intimacy: Drawings by AIA Gold Medalists, 1907-1983" (see March, page 58).

The fifth edition of "Architectural Exhibitions," a 48-page booklet compiled by the Foundation, contains a listing of 37 sources for architectural exhibition materials and is intended as a reference tool

Left, 30x40-inch watercolor by Edward J. Neville Stent, 1869, recognizing subscribers to the New York Chapter/AIA library fund. Above, William Thornton's drawing for steamboat paddles. Thornton, architect of the Octagon House, was an inventor as well. Right, Paul Pelz's 1886 design for the Grant Memorial Bridge that was never built, from the cover of the *Bridges and the City of Washington*.



Courtesy of New York Historical Society

for AIA components, schools, galleries, museums, and others seeking architectural exhibit materials. Sixty-eight exhibits are described, their sizes given in running feet, their numbers of panels and pieces, security requirements, fees and sources. It is available through the Octagon for \$2.

The environmental education department of the Institute has developed a comprehensive education program, "Learning by Design," to encourage educators to place more emphasis on architecture and the role of the architect in making a quality environment. The program consists of four integrated components of educational products and services about architecture and the built environment for students from kindergarten through college. They are:

- Information resources. Central to this component is *The Sourcebook*, a notebook-style catalog of environmental and education teaching resources that provides a comprehensive and convenient system for all levels of learning.

- Action programs, for developing and disseminating activities for use by teachers and architects in the classroom. The unit poster "Architecture: A Design for Life" features a photograph by Skip Brown of contrasting facade details of Minoru Yamasaki's World Trade Center and a lower Manhattan skyscraper by Cass Gilbert. The reverse side of the poster has a long narrative highlighting the value of architecture and explaining three design projects for students.

- Workshops program. Conceived as a partnership between school representatives and architects, the program explores ways to make the built environment accessible to teachers through local workshops held around the country.

- Regional coordinator network. State, local, and regional chapters exchange information about successful educational programs.

Public Affairs

The public relations department has developed "The AIA Brochure" to explain the Institute's role, history, and activities to the general public. It focuses on how AIA's education and practice programs, media and public outreach, and public policy initiatives encourage its goal of a quality built environment.

A reprint of the *Harvard Business Review* article "Architecture at Work," written by John A. Seiler, is also available through the public relations department. A practicing architect and member of the faculty of the Harvard graduate school of design, Seiler uses case stud-



Courtesy of U.S. Commission of Fine Arts



ies to describe the connection between corporate architecture and corporate strategy and includes a chart outlining what management should consider when contemplating a new building.

"Saving Energy by Design," a 72-slide presentation with script, shows how a building's design can save energy and energy costs with examples from a range of climates, building types, and energy saving methods. "Adaptive Use," a 79-slide show with script, illustrates how renovation can restore life to old buildings and their communities. Both of these recent slide presentations are geared for client groups, civic organizations, and the general public, and can be adapted to highlight examples of local work. Each is sold for \$20.

The findings of an AIA study comparing the qualifications- and price-based architect and engineer selection process of the Maryland state government and

Above, "The Lady with the Greyhounds," a 1920 study for a Harper's Bazaar cover from the Octagon's 1980 exhibition, "That Red Head Gal: Fashions and Designs of Gordon Conway 1916-36." The 48-page catalog contains color reproductions of theatrical costumes, fashion designs, and advertisements as well as magazine covers. The accompanying text by the exhibition's guest curator David Schaff provides background information about Conway's life and work.

the qualifications-based Florida state government process is available at no charge from the government affairs department. The study found the Maryland system "significantly more time consuming and expensive than the Florida system."

Florida is one of a number of states that has passed legislation modeled on the qualifications-based approach to procuring design services, a system used by

the federal government under the Brooks Act. Enacted in 1972, the Brooks Act requires that the most qualified architect or engineer be selected for a project subject to negotiation of a fair and reasonable compensation. In contrast, Maryland enacted a law in 1974 that requires that both price and professional qualifications be considered in the selection process.

According to the AIA study, total costs of the architect and engineer portion of Maryland's capital construction process averages 13 percent of estimated construction costs; in Florida the architect and engineer portion averages 6.8 percent. Although architect and engineer fees are lower in Maryland than in Florida, "the added costs of the Maryland process far outweigh the savings in A/E fees," the study concludes.

The Maryland system requires a larger administrative staff and budget for preparing detailed programs on which architects and engineers can base price proposals. The Maryland selection process also takes considerably longer to complete than Florida's. The Maryland Department of General Services completes the A/E portion of the capital construction process, from the point that funds are approved to the beginning of the actual construction cycle, in 31 months. The same steps are completed in 22 months by the Florida Department of General Services and in 20 months by the State University System of Florida.

Although the Maryland system requires the consideration of both price and technical competence when awarding contracts, the study found that price is becoming the dominant factor. Of the last 40 projects awarded by the Maryland state government before June 1983, 83 percent went to the firms with the lowest price proposals. The study was based on data collected in the two states from 1975 through 1983.

Preservation

"Where to Look: A Guide to Preservation Information," compiled by the Advisory Council on Historic Preservation, is a categorized listing with a brief description of available material in preservation and related fields. Sections of the illustrated booklet cover legislation preservation; adaptive use; tax and other economic incentives; technical handbooks on rehabilitation; and education. The 88-page guide (#052-003-00879-3) is available for \$5.50 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Also developed by the advisory council is a 12-minute audiovisual presentation, "Preservation and Energy Conservation," based on a technical study on assessing the methods and examples of

energy conservation benefits of historic preservation. The slide package presents the methods for determining the total energy cost of any existing building with three models of varying complexity. It is available for sale (\$95) or loan (\$20) from the audiovisual program, Conservation Information, Smithsonian Institution, 2235 Arts and Industries Building, Washington, D.C. 20560.

Urban Design

The Regional/Urban Design Assistance Team (R/UDAT) program is intended to help communities solve urban design and planning problems through intensive four-day workshops and subsequent visits by teams of architects and related professionals. Since the first R/UDAT in 1967, 85 cities have participated in the program. A handbook describing the process is available to local community groups and AIA components. R/UDAT reports from recent workshops are also available from the design department of AIA.

The National Main Street Center has published *Main Street: Open for Business*, a 112-page softbound book, lavishly illustrated with black and white and color photographs. It describes six state programs in detail, highlighting the major achievements of each community and showing the ways different states and towns adapted the center's four-point approach for revitalizing downtowns. Twelve case studies provide a step-by-step look at the way communities implemented the Main Street approach, and detailed charts document the number of rehabilitation projects, business starts, and money reinvested in each downtown over a three-year period. It is available for \$10 from the National Trust for Historic Preservation's Main Street Center, 1785 Massachusetts Ave. N.W., Washington, D.C. 20036.

The Project for Public Spaces has written a new guide, *Managing Downtown Public Spaces*, to help city governments and downtown businesses make urban public spaces safe, attractive, and lively. The 62-page book is based on a nationwide survey of organizations that manage downtown areas and includes case studies of successful management programs in Denver and Hartford, Conn. The guide also describes ways to supplement city services so downtowns are safer, cleaner, and more accessible; to create a downtown marketplace atmosphere so retail activity is improved; and to make changes to the design of public spaces so that they are more inviting. Each chapter concludes with a series of questions to help readers analyze the problems and potentials of their own downtown. The handbook is available for \$18.95 from the



Two photographs by Charles Darling, submitted but not used, for the article "Old New England Frescoes" by Edward B. Allen that appeared in the December 1927 Journal of the American Institute of Architects.

American Planning Association, 1313 E. 60th St., Chicago, Ill. 60637.

Also dealing with improving public spaces is the Partners for Livable Places' *Insights/On Sites: Perspectives on Art in Public Places*, edited by Stacy P. Harris. Essays by Cesar Pelli, FAIA, Richard Andrews, Mary Miss, Kathy Halbreich, and Anita Contini describe collaborative efforts between arts and communities for public art and provide various approaches to design and site integration. The 80-page paperback book with color illustrations and a bibliography is available for \$12.50 from Publishing Center for Cultural Resources, 625 Broadway, New York, N.Y. 10012.

Courtesy of AIA Archives/copy work, John Tennant

Courtesy of AIA Archives/copy work, John Tennant

Professional Development

The "Professional Development Resource Catalog" from the membership services department lists AIA-approved national workshops, energy in architecture programs, correspondence courses, audiocassette programs, intern-architect development programs, and supplementary education guides.

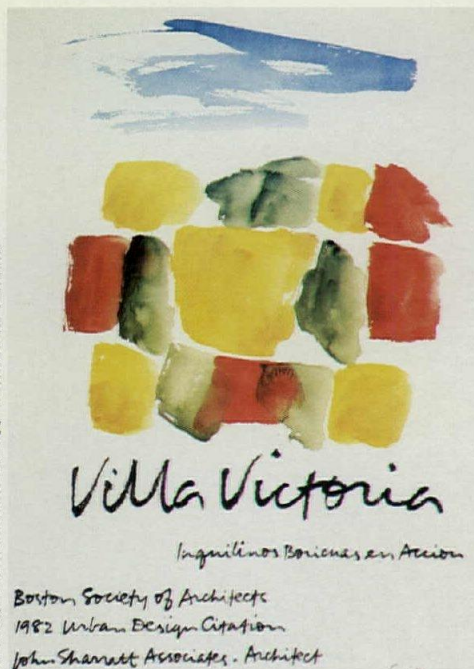
The professional development hands-on workshops, limited to a small number of participants, are developed and implemented by outside consultants in association with AIA. "Negotiating Better Compensation" is a one-day, "learn by doing" workshop, designed to give participants the skill and ease to negotiate better fees while strengthening client relationships. Given over a three-day period, a series of six four-hour experimental workshops for small groups, "Marketing Your Architectural Services," is designed to provide professionals with the skills and personal confidence to direct a firm's marketing and management.

Guidelines and counseling material on the intern-architect development program were developed by the National Council of Architectural Registration Boards and the Institute's membership services department. A counseling network was developed to help provide information packages to local professional advisers who will be in direct contact with intern-architects. The IDP training syllabus is comprised of 14 training areas in which all intern-architects are expected to gain exposure during their internship. The syllabus also identifies several special areas of professional practice that relate to the individual interests of the participants. Information is also available that focuses on board career options, immediate job opportunities, economic outlook, the future of the profession, and AIA program and activities. Free descriptive brochures are available through the education division.

Housing

The major changes experienced by the rental housing industry since the boom days of the early '70s are described in the Urban Land Institute's *Rental Housing* by W. Paul O'Mara and Cecil E. Sears. The effects of demographic shifts, changes in tax laws, the emergence of the condominium market, and two national recessions are detailed. This 176-page book with several case studies is a perspective on the nature of the rental market and the changing demands for rental housing. It is available for \$36 from the ULI, 1090 Vermont Ave. N.W., Washington, D.C. 20005.

Also available from the ULI is *Affordable Housing: Twenty Examples from the*



Courtesy of AIA Archives/copy work, John Tennant

Above, Boston Society of Architects/AIA produced this colorful poster by Corita for a 1982 urban design citation. Right, photograph by Herbert E. Striner of the Central tower of the Washington Cathedral from a 1980 Octagon exhibition.

Private Sector, by Douglas R. Porter and Susan Cole. Case studies document how homebuilders are down-sizing houses, experimenting with new building forms, and segmenting markets. The 106-page book, costing \$20, includes tables that illustrate specific demographic and housing trends as well as the financial aspects of affordable housing.

"In 10,000 B.C. It Was Easy to Find a Home," a brochure available free from the Institute's public relations department, describes the long-term benefits of quality design in purchasing a home. Produced in association with the National Association of Homebuilders, the pamphlet's cartoons and lighthearted text highlight how design influences craftsmanship, cost and energy efficiency, livability, resale value, security, and a sense of community.

Design strategies to reduce flood damage to residential buildings and floodplain management techniques and regulations are described in *Elevated Residential Structures*. Prepared by the AIA Foundation's research division and published by the Federal Emergency Management Agency, the manual addresses specific design issues confronted in elevated construction. This revised edition of a 1976 publication reflects changes in government programs and regulations, improvements in construction materials and practice, and increases in construction costs. The 137-page technical report includes several case studies, a glossary, and bibliography. It is available free of charge from FEMA (#15), P.O. Box 8181, Washington, D.C. 20024.

Miscellaneous

The AIA library provides reference materials on architectural subjects and loans a maximum of six books for a two-week period to members by mail, telephone, or in person. Subject bibliographies of books and periodical articles are available from the library free of charge, and on-line bibliographic searches are performed on request on a cost plus basis. The library staff also prepares a quarterly listing of recent accessions.

Films, slide shows, and videotapes on architecture and planning are available for loan or rent. Subject lists of films available through other distributors are prepared on request. Members may also borrow from the slide collection that contains over 16,000 images, predominantly of contemporary American architecture, and includes documentation of most of the AIA honor award winners. No listing of the collection is available, but the librarian will select slides of individual buildings, by architect or firm, or specific building types.

"Proceedings of the Conference Toward Standards for Architectural Archives" is available for \$6.50 from the Foundation. The two-day conference, sponsored by the Foundation and funded by a grant from the National Endowment for Humanities, addressed conservation and storage of architectural records and illustrations, arrangement of collections, descriptions of university and historical society's archives, and development of standards.

ProFile: Official Directory of the American Institute of Architects, lists more than 10,000 architectural and A/E firms in this country. Data for each firm include the address, telephone number, location of all offices within the firm, organization of the firm, year office was established, name of parent organization, principals, geographical distribution of work, and projects that have won national, state, regional, or chapter honor awards.

The directory is organized by cities within states; an index to firms by name references them the main text. Another index lists principals, with references to their firms. It also contains a listing of the entire membership, fellows, and associate members of AIA, in addition to listings of the board of directors, state and local components, and allied organizations.

Profile is published by Archimedia, Inc., of Philadelphia and is available for \$85 to AIA members or \$95 to nonmembers from the publications fulfillment department. Editor of the 1985 edition was Henry W. Schirmer, FAIA.

For a more in-depth listing of Institute resources and publications, contact the component affairs department for the "1985 AIA Member Resource Catalog" and the publication sales department for the latest AIA Press Bookstore Catalog. □



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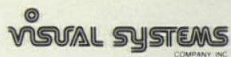
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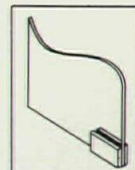
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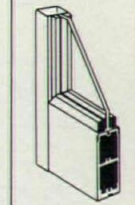


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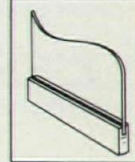
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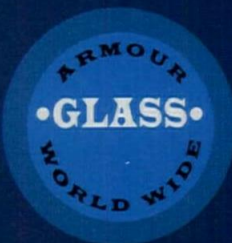
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A Psychologist Reflects on The Social Design Movement

Social Design: Creating Buildings With People in Mind. Robert Sommer. (Prentice-Hall, \$7.95.)

The decade of the 1960s in the U.S. produced various social and political movements including those for human rights, civil rights, consumer advocacy, and environmental activism. In the search for "relevancy," the design professions sought to change their attitudes from those of esthetic and technical preoccupations to concern for the occupants of buildings and cities. They embraced the social sciences of psychology and sociology for their newly discovered insights regarding the influences of the physical environment on human behavior. They tried to find ways of getting these occupants to participate in programming, planning, and design.

Psychologist Robert Sommer has been one of the most influential proponents of this design movement through his provocative and informative books: *Personal Space* (1969), *Design Awareness* (1972), *Tight Spaces* (1974). This book, his most recent, adds to this series in terms of supporting this design direction and evaluating its influence over the last two decades.

"Social design" is an apt term for a design movement that has been overloaded with terminology (behavioral approach, participatory design, user needs, environmental awareness, etc.). If this book serves no purpose other than to offer a cogent definition and name to this movement, it will have fulfilled an important role. Social design is distinguished from traditional design by its commitment to the occupants. It seeks to gather systematic input from those occupants in the form of user needs analysis for new environments. It also utilizes user feedback in the form of postoccupancy evaluations to learn about man-environment interaction. In Sommer's words, "Social design is working with people rather than for them."

A goal of this book is to renew interest in the social design approach at a time when other design issues seem to be more important. This is accomplished through

pointing out the areas of mutual concern between behavioral scientists and designers, the demonstrated value of a user needs analysis, how behavioral consultants can aid designers, how participatory design can be effectuated, and the validity of postoccupancy evaluations. Throughout the book, Sommer uses examples from his own extensive experiences and that of his colleagues. Interest in this design movement will certainly not be renewed by this book alone, although Sommer has done his part well.

Sommer is both sincere and positive in his assessment of the impact of social design upon the design professions over the last two decades. Whereas the consumer movement adopted a political approach, social design remained largely apolitical, concentrating on its influence through education and research. Since this is distinctly a long-term approach, its eventual effect is difficult to judge. Sommer, however, does judge the impact as positive in terms of increased awareness of user needs, although developments in methods and incentives (which largely have been moral imperatives) have not been very successful. In terms of objective accomplishments, more than 60 English-speaking universities now offer some form of graduate training in social design. There are textbooks and readers, two professional organizations, and countless courses on the subject in architecture and planning curricula. As an academic field, social design seems to be firmly established.

Sommer's new book provides interesting and provocative reading. His case studies could be more germane, and the book could use graphics to appeal to the visually oriented designer audience. His ability to draw associations between other cultural phenomena (community art, tomato design) is indeed intriguing.

The lasting impact of social design upon the professions of architecture and planning is not clearly discerned. The influence on planning is more direct, particularly in the form of participatory processes. In architecture, however, energy conservation, historic preservation, and stylistic

trends such as classicism and historicism have caused social design in many cases to become a lower priority. (Interestingly, each of these movements has its own user overtones.) Certainly there have been some prominent success stories, and certain practitioners currently use these processes. The influences of social design are widespread, but rarely deep. Sommer writes, "Architecture is back to form and the behavioral sciences are back to theory and research, but fortunately the fields are not where they were before."

MICHAEL J. BEDNAR, AIA

Mr. Bednar is an associate professor of architecture at the University of Virginia.

Energy Economics and Building Design. William T. Meyer. (McGraw-Hill, \$39.)

Within the waves of information development, some of the best packages emerge at the wrong side of the cycle—perhaps because they benefit so strongly from the acceleration of the cycle. Within the cycle of energy consciousness of the last decade, this book is one of the most useful to emerge. Its nonseductive title is a precise definition of content, although architect William T. Meyer is indeed driven by the architectural opportunities of his economic crafts.

The lean and crisp appearance of the book's pages and the bare style of its communication bespeak the elegance of an economic discipline. The tailored words, the handsome drawings, and the careful phrasing illustrate how the economic driving force of commercial architecture results in a frame of reference with a certain fastidious esthetic. It is the esthetic of the long distance runner. Thus, the author provides both the ammunition of fiscal accountability and the opportunity for design alternatives that can result in a synthesis that is doubly rich.

Meyer is a New York City architect with a practice of commercial and residential projects on both coasts as well as professorial responsibilities at Columbia and Pratt. His previous experiences as a vice president of the Ehrenkrantz Group add to his credibility in dealing with real life design issues at many architectural scales. Thus, based on the jungle law of the building marketplace, he presents a practical text for conscientious architects. It is also an academic guide to the best of current practice in developing com-

continued on page 104

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mercially viable properties. Whether driven by the legal mandates of building codes or respect for future fuel costs, Meyer provides the design tools to bound energy parameters and to direct better informed creativity.

This is not a research document, nor a treatise on abstract theory, but applications for architects. The literature on building economics for nonarchitects is substantial and stupefying. It is a subject dear to the hearts of big business accountants and corporate fiscal managers. But their needs and uses are especially alien to the creative architectural process; certainly their language of absolute numerical determinism is foreign to the qualitative concerns of designers. In architectural design there are no right and wrong decisions, only better or worse ones.

Most useful are the fully worked out numerical examples. The simpler processes of both first cost and life cycle cost are thoroughly covered for both commercial and residential projects. Various cost and benefit analyses and accounting strategies allow designers to pick their weapons. Both thermal and luminous issues

are addressed. Since lighting often has the greatest potential for operational and thus lifetime savings, its inclusion is typically welcome.

Meyer deals primarily with big buildings and focuses on the post-Arab oil embargo parameters that have redirected good business sensitivities. His sparse treatment of historical architecture is understandably thin—the buildings were designed and built in times of completely different expectations of both environmental conditions and economic responsibility. Current practice and an increasingly tough future present new rules in terms of revenue and resource management for both public and private properties.

Although the book concerns a labyrinthian subject, it presents simple and crisp tools that expose the alternative economic routes and their design implications. Here is a state-of-the-art process of economic analyses written by an architect for architects. **JEFFREY COOK, AIA**

Author and critic Jeffrey Cook is a professor in the college of architecture and environmental design, Arizona State University.

The Almighty Wall: The Architecture of Henry Vaughan. William Morgan. (Architectural History Foundation and MIT Press, \$30.) **On the Edge of the World: Four Architects in San Francisco at the Turn of the Century.** Richard Longstreth. (Architectural History Foundation and MIT Press, \$40.)

Of the five architects treated in the two books under review, four—Henry Vaughan, Ernest Coxhead, Willis Polk, and A.C. Schweinfurth—are largely unknown, certainly not common drafting or lecture room names in the community of architects. The fifth architect, Bernard Maybeck, enjoys a somewhat more national reputation and was an AIA gold medalist in 1951. These five are part of the turn-of-the-century feisty and frothy willingness to adopt and adapt practically any style, image, or idea in an attempt to create an American architectural culture. As the curtain parts increasingly on our own age, and eclecticism and revivalism are again proper subjects not just for scholarly investigation but also as a growing concern for contemporary practice, the work and lives of architects such as these five will become more relevant. They illustrate fully the problems of style: What should be its sources and what does it mean? How should past styles be handled—as accurate copies, or exaggerated, or rejected? Examples of almost every possible approach and success, as well as failure, are evident in both books.

Henry Vaughan (1845-1917), who is treated in William Morgan's book *The Almighty Wall*, is the most difficult to get close to; his work has a dry, almost pedantic air, and, as an individual, he has none of the Bohemian charm that characterizes the San Francisco contingent of the other book. He is probably best known as the designer of a large number of high Episcopal churches and chapels on the East Coast, primarily in New England, in the period 1880 to 1910. He provided the original plans for the Episcopalian National Cathedral in Washington, D.C., although he died shortly thereafter and only portions of his scheme are observable in the building now nearing completion.

Vaughan came to Boston in 1881 as a representative of the leading English church architect George Frederick Bodley and wound up staying and becoming the founder of the so-called Boston Gothicist movement of the late 19th and early 20th centuries, of which Ralph Adams Cram is the best known member. Cram always acknowledged Vaughan's role and, indeed, Vaughan set the pattern for much of American ecclesiastical architecture from the 1890s up to the 1930s—those well appointed, finely crafted churches based on English models that literally cover the U.S. Vaughan did other work, including pre-

continued on page 106

The Changing Metropolis: Earliest Photographs of London, 1839-1879. Gavin Stamp. (Viking, \$25.) It was in 1839, the date of the first photograph in this compilation of 211 photographs of London, that Daguerre's new process gave the world its first practical form of photography. London, as the first photographs in the book reveal, was as the Georgians had left it. But by 1879, the date of the last photograph, many changes, not necessarily for the better, had occurred. By then, says the compiler, a "rampant eclecticism" had destroyed the classical tradition that once gave the city its order. The book's photographs hauntingly show a city in transition. The 1856 photograph (below) of the Architectural Museum, created in 1852, has a view of the Thames in the background a decade before the erection of the Victoria Embankment. The museum's collection of casts and architectural fragments were eventually absorbed into the South Kensington Museum. The old warehouse, says Gavin, was typical of wharves that once lined both banks of the Thames.



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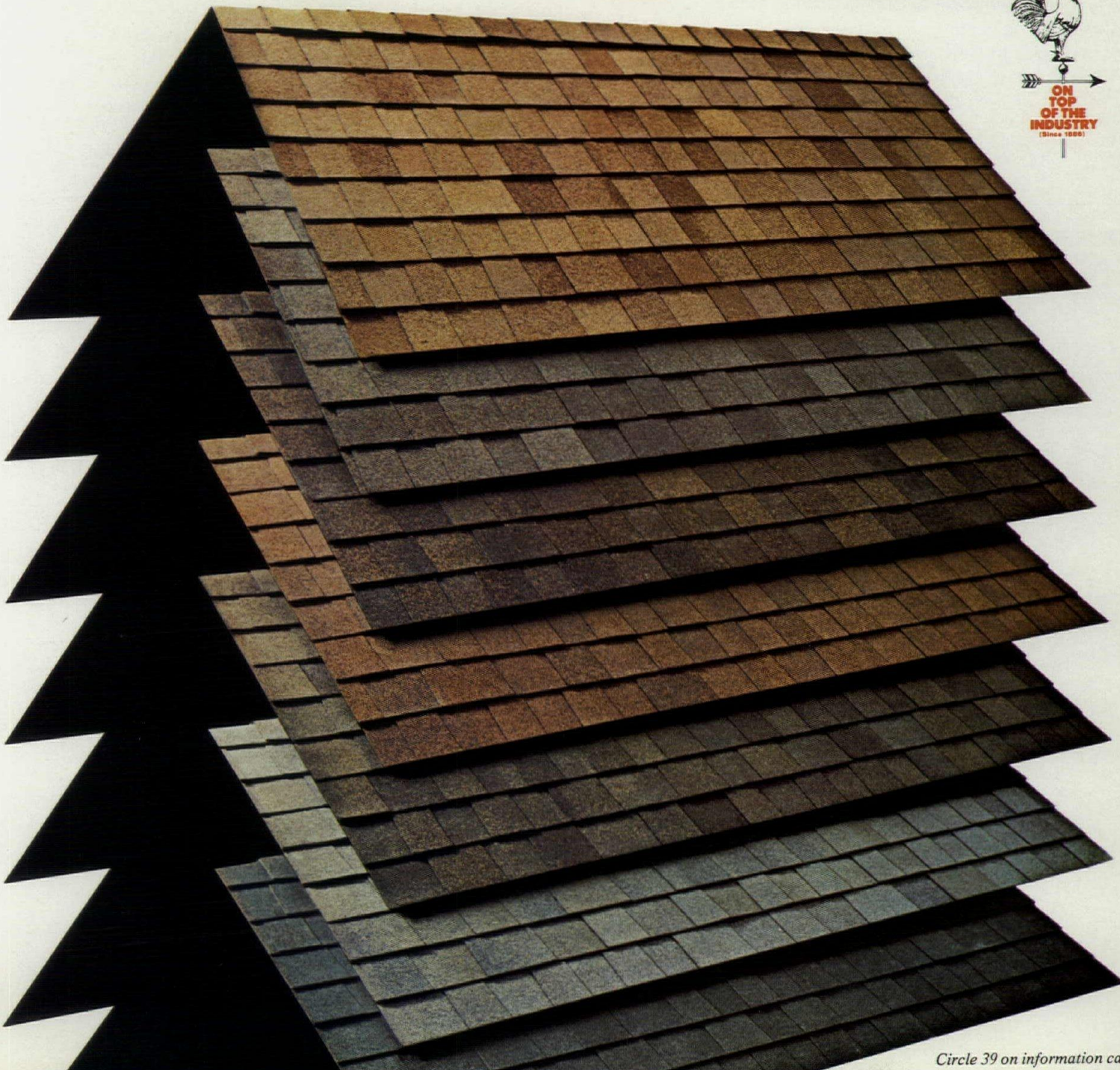
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Books from page 104

paratory schools, college buildings, and houses in a variety of styles, such as American colonial. A scholarly approach appears to have been Vaughan's dominant concern, and Morgan tends to emphasize this at the expense of Vaughan's momentary—at least from the book's evidence—flings at originality. But nobody can ever be a complete revivalist, and Vaughan's work along with others needs to be studied in more detail to see its true originality and development beyond its sources.

Certainly, Morgan faced a difficult problem with Vaughan since there are scarcely any remaining papers, not even a job list, and Vaughan wrote nearly nothing about his work. Morgan has created a career, doing so by a series of chapters devoted to different commissions. The treatment is almost strictly architectural and descriptive, lacking the context in which the buildings were created.

Out West, the locale of Richard Longstreth's book *On the Edge of the World*, the cultural context was important—as he makes clear—in determining what the four San Francisco architects created and how their work was perceived. A definite air of Western regionalism and of separation from the East is felt, but conversely there is the conflicting claim of wanting to

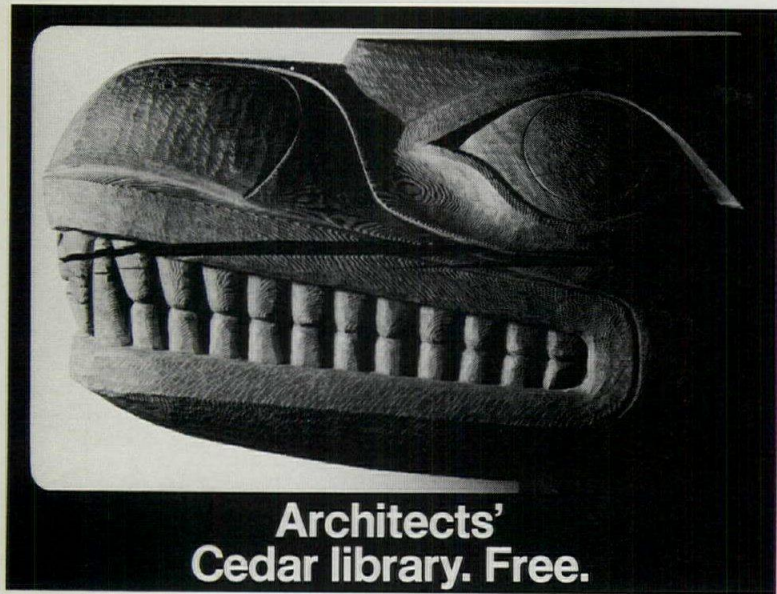
belong. Between these two poles, an architecture came into being. The book treats the work of four architects: Ernest Coxhead (1863-1933), Willis Polk (1867-1924), A.C. Schweinfurth (1864-1900), and Bernard Maybeck (1862-1957), who worked around the turn of the century in the Bay Area, sometimes in concert, sometimes apart.

With the exception of Schweinfurth, this is only a partial glimpse of the architects' careers since all, and especially Polk and Maybeck, continued beyond the time limit of the book to work; and some of Maybeck's most important work lies in the future—the First Church of Christ Scientist, Berkeley, 1910, and the Palace of Fine Arts at the Panama-Pacific International Exhibition, San Francisco, 1915. Instead of a full career treatment, Longstreth has chosen to concentrate upon the establishment of a unique Bay Area idiom, one that accepted a variety of styles and appearances. This architecture best known as the small shingled cottages, with high peaked roofs and eccentric plans, found other expressions as well. Some of the architecture could be as prim and scholarly as anything of the East Coast, though generally the architects attempted to take history and create a unique image: an overmantel of a gigantic pediment

squashed between the fireplace and ceiling, or a vast, strung-out, pueblo-Hispanic hacienda, or a simple—rustic—church with rough-hewn timber work.

Longstreth's book is a challenging recovery of a group of generally obscure—frequently destroyed—buildings. The one major problem I have is his attempt to create a movement labeled "academic eclecticism" that encompasses not only the San Francisco designers but almost everyone else practicing in the U.S. With academic eclecticism, he includes the Beaux-Arts classicists, the medieval revivalists, regionalists, arts and crafts, and practically every type of design, from large formal civic complexes to commercial highrises and small irregular resort houses. The concept of such a movement is far too inclusive and fails to recognize the fundamental differences of design approach, intentions, and image among many architects. Architects consciously designed in different manners depending upon the situation, the client, the location—and also changed throughout their careers. This reservation aside, Longstreth's book is excellent. RICHARD GUY WILSON

A professor, author, and critic, Dr. Wilson teaches architectural history at the University of Virginia.



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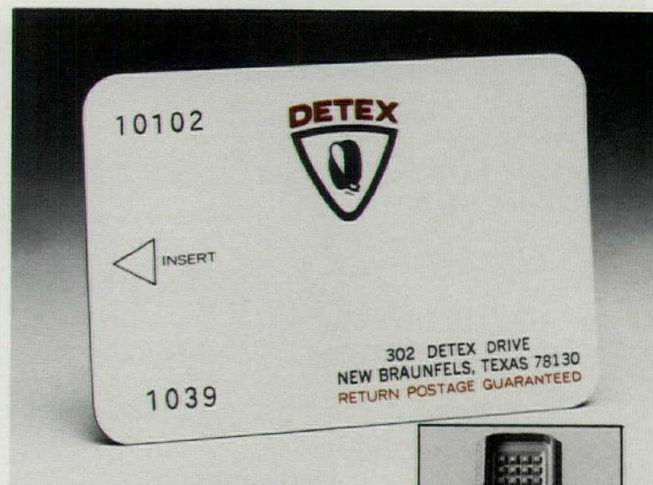
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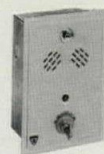
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BRIEFS

Georgia Tech Student Prizes.

Ann Schoelles of Atlanta has won a \$6,000 travel fellowship at the Georgia Institute of Technology college of architecture for her pyramidal design for a chapel. She also won a bronze sculpture designed by Arnaldo Pomodoro. Second prize of \$1,000 was awarded to Jane Seville, also of Atlanta, for her design of a bridge in Venice. The competition, open to last-year students in Tech's graduate professional program in architecture, is sponsored by Southern GF Co.

Entries Sought for Shingle Awards.

The Red Cedar Shingle & Handsplit Shake Bureau in association with AIA has set June 7 as the deadline for application requests and July 12 as the deadline for completed submissions in its 1985 architectural awards program. The biennial awards program is open to all architects and designers. For more information, contact the bureau, 515 116th St., N.E., Suite 274, Bellevue, Wash. 98004.

Builder Awards Program Deadline Set.

June 15 is the deadline for entry material in the fifth annual Builder's Choice design and planning awards program. Architects,

builders, planners, and developers may submit projects completed between June 1, 1983, through June 1, 1985. Grand, merit, and honorable mention awards will be presented in 22 categories. The entry fee is \$125. For more information, contact *Builder* magazine, 655 15th St., N.W., Suite 475, Washington, D.C. 20005.

Concrete Building Award Winners.

The Portland Cement Association and the Canadian Portland Cement Association has cited eight buildings in their biennial concrete building awards competition. Awards of excellence were presented to the Monterey Bay Aquarium in Monterey, Calif., by Esherick Homsey Dodge & Davis of San Francisco; the Vintage Clubhouse in Indian Wells, Calif., by Fisher-Friedman Associates of San Francisco; and Van Ness Plaza in San Francisco by Kaplan/McLaughlin/Diaz of San Francisco. Five awards of merit were also presented.

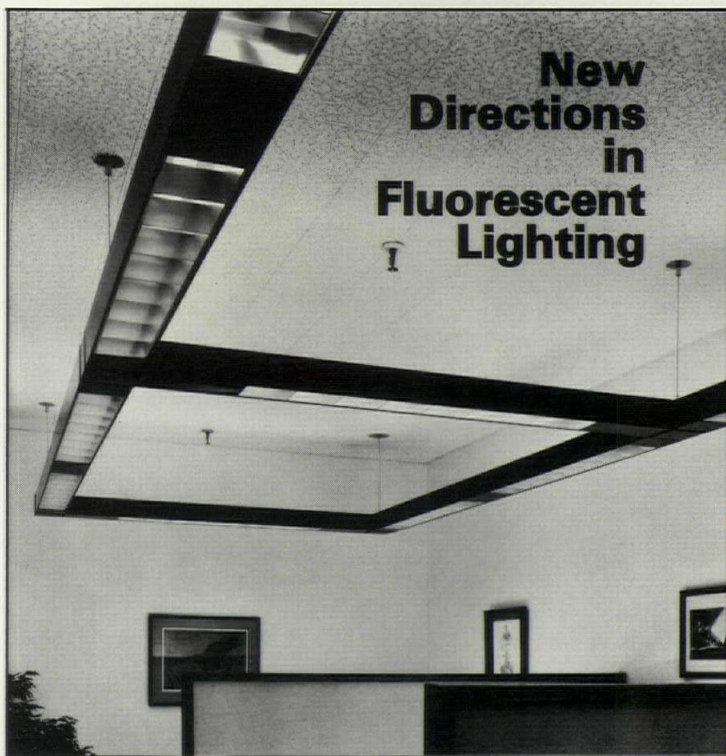
ACSA Design Competition Winners.

Four students were cited in the Association of Collegiate Schools of Architecture's 1984 Design + Energy student competition sponsored by the Department of Energy, the Brick Institute, and AIA. Matt King of the University of Arkansas was

awarded first place, and David W. Ricker of the University of Texas at Arlington was awarded second place for a mixed use hotel and theater complex. Winners in an open submissions category were James I. Williams of the University of New Mexico and Michael McGuire of University of Wisconsin-Milwaukee.

Air Force Award Winners.

Two completed works and three concept projects have been presented honor awards in the ninth annual Air Force design awards program sponsored by the U.S. Air Force in cooperation with AIA and the Society of American Military Engineers. The winning buildings are the Air University Library interior at Maxwell Air Force Base in Alabama by Sherlock, Smith & Adams of Montgomery, Ala., and a commissary at McGuire Air Force Base in New Jersey by Wilson/Jenkins & Associates of Itasca, Ill. The winning concept projects are the David Grant Medical Facility at Travis Air Force Base, Calif., by the NBBJ Group, Seattle; B1 Bomber Hangar at Dyess Air Force Base, Tex., by Frankfurt-Short-Bruza of Oklahoma City; and a control tower at Edwards Air Force Base, Calif., by TSG/ASKJ Associated of Spokane, Wash. Ten projects were also presented merit awards. □



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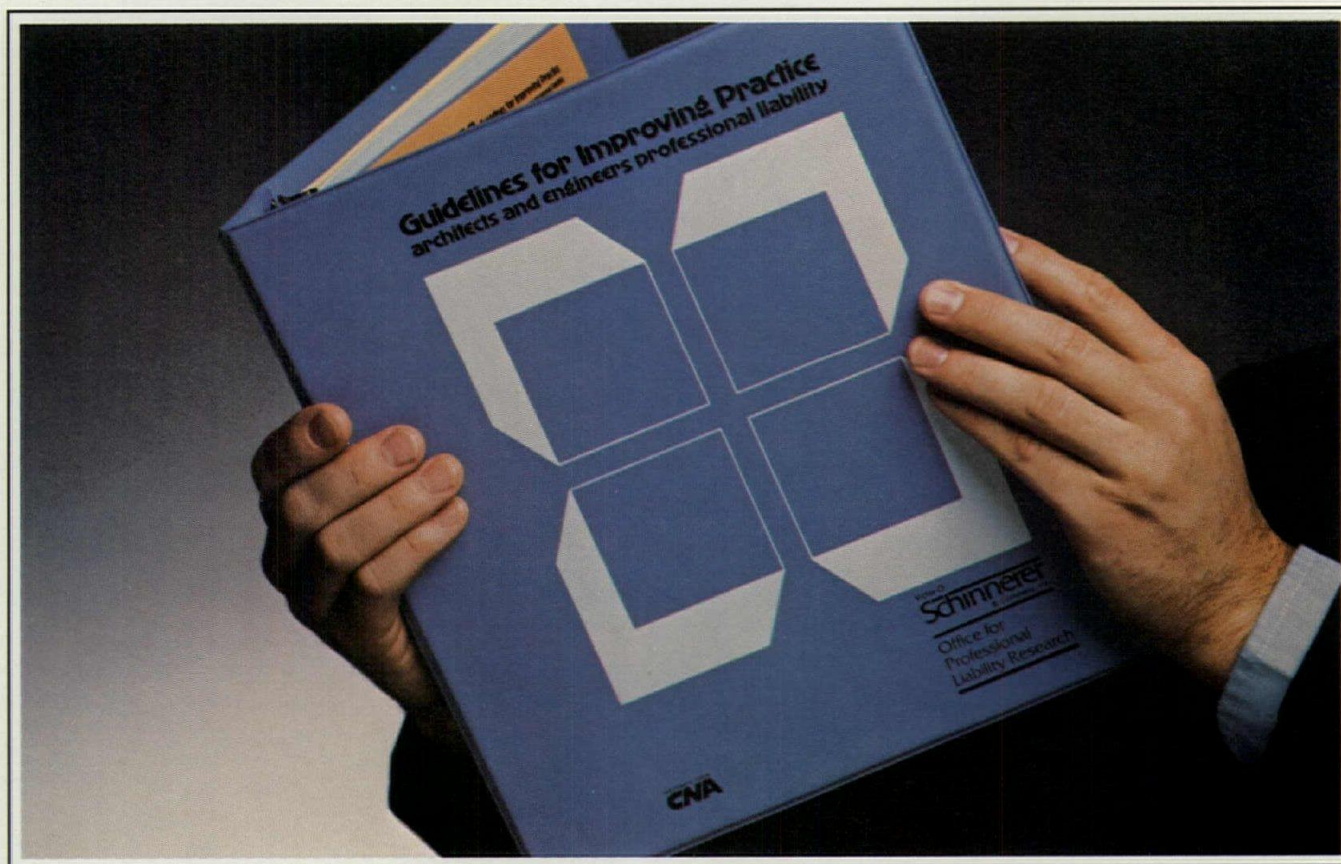
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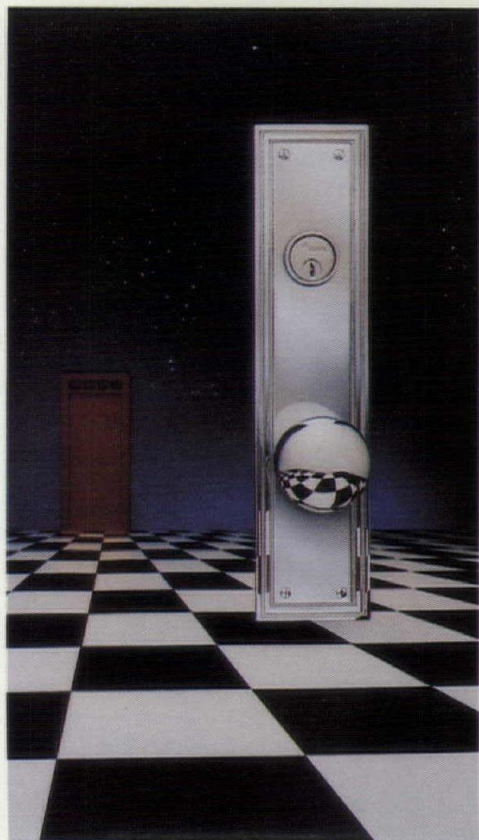
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A selection of notable offerings and applications.
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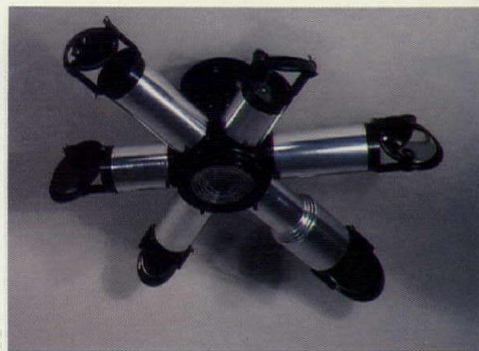


High-tech door hardware (1) by Kolson has a $3\frac{1}{2} \times 14\frac{3}{4}$ -inch plate and either a $2\frac{3}{8}$ - or $2\frac{3}{4}$ -inch diameter knob in chrome or brass. (Circle 201 on information card.)

Kinetics' interconnected, desk-mounted office system (2), designed by James Hayward and Paolo Favaretto, has privacy screens and modesty panels suspended from the trestle or desktop and communication and power cables tucked inside two segregated channels. The screens are framed in aluminum, filled with sound-reducing core material, and wrapped in corner-hugging Ormavyl. An integral system of grooves enable shelves, lighting, signage, and other accessories to be firmly affixed. (Circle 202).

The space illumination system from BeamO Corporation uses a single quartz halogen lamp housed in a "radial luminisitor condenser" (3) to break light into two, four, or six beams to project various light patterns. One source of light can provide 13 independently focused beams for decorative, task, ambient, or key functions. The decorative light tapestry (4) provides a mural of vivid light patterns and colors. (Circle 203).

Products continued on page 112 4





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Permanent wall bracket lighting fixture (above) measures 5 $\frac{3}{4}$ inches in height and extends 8 $\frac{1}{4}$ inches from the wall. The unit has "pin up" cord and plug construction and is available with a polished brass, chrome, white, or black finish and an opal glass shade. (Koch + Lowy, Inc., Long Island City, N.Y. Circle 238 on information card.)

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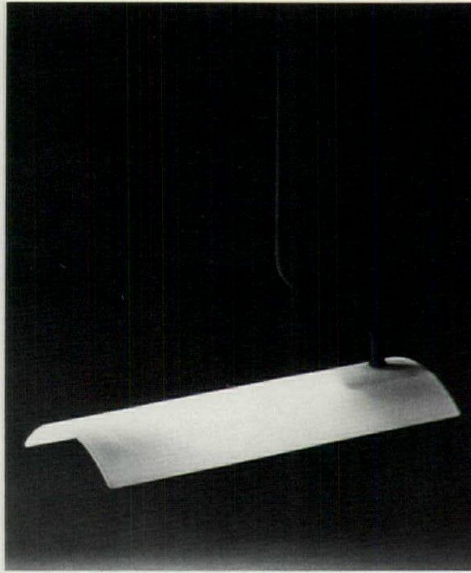
Handcrafted ceramic tiles with folk art motifs are designed to frame fireplaces, doors, windows, and chair rails. Available are pineapple or school house decorations, as well as farm animals. The collection is available in pastels, cobalt blue, or multicolors on white glazes in four- and six-inch-square patterns. Coordinating field tiles and trim pieces are also available. (Terra Designs, Inc., Morristown, N.J. Circle 237 on information card.)

Wash Fountain.

Quandra-Fount wash fountain has concealed spray formers, recessed push-button controls, a heavy-gauge stainless steel access panel with a tamper resistant fastener. Four independent metering valve assemblies have a flow timing range from five to 20 seconds. It is designed to provide space for four people to wash their hands in commercial and institutional installations. (Bradley Corporation, Madison, Wis. Circle 236 on information card.)

Wall Board.

Ultra-Board is an asbestos-free building board designed for internal and external applications for wall and ceiling linings, roof linings, soffits, floor substrates, cladding, and infill panels in renovations and new construction. Available in four thicknesses, the board has the highest fire rating and can be cut, drilled, and nailed with standard tools. (Brit Am, Middlesex, N.J. Circle 235 on information card.)



Ceiling Light.

Designed by Piotr Sierakowski, Wings series of lamps and fixtures (above) has a frosted white glass canopy measuring 5x12 inches and a black nextel or white enamel finished stem. (Koch + Lowy, Inc., Long Island City, N.Y. Circle 239 on information card.)

Linear Lighting Feature.

Light Channel is made of tiny, bare bulbs of light mounted on a flexible ribbon and installed in a rigid aluminum channel with a light diffusing reflector and lens. The aluminum channel, available in any standard anodized color finish, has three flat surfaces for installation in corners or on level planes with double-sided foam adhesive tape or with screws. The 12- or 24-volt linear lighting systems are available in standard lengths to a maximum of 20 feet with four spacing options and gold or silver color corrected reflectors. (Sylvan Designs, Inc., Northridge, Calif. Circle 218 on information card.)

Floor Tiles.

Six-inch-square Quarry Mesa floor tiles are designed to provide passive solar efficiency in commercial and residential installations. Tiles are available in three colors with a textured layered finish designed to resemble handmade clay tiles. (American Olean Tile, Lansdale, Pa. Circle 234 on information card.)

Wall Mirror.

Console units have a ribbed black cultured marble mirror and matching shelf. The mirror is made of $\frac{1}{4}$ -inch beveled glass and measures 26x42 inches. Shelf unit measures 26x9x3 $\frac{1}{2}$ inches. (Autumn Guild, Easthampton, Mass. Circle 233 on information card.)

Sandwich Panel Tie.

Fabcor plastic panel tie provides anchorage for polystyrene insulation and sandwiched concrete wall panels. The tie is

made of custom formulated polymers designed for low heat transfer and non-corrosive characteristics. It is lightweight and nonhazardous to hands and feet. (Preco Industries, Plainview, N.Y. Circle 232 on information card.)

Roof Insulation.

Perform 1 expanded polystyrene roofing insulation is designed to be used with single-ply membranes or modified bitumen membranes. Standard panels measure 4x4 or 4x8 feet. (Associated Foam Manufacturers, Excelsior, Minn. Circle 240 on information card.)

Wall Panels.

Soundsoak Ovation acoustical wall products for commercial installations are made of wood yarn strings with noise reduction properties. Yarnlike strands and nubs in varying widths and tones create textured patterns. They are available in three colors. (Armstrong World Industries, Lancaster, Pa. Circle 220 on information card.)

Commercial Window System.

ProComm line of aluminum replacement windows have a double-hung, integral storm window attached with a vinyl thermal break. Standard features include $\frac{7}{8}$ -inch insulating glass, a thermally broken sash and frame, step jamb, weather seal of T-slot foam, and a half screen. Optional triple insulating glass is also available. It comes in a variety of colors with optional decorative grids and screens. (Season-All Industries, Inc., Indiana, Pa. Circle 221 on information card.)

Patio Door.

Maxi-Miser door is made of Douglas fir with vertical grain door stiles and has a bronze tone screen with adjustable steel rollers and a bronze glass fiber screen mesh. Weatherstripping and $\frac{3}{4}$ -inch insulated glass are designed to increase energy efficiency. A thermal break threshold is available with a standard aluminum or an optional bronze tone finish. (Maywood, Inc., Amarillo, Tex. Circle 205 on information card.)

Ceiling System.

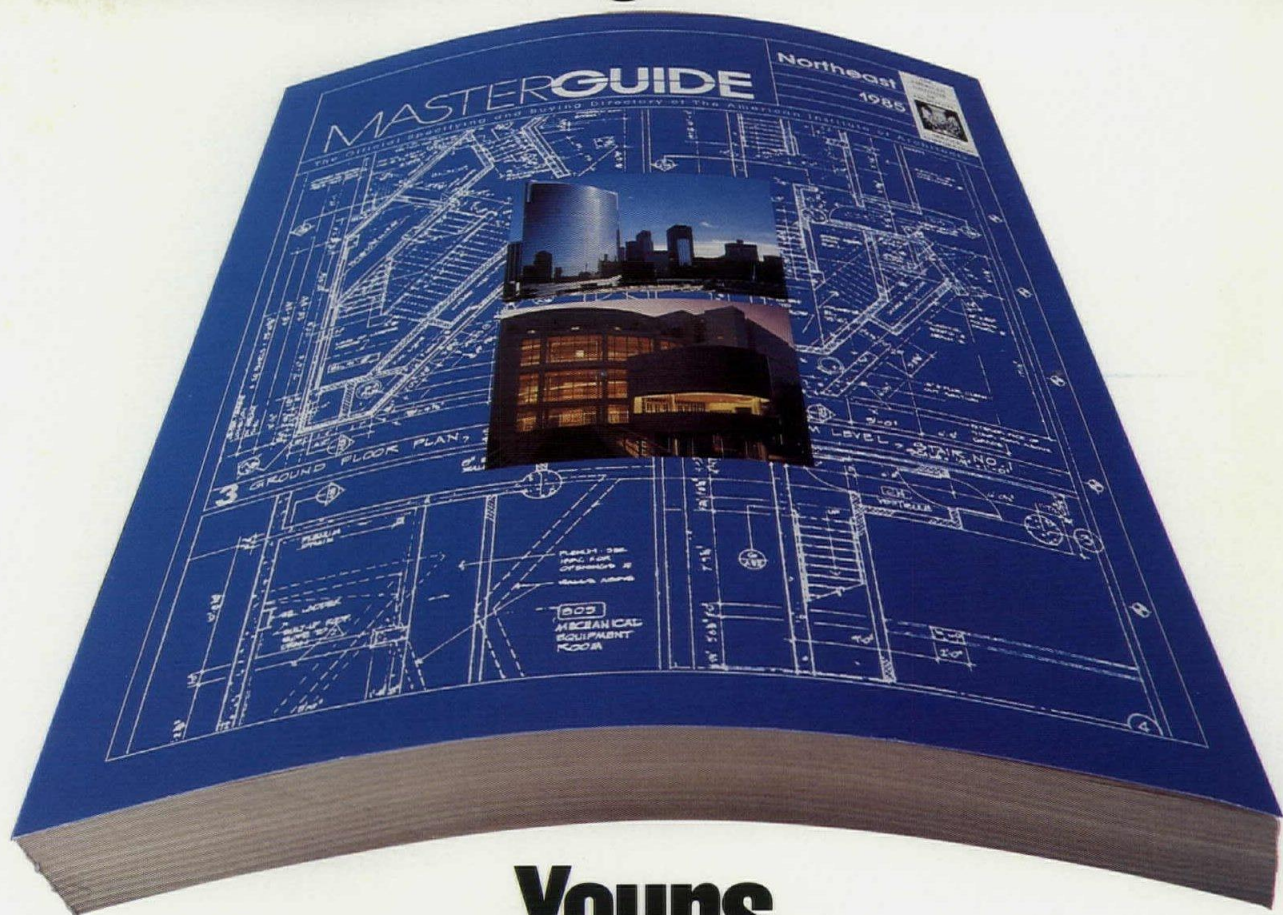
Alabar monolithic ceiling system has concealed joint lines and a low gloss facing with a smooth, marblelike pattern. It has a Class A flame spread rating and offers acoustical control. Panels are made of mineral fiber and measure 12 inches square. (Conwed Corporation, St. Paul. Circle 206 on information card.)

Wall Panel System.

Full height wall system is designed to provide space flexibility and acoustical and visual privacy. It has a floor-to-

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ceiling panel that looks like a fixed wall but can be dismantled, moved, and reassembled. Wall panels may be covered with any one of four Steelcase fabrics in a range of colors or painted three colors with a choice of six trim shades. Special brackets in the wall seams support binder bins, work surfaces, and lateral files. (Donn Corporation, Westlake, Ohio. Circle 207 on information card.)

Window Film.

SunGain window film is a transparent, ultraviolet-stabilized, polyester film coated with a metallic composition. The film is said to be 10 percent more transparent than 1/8-inch glass, and one layer has 98 percent visible light transmission. Each layer of the film suspended inside sealed insulated glass units creates air spaces that increase insulating properties. It is also designed to reduce condensation and frost buildup and reduce fabric fading due to ultraviolet filtration. (3M Corporation, St. Paul. Circle 208 on information card.)

Track Lighting System.

Solid-state 75VA power supply is designed to permit the Capri series of low-voltage track heads to be used on standard, line voltage heads. The power supply can be

used with 20-, 42-, 50-, and 75-watt MR16 low-voltage lamps in multimirror precision lighting fixtures. Constructed of die-cast aluminum, the rounded case measures 5 3/4 x 1 1/4 inches. Wall-dimmed and fixture-dimmed models are available. (Capri Lighting, Los Angeles. Circle 209 on information card.)

Patio Door.

SwingSet patio door system has a lever handle and a one-inch deadbolt lock with an interior thumb turn. The cylinder is replaceable, and optional double cylinder locks are available. The hardware is available in standard bright brass or with an optional antique brass finish. Doors are preassembled and sized to fit most standard openings. (Morgan Products, Inc., Oshkosh, Wis. Circle 210 on information card.)

Coating Material.

FlexFram 805 fire retardant coating material is designed to provide thermal protection for structural steel in highrise building construction, storage tanks, and structural columns and buckheads. The two-component, self-curing coating may be applied by spray or trowel methods. (Fiber Materials, Inc. Biddeford, Maine. Circle 211 on information card.)

Epoxy Coating Material.

Pitt-Guard polyamide epoxy coating is designed to provide protection against moisture and corrosion and rust penetration. The coating can be applied directly on surfaces that have been minimally cleaned. The coating wets, penetrates, and fuses to tightly adhering surface rust to fight further corrosion by blocking moisture and chemicals. It is made of nonreactive, nonaluminum, mineral flake pigments. (PPG Industries, Pittsburgh. Circle 214 on information card.)

Window Coverings.

DuoPleat window treatment has a dual constructed shade with narrow pleats in nine fabric colors ranging from sheer to opaque. The honeycomb construction traps air to provide insulation. The pull cord is color coordinated to match the shade. (Hunter Douglas, Inc., Maywood, N.J. Circle 217 on information card.)

Flooring.

Fiandre ceramic granite is porcelain stoneware designed for commercial, institutional, and residential installations. It is available in a range of bright and opaque colors with a matte or polished finish. (Trans Ceramica Ltd., Elk Grove Village, Ill. Circle 212 on information card.) □

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