

ENVIRONMENTAL GRAPHICS



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Circle 1 on information card

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Cover: Wall painting by Roland Hobart in Indianapolis. Photo: Robert A. Harris, AIA

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GSA Inaugurates New Procedure, and Two New Forms, for A/E Procurement

"It is said that the hardest thing to change in Washington, D.C., is a government form," said the General Services Administration in a statement which outlined the rationale for an overhaul of Standard Form 251 ("U.S. Government Architect-Engineer Questionnaire") and its replacement by SF 254 and SF 255. It's taken more than two years to work out the new forms, but at last they are available for distribution. Architects should request the forms from their local or regional federal offices.

The old 251, in use since 1961, "has come to be as well-known among architects and engineers as the 1040 and 1040A are known to taxpayers," said GSA. But in spite of its longevity, 251 had come under fire from both contractors and government agencies. And with the enactment of Public Law 92-582 in 1972, which prescribes policies and procedures for the selection of A/Es for government work, revisions of 251 were in order.

As reported in the November 1974 AIA JOURNAL, an ad hoc committee of representatives from federal agencies and professional design societies—on which AIA was represented—was formed in 1973 to review 251. The ad hoc committee determined that 251 lacked project-oriented information; failed to reflect adequately the capabilities of related professionals; called for superfluous and irrelevant information; lacked flexibility to cover a firm's diversity; was not readily adaptive to computer retrieval, and did not result in uniform submissions.

It was decided that two forms were required: 254, "Architect-Engineer and Related Services Questionnaire," to give general information about a firm, and 255, "Architect-Engineer and Related Services Questionnaire for Specific Project," to give detailed data regarding the firm's ability to perform a particular piece of work. Forms were prepared subsequently for circulation and comment by federal agencies, and a controlled test of

100 design firms was conducted for GSA by the Committee on Federal Procurement of A/E Services, of which AIA is a member. The AIA federal agency committee reviewed the results of this test and submitted its recommendations, which became the Institute's official input. These suggestions were incorporated into the development of final forms.

Bruce Schafer, who heads AIA's federal agency liaison office in the department of government affairs and who was one of AIA's representatives in the development of the new forms, says that 254 and 255 "provide a more specific and clearer approach to A/E procurement. SF 254, to be updated on an annual basis, will better reflect changes in a firm's personnel and qualifications. Also, the new forms will benefit not only multidiscipline firms, but also new, small and/or minority firms."

Form 254 "may be used as a basis for selecting firms for discussions, or for screening firms preliminary to inviting submission of information," GSA explains. It provides the A/E with easy-to-follow instructions for filing. It calls for data about the firm's makeup as to personnel by discipline, size and capabilities. It requests information about professional services fees received, the firm's project experience over the past five years and examples of specific projects that the firm has executed.

For answers to questions pertaining to the firm's experience and projects, so-called "experience profile code numbers" have been evolved for 117 different types of services and projects. Considerable effort was expended on the development of these code numbers to make them cover a broad range of professional services. The code numbers range from acoustics and noise abatement to zoning and land use. Although nearly every conceivable building type is coded, as well as such things as environmental impact statements and value analysis, there is space for five additional categories to be

written in. No more than 30 code numbers may be selected, however, to accurately reflect a firm's demonstrated abilities and experience. There also is space for listing 30 project examples.

In order for new firms to have equal consideration, questions on the form which concern personnel or experience "may be answered by citing experience and capabilities of individuals in the firm based on performance and responsibility while in the employ of others."

Although 254 is to be filed and updated annually, 255 is to be filled out and submitted only upon request by a government agency or by a formal public announcement in regard to a specific project. Most proposed projects will be announced under Section R of the *Commerce Business Daily*.

Both a new form and a new procedure 255 does not substitute, however, for "discussions with no less than three firms as PL 92-582 requires. It does allow for initial screening of respondents. Its submission, says GSA, "will assure a firm that it will be considered on the basis of data pertinent to the project in question. The form "will discourage the 'shotgun approach' " that was used heretofore when A/Es submitted a 251 "for virtually every job within a certain geographical area."

There is some necessary repetition of information provided on 254, but 255 also elicits data relevant to a specific project such as: specific areas of responsibility for joint ventures; names, addresses and specialties of outside key consultants and associates; qualifications and experience of key persons, specialists and consultants anticipated for the project; projects which firm or joint venture members have done that illustrate current qualifications relevant to the project, and information about all work by firms or joint ventures currently being performed directly for federal agencies. There is also space to provide any additional information or descriptions of resources that support a firm's qualifications for the proposed project.

Schafer says that the new forms will result in more uniform submissions by firms than heretofore and that firms

continued on page



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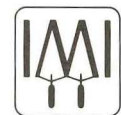
Expressions in Masonry



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*Research Tower, College of Veterinary Medicine,
State Colleges, Cornell University, Ithaca, N.Y.*

Architect: Ulrich Franzen & Associates

*William Street Apartments, Wesleyan University
Middletown, Conn.*

Architect: Ulrich Franzen & Associates

Photographs: David Franzen

Circle 6 on information card



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will be better able to indicate those services for which they are best qualified. Because SF 255 is keyed to specific projects, it "will be closely examined by federal officials," GSA says. "From this standpoint, new, small or highly specialized architects, engineers and other professional service firms will be afforded greater opportunity to be considered for federal work."

Growth Controls Upheld By Appellate Court

The U.S. Court of Appeals in San Francisco reversed a decision of the U.S. District Court declaring that a no-growth ordinance enacted by the town of Petaluma, Calif., did not violate the U.S. Constitution.

Petaluma, which is about 40 miles north of San Francisco, enacted a growth control plan in 1972, limiting new housing to 500 units a year. Local builders brought a suit against the town, challenging that the ordinance violated the constitutional guarantee of "right to travel" because it prevented people from moving into the community. In April of this year, the U.S. District Court agreed with the argument and declared the Petaluma ordinance unconstitutional.

The home building industry in the suit against Petaluma was supported by the National Association of Home Builders. Duane Searles, NAHB associate legislative counsel, is quoted in the *NAHB Journal-Scope* for Aug. 18 as saying that the "new ruling is being closely studied to determine what further action will be taken."

Wright Home Acquired By National Trust

The original home and studio of Frank Lloyd Wright, built in Oak Park, Ill., in 1889, has been purchased by the National Trust for Historic Preservation, assisted by the Frank Lloyd Wright Home and Studio Foundation. NTHP paid \$190,000 for the property through the use of grant-in-aid funds provided by the National Park Service. The property has been leased for a renewable term of 40 years at \$10 per year to the Foundation, which contributed \$98,000 toward the purchase price and related costs. The Foundation will be responsible for maintenance and administration of the home and studio and for its restoration, which may cost as much as \$500,000.

"This purchase lease-back is the first of its kind for the Trust, and through the cooperative agreement with the Foundation, virtually assures the preservation and restoration of this important early site of

Wright's work and experimentation," says James Biddle, president of NTHP.

The home and studio were offered for sale in 1972; pending the development of a permanent preservation plan, the property was bought in mid-1974 by the Oak Park Development Corp., with financing support by local banks.

Restoration of the home and studio will present problems because Wright remodeled the interior on the average of every 18 months, testing his new design ideas. His son, Lloyd Wright, has been retained to assist in research and restoration plans. The house is currently open to the public as a museum and center for the study of Prairie School architecture.

Student Competition For Rural Settlement

An international competition which is open to any architectural student at any of the 750 schools of architecture recognized by the International Union of Architects has been organized by the Rideau Institute, Montreal. The competition is in anticipation of "Habitat '76," the United Nations conference on human settlements to be held in Vancouver, in June 1976.

The program calls for the design of a model settlement for 10 families in a semi-rural area of eastern Ontario. Among the objectives are the development of an "ecologically satisfactory habitat having social, economic and recreational benefits for a group of families desiring to combine work opportunities in a nearby industrial town with the production of food in harmony with nature" and the demonstration of settlement techniques that will result in minimal environmental damage.

Ten projects will be selected for exhibition at the conference. The winners (or the designated representative of teams) will be invited to attend the conference as guests of the sponsor. Prizes will include air fare to Vancouver and \$50 per diem.

The competition will be conducted in two stages. In the first stage, schools of architecture are invited to conduct a preliminary competition to select a scheme to be submitted as representative of the school. The name and address of the student selected to participate must be countersigned by the dean of the school and postmarked no later than Feb. 1, 1976. Schemes selected by the schools must be submitted by Mar. 15.

In the second stage of the competition, an international jury of seven persons, four of whom will be architects, will meet in Montreal in April to decide upon the 10 winning schemes.

Programs and other information may be obtained from: John Bland, Professional Adviser, EPROM '76, School of Architecture, McGill University, P.O. Box 6070, Station A, Montreal, Canada H3C 3G1.

Grants Offered For Neighborhoods

In an effort to promote the conservation of older neighborhoods, the National Endowment for the Arts has initiated a grant program for fiscal year 1976 which will fund the development of design studies, zoning revisions, economic incentives and other endeavors aimed at regenerating older neighborhoods. Nancy Hanks, chairman of NEA, says that the grants "constitute only one part of a larger neighborhood conservation effort under the direction of the architecture + environmental arts program."

In the selection of grant recipients, priority will be placed upon action-oriented projects which "stress the sympathetic reuse of existing buildings as catalysts for community revitalization." The program is limited to local governmental entities and nonprofit, tax-exempt organizations which possess "broad community support and demonstrated capability for implementation."

Applications must be postmarked no later than Nov. 3. Additional information may be obtained from Miss Merrill Wade, Architecture + Environmental Arts Program, National Endowment for the Arts, Washington, D.C. 20506; (202) 634-4276.

Mobile Home Awards

First prize of \$7,500 in the 1975 Reynolds Metals Co. mobile home design awards program was won by Carolyn and Ronald Nuetzel, a husband/wife design team from St. Louis. The winning design, selected from more than 400 entries, is for a double-wide mobile home connected by a wooden deck that provides a courtyard.

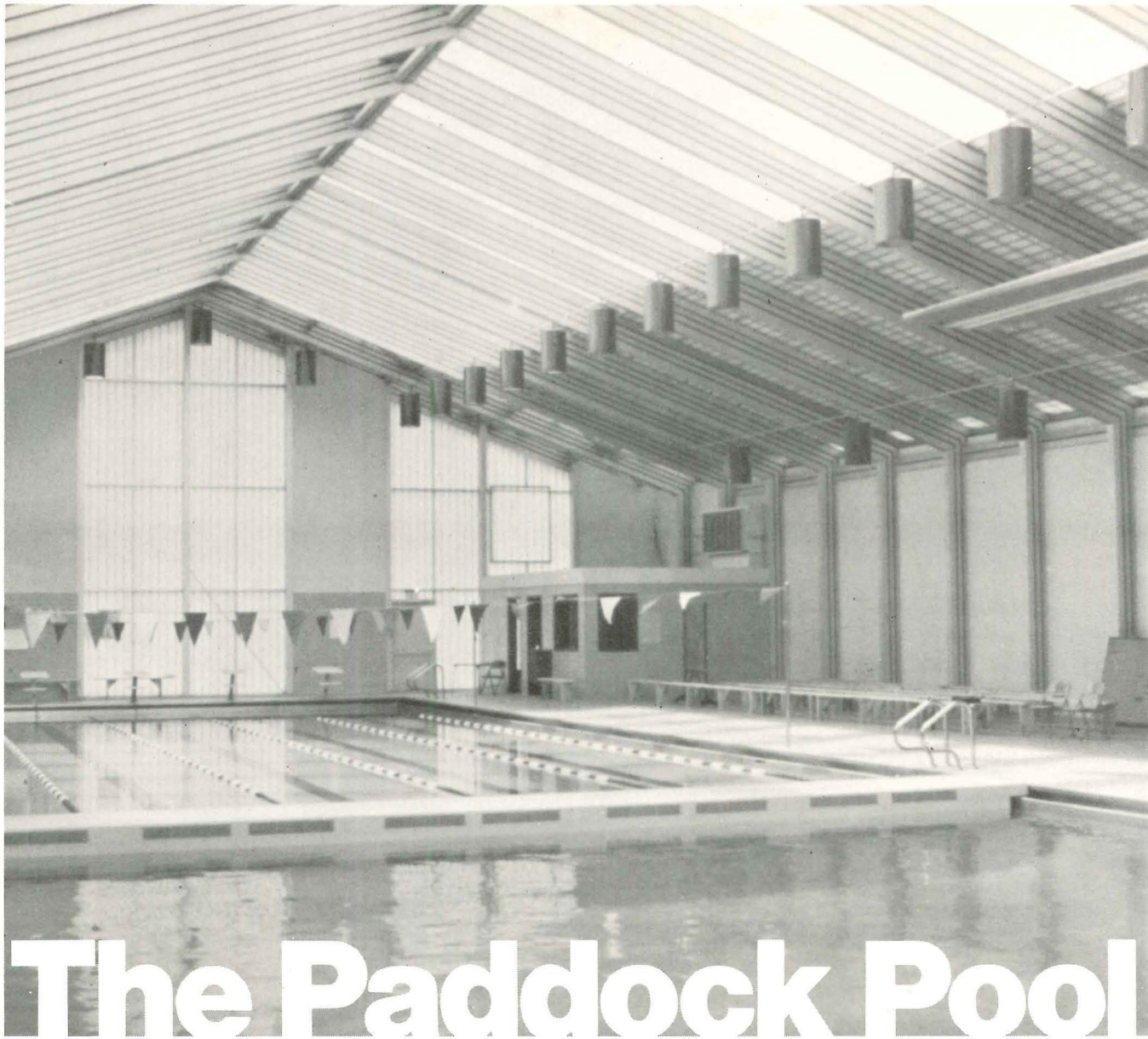
Gerald Roberts of Skokie, Ill., was winner of the second prize of \$5,000; third prize of \$2,500 was won by Frank W. Bellows, AIA, of Berkeley, Calif. Bellows' design is for a mobile home with three distinct "zones," with living areas projected into landscaped surroundings. Special merit awards of \$1,000 each went to Michael Mate of Denver and to Norma W. Faldmo Jr., of Provo, Utah.

The judges were mobile home experts or persons professionally involved in the housing industry.

Regional Housing Labs Scheduled by AIA

AIA has scheduled a series of regional workshop conferences to help architects explore job opportunities in housing development, specifically those offered by state housing finance agencies. The intent of the workshops is to assist architects in

continued on page 1



The Paddock Pool

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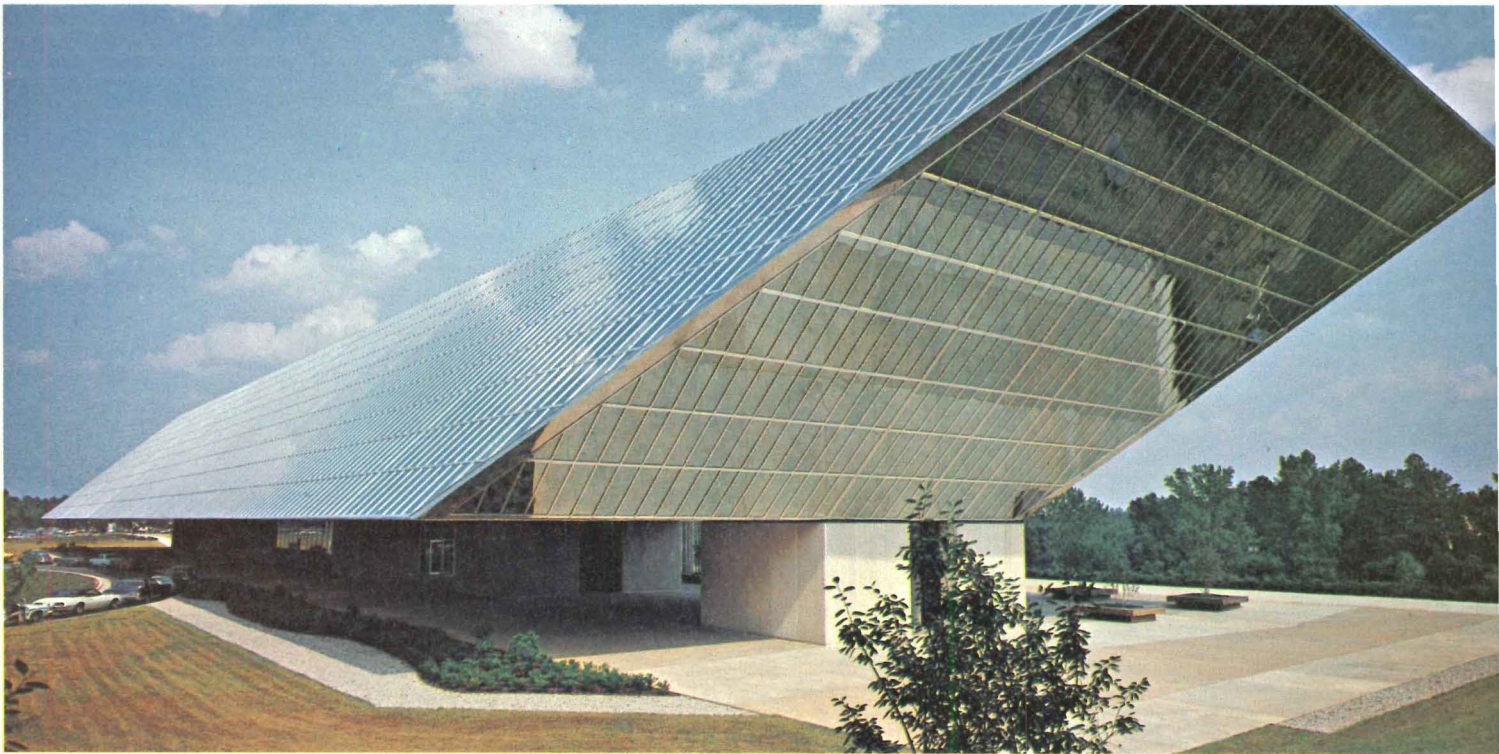
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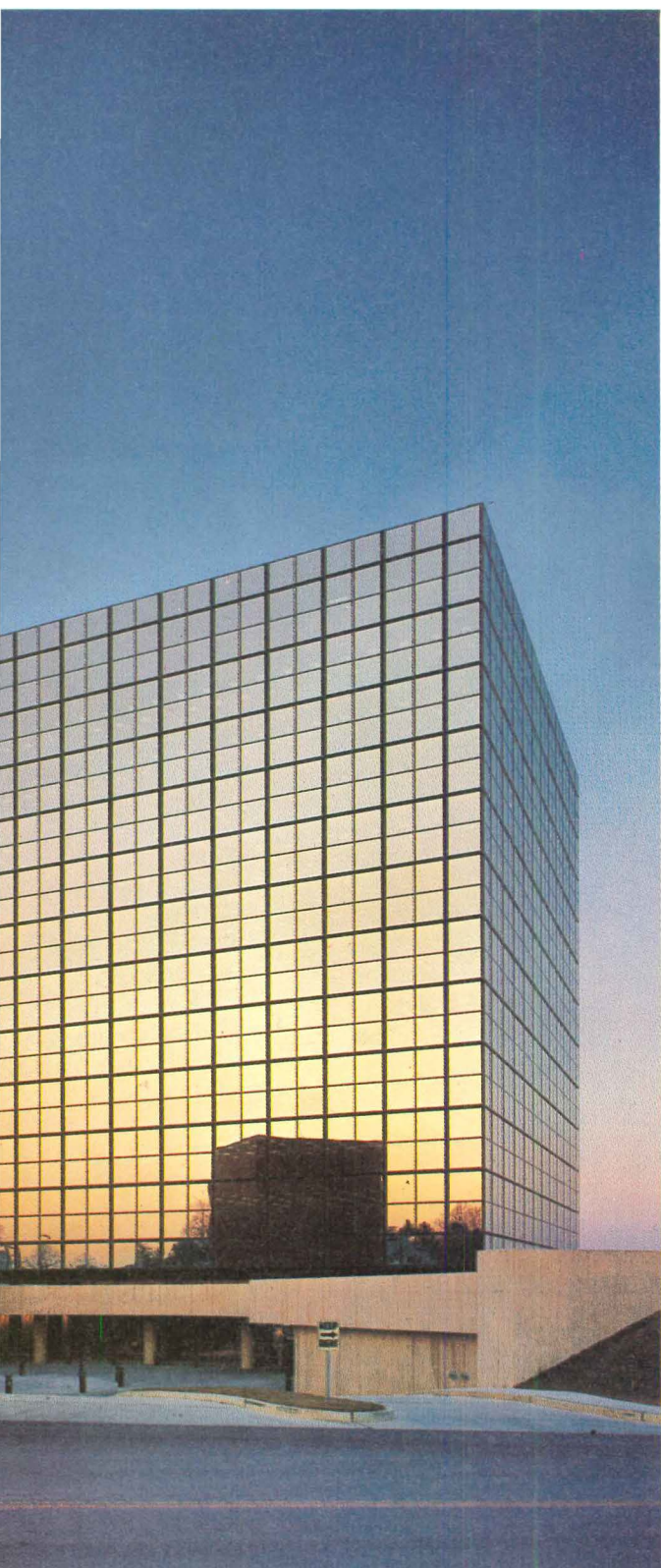
ALL OVER THE BLUES ARE



Upper left: Blue Cross and Blue Shield Service Center, Durham, North Carolina.
Architect: Odell Associates, Inc. Glass: Vari-Tran 1-108.

Lower left: Blue Cross Building, Seattle, Washington. Architects:
Maloney, Herrington, Freese & Lund. Glass: Vari-Tran 1-208.

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LOF

Going On from page 10

Understanding the programs and functions of state housing finance agencies; to show how such programs are related to Section 8 of the Housing and Community Development Act of 1974, and to give participants a chance to meet and discuss mutual problems with housing agency representatives.

Called Housing Lab '75: Part II, the conferences will be held in Boston on Oct. 28-29; in Washington, D.C., on Nov. 5-6; in Chicago on Nov. 17-18, and in Denver on Nov. 24-25. The "Part II" of the conference title makes reference to the fact that an AIA housing finance conference was held last spring.

For more information, contact Dennis Beese, AIA headquarters; (202) 785-7361.

Illinois Team Wins Energy Competition

Grand prize winner of the intercollegiate energy resource alternatives competition, held in Albuquerque, N.M., recently, was a team of students from the Illinois Institute of Technology. The competition, which challenged 38 student teams from 31 universities in the U.S., Canada and England to design and build a total energy package from sources other than petroleum, was sponsored by SCORE (Student Competitions on Relevant Engineering). The five-day event took place at Sandia Laboratories, a government energy research facility with the capability to test full-sized projects under varying conditions.

The winning team built a flat plate col-

lector system to supply home heating and hot water. The collectors were constructed from aluminum plate ceiling panels. Two transparent layers on top of each collector trapped the solar energy. Lower covers were made of low-cost plastic film and second layers were either double-strength plate glass or the same plastic film.

SCORE reports that results of a site test proved the overall efficiency of the winning concept: 76,000 Btu's were delivered in nine hours and 40 gallons of 140 to 150F domestic hot water were supplied.

Second place was won by a University of California at Berkeley team whose solar flat plate collectors used clear fluorescent tubing instead of plate glass covers. Third place went to a team from Wichita State University; flat plate collectors delivered space heat and hot water, weathering gale force winds and driving rain. Fourth place was won by a team from Concordia University for a solar hot water heating system that adapts to various geographic locations.

Van Alen Award

Alain Rodriguez, a student at the Ecole d'Architecture, Bordeaux, France, is the winner of the William Van Alen memorial award given annually by the National Institute of Architectural Education to a student under 35 years of age who is attending an architectural or engineering school. Second place was won by another Frenchman: Pierre Chatauret of the Ecole Nationale Supérieure des Beaux-Arts, Paris.

This year's program, which drew an "unprecedented" response, was written by Giorgio Cavaglieri, FAIA, for the design of a hotel/study facility in the ruins of the 15th-century Inca city of Machu Picchu in Peru.

Winner of another NIAE awards program is Michael Manfredi of the University of Notre Dame, who was awarded first place in the Lloyd Warren fellowship competition. Second place winner is Le Schwerin of the University of Illinois. The subject of the 1975 competition was the design of a major zoo in a large city.

Conference Scheduled On Barrier-Free Design

A special program, designed with architects in mind, is scheduled during the 19th annual convention of the National Easter Seal Society for Crippled Children and Adults, to be held in Louisville, Ky., on Nov. 4-8. On Friday, Nov. 7, designers will have the opportunity to participate in the development process of some important projects now being funded by the federal government to ensure accessibility.

continued on page

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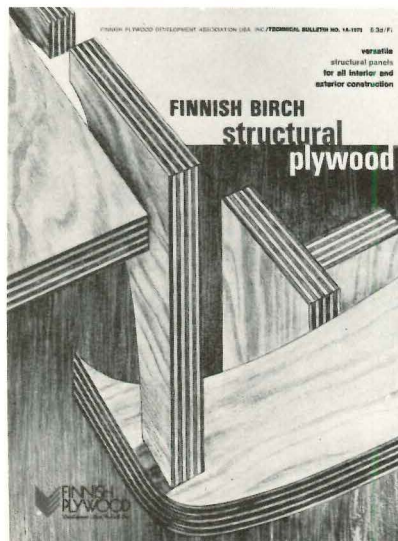
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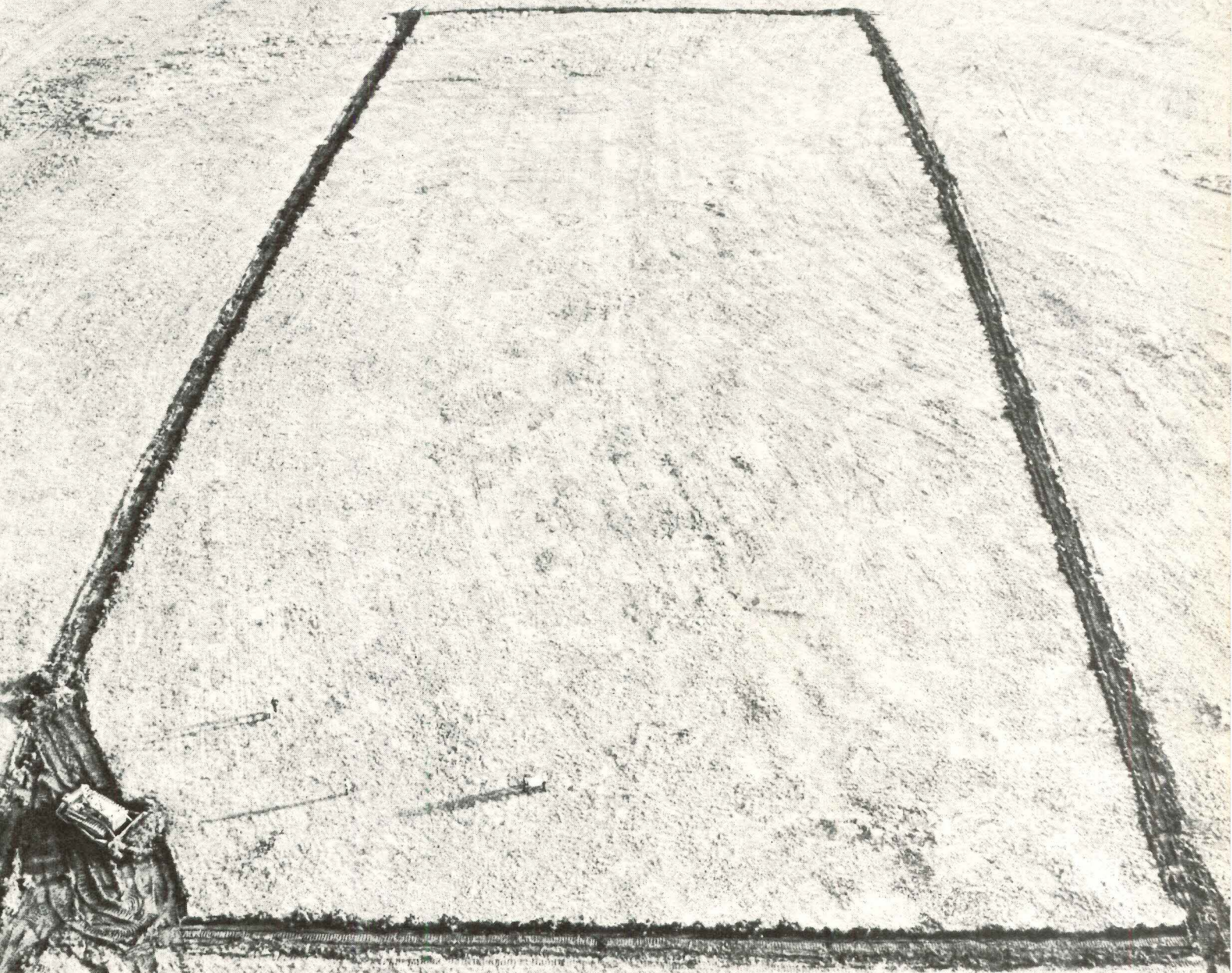
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AIA JOURNAL

Increasingly, architects and their clients, government agencies and builders are exploring the possibilities of environmental graphics in an attempt to enliven their buildings and, especially, to humanize them—all at relatively low cost. “Ten years ago, a plaza or sculpture in front was a sufficiently deep bow to social consciousness. Now, attention must be paid to all architectural spaces and elements from signage to elevator cabs, from corridors to rooftops,” says Dorothea Elman of the design and planning firm of Propper/Elman.

Signage, the most common form of graphics in the environment, tends to suffer either from being so overwhelming in quantity and scale as to produce an indistinguishable clutter or else so scant or low-keyed as to be of negligible assistance.

Even if newly intrigued by other forms of environmental graphics, architects still view signs as unsightly appendages to their buildings. Says designer Ivan Chermayeff: “Most architects wish graphics would blow away so that there isn’t anything mucking up the building.” But the problem with eliminating graphics to prevent violating the architectural design, says graphic designer Don Page, is that needed directional signs—huge and ugly ones—may later be added on by building owners and then severely undermine the integrity of the architecture.

Graphics in the Environment

If insufficient signage can be a frequent shortcoming on and inside buildings, overload is a more prevalent source of distress outdoors. Countless signs in all shapes and sizes often vie for attention like shrill egos, and important messages can become submerged in the trivia. In some hyperactive downtown areas, such as Times Square, circus-like signage is not only acceptable, but appropriate, creating what has been called a living museum of our brand of material culture. But such “pockets of disorder,” warns Ivan Chermayeff, “have to have tight edges.”

Along with the excesses, however, there is also the problem of “sameness and monotony, producing a mixture of disorientation and boredom, like floating aimlessly in warm water,” to quote Robert Sivard, retired art director of the United States Information Agency.

For better or worse, some environmental graphics, such as outsized wall paintings, have gone from simply communicating to us to communing with us. They can change our attitudes towards spaces, imparting to them a sense of place and identity. They can also transform buildings, turning ordinary or anonymous structures into extraordinary environmental events.

In part, outsized wall graphics have been a natural outgrowth of recent artistic and political movements. In the '50s, some painting had become a process of wide-armed splashing and hurling of paint onto ever-larger areas of canvas. The empty canvas was looked upon as an arena for action, the finished work as an actual part and extension of the environment, rather than as something separate from it. As paintings thus outgrew the natural boundaries and restraints of canvas, big bare walls began to beckon seductively. And as social and political activism have increased, walls have become the medium for a variety of messages.

Some architects and critics have belittled supergraphics as a kind of coverup or cosmetic surgery for poorly designed buildings, and as a fad that has already seen its day. However, the embellishment of walls with paintings can be a form of “instant urban renewal, upgrading architecture and uplifting human spirits,” says Doris Freedman, president of City Walls Inc. of New York.

A cautioning note by George Nelson, FAIA, president of the design firm bearing his name: “Environmental graphics should not be clever enough to bother you. Repeated exposure is the best test. They should take the good neighbor approach to the environment.” *Andrea O. Dean.*



Lincreasingly designers are using signs to add esthetic interest and pizzazz, rather than simply as labels. As a result, such graphics have been made evermore inventive in design and have been extended in sale to become in themselves strong and assertive elements in the environment.

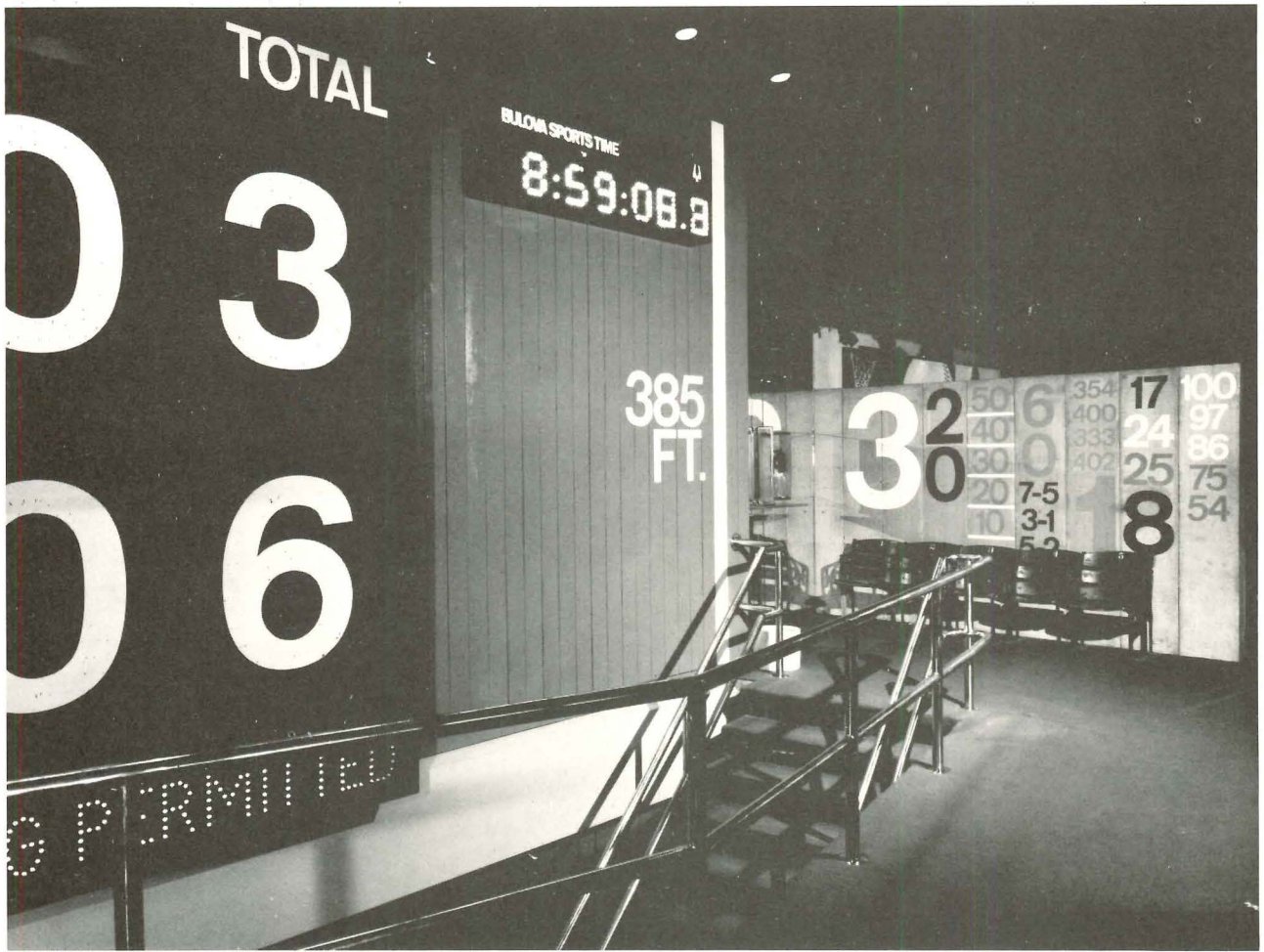
While it was there, the construction fence at 1370 Park Avenue in New York City, created by the design firm of Page, Arbitrio & Resen, could hardly be missed by passersby. The fence was made of four-foot plywood sections, with characters so large that even when the sections were "moved by workmen and not re-erected properly, they could still be read," according to Don Page. For the public, says Page, such construction fences can imprint an identity on a building even before there is a finished building there to be seen. As designer Rudolph deHarak said of such temporary structures, "It's like the circus that comes to town and then packs up and leaves again."

The intention of Page, Arbitrio & Resen in designing large, odd-shaped numbers for the Chembank in New York City, such as the 5 shown here, was to "break up the monotony of endless dreary corridors," according to Page. "It was an inexpensive and easily maintained face-lift."

A similar rationale lay behind the crea-



tion of the large, off-kilter symbols marking the restrooms at the State University of New York at Stonybrook. As part of a colorful graphics program, they were designed by the environmental graphics group within the architectural firm of Smith, Hynchman & Grylls to add color and spirit to an otherwise strictly utilitarian building designed by the same firm. Going beyond the trite little paper dolls with skirt or pants that typically mark restrooms, the designers intended the symbols to "match the sophistication of the students." Unlike the hallways of many such buildings, these remain unmarred by graffiti.



y using large graphic elements for the decor of Gallagher's Restaurant in New York City, designer Rudolph deHarak attempts to create "a total sports environment." By employing huge rear-lit signs and, of course, concrete block walls and antique bleachers, deHarak simulates the feeling of a stadium.

Similarly, the wall mural created for elementary school P 380 in Brooklyn by designers Propper/Elman is intended to impart a strong sense of identity to the school. The designers chose a symbol that has immediate meaning for all the students. The mural is made of narrow, vertical strips of ceramic tile in eight different colors, set alternately at 90-degree angles to each other. The result is a kinetic wall graphic whose colors and shapes change as the viewer moves around it. As well as having been expanded in scale and conception to take on a life of their own, many graphics have also been endowed with a third dimension to become a form of sculpture.

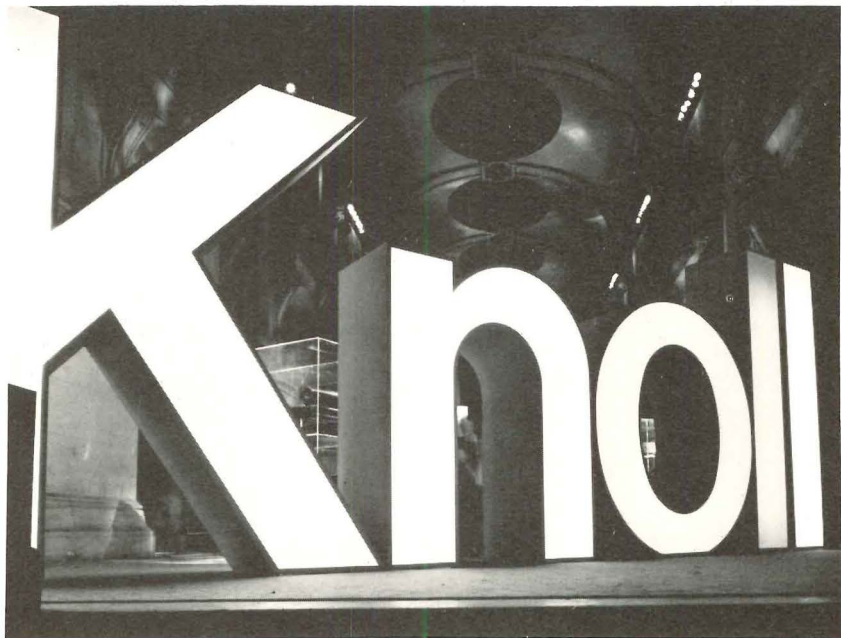
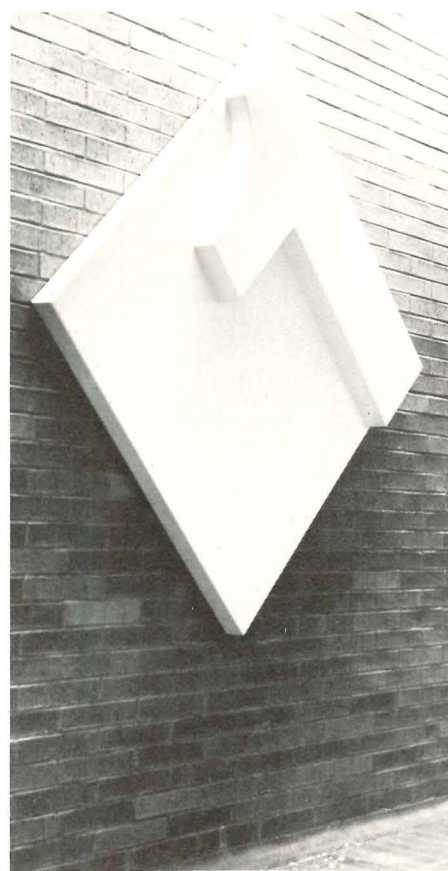
A progression toward three-dimensionality is seen in the work at the North Central Bronx Hospital by designer E. Christopher Klumb. The five-foot "elevators and admitting" sign is situated on the first floor back wall facing the hospital entrance. To create variety within the graphic, Klumb raised the striped, color-pattern slightly; to heighten the contrast between the object and the brick wall on which it is mounted, he selected a smooth, slick surface material. "And by rotating the static square onto its side and printing the copy on a diagonal," says Klumb, "we tried to establish a sense of drama."

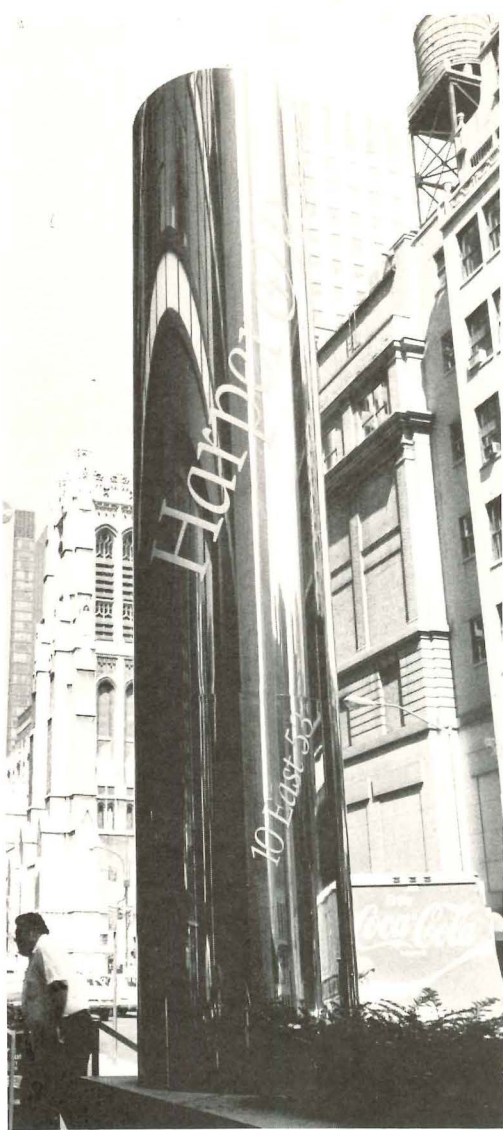
Klumb's graphic 1, also situated on the first floor of the hospital, is raised not



only for esthetic effect, but for purposes of giving the numeral definition. The graphic is all one color—white on white—and shadows cast by overhead lighting etch a line around the number, delineating it from its background.

By designing an enormous, three-dimensional version of the well-known Knoll logotype, designer Massimo Vignelli created an entranceway to an exhibition of the firm's products and history held at the Louvre museum in Paris. The huge letters are constructed of metal over which fabric was stretched; they are illuminated from within by neon lighting. Says Vignelli: "The letters act like a people filter, and the attempt generally was to create a sense of magic."



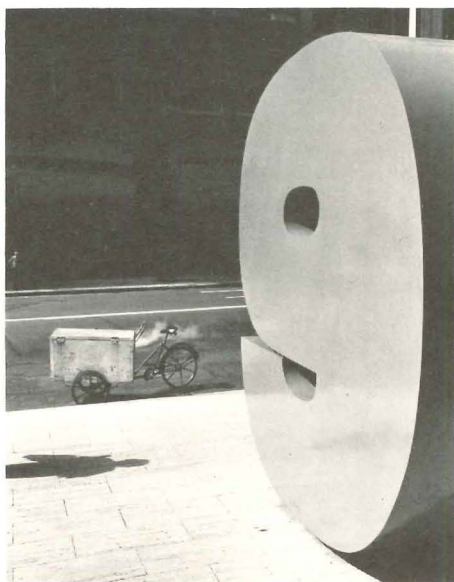
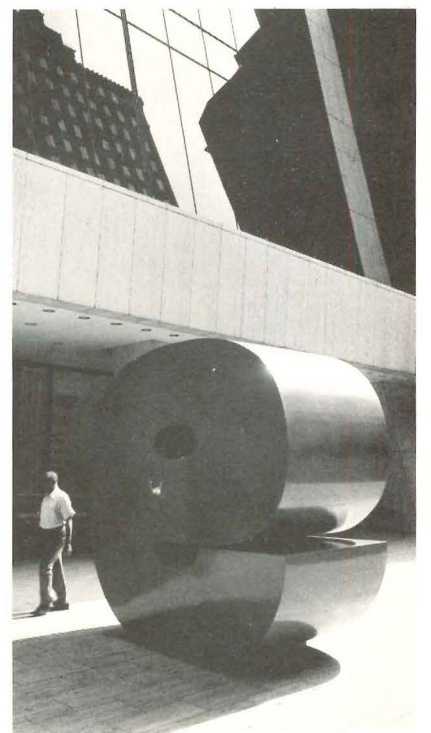
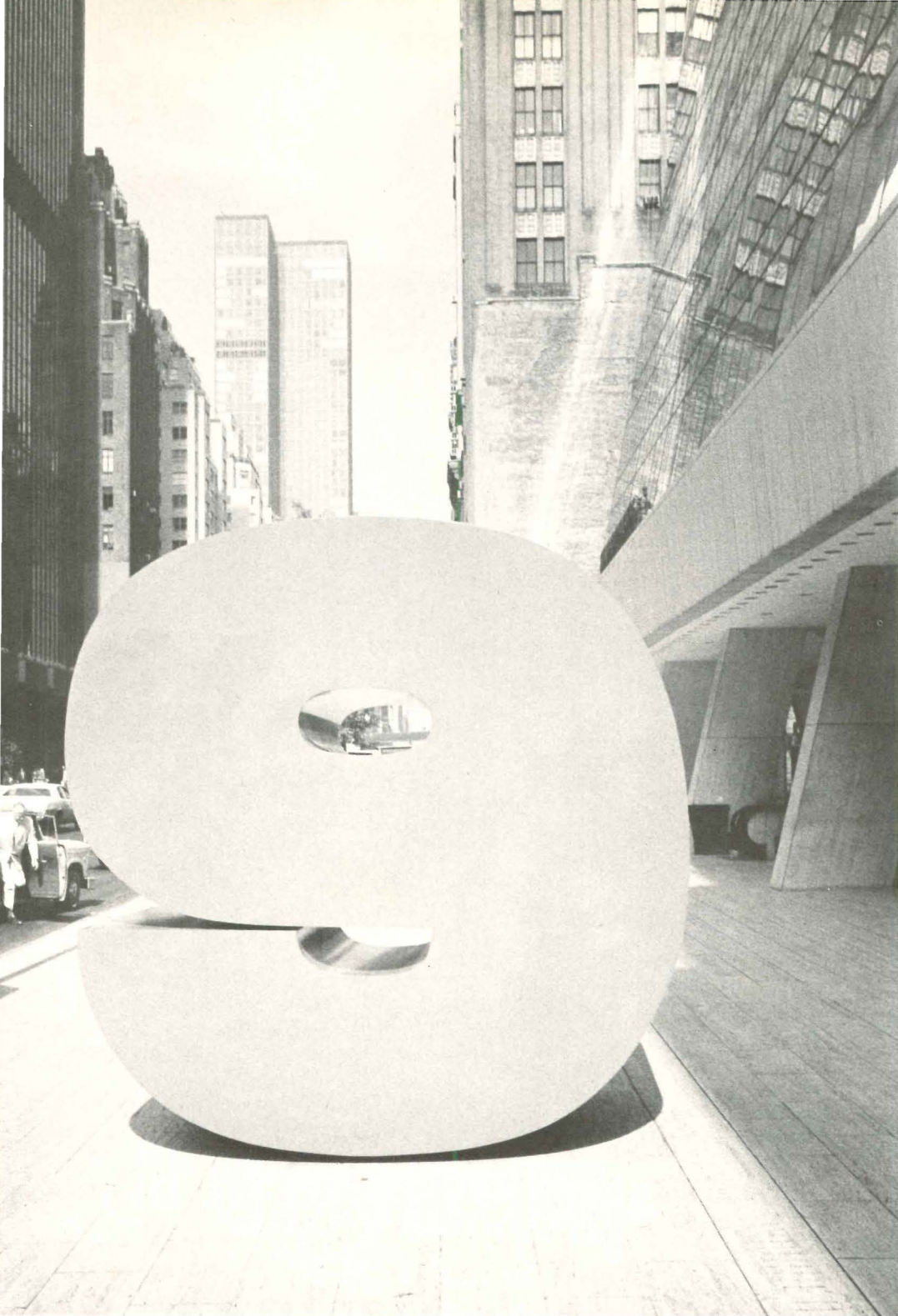


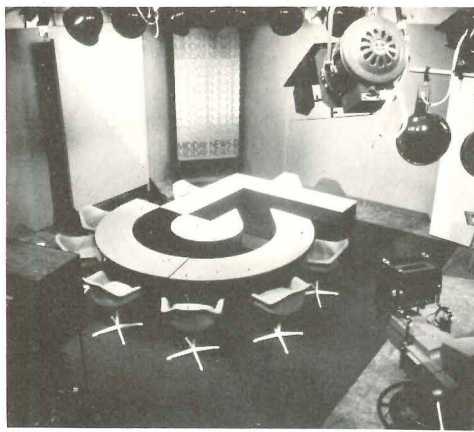
The Harper & Row cylinder and the 9, identifying the building at 9 West 57th Street in New York City, are both the work of the design firm of Chermayeff & Geismar. And both were created especially for an urban area where people are always moving, usually at a frenetic pace, on foot, or in cars, cabs, buses, bicycles. The intention is to establish a dynamic relationship between passersby and the sculptural markers. As people move, their perception of the objects changes; they catch different glimpses of them, but never see them in their entirety.

Made of highly polished metal, the Harper & Row cylinder reflects the life on the street and acts, especially when lit up at night by interior illumination, as a beacon.

The widely-admired 9 was invented to solve the problems of identifying and attracting attention to an anonymous-looking travertine and glass building, just off Fifth Avenue, on one of the busiest corners of the world. "Something beyond the ordinary needed to be done," says Ivan

Chermayeff. "Just identifying the building would have been totally inadequate. It needed a dash of drama and "something to bring some warmth and character to the space." Hence, the red color of the 9 and the attempt to invest the figure with a sense of the humorous. Hence, also the attempt to take full advantage of the weightiness of the form to make it look like a friendly lump sitting there. It is meant to be walked right up to and touched, to give human scale and dimension, and thereby to help overcome the monumental feeling of the building it identifies.

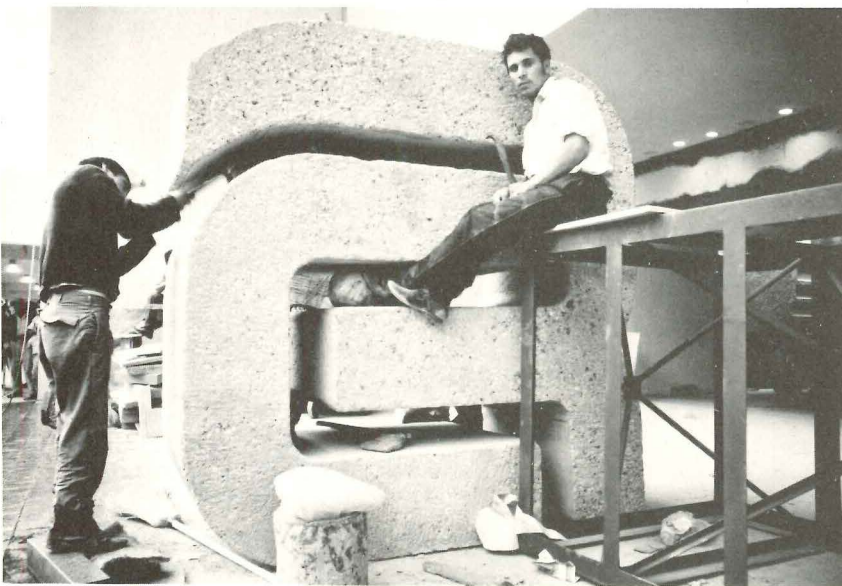




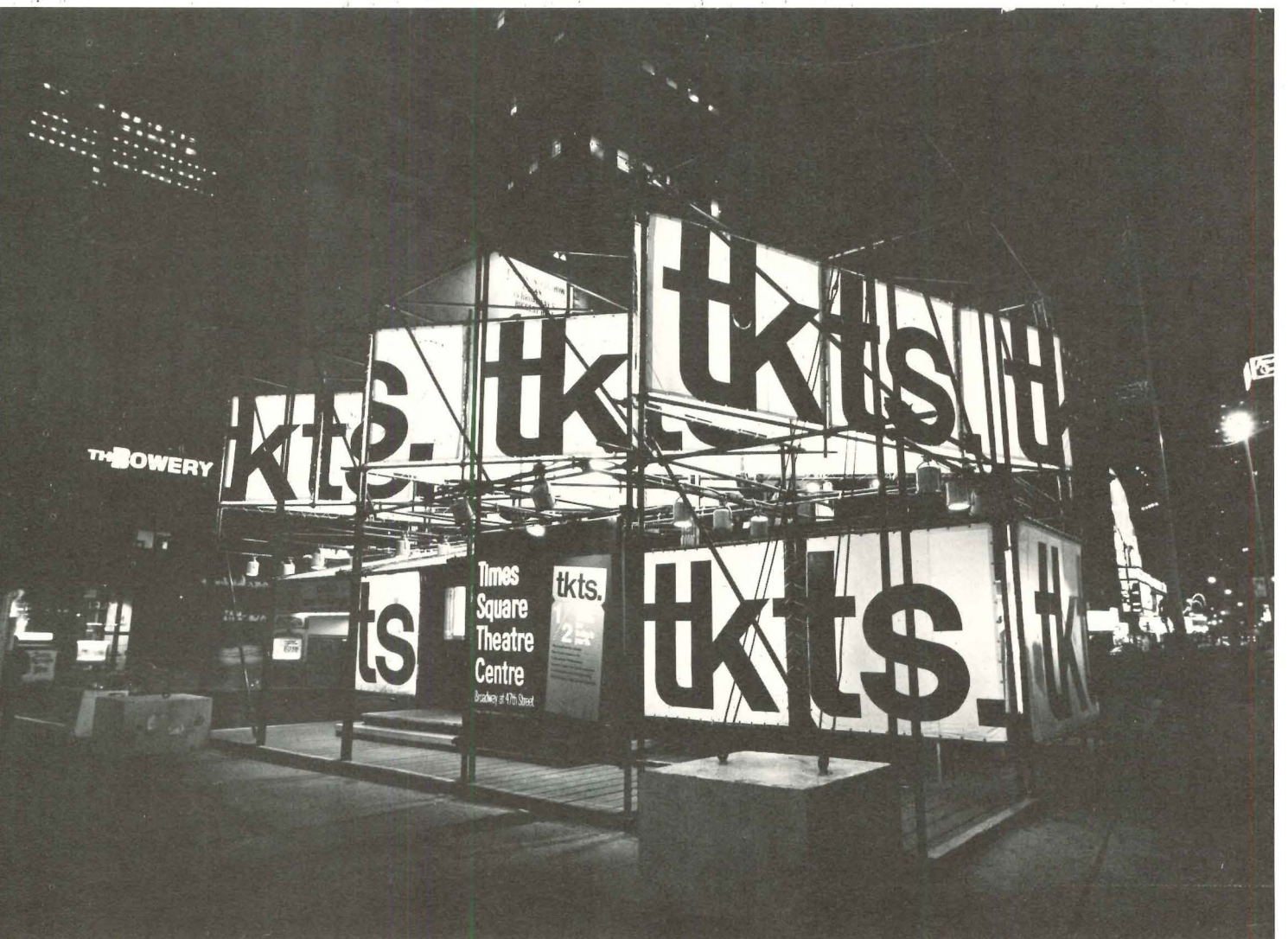
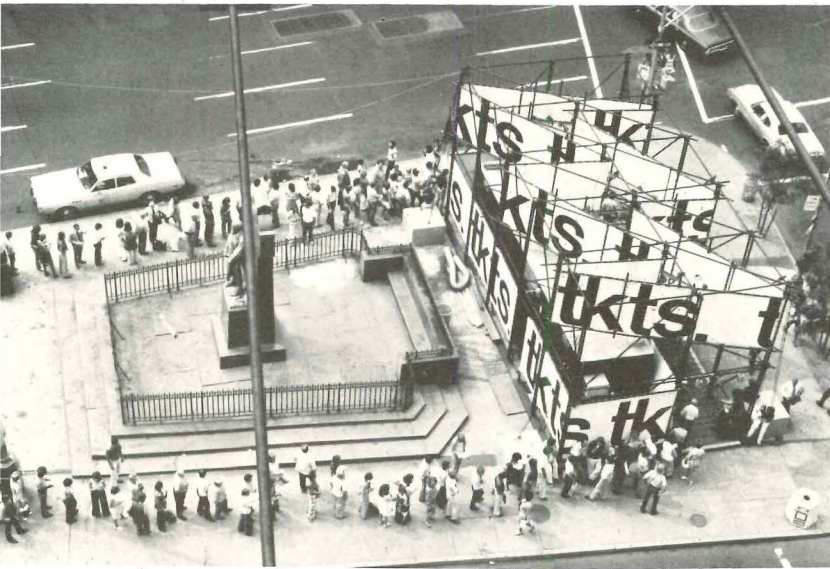
The three-dimensional symbol for the Camino Real Hotel in Mexico City, created by designers Wyman & Cannan of New York with Peter Murdock, serves a similar function as does Chermayeff & Geismar's 9. But while the 9 derives from a modern typeface and is in itself a piece of contemporary sculpture, the CR is a refinement of an ancient preHispanic symbol. It is intended as an expression of dominant influences on Mexican culture and to communicate the prevailing atmosphere of the region. "And it is easier to do this with symbols than words," in the view of Lance Wyman. The three-dimensional CR was also adapted to create a two-dimensional logo, which is used throughout the hotel.



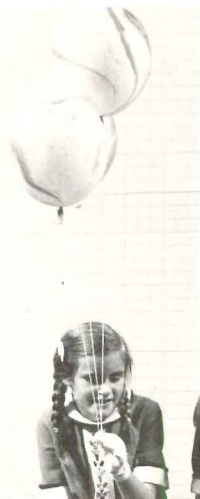
In their logo for Boston's television channel five, Wyman & Cannan reversed the process they followed in their work for the Camino Real Hotel. They began by designing a large two-dimensional number 5 for the outside studio wall, and then adapted it to form a three-dimensional board table. The arrow in the 5, which defines and also creates space, is meant to symbolize the movement and energy which are the essence of the medium, according to Wyman.



Times Square Theatre Center booking office, designed by the architectural firm of Mayers & Schiff, is an example of graphics evolving in concept and size to actually become a building. The problem was to create something dynamic and bold enough to be heard over the promotional cacophony of Times Square, but which was also relatively inexpensive. The architects' solution was an enormous black and white kite-like structure, anchored down at its four corners, and bearing bold letters. It is made of taut ropes, thin wood poles and sheets of light plastic, and like most kites it has a gayness and fleeting quality about it reminiscent of the theaters it services.







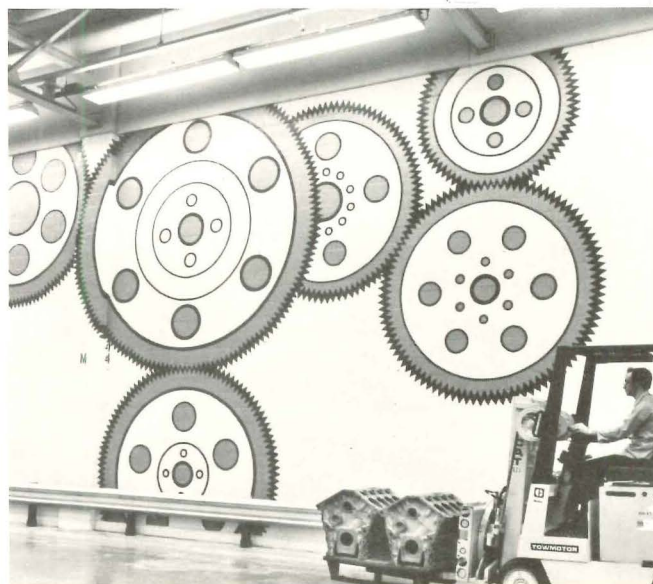
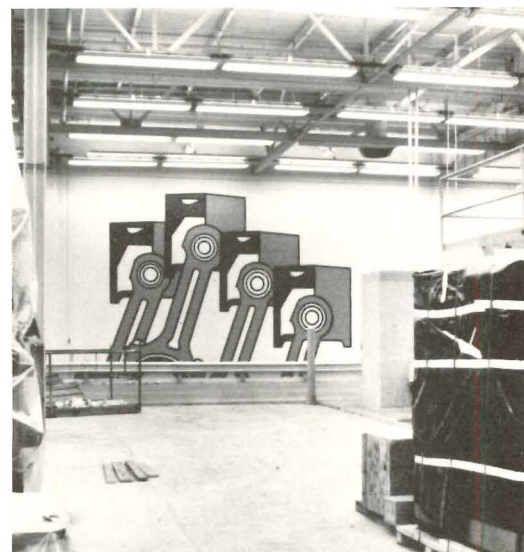
Another new development in environmental graphics is the elimination of words, letters and numbers altogether—both two- and three-dimensional work—so let the design make its point mainly by evoking a particular feeling or image in the viewer.

Such is the case with Rudolph deHarak's design for a large, blue neon and white metal tunnel, located on the ground level of 127 John Street in New York City. Serving as a conduit from entranceway to elevators, it points the way in a completely unequivocal manner, better than any arrow. The intention, according to deHarak, is to create an experience that "is not joyous, not heavy, just different and as interesting as possible." It is an experience, he says, that makes you stop and realize that, now, here's a building with something other than travertine walls."

In creating a new graphic system for the Boston Mass Transit System, the architectural, design and planning firm of Cambridge Associates struck on the idea of using photomurals in subway stations to show riders what they will find above street level. Firm principal Peter Permayeff says of the murals, "The intention was to make an underground environment that was not just varied and pretty but, more important, reflected the real world above. So even if you never look out of the train, but just sit looking out your mindlessly out of the window—as you often do—you would still get an image of what exists on the street." The style of the murals changes dramatically from station to station, which gives great visual variety to the subway system as a whole.



The graphics for a new Caterpillar Tractor basic engine plant shown here were designed by the environmental graphics group of Smith, Hynchman & Grylls. The art work gives a cohesiveness to the "natural chaos" of the manufacturing operations, says John Berry, director of the group. "And by making this signage colorful and oversize, the areas can be seen easily even across the huge acreage of the plant." Recent studies show that in industrial work areas the people who have to look at outsized graphics generally like them very well. One survey revealed, for example, that they give workers an environment with which they can personally relate, which has a personality of its own; such graphics also serve as a kind of status symbol.

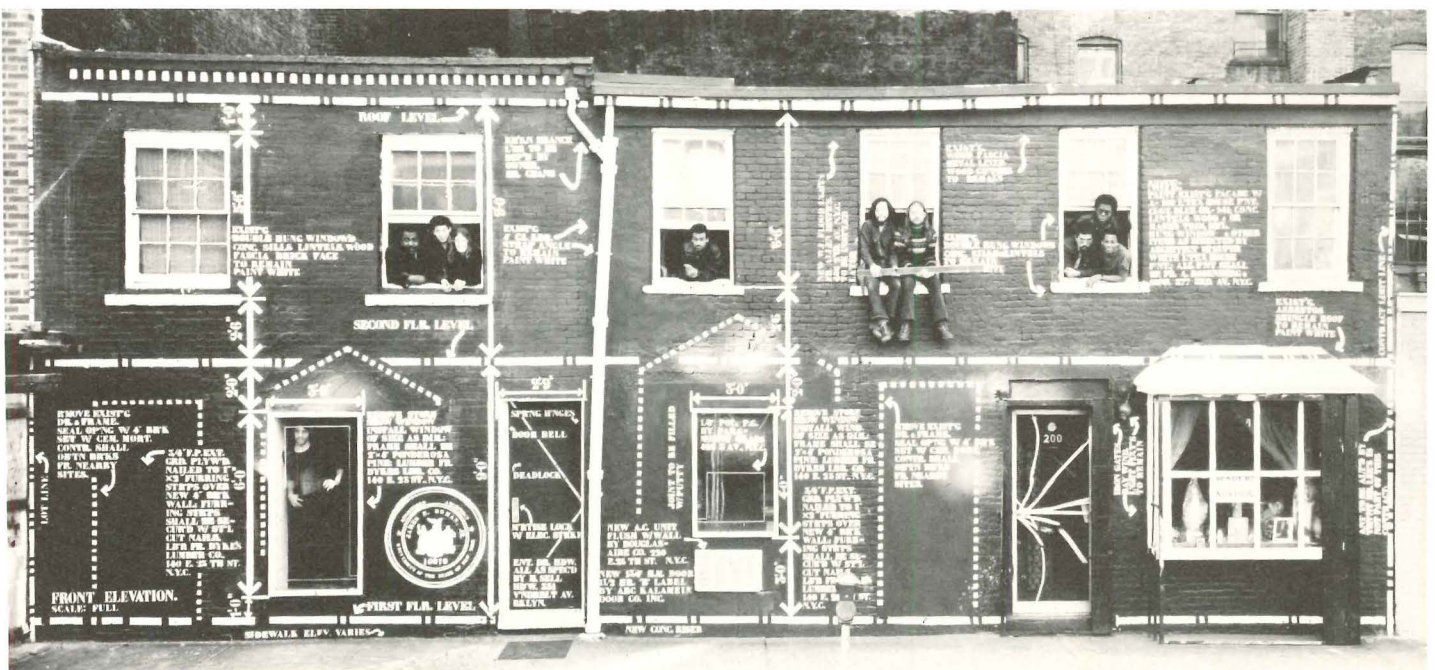
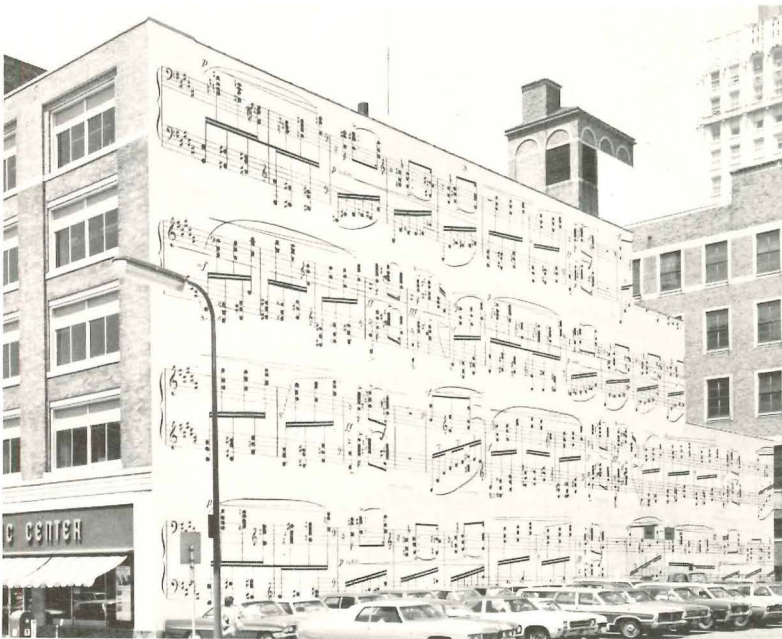


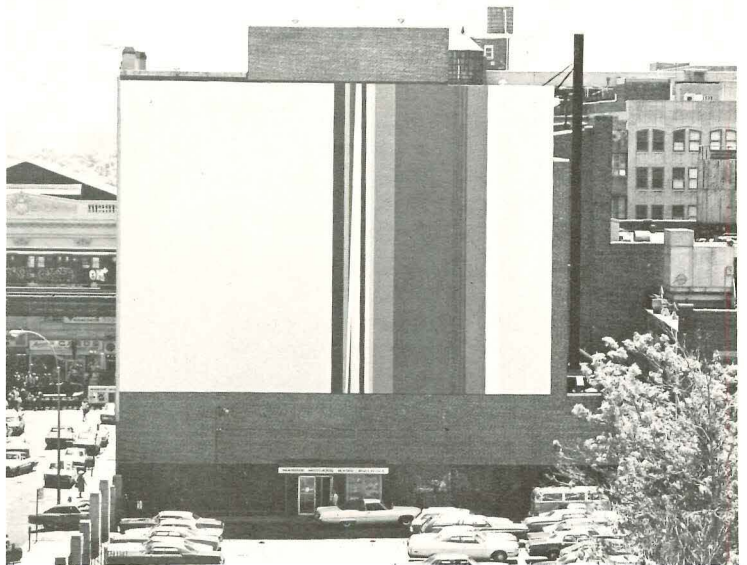
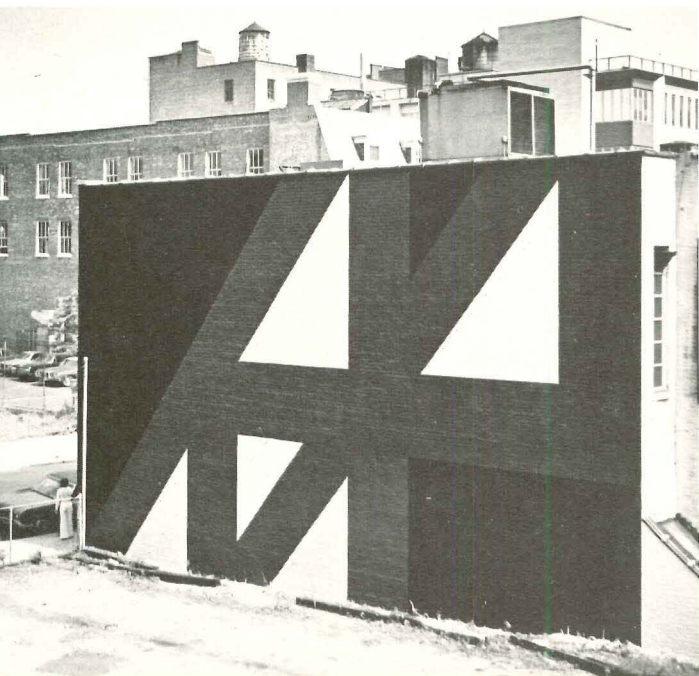
Huge wall paintings that identify and impart a sense of place have also moved outdoors, sometimes to cover whole buildings. The score of Ravel's "Gaspard de la Nuit," on the Schmitt Music Center in Minneapolis, is the creation of Jill Sprangers. In addition to serving as a wordless description and advertisement for the firm that commissioned it, the musical score enlivens an otherwise undistinguished urban neighborhood.

Some two years after moving into their present New York City offices, the principals of the architectural firm of James Doman & Associates began searching for "an inexpensive, efficient way to let people know what we were about. And what better way than a huge architectural blue-

print," says Doman. Designed by firm member Amado Ortiz, the wall painting was intended to "make a visual connection between passersby and the people working behind the building's walls."

The wall paintings shown here were created under the auspices of City Walls Inc., a New York City, artist-directed, nonprofit organization. Similar groups have formed in other cities to promote art in public places. Doris Freedman, president of the New York organization explains that "City Walls artists are concerned with the world outside studios, galleries and museums, and have directed their creative energies toward enhancing some of the dreariest sections of our cities." This approach is very different from that of community-based groups whose murals are intended to celebrate heroes, villify enemies and record history. "City Wall projects are primarily abstract paintings concerned with form and color and their relationship to the total urban environments," says Freedman. Shown here from top to bottom are the works of Tania at Mercer and Third Street, Manhattan; Jay Rosenblum at 89-64 163rd Street, Jamaica, Queens, and Pierre Clerk at 90-14 161 Street, Jamaica, Queens. Helen de Mott's wall painting at 509 Amsterdam Avenue, Manhattan, is shown on the next page. *A.O.D.*

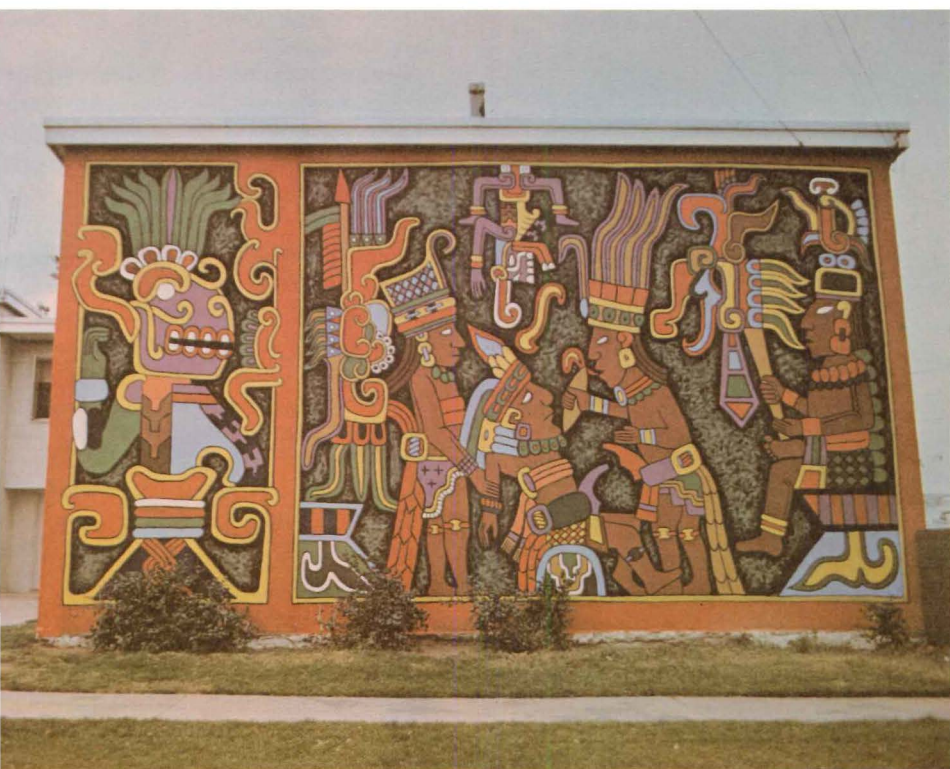






A New Mural Movement Brings Indigenous Art to the Streets

Robert Sommer



Trada Courts Housing, Los Angeles; coordinated by a self-taught Chicano artist.

There is a street art explosion in America of unprecedented proportions. What differentiates it from previous wall paintings is that the murals are not advertising a product and they are frequently painted by nonprofessionals. The last mural movement in this country occurred during the Great Depression when unemployed artists painted public buildings. Most of these WPA murals were painted indoors and little effort was made to involve neighborhood people.

The new mural movement did not begin as a Washington program that filtered down to the states, cities and neighborhoods. The main impetus for these mu-

Robert Sommer, professor of psychology at University of California at Davis, is the author of many books and articles on the behavioral basis of design. The expected material here is from *Street Art*, Robert Sommer. Copyright © 1975 Robert Sommer. Published by Links Books, 33 W. 60 St., New York, N.Y. 10023.

ralists has been at the local level rather than coming from above. In the slums, ghettos and barrios, murals are a way of bringing art to people who are otherwise denied access to it.

The primary goal of many black muralists is to instill respect, dignity and pride within the community. Chicanos, drawing upon a mixed Mexican, Spanish and Indian heritage, are a mural-proud people. Wall painting is a vital part of community life. Chicano murals are readily identified by their bright colors and bold outlines, the frequent appearance of plumed serpents, skulls and skeletons, unborn children, the snake, eagle and prickly pear, as well as the stylized Indian figures with ceremonial clubs and ancient musical instruments.

For the sides of commercial buildings, white muralists employ abstract geometric designs for an art pure and simple. Relying on bright colors and sharp contrasts, these paintings bring gaiety to the grimy streets and at the same time offend no one. One can explain the difference in

"Knowledge Is Power, Stay in School." Painted at the rear of a Boston school.



protection and maintenance of disinterested third parties.

Graffiti: Anyone who is seriously interested in art in public places has to face the vandalism issue. Some muralists reject the coupling of their work with graffiti even for comparative purposes, while others acknowledge a continuum between illegal wall writing and their own work. Most graffiti are written rather than drawn. If a picture is worth a thousand words, graffiti writers haven't heard it.

The issues involved in determining what is vandalism are complex. One must begin with a determination of what constitutes an attractive public environment before labeling an act as defacement. This in turn raises important questions about the nature of art and its role in public settings.

There is an important difference between a person painting a fire hydrant in a slum neighborhood and someone carving "AR loves VD" on a tree in a state park. While both acts represent the utilization of public space for private self-



Titled "Black Women" and painted as part of Boston's 1970 Summerthing program.

content between these abstract designs and the representational paintings of the black and third world communities as less a matter of artists having something to say, than having a community willing to listen.

Only among its youth has white America taken its culture to the walls. In university cities and bohemian sections, one encounters the familiar psychedelic style. Deriving its colors and themes from the ultimate drug experience, it fuses meditation, yoga, aikido and astrology.

There are many standards which can be used in judging street art. The most logical ones involve whether the work improves the immediate environment, the extent to which it involves neighborhood people and its role in developing community identity. Street art is a complex social phenomenon that includes many ingredients—painting done in the presence of an audience, the rhythm of crowds, interaction with local gangs, the hostility of drunks, the watchfulness of policy, zoning regulations and sign ordinances, and

Longest mural in the world, "Hog Heaven" graces a Los Angeles sausage factory.



pression and communication to others, the intent of the two people is different. Hopefully the hydrant decorator has a desire to brighten his neighborhood and counteract the drabness and ugliness of his surroundings. The tree carver, on the other hand, did not express the anonymity of the people's artist. Though his message is accessible to any finder, it was probably directed to a specific friend. Another difference is that people's art requires talent, while vandalism does not. These efforts to convert ugliness into beauty (including satire) make the invalid assumption that ugliness is inescapable and unpreventable. The New York subways are dingy, dirty and depressing, but the Montreal and Paris metros and the underground in Moscow are not. If someone drops a piece of paper in a Moscow subway, a local citizen will not swoon in aesthetic rapture, he will tell the slob to pick it up. If a bystander does not do this, he is implicated and likely to be tried before a people's court for being socially irresponsible. There is no reason



Another of more than 60 murals at Estrada Courts Housing, Los Angeles.

struction fence painted by students at a high school in Columbia, Mo.



why a subway has to be dingy, noisy and malodorous. In contrast to the general dreariness, the graffiti provide some color and humor. The solution is not to romanticize the graffiti but to brighten up the underground environment.

Politics: In the Soviet Union, Mexico and Chile, street painting accompanied socialism. Neither the intent nor the content of most American street art has been revolutionary. This is particularly true for professional muralists who paint abstract murals on the side of commercial buildings. Black street art is intended to instill ethnic consciousness and pride by portraying historical events or famous people. Chicano art is stylized with icons of Spanish, Mexican and Indian origin. Muslim painting employs African-Arab characters and logos. This kind of identity-building and connection with history serves an important purpose for people oppressed for centuries, but it would be incorrect to characterize it as revolutionary. The most political aspect of most ethnic murals is the involvement of the local community



Antidrug mural painted on the side of a neighborhood tavern in Los Angeles.

in overcoming bureaucratic red tape, finding a suitable wall, organizing, deciding on content and painting the wall.

The justification for the new muralist is art for and by the community. If these painters should turn their backs on local people, the new mural movement will have ended.

Opportunities Unlimited: The opportunities for creating street art are limitless. This does not imply that every wall should be painted and every lamppost converted into sculpture, but only that these opportunities exist and in some situations the setting would be improved through an artist's intervention. Cities are a better potential for art work than rural areas. There is a saying that nothing in nature is ugly, only the products of humankind can be ugly. There is beauty in the trackless desert, the glaciers of Antarctica and the lava trail of an extinct volcano. These may be majestic, awesome, mysterious and even frightening, but they are not ugly. The situation is different for human paraphernalia and products—gas pumps, fire hy-

drants, warehouses, factories, parking lots, sidewalks and tunnels.

There are many overlooked spaces with an exciting potential for unique forms. It must be emphasized that there is no single embellishment that is suitable for all places and all times. It is the task of those who care about art in the city to ask if anything can be done to brighten up an alleyway or a sewage treatment plant. Perhaps no art is the best solution, but there is no inherent reason why a sewage treatment plant should be gray or green. Some power plants have found that bright colors improve safety, efficiency and worker morale. Brighter and more attractive sewage facilities may assist in the necessary task of changing public attitudes toward recycling human waste.

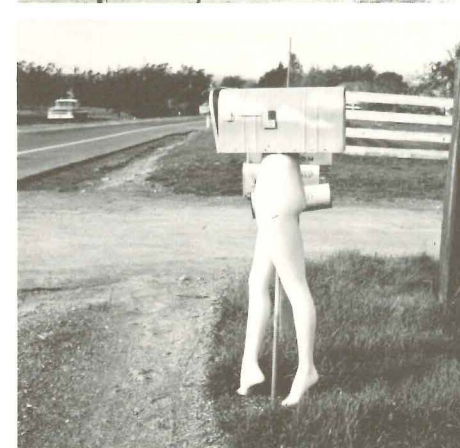
Tunnels are probably the dingiest and smelliest public spaces in urban America. Incidents of crime and vandalism have reached the point where the pedestrian tunnel may no longer be a valid architectural form. However, we can look to Montreal to see how exciting an underground

plaza, shopping and entertainment area can be. The use of murals and bright colors, in addition to better lighting and adequate ventilation, can counteract some of the drabness of pedestrian tunnels and possibly reduce vandalism.

One of the most depressing aspects of the modern city is the percentage of space devoted to the automobile. The vast expanse of asphalt surrounded by bare walls degrades the cityscape. However, some of the most exciting murals in downtown areas have been painted on walls adjacent to parking lots.

The factories, machines and implements of modern America provide many opportunities for the street artist. Cylindrical storage tanks, steel plants belching fire and refineries lit up like a million Christmas trees represent accidental art already, but there are possibilities to create deliberate art too. Deliberate art is not automatically preferable to the accidental art of an industrial scene; this is a decision that belongs to the people who are involved—management, workers, neigh-

Oil field art, Santa Maria, Calif. (top); and mailbox in Sebastopol, Calif.



ood people, automobile drivers, pedestrians and so on. I don't know when the first construction fence was painted, but the practice is spread across the continent. There has been a constant problem with graffiti on the construction fences. Somewhere along the line a project supervisor had the sense to allow an art class to paint murals on the fence boards. The practice had so that painted construction fences are now commonplace. Sometimes the painting is organized around a single theme such as a centennial celebration. Other times each student selects a six-foot area and paints whatever she wants. The large surface to be covered generally encourages a single connected mural. Some construction fences have been painted by organized groups.

The excitement of the new mural movement is contagious. Like the bicycle race with which it overlaps in time, there has been a succession of local campaigns rather than an overall national program. Now the movement is faced with



Painted supports for a highway bridge that links Coronado and San Diego, Calif.

A mural colorfully decorates a private home in Santa Fe, N.M.



the decision as to whether it will become another centralized program dependent upon the federal government and foundations or continue as a meeting ground for artists and local people. There is presently an effort being made to organize a national conference on muralists to discuss common problems, particularly funding. In the U.S., the idea of art going public is something like a corporation going public. Art becomes a commodity to be sold to a mass audience. A true people's art does not mean professional artists selling their wares in shopping centers and restaurants but working with local groups to create their own art. Of all the art forms today, street painting has the greatest potential to become a true public art.

The lesson of community mural groups is that some exterior spaces can be reclaimed by local people to reflect their own culture. There are many walls still to be painted, a great deal of material for sculpture, but above all, there are creative people who have inherited a thousand years of experience in the use of paint and stone. □



Lettering was completely organic to ancient Roman architecture, in contrast to the sans serif appliqué (below) all too typical today.



Signage: Fitting Letter Forms to Building Form

by Andy Leon Harney

Architectural attitudes toward letters on buildings generally range from apathy to sympathy. Yet, there is an architecture of the alphabet which, if properly employed, can reinforce a building's character and enhance its facade.

Nicolette Gray, one of England's most articulate designers writing on architecture and lettering, points out that "architectural lettering cannot be reduced to function in the sense of legibility. Its function is to convey an impression, as well as to spell out words. Also it is part of a whole, and must be related to the function and design of that whole." Letters can be cast, bossed, incised, sculpted, applied, lit with neon or spotlights, made to imitate hand or foundry-made type faces.

Victorian architects took great pains to integrate lettering and numbers as part of an overall decorative pattern. Fanciful uses of numbers in a raised, serified-type style were not uncommon. Art nouveau is another era when the designer took great delight in integrating lettering and form. Perhaps the best example of this integration is Hector Guimard's Paris metro gateways. And even in the heyday of the Bauhaus, with its strictures against decorative "over-cultivation," the designers of what we now call the Art Deco school were making letters highly integral elements of their buildings.

Meanwhile, the Bauhaus designers were applying the same functionalist discipline to letter forms that they did to buildings, and with the same widening influence. Herbert Bayer designed his sans-serif "universal" type face in 1923 and as modernism swept architecture in the '40s and '50s sans serif was firmly installed as the dominant style of architectural lettering.

For the past 15 years, the favorite typeface for use on buildings has been Helvetica, a derivation of the Bayer design. The architect's catalog is filled with signage systems in Helvetica bold and medium. Architects and designers are among the latest defenders of Helvetica as an appropriate, easy-to-read type style.

Andy Leon Harney is a Washington writer and editorial consultant and frequent contributor to the Journal.

"There are very few contemporary buildings that can support a serif face," says graphic designer Peter Bradford. "Most serif faces are not designed for directions. When you blow up other letters, it often just doesn't work."

Designer Herb Lubalin disagrees: "Helvetica is a perfectly designed face—it is architectural and every architect uses it to the exclusion of other typefaces. But it is essentially a dull face, evoking no feeling or reaction except among the Swiss, who invented it, architects and designers who use it, and big businessmen who don't know what they want but figure it's sophisticated enough to be safe. Lettering needs some measure of imperfection to be interesting."

Lubalin feels that almost any typeface can be used on any building and any building can use almost any typeface, if the right person is handling its design and application.

Wolf Von Eckhardt, architectural critic for *The Washington Post*, and former art director of the JOURNAL, feels that "architects are not equipped to design legible lettering," pointing out that few architects have had any training in graphic design.

"An architect may sketch in an elevator in the design of a building, but when it comes down to making final decisions, he turns to an engineer to handle that aspect of the overall program. Yet often, whatever lettering he likes on the first set of drawings ends up on the finished product—and all too often it's Helvetica."

"Few architects would give themselves the task of designing the sculpture, or the murals for a building," says Don Page of Page, Arbitrio & Resen. "They would be wise to receive help where graphic problems are involved." Philip Johnson, Eero Saarinen, and Skidmore, Owings & Merrill are among architects who have regularly sought such help from leading graphic designers.

Yet, they are the exceptions. The all but exclusive use of Helvetica as a type style for contemporary buildings, both interiors and exteriors, smacks of a formula approach to design. Clearly, there are instances where Helvetica (or son-of-Helvetica) can be effectively used. Yet, all too often, it is used as a safe "contem-

porary" look which bears little relationship to the architectural character of the building, the materials used in its construction, the site, climate and lighting on the building.

Nicolette Gray writes: "Sans-serif leaves each letter as if it were on its own, as much related to adjacent moulding as to the next letter; serifs bind a word together, making it an entity. Both have advantages and disadvantages and need to be designed with this characteristic in mind." Finally, she concludes, "One must admit that formally sans serif letters are rather dull shapes; the even line is monotonous. The introduction of some sort of shading adds immensely to its range of pattern and expression."

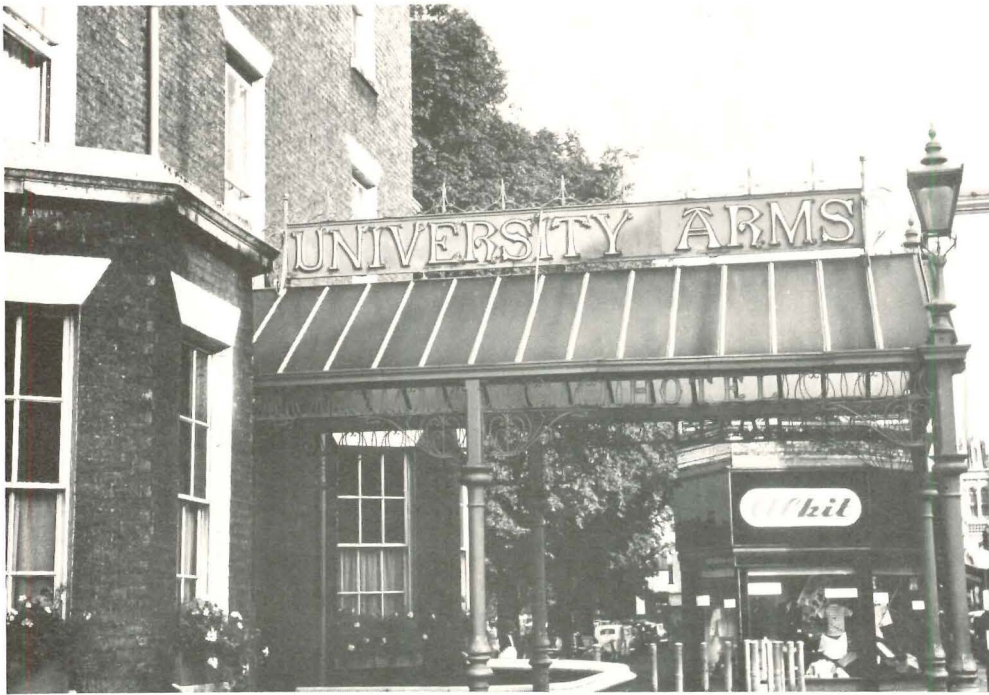
Type styles need not be "of the moment" in design. Some of the more classic styles can evoke the mood an architect is trying to achieve in the overall building. For example, Lubalin used Times Roman for the cornerstone identifying Kevin Roche's Ford Foundation Building in New York City. The name is chiseled in granite to lend an air of established solidity to the building.

"You can mix cultures and type styles," says designer Tony Palladino, "and come up with a much more exciting product. You can take an old typeface and make it contemporary through the way it is used."

Some of the most notable exceptions to the reliance on neutral sans serif have been on buildings designed for corporate clients who already have strong graphics programs. Such a client is likely to view each new building as an opportunity to reinforce public recognition of its visual identity.

Perhaps the most notable such client is CBS, long famous in design circles for the total graphics program created by William Golden and his successor Lou Dorfsman. The program prescribes building signage in a delicate serified type style designed by Golden. The application of this lettering to the corporation's burly Saarinen headquarters building in New York is one of the happiest marriages of graphics and architecture to be found.

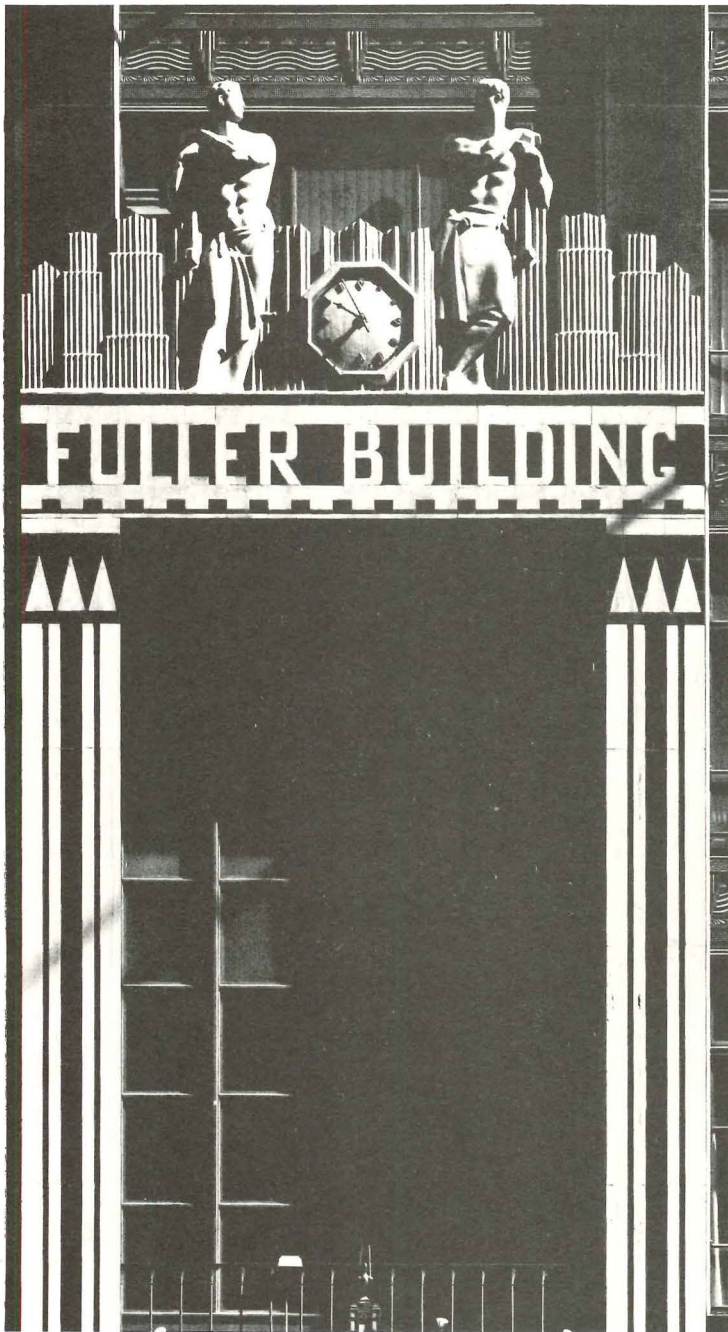
The familiar square-serif IBM logo, part of an overall design program devel-



oped by architect Eliot Noyes and designer Paul Rand, gives identity to the corporation's highly diverse collection of buildings around the world. Says Noyes, "We are now urging architects to consider the IBM sign as part of the building, and to incorporate it into the design."

More typically, it is up to the architect—working on his own or with a consultant—to come up with lettering that will reflect the building's nature and reinforce its character. To settle for a safe sans serif is to accept a cliché as attractive, but as predictable, as a Barcelona chair in the lobby. □

The Victorians took great delight in integrating architecture and lettering styles. The University Arms and Odd Fellows Hall examples are both British. Similar integration was the rule in the Art Deco period, as witness the Fuller Building in New York City and the Paris metro entrance.



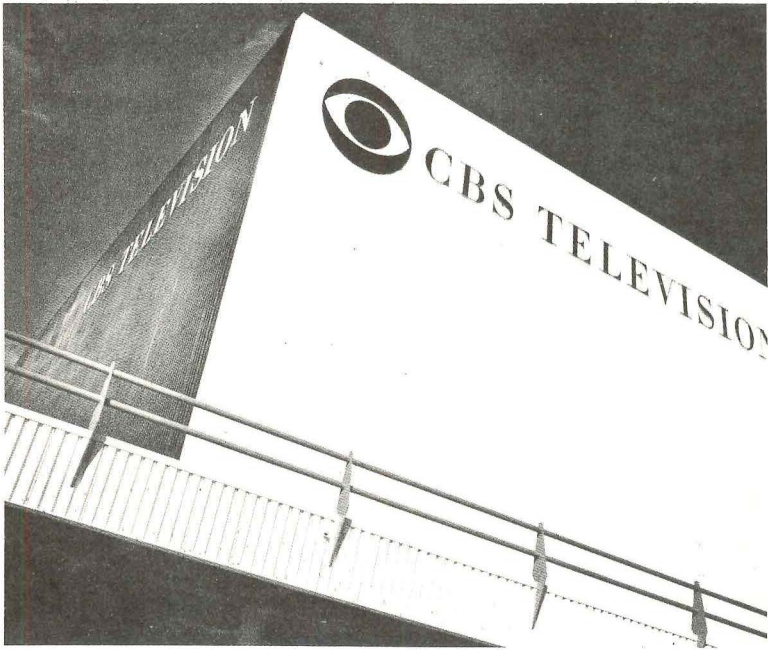
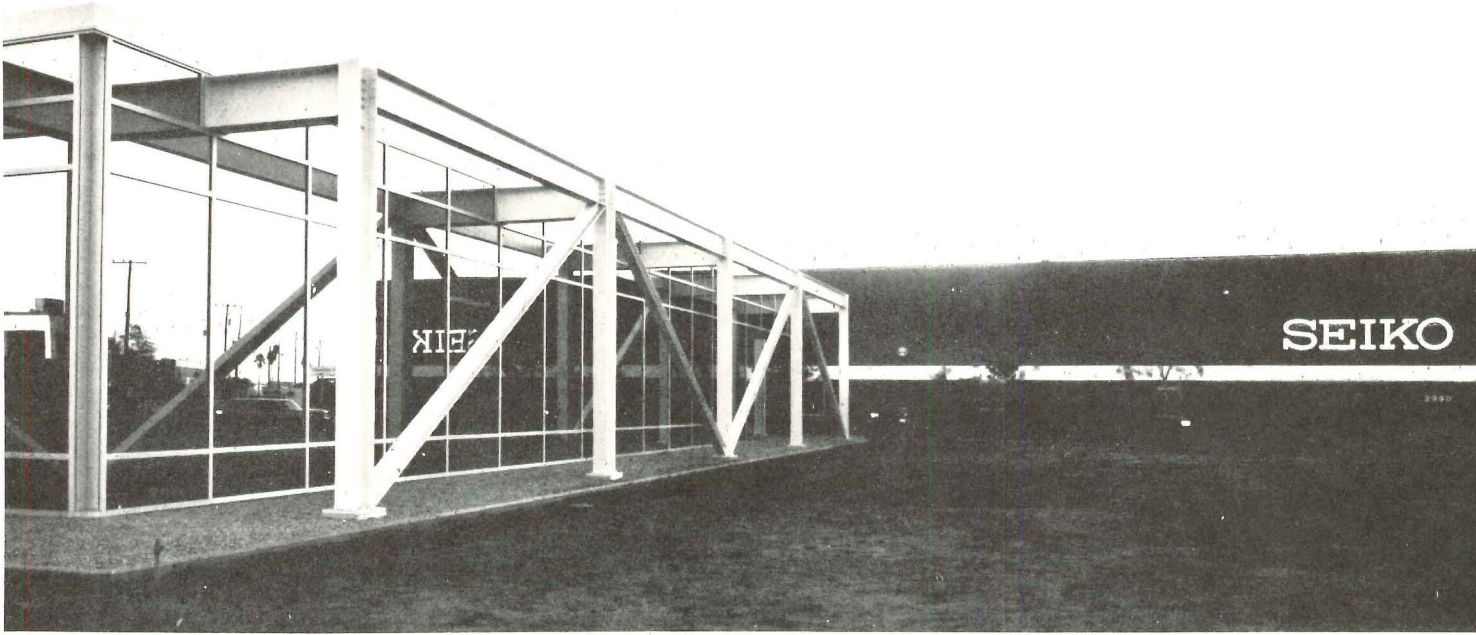


**Radiology
EKG/EEG
Rehabilitation Medicine
Physical Therapy**

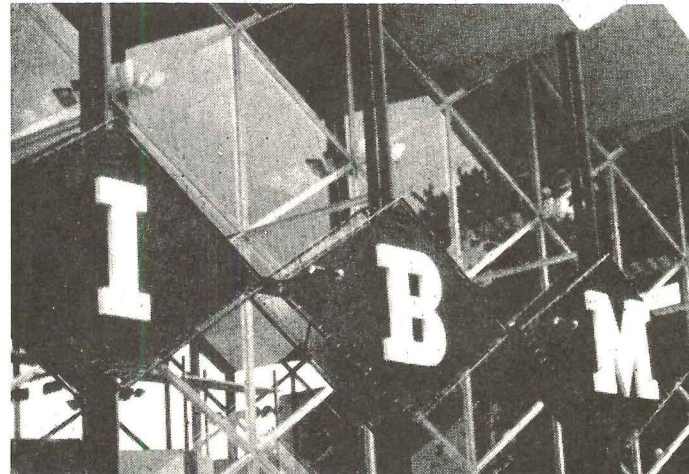
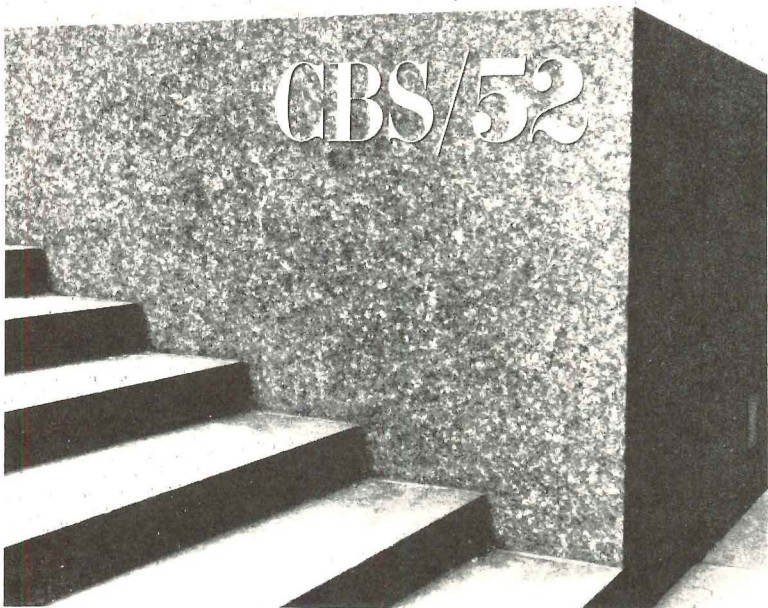
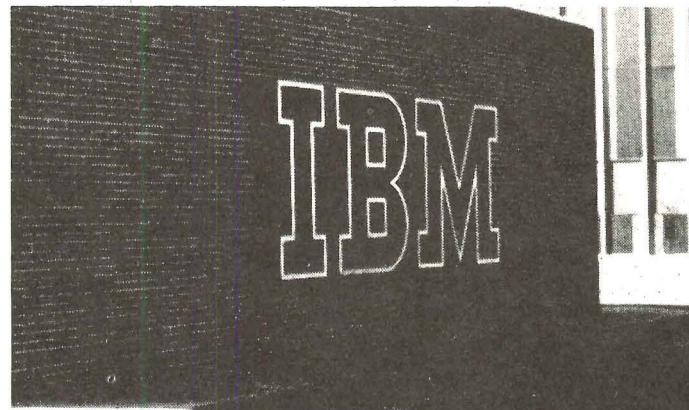
**Laboratory
Corridor At Left**

Uses of the ubiquitous Helvetica: straightforward but dull directional signs for a garage and a hospital interior; more imaginative signage for Atlantic Richfield Plaza in Los Angeles (graphic designer, John Follis & Associates) and a classroom in Boston's Acorn school (Mayers & Schiff Associates).





CBS and IBM achieve identity on their buildings by use of uniform letter styles they have made their own. The facade of the U.S. headquarters of Seiko (Katjima Associates) was made a billboard for display of the firm's logo.



*Serif alternatives to Helvetica:
 Fortune bold in the garage of the
 Christian Science Center in Boston
 (Page, Arbitrio & Resen); a crisp, out-
 size Roman in New Orleans (Berman
 Icardi); Cooper black in lower case for
 the Hartford, Conn., Civic Center
 (Peter Muller-Munk & Associates);
 classic capitals for New York's Juilliard
 school (Nicholas Fasciano) and an
 antique style for a bakery in Seattle's
 flavorful and historic Pioneer Square.*



**THE
 JULLIARD
 SCHOOL
 144**



Beyond Graphics: The Architecture Of Information

**Richard Saul Wurman, AIA
and Joel Katz**

In this issue of the AIA JOURNAL you have seen a wide range of environmental graphics used to direct, to inform, to entertain, to delight. Yet, for all their diversity, environmental graphics are but a part of the limitless techniques, media and programs that can make the city understandable to all of us who live in it and use it. The goal of all the ways of displaying and communicating information is an informative and attractive environment interacting with informed, self-informing citizens.

The architecture of information applies not only to large-scale graphics applied to or integrated with structures in the man-made environment, but also the means of information display which make that environment understandable, interesting and navigable. It follows from the recognition of the various ways in which the environment can become self-revealing.

Signs, in order to be effective as well as unintrusive, must on one hand respect their environment and on the other hand be separate from it to communicate. They must be legible from a functional distance at a given size.

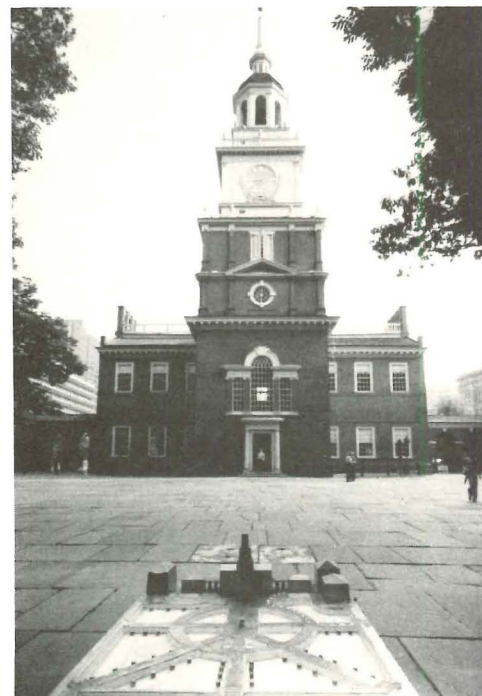
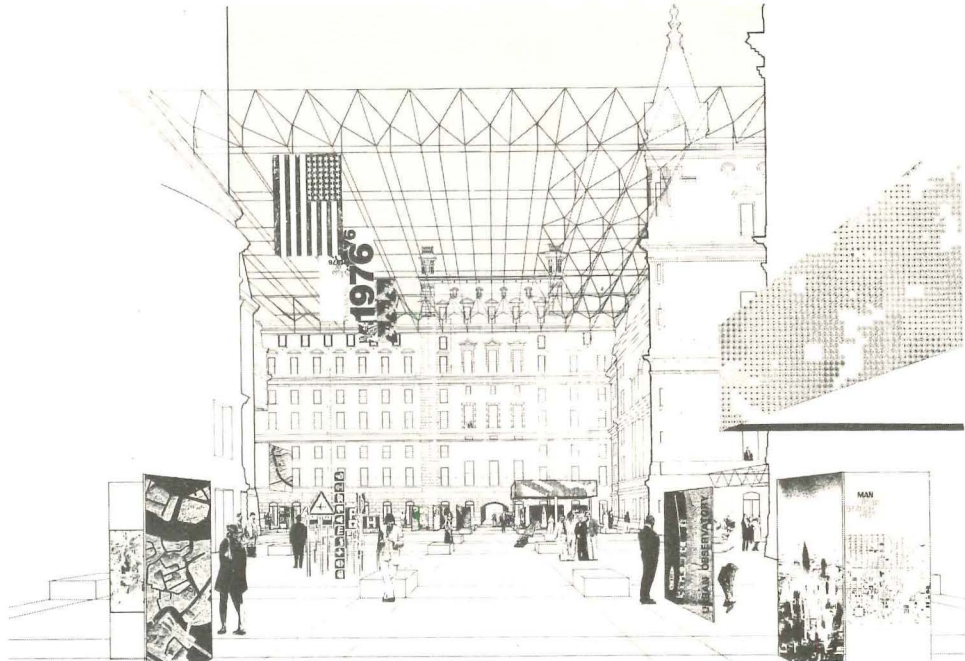
Maps, even though containing verbal designations, cross the line into experiential reality, and are capable of providing visually, sensorily descriptive analogies of experience. Our interaction with our environment is largely sensory rather than intellectual. Yet, because our culture is so verbally oriented—with visual literacy hardly considered by our educators—we find it difficult to relate two-dimensional translations of our environment, in the form of maps and diagrams, to our encounters with it.

Maps and diagrams, like any communication medium, must consider perceptual and physical constraints as well as coping with this negative cultural bias. They must

Richard Saul Wurman, partner in the architecture and planning firm of Murphy Levy Wurman, is national chairman of the 1976 AIA convention and the author of many books on urban communication and the environment.

Joel Katz, graphic designer and photographer, is an associate of MLW and co-author of several books.

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be large enough in scale for the information to be meaningful, and large enough in size to be legible. They must be simple enough for their content, once extracted, to be retained and related to experience.

The visual communication of information is particularly fortuitous for both artist and audience when it takes place in the

Above, a proposal for an urban observatory in the courtyard of Philadelphia's clock hall. Murphy Levy Wurman is designing the renovation of the courtyard featuring information display for the bicentennial. Left, one of three models for the blind of Independence National Historical Park done by students under MLW's direction.

environment it is communicating information about. It is in such a situation where visual translation (in the form of a map or diagram) and the sensory, visual reality (the environment) can be simultaneously experienced. Whether a topographical diagram of the spot you are standing on, or the description, in advance of things you are likely to encounter, it is in such circumstances where we can be made aware of things we have taught ourselves to see without really seeing, as the congruence of the experience and the graphic hits us. The simultaneity of the experience is so compelling because it eliminates the generation of intellectual understanding that so often intervenes between an experience and a visual (rather than verbal) analogy of it.

The possibility for such simultaneity and revelation is also high with models placed in the environment they represent

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Energy Standards: Design Stimulus Or Straightjacket?

"In essence," said AIA President William Marshall Jr., FAIA, in congressional testimony this summer, "we believe that the approach to energy conservation is one of attitude. Mandatory energy standards are a result of an attitude that says we cannot trust professionals and building owners and the normal action of the marketplace to produce satisfactory solutions. Promulgated performance standards result from an attitude that accepts the idea of establishing energy efficiency goals and allows professionals and building owners to achieve those goals."

Much of the debate over how to conserve energy in the built environment has centered around performance standards versus prescriptive standards. The debate is continuing. To date, proponents of performance standards have won one battle in Congress and lost one with the American Society of Heating, Refrigeration and Air-Conditioning Engineers.

The latter battle was lost when ASHRAE's board of directors unanimously approved a document known as Standard 90-75. The ASHRAE standard deals primarily with the thermal or energy effectiveness of various building components. It calls for the building envelope to be constructed of "materials which have a high degree of insulating effectiveness"; for HVAC systems that will meet "higher standards of performance"; for HVAC equipment of "greater efficiency and superior controls"; for changes in lighting levels to vary throughout a space according to function. More precisely, the standard also states minimum U-values for floors and roofs; infiltration rates for doors and windows; number and settings of thermostats, and specific regulations for HVAC systems and lighting levels.

The AIA, among other organizations, has consistently opposed ASHRAE 90-75, mainly because it is a prescriptive standard. AIA's opposition to prescriptive standards has three basic thrusts: that they apply only to individual components of buildings rather than the entire structure; that they do not encourage development of new technology, and that they do not utilize fully the creative problem-solving talents of design professionals.

In a recent memorandum, Dick Kalt,

assistant director of AIA's codes and regulations center, detailed some of the Institute's other objections to 90-75:

"Nowhere does the standard consider energy efficiency as a total package unless costly analysis of alternatives are made;

"Nowhere does the standard recognize the advantages of natural lighting;

"Nowhere does the standard consider energy efficiency of power-generating equipment remote from the site;

"Nowhere does the standard recognize user needs or desires as if buildings are designed in a clientless vacuum;

"Nowhere does the standard provide for any sort of positive incentive to control energy utilization."

Kalt also cautioned that adoption of the standard could result in restraints on designs, "de facto limits on new approaches to conservation," higher consulting engineering fees, delays, inflation and "less innovative, more costly buildings which may not even be more energy efficient."

"Prescriptive standards," said John P. Eberhard, AIA, president of the AIA Research Corporation, "tend to be based on the requirements of the building and its subsystems divorced from the human purposes to be met by the building. This approach tends to preclude more innovative solutions that architects, engineers and the building industry might develop in the future."

The conflict over ASHRAE 90-75 provides a key to the issues involved in debates over other energy conservation standards now being discussed and enacted at the federal, state and municipal levels. The goal of energy conservation is an unquestioned one; the means of achieving that goal is a highly volatile question. In part, this is because performance standards tend to be less easily definable than prescriptive standards. Rather than stating a given limit, such as a U-factor for floors and roofs, a performance standard would set a total energy consumption goal for a building, such as an annual energy budget for the total amount of energy required for heating, cooling, ventilating, lighting and other supportive systems in a building.

"Performance standards state a desirable set of requirements to be met without

reference to possible solutions, while specification standards give minimum requirements specified in terms of particular materials, systems, designs and construction methods," said Eberhard. "More important than the language used, however, is the philosophical basis which separates the two concepts. The performance concept grows out of a rationale of meeting some human requirement or set of requirements. The specifications approach accepts the state-of-the-art known solutions as satisfactory and attempts to specify either minimums or maximums based on the characteristics of such existing solutions."

It is with notions such as these in mind that AIA and other organizations have opposed Standard 90-75. Since the standard's passage, however, the opposition has taken a new direction—to prevent its adoption by model code organizations and its incorporation into model codes, which in turn would mean its use by states and municipalities using such model codes.

Incorporation into model codes would mean the use of Standard 90-75 in numerous municipalities and in the 18 states which use either the codes established by the Building Officials & Code Administrators, the International Conference of Building Officials or the Southern Building Code Congress.

An AIA survey of trends in state regulation of energy in buildings showed that three states so far have adopted 90-75 and an additional 11 are leaning toward adoption of the standard.

The survey also showed that as of September six states had other prescriptive standards in effect and two had adopted performance standards or energy budget regulations. Ten states and the District of Columbia have no energy regulations, and 14 states have taken other kinds of steps toward legislating energy conservation, ranging from the establishment of an energy office to tax incentives for the use of solar heating.

Just as diverse as the multitude of state actions are the bills now pending before Congress. So far, energy legislation has epitomized the push-pull situation between President Gerald Ford and Congress and the situation has been variously

described as "confronting a confrontation" and "staring at a stalemate." One bill, the Building Energy Conservation Standards Act, which passed the House on Sept. 8, deals with standards. And it was in the House version that proponents of performance standards emerged on top.

This bill directed the Department of Housing and Urban Development to develop performance energy conservation standards for various types of buildings. It also authorized \$55 million annually for grants to states from the Federal Energy Administration for the purchase of materials to insulate the homes of low-income persons. A third portion of the bill authorized HUD to provide technical aid and grants of up to \$10 million to states and local governments working to include energy conservation standards in their building codes.

Significantly, the bill encourages rather than mandates the development of local standards. However, the counterpart bill in the Senate, which is currently pending in the banking, housing and urban affairs committee, calls for the initial promulgation of prescriptive standards to be followed by performance standards developed later. The Senate bill also calls for enforcement of energy standards through federally regulated, supervised or insured financial institutions by prohibiting them from making or purchasing loans in an area where federal standards are not in force. The bill also cuts the \$10 million in HUD technical assistance money to \$5 million and then prescribes its use only for the development of state building codes and state certification procedures.

The House bill originally called for prescriptive standards, and AIA was among those arguing successfully for the substitution of performance standards. AIA's alternative is the use of performance standards in tandem with a tax incentive program. "We believe that this approach will be more politically and economically appealing for both the public and the federal treasury," said Marshall. "In addition to achieving greater energy savings in both new and existing buildings, the approach will also stimulate the deeply depressed construction industry." *Beth Dunlop*

The following is a partial text of testimony delivered by AIA Executive Vice President William L. Slayton this summer to the U.S. Senate finance committee stating the Institute's current policy on energy conservation in buildings. Ed.

As the second largest energy-consuming sector, buildings offer a significant opportunity to save energy. For the past several years, The American Institute of Architects has studied the relationships between energy and the built environment, and our findings and recommendations are included in two reports, *Energy and the Built Environment: A Gap in Current Strategies* and *A Nation of Energy-Efficient Buildings by 1990*.

These reports outline the dramatic potential of a high priority national program to achieve energy-efficient buildings. Our estimates show that a high priority program for energy-efficient buildings could save an average of nearly one million barrels of petroleum equivalent per day each year between now and 1990. By 1990, a savings of 12.5 million barrels of oil per day could be reached.

We, of course, recognize that additional time is needed to develop and test the institutional innovations needed to implement our long-range strategy. We do, however, believe that complementary short-term initiatives can be taken. The positive incentive approach offers better means to resolve the energy problem than regulatory approaches which bring about conservation forcibly through prices or prescriptive standards.

This is why we believe that the incentives approach within the present version of HR 6860 is a step in the right direction. However, in its current form, HR 6860 will result in governmental subsidy on installation of prescribed hardware items such as insulation and storm windows.

Depending on the particular situation this could result in subsidy dollars being invested in only marginal gains of energy and not necessarily providing the best or optimal energy return per investment dollar. It will be likely that building owners will comply with the requirements to get the incentive, but may not realize

stantial savings. This approach nullifies or at least ignores, a far greater range of alternative considerations for effective energy conservation which are available under a more comprehensive approach to the problem.

We have developed a comprehensive incentive proposal. It would apply to new and existing buildings, both commercial and residential. Our incentives approach would result in greater energy conservation, stimulate a lagging economy, and provide the needed professional and qualified attention required.

I would like to briefly summarize our proposal.

Existing Buildings. Should the owner of an existing office building, for example, wish to have the structure retrofitted to be more energy-efficient, he must arrange for modification of the building. His goal is to reduce the building's annual energy consumption by a minimum of 30 percent. The building's annual energy consumption would be calculated by using the average of the lowest three consecutive annual demands since 1970, or, for buildings less than three years old, the average annual energy consumption since the date of the first consumption of energy in the building.

We have called the range of possible modifications to the building an "integrated energy package." This does not mean simply hardware, insulation or electrical equipment, although these may be included in the integrated energy package.

Rather, we are talking about the necessary design, engineering and construction services associated with modification and additions to achieve energy conservation.

A qualified professional would certify that the integrated energy package will achieve at least a 30 percent annual energy savings.

After modification of the building, a commercial building owner may either a) treat a percentage of the cost of the integrated energy package as an investment credit, or b) amortize a percentage of the cost of the integrated energy package over a period of five or more years. In addition, he may be qualified to

receive a second tax credit. If energy is saved over and above the required minimum of 30 percent, in each of the next 10 years after installation of the integrated energy package a tax credit equal to 30 percent of the *value of the energy saved from nonrenewable energy sources* would be available. In this way, an incentive exists to make the best possible modifications to a building in order to save a maximum amount of energy. It also encourages the utilization of renewable energy sources, such as solar and wind power.

The incentive for the owner of a home differs slightly. In this case, the option is to deduct a percentage of the cost of the integrated energy package in calculating taxable income within a period from one to five years. The second tax credit—for saving nonrenewable energy above and beyond the minimum 30 percent—remains the same as we described for the owner of a commercial building.

New Buildings. Here the incentive is intended to stimulate the owner to have a building designed to be energy efficient to the maximum extent feasible. Present tax laws make it unprofitable to invest more front-end money because operating expenses are either deductible as a business expense (in the case of commercial buildings) or are passed on to the building's tenants or new owners. By making it economically beneficial to spend more money initially, owners and developers should be encouraged to build energy-efficient structures.

With new buildings, calculating the amount of energy that a building would have consumed *without* the application of the integrated energy package is the heart of the problem. As a solution, we suggest that an energy conservation performance standard should be the base for the calculations. We believe that legislation authorizing the federal government to develop and promulgate energy conservation performance standards for all new construction will be passed by this Congress.

Therefore, we recommend that the tax incentive for energy-efficient new buildings be a retroactive one. However, if a building is constructed in a state which

already has adopted a set of energy conservation standards acceptable to the federal government, the incentive would be effective immediately.

To summarize again, the potential owner of a new building might employ the services of qualified professionals to provide for the design of an energy-efficient building through the use of the range of possibilities included in an integrated energy package.

A professional would certify that the use of certain design techniques, equipment, etc., would achieve an annual energy savings of at least 30 percent over the standard. A percentage of the cost of the integrated energy package is either treated as an investment credit or rapidly amortized, or, in the case of a homeowner, is deducted from taxable income. Both commercial and residential building owners, if they achieve energy savings above the minimum required 30 percent, are entitled to receive a tax credit in each of the next 10 years equal to 30 percent of the value of the nonrenewable energy saved.

There are more than 70 million existing residential buildings in this country, and millions of existing commercial structures. Energy conservation in this vast inventory of buildings could begin as soon as this measure is enacted. At the same time, knowing that it will be possible to qualify for a retroactive tax incentive as soon as the federal standards are developed in two or three years, new buildings will be designed and built with energy conservation features.

The enactment of this incentive would stimulate two million to three million jobs in the construction industry and in the industries which supply materials, and would sustain them over a period of years.

If 7 percent of our existing inventory of buildings were redesigned and retrofitted with energy conservation features each year, and all new buildings were designed and built with energy conservation in mind, we would save the equivalent of 4.65 billion barrels of petroleum within the first five years. These savings would then continue year after year without additional cost and without reduced standards of living. □

Six Architectural Markets That Show Growth Potential

Weld Coxe

Although 99 percent of all architects hold to the concept of general practice and think that demand for various building types is constant, the fate of most firms is tied to one or a few areas of specialization, for which the demand varies. More and more, the architectural workload in the marketplace is determined by cyclical demand for different building types. Thus, in the past decade, we have seen waves of commissions for college libraries, hospital intensive care units, downtown office buildings, vocational-tech schools, condominium housing, etc. In each case the cycle has lasted only five or at the most 10 years before the demand is satisfied or over-saturated.

Obviously, timing is very important to the architect who wants to ride the waves of the marketplace. The firm that is fortunate enough to design one of the first successful projects of a new wave will generally enjoy a flood of similar referrals. Conversely, the firm that tries to catch up with a wave that has already formed may win and complete one commission but then find the market has dried up. It is becoming a rule of thumb that by the time you can see examples of a new building type popping up all over the landscape, it is already too late to capitalize on that market.

How then does the architect spot new markets in time to get aboard?

There are no magic answers, just as there is no perfect crystal ball. The name of the game is market research, and the state of the art for architects is just a few years old. Architectural commissions are awarded so early at the front end of the construction stream that derivative forecasting is not possible. The architectural market forecaster, like the safecracker, must rely not only on his technical knowledge of how the system works, but, maybe equally important, on the sandpapering of his fingertips.

In a recession economy the ability to spot newly forming waves is especially important because the traditional, general markets—such as schools, hospitals, housing and so forth—are all soft.

Over the past several years, in connection with our publishing activities, we have tried to develop a market research system

that will pinpoint opportunities as early as possible in the cycle.

There are six specific markets which our technology and sandpaper have identified as having considerable potential to become waves of the near future. Three are specific building types, two are new areas of service and one is a new breed of client. The six are:

1. Local recreation facilities could become the most significant among the new markets if social, economic and energy factors continue to encourage close-to-home leisure time activities. Typical structures which may gain in demand are those for indoor tennis and/or swimming and/or hockey (or all three). But the market can also embrace everything from rifle ranges to indoor bobsled runs. The most active areas at present for such construction are growing towns, suburbs and cities of the upper Midwest and Northwest where long winters increase the demand for indoor recreation. For architects, the key to the market often is less closely related to facility at the drawing board than to skill with the adding machine. Clients

are predominantly citizen boards in smaller communities who, at the outset are looking for advice on how to estimate construction and operating costs and how to package financing, much of which is supported by government revenues. The architect who studies and understands how other communities successfully solved similar problems will find a welcome reception among prospective clients.

2. The issue of housing older citizens may in time provide several major market opportunities for architects. But at present the whole matter is being clouded by inadequate definitions of "elderly" versus "retirement" and indistinct policy on the roles of private, public and nonprofit sectors. In spite of this confusion, one segment of the market is becoming visibly distinct and may soon mushroom on a nationwide scale. This is the so-called "lifestyle care" retirement community, where for a monthly payment within reach of most middle-class pensions plus a capital contribution the occupant receives a life interest in an apartment-sized unit, plus maintenance and nursing care for the rest of his

Mr. Coxe is president of the management consulting firm of Weld Coxe Associates, which has been advising and assisting architects in marketing management since 1967. Over the years the firm has acted as consultant to over 150 architectural offices. And as Weld Coxe explains it, his monthly newsletter, *The Coxe Letter*, originated from a need "on the part of our clients, and non-clients, for a continual update on changes in the market and in marketing techniques."

Says Coxe, "We define architectural markets as the marketplace and as the client does." For example, architects may look at vocational schools as part of the school market, but the client views them as a separate one. Accordingly, Weld Coxe Associates has identified seven major markets, and under each has recognized three to five

distinct categories of architectural work. *The Coxe Letter* examines at least one market per month.

The best way for architects to do market research themselves, according to Coxe, is through simply talking to their present and prospective clients. Coxe's forecasts are similarly heavily dependent upon feel, or what he calls in the adjoining article, "the sandpaper of my finger tips," which has become refined with time and experience.

There is a missing link," he says "in that we have no way of knowing if forecasts have become reality." In order to fill this gap, the AIA task force on markets has been formed with Coxe's help. It is currently trying to develop a "market activity index," a report on the types of work being commissioned on a state by state basis.

Three are building types, two new services, and one last a new client.

life. Physically, the facility usually consists of a campus of 200 to 300 apartments, plus a common dining/recreation center and a 40-50 unit nursing wing. Project costs range from \$5 million to \$8 million. Most clients thus far have been nonprofit religious denominations, but the private sector has gotten wind of the profit potential and is moving in. Estimates of the architectural market for life care communities over the next five years run as high as 700 such projects. Architects who understand the packaging process will capture the biggest share as the market opens up.

Another fairly specific building type with good market potential over the next several years is the renovation/recycling of strip shopping centers that were built 10 to 20 years ago. A whole generation of these centers are losing their anchor tenants in the supermarket shakeout, and all that can be revived to survive competition is the new regional malls. For architects the work itself may only involve facelift, landscaping and tenant changes, but the designer with creative ideas holds most of the keys to the market. To find projects, all an architect need do is drive through any strip, look for the seedy shopping centers and then contact their owners to offer fresh ideas.

A new type of owner worth keeping an eye on is what we call the "semipublic client." This breed is emerging as the prime mover on major urban commercial projects in large and small cities alike. Usually it consists of a combine of tenant interests (a department store, hotel or government office user), in conjunction with a

real estate investor/manager and municipal government. The hybrid joins together in order to make use of public revenue bonds, tax concessions and/or publicly owned facilities like a parking garage to secure a large share of the risk and thereby make projects happen. The semipublic client is seldom a visible entity at the time the architect begins laying the groundwork for selection. In fact, sometimes it can take years of spadework before a semipublic client prospect becomes a real job, but the end result will be some of the largest landmark commissions of the decade. Success in carrying out such commissions takes special talent in dealing with a multi-headed client.

5. In terms of consulting services, land planning could become a completely distinct market opportunity over the next several years. The rapidly emerging discipline of land planning combines the planner's knowledge of land use; the civil engineer's expertise in surveying, site engineering and plotting, and the architect's skills in physical design and management. The landscape architects had the first toe-hold on the new market, but there aren't enough of them nationally to fill the demand. The largest market for this service is at the local level where interest in PUD zoning and new standards for obtaining land use require a broader, multidiscipline approach than that furnished by the traditional site engineer with his subdivision plotter. The architect who does his homework, ties in with other services (especially land surveying), and develops a good track record in representing clients before local public agencies, can expect to virtually sew up a community market for land planning.

6. Single point responsibility is the umbrella term for a new service whose time is coming a lot sooner than many would have believed even a year ago. The growing acceptance by clients of the construc-

tion management, design/build team approach and other forms of truly comprehensive service, provides solid evidence that single responsibility will be with us for some time. It is not a market so much as an approach, but the growing willingness of the client to have the architect (or, in his absence, someone else) handle all aspects of a job is without doubt going to mean more to the architect's future than any other single factor. At the same time, this market is the easiest to get into, because the architect can, with the client's agreement, apply a single responsibility approach on almost any project he already has. At the moment, there is still a lot of confusion and misunderstanding about how to put a single responsibility package together (and some architects really don't understand it at all), but more and more firms are making it happen in just about every market: schools; hospitals; higher education; commercial; government and, of course, in industry where it has been the norm for years. Those firms that have a good grasp of a single responsibility project are doing far better in the recession marketplace than almost any others. To get involved requires a good deal of homework by the top principals of the firm. Virtually no firm that just sent its construction administrator or some other subordinate to the AIA construction seminars a few years ago has competed successfully. Single responsibility as an architectural service is just as basic as design and programming, and can be sold successfully only when it is an integral part of the professional philosophy of the firm.

These six new markets are not, of course, the only opportunities to ride the waves of the future. There are always promising individual situations in existing markets, and local or regional variations that will make good surfing for individual firms farsighted enough to spot them early. No firm can realistically expect any one market to last a lifetime. For the typical firm, it is good planning policy to tackle just one new market a year. Not all the choices may be winners, but in today's market (to paraphrase Harold Geneen) the successful architect is the one who makes 51 percent of his market choices right. □

Preliminary Cost Guide: A Complete System for Total Project Development. Editor, David Kyun Hyun. Pasadena, Calif.: Architectural Data Corp., 1975. 711 pp. \$49.95, plus \$3.50 shipping costs.

Billed as a "self-teaching professional manual . . . designed to be a single source for determining total project costs," this work (encased in a 3½-inch thick orange looseleaf binder) contains an overwhelming amount of information. A note from the editor indicates that the guide can "help the key decision makers in the construction industry to accurately and rapidly ascertain anticipated total project costs in a matter of hours." The same note says that there is no guarantee or warranty as to the correctness and viability of the information and data contained in the guide and that no one connected with the guide assumes responsibility or legal liability in connection with its use.

The guide is divided into 12 chapters, covering preliminary estimating procedures for "all phases of project development," including: the building, professional services, off-site development, site work, landscaping, financing, taxes, legal fees, marketing, sales and leasing. It is claimed that the guide, published annually with one semiannual update, can be used by professionals with no experience in financial planning. It is this reviewer's opinion that such a course would be fraught with danger and that any of the myriad of construction cost data publications on the market can only be used successfully when tempered by the judgment that comes from experience.

The guide contains some good flow charts relating to project development sequence and real estate economic analysis, as well as text on these subjects. The fairly extensive bibliography has some good references for further reading, including some books prepared by AIA on development building and real estate financing (but not so credited). Nearly half of the bulk of the guide is taken up by 100 case studies spread over a large number of building types previously published in a California magazine and updated to mid-1974, hardly a comprehensive data base.

The chapter on costs of professional

services covers a wide gamut of disciplines. The section on architectural fees contains some misleading and even incorrect comments concerning AIA's actions and recommendations.

There are other instances where users of the guide might be misled. For example, the cover conveys the impression that it is a publication of the Pasadena & Foothill chapter/AIA, while the title page indicates that it is a publication of Architectural Data Corp., endorsed by this AIA chapter and the American Institute (not the much larger Society) of Landscape Architects. In the chapter on building cost system, there is a chart labeled "CSI-Cost Guide System," showing a relationship between "CSI Divisions" and "Building Cost System Divisions." This chart is misleading from two points of view: First, it is not a cost guide system of the Construction Specifications Institute, which neither has nor endorses such a system; second, the simple lumping of cost data from several of the 16 CSI-type divisions into a few "cost system divisions" will produce unrealistic data in several instances. Readers familiar with the proposed Mastercost system, reported in the *AIA JOURNAL* (Nov. '74), will understand this observation.

The user of any cost data publication must know the sources of all such data and must be in a position to pass on validity and dependability of the data. The data must also be presented in such a way as not to have such a wide spread as to be meaningless. And projections into the future are to be regarded with suspicion in a factual publication. This reviewer will not comment on these aspects of *Preliminary Cost Guide* but emphasizes that judgment on the part of the user is essential in applying the data presented in any construction cost publication.

The fact remains that another cost data book has appeared on the scene to be added to the body of knowledge on the subject. It is planned that the book will be expanded and improved, and the publisher solicits comments. This reviewer has one suggestion to help improve the book's usefulness: Change the binder to make it easier to flip from one section to another; it's hell now. *Robert Allan Class, AIA, Director, AIA Technical Programs*

Safety in the Construction Industry: OSHA. Vincent G. Bush. Reston, Va.: Reston Publishing Co. (Prentice-Hall) 220 pp. No price given.

Except in the case of "acts of God," says Bush, accidents are caused by negligence. Accident frequency and severity rates in the construction industry are much above the averages for all other industries. Each year, Bush points out, the 4 million construction industry workers have accidents which result in the death of 2,700 workers and injury to 240,000 of them. Good safety records on a construction project don't come through luck.

In order to promote the health and safety of workers, the federal government has set up regulations—among them, the Occupational Safety and Health Act. In this book, Bush directs his attention to OSHA and how management can comply with its regulations.

Bush outlines the responsibilities of the building team, the architect, the owner, the builder and the workmen in reducing construction industry accidents. He explains OSHA, its rules and regulations, inspections, necessary record-keeping and compliance with its regulations. There are chapters on such topics as planning the operation, the safety program, first aid and the human factor where fatigue, lack of knowledge, fright, etc., lead to accidents. He discusses such hazards as gravity, electricity, fire, gases, weather and machinery. There is detailed information about accident prevention in such procedures as demolition, excavation, foundation work, concrete and steel construction, building of exterior walls and roofing, as well as insulation and waterproofing. Also there is a helpful chapter on the all-important subject of insurance.

Memos from Egypt. William Caudill, FAIA. Boston: Cahners Books, 1975. 100 pp. No price given.

Bill Caudill went to Egypt early this year as a member of a joint U.S./Egypt task force to study building technology and materials. Each day he sent back a memo to his office in Houston, telling the folks at home about his experiences in airports and hotels, about his bouts with

continued on page

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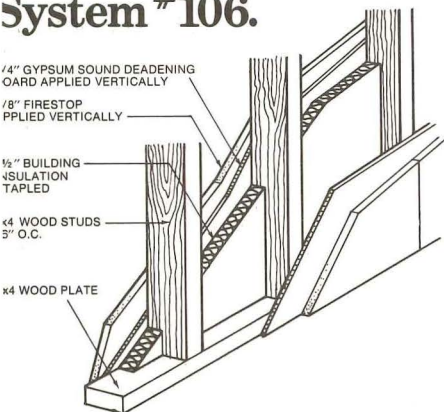
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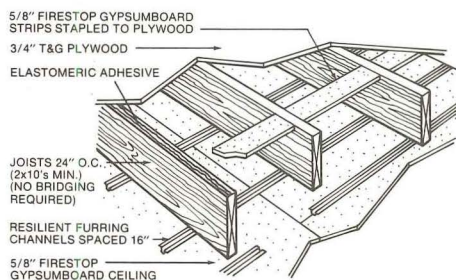
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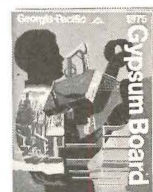
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Forrest Wilson is entirely correct when he says in the foreword: "The information . . . is first-hand, objective and incisive. It is an excellent travel handbook for architects, engineers, contractors and builders who intend to do business in Egypt."

Shelter. Edited by Lloyd Kahn. Bolinas, Calif.: Shelter Publications (distributed by Random House), 1973. 176 pp. \$20 hardbound, \$6 paperbound.

Come and meet hip-humanist Lloyd Kahn and his friends. Their book is full of interesting information and is a refreshing change from the mainstream of architectural publications. It is similar to the *Whole Earth Catalog* in counter-culture format.

There is little in this folksy book designed to shock us establishment types. Although I don't care to share in the styles of living shown, I am happy to share in the ideas on building. In addition to Kahn and co-editor Bob Easton, here are many people with searching minds giving freely of themselves.

Kahn describes the attitude of the book: "In times to come, we will have to find a responsive and sensitive balance between the still-usable skills and wisdom of the past and the sustainable products and inventions of the 20th century." Whether of old or new products, the book is aimed at fostering a culture of handbuilt homes, preferably owner built, or to quote: "indigenous, people-built, non-architect designed, alternative habitat."

The book borrows from many publications, includes many contributors and has an interesting and useful illustrated bibliography. It starts with scholarly discussions of primitive and historic building techniques and goes on to alternative shelters and construction drawings of simple conventional buildings. All are intended as inspiration as well as guidance.

A section of the book displays domes, zomes and zarches. After publishing his *Domebook 2*, Kahn became disillusioned with domes and apparently with Buckminster Fuller. This is discussed in *Domebook 3*, which is included as a section of this volume. We are told that domes are difficult to partition or expand, are more expensive than conventional construction, are short-lived, are practically impossible to weatherproof and require extreme accuracy.

Showing previous examples, Kahn apologizes for stating in *Domebook 2* that Fuller invented the geodesic dome. He

now calls Fuller a popularizer and commercializer of the dome.

In addition to taking on Fuller, Kahn reprints from *The Shingle Style* by Vincent Scully Jr., an example of form-borrowing by Frank Lloyd Wright from Bruce Price. Concerning it Kahn says: "Much that passes for invention or innovation is actually misappropriated (and often highly publicized) work of others. This tends to inhibit architecture students or designers, as the achievements of the 'masters' appear stunning when out of context of their historical background." He also reports Doxiades' confession that he should not have previously advocated highrise buildings. From direct observation, he makes fun of academic games of futurism and housing fantasies and notes the patronage of academia by industry.

In spite of his own doubts concerning domes, Kahn tells of the effective and still enthusiastic Bill Woods, dome builder, and Steve Baer, zome builder. Baer is also covered on his practical researches on solar energy in the section on alternative power sources, such as wind, sun and methane from decaying matter.

In this section on energy, Jay Baldwin says that solar energy will not be economically practical until the cost of fossil fuels triples. Harold Hays tells us, without documentation, that solar energy is highly polluting when collected off the immediate premises.

These are samples of information I have not come across elsewhere. The book points up the tremendous difficulty in obtaining accurate information. Many of these people, for example, were excited by the over-advertised claims for various plastics. They became disillusioned from actual firsthand experimentation. I might say that they have no need to apologize; if we honor successful experimentors, we must also value unsuccessful ones.

I am enthusiastic about the book for more than being entertained, informed and stimulated. I am strengthened in believing in my own common sense. It is more effective coming from a former dome enthusiast that there is "no wondrous new solution to be." Didn't we really always know, in spite of its usefulness for certain purposes, that the geodesic dome is no more functionally suitable as a universal form than was the Greek temple? But as Kahn says, they are good media; "they photograph well." It is time we sought out the reality within (and without) the communication fodder. This book is an excellent beginning.

The people in this book prove that the creative urge to build cannot be stifled. I disagree on many things advocated by the unnamed self-proclaimed "ding-bat hippie" who writes a section in the book, but I enthusiastically subscribe to his statement that "we love anything that someone builds out of love." *John Blanton, AIA*

The Architectural Index for 1974. Edited by Ervin J. Bell, AIA. Boulder, Colo., 1973. 80 pp. \$8.

The reader who keeps files of AIA JOURNAL and other periodicals of interest to architecture ought to subscribe to the *Architectural Index* because it is a real time-saver. Compiled especially for architects, it is an invaluable reference guide to articles published on a specific building, building type, materials and methods of construction, the architecture of a region or the work of one man or firm.

Back issues to 1951 are available for \$8 per copy, and a hardboard binder that will hold five issues may be bought for \$10. Orders may be sent to *Architectural Index*, P.O. Box 1168, Boulder, Colo. 80302.

McGraw-Hill Dictionary of Scientific and Technical Terms. Daniel N. Lapedes, editor-in-chief. New York: McGraw-Hill, 1974. 1670 pp. \$39.50.

This comprehensive reference book contains definitions of nearly 100,000 scientific and technical terms, making it an invaluable tool for the public, university and large office library. The appendix is filled with pertinent information as well, such as the tables of measurement systems and conversion factors; abbreviations for scientific and technical organizations; and international graphic symbols. Thousands of new terms are incorporated in this dictionary, and there are 2,800 illustrations and diagrams to amplify the definitions.

Handcrafted Playgrounds: Designs You Can Build Yourself. M. Paul Friedberg. New York: Random House, 1975. 123 pp. \$12.95 hardbound, \$5.95 paperbound.

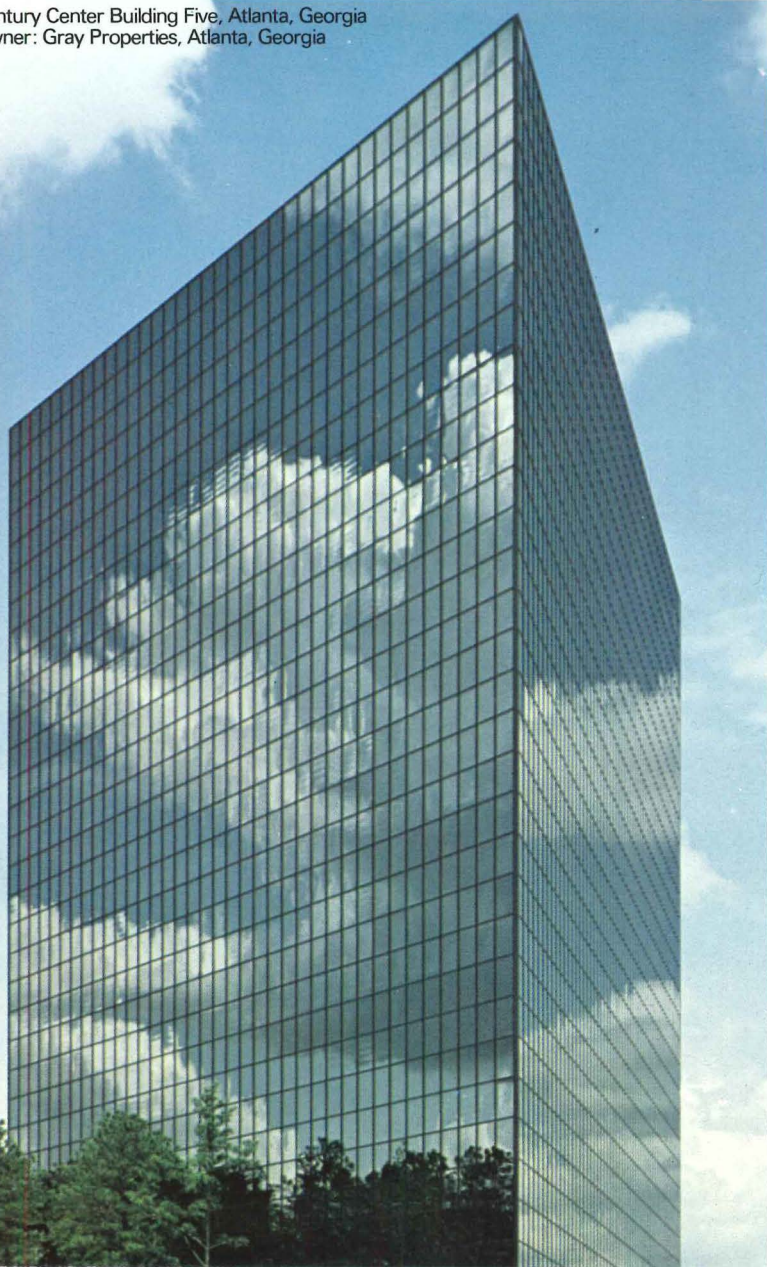
Anyone, says Friedberg, can build a playground. And the experience is most satisfying for those who participate, especially children. Whether the locale is urban, suburban or rural, there's plenty of natural and man-made materials around to use. Friedberg has chosen things easily found or inexpensively bought. He explains—and provides measured drawings—for an array of playground ideas, such as fences, stepping columns, tree houses, drums and bridges. He tells how to use tires, spools, tubes and all the other materials to make a playground to delight the heart of any child.

Construction Specifications. Jack R. Lewis. Englewood Cliffs, N.J.: Prentice-Hall, 1975. 340 pp. \$13.95.

This book on construction specifications explains in understandable language such topics as types of specifications, legal documents, the uniform system, the federal specification, how to write a specification, change orders and reproduction methods. There are questions at the end of each chapter, making the book adaptable. *continued on page*

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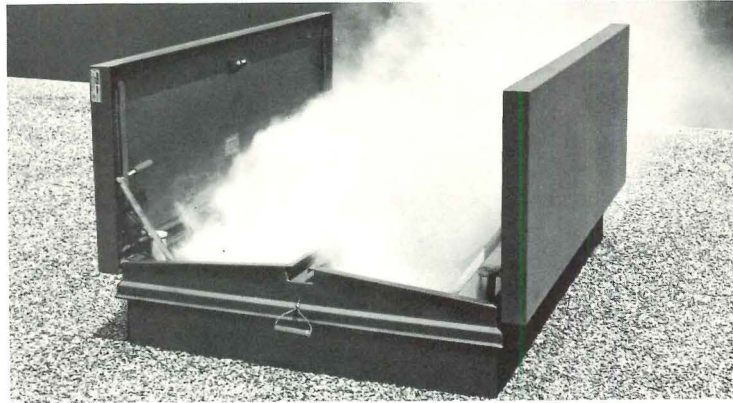
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 fication reference; a short bibliog-
 y, and a list of organizations to help
 h beginning and professional spec-
 ter. AIA is included in this list, but the
 ress is an old one, being that of the In-
 ate's temporary headquarters at the
 e the present building was under con-
 ction. Readers should note that AIA's
 irect address is 1735 New York Ave.
 W., Washington, D.C. 20006.

Action Office Acoustic Handbook.
 bert L. Propst and Michael Wodka.
 n Arbor, Mich.: Herman Miller Re-
 ch Corp., 1975. 62 pp. \$5.50.
 Propst, one of the authors of this in-
 imative handbook, pioneered in the
 n plan office environment called the
 "action office"; Wodka is a research and
 gn associate at the Herman Miller
 earch Corp. Since the action office
 cept was introduced, questions about
 ustic control and comfort have arisen,
 d they aim to help designers and facility
 nners and managers to achieve a
 ccessful acoustic environment."
 The booklet is filled with practical in-
 mation on how to control frustrating

and energy-draining noises to achieve both
 good interoffice communications and
 acoustical privacy. A good acoustic en-
 vironment may be judged as successful,
 the authors say, only when we are no
 longer aware of it. "It is simply there—
 like moderate temperature or comfortable
 light level."

In a section on the elements and how
 to control them, there are discussions of
 voice levels, ceilings, distance, configura-
 tion, natural/artificial background, floors
 and fixed walls. What are the variables?
 Can they be controlled?

After exploring how sound travels, the
 authors present a checklist to help the de-
 signer or planner determine where the
 acoustical problems may be. This facility
 performance checklist is worth the price
 of the booklet. If there are too many "no"
 answers, you may be in trouble, but a tally
 of such "no" replies will point out where
 the problem is and the direction for cor-
 rective action.

Other sections tell how to tune and bal-
 ance an office for good acoustics and how
 to treat special problems (the loud voice,
 the telephone, sound leaks around ends
 and the so-called "security syndrome" of
 the person who complains about noise
 when in reality what he wants is "protec-
 tive invisibility").

Also helpful are the glossary of acous-
 tical terms and the list of useful sources.


The booklet may be ordered from Her-
 man Miller Research Corp., 3970 Varsity
 Drive, Ann Arbor, Mich. 48104.

**Techniques of Successful Practice for Ar-
 chitects and Engineers.** Edited by William
 B. Foxhall. New York: McGraw-Hill,
 1975. 225 pp. \$14.95.

This book contains a "re-edited" selec-
 tion of articles that were first published in
Architectural Record over the past few
 years. The articles are grouped into nine
 chapters and concern such themes as
 changing patterns of architectural prac-
 tice; various models of practice (joint
 venture, interior design, etc.); practice
 and the law, and project administration
 and cost control.

Opportunities in Architecture Today.
 Robert Piper, FAIA. Louisville, Ky.: Vo-
 cational Guidance Manuals, Inc., 1975.
 117 pp. \$2.20 AIA members, \$2.45 non-
 members.

Those who are familiar with the 1966
 and 1970 editions of this manual know
 that it is an excellent handbook for any
 young student who is contemplating a
 career in architecture. Piper gives the
 reader a realistic appraisal of the profes-
 sion, outlining its major responsibilities
 and opportunities. He gives concrete and
 good advice on preliminary preparation in
continued on page 54



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high school and the choice of a college architectural program.

Construction Design for Landscape Architects. Albe E. Munson. New York: McGraw-Hill 1975. 212 pp. \$12.50.

Written for landscape architects and site planners, this book covers such essential information as property descriptions, topography, site layout, site grading, the mathematics used in site construction, the design of retaining walls and sprinkler irrigation systems. It will be helpful to the architect in that it presents specifics of landscaping procedure.

LETTERS

Detroit's Woodward East: It was with great interest that I read the article titled "Designing the Renaissance of a Proud but Decayed Neighborhood in Detroit" in the May issue, which featured the efforts of well-meaning architects and planners to improve the deteriorating neighborhood of Woodward East.

What I find so disheartening is the wide gap between the planning hopes of the architects and planners and the realities of the situation. I read of the \$26,000 in donated services, the \$50,000 in grant money and the application of the best talent available toward revitalizing the neighborhood through better planning. This effort, except as a catharsis and intellectual exercise for the participants, will be futile in terms of results. The planning, for instance, was unrelated to any known financing schemes, either state or federally funded. The economics are such that only massive subsidy can help in a neighborhood largely made up of the poor, the indigent and the dispossessed.

In fact, such a planning exercise might become a disservice to the community. It engenders false hopes and focuses on schemes that have no hope of fruition. Further, the group was in and out in a weekend. Might it not have been better if a community design service had been located in the community with a two or three person staff that worked continuously over a several-year period rather than this deluge of talent that was in and out in a weekend?

Woodward East, at this juncture, must be one of the most carefully studied communities in the country. In the last seven years, countless architects and planners have worked on its physical makeup. Another grant or added donated services aimed at master planning is counterproductive. What is needed is pragmatic planning that deals with day-to-day crisis (like crumbling back porches) and architecture that works within existing private and governmental programs.

I suggest that the grant money and donated labor that has been spent up to now might have been better invested in Woodward East by the rehabilitation of two or three buildings. A nearby highrise has been successfully rehabilitated and, with community control, has provided better housing. Given the fortunate circumstances of a viable community group, additional rehabilitated buildings would be well managed. Thus some decent housing would be provided, as well as a nucleus for further gains created.

*Joseph Savin, AIA
Southfield, Mich.*

I was pleased to see the article on Woodward East in the May issue.

The article reports that the National Trust for Historic Preservation gave the community a consultant's grant of \$1,000 "to help assure implementation of the weekend retreat's design proposals." In fact, the National Trust awarded a \$3,000 matching grant through the consultant service grant program. This funding program is designed to assist organizations such as the Woodward East Project in obtaining the kind of professional advice which often determines the success of an historic preservation project. No funds from this program may be used for actual project implementation. In this case, the grant was used to help pay the cost of coordinating the three-day design retreat.

This is the second grant that the National Trust has awarded Woodward East. In November 1973, a \$1,000 matching grant was given to help pay for rehabilitation cost studies for 21 structures in this Detroit neighborhood. *Peter H. Smith
Director, Advisory Services
Office of Preservation Studies
National Trust for Historic Preservation
Washington, D.C.*

EVENTS

Nov. 1: Receipt of entries deadline, competition for adaptation of two Philadelphia stadia for 41st International Eucharistic Congress to be held in 1976. Contact: Mario Romanch, AIA, 117 S. 17 St., Philadelphia, Pa. 19103.

Nov. 3-4: Workshop on Long-Term Economy: A Systematic Basis for the Construction, Operation and Reuse of Buildings, Harvard University, Cambridge, Mass. Contact: Peter Lawrence, Graduate School of Design, Cambridge, Mass. 02138.

Nov. 3-7: Seminar on Solar Energy Technology and Opportunities, Washington, D.C. (Repeat seminars: Nov. 17-20, Chicago; Dec. 8-11, Los Angeles; Feb. 2-5, Houston; Mar. 1-4, New York City.) Contact: Heidi Kaplan, Information Serv-

ices Manager, Department 14-NR, New York Management Center, 360 Lexington Ave., New York, N.Y. 10017.

Nov. 6-7: Annual Construction Contracts and Specifications Institute, University of Wisconsin, Madison, Wis.

Nov. 7: Postmark deadline, submission for Institute honors program. Contact: Maria Murray, AIA Headquarters.

Nov. 7: Forum on Developing a Barrier Free Environment, Louisville, Ky. Contact: National Easter Seal Society for Crippled Children and Adults, Convention Office, 2023 W. Ogden Ave., Chicago, Ill. 60612.

Nov. 7-8: Architectural refresher in preparation for NCARB examination, University of Wisconsin, Milwaukee. Telephone Professor Douglas C. Rhyn (414) 963-5339.

Nov. 10-11: Conference on How to Finance Downtown Action, Warwick House, New York City. Contact: Downtown Research and Development Center, 555 Madison Ave., New York, N.Y. 10022.

Nov. 12-21: International Building and Construction Exhibition, Olympia, London, England.

Nov. 15: Entries deadline, CRSI design awards program. Contact: George F. Leyh, Concrete Reinforcing Steel Institute, 180 N. LaSalle St., Chicago, Ill. 60601.

Nov. 16-18: Conference on Architecture for the Justice System, Key Bridge Marriott Motor Hotel, Arlington, Va. Contact: Mark Maves, AIA Headquarters.

Nov. 16-19: Workshop on Alternative Processes in Building Procurement, University of Illinois, Urbana/Champaign, Ill. Contact: Samuel Lanford, Department of Architecture, Urbana, Ill. 61801.

Nov. 18-20: Seminar on Fire Safety in Buildings, Lincolnwood Hyatt House, Lincolnwood, Ill. Contact: Educational Services Department, Portland Cement Association, Old Orchard Road, Skokie, Ill. 60076.

Nov. 19-21: Systems Engineering Conference on Alternative Strategies for System Productivity. Contact: American Institute of Industrial Engineers, 25 Technology Park/Atlanta, Norcross, Ga. 30071.

Nov. 20-21: Institute on Fire Protection in Buildings, University of Wisconsin, Milwaukee.

Nov. 21-22: Educational laboratory on Selling Professional Services, Washington, D.C. Contact: Continuing Education Department, AIA Headquarters.

Dec. 31: Postmark deadline, Library Buildings Award Program. Contact: Maria Murray, AIA Headquarters.

Jan. 15-17: AIA Grassroots East, Statler Hilton Hotel, Washington, D.C.

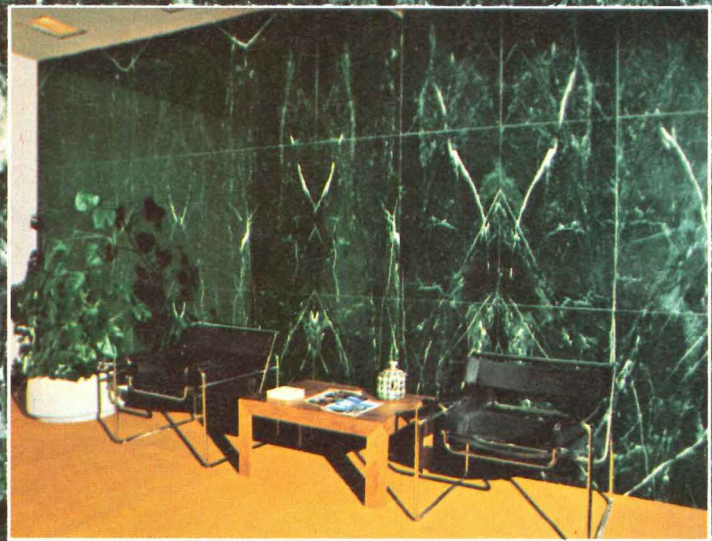
Jan. 22-24: AIA Grassroots Central, Marquette Inn, Minneapolis-St. Paul, Minn.

Jan. 26-28: AIA Grassroots West, Hyatt Hotel on Union Square, San Francisco.

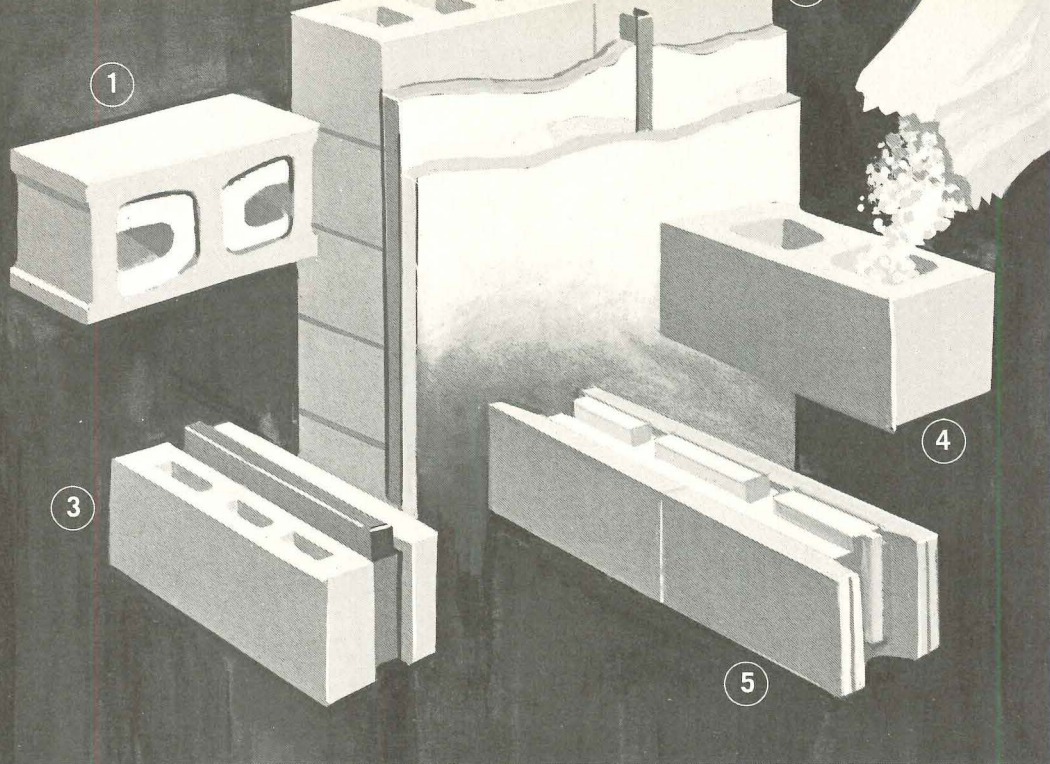
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Wurman and Katz from page 40

Double function is gained when, for example, the models are Braille- as well as type-legged, created as maps for the blind. The sighted user of such models benefits as well, as he is able to grasp the relationship within a whole (whether an architectural project, a block, a larger section of the city, a landform) of which he can see only a part at any one time.

The logical extension of such ideas, in terms of both conception and implementation, is the environment as information art. A building lobby, a public plaza, part of an urban park, streets themselves can be conceived of and treated as information centers and as environmental artworks, revealing themselves to their use and releasing useful and interesting information about their surroundings to citizens and visitors alike.

Informationally functional and visually architecturally and experientially exciting, such integrated places are a far cry from the unrelated signs, scaleless billboards and chic supergraphic appliques that clutter our urban landscape today, often contributing to the defeat of the very informational functions they purport to serve.

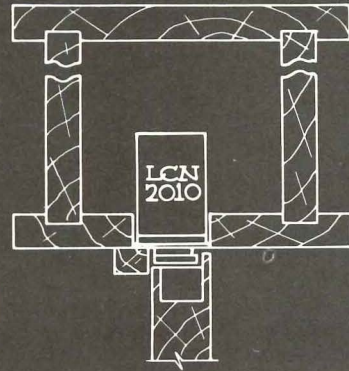
Of course, much of our concern with the means of displaying information is rooted in our awareness that so much basic information about our man-made environment does not exist when and where we need it. While the entirely self-revealing environment is as utopian an idea as the entirely self-revealing building or instructionless instrument panel, as architects and designers we have a special opportunity and responsibility to make our environment more comprehensible and self-revealing, through more functional and self-revealing design. Whether our means are visible stairways, logically placed elevators, carefully considered vistas or the coordination of verbal and cartographic information in a minimal system, each of us can contribute to an environment in which information and urban architectural fabric, instead of the one needing to be imposed upon the other, are genuinely and sympathetically integrated.

The architecture of information related to an American city best describes the theme of the 1976 AIA convention that will be held in Philadelphia next May. The convention week, as well as the entire month of May, will be a compendium of events demonstrating various ways in which the environment can be perceived, recorded and understood. There will be access to special vantage points on the tops of buildings, a resource center, a program with the Philadelphia school system, an urban communications film festival, a group of seminar show-and-tell sessions, individualized tours, comparative exhibits, etc.

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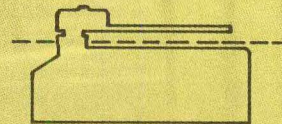


LCN CLOSERS, Princeton, Illinois 61356

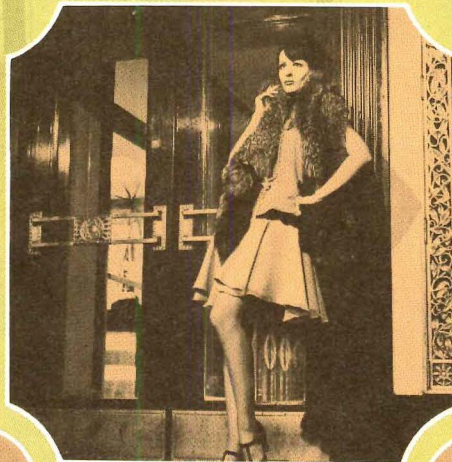
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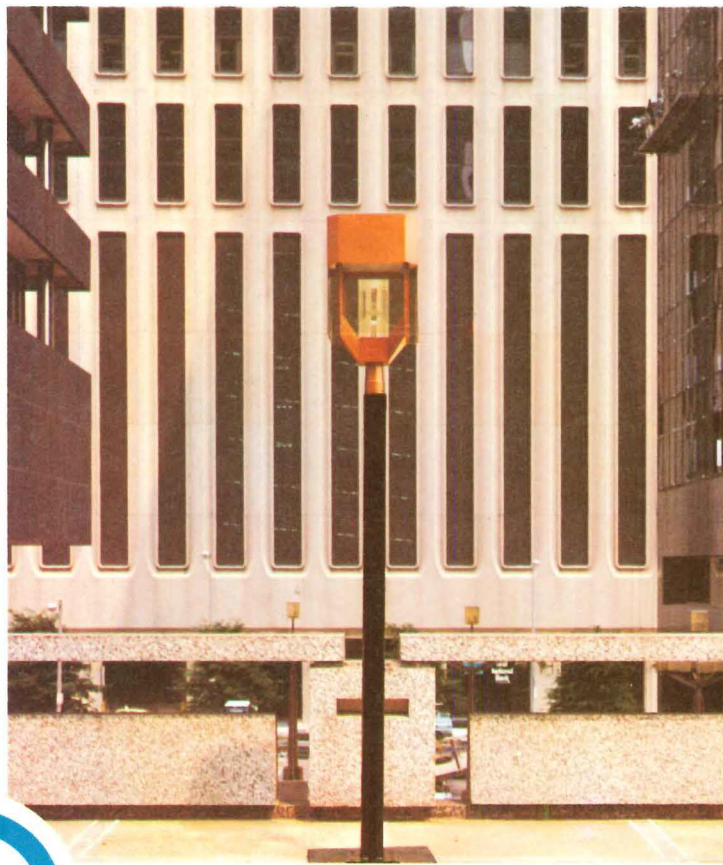
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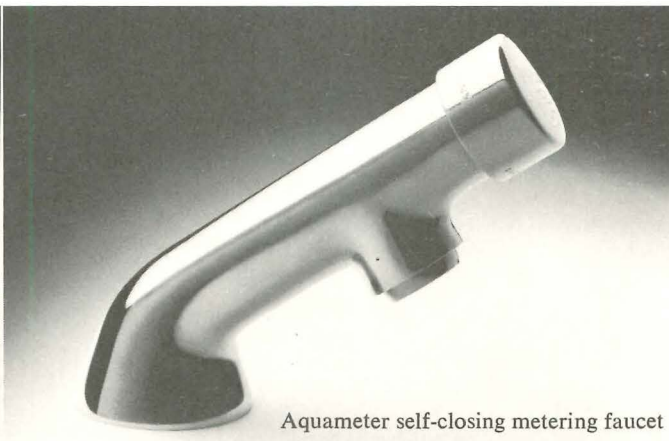


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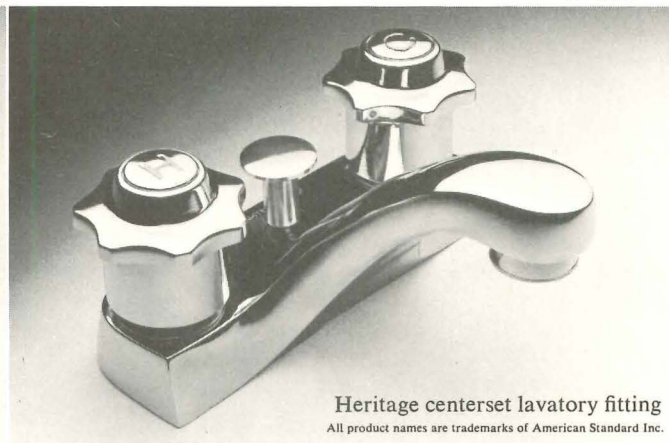
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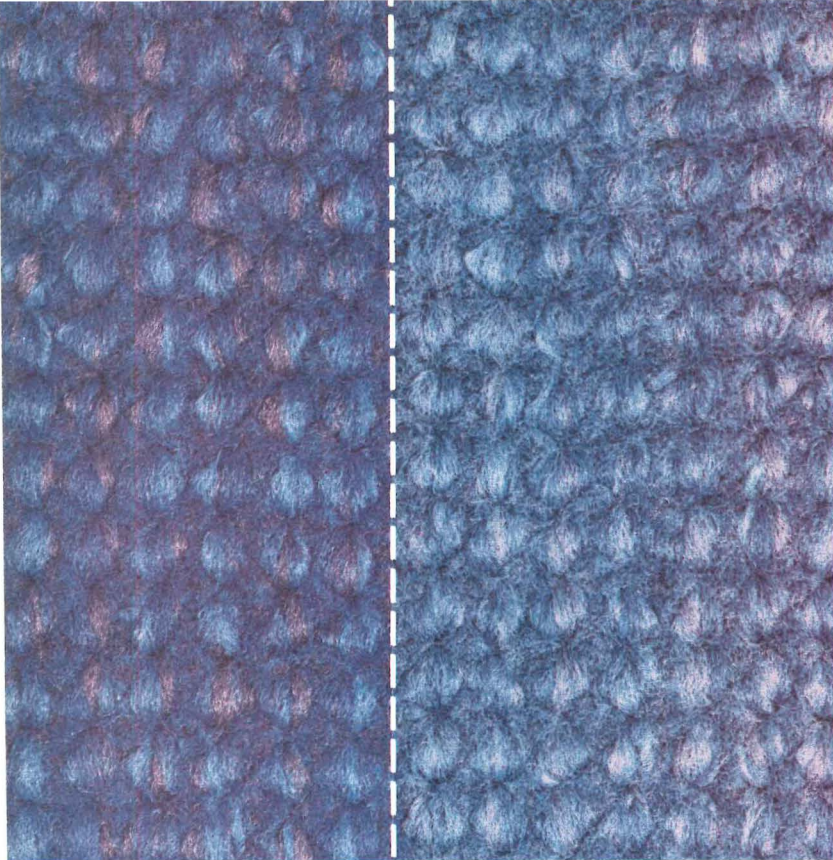
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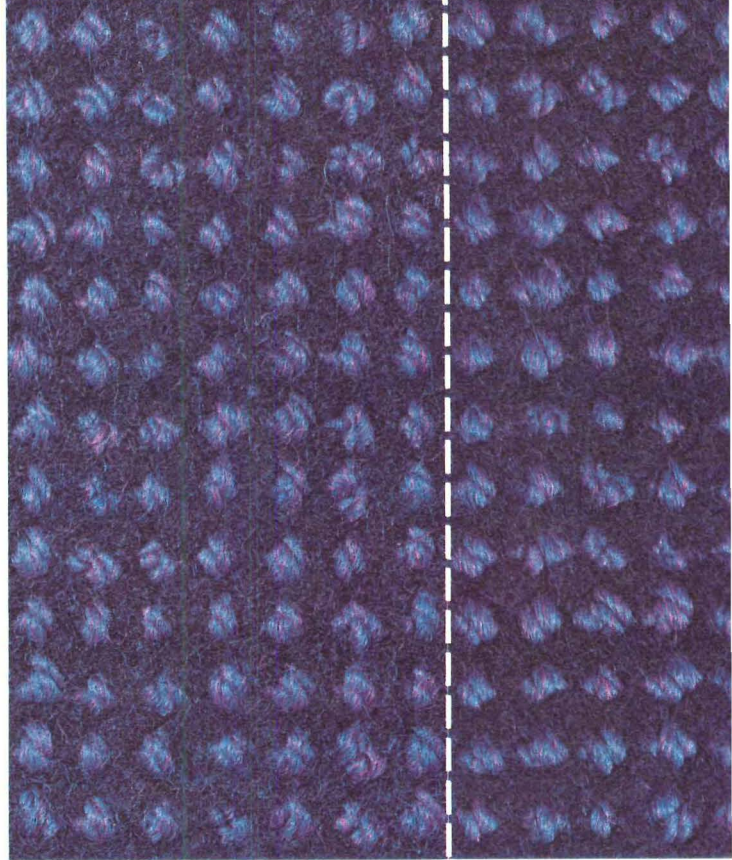
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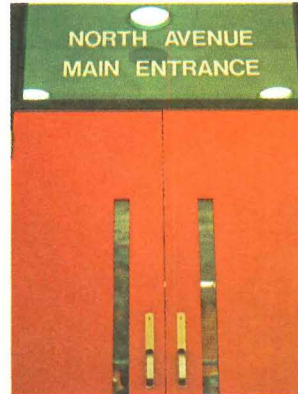
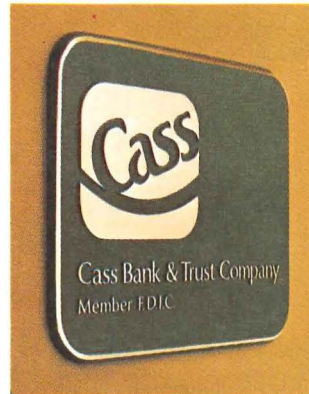
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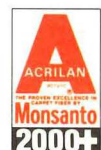
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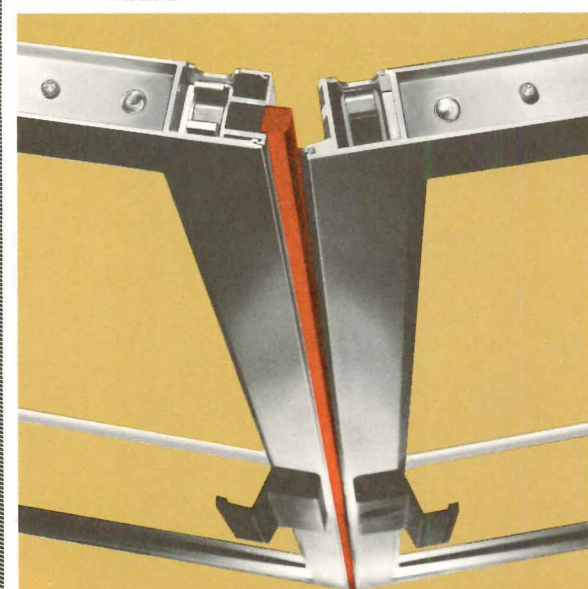


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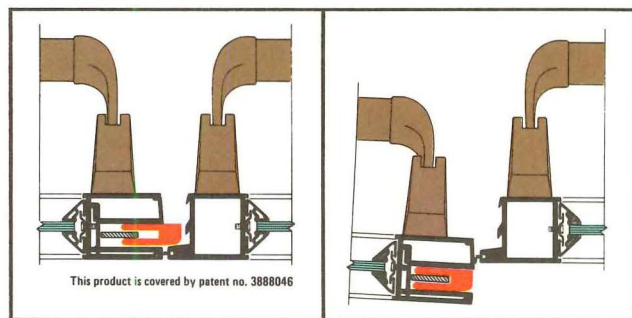


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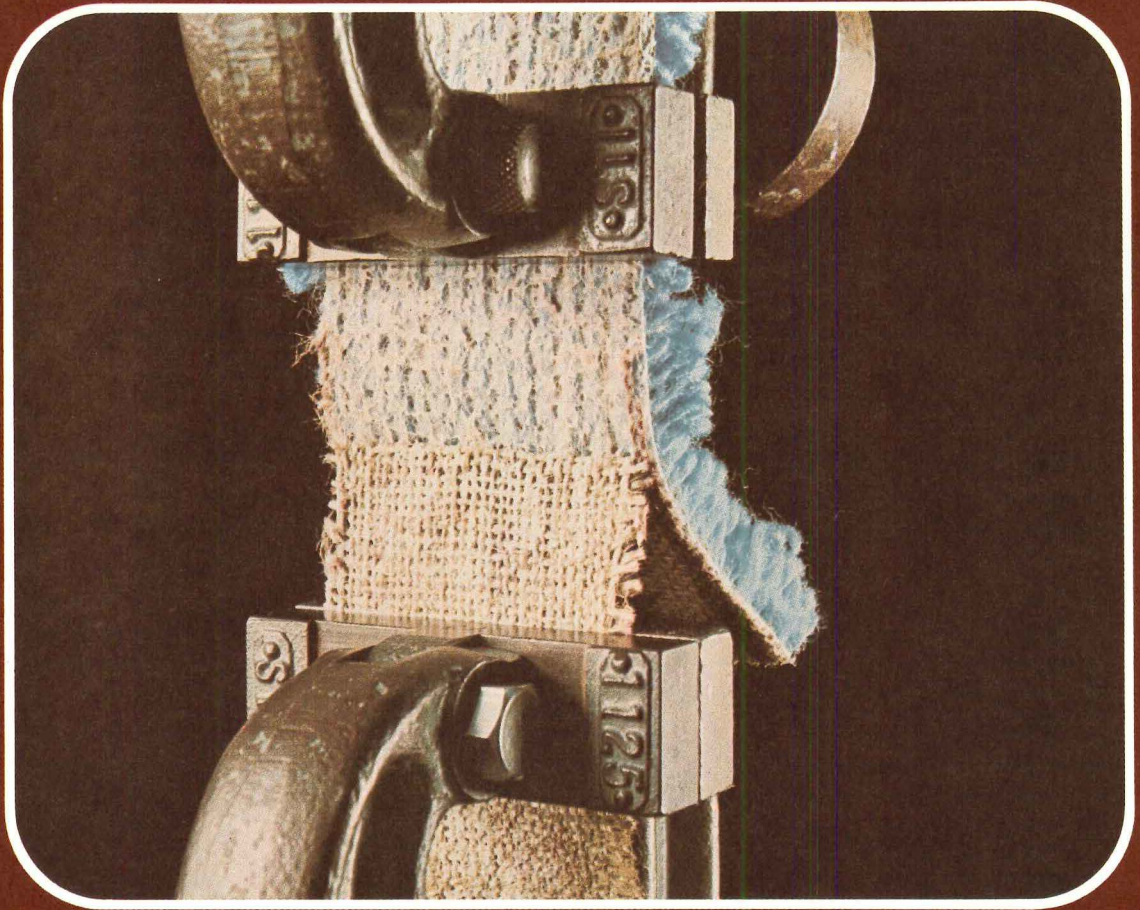
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CERTIFICATION**

Continued from page 14

handicapped persons to public building and housing projects. Current efforts, on the part of the private sector, to amend official building codes will also be explored during the two-day conference, bringing together representatives from the AIA codes and regulations center, the Building Research Advisory Board of the National Research Council and personnel associated with the Department of Housing and Urban Development-sponsored project to revise and amend original standards of accessibility. Andrew S. Adams, commissioner of the Rehabilitation Services Administration, will open a panel discussion scheduled for the afternoon, the purpose of which is to report the findings emerging from federally-funded projects and building code proposals to the field of rehabilitation. Panelists will include Warren R. Nellis, project director, Building Research Advisory Board; Charles Gueli, director of community research, office of policy development and research, HUD; Edward Steinfeld, project director, school of architecture, Syracuse University, and James Dowling,

director, AIA codes and regulations center.

Earlier in the day, an additional forum of exchange will be provided when the first open meeting of the Center for a Barrier-Free Environment is scheduled. The center was incorporated during the past year as a centralized coordinating agency to implement the objectives of the national policy for barrier-free design. The policy, drafted by participants in a 1974 conference called by the National Easter Seal Society, AIA and the President's Committee on Employment of the Handicapped, has been adopted by the U.S. Senate as well as more than 150 public and private agencies. The meeting, called by the center's president, Edward H. Noakes, AIA, will give conference participants an opportunity to learn about current efforts to eliminate architectural barriers. Following the papers presented by the afternoon panelists, he will lead a discussion to pinpoint specific issues.

Additional information about the conference, which is sponsored by AIA, the National Center for a Barrier-Free Environment and the Rehabilitation Services Administration, may be obtained from the National Easter Seal Society for Crippled Children and Adults Convention Office, 2023 W. Ogden Ave., Chicago, Ill. 60612.

Erratum

In the article "Survey of Firms Charts Decline in Employment" in the September issue (p. 41), the figure given for loss in personnel in the three months from the third quarter of 1974 to the end of 1974 should have been 1,217. We regret this inexplicable error. — Ed.

Tour of Japan

Kenneth M. Nishimoto, AIA, of Pasadena, Calif., will conduct the 26th architecture and garden tour of Japan, Taipei and Hong Kong this coming spring. The 25-day tour, designed specifically for architects and allied professionals and limited to 20 persons, will leave by air from Los Angeles on April 10, 1976.

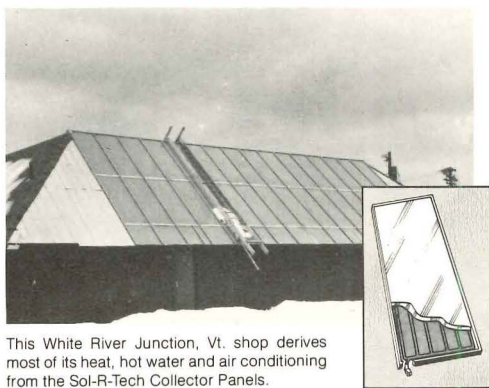
A highlight of the tour will be a visit to the Katsura Villa and Garden in Kyoto; visits to numerous other structures of architectural importance, such as the Ise Grand Shrine, and a stay at a native inn. There will be opportunities as well to discuss matters of professional concern with architects in Japan and Hong Kong.

An illustrated brochure is available from Kenneth M. Nishimoto, AIA, 147 S. Los Robles Ave., Pasadena, Calif. 91101. *continued on page 72*

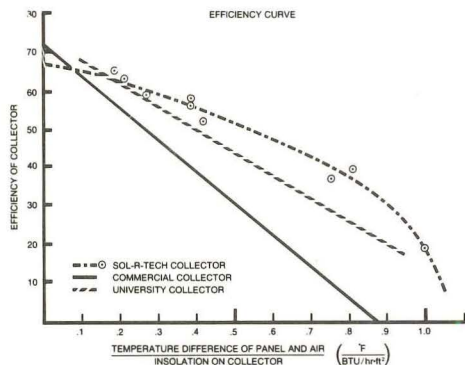
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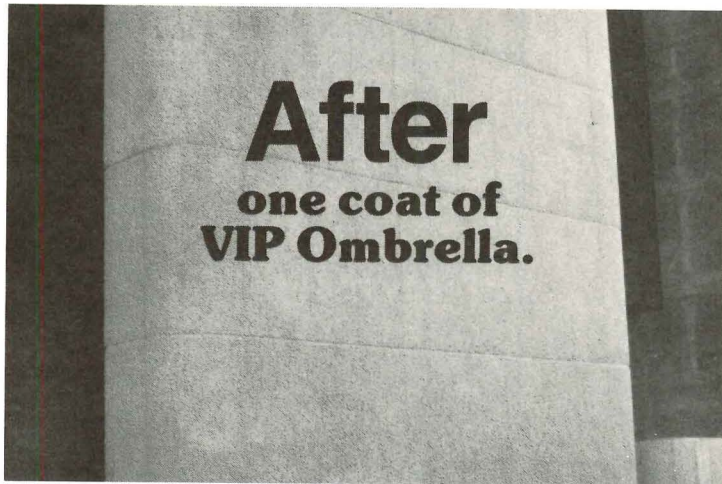
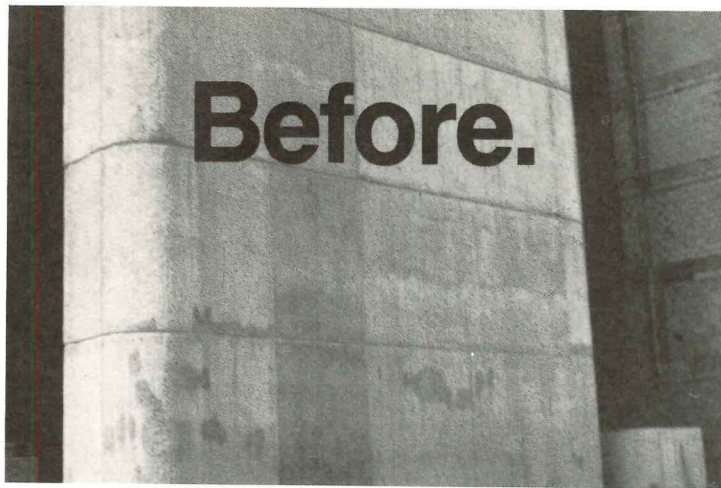
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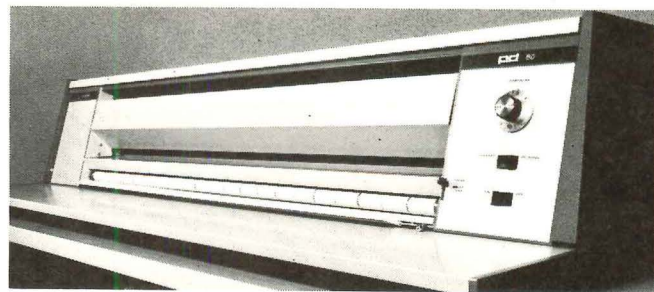
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Sullivan Award Winner

Philip Johnson, FAIA, of New York City, is the recipient of the 1975 Louis Sullivan award for architecture. The award, sponsored by the Bricklayers, Masons & Plasterers International Union of America, and administered by AIA, is given every two years to a practicing U.S. or Canadian architect "whose work is judged to best exemplify the ideals and accomplishments of Louis Sullivan."

The jury chose Johnson from among 51 entrants. Its report stated: "The overall quality of the entries staggered the jury. . . . When our various prejudices, polemics and preconceptions had finally been thoroughly discussed, exhausted and (temporarily) discarded, Johnson's buildings stood, purely and simply, on their own merits as architecture."

Members of the jury were Warren J. Cox, AIA, chairman; Ulrich Franzen, FAIA; Robert B. Marquis, FAIA; Bernard Wood, president of the Royal Architectural Institute of Canada, and Lucien Roughton, student at the University of Wisconsin, Milwaukee.

Federal A/E Conference

The fourth annual A/E federal programs conference will be held in San Francisco on Jan. 29-30, 1976. The conference is sponsored by the Committee on Federal Procurement of A/E Services, of which AIA is a member.

The conference will bring together key federal agency officials, members of Congress, architects and engineers for discussion of such timely topics as the issues of competitive bidding, future federal agency construction budgets, energy conservation, opportunities in the overseas market and the implementation of the new General Services Administration Standard Forms 254 and 255.

Additional information may be obtained from Marshall E. Purnell, co-director of federal agency liaison, AIA headquarters.

Burnham on Pure Air

Back in 1910, Daniel H. Burnham predicted that the "air of the city of the future will be pure." In a speech titled "A City of the Future under Democratic Government" (*Transactions of the Town Planning Conference, Oct. 1910*, pp. 372-3), he said that smoke would be eliminated "when fuel is properly consumed" and that "all gases freed in manufacturing will ultimately be consumed." With the smoke and gases gone, he said that he couldn't think of but two things that would pollute the city: construction enterprises and horses on the street.

To purify the air of construction, he

suggested: "The refuse must be delivered to wagons through closed shuttes, and the wagons themselves . . . covered with tarpaulins."

He continued: "The use of horses in a great city is near its end, because motor vehicles are becoming very cheap and will soon be more economical, and with the passing of the custom of using horses will end a plague of barbarism which we still live in.

"When this change comes, a real step in civilization will have been taken. With no smoke, no gases, no litter of horses, your air and streets will be clean and pure. . . . The air and streets of our cities of the future will be as clean as our drawing-rooms; and the people living in sweeter conditions should be better citizens, should they not? Thus you see that clean air is an affair of state."

Deaths

- William B. Berget, Minneapolis
- Earl Bluestein, Tucson, Ariz.
- Donald Dodge, Newport, R.I.
- George Garties, Cincinnati
- Coswell E. Gerrald, Greensboro, N.C.
- H. Eldridge Hannaford, Cincinnati
- George Irby, Little Rock, Ark.
- John MacKenzie, Flint, Mich.
- Roland G. Middleton, New York, N.Y.
- Robert S. Pinkerton, Winter Park, Fla.
- Louis E. Plaiss, New Albany, Ind.
- Robert W. Schmertz, FAIA, Pittsburgh
- Arthur G. Tafel Sr., Louisville, Ky.
- Edouard Utudjian, Hon. FAIA, Paris, France
- David A. Yerkes, Fort Lauderdale, Fla.

Newslines

Arnold G. Gangnes, AIA, of Seattle, has been appointed to the President's Committee on Mental Retardation. He is the first architect to be appointed to the committee in its nine-year history.

In memory of Wallace W. Arendt, AIA, who died early this year, a scholarship program has been established by the Santa Barbara, Calif., firm of Arendt/Mosher/Grant/Pedersen/Phillips at the California Polytechnic State University. Arendt helped establish the firm in 1956.

Every homeowner will welcome a booklet recently developed by the Department of Housing and Urban Development as part of the agency's research into ways to conserve energy supplies. Titled "In the Bank—Or Up the Chimney," the booklet tells the reader how to inventory his home's present energy-saving condition and to determine exactly where excess energy is being expended. Order by stock number 023-000-00297-3 for \$1.70 per copy from the U.S. Government Printing Office, Washington, D.C. 20402.

Stanford University will phase out its undergraduate program in architecture, probably at the end of the 1976-77 school year. The decision was made as "a regretful result of the financial circumstances of the university."

Harry M. Weese, FAIA, president of the Illinois chapter/AIA, is the recipient of the first "total design award" of the American Society of Interior Designers/Illinois chapter. The award was given in recognition of Weese's "constant respect for the importance of the interrelationship between a building and its interior."

Ronald A. Straka, AIA, architect and urban designer in Boulder, Colo., was the only architect invited by Governor Richard D. Lamm to participate on an interdisciplinary task force committee to draft a preliminary program design for "Colorado Futures Program." The nine-person task force is working on a goal-setting process for statewide citizen involvement in determining the state's future growth and development.

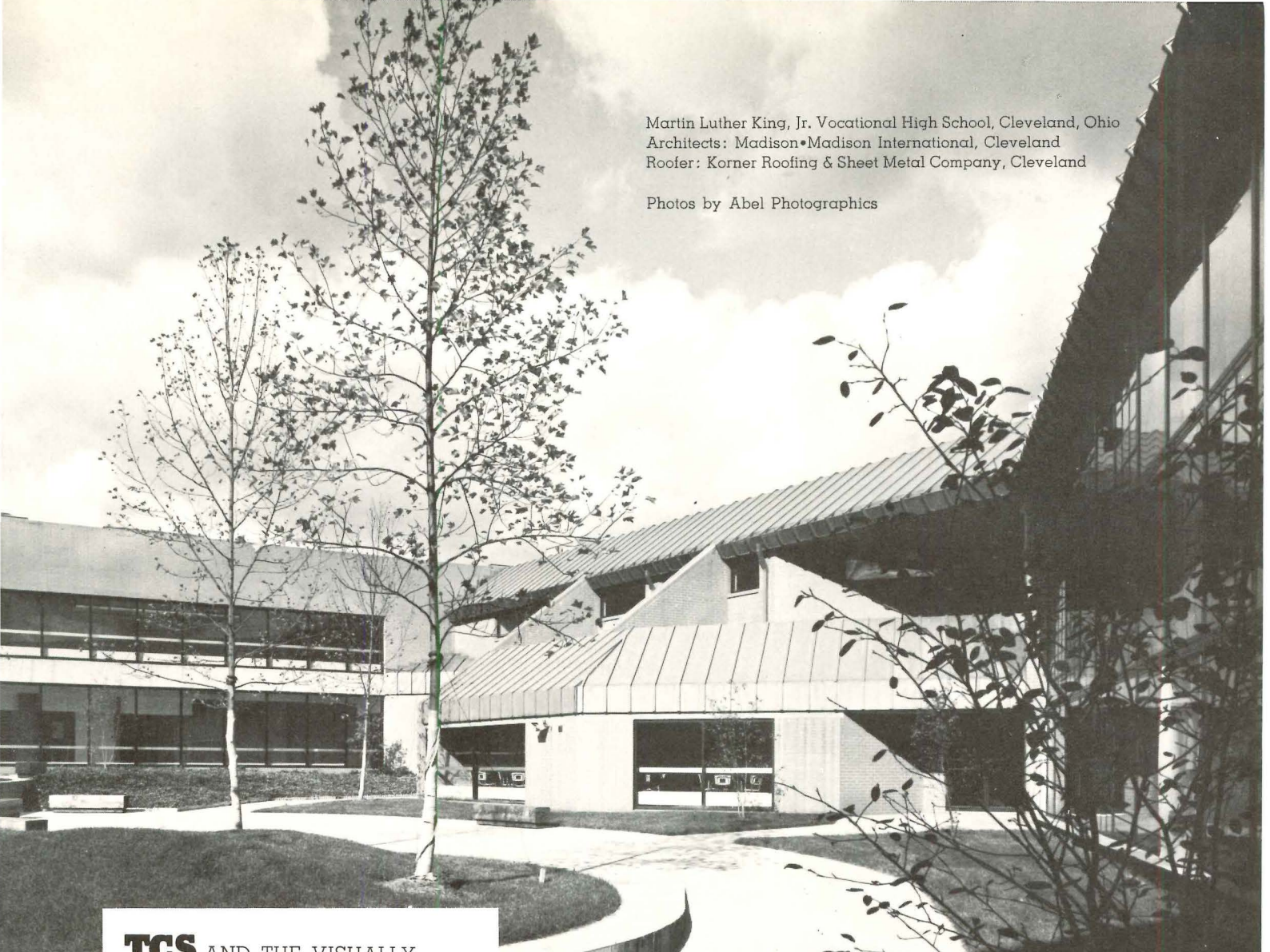
Edwin F. Jones, AIA, vice president and director of Hugh Stubbins & Associates, Inc., Cambridge, Mass., has been awarded a citation of appreciation from the Boston Architectural Center in recognition of his "devoted service" to the center, which he joined as a student in 1949.

"The Fire Resistance Design Manual," which contains technical data on a variety of wall, ceiling, beam and roof assemblies using gypsum products, is now available in a new edition. Single copies at no charge will be sent upon request to the Gypsum Association, Suite 1210, 1603 Orrington Ave., Evanston, Ill. 60201.

The Building Officials & Code Administrators International has elected Leo J. Cantor, commissioner of building, Richmond, Va., as its president for the 1975-76 term.

A fellowship in honor of the late Robert F. Hastings, FAIA, president of the Institute in 1971, has been established at the University of Illinois at Urbana-Champaign by his colleagues. Until his death in 1973, he headed the Detroit firm of Smith, Hinchman & Grylls Associates.

The Chicago chapter/AIA has awarded a five-year contract for the publication of an annual "Illinois Architects' Reference Manual." Editor Wilbert R. Hasbrouck, FAIA, says that it will be an "indispensable reference book for nearly 3,000 architects in and around Illinois, as well as for the building industry throughout the state." The 1976 edition will be available in November. □



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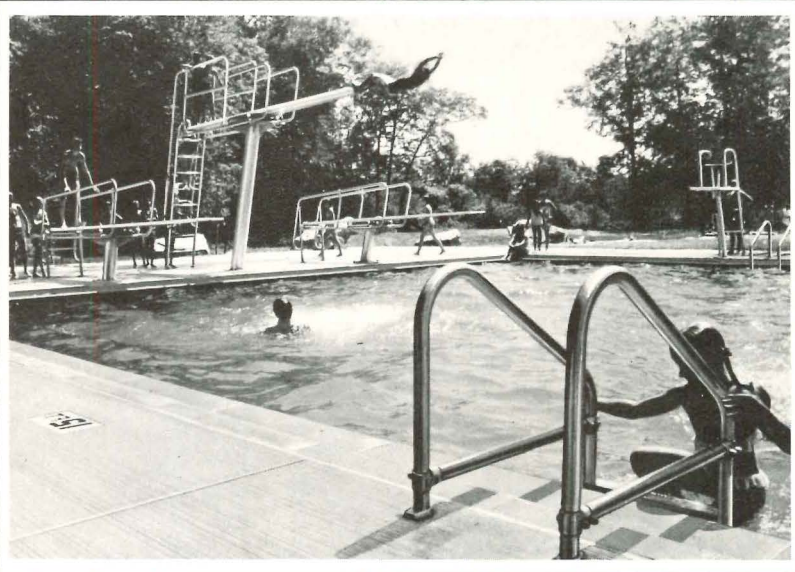
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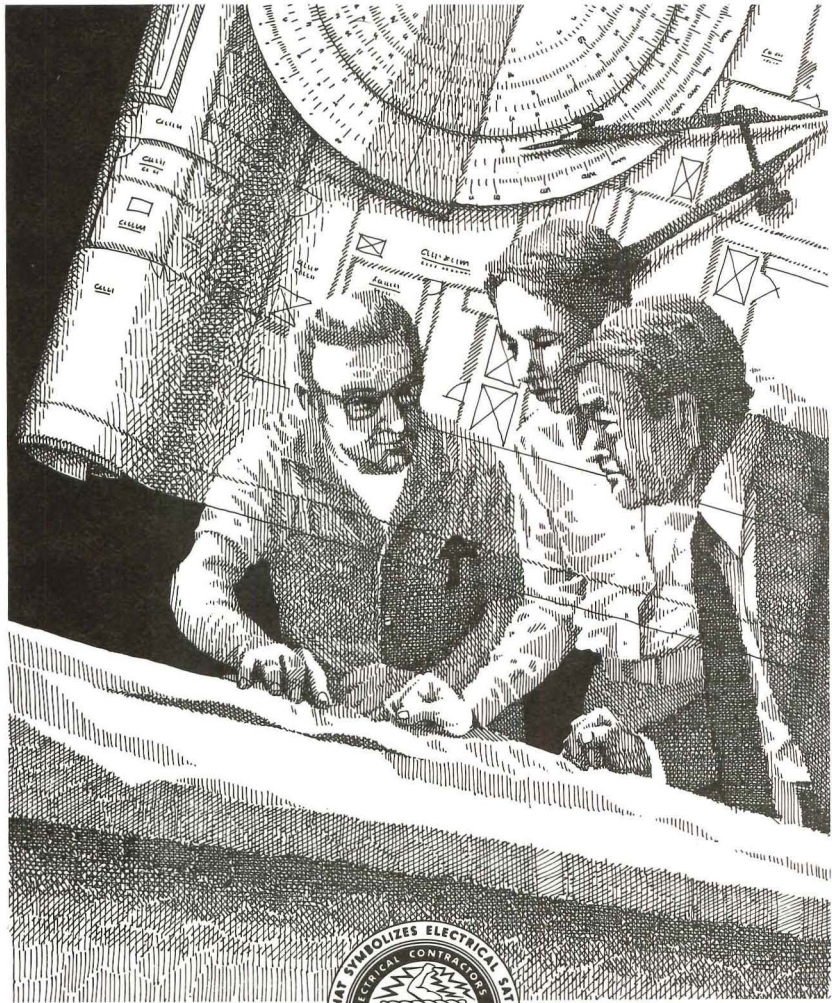
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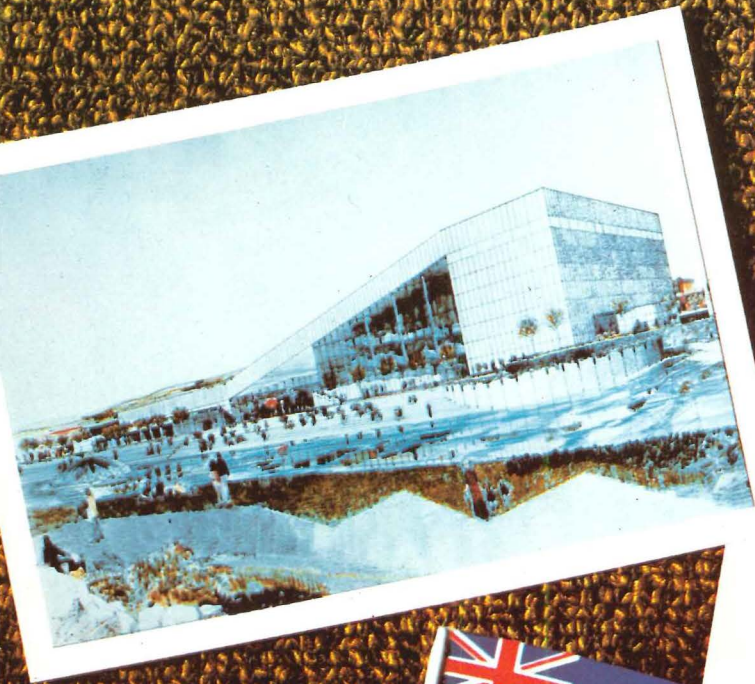
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