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## EVENTS

**July 7-13:** Home Furnishings Market, Dallas. Contact: Delores Lehr, Dallas Market Center, 2100 Stemmons Freeway, Dallas, Tex. 75207.

**July 9-12:** International Conference on the Development of Low Cost and Energy Saving Construction Materials and Applications, Rio de Janeiro, Brazil. Contact: Robert E. Bosely Inc., Marketing Communications, 507 E. Lynwood Ave., Arlington Heights, Ill. 60004.

**July 13-15:** BeauxArch II Exposition—Houses by the Sea: Is There a Hamptons Style? Bridge Hampton, N.Y. Contact: Hillary Woodward, Hampton Day School, Butter Lane, Bridge Hampton, N.Y. 11932.

**July 16-18:** Conference on the Design of Air-Supported Structures, Bristol, England. Contact: Institution of Structural Engineers, 11 Upper Belgrave St., London SW1X 8BH, England.

**July 23-27:** Course on Organization and Writing Construction Specifications, University of Wisconsin, Madison.

**July 30-31:** Course on Interactive Computer Graphics for Finite Element Structural Modeling, University of Wyoming, Laramie.

**July 30-Aug. 3:** Course on Preparing Contracts and Conditions to Control Project Delivery and Quality, University of Wisconsin, Madison.

**Aug. 20-24:** International Conference on Indoor Air Quality and Climate, Stockholm. Contact: Indoor Air '84, RESO Congress Service, S-105 24 Stockholm, Sweden.

**Sept. 3-7:** Conference on the Planning, Design, Execution, and Operation of Bridges, Vancouver, Canada. Contact: International Association for Bridge and Structural Engineering, ETH-Hönggerberg, CH-8093, Zurich, Switzerland.

## LETTERS

**Tucson's Water:** As a member of the Tucson City Council and as executive director of the Southern Arizona Chapter/AIA, I was pleased to see a profile of Tucson in the March issue of *ARCHITECTURE* (page 137). An article that points out Tucson's colorful history and architectural style in a nationally prominent magazine of your stature is clearly of great benefit.

However, I was horrified to see the paragraph that was devoted to the water situation in Tucson. The paragraph was not only misleading but inaccurate. It seemed to imply that "Tucson is running out of water, and no one cares." Nothing could be further from the truth.

The U.S. Geological Survey estimates that Tucson has sufficient reserves in our aquifers to last for 200 years. Tucson's water problem is clearly long term in nature, and long term strategies are being developed and implemented today.

In 1980 the State of Arizona adopted

the strongest groundwater code in existence in the United States. The Central Arizonal Project will bring additional water to the Tucson area by 1992. The City of Tucson has recently made operational a reclaimed water system that will provide treated effluent for irrigation of golf courses, parks, school grounds, and other turf intensive lands. We also have initiated a project to demonstrate the feasibility of large-scale recharge of water.

In the past more emphasis has been placed on demand management, but conservation has and will continue to occur. We have reduced our per capita water use from a high of 204.6 gallons in 1974 to 151.4 gallons in 1983. In the past, the mayor and council have implemented an increasing block rate structure for water rates. This rate structure rewards the low water user by charging less per unit of water than the high user. On the agenda for this year's council deliberation are a water rebate for those who conserve during the summer months, mandated low water use plants and landscaping in new subdivisions and commercial properties, and easing restrictions on the use of gray water.

Tucson has been at the forefront of water conservation in the state of Arizona. Many cities are using our programs as a model.

*Brent L. Davis*  
Councilmember, Ward 2

*The writer, Allen Freeman, responds:* Tucson is to be congratulated for its efforts to reduce water consumption. Mr. Davis obviously sees the city's water supply as being at least half full. As indicated in the story, others who interpret the facts and projections with more skepticism consider known supplies half empty.

**In Defense of Colorado:** I read with great interest Carol Ann Bassett's article on "Roots of Regionalism: 'Great Stone Cities'" (March, page 100). Studies in these areas are quite unique and very informative. However, I feel Ms. Bassett has misled her readers into believing that Don Francisco Vasquez de Coronado "in his search for the fabled Seven Golden Cities of Cibola in 1540" was barbaric.

This was hardly the case. This oversimplified view of Ms. Bassett's research on the conquistadores stemmed from isolated incidents and was not the norm. The Spaniards in fact recognized the land water rights of the Indians, as they took an oath prior to leaving Compostela, Mexico, to be obedient to Coronado. History tells us also that due to Coronado's own brand of personal leadership, extraordinary discipline marked the conduct of these conquistadores.

Realizing this issue would have complimented an otherwise fine research job by Ms. Bassett.

*Martin Valdez*  
Albuquerque, N.M.

**New Mexico Cities:** Contributing Editor David Dillion's articles on Albuquerque and Santa Fe in the March issue were timely and perceptive. His comment that the trend of making the parts more important than the whole is undermining Santa Fe's integrity was well taken and, sadly, true.

Two points of information: La Fonda Hotel in Santa Fe was designed not by John Gaw Meem but by T.H. and W.P. Rapp in association with A.C. Hendrickson in 1920. John Gaw Meem's important addition of an annex and fifth floor was undertaken in 1926. It is that annex which appears in the photo on page 142, misidentified as the cathedral tower.

*Kathleen Brooker*  
Deputy State Historic Preservation Officer  
Santa Fe

**Alvar Aalto:** I was naturally pleased to read Frederick Gutheim's appreciation of my recent book *Alvar Aalto: A Critical Study* in your February issue (page 87). It is reassuring to have the work of more than 20 years so thoughtfully reviewed.

Mr. Gutheim is not entirely accurate, however, when he suggests that I have overstressed Aalto's use of the fan motif in the second half of my book, and I believe your readers will find a more complex and balanced evaluation in my arguments. I am extremely grateful to him, however, for pointing out my weaknesses and omissions.

In this latter connection I should be particularly grateful to hear from all those who had personal experience of Aalto at MIT, especially in the design studio. I am currently revising the text for the second edition and am most anxious to include any new information that my friends in the profession are willing to share with me.

*Dr. Malcolm Quantrill*  
School of Architecture  
Montana State University  
Bozeman, Mont. 59717

**Lost in Translation:** You carry a fine reproduction of a Le Corbusier drawing, acquired by AIA, in the April issue (page 74). Unfortunately, the mistranslation of his handwritten inscription produces an absurdity: "friend of the Modulor, do not yourself search, but invent and discover. . . ." Le Corbusier's words, *ami du Modulor, cherche par toi-même, invente, découvre. . .*, mean just the opposite: "friend of the Modulor, search for yourself, invent, discover. . ."

The error, of course, was due to a misreading of the fifth word, *par*, as *pas*, which, in itself, is understandable. However, the *pas* can be immediately ruled out: first, by grammar (it would have required a "ne" *cherche pas*); second, and more important, by common sense.

*Jacques E. Guiton, AIA*  
New York City



*The Institute*

## Convention Votes to Develop Code of Professional Conduct

Delegates to AIA's 1984 convention in Phoenix unanimously passed a resolution calling for the development of a model code of professional responsibility and the establishment of "strong and effective mechanisms of enforcement."

In submitting the model code resolution, Peter Forbes, FAIA, (representing the New England Regional Council/AIA, the Massachusetts State Society of Architects, and the Boston Society of Architects) said that AIA's ethical code "had been attacked over the years" and that there is now a consensus among AIA members for a "carefully articulated" statement of professional responsibility. The resolution calls for an interim report on the model code and enforcement alternatives to be presented at Grassroots '85, with a resolution following at the 1985 AIA convention.

AIA's former code of ethics and professional conduct was replaced with a statement of ethical principles to be adhered to on a voluntary basis in June 1980. This change was accepted by delegates at the '80 AIA convention, following recommendations from AIA's legal counsel and the legal decision impact task force.

The first challenge to the code of ethics— although somewhat indirect— dates back to 1978 when the Supreme Court ruled that the National Society of Professional Engineers violated the antitrust laws in prohibiting competitive bidding in its ethical standard. In that case the court said that the determination of whether an ethical rule violated the Sherman Antitrust Act should be based solely upon its effect upon competition.

In June 1979 the U.S. Court for the District of Columbia ruled that AIA's ethical standard prohibiting "supplanting" was in violation of the Sherman Act and that AIA was liable for damages to a Washington, D.C., architect suspended from membership for an alleged violation of the standard. (That suit arose from an ethical controversy between two architects involving the conversion of Washington's Union Station into a national visitors' center, for which Seymour Auerbach, FAIA, was the original architect. Aram Mardirosian, AIA, was consultant to the National Park Service on the project and eventually replaced Auerbach as architect. Mardirosian brought suit against AIA and

Auerbach in July 1977). After the court's decision, AIA repealed the supplanting clause from its code of ethics.

By adopting the voluntary statement of ethical principles in June 1980, AIA avoided any further lawsuits over what could have been judged as anticompetitive aspects of the former code of ethics. And, in fact, in October 1980, the American Consulting Engineers Council was sued by the Justice Department for three provisions in its professional conduct guidelines that warned against the pitfalls of its members' acceptance of contingent contracts, provision of free services except to charitable or church institutions, and participation in design competitions unless competing firms are compensated.

AIA's mandatory code of ethics, violations of which could result in suspension of AIA membership, had been in effect since 1909. While its provisions had undergone revisions over the years, the following paraphrased rules had remained constant: prohibition against engaging in construction, paid advertising, participation of a design competition that did not conform to AIA standards, falsely or maliciously injuring another architect, supplanting another after steps had been taken toward his/her employment, and competition with another architect on the basis of fees. Other principles evolved that prohibited an architect from using commission agents, using contributions to secure a commission, submitting free sketches or offering free services on a contingency basis, violating registration laws, having any interest that would prevent the architect from acting in an unprejudiced manner or from serving the best interest of the client.

Another resolution unanimously passed by the delegates concerning architects' compensation states that "the establishing of a fair return on architects' investments in their practices and the establishment of fair compensation for employees be a major American Institute of Architects' issue of the 1980s." At its pre-convention meeting the AIA board of directors also voted to establish the architects' economics and compensation program as a high priority for 1985 and to provide increased staff support to coordinate the program.

Both the resolution and the board's

actions were based on the report by the economics and compensation task force, which concluded that a serious compensation problem exists for the architectural profession and will "continue to worsen in the future if effective countermeasures are not developed immediately." Appointed in June '83 to identify the long-range economic climate for architects, the task force found "several critical factors" that have "impacted the ability of architects to maintain an economically sound position." Among them are continued declining profitability, compensation that is failing to keep pace with inflation and with that of other professionals, and a gradual decline in demand for architects' services. To carry out this program, management consultants will be hired to identify attributes to successful practice, surveys will be conducted to assess AIA members' economic conditions, and a series of roundtable discussions will be held to promote successful practice concepts.

The delegates also passed a resolution calling for the Institute to "intensify its efforts by all possible means" to implement a nuclear disarmament resolution passed at the '82 convention and to "designate" this issue as an "urgent commitment within the government affairs program." That '82 resolution called for AIA

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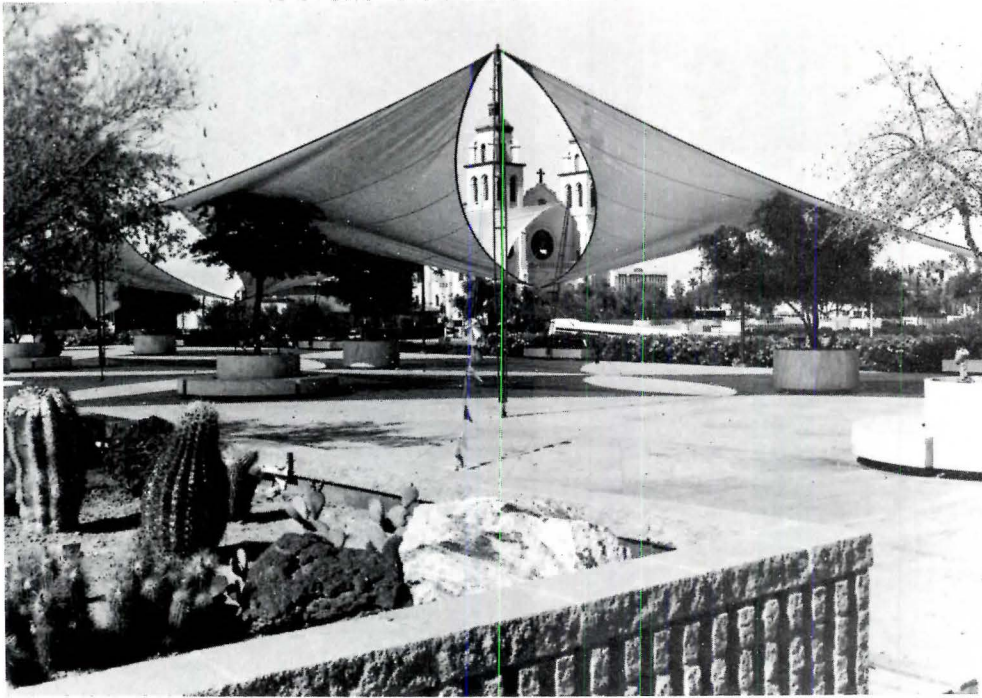
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## Busby '85 President-Elect

New officers elected at the convention are John A. Busby Jr., FAIA, as first vice president/president-elect; Robert E. Gramann, AIA, Donald J. Hackl, FAIA, and Ted P. Pappas, FAIA, as vice presidents; and Philip W. Dinsmore, AIA, as secretary.

A founding principal in the Atlanta firm Jova/Daniels/Busby, Busby was a vice president in 1983 and chaired the Institute's design commission. From 1980 to 1982 he represented the South Atlantic region on the AIA board of directors. Gramann is a principal in the 30-person Cincinnati firm Gartner, Burdick, Bauer-Nilsen Inc. Hackl is president of the Chicago-based firm Loeb Schlossman & Hackl. Pappas is president of the 12-member Jacksonville, Fla., firm Pappas Associates. And Dinsmore is founding partner and principal in charge of marketing and design for Architecture One Ltd. in Tucson, Ariz. They will assume office in December.





*Tents shelter the Phoenix Civic Plaza, where convention-goers participated in a 'Cinco de Mayo' festival.*

to "urge the U.S. government to take a leadership role in achieving total nuclear disarmament and to direct its strongest diplomatic efforts to achieving world peace through cooperation, brotherhood, and mutual respect."

In other action the delegates:

- passed an amended resolution calling for AIA to "implore" Congress and the Administration to reduce the national budget and "couple federal spending with federal revenue to ensure an ongoing balanced federal budget."
- passed a resolution charging the AIA executive committee with making funded AIA national committee assignments and "striving" to assure that proportional distribution of funded members by region is maintained.
- after heated debate, defeated a resolu-

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

tion to retain national AIA dues at the present level through 1985 and to "design" national staffing, programs, and services to operate "effectively within the resulting income amount."

- voted to table a proposed AIA bylaw amendment that would have increased the number of public board members from one to two.

## A Political Observer Reflects on Architecture

"Our architecture is our national signature. It is a measure of our concern, of our imagination, of courage and daring, and of our belief there is reason in being." So stated Hugh Sidey, veteran *Time* magazine Washington contributing editor, in his talk at the AIA convention on social perspectives on American architecture and its public.

In his eloquently worded address, Sidey began with what he knows best—the political world of Washington. "The short-hand of the power game of which we journalists write often has to do with buildings, or monuments, or other architecture. These terms tell an entire story, suggest an idea, set a mood, and form a framework for discussion." When journalists write about the Pentagon, for instance, he said, "any reader knows we are dealing with massive military might"; references to the Oval Office reduce "our focus to a single man and the human dimensions in which he operates"; the Lincoln Memorial "is a visual symbol of our greatest anguish and our greatest triumph. It means two centuries of debate, war, struggle to bring equal justice in this republic.

"Indeed, wherever we look in the world its architecture seems to reflect the nature, the success of the person or institution

that erected the structure," he added. Mount Vernon stands majestically above the Potomac, a statement of the enduring qualities of land, home, and family for which George Washington stood. Monticello is a statement in brick and wood of the endlessly curious mind of Thomas Jefferson, of his search for beauty and grace. . . . The buildings of the federal government in Washington reek of Franklin Roosevelt. He created big government as we know it. He built the giant, gray fortresses along the mall that house the departments and agencies. . . .

"Perhaps there is no clear pattern in all of this with which to make sweeping judgments of men and their times. But at the very least there seems to be a correlation between those years of great progress and achievement and the architecture that is inspired and in turn inspires."

Sidey sees the early development of American architecture as "pragmatic, designed to fit the need: huge when bulk was needed, massive when power was demanded, but intimate and restrained when defining a single person." In earlier times—defined by Sidey as pre-World War II—there seemed to be a "special harmony between those who lived in the structures and the architecture." The development ethic was unlimited space, "which could swallow up blight, which could obliterate ugliness." But at the same time, he said, there was a "character in the town squares, the big, boxy Victorian homes, the cities that grew around rail terminals. All that came into being from the functions of people who wanted to live there. The people had an identity."

After World War II, Sidey suggested, development went askew. "It is in that time that we began to build the sprawling suburbs that, I believe, have robbed us of some of our identity. The job seemed to be nothing so much as warehousing people. Trackless acres of homes appeared. There were no neighborhoods and no towns to speak of. Our crowded loneliness began to be apparent. Families began to disintegrate. The dreary sameness of housing developments produced people just like that. The central cities could not compete with the suburbs. The ghettos grew. Beauty and pleasure from a pleasant environment became unknown to many Americans."

Concerning current times, Sidey wonders if we have the drive to seek excellence in our lives and in our environment. "We still do things well, but not well enough. We still want to improve the quality of life, but we are becoming less insistent than we used to be. The designs of our homes and buildings are still very good, but are they good enough for these tumultuous years?"

As a professional political observer, Sidey  
*continued on page 15*



**The Institute** from page 12 believes we are in an "age of endless campaigning," where we "glorify the mediocre. . . . The pressure builds on the nation's leaders to seek the lower common denominator; no more cathedrals, no more great adventures whether in building highways or going to the moon. I cannot imagine that is the true American spirit. . . . We need cathedrals. A nation cannot survive on despair."

In conclusion, Sidey said that he was "uncertain how much of a people's spirit creates its architecture and how much its architecture shapes a people's strength and vision." He ended by stating with conviction that "few leaders will have as much to say as you architects about how the world sees and assesses this society and how this society judges itself."

Earlier at the convention's opening session, Marvin Cetron, founder and president of Forecasting International, said that the United States is not preparing for the future adequately. Two major problems are the "rotten job" America is doing in "educating our kids" and that this country is not spending enough for research and development, Cetron said. He envisions the future as one where robotics will be the norm for industry, work hours will be shorter, Americans will live longer. In this world, the highest paid professionals will be, he suggested, teachers, writers, artists, architects, and others in creative jobs that cannot be "robotized." But, he warned, architects need to be computer-educated.

## The Architect's, the Critic's, The Public's View of the Media

"I think fairly soon we are going to have an architecture critic in every city," said Robert Campbell, who plays that role for the *Boston Globe*, at an AIA convention program on architecture and the media. What does that mean for architects? For the public? What kinds of issues are being raised by the media? How well do the media serve the public and architecture?

These issues, and others, were examined by three panels. The first discussed the architect's view, the second the critic's view, and the third the public's.

In the first session, it was Campbell who, as moderator, set the stage. "The interest in architecture everywhere I go is intense," he said. "There is a sense that cities are coming back. There is a sense that the architects are no longer so interested in creating inhuman, overscaled, alienating, abstract cubic skylines."

Campbell credited the preservation movement, which he called one of the most important environmental movements in American history, with being the catalyst behind this growing public interest. But, he warned, speaking "as an architect"

(he has degrees in both architecture and in journalism), the "people don't trust us. They don't trust experts of any kind who create the built world because of the built world that we experts created in the '50s and '60s primarily through urban renewal and then through the enormous corporate headquarters and speculative office buildings in the '70s and in the '80s."

There was a general consensus among the panel members—Betsey Olenick Dougherty, AIA; Kenneth Filarski, AIA; John Hartray, FAIA, and Barry Moore, AIA—that the increased interest by both the public and the media in architecture is welcome. As Dougherty put it, "The media provide the opportunity for us to work toward educating the public as a whole." However, the panelists also identified two major problems in the current relationship between architects and the media.

The first is what Moore called the "tremendous ignorance that we as architects continue to maintain with regards to the media." Filarski continued, "Architects are inarticulate for the most part about design. When they talk to the media they are looking for a quick fix. They don't realize the tremendous long-term potential and possibilities that there are for public education about the built environment."

Campbell added, "The reason that the media treat new buildings as if they were superficial works of art is because their architects talk about them as if they were superficial works of art. What we need to counteract that is for architects to talk about the experiential side of architecture much more than they do. What is it like to enter a building, the sun, the wind, the orientation? How do you make one part of the world different from another?"

The second problem is the naivete of the media concerning architecture and the built environment and their tendency, in Hartray's term, to seek "controversy." With all seriousness Hartray said, "What bothers me most about talking to reporters is that they quote me correctly." In discussing with a reporter a particular building or even simply supplying background information, Hartray says, "make one intemperate remark concerning some aspect of it and you will find that that is the only sentence that gets quoted. . . . It

is very hard to discuss the environment and architecture and construction really very seriously."

Campbell said, "The sooner we have people in each city who write about architecture who have some longer time line of information than just what they get from the architect, the better off we will be."

Given that there is a tremendous need for architecture critics, how do they perceive their task? The second panel's moderator, John Roszak, architecture reporter for KQED-TV, San Francisco, asked, "Is architecture newsworthy, and is it worth covering? If so, what is news?"

"What I am interested in is the effect of architecture on the environment," said Sam Kaplan, urban design critic for the *Los Angeles Times*. "If anything, we look at ourselves as public advocates. How does the building, how does the architecture, how does the planning affect the public?"

This sentiment was echoed by David Dillon, architecture critic for the *Dallas Morning News*. "Architecture critics are not the public relations arm of the AIA, the local chapter, or architects," he said. "Our job is not to represent you [the architect] in the best possible light to the community. Our function is to represent the public as best we can." Dillon also added that a good architecture critic is a "good reporter. . . . There is a certain amount of reporting that goes along with criticism. On the other hand, architecture critics are paid for their opinions."

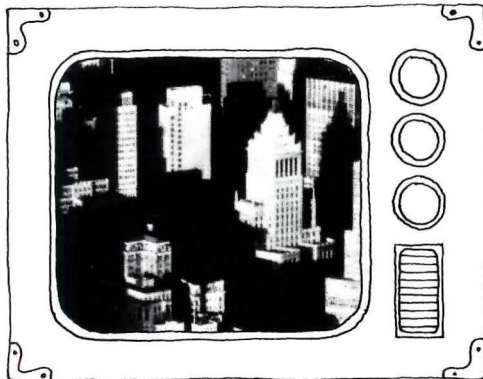
Beth Dunlop, architecture critic for the *Miami Herald*, suggested that "somewhere between what you [the architect] do and what the public knows about architecture comes the architecture critic. What we do is try to evaluate and interpret and communicate all of what is going on in our cities for the general public who are not privy to architectural educations." She added, "What is popular is inevitable. We have to write about buildings that are high in the public eye. But I don't think we are there to either create or record fads. Our mandate is much more serious than that."

Lawrence Cheek, architecture critic of the *Tucson Citizen*, emphasized, "We are extremely concerned about the effect of a sculpture [building] on the quality of life, on the streetscape in context."

The final panel spent its hour trying to define the public and how the public can affect the planning/design/development process, rather than examining the public's relationship with the press.

It quickly became evident that the public in the desert Southwest (represented on the panel by Rick Counts, director of planning for the City of Phoenix; John D. Driggs, chairman of the board of Western Financial Corporation in Phoenix; and Hal De Keyser, executive editor of the

*continued on page 16*





**The Institute** from page 15  
Tempe Daily News) has a very different role in the planning/development process than the public in Boston (represented on the panel by Robert Campbell) and in San Francisco (represented on the panel by John Roszak).

Driggs started by saying, "I would like to see the public involvement not just in reacting to a particular architectural impact as it might affect them personally, but I would like to see the public involved more in a positive, constructive way, and not always just in a negative, reactive way."

Campbell responded, "It must be an entirely different world here. The way the public has been described here is so general and abstract—the general public, the citizenry—as if they were a kind of great unknown and undifferentiated body of something out there. . . . In Boston they have organized themselves from the great general public into a number of very specific constituencies—the neighborhood organization, the preservation district, the issues-oriented group. They believe that they have the same right to determine what the world ought to look like as the guy that is paying the bill for the building has. . . . They have been tremendously effective."

Campbell continued, "We may be pretending that this whole process could be a lot friendlier than it really can be. . . . I can only use my own city as an example, but citizen participation in the planning and design of Boston began when the lawsuits began. Then it stops being a process of the planners and developer coopting the opposition, and it really becomes a legitimate forum where both sides have power. . . . Confrontation is not something to avoid. Confrontation is something that will prove that the public is becoming interested."

## Panel Explores Public Needs, Attitudes Toward Architecture

Does the American public know what it wants from its architects and architecture? At a theme program at the AIA convention panelist Beth Dunlop, architecture critic of the Miami *Herald*, answered yes but added that the "public sometimes lacks the tools to articulate feelings about architecture."

It was obvious, though, that one of the two main speakers at the program had a highly articulated answer to the question. Herman Chanen, president and chairman of the Chanen Construction Co. of Phoenix, said, "The public wants the best possible life style, with costs they can afford. . . . Quality? Yes. Profit? Yes. It is more than possible to achieve both. First, and forever first, must come a concern for the individual needs and the humanity we serve. Then profit, like beauty, fol-

lows as a natural consequence of that basic consideration."

Chanen criticized architects in recent years for failing to "create quality by neglecting to plant a human heart in their steel and glass structures. Function and efficiency replaced, and often still do, the remembrance of human need." He believes that too much emphasis has been placed on the "bottom line."

He said that it is the architects' responsibility to "reassert yourselves as the dominant force in planning and design. . . . By creating an environment that genuinely reflects the assumption of human needs, and answers those needs, a completed structure can be no less than successful and profitable."

He asked, "Who shall be the 'visionary' among our ranks who views the 'whole' rather than the separate parts? It would be prudent in today's complicated scheme of things for architects to once again take that position. In that process, architects need to teach builders to know more about the concept and challenge of design. . . ."

"If your work reflects human needs in an accurate way, mine will too. And if mine falls short of the mark, it is your responsibility to tell me that it has."

## Cities

# Kevin Lynch, A Pioneer of Urban Design, Remembered

"What makes a good city?" Kevin Lynch asked again and again in his teaching, his planning, his person. "A naive question," he called it in his last book, *Good City Form*. But the question was the root one, and the MIT professor, planner, author, and articulate simplifier who died in April carried the conviction that it was central further and diffused it wider than anyone else in his field.

He was a gifted catalyst with the capacity to synthesize, clarify, and communicate visual ideas in a compelling manner that first made *Image of the City* the classic of planning almost a quarter century ago; his *Site Planning*, re-issued this spring, is the standard text. "The Doctor Spock of planning," one urban designer called it. "He gave people the vocabulary to look at cities. He was our Webster." Like Jefferson, "he had to rework everything he saw," co-author and fellow MIT professor Gary Hack observed. Asking "naive" questions—looking for answers—Lynch helped usher planning from its post-World War II narrow professionalism to a broader viewpoint that was more comprehending of human and architectural values. "He can properly be said to have

This need for architects to take a leadership role was echoed by John P. Robin, Hon. AIA, professor of urban affairs at the University of Pittsburgh and chairman of the Pittsburgh Urban Redevelopment Authority. Robin compared the results of Pittsburgh's Renaissance I (which he called the first major urban renewal program in the country), with the city's Renaissance II program, begun seven years ago.

During Renaissance I, he said, there was not enough emphasis on quality and excellence, a fact which he said later became quite evident. The later program had the benefit of "strong architectural advice and architectural comment." He pointed to the new PPG complex (see May, page 242) as one of the program's major successes.

Karen Moore, a member of the Phoenix planning commission, was very specific in her views of public needs. "People want more open space, affordable housing, structures that are more responsive to energy and environmental concerns," she said, adding that there is a need to have a public that is informed about the issues and there is a need "most of all to have a dialogue between architects, developers, government, and the public."

invented the realistic possibility of city design," according to a biography from MIT that sums up his work of 35 years.

Lynch, 66, died on April 25 in his full powers. He was found seated in a chair in his summer home, having spent the day planting his garden by the house in Gay Head, Martha's Vineyard, where he summered while writing many of his seven books. "To everything there is a season," the reading from *Ecclesiastes*, began his May 14 memorial service in Trinity Church, and the eulogy and biographical booklet accompanying it spoke of the city man's connection to the natural world. The booklet with Lynch's planting scheme, his list of vegetables and when he planted them, was seasonal too: "April 17 . . . planted peas, 1st lettuce . . ." it began to record 1984's schedule. "April 24 . . . second lettuce, basil, parsley, dill, cabbage," it ended as his life ended. The same tidy script and lines that lined the margins of his texts told graphically of Kevin Lynch's last hours.

Kevin Lynch died "on his own good terms," Stephen Carr, partner in the firm of Carr, Lynch Associates, said at the

*continued on page 18*



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*Cities from page 16*

memorial service attended by more than 400, "in a house of his making, on a site of his choosing." His life, said Carr, was more coherent than most, and, as if to confirm it, friends and family gathered after the service to attest to the simplicity, humanity, and integrity of the man and his work.

"I must confess to believing in that outworn heresy, the public interest," Lynch once wrote. If that public interest ranged backward over centuries in history and across continents in scope, it touched close to home too. Those who spoke in tribute described a loving family man and father of four; an unassuming scholar-planner as likely to help a former student from Poland with a visa problem as to create a master plan, and a teacher as caring and attentive to the words of youngsters at the Children's Museum as to his colleagues'. He had a "sense of community," artist and MIT colleague Gyorgy Kepes told the assemblage, "which I keep as the scaffold of my life."

With Kepes, Lynch began his career researching and writing *Image of the City*, published in 1960. The end of a five-year study of how people perceive the urban landscape, it became one of the most influential 20th century books on the design of cities. Before Lynch, architects and planners had barely voiced their "dirty little secret"—that a passion for things visual or esthetic mattered and could and should ground the shape of the city. Before Lynch, planning in mid-century America meant transportation. It meant economics. Now and again, it meant rejuvenation. With this work, "the look of cities, and whether this look is of any importance, and whether it can be changed," became verbal—in other words, mattered. "The urban landscape," Lynch dared to tell the generation that had urban renewed that landscape to extinction, "is also something to be seen, to be remembered, and to delight in." Before Lynch, a city was a place of parts; after him the image encompassed a whole. Above all, though, his urban vision extended beyond the parochial planner to include the user's view.

Cities originate as holy places, Lynch also liked to remind readers in his history-conscious way, and this reverence or awe emerged even in the carefully ordered specifics of *Site Planning*. Site planning "is more than a practical art," he wrote. "Its aim is moral and esthetic: to make places which enhance everyday life—which liberate their inhabitants and give them a sense of the way they live."

Perhaps the sense of holiness—if not awe—or morality and urbanity originated in his native Chicago. The third generation in an Irish family, Lynch began his education in parochial schools there but soon shifted to the progressive John



Kevin Lynch in a New Hampshire setting.

Dewey system of the Francis W. Parker school. Seventh grade instruction on Egyptian architecture, "great teachers, and a school which encouraged you to be active" powered his career, he once said. The Depression added to his social zeal. "The bread lines were forming," he said. The Spanish Civil War further inspired him: "A lot of us were being swept up into political and social causes."

The best that Lynch would probably have said of his brief stay at Yale was that it didn't stem these impulses and left him ready to profit from a year and a half with Frank Lloyd Wright at Taliesin. (Wright cursed him roundly, and poetically, when he left, Lynch recalled.) After a few more courses, service in the army in World War II and an infusion of Lewis Mumford's city views, Lynch headed to MIT and received his bachelor of city planning in 1947. A year on the Greensboro (N.C.) Planning Commission and then he joined the MIT faculty, a tenure that lasted until 1977 when he retired.

"From the beginning, he was a devoted teacher and wonderful colleague," associates Carr, Hack, and Lloyd Rodwin wrote in his memorial brochure, "interested in his students and associates (doubtless in that order), respectful of their ideas, himself, provocative but never cutting."

A man of middle size, his close-cropped hair and demeanor closer to the bureaucratic clients he worked with than his MIT peers, Lynch had a gentle but firm way of instruction, an air of caring, humor, and a gift as raconteur that engaged the listener. The same straightforward style spliced with wide-ranging insights marked his writing even at its most circulatory.

After *Image of the City*, Lynch seemed always at work on a book, collecting stories, culling material from many sources to produce *The View from the Road* (with Donald Appleyard and John Myer); *What Time is This Place*, his own favorite but perhaps too early in the preservation movement (1972) to earn the place it deserved; *Growing Up in Cities*; the dryer *Managing the Sense of the*

*Region*; as well as *Site Planning*; and *A Theory of Good City Form*. Another work, on waste in society, awaits completion. Almost a decade in forming, it again ranges over other times, other cultures to make a topical problem universal.

"He used writing as a way of speculating," says Gary Hack, who shared in the third edition of *Site Planning*. Drawing from endless books and countless friends and acquaintances ("there were seven- or eight-hundred people, all of whom felt like they had a special intellectual and personal relationship," Hack recalls), he credited them with great generosity (one book was dedicated to seven contributors "whose ideas helped me to write this book"). "Kevin was a marvelous host for ideas," Hack goes on. He could take a 10-minute conversation and inspire the speaker to push on. "He was always wanting to wrestle with ideas. He had absolutely no sense of proprietary rights to ideas. That's, in part, why he could do his synthesizing." Lynch researched and wrote to think as much as to produce; that is also what made him so productive.

The prolific author's generosity and pluralism may also account for his relative anonymity as a planner. As a member of the teams that he thought essential to planning, he shaped Boston's Government Center and waterfront "walk to the sea." The *Boston Globe* paid tribute to him and his work in two articles and an editorial in May: "He addressed 'the image' of Boston at a time of woeful civic design," the editorial noted. "A desperate city in the 1950s had panhandled its human-scale heritage for the flossy future of the Prudential Center in the Back Bay and Charles River Park in the old West End. By considering the expressed esthetic needs of Bostonians, Kevin Lynch's vision helped produce the relaxed ambience of Waterfront Park."

For himself, Lynch recognized the incursion of "market forces" and the many changes in plans by I.M. Pei in Boston and by others elsewhere. But he was philosophical enough to place his work in the "long stream of events" through which cities evolved and of which he wrote. "In a capitalist society, the market takes over," he commented, but that reality did not stop his work at the notorious Columbia Point housing project in Boston. Equally appalled by "daunting buildings" and a public "traumatized by hugeness of scale," he persevered with projects in Cleveland; Columbia, Md.; plans for Minneapolis, Los Angeles, San Francisco, and San Diego; and, after retiring from MIT, projects in Dallas and Washington, D.C.

A career studded with awards—the 50th anniversary award of the American Institute of Planners (1967); the AIA's Allied Professions Medal (1974) and the first  
*continued on page 21*



Cities from page 18

Rexford G. Tugwell Award for city planners—closed with the city council of San Diego adjourning to mark his death a decade after he had drawn visionary plans for that city. A month before, Lynch had accepted an invitation to teach urban design at Tsinghua University in China. "He had an urgent sense of mission," his colleagues said, "never resting on his laurels, speaking always of the good work remaining to be done." Clearly, that work on cities, spaces, places; on forms, perceptions, values is and will remain an empty shelf endlessly awaiting new ideas. Just as clearly, though, the spot occupied by Kevin Lynch is a permanent and prominent one. JANE HOLTZ KAY

*Architecture critic for the Christian Science Monitor and author of Lost Boston, Jane Holtz Kay is working on Preserving New England, to be published by Pantheon and the National Trust in 1985.*

## Boston 'Desperately Needs' New Plan, Experts Conclude

The city of Boston needs a new plan and needs it fairly desperately, according to five national experts who participated in a four-day symposium in April and May called "The Boston Conference: A City and Its Future."

The panel of experts, invited to Boston to study and react to its problems, noted, almost unanimously, four issues: a threat to the quality of life posed by a rapid, uncoordinated proliferation of high-rise towers in the city's booming downtown; a deterioration in many public spaces and services; poverty and abandonment in some neighborhoods, especially minority neighborhoods; and the chronic financial crisis of a city whose only significant source of revenue is a tax (limited by statute) on its real estate.

The experts, chosen for their diversity, experience, and lack of previous involvement in Boston, toured the city for three days in April and heard and cross-examined some 30 "witnesses" representing most possible Boston viewpoints and constituencies. After a month's reflection, the experts reconvened for an all-day session in Faneuil Hall to report their reactions and proposals.

Barton Myers, AIA, a professor at UCLA, said that if the city thought of itself as a self-sustaining economic entity, like a corporation, it would more clearly perceive its weaknesses in financial matters and in its "training programs," i.e. schools. He proposed to ease the overbuilding of the downtown by moving toward a "multicentered city" on a Toronto model.

Dolores Hayden, architect and historian, author of *Redesigning the Ameri-*

*can Dream*, said Boston fails its minorities and women. She proposed a crash employment program comparable to World War II mobilization.

Moon Landrieu, former mayor of New Orleans and secretary of HUD under Carter, was the only expert who was sure downtown wasn't overbuilt, saying development there hadn't yet scratched the surface and that there was nothing wrong with 40-story buildings. He supported some height limits and a revival of the city's long-neglected zoning ordinance.

J. Max Bond, architect, Columbia University professor, and member of the New York City Planning Commission, suggested ways of creating a fairer distribution of income by such devices as awarding public contracts not to the low bidder but to whomever proposed to employ the most local products and services.

Allen Jacobs, former director of San Francisco's city planning, in the day's most forceful presentation, spoke of Boston's "incredible economic and social inequities," called the new, upscale, in-town mall, Copley Place, "a terrible development," called the Hancock Tower "a profanation," said people in cities must learn to live with nature and stop trying to master it, and called for a new city plan with clear policies and specific rules on housing, height and bulk limits, pres-

*continued on page 24*

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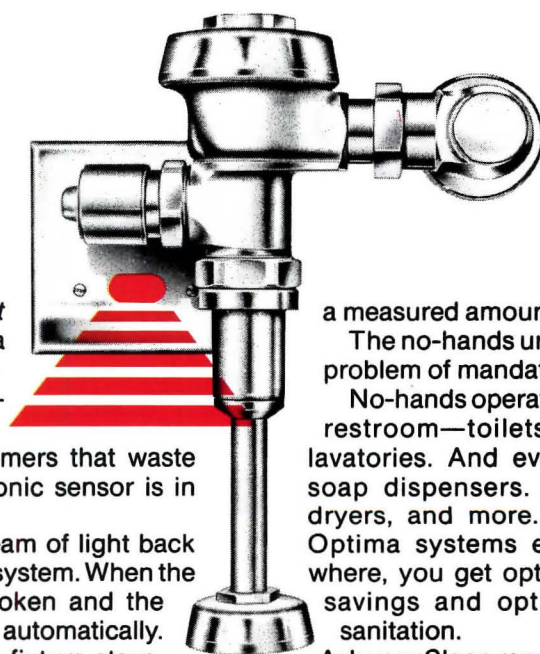
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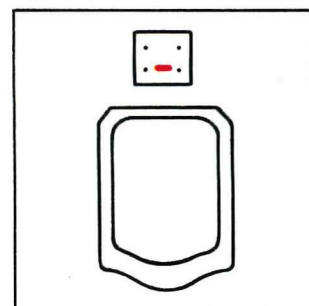


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**Cities** from page 21

ervation, the streetspace and public realm, and the natural environment. Jacobs decried "flexible" plans and said: "Never leave anything up to discretion or negotiation—the party with power always wins. And never give up or vacate any public street or alley—they moderate the scale of new development."

The panel generally agreed with the many witnesses, among them former Boston redevelopment chief Edward Logue, Hon. AIA, who argued that Boston's economic revival in recent years has been a stunning success but one that now threatens to overwhelm and divide the city. New growth must be better channeled and a greater priority given to neighborhood revitalization, Logue said.

The conference was sponsored by the Boston *Globe* and MIT's school of architecture and planning, with help from nine other educational and professional institutions and from the National Endowment for the Arts. Its April meetings were held in different parts of the city: at the downtown Federal Reserve tower to discuss "The Architecture of Growth"; at the First Church in Roxbury to talk about "The Architecture of Promise and Neglect"; and at the new wing of the Boston Public Library in the Back Bay to consider "The Architecture of Affluence."

ROBERT CAMPBELL

**Old Post Office Clock Tower Opens in Washington, D.C.**

Last month the 315-foot-tall tower of the Old Post Office in Washington, D.C., was opened to the public. The tower's refurbishment by Arthur Cotton Moore Associates (with Rob Hammell, AIA, as project architect) is part of restoration work on the 1899 building (designed by Willoughby Edbrooke) that combines federal office space with commercial development as allowed by the Cooperative Use Act of 1976 (see Nov. '83, page 48).

The visitor's journey to the top of the city's second tallest structure (after the Washington Monument) begins with a ride in a new, glass-enclosed elevator from the ground floor of the cortile up to the ninth floor. Visitors then walk past a display of rope pulls for the bells above and into another elevator (this one without a view) that ascends to the 12th floor observation deck. Here there is a plexiglass-enclosed mechanism for the clock's tower, a podium for park service personnel giving tours, and views out of the tower on all four sides through 12 arched openings. These are partially enclosed with thin, vertical wires that "sing" as wind blows through the tower.

While descending, the visitors can view the 10 Ditchley bells, reproductions of

those in Westminster Abbey, which were a bicentennial gift to the United States from Great Britain. The bell room is a two-story space on the 10th floor. Moore explains that originally the bells were to be installed in the observation deck but sway tests revealed that at that height the bells might be rendered inoperable. On the 10th floor, where swaying was in tolerable limits, no openings could be made in the tower to allow the sound to escape.

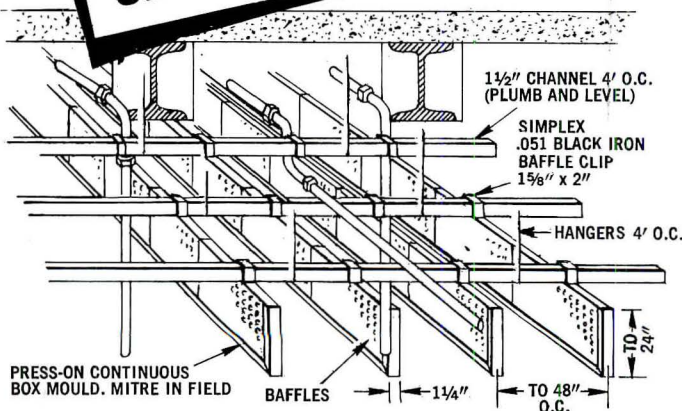
The problem was solved, says Moore, by making the four 15-foot-diameter clock faces (one story above the bells) open. The clock faces are made of thin fabric similar to that covering stereo speakers. Behind this are louver windows to keep the weather out. When the bells are rung the windows are opened and the sound is bounced off a huge, inverted acoustical pyramid.

Although the tower is now open to the public, exhibits illustrating the building's history and that of the city are yet to come. The ground floor visitors' waiting area will display an exhibit of the building's history, the rope pull area will graphically depict the art of bell ringing, and in the observation deck will be a model of the Old Post Office and a display of historical aerial photographs and plans of Washington. Panels will also explain the design of the bell room. *News continued on page 88*

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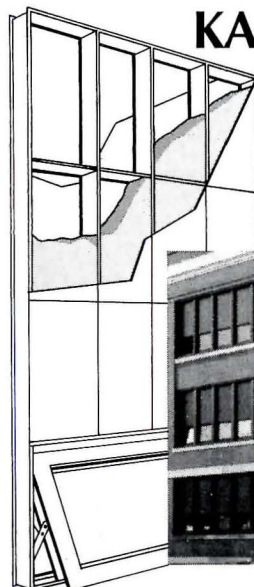
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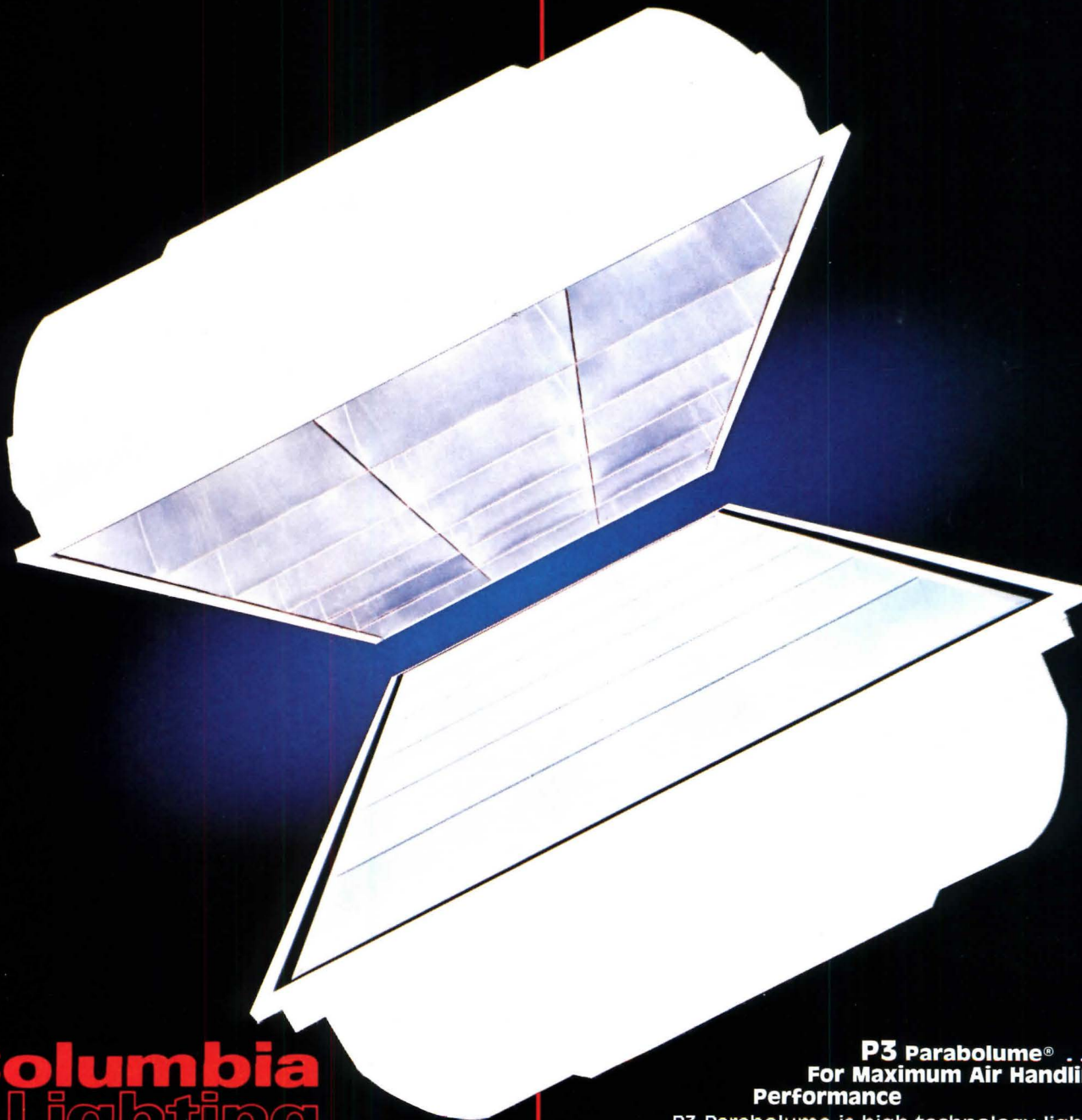


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The Arts

# America's Folk Art Heritage

American folk art reached its pinnacle of creativity and output from colonial times to the dawning of the machine age. Paintings, sculpture, textiles, furniture, and quilts were produced by the multitudes simply for the pleasure and gratification of family and friends. While the artists and craftsmen may have lacked technical competence, their work displays insightful observation, an imaginative sense of design, and whimsy and wit.

In more recent times, the question of whether the folk art tradition continues in its own right or whether it is simply an extension of current American fine art has been sharply debated, with folk art enthusiasts arguing that it "has been and continues to be the mainstream of American art."

In an effort to bring more recognition to American folk art—its past and present—the Museum of American Folk Art organized an exhibition of 130 objects of 17th through 20th century vintage, some of which are shown here. Sponsored by United Technologies Corporation and circulated by the American Federation of Arts, the exhibition has traveled to four European cities and will visit eight U.S. cities, beginning with Minneapolis in July.  
NORA RICHTER GREER.



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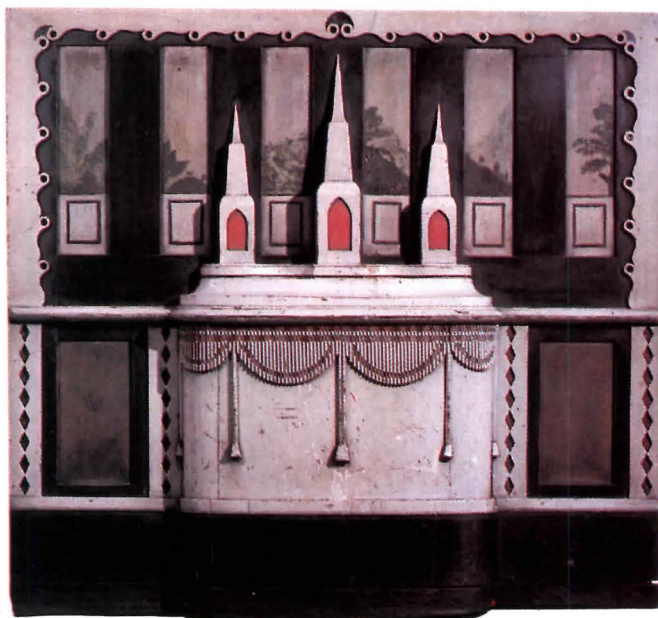
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Among the 130 objects of the exhibition 'American Folk Art: Expressions of a New Spirit' are: (1) Bird of Paradise bride's quilt top, artist unknown, 1858-63; (2) Circus Parade, Kathy Jakobsen, 1979; (3) Portrait of a Child with Basket, artist unknown, circa 1835; (4) The Big Farm in the Spring, Mattie Lou O'Kelley, 1976; (5) fireboard, artist unknown, circa 1840; (6) Zocobra, Old Man Gloom, Popsy Schaeffer, 1935.



5



6







# ARCHITECTURE

**R**obert Venturi spoke of the architect as “servant of the client” and invoked the doctrines of 1960s participatory planner Paul Davidoff. Charles Moore spoke of his St. Matthew’s church, as he has before, in terms of his role being mainly to realize what the congregation itself had designed. One after the other, architects of five of this year’s honor award winning buildings rose at a Phoenix convention seminar to credit their clients with major influence on the designs. They were joined in the seminar by representatives of the clients, a fact of some significance in itself.

It wasn’t always that way. A few years ago at the Dallas convention some of the most publicized figures in present-day American architecture were proclaiming themselves “postfunctionalists.” Architecture had been liberated as “pure art,” no longer shackled by the need to fulfill a brief—to serve a client’s perceived needs.

The recoupling of design and purpose, the redefinition of design as a collaborative process, were among the major events in Phoenix. They related to another: passage of a resolution calling for an effort to improve the economic situation of the architect. For clients cannot be expected to play a part in such improvement if they, and their needs, are not part of design. *D.C.*



# Return to Columbus

*What's new in the tiny Indiana city that is an architectural capital. By Carleton Knight III*

Returning to Columbus, Ind., after more than a decade, one is struck immediately by a number of physical changes. There are, of course, a number of new buildings in this architectural mecca by such architects as Richard Meier, FAIA, Gwathmey Siegel, Skidmore, Owings & Merrill/San Francisco, and Roth & Moore (see following stories). But what really stands out is the maturity of the landscape.

Although there is no indication to the general public passing by on the outskirts that Columbus is anything other than just another small Midwest city with a championship high school athletic team, those with a design orientation will see positive evidence of someone and something special at work—and immediately at the two major entrances to the city.

To one arriving from the north down U.S. Highway 31, the tapered, lead spire of Eero Saarinen's North Christian Church (1964) is a guidepost, riveting to the eye. Getting closer, however, it appears that the spire and church are growing out of a brilliant sea awash with luscious pink and white magnolias. And from the west, along Indiana 46 that leads from Interstate-65 to downtown, once one passes the tacky fast-food joints and motels at the interchange one notices masses of willow trees planted on closely manicured embankments along either side of the road.

Both planting jobs are the work of the same landscape architect, Dan Kiley of Charlotte, Vt. Edward Charles Bassett, FAIA, of Skidmore, Owings & Merrill/San Francisco, architect of the new Columbus City Hall (page 52), believes that despite the nearly 50 contemporary buildings designed by major American architects in Columbus since the 1940s, "the biggest contribution has been by Dan Kiley."

By his own count, Kiley has planned and planted some 25 projects in Columbus, starting with Eero Saarinen's first job there, the glass-walled Irwin Union Bank & Trust Co. (1954) set in a tree- and flower-filled park. Kiley is especially pleased at the way the "orchard of magnolias" turned out at North Christian Church. Early on, because they were growing poorly, he suggested ripping them out, but the congregation, led by architectural patron J. Irwin Miller, Hon. AIA, (page 62), objected. They remained, as a sort of "recessional" for the church service, Kiley notes.

On the other side of the church, the hedges that shield cars in the parking lot have grown up so that they now thoroughly shield the automobiles from view.

Downtown Columbus, after 11 years, still looks typically Midwestern, but evidence of change is there. Zaharako's, a turn-of-the-century ice cream parlor that features an onyx and marble soda fountain in front and a German pipe organ in back, continues to serve the same homemade peppermint stick ice cream. But the economic recession hit Columbus particularly hard because of local industry's close connection to the automobile and truck business. Cummins Engine Co., the city's major employer, has cut its workforce by 20 percent, a reduction that is evidenced downtown in vacant storefronts and delayed maintenance.

*Eero Saarinen's North Christian Church, completed after his death in 1964, amid magnolias. The landscaping is by Dan Kiley.*

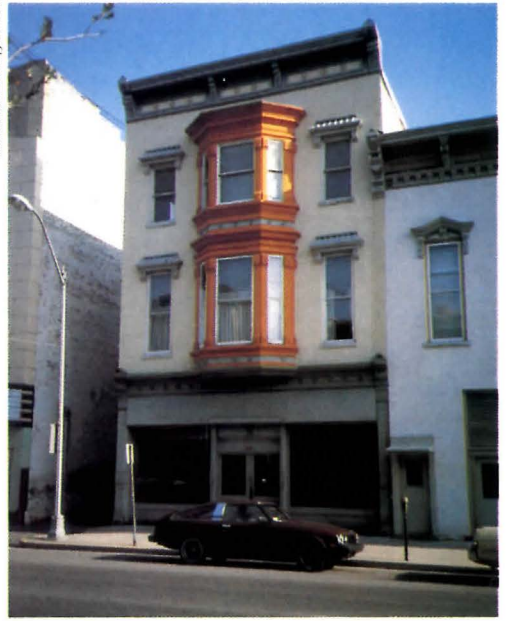


Carleton Knight III









*Main shopping thoroughfare through downtown Columbus is Washington Street, where Victorian storefronts have been brightly painted. The bay at top right is one in a row refurbished a decade ago by Alexander Girard. At left and immediately above is a similar row by architect A. Dean Taylor. Across page, downtown Columbus with the old city hall in the center and the freestanding tower of Eliel Saarinen's 1942 First Christian Church on the right.*





One of the most distressing results of this is the general deterioration of Alexander Girard's brightly painted facades along Washington Street, which have been allowed to fade and peel. But this sad situation is off-set somewhat by the new renovation work that has taken place across the street.

"It's almost criminal what people do to old buildings," say Ray and Lou Marr, who vowed to undertake a quality renovation of property they owned in the 400 block of Washington Street. Their care shows. Using an old photograph and working with architect A. Dean Taylor, AIA, of Columbus, they were able to recreate the 19th-century facade, even to the point of having the cast iron columns recast. This time they are aluminum, but the only way to tell the new from the old is with a magnet.

A new bay window was installed on the second floor to replace one removed years ago, and the whole painted effectively. The first floor is shops and the second offices. The project, note the Marrs, has spurred a "chain reaction" of downtown restoration.

That's all just more evidence of growing concern for historic preservation. "The time for tearing down is over," reports Linda S. Lehner, executive director of the city's community development office. Cummins, for example, agreed to purchase Old City Hall when the new one was built. The Victorian brick structure built in 1895 is listed in the National Register of Historic Places and is now in temporary use for Cummins offices. The firm reports that several developers have presented proposals to convert the structure into a small hotel, something Columbus badly needs downtown.

The building is ideally located at one corner of what has de-

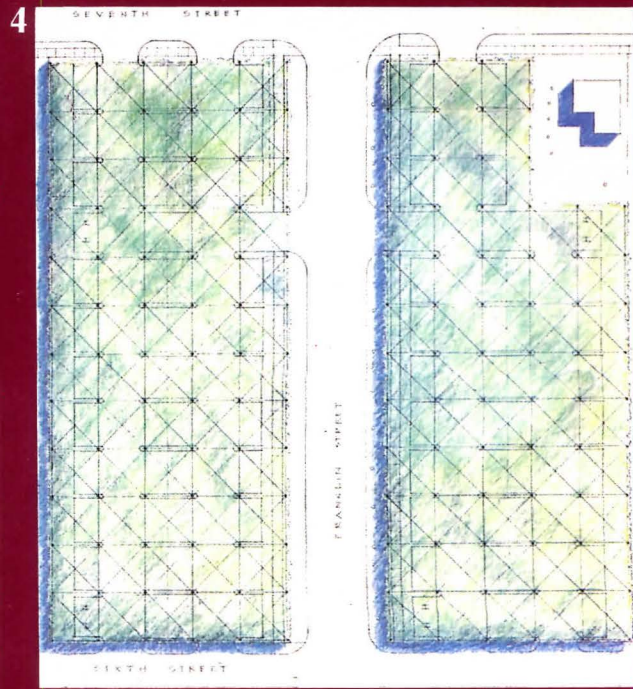
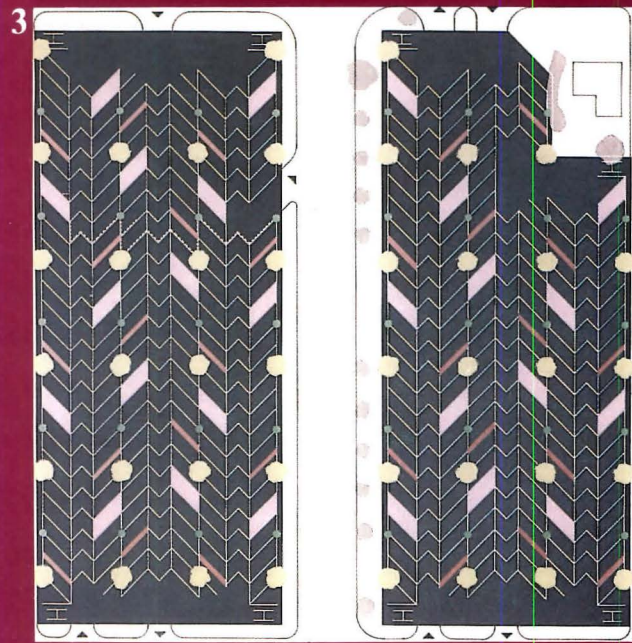
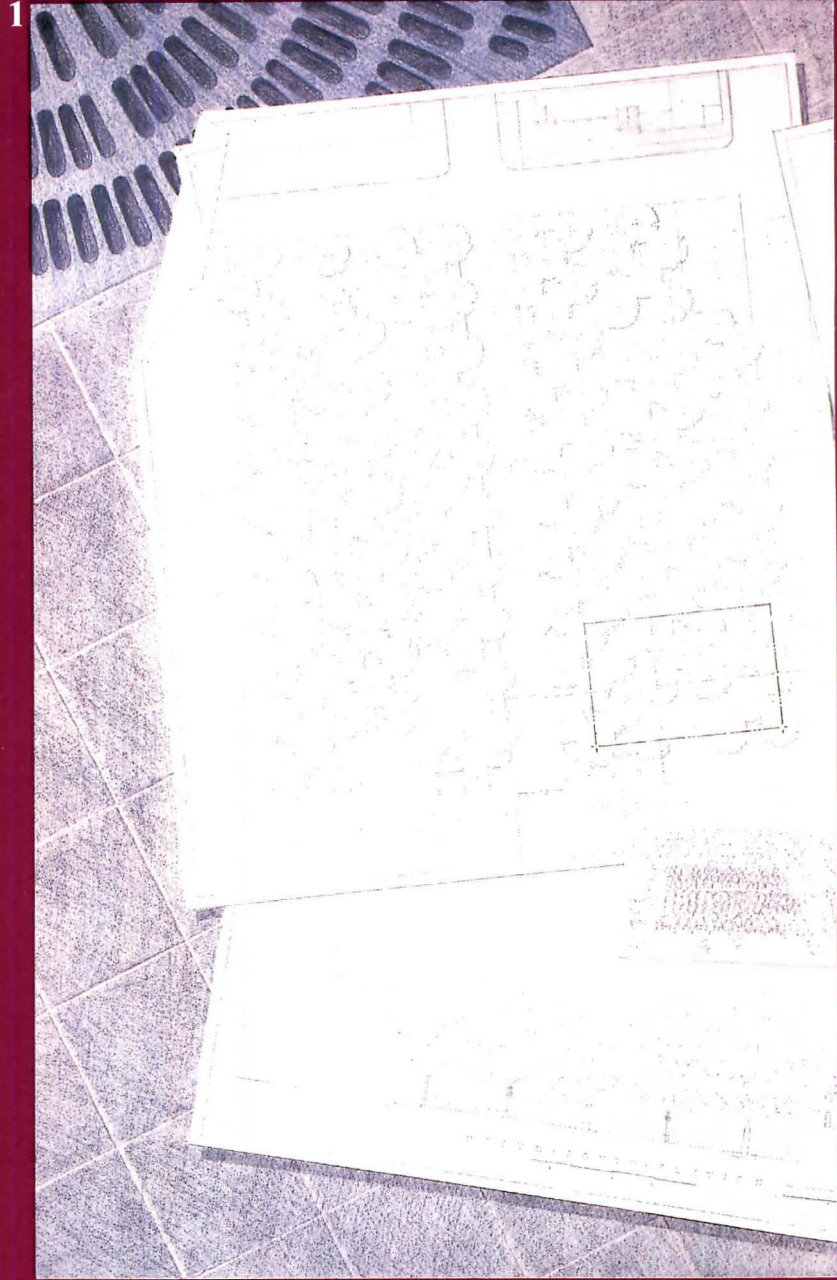
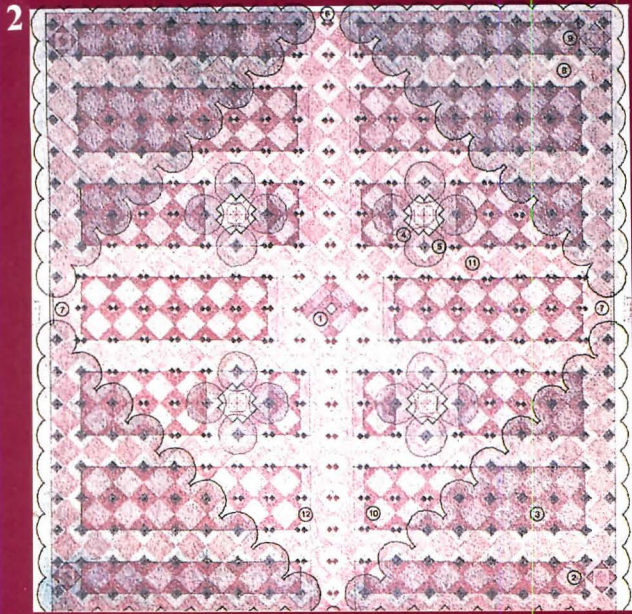
veloped into a major public space. Other neighboring structures include Eliel Saarinen's First Christian Church (1942), the first contemporary building in the city; the old Irwin family home and gardens; I.M. Pei's Cleo Rogers Memorial Library (1969) with Henry Moore's "Large Arch" on the plaza in front; and the Visitors Center, an 1864 brick house renovated by Bruce Adams of New Haven, Conn., in 1973 that also includes a branch of the Indianapolis Museum of Art.

**F**ifth Street, which runs through this public space, has gradually become something of an architectural time line for Columbus. In addition to the buildings just mentioned, a block to the east stands Gunnar Birkerts' Lincoln Elementary School (1966), a square set in a wooded circle. To the west a couple of blocks is Eero Saarinen's Irwin Union Bank with the Kevin Roche John Dinkeloo striped-glass addition (1973) across the street from the Marrs' renovation.

Beyond those are Roche and Dinkeloo's Cor-ten steel U.S. Post Office (1970) and the white concrete, arcaded corporate headquarters of Cummins (page 66). That project was designed originally in 1972, but is only now nearing completion following 2½ years of construction.

Unfortunately, between many buildings in Columbus, as elsewhere, there are acres of parking lots. In April, the city and the Irwin Sweeney Miller Foundation jointly sponsored a competition supported by the National Endowment for the Arts to design a suitable alternative to these eyesores (overleaf). The city is committed to build the *winning design*, and it is hoped that the concept might be exportable to other communities.





“Nobody has ever applied design to a dumb parking lot,” J. Irwin Miller says, adding he hopes he has found a solution. The City of Columbus and the Irwin Sweeney Miller Foundation jointly sponsored a design competition supported by the design arts program of the National Endowment for the Arts.

The winning schemes were chosen in April by an eight-member jury that included architects and townspeople. Theodore Liebman, AIA, was the professional adviser. In addition to \$5,000, the first place winner (1), Eric R. Kuhne & Associates of Princeton, N.J., will get to see its scheme built by the city, probably starting this fall.

That scheme appealed to the jury, said chairman Hugh Hardy, FAIA, because it attempted “to integrate both blocks into a single composition.” He added that the parklike setting filled with trees “would be a very pleasant place to be, even without cars.” Another element in its appeal was no doubt its presentation: The drawings appear to be scattered randomly on a tiled pavement with a tree grate in one corner.

Second place (2) went to Odell Associates, Charlotte, N.C., for a planting scheme that includes as its focal point a 40-foot-high obelisk assembled from crushed automobile parts. Third place (3), basically a composition of vegetation and white lines on asphalt, was done by BA-BA ARC of New York City.

There were three honorable mentions, including another bower scheme (4) by SWA Group, Sausalito, Calif.



An earlier effort in that direction failed. Richard B. Stoner, vice chairman of Cummins, recalls that the Roche Dinkeloo post office was to have been a symbolic model of American architectural quality, just as the U.S. embassies are overseas. "We thought the same thing ought to occur in the United States with post offices," he says. Stoner envisioned local materials and regional influences being utilized all over the country, but laments, "All Kevin Roche [whose fee was paid by the Cummins Engine Foundation] could do is put a shell over what the bureaucrats wanted inside."

Now, the future of the Columbus post office is in some doubt. A 1983 update by Skidmore, Owings & Merrill/Chicago of the firm's 1968 central area master plan calls for conversion of a large portion of the post office into a department store as a needed second anchor for downtown. But a lot of people in Columbus doubt that that will ever happen.

Other parts of the plan, however, seem considerably more feasible. In the first place, Graziella Bush, director of the Columbus Visitors Center, says, "We are much more cautious and wiser than in 1968. The city is not as impulsive as it was several years ago. It's a more realistic approach."

The community development office's Linda Lehner reports that efforts at landscaping and signage recommended in the report are to be undertaken by a public/private partnership and should "make downtown more cohesive." Local banks have established a \$1 million, low-interest loan pool for downtown property owners to draw on for renovation work. All design will have to be approved by a review committee to assure compliance with the plan.

The master plan update was coordinated by the Heritage Fund of Bartholomew County, Inc., a comparatively new organization that augurs well for the future. Conceived to carry on the county's rich philanthropic tradition, the fund has, in just a couple of years, raised more than \$3 million for an endowment. Robert N. Brown, publisher of the *Republic*, the Columbus daily newspaper located in glass-walled plant by SOM/Chicago and who shepherded development of the fund-raising effort, notes realistically that times are changing. "Cummins still has an interest, but everything is leaner," he notes. "It's a different environment."

Edward F. Sullivan, the fund's executive director, reports his organization is viewed as a "neutral force" in the city that can undertake various program initiatives, such as the master plan update. The fund has also held two thought-provoking symposia on the future of Columbus and its architecture, highlighting the development of an architectural archives center at the library.

Last year, in "vision for the future," a year-long symposium sponsored by the city, residents discussed the architectural program and future direction of the architectural program under which Cummins Engine Foundation pays design fees. Carolyn Lickerman, a member of the city council, reports she was impressed by the consensus that developed at one session. It became very clear that the community wanted the program to continue, "even if government had to pick up the cost," she says.

For its part, the Cummins Engine Foundation has to date paid out more than \$8.25 million in fees for 20 buildings, with three more underway. Don M. Hisaka, FAIA, of Cambridge, Mass., is working on a new jail for a site yet to be decided—it is the subject of some controversy—and Susanna Torre of New York City, the first woman architect hired under the program, is designing

a fire station for the west side of the city. Gwathmey Siegel & Associates has in construction federally financed housing for large families, having already completed a residence for the elderly (page 49).

But today, the formal architecture program is slowing down. According to Adele J. Vincent, senior program officer for the foundation, "there seems to be a diminishing need for new public buildings." Richard Meier's Clifty Creek Elementary School (page 44) is likely to be the last such facility for a while since fewer students mean reduced space needs. In fact, Southside Junior High School (1969) by Eliot Noyes was recently converted to use by two elementary schools (with a swimming pool, auditorium, commons, and library, it must be one of the nicest grade schools in the country!). And John Carl Warnecke's multi-pavilioned Mabel McDowell Elementary School (1960) is now an adult education center. Neither required major alterations to meet their change in use.

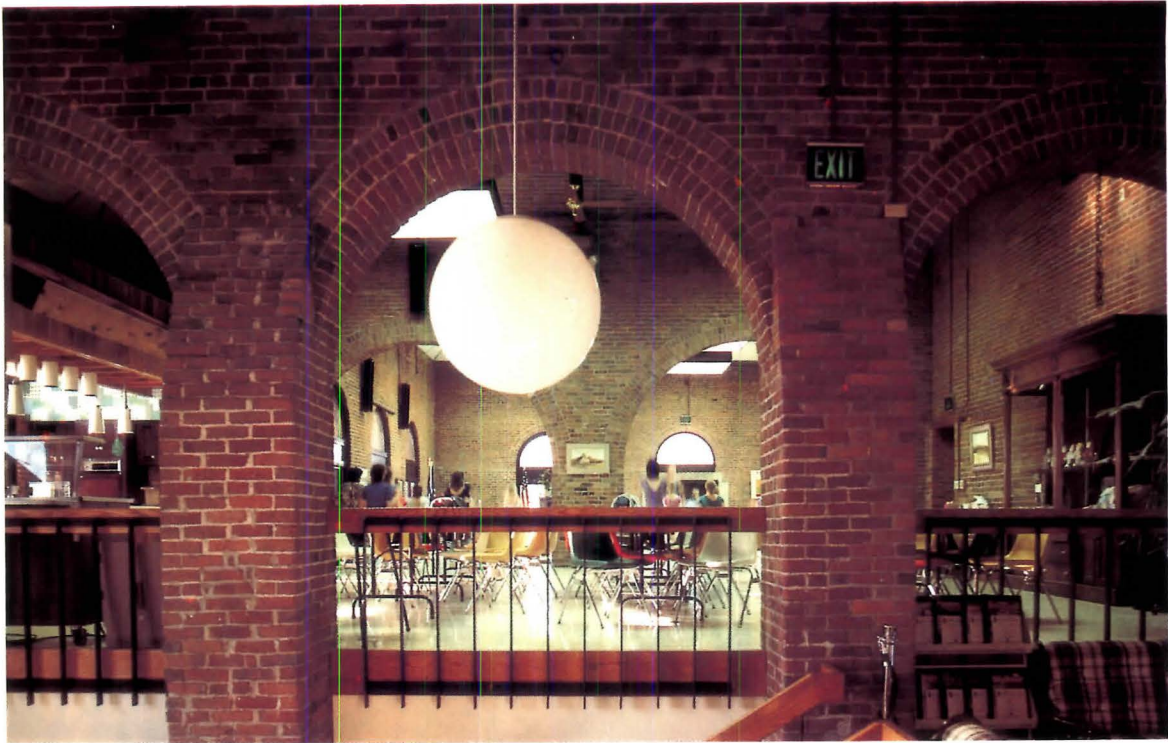
Although the foundation's efforts may be winding down, interest in architecture throughout the city has never been stronger. A couple of years ago, Cummins employees, basically blue-collar types, wanted to build a new athletic facility for their recreation association. Rather than take the easy way out with an inexpensive, prefabricated building, they decided to emulate the efforts of others in Columbus and went for quality design in the Ceraland Recreation Center (page 58).

But the most welcome sign that the architectural seeds have been sown for the future is seen in the greatly increased level of quality in the work of local architects. Donald G. Wood, AIA, of Wood & Burd, architects for Fire Station No. 3 (page 40), thinks the work by outside architects has been a "stimulus" to local designers, and he welcomes the increased competition among the city's architects. Columbus architects have reaped the benefits of their location, since their nationally prominent professional colleagues have often hired them as local associates to oversee jobs. But when given the opportunity, they have also proven that their work can be very good. Much of it has involved renovation, but increasingly it includes new construction.

As noted earlier, interest in historic preservation has grown steadily over the last decade. This writer's last visit to Columbus, in 1973, dealt with the city's old buildings, including one on a bank of the White River at the edge of downtown that, with its wide eaves, looked like a railroad station. Underutilized, the city's former waterworks and later power house was then in use for storage.

In a recent conversation J. Irwin Miller made it very clear that he was in favor of historic preservation, but only if it made economic sense. He, too, was interested in the future of the old pumping station and had asked a Chicago architect for ideas. When the report came back suggesting a restaurant, but with a \$1.5 million price tag, Miller said no thanks. It was quite evident at the time that one of the reasons for the steep cost was that Miller's name, with his attendant concern for quality, was attached to the project. And so the building sat, deteriorating. In 1975, however, the city acquired some community development funds from the federal government. Senior citizens, long in search of an adequate space to call their own, packed a public hearing on the funds' disposition. They made their point, and money was set aside to convert the building to the center that the senior citizens had demanded.





James K. Paris, AIA, redid the building, cleaning up the exterior, installing new glass in the windows, adding steel in the roof to retain its unique shape, and converting the interior into spaces both accessible and suitable for a variety of activities while preserving the “masses of volumes,” as he puts it. Steel trusses in the roof were left exposed and new insulation panels installed between the purlins. Special fixtures designed by the architect to cast light up or down were hung from the open ceiling of the main room.

Considering the tight budget, the building, which opened in 1976 and is now busy all the time, turned out quite well. But most important was the construction cost: \$441,000, or about \$33 a square foot.

Unfortunately, local architects get very little credit for their work. There almost seems to be a kind of reverse xenophobia, where the townspeople love imported architects but fear their own Hoosiers. This is evident in the architectural tour map provided by the visitors center, an operation of the chamber of commerce (it reports the city has 60,000-plus tourists per year). New buildings by local architects are excluded from the map.

There is a variety of reasons given for their omission. One goes, “if you include the work of one local architect, you have to include them all.” A former Midwesterner attributes it to a long tradition of self-deprecation. “The Midwest has the greatest inferiority complex in the U.S.,” she says.

Overall, how to assess Columbus after 11 years? It is not, as this critic wrote in 1973, “a Williamsburg or Old Sturbridge Village of contemporary architecture.” Rather, it is a living, breathing city of 32,000 people with a range of problems just like any other. There is a difference, of course, and that difference is architecture. “That’s what makes Columbus more than just another small town in the Midwest,” notes David Force, another architect there.

*Above and across page, the 1871 building on the bank of the White River that served at different times as waterworks and power station. It was renovated in 1976 by James K. Paris as a senior center.*

The architecture affects everyone, from toddlers in nursery school to senior citizens. Critics declaim against it’s not holding together, that there are too many styles adjacent to one another, that you can see a Dairy Queen sign, for example, through the legs of Henry Moore’s arch. But that sort of thing is what makes Columbus a city and not an architectural museum. Furthermore, it would seem difficult, if not impossible, to tie together buildings that are 10 miles apart. It can be done with an architecturally homogenous new town, such as Reston, Va., or Columbia, Md., but that is hardly possible in an older community.

Columbus has been lucky. For the most part, it has gotten some very distinguished buildings from some very prominent architects. Max D. Andress, mayor when the new city hall was commissioned, names the architects interviewed for that job—Philip Johnson, FAIA, Kevin Roche, Edward Larrabee Barnes, FAIA, Richard Meier, FAIA, Paul Kennon, FAIA, and Edward Charles Bassett, FAIA. Then the former football coach says, “It’s nice to be in a position of knowing you can’t lose.”

In a recent interview in his city hall office, the newly elected mayor, Robert N. Stewart, just back from a trip to the Far East in search of industry for Columbus, recalled the famous phrase of Winston Churchill, “We shape our buildings, and afterwards our buildings shape us.”

Columbus’ noted architecture continues to shape the city and its residents. No stronger evidence of that can be seen than in the decision last year by St. Peter’s Lutheran Church to commission Gunnar Birkerts, FAIA, to design a new church. The congregation, without support from the Cummins Foundation or the Miller family, chose Birkerts on its own, in large measure because the church site is across Fifth Street from his Lincoln School. Birkerts says that what impressed him the most about the commission was that it came from the “second generation,” young people who have grown up in the city’s architecture and obviously have been affected by it.

A disproportionate number become architects, in fact, although they have trouble getting recognition in their home town. □







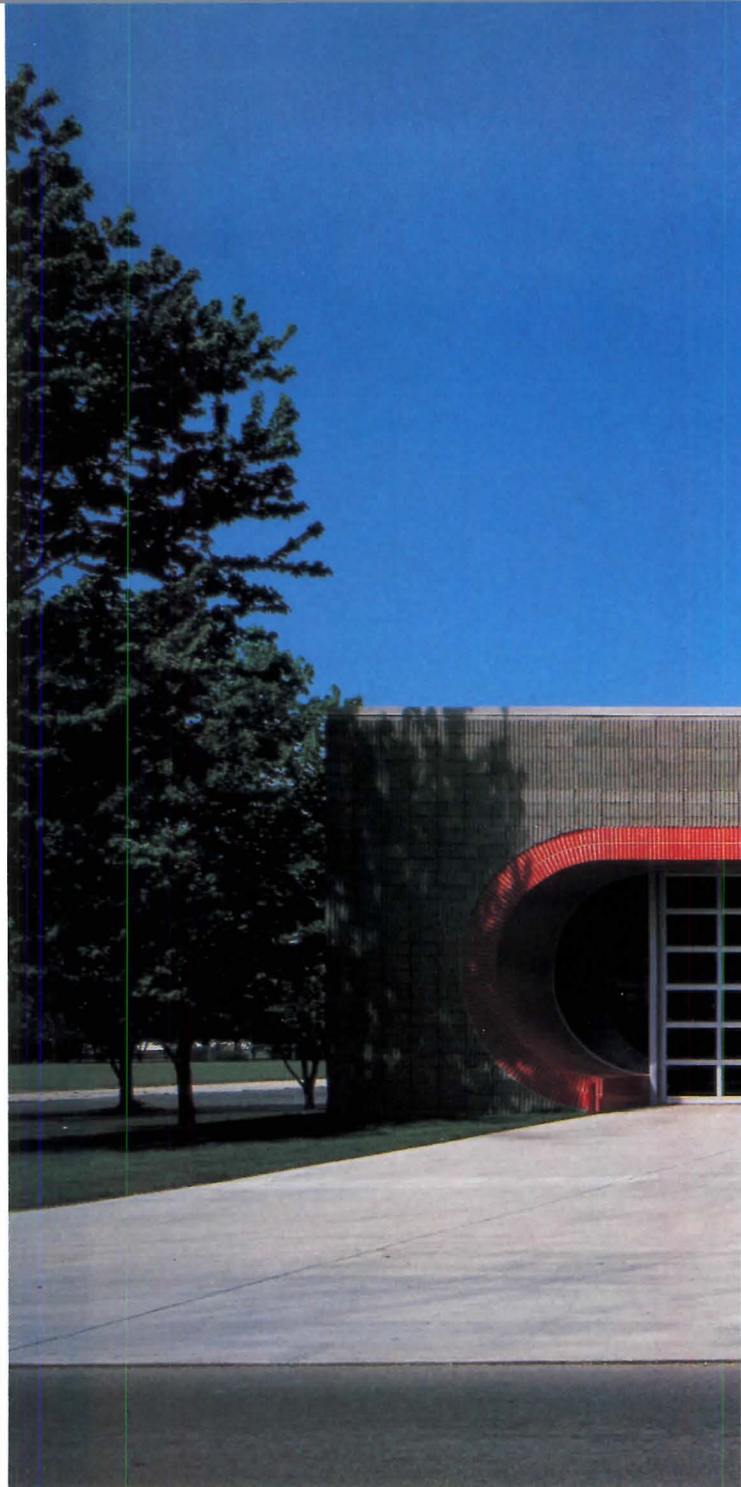


# 'It Boldly States I'm a Fire Station'

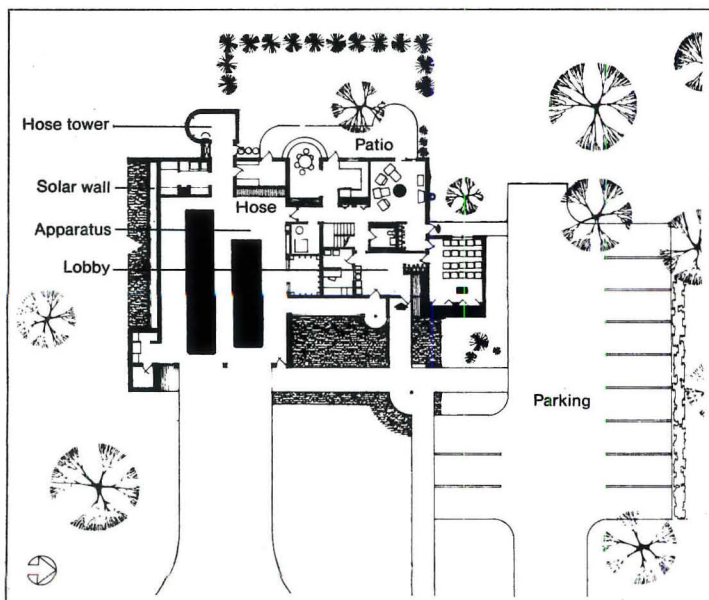
Architect: Wood & Burd. By C.K.III



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"I am what I am," goes the refrain of a popular Broadway show tune these days. So it is with Fire Station No. 3 in Columbus, Ind. Architect William E. Burd of the Columbus firm of Wood & Burd thought the building, which opened in April 1983, ought to declare emphatically what it is. "It boldly states I'm a fire station," he says.

In considering what constitutes a fire station, Burd decided to concentrate on two major characteristics: the traditional red color and the strong, round form of the fire pole. "The pole intrigues the public and should not be hidden," says Burd.

He placed it in a transparent cylinder on the front of the building, giving it a focal point. And then he repeated the curved form elsewhere, in section and in plan. The hose tower provides a strong counterpoint, as do the curved sections of the facade, which focus attention on the truck bay and main entrance. Another, smaller brass pole reaches out horizontally along the entry walk to draw the public inside.

*Fire-engine-red glazed brick accents gray concrete block. Super-graphic '3' and prominent fire pole in vertical cylinder identify building's name and function. Right, Trombe wall on side elevation.*

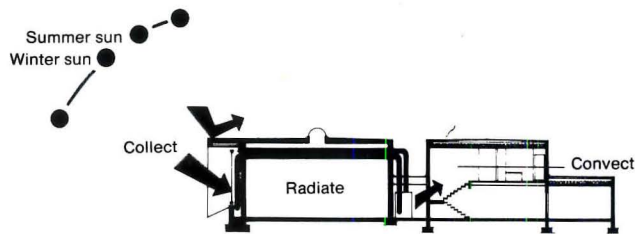




Allen Freeman







Although the curved sections are perhaps a bit overdone, they do make for a strong visual image. They are accentuated by a red glazed brick that contrasts in color and texture with the gray concrete split block walls. A large supergraphic number 3 on a red wall beside the fire pole identifies the station.

Energy was equally as important a consideration as image in the design, according to the architect. A system on the south side of the building provides for passive solar gain through radiation into the apparatus room as well as storage of warm air in a Trombe wall. That air can be circulated by the mechanical system into the living quarters through large ducts. The living quarters are shielded by the apparatus room, offering privacy to the firefighters who must work and live there while on duty.

The \$340,000 station is located in East Columbus, a nonaffluent section of the city, and replaces an antiquated facility. Just as the Fodrea School a couple of blocks away was designed by Paul Kennon, FAIA, of Caudill Rowlett Scott in 1973 as a bright light in the neighborhood, so has this fire station become a source of community pride. "It's something people can identify with," notes Burd.

What is mainly different about the fire station, however, is that it was designed locally. Under some pressure from Columbus architects "to spread the work around," in the words of one, the city made a conscious effort in that direction.

The results prove it was worth the effort, for the design can easily hold its own with the work of outside firms in the city. Now if only the Columbus Visitors Center would include Fire Station No. 3 on the tour map. As with some other local work, the architects seem to be prophets without honor in their own community. □



*Above, the fire pole from a firefighter's perspective, and left the glazed, ground-level passageway leading from the pole to the business end of the station, where engines and other equipment are kept. Right, the immaculate surfaces of a fire truck with a glimpse of the freestanding element anchoring brass rail.*









# Shiplike School on A Sea of Grass

*Architect: Richard Meier. By C.K.III*

One of the major reasons that Richard Meier, FAIA, received the commission for the new Clifty Creek Elementary School in Columbus, Ind., was because he had never designed such a building before. The school board wanted creativity, says Lawrence Heyerdahl, superintendent of schools, and knew that Meier "couldn't go to the file and pull out some old plan," as some other potential candidates might.

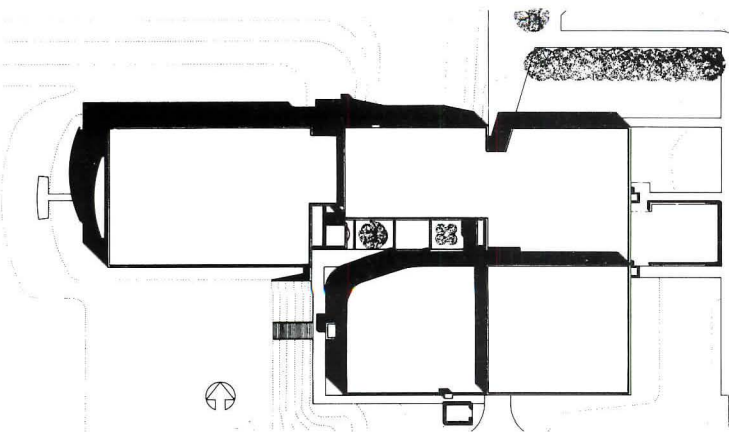
Meier did not disappoint. He created an angular, gray and white object on the landscape that bears some resemblance to a huge ship ploughing through the rolling waves of an ocean. But more important than the image Meier formed is how the school, which opened in fall 1982, works.

Meier had to accommodate 700 students and a complement of 40 teachers. For budget and esthetic reasons, Meier thought, the building could not and should not spread out, sprawling over





©Ezra Stoller/ESTO



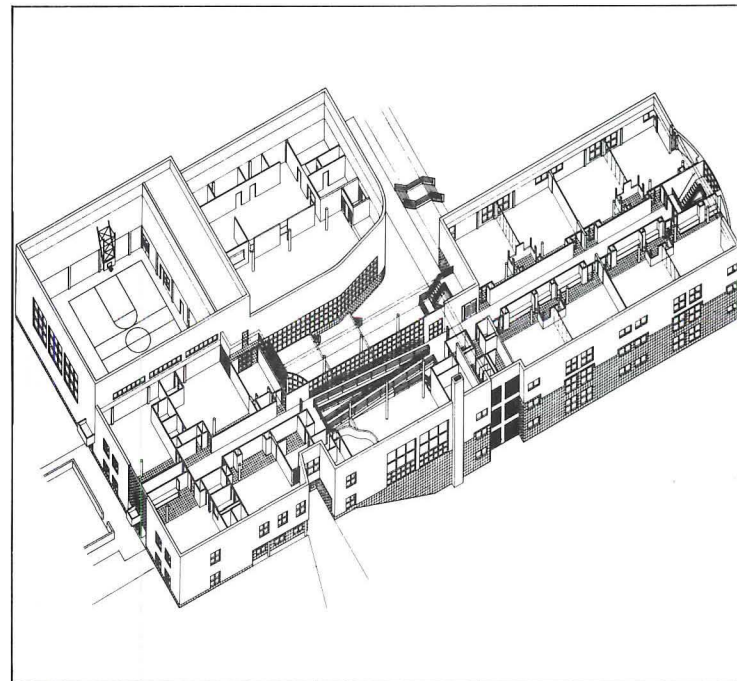
*The white tile and gray block school creates a startling, crisp image on the rolling, semirural landscape. Architect Meier describes plan, left, as an 'eroded square.'*

the 22-acre, sloping site. Meier was also resistant, however, to the general concept of more than two floors for an elementary school.

But the slope of the site allowed a money-saving, compact scheme that offers entrances at grade at both the bottom and middle levels of the three-story structure and makes the building look much smaller than one would expect for that number of students.

Following the trend of several recent schools in Columbus, Meier thought originally about an open plan, but the school board made it very clear that it wanted a more traditional, en-





## Paired classrooms in a flexible plan.

closed classroom approach. After talking with parents and teachers, the architect devised a scheme that divides the 900-square-foot classrooms into pairs, with movable walls between them for flexibility. In addition, a glass-walled area shared by each classroom pair can permit privacy, for teacher-student conferences, or allow teacher monitoring of small work groups.

The three-story classroom block is divided hierarchically with grades one and two on the first floor, three and four on the second, and five and six on the third. The number of classrooms — eight on each level — allows teachers to assign students in each grade by ability.

Classrooms are connected to other school functions through a series of ramps that offer a sense of openness. Each quadrant

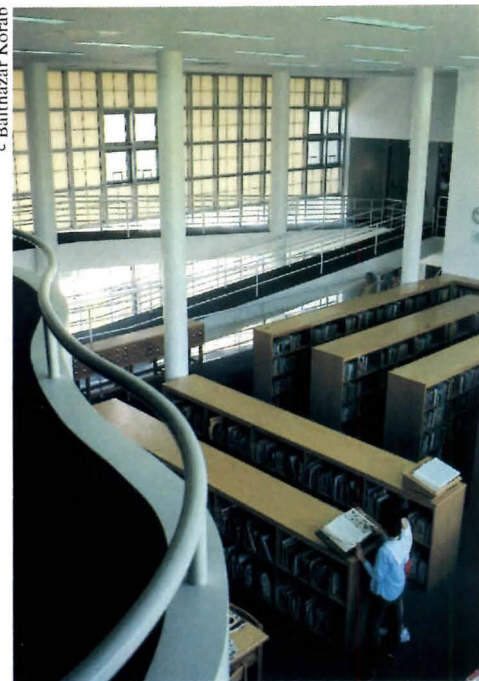
in what Meier describes as an “eroded square” features a different activity — cafeteria, gymnasium, and art and music classrooms over the administrative offices.

Meier views the remaining quadrant, the one through which the ramps run, as “the symbolic center of the house of education.” It is the library, and because of the ramp access to the classrooms, students must pass through its space often. It would seem that by osmosis, if nothing else, reading and library resources would become an important part of the students’ everyday lives.

Notes Meier succinctly, “It’s not just another adjunct space.”

The size of the library had to be reduced somewhat due to the tight, \$6.5 million budget, but the architect managed to visually extend its double-height space with windows on both sides as well as the ramp system. A free-form balcony cantilevers from one end to provide a story-telling area.





*Opposite page, building is split to create private, sheltered courtyard between wings. Classrooms are divided into pairs with movable walls for flexibility. Above, ramps to classrooms require students to pass through library, left, on their way to and from other activities.*

The exterior is composed of white tile and a smooth-faced, gray concrete block, a combination that has intrigued Meier. "The tile," he says, "gives a base to the building, while the block gives articulation to the surface. The whole building in block would have been overbearing."

Meier believes "color comes from the way light comes through a building and from the view outside to nature." In the case of the school, the nearly all-white interior creates a neutral environment that "serves as a canvas for the children's paintings

and what they make. Kids add color and make each classroom different." He is certainly right about that.

The architect did relent slightly from his purism to allow a variety of colors in the recessed entries to the classrooms and on one wall of the interior hallways of the classroom block. In addition, the large curved wall at the end of the building, which looks like the stern of a ship and shields a major stair to the playground, is painted bright purple inside.

The ultimate compliment about the building comes from school superintendent Heyerdahl, who has worked with many architects in the Columbus school design program. "We feel that Meier achieved his design, and we got an outstanding building," he says, adding, "We have yet to find anything that doesn't work well." And he and the school are especially proud that their architect has won the Pritzker prize.





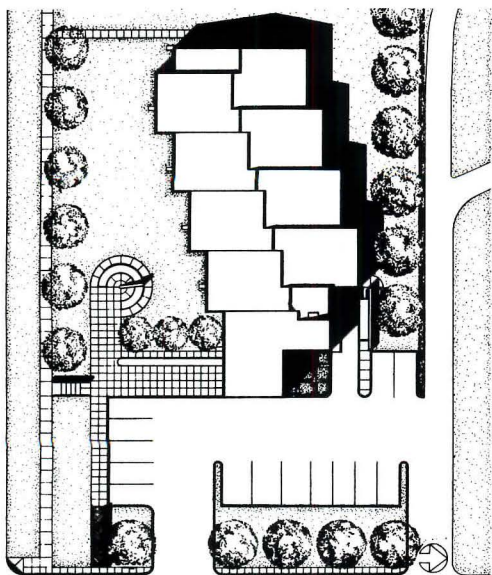
*Large, curved end wall of classroom block is like the stern of a giant ship. Wall, used to demarcate one end of main circulation spine running through school, shields major stairway to playground for children. Stair tower's interior, in contrast to mostly white scheme favored by architect in the rest of the school, is bright purple. Meier laments that budget restrictions reduced landscaping; he would like to see more trees on the 22-acre site. □*





# Sensitive Subsidized Housing

*Architect: Gwathmey Siegel & Associates. By Allen Freeman*



What happens when a New York City architectural firm known for meticulously conceived and detailed houses designs public housing in Columbus, Ind.? In the case of Sycamore Place, a block of apartments for the elderly by Gwathmey Siegel & Associates, the result is an unprojectlike environment that nevertheless has experienced some of the problems to be expected of housing built on a tight budget under HUD supervision.

A statement by the firm says the design intention "was to transform the image of subsidized housing by making a building with presence, that was contextual and responsive to the inhabitants, while simultaneously establishing a 'sense of place.'"

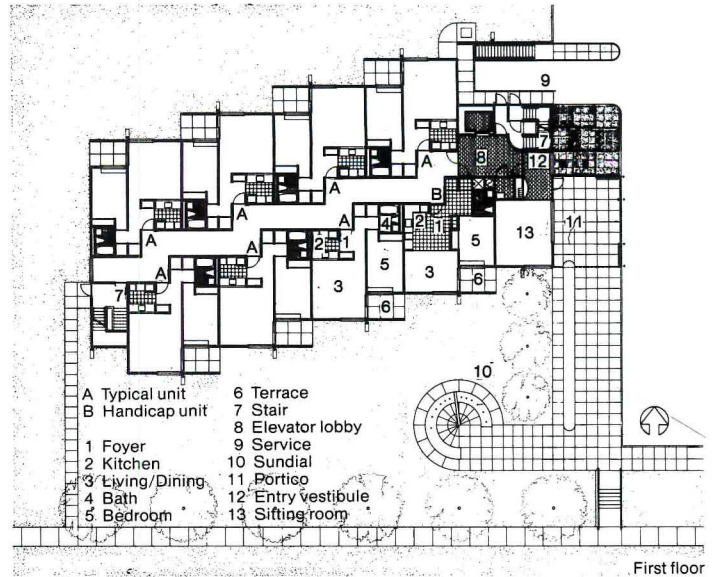
Sycamore Place lies on the periphery of downtown, four blocks east of city hall. The immediate context is a low density mixture of commercial buildings and modest houses—on one side a car wash and on the other the edge of an older neighborhood. At three stories, the apartment building is the tallest around, but it recedes because of its muted color and varied form.

*The building steps back beside a concrete sundial/sculpture, right in photo, by architect Jacob Alspector of Gwathmey Siegel.*





Allen Freeman



Allen Freeman

### 'Light-filled, flowing' public spaces.

The exterior is horizontal cedar clapboard, stained light gray, with white window trim, doors, gutters, downspouts, handrails, site walls, and benches. The plan is stepped on the two longer sides, providing articulation of the vertical rows of three apartments, each of which has a balcony or terrace. The roof is a series of five offset gables.

Behind a covered entrance is a small lobby, then a smaller elevator lobby, and finally the interior double-loaded corridor, which zigzags in accordance with the stepped plan. A community room is a two-story space above the entrance, with both interior and exterior balconies. Each of the 24 one-bedroom units is 586 square feet; three are designed for disabled residents.

Today, a year and a half after first occupancy, Sycamore Place seems an appropriately quiet but cheerful place to live. The interior common areas are nicely scaled, light-filled, flowing. Especially attractive are the zigzag corridors that seem more a series of spaces than a hallway yet are wide enough to permit views end-to-end. Each terminates in a window. And there is thoughtful detailing. For instance, exterior heat pump vents for each apartment are hidden from the street by balcony and terrace parapets, and clapboard corners are mitered instead of strip framed.

The problems, none of them severe, relate to specification and maintenance. The architect specified galvanized downspouts because of their round configuration, and the paint is chipping away, seriously marring the appearance of the exterior. In the two-story community room, the thermostat is located low in the space, and the interior balcony, off which the laundry room is located, has no operable windows. As a result, the balcony overheats—to the point that the drywall tape in the ceiling came unglued. Finally, the sliding glass door to the exterior balcony off the community room is too heavy for most of the elderly users to operate.

Such shortcomings only slightly diminish the \$910,000 project's accomplishment. The residents report few complaints, and to a great extent the architect succeeded in de-institutionalizing this project. Meanwhile in construction a mile away is Gwathmey Siegel's second housing project in Columbus, 43 three-bedroom town houses for large low- and moderate-income families. The expressed goals are similar to those for Sycamore Place. □

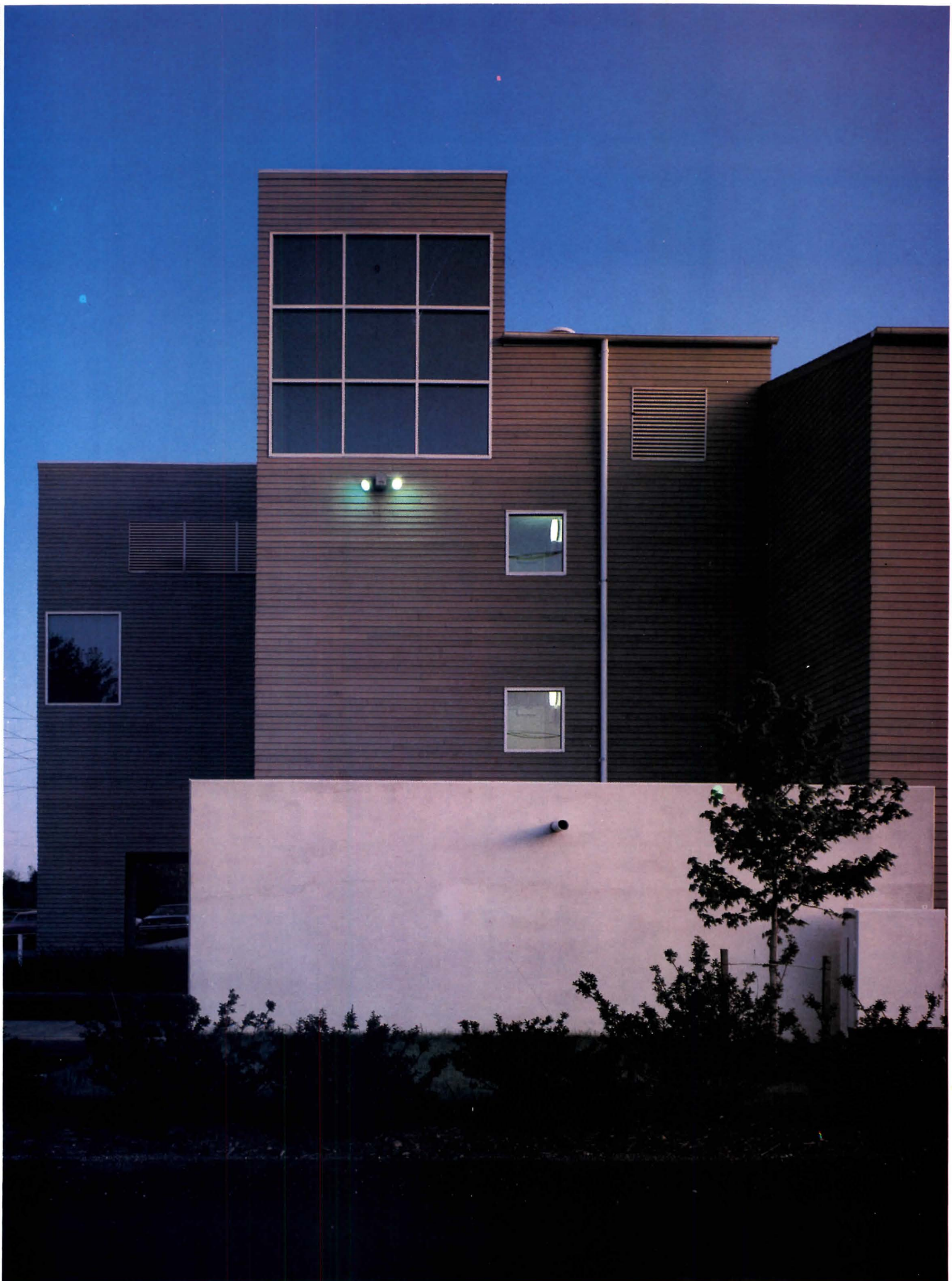


Allen Freeman



*Service and common areas are clustered at the east end of the building. The first bay contains a covered entrance, top left, behind which is a small lobby, middle photo. The community room, bottom, is accessible from both the second and third floors. Typical unit plan varies only for disabled residents, as shown at near left. Right, stair tower with large, square, light scoop.*





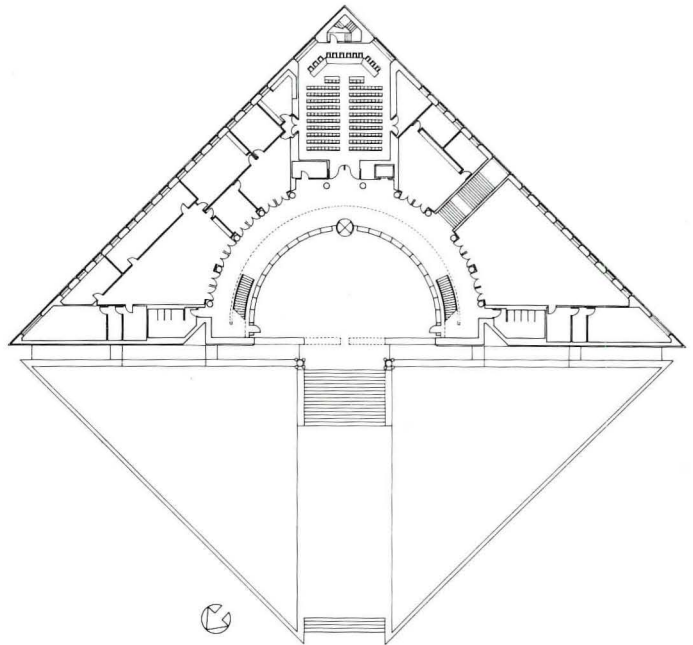




# Self-Effacing New City Hall

*Architect: SOM/San Francisco. By A.F.*





Columbus City Hall by Edward Charles Bassett, FAIA, of Skidmore, Owings & Merrill/San Francisco is most appealing for its contextual respect and for the homage to civic-democratic ideals implied in its plan. But obsequiousness to surroundings is also the building's salient shortcoming: What should be the small city's most identifiable civic symbol fails to establish a strong identity of its own.

The full-block site is prominent but unprepossessing, lying directly across Washington Street from the shorter dimension of a glassy one-story newspaper building by SOM/Chicago, across Second Street from the end elevation of a row of Victorian storefronts, and diagonally across from the exuberant brick pile that is the 1874 Bartholomew County Courthouse.

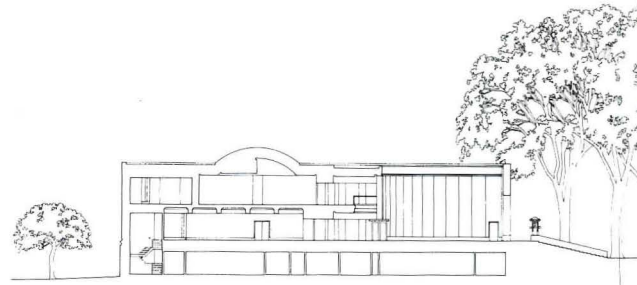
The new civic building tries to draw the newspaper plant and courthouse into focus by angling at 45 degrees across the corner of its square lot. But the neighbors all seem unwilling participants in this urban gesture, and the space enclosed by the dissimilar buildings is nebulous.

City hall's low, ceremonial front is the long side of the building plan, an isosceles right triangle. A bite has been taken out of the center of this brick front, forming a semicircular, glazed cutout. Cantilevered extensions of the facade extend over a wide portal, stopping short of touching each other by several feet. The front also bears vertical niches on either side of the entrance, a limestone plinth capped with a limestone spring course, and a brick belt course extending high across the elevation. Bassett also designed large, freestanding lamps for either side of the portal opening, but they were never executed for budget reasons.

*The ceremonial front of the triangular building sets back in a 45-degree relationship with Washington Street. Left, the view under cantilevered 'gate'; police department antenna is centered.*







## Domed council chamber at the core.

It is a quiet but eccentric facade. The limestone base portends classicism, and the vacant niches and horizontal banding reinforce that impression. But the central portal is unarticulated, and the ensemble lacks a capital of some sort to terminate the elevation.

Approach is from the corner of Washington and Second, up a wide walk and steps, and under the cantilevers. From the court you enter the building at either edge of the semicircle. Just behind the curved, vertical glass-mullioned window wall is a two-story hallway, off which open conference rooms, the council chamber, a large meeting hall, and open plan offices. Behind the latter are enclosed offices with windows to the rear of the building. The two large public spaces, the meeting hall and council chamber, are appropriately centered, stacked at the triangular building's deepest dimension. The basement is occupied by the police department, which has its own entrance on the east facade. The third major door is on the south. This is a workaday entrance for city employees and visitors who arrive by car. In all, it is a logical plan that gives each city department appropriate identity and equal prominence and provides bright, attractive spaces.

The interiors are enhanced by well-chosen art, including colorful Amish quilts, a Robert Indiana, and, to be installed in the tympanum of the council chamber dome, a mural by Indianan William T. Wiley depicting local history. But a serious omission is a piece of sculpture in the half-circular court that is the building's focus. Bassett says he intended the space for an important piece and thinks a Dubuffet would do nicely. He's right. This city hall needs lively forms to foil against its restrained elevations.

*Above, the two back sides of city hall present a more traditional esthetic. Limestone base sets apart the first floor, entirely occupied by the police force. Right, the domed council chamber, which is the large space on the third floor in the section above.*







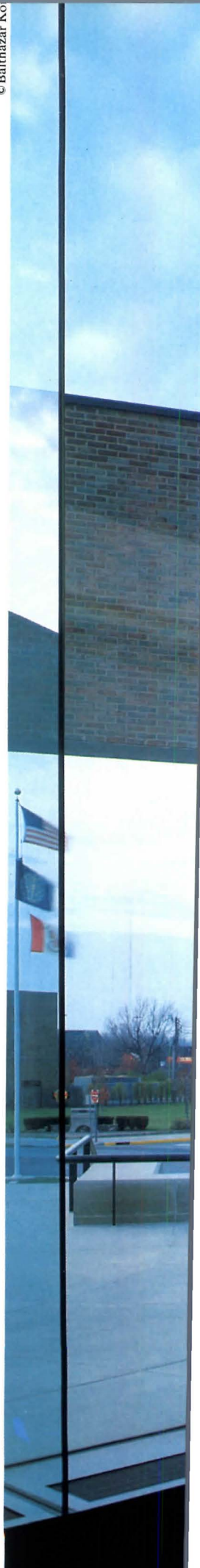


Allen Freeman



*Above and right, the semicircular entrance court. All city department offices except the police are entered from this central space. One of several Amish quilts in the building decorates landing of ceremonial stair. Below, a view from entrance court through louvered doors into open office area for support staff. □*

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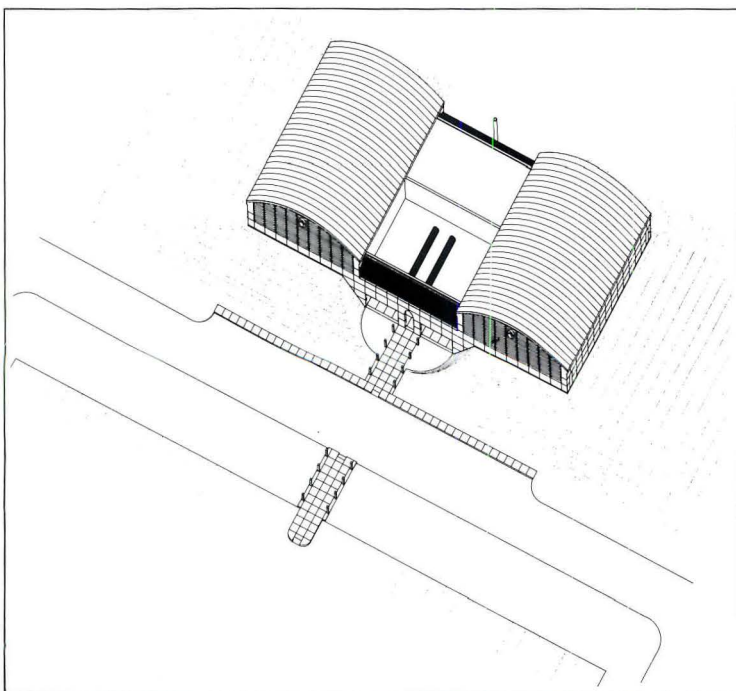
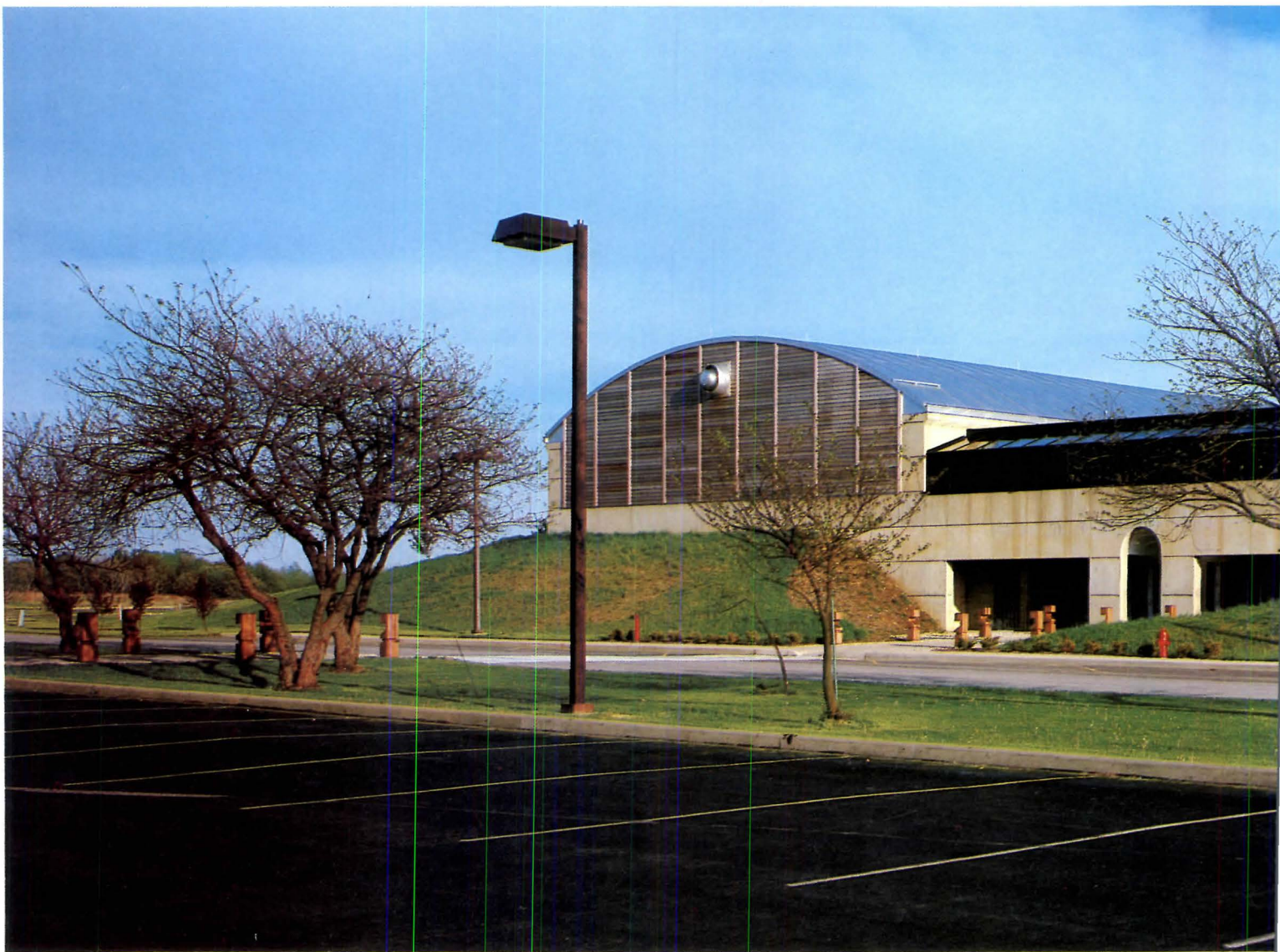




# Twin-Barreled Athletic Facility

On a prairie site. Architect: Roth & Moore. By C.K.III

Photographs © Balthazar Korab



Just a few miles from urbanized downtown Columbus, Ind., one finds America's true heartland, a gently rolling landscape dotted with small farms. Enchanted by this rural vision, Roth & Moore Architects of New Haven, Conn., chose farm imagery for their Ceraland Recreation Center, located in the midst of the rolling prairie.

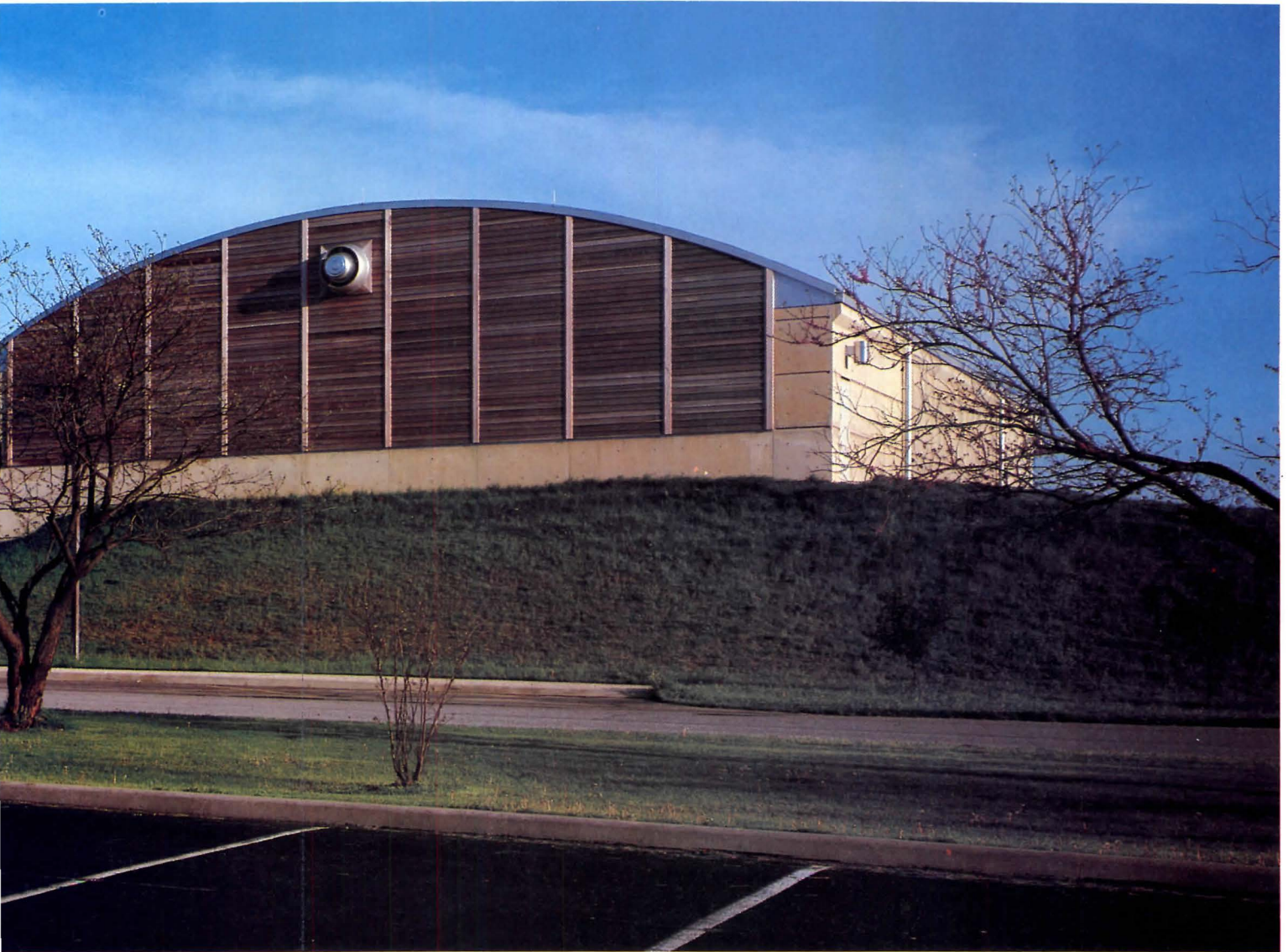
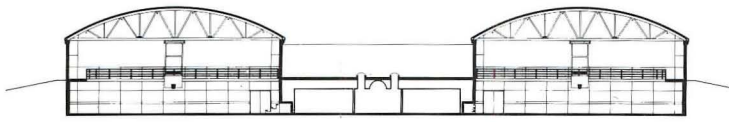
From a distance, the structure resembles an immense, twin-vaulted barn that seems to hover over the surrounding green fields planted with corn and grass.

The center is owned and managed by the Cummins Employee Recreation Association, an independent organization whose operations, including the salary of a fulltime manager, are financed by the profits from vending machines at the various Columbus-area Cummins Engine Co. plants. The building, which opened in September 1982, is located in an association-owned, 350-acre park that offers outdoor recreation activities for the firm's 8,800 Columbus employees.

In seeking a new, year-round athletic facility, Bob White, the association manager, reports the group "had no idea of what kind of building we wanted. That's what you hire an architect for." They elected to go to the Cummins Engine Foundation for help.

The foundation "saved us a lot of legwork," he says, screening architects and providing advice as well as a list of ques-





*Above, twin roofs, covered in standing seam metal, evoke farm imagery from surrounding prairie. Berms reduce bulk of necessarily large building. Right, archway at center denotes entry to symmetrical structure constructed of simple materials.*

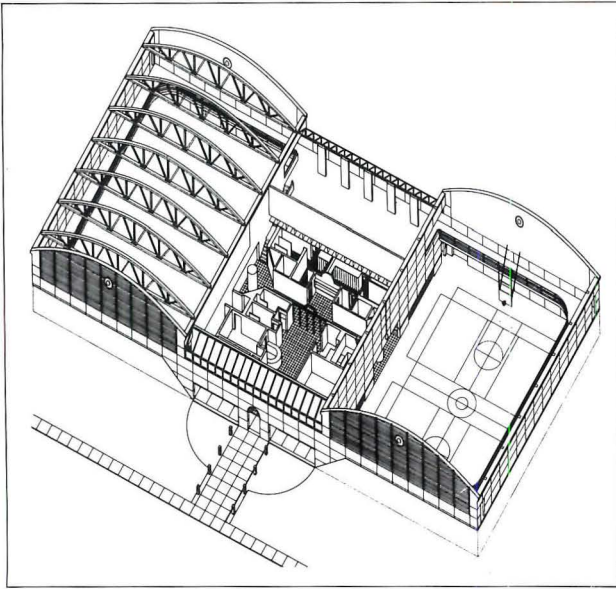
tions to ask potential designers. Four firms were invited to Columbus to meet with the building committee, which selected Roth & Moore.

The association's lengthy "wish list" was then matched with its more stringent budget of \$2 million. The project scope was reduced somewhat, but the architects managed to pack a lot of activity into the 30,000-square-foot structure. To permit independent use, two distinct gymnasiums with basketball courts convertible to volleyball are separated by a series of support spaces including a conference area, meeting room with small kitchen, locker rooms, and office. Upstairs a weight room with the latest in Nautilus equipment opens onto a small section of a 1/8-mile jogging track that runs around the inside perimeter of the building.

To meet the requirement for low maintenance the building is constructed of poured-in-place concrete walls that support a series of 80-foot-long bowstring trusses. Architect Harold Roth, FAIA, notes that a non-flat roof avoids potential problems. "The water is shed before it can do anything," he says.







## A combination of durability and style.

Inside, the vaulted ceilings are especially designed so as not to distract the players. Energy-efficient halide lights within the truss webs shoot upward, allowing glare-free light to reflect off the white acoustical panels attached to the roof decking and evenly down onto the playing surface. The boltheads and tie-rods of the trusses are painted white, as are the sprinkler pipes.

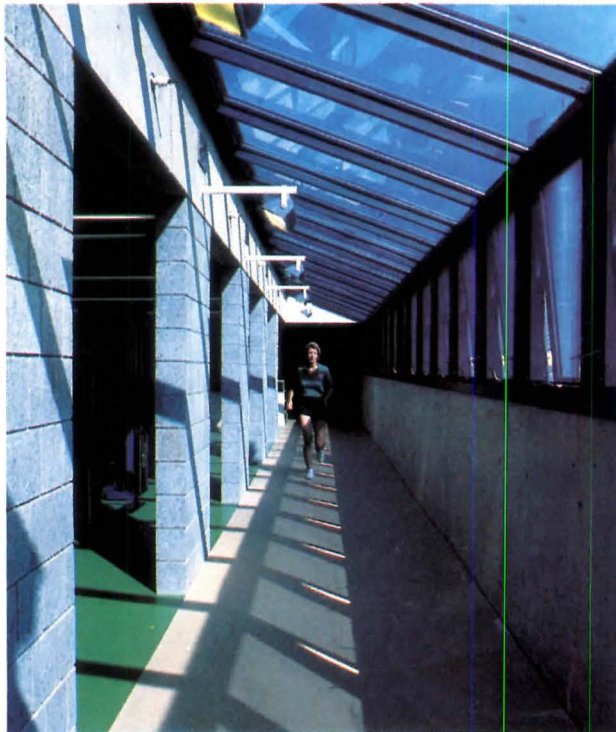
The fenestration is minimal, in part to control lighting on the playing surface but also to reduce energy costs in the necessarily large-volume building. Earth berms shield the lower half of the walls around each gym, a feature that also minimizes the building's bulk. In addition, the berms act as a counterbalance to the force from the cantilevered jogging track, constructed of poured-in-place concrete, as well as allowing grade-level access from the track, thus removing the need for separate fire escapes.

Materials were selected for durability but with an eye for style: hence the ground-face concrete block for interior walls and the redwood siding for the non-bearing end walls of each gym. Locker room ceilings are composed of a perforated metal screen panel system designed to stand up to high humidity levels.

Use of color is limited. The concrete has a warm tone that complements the laminated wood beams and the maple flooring. The brightest touch is a chartreuse tile on the lobby floor and adjacent check-in desk.

This color accent is particularly visible from the front. The entrance loggia has a wall composed of sections of glass block flanking a series of five aluminum-framed glass doors in the center. A concrete arch in front accents the facade's symmetry and creates visual interest but seems somewhat constricting to the space behind since several of the doors open directly onto its five-foot-wide piers.

The significance of this simple but well-detailed building goes beyond its architecture. As architect Roth notes, "The center represents the first chance for Cummins employees to do something about quality design." The association could have settled on a prefabricated building with little esthetic merit, but instead, building on the Cummins and Columbus record of architectural achievement, it sought excellence. And that's what the program is all about. □



*Opposite page, bowstring trusses create visual interest. This page, left, jogging track cantilevers from interior perimeter. Above and plan, lobby separates twin gyms.*







# J. Irwin Miller: Patron, Client, But Always a Businessman

*Architecture is his chosen form of civic betterment. By C.K.III*



Allen Freeman



"Our interest in Columbus is not primarily an architectural one. It's in making a contribution as a citizen toward a good community. There are many ways to do that, and architecture is one. But architecture is only a means to an end. If it doesn't serve the end, it's not very good."

Those may seem surprising words, coming as they do from a man who is this country's pre-eminent architectural patron. But J. Irwin Miller, Hon. AIA, is a most surprising man.

He put Columbus, Ind., on the world architecture map—no minor achievement for a small city on the Hoosier prairie—fostering a program of design quality by offering 30 years ago to pay the architectural fees for public buildings. As well, Miller has commissioned a number of buildings, for his family, for his church, and for his businesses. But no edifice complex has he.

Architecture has fascinated Miller since youth when he studied it in ancient history classes at a Columbus grade school. "I could identify all the classical orders of columns on Washington Street, and on the interurban to Indianapolis," he says proudly.

There's much more than architecture to this paradoxical man, who is one of the most cultured persons you'll ever meet. Educated at Yale and Oxford, he reads Greek philosophy (in the original language) and plays a Stradivarius violin, all of which helped bolster outsiders' descriptions of him as the "Medici of the Midwest," a label that causes him some chagrin. Miller is, however, first and foremost a businessman—a most enlightened one, but a businessman nonetheless. Building on his forebears' record of civic involvement, he has always tried to expand his community's vision, indirectly and by example.

His patronage of architecture, for instance, is always at arm's length. During an interview at his Alexander Girard-designed offices in an 1881 Victorian bank building, Miller recalls that the architectural program did not start out to be one. "We stumbled onto it, really," he says.

In the years just after World War II, during which the city doubled in population, new schools became a necessity. Miller remembers that the first two were "prefab, hurriedly erected. [They] obviously weren't going to last any time at all, and equally obviously were very bad places for young people to go to school."

Alarmed, Miller told the school board that his firm's philanthropic arm, the Cummins Engine Foundation, would pay the architectural fee for the next school if the board would select a designer from an independently created list of nationally prominent architects furnished by the foundation. "It wasn't a program," Miller says. "It related to a specific school building." Later on, when the board was thinking about another school, it asked if the same arrangement was still available. Miller said it was, "provided you pick a different architect," and thus the program—later expanded to include any public building—was born.

The famous list on which architects lust to be included was developed at first by Eero Saarinen, Pietro Belluschi, FAIA, and the late Douglas Haskell, editor of *The Architectural Forum*. Miller says the current makeup of the committee is never made public, "for their self-protection." Initially, his advice to the panel developing the list was simple. It should look primarily at architects who had never designed a school "rather than getting a professional school architect who may duplicate the last 10 schools he built."

From the beginning, the patron has insulated himself from the actual architect selection process of the school board or other groups where Cummins paid the fee. "It's very important,"

*Left, J. Irwin Miller and the headquarters of the Irwin Management Co., colorful storefront bank building renovated by Alexander Girard.*

Miller says, "not to interfere with the proper functioning of government. The school board is the one charged with the responsibility of planning the school system and erecting the buildings." Miller does not talk to the architects involved or preview the designs, leaving the decisions totally up to the clients. He tells them, "It's between you and the architect. He must meet your budget, requirements, and goals." He adds: "We've always made it clear to the school board or anybody else that, look, if you don't like the program or if after you get into it with an architect you want to fire, go ahead. No hard feelings. I think we had the feeling that the democratic process is always more important than the product. And to preserve that tradition, you have to sacrifice opportunities now and then."

Miller has similar feelings about planning. He is aware of criticism about Columbus being a city with "a lot of buildings dotted around without an overall plan," and admits, "it still has its Burger Kings and so forth." But, he says, "This poses democratic principle versus aristocratic principle." And he comes down strongly in favor of consensus, asking, "How does any one person or group get to feeling so arrogant as to think they know how the place ought to be planned?" If anything, he favors the slow approach, like maybe 100 years. He is pleased at the way the public space around the First Christian Church and the library has come together, and adds, "We have a city plan. We nibble away at it, but never push it to the point where it fractures the community."

Miller's approach to getting things done in Columbus is typified by the old city hall. Now used by Cummins for offices, it may soon be converted into a small hotel. "We wouldn't do it," he says. "It would be done by somebody else. We might guarantee a few rooms. The role we try to play is a catalytic role, rather than a leadership role. We would like to help things happen, not make them happen."

What happens when Miller puts down his patron's hard hat and picks up his client's? His views and concerns are no less strongly presented. And they go way back. Miller's first involvement with a new building came in the late-1930s with the commissioning of the First Christian Church, which set the stage for his approach to architect/client relations.

"I was in my late 20s," he recalls, "but sort of an outsider. From the perimeter, I bugged the people in the church to not just do an ordinary one." He told the congregation, "Let's pioneer," and they subsequently talked to a number of leading architects. "We weren't impressed with Frank Lloyd Wright," he says tellingly, "not that we would deny he was a giant influence in this century, but because of a feeling that his relations with the client would require a more passive client than we would be."

They chose Eliel Saarinen, who designed a simple, geometric building with a freestanding 166-foot belltower that is universally acclaimed. It was one of the first contemporary churches in the United States. Eero Saarinen worked with his father on that project, and 20 years later, at Miller's behest, the younger Saarinen designed North Christian Church, completing the drawings just before he died.

Miller speaks with feeling about the two churches, the first open and light, the second closed and dark. "They reflect in a very clear way how people thought in the late-'30s and in the late-'50s. In the late-'30s we were coming out of a depression, beginning to recover a good deal of confidence, and thought we knew where we were going as a nation. Religion was fairly



rational, clear, and comforting. By the time North Christian Church was built, we were into the atomic age. We knew that we could blow ourselves up. We wanted much more of a sense of family and closeness. There was more doubt in the world."

Will G. Miller, the youngest of Miller's five children who has inherited an obvious love for architecture from his father, sees in the elder Saarinen's buff-brick edifice "a celebration of craft," while the younger's is "a celebration of technology and the machine age."

**T**he best design, J. Irwin Miller thinks, comes from strong architects and equally strong clients. "Inescapably, the relationship between architect and client has an adversary component, but if each of the two parties is highly respectful of the other, it need not strike sparks. The client has to recognize what is the client's proper area of operation and what is the architect's. A client should not tell the architect what to do. It is the proper function of a client to say, 'I don't like it. Try again.' There's a difference between saying that and saying, 'I don't like it. Do it this way.' It is proper to say, 'This doesn't work. You've got too much space here. You haven't figured the sun angles right. How are you going to clean those windows?' The client should never give up. If he isn't happy, he should never, so to speak, go to press."

Miller points out that the process often takes a lot of work, adding, "The client has to be ready to pay for the architect's time to make many passes. And the architect has to have the patience and dedication to go back to the drawing board many times." He finds that problems often arise with younger architects. "They have a great deal of parental pride in their first design and feel that it's a matter of morals or principles or artistic ethics. They must fight to the death for their very first thought and allow nobody to change it. The comparable attitude on the part of the client is, 'I know what I want. You just draw it.' Neither one of those attitudes produces a good workable solution."

Miller has equally strong opinions about the direction of architecture today. He does not think much of postmodernism, saying, "It's a creation of the critics. They have to have a new school every year." Nor does he go for a lot of excess baggage in the form of architectural theory. "They try to find all kinds of significance in Robert Venturi's fire station in Columbus," he notes. "It is a good, workable fire station built on a very limited budget. It works fine and it's simple, but as for all the mystical qualities that Vincent Scully and others find in it, I think that's a lot of bull."

He does not hesitate to express himself on the subject of Johnson/Burgee's new headquarters for American Telephone & Telegraph Co. "I think it looks a little like the kind of buildings they're tearing down these days, not like the kind they're putting up." Those are interesting words for someone who is a member of AT&T's board of directors. Although he and Philip Johnson, FAIA, are friends, serving on the Pritzker prize jury together, Miller was strongly opposed to the AT&T design when it was presented.

(Chalk it up to the generation gap, but it is interesting to note that young Will Miller, who recently returned to Columbus to run the family's real estate interests, welcomes "the trend toward historical allusion in architecture, and the range of shapes and materials that is being expanded dramatically.")

While he admits it may be "too simplistic," J. Irwin Miller sees two kinds of architects working today, "the ones who draw beautiful pictures and the ones who solve problems." Eero Saarinen, who met Miller when they attended Yale together, was one of the latter. Miller recalls that when Saarinen, who designed four buildings in Columbus, came to interview for a job, "he never drew any sketches or anything. He would back every-

body into a corner and ask, 'What is it you're trying to do? How do you want people to feel when they work in this place, or when they are on the outside?' He never put pencil to paper until he had totally picked the minds and spirits of his client."

Saarinen designed two houses for the Miller family, in Columbus and in Canada. Following his death, Kevin Roche was to pick up the Saarinen mantle for the Millers, and he has designed a house for them in Florida. Although physically different, it reminds one of a 1980s version of the 1950s Columbus house, which Roche also worked on with Saarinen.

Architecturally, Miller feels the same way about his houses as he does about other buildings he has commissioned in his role as head of Cummins and of the Irwin Union Bank. "I just think it's very expensive to be mediocre in this world," he says. "Whatever you do, you better bring to bear the best minds you can find. You shouldn't perform any act casually, build any building casually, produce any product casually." Thus at Cummins he commissioned first Eliot Noyes and now Emilio Ambasz to design the firm's diesel engines. And Paul Rand is in charge of the graphics.

Quality design lasts, he believes, and in the long run costs less. "In the case of buildings, they're going to serve maybe one or two generations longer," Miller says, using as an example the 110-year-old Bartholomew County Courthouse diagonally across the street from his office. "Most of the surrounding county seats have had to build at least two courthouses during that time because they didn't think big enough. They didn't plan for the future, and they weren't willing to commit on the first building. In the end they spent a lot more money," he states, proud of his record.

Miller may have turned over day-to-day operation of Cummins to a team of younger executives, but he remains chairman of the executive committee and, as Kevin Roche puts it, "he has cast a long shadow." He is still the ultimate client. Roche makes it very clear that Miller is no pushover. "You are not going to get any special favors," the architect says, adding, "he expects full performance, and can be very demanding." Harry Weese, FAIA, who has designed more than a dozen buildings in Columbus, including facilities for Cummins and for the bank, confirms that assessment, noting, "As long as you solve the problem, he doesn't interfere."

Miller's favored method is to ask questions of his architects. "It forces people to think and consider the consequences," notes Roche. "It can be exhausting, making you question your own motives." But Miller's concerns as a client go beyond quality design. "He sees architecture as an extension of his humanist viewpoint," says Roche. "He knows very well what goes on on the factory floor. He has a good feel for working conditions and wants to improve the whole work environment."

Richard B. Stoner, vice chairman of Cummins, puts it another way: "Better working conditions mean better attitudes. Architecture is one way to show concern for our employees, and it doesn't cost any more in the long term." This almost paternalistic approach is possible because it is small-city based, unlike, say, Detroit. "Cummins management has the same roots as the workers," Roche points out, adding that in the various facilities there are no hierarchical arrangements such as reserved parking or executive dining rooms.

In looking for new plant locations, James E. Shipp, vice president for corporate facilities, says the company prefers small communities, where the company can continue its well-tested approach. He also reports that Cummins is sensitive about building, preferring to refit an old factory over constructing a new one. "It is not appropriate for industry to go digging up farmland, taking it out of the agricultural marketplace," he says.

The exception to that was the factory in Walesboro, Ind., just south of Columbus, Roche-Dinkeloo designed a decade ago. The





13½-acre factory is set in a huge field at the edge of some woods. But the giant building, for the manufacture of truck engine components, is barely visible; it is depressed six feet below grade. Workers park their cars on the roof, and from inside everyone has a view to the outside.

That design marked the first time Cummins and its architects talked at length with company workers about their ideas, notes Miller. That is now a standard procedure and was followed by Peter Eisenman, FAIA, at a Cummins plant in Madison, Ind. Eisenman calls it “an incredible sociological experience,” noting that programming the conversion of the old factory took 18 months. The only problem, he says, was that by the time the programming was completed, it was out of date because of changes in technology and the industry. Nonetheless, phase one of his design has been completed and features a glass-block wall to separate the offices from the production space, which has a pleasant, restful quality from a muted palette of blue, white, and maroon. If the Eisenman master plan is completed, the offices will wind up in the center of the factory, which will have a gridded facade composed of concrete block and glass block lit from behind at night.

Perhaps the most complex programming process was that undertaken by Caudill Rowlett Scott for a factory near Rocky Mount, N.C. (page 74). Miller describes with great animation how the architects—Paul Kennon, FAIA, and William M. Pena, FAIA, of Caudill Rowlett Scott—set up a large room in the existing factory and covered the walls with tackboard. “Anybody could walk into that room,” notes Miller, “and say, ‘Here’s what I don’t want in a factory, or what I do want.’” They stuck the comments up on the wall.

*Above, glass block offices in a Cummins factory in Madison, Ind., converted by Peter Eisenman, are adjacent to the manufacturing floor.*

When the walls were filled, the architects took all the cards, classified them, and then used it as their mandate for the design. The architects even went through the process a second time, after the preliminary design, Miller notes.

The end result, according to Cummins vice president Shipp, was “a quilt that provided the foundation for the design. And, he adds, “as a result, Cummins is a better client than ever. We can articulate better our likes and dislikes, and now we are able to prove them.” For his part, Kennon, who was introduced to Columbus and Miller when he worked for Eero Saarinen in the mid-1950s, thinks the process provides “incredible food for thought.” He is impressed by Cummins’ “constant search for improving the human condition,” adding, “ideas permeate Cummins.”

Although most of those ideas are in a constant state of flux, Cummins seems to prefer it that way. Says Shipp, “We don’t want a standard design. That would freeze our thinking.” He says the company once tried to write a book for architects about what it wanted in design, but could not because “it didn’t allow new ideas.” Some corporations have huge volumes of design guidelines and standards, the result of which, notes Shipp, is that “a first-year draftsman could design a factory. We don’t even give architects one page.”

Harold Roth, FAIA, of Roth & Moore of New Haven, Conn., who has designed European facilities for Cummins as well as the master plan for a factory in Charleston, S.C., says simply, “There are no esthetic constraints. They want architects with no industrial background who can give them a breath of fresh air.”



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*The Cummins Engine Co. headquarters, now nearing completion in downtown Columbus, is a single-story, irregular-shaped building that partially surrounds a former mill, the red brick building in photo at right, that was the company's first factory. Below, arcade completes the wrap around the old factory. Far right, the partially finished interior with strip skylights and walls of horizontal rows of view and mirror glass.*

© Balthazar Korab







Allen Freeman

Here's an analogy that may explain the company's approach. IBM's buildings, well-designed, conservative, in a style that is always correct, are like a Brooks Brothers suit. Cummins, on the other hand, while still concerned with quality, will go one day to Brooks Brothers, another day to Giorgio Armani, and yet another to Calvin Klein. The approach works for Cummins, so who's to say which is better.

The latest is a glistening new corporate headquarters designed by the Roche-Dinkeloo firm. Commissioned originally in 1972, it went through several changes until ground was finally broken in October 1981. The 200,000-square-foot, one-story structure—there is a partial mezzanine—is expected to be completed this fall in downtown Columbus. In deciding on a site, says Miller, "We could have gone out in the country." But in a remark typical of his attitude, he notes, "Part of having a good life here is active acquaintance with and participation in the community." Cummins settled on three square blocks, which included the old Cerealine building, a former mill that housed the company's first operations in the 1920s. From the start, Roche's design wrapped around the old building. Early on, the headquarters was to be a two-story building with commercial space on the ground floor, but it was thought those operations would jeopardize the main shopping area on Washington Street, and the idea was discarded.

Roche's building has a sawtooth plan that utilizes only one-

half the site but fills all three blocks by means of a plant-filled colonnade around most of the building. Energy conservation, as well as the heavily traveled streets on the east and west sides of the building, dictated minimal fenestration. The result is a finely crafted and detailed, poured-in-place white concrete frame composed of octagonal columns and lintels and precast concrete infill panels with one-foot-high strip windows. This triple-tiered exterior gives no hint of the voluminous, 25-foot-high interior, where the precast panels are covered with mirrors. When combined with a series of strip skylights overhead, the mirrors create an amazing quality of light, rain or shine. Surprisingly, they do not distract but rather amplify the light. North-facing walls are all glass and in most cases offer a view into the park at the center of the building, a pleasant change for an urban setting, Roche points out.

Vice president Shipp is pleased with the way the building lends itself to modification, "an absolute must, given the changes that take place." He can even envision, in a time of reduced management, using part of the building for a production space.

There are those who see the new corporate headquarters as something of an architectural last hurrah for Miller. He turned 75 last month, and, uncharacteristically, he allowed the city to hold a picnic in honor of his contributions to Columbus. His contributions to American architecture likewise deserve celebration. □

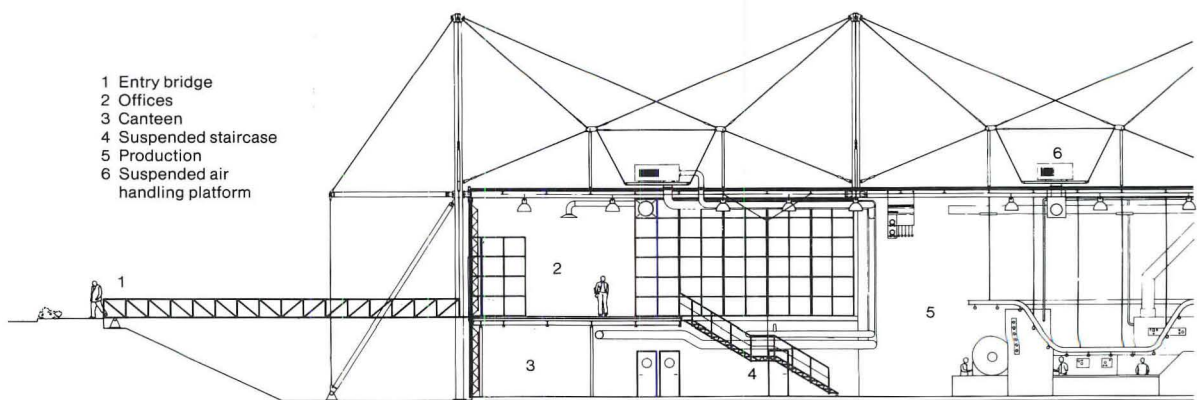
*Research for this article was assisted by a grant from the National Endowment for the Arts.*





# Cummins Builds in Brittany

*Architect: Richard Rogers & Partners. By Annette LeCuyer*







The factory and European headquarters that Richard Rogers & Partners designed for Fleetguard, the Cummins subsidiary producing heavy duty engine filters, is clearly more than a simple industrial shed. Located near the town of Quimper in Brittany, France, the building establishes itself in stark contrast both to the surrounding rural landscape of wooded hills and to the other buildings in the area. The forest of slender red-painted steel columns and tension rods and the silver PVF-2 aluminum coated skin of the building provide a signpost for the company. The light, airy, and even cheerful external appearance of the factory—in contrast with the more usual dour, run-of-the-mill industrial shed—helps to convey Fleetguard's optimism about its manufacturing future as well as the company's commitment to provide an above average working environment for its staff.

The 8,750-square-meter factory sprawls on an extensive sloping site. The building is dug into the slope at its north end where staff and visitors enter at mezzanine level via a tubular steel

*Fleetguard's profile of silvered cladding topped by steel columns and tension rods. Partial section shows entry bridge from left.*

bridge from the parking area. Reception, offices, and meeting facilities are located on the mezzanine. The office walls are extensively glazed, creating a direct visual relationship between management and the factory workers below.

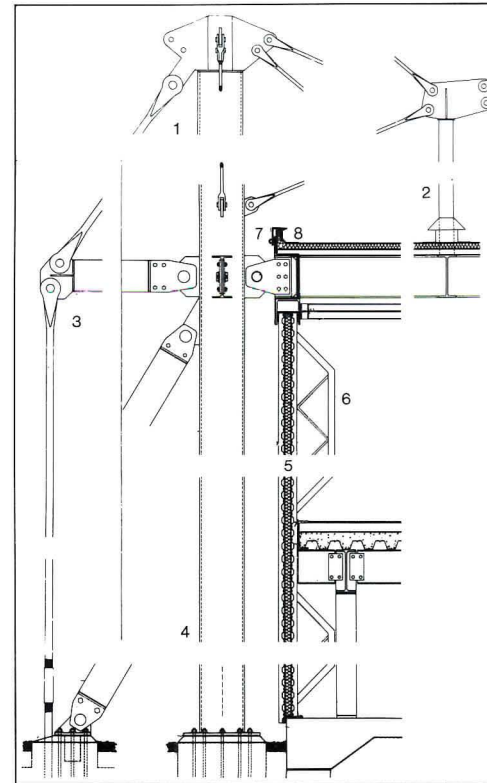
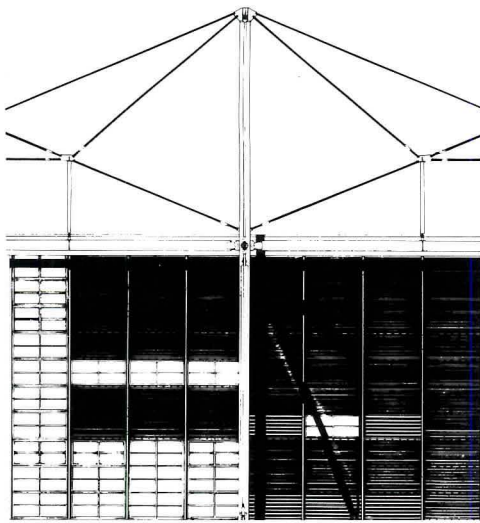
A central grand staircase leads down to the factory's shop floor and to the staff canteen, labs, test rooms, and plant rooms under the mezzanine. Production lines are organized along the west face of the building, with the majority of remaining area given over to storage of supplies and finished goods.

The flat roof of the factory, which provides a uniform nine-meter-high internal space throughout, is supported on beams hung from steel rods at six-meter centers. These are in turn supported by hangers fixed to columns at 18-meter centers. Although the steel structure appears to be complex, it seeks to clearly articulate pure tension and compression members and to minimize bending. The tension structure results in a proliferation of members, but the total steel weight at Fleetguard is said

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*Ms. LeCuyer is a designer and writer who lives in London.*





Below, mezzanine-level reception and office area with entry air lock as glass box. Structural system, above and below right, extends around building perimeter. Section through structure, right, includes: (1) column head detail, also shown in photo across page; (2) tubular steel hanger with forked end suspension rods, also shown

in photo above; (3) perimeter column restraint system; (4) tubular steel column; (5) sandwich of interior and exterior steel sheet with rock wool insulation and vapor barrier; (6) latticed steel cladding post; (7) painted galvanized steel coping; (8) steel roof deck prebonded to insulation and first layer of waterproofing membrane.



### 'The delights of structural gymnastics'

to be approximately 17 percent less than a conventional structure of similar span.

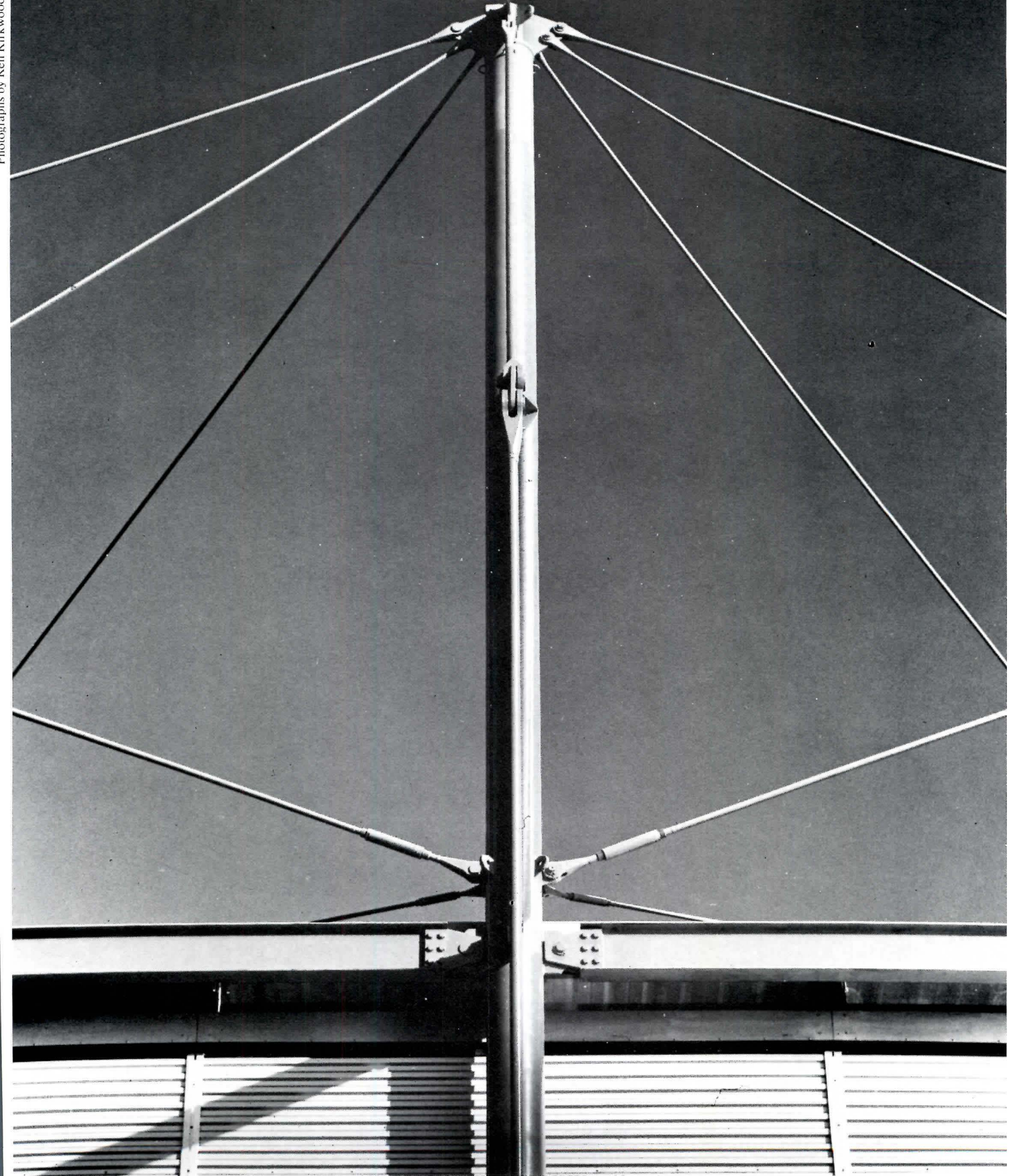
There are three load carrying systems of tension rods: One system carries gravity loads, the second carries uplift loads, and the third links all of the columns of the building to provide a continuous system to counteract the deflection caused by the asymmetrical loads of the plant on the roof. Because of the necessity for structural continuity, there are no expansion joints. The forks at the ends of the rods, unlike the cast structural joints of the Pompidou Center, were fabricated of cut and welded plate

in order to expedite the required fast construction program.

All of the hangers are pinned to the columns just above roof level, simplifying the column-roof joint and minimizing the penetration of structure through the roof. Conical shrouds are welded to the tubes that do go through the roof, and waterproofing is dressed up underneath the shrouds. At the perimeter of the building, a tension rod passes over a horizontal boom fixed to each column at roof level and is restrained by mass concrete pads flush to the ground. In addition, perimeter columns on two adjacent faces of the building are braced by diagonal tension-compression struts to take lateral loads.

The separation of structure and building envelope is clearly





articulated. An insulated sandwich of profiled steel cladding, set just inside the perimeter columns, is fixed to vertical lightweight steel trusses at two-meter centers. While all other structure is exposed, the wall structure and bracing, surprisingly, are hidden inside the building. The penetration of the wall by roof beams and the separation of wall from roof are expressed in a minimal fashion by a narrow strip of perimeter glazing around the entire building. Windows and ventilation louvers are carefully integrated into the cladding system.

All services are carried at high level. While water and electrical services are supplied from the central plant at the north end of the building, heating and ventilation for the factory areas

are provided for each structural bay by air handling units that are suspended from the hangers above the roof. The eight-ton ovens used in the manufacturing process are also suspended from the main structure, and, in addition, a number of vents and chimneys penetrate the roof. Although the structure has been elegantly expressed and ordered on the exterior of the building, the services cover the roof in an apparently ad hoc manner.

Fleetguard is the product of analytical design. However, it does avoid being cool, detached, and purely rational. For all its economy and clarity, this factory plainly revels in the delights of structural gymnastics. □



# Cummins Expands in Scotland

Architect: Ahrends Burton & Koralek. By A.LeC.

In 1974, Cummins approached architects Ahrends Burton & Koralek to prepare a scheme to upgrade and expand their engine factory in Shotts, a small Scottish town between Glasgow and Edinburgh. The brief had many constraints: The existing buildings had to be retained, and the costly engine test cells could not be moved. In spite of these fixes, the client wanted a flexible complex of buildings to accommodate expansion and changes in production. Finally, manufacturing had to continue throughout the program of construction, which would ultimately double the production capacity of the plant.

Though the Shotts project is superficially similar to Roger's factory at Quimper, the two buildings are polar opposites. Quimper is a loose-fit solution, minimal in terms of structure, form, and detailing, expressing a single-minded concept. Shotts, by contrast, is tailored, juxtaposing a complex range of structures, forms, and materials to create tension, contrast, and ambiguity.

The Shotts complex, on a sloping site in a rural landscape overlooking the town to the south, is organized in alternating slices of servant and served spaces. Slender spines exploit the sloping site to advantage by providing grade-level, weather-protected access from the staff parking areas to the north and delivering workers to the plant along mezzanine-level circulation routes. Flanking stairs provide access to the production floor below. Staff locker and changing rooms, meeting rooms, and stores are housed underneath the circulation spine adjacent to workplaces. Mechanical plant rooms are above, articulated almost as separate buildings astride the circulation spines.

Between the spines are four zones of production space: receiving, machining, assembly, and testing/shipping, combined with an office area for 400 people housed in the refurbished former factory. In the client's terms, the assembly area is the symbolic heart of the plant where the fruits of everyone's labor are made manifest by the emergence of the completed product. The staff canteen and training areas are therefore situated on a mezzanine bridge above the assembly plant so that the whole workforce can share vicariously in the "act of completion."

The three-story servant spines are chunky, reinforced concrete structures, small in profile. At production floor level, infill walls or blockwork form the staff amenity areas and stores. The circulation routes above feature tubular steel balustrades with

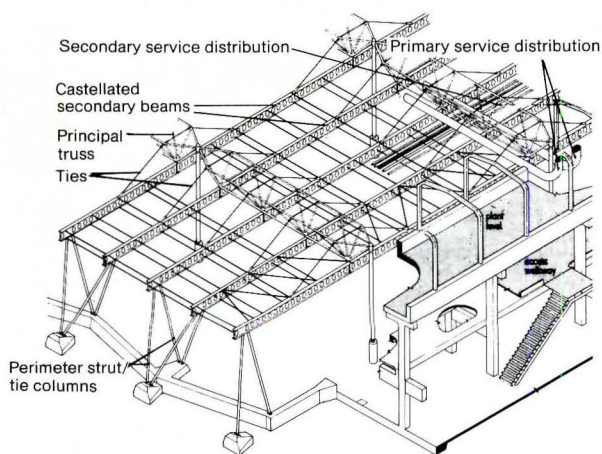
mesh infill panels. Profiled aluminum cladding is added on the exterior portions of the spines and on the plant rooms above.

In contrast, the production floor features a steel structure with circular columns on a 15-meter-square grid. Structure and services are tightly interrelated. Triangular tubular steel primary trusses run perpendicular to the service spines. These trusses define continuous strips of roof monitors that provide ample natural light to the production areas. The structural system is completed by castellated secondary beams suspended from the trusses and tied back to the top chord of the trusses at third points of their span. The sloping roof defined by the ties provides space above the beams for the main service runs, with secondary distribution routes parallel to and within the depth of the beams. The main ducts are painted yellow, lending an illusion of brightness to the natural light—often gray and dull in this northern clime—which is admitted through the roof.

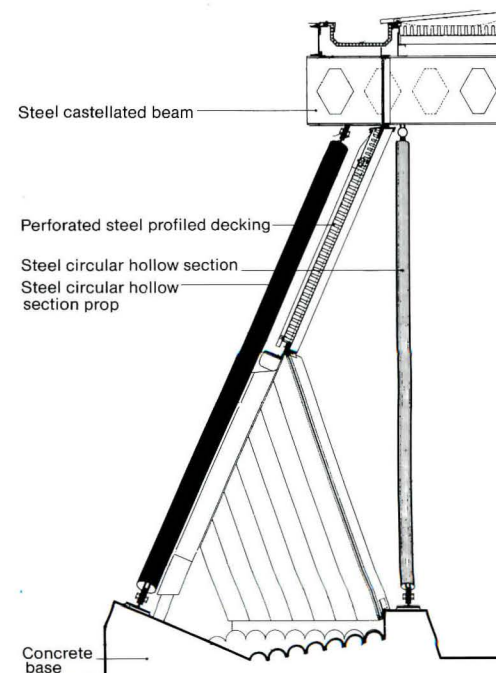
The primary trusses are restrained laterally by being tied to the concrete spine structures, while the secondaries are braced at the perimeter of the building by triangulated struts and ties anchored to concrete upstand foundations. This arrangement has been exploited by the architects to create a complex geometry for the skin of the building. An outward-sloping wall of profiled aluminum is eroded by an undulating, inward-sloping glazed wall. The strip of clerestory glazing that completely separates wall from roof leaves no doubt that, although the wall appears tentlike and in tension, the appearance is an illusion. Inside, the zigzag sloping external wall creates a zone at the perimeter of the production floor dedicated to circulation.

The structure-skin detail used on the north and south faces of the building does not turn the corner. The east and west faces of the production zones generally abut the spines except at the eastern edge of the building where there is no protective spine. Instead, a variation of the theme of the canted wall reveals the trusses and columns externally between loading bays.

Profiled aluminum cladding has been applied to the existing brick buildings in an effort to integrate them into the new composition by camouflage. This attempt to lose the undistinguished old buildings in the new complex is understandable but is perhaps less successful than a separate-but-equal approach might have been. □



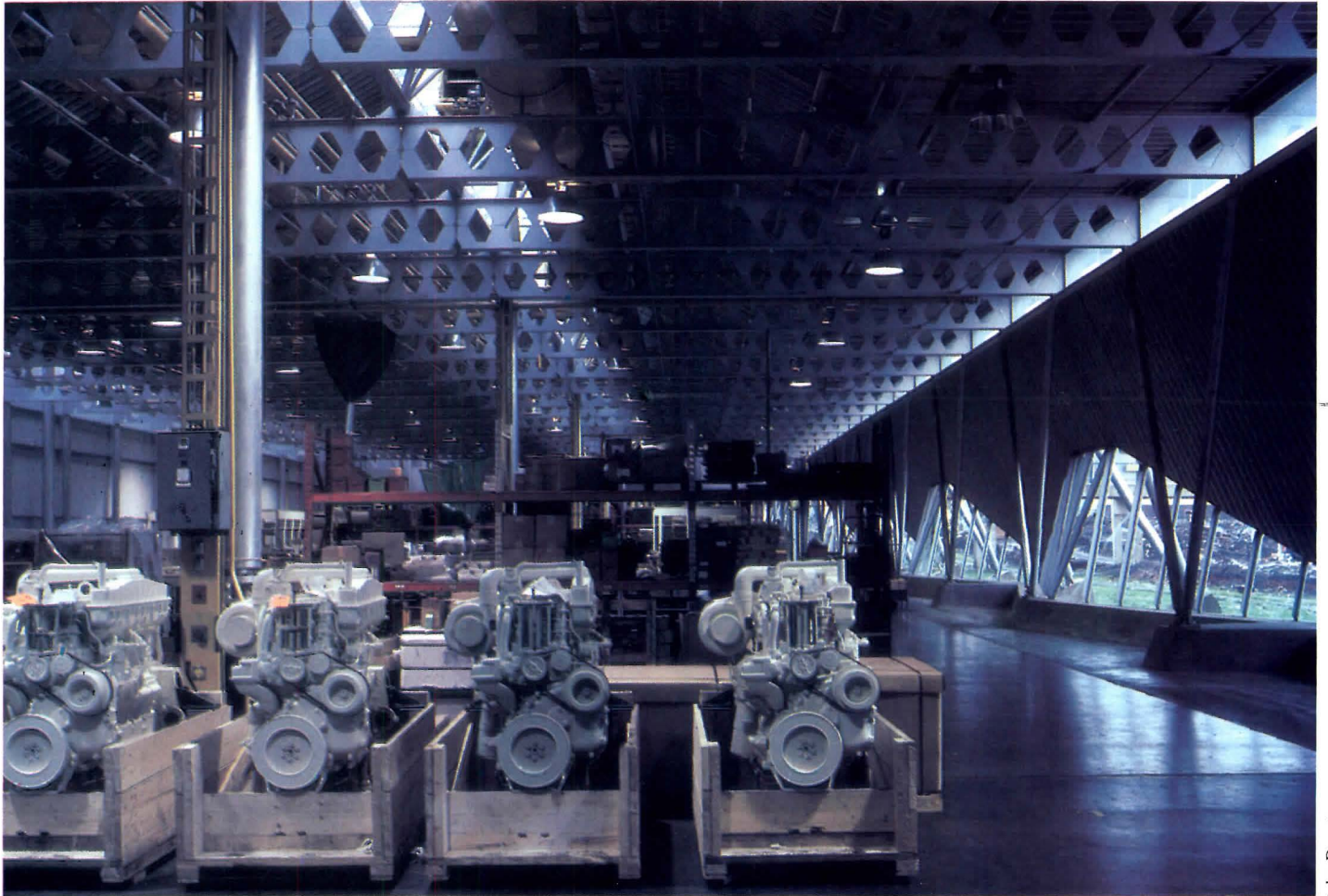
Drawings above and far right, structure and services, detail of external wall; right, view along exterior of circulation spine; across page, top, building corner near receiving docks; bottom, interior of plant showing undulating wall and lighting from above.







Harry Sowden



John Donat









# Celebration Of Technology

*A diesel plant that is a Cummins joint venture. Architect: CRS. By A.F.*

For this diesel engine plant in North Carolina, Caudill Rowlett Scott eschewed the traditional layout of offices out front with the works behind. Instead, Paul Kennon, FAIA, took a cue from management's desire to decentralize the factory and placed most support components near the workers on the lines. The few functions that serve the entirety—plant manager's office, personnel, quality control, and the cafeteria—are clustered in a linear core that slices through the vast building, effectively dividing it into its two main functions of machining engine components on one side and assembling them into engines on the other.

The factory, Consolidated Diesel Co. near Rocky Mount, is a 50-50 joint venture between Cummins and J. I. Case Co. For Cummins, it represents expansion into the small diesel market (50 to 250 horsepower); for Case, already a small-engine producer, it is the facility needed to build a new generation of fuel-efficient diesels. When the plant goes into full operation in several years, it will have the capacity to produce 150,000 engines a year, equal in number to Cummins' entire worldwide output today.

The assembly side, which is also where the engines are tested, was a pre-existing, 400,000-square-foot textile mill. New construction brought the total area to 1.1 million square feet. Kennon pulled the new entrance around to the side, emphasized it with a long, high canopy/trellis that extends several hundred feet into the site, aligned the core behind it, and channeled visitors deep within the building before they reach the reception area. (Workers use the same entrance but circumvent the reception lobby.) This vantage point presents fascinating views through window walls of the two main manufacturing areas—machining to the right, assembly to the left. Straight ahead is a two-story element housing offices and quality control, and beyond this is the dining area, another full-height, glazed space bathed in natural light from skylights and softened with large ficus trees. Kennon sees this central cafeteria as "town square" from which radiate precincts and neighborhoods as defined by job responsi-

*The entry canopy/trellis shoots out of the central core. Its top element is an extension of a roof-mounted light scoop. A shallow berm next to the building provides an earthen plinth.*



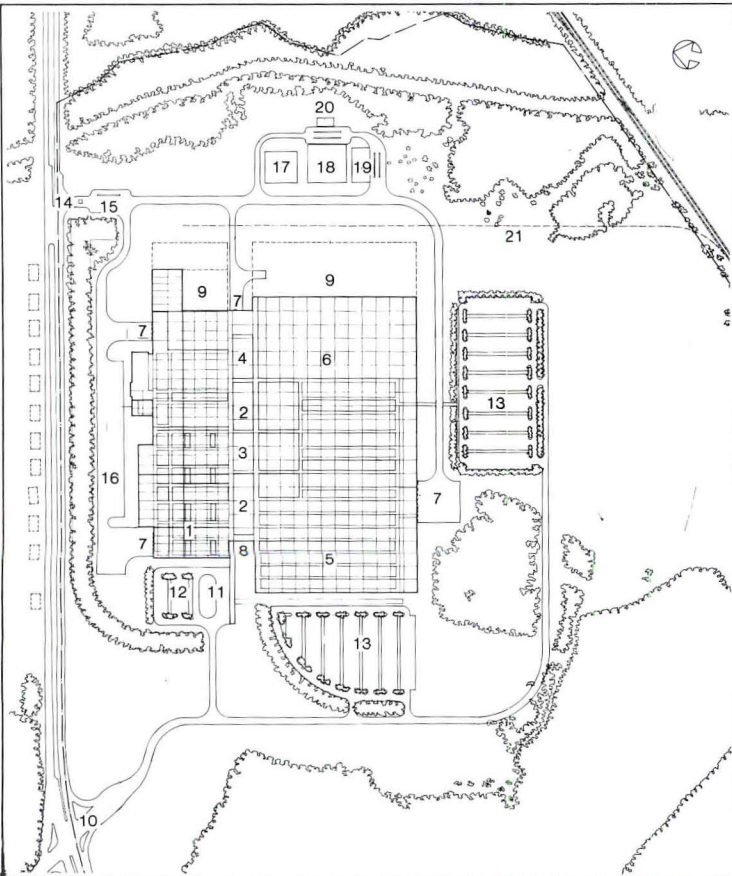
Allen Freeman



Balthazar Korab



Allen Freeman



- 1 Assembly
- 2 Central office/Support
- 3 People place
- 4 Central mechanical
- 5 Machining
- 6 Shell space
- 7 Shipping/Receiving
- 8 Main entrance
- 9 Future expansion
- 10 Plant entrance
- 11 Drop off
- 12 Visitor parking
- 13 Employee parking
- 14 Plant entrance/Truck traffic
- 15 Weigh station
- 16 Trailer storage
- 17 Transformer
- 18 Waste water treatment
- 19 Tank farm
- 20 Propane storage
- 21 Future rail spur





## A colorful and considerate work space.

bilities. These outlying areas also have natural light, of a softly glowing kind, that enters through hooded, strip skylights and is reflected off vertical surfaces that also absorb sound. The intent was to keep noise at 85 decibels or below, and the result is an exceptionally quiet factory environment.

Throughout, technology is celebrated. Bright primary colors—used here because Irwin Miller thinks they denote a young, growing company, says Kennon—code the walls, columns, and HVAC components, à la Beaubourg. Especially striking is the high visibility of moving materials. Gleaming machined parts, elevated high and suspended from conveyers, move along the core and then cross it at a point just beyond the dining space. (Kennon

had wanted the line to transverse above the lobby, but this proved impractical in the final building configuration.)

Movement is appropriate symbology in this factory, both for the engines it turns out and the changing corporate strategy that went into it. In an effort to stay ahead of the Japanese in diesel manufacturing, Cummins is moving away from paternalistic, centralized management of its plants and toward self-managing components in “teams.” The Rocky Mount factory eloquently expresses that strategy while providing a considerate workplace.

*Main entrance beyond trellised canopy, photos at left, serves both visitors and employees. Plan shows tree-planted berm just west of the factory that partially hides the huge building from the highway. Above, the centrally located, glazed cafeteria.*



Photographs © Balthazar Korab



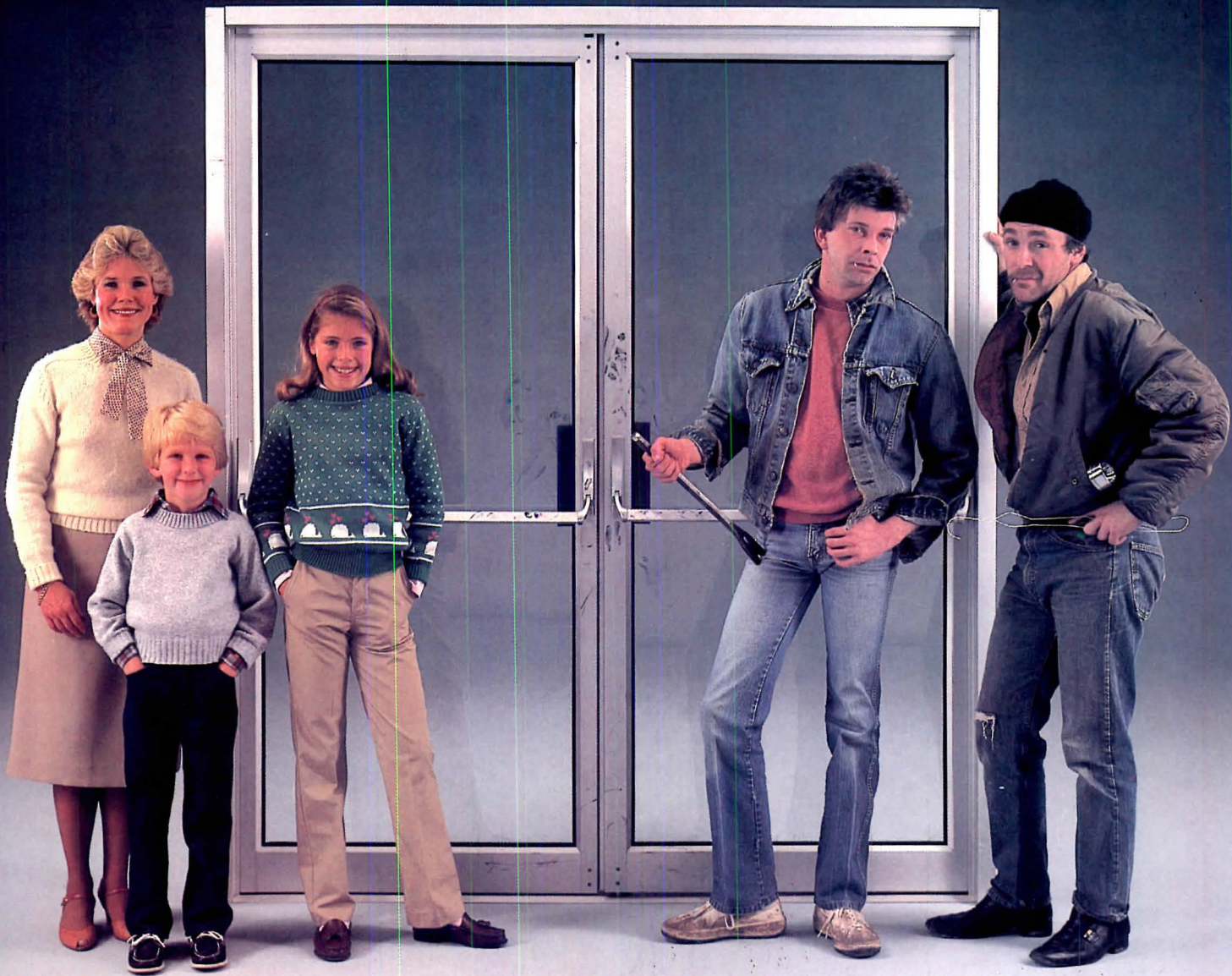
*Red denotes structure, blue HVAC in the interior color scheme. Trees in dining area, left, filter natural light from above. Seating with built-in lights, right, snakes along L-shaped reception lobby, where visitors have views onto manufacturing floor. White wall, below, serves both as light reflector from hooded, linear skylight and as sound baffle. □*





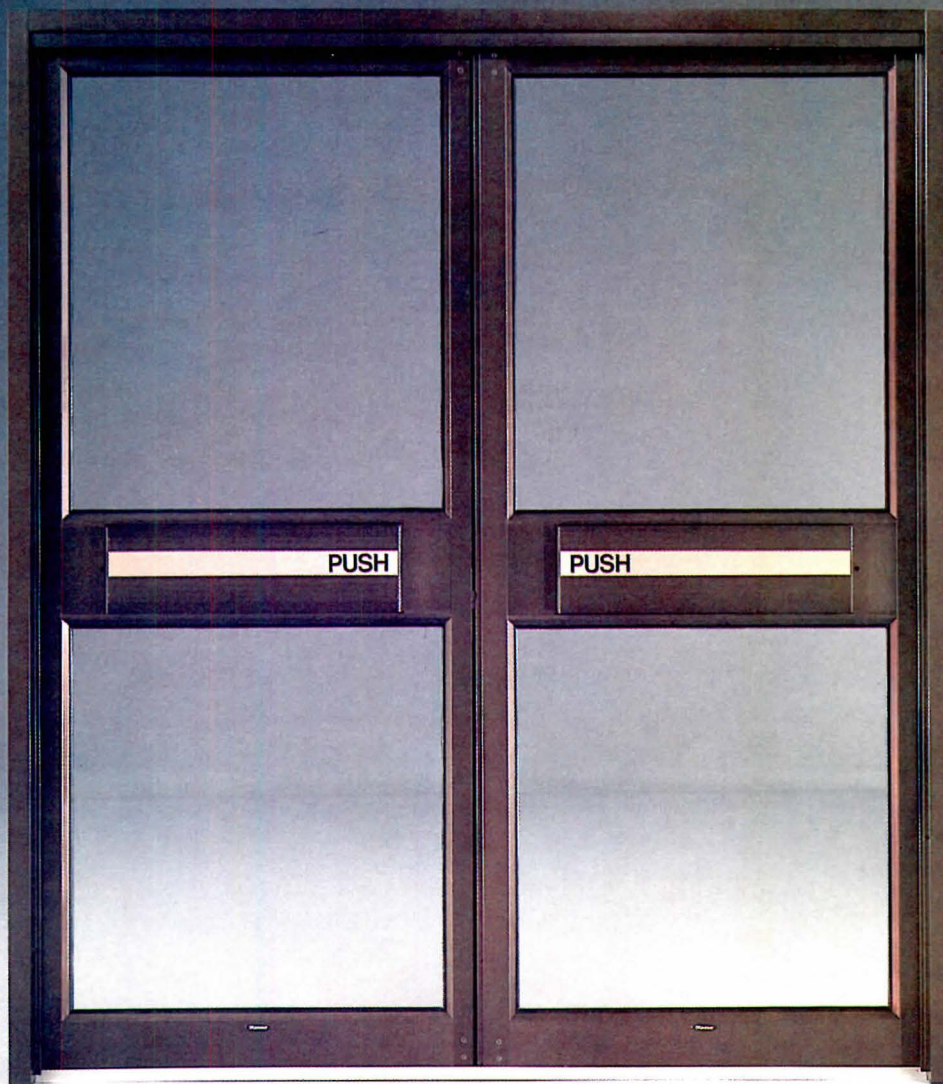






**The good, the bad, and the ugly.**





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## Two Views of Theater Design

### Contemporary Theater: Evolution and Design.

Christos G. Athanasopoulos.  
(Wiley, \$60.) **Hockney Paints  
the Stage.** Martin Friedman.  
(Abbeville Press, \$45.)

According to the author of *Contemporary Theater: Evolution and Design*, the history of theater architecture begins with perfection. After tracing the origins from 2000 B.C. in Egypt, he describes the Greek experiments with audiences on hillsides, which develop into the definitive amphitheater. In his opinion, the ideal form for the communication of meaning through speech

to large numbers of people occurred as early as the fourth century B.C. From then on, however, the ideal steadily erodes. Meaning and speech yield to spectacle and, in the fully formed theater of imperial Rome, we are confronted with the chilling prospect of the supremacy of mass entertainment. A continuous conflict ensues between the forces of meaning and the forces of display.

In Athanasopoulos's view, speech and meaning are forever in danger of being overwhelmed by showmanship. The influence of the so-called *scène à l'italienne* (the Italian theater of scenic illusion), which sprang up in the 17th century as a misquotation of newly discovered ancient models, succeeded, he believes, in systematically strangling every creative impulse up to and including our own time.

With the exception of an occasional golden age or two (Elizabethan England or the France of Louis XIV), Athanasopoulos sees the history of theater architecture as one of frustration caused by the inability to get beyond the perfection of the ancient model. Of course, productions of works by Ibsen, Tolstoy, and Chekhov stressed speech, the author says, but meaning was blunted and rendered small-scale, in fact microscopic, by the development of the box set and naturalistic electric lighting.

During the present century, the author asserts, there had been no lack of theoretical research into new and experimental forms of theater architecture. Beginning with the early Bauhaus examples, he describes the emergence of the four contemporary theater forms: the revised



Three of artist David Hockney's creations with theatrical flair, showing his lively use of color and form, from *Hockney Paints the Stage*: Above, 'Dancers,' 1980; across page, top, 'Leaping Dancer,' 1981; and bottom, 'Hollywood Hills House,' 1980.

proscenium, the open or thrust stage, the theater-in-the-round, and the mechanically adaptable forms generally associated in the U.S. with the work of George Izenour.

Even though there has been some experimentation during the past 60 years, Athanasopoulos maintains that the main thrust has been toward serving the interests of popular entertainment. Therefore, the influence of the Italian theater of scenic illusion remains as strong as ever. In the final chapter, he calls for a breed of playwrights who will lead us away from spectacle toward a new "golden age" of meaning and speech.

While we wait for this golden age, however, we must deal with the design of theaters in the present. And sometimes inspiration may come from an unexpected source.

David Hockney, the British painter who recently has been working mostly in southern California, has over the past 10 years done some remarkable stage designs for the Glyndebourne Festival Opera in England and the Metropolitan Opera in New York City. Highly imaginative in their use of painterly techniques to solve the problems of theatrical space, they explore the area of audience involvement, which is at the heart of theater architecture. The profusely illustrated volume *Hockney Paints the Stage* has been assem-

bled by Martin Friedman to accompany an exhibition of Hockney's stage designs that will travel over much of North America in the coming year. In addition to the paintings, models, and sketches, there are candid interviews with Hockney and his collaborators that give a strong feeling for the creative process that turned these experiments into the successful taming of two very different theatrical interiors.

The stages and auditoriums of both Glyndebourne and the Met are shown side by side as isometric draw-

ings at the same scale. The challenges inherent in designing for each are quite dissimilar. Glyndebourne is small and squat and requires ingenuity to create an illusion of spaciousness, while the Met is vast and vertical with an enormous chasm of an orchestra pit separating even the front row orchestra seats from close involvement with the action.

Physical and psychological distances claim much of Hockney's attention, and he begins by studying the configuration of the house itself. He observes apparent distances from individual audience positions to possible elements of performance — actors, props, sets, and lighting. He ponders the relationship of audience to actor.

As ideas about the specific production gradually develop, Hockney tends to use models rather than sketches. He analyzes the relationship of stage elements to actors and the perception of these from extreme positions within the auditorium. In conceiving the designs for a Stravinsky triple bill at the Met, he considers incorporating the auditorium tiers into the scenic backdrop, thereby dissolving the boundaries between performers and audience inherent in the architecture of the hall. He uses sharply focused projections on the proscenium frame to mitigate its intrusiveness. In the case of "Oedipus Rex," he incorporates the red of the auditorium carpets into the main stage setting and clothes the performers in black and white to match the orchestra players in the pit. All these concerns display an intense interest in attempting to solve actor-audience relationships, an interest that should have

*continued on page 84*



# BOOKS

Photographs courtesy of the Walker Art Center





**Books from page 83**

been of prime concern to the architect of the hall itself.

Pondering Hockney's production experiments may not lead directly to the design of better, more useful theaters, but being exposed to his personal vision might help us to approach old problems in new and unconventional ways.

MARTIN BLOOM, AIA

*Mr. Bloom specializes in theater architecture in New York City.*

**Shoppell's Modern Houses, 1887.** (Antiquity Reprints, \$6.)

In the latter half of the 19th century, the American rural countryside was being radically transformed as city dwellers (thanks to improvements in transportation technology) moved out beyond the urban fringe to the very first suburbs. This activity was aided by the use of pattern books that presented designs for palatial houses (like that below) of brick, stone, wood, and stucco, in virtually any style imaginable. The would-be homeowner surveyed the designs available, chose one to his liking, and then (for a fee) would receive from the architect/author a complete set of working drawings and specifications for construction.

Other architects distributed their designs through magazines. Robert Shoppell started his "Co-operative Building Plan Association" to crank out the designs that appeared in his publication *Shoppell's Modern Houses*. The magazine presented not only designs but articles on heating and ventilation, landscaping, furnishings and decor, and, through one article in particular, answered the pressing domes-

tic questions of the day, such as: "Shall we have plumbing in the house or shall we not?" By the mid-1880s, Shoppell claimed to have been responsible for the design of more than 8,000 houses built across the country.

This reprint of the best of Shoppell's designs for 1887, and others, is available from Antiquity Reprints. The books are not only interesting reading from an historical point of view but are also valuable as resources for those restoring houses of this vintage. A catalog of reprints is available for \$1 from Antiquity Reprints, Box 370, Rockville Centre, N.Y. 11571. MICHAEL J. CROSBIE

**Restaurants: Architecture and Ambience.** Egon Schirmbeck. (Architectural Book Publishing Co., \$35.)

With text in English and German, this book has an international flavor, discussing an array of restaurants that have opened in the last decade in several countries, among them the U.S., Italy, Denmark, West Germany, and Switzerland. The author bemoans the fact that far too many new restaurants disregard atmosphere and environment. Too many, he says, "are an unreflecting repetition of traditional forms and design principles." He continues: "Simply to offer the guest pseudo-Victorian pubs or barns or cattle stalls in charred pine is to underestimate his taste." The examples he has chosen, then, reinterpret "the restaurant theme with the modes and materials of the modern age." There is an introductory section to the book in which Schirmbeck explains the different types of restaurants and discusses outside appearance, entrance zone, design, lighting, materials, and dec-

oration, and the bar and other furniture. The major portion of the book is given over to examples of 37 restaurants in all parts of the world that evidently meet the author's standards.

**Renovation: A Complete Guide.** Michael W. Litchfield. (Wiley, \$29.95.)

If you have clients who are interested in renovating a house, give them this book so that they will understand all the principles and ramifications of rehabilitation. Be warned, however, that the book is so comprehensive and clear in its guidelines that clients may decide to take on the job themselves rather than contracting for your services. And even the professional architect will gain from reading the technical hints the author provides.

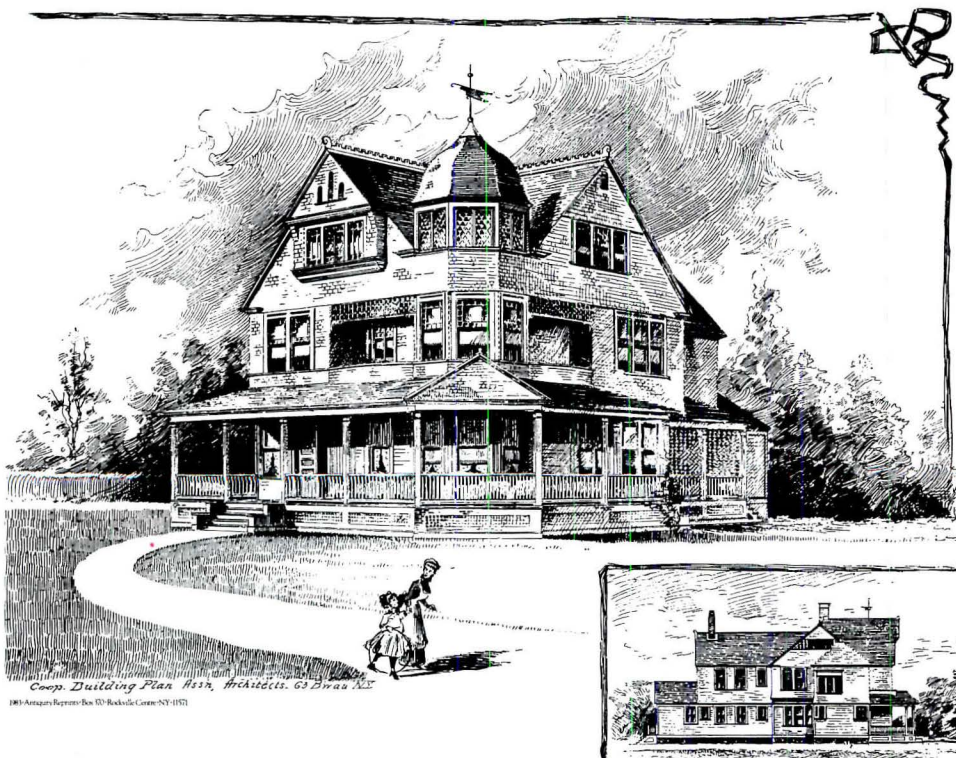
The author, founding editor of *Fine Homebuilding* magazine, has renovated three houses on his own, using this experience to write this encyclopedic guide. All the information, he says, is "first-hand," gathered from an array of people, including architects, structural engineers, masons, plumbers, et al.

Litchfield begins with information on how to assess an old house, going on to chapters on developing plans, planning kitchens and bathrooms, tools to use, and building materials. He interjects a case history in renovation and then proceeds to roofs, weatherproofing, windows, structural carpentry, masonry, electricity, and plumbing, always giving concrete information on such matters as proper preparation for the task at hand, problems that may arise, and how to get the job done. He supplies details on energy conservation and then covers cooling and heating equipment, walls and ceilings, finish carpentry, painting, wallpapering, and flooring. The nine appendices add a dimension, supplying details on financing a house, building a deck, etc. Within the book's 600 pages are more than a thousand illustrations that demonstrate techniques and other helpful matters.

**Drawing and Modelmaking: A Manual for Students of Architecture and Design.** Alexander Ratensky. (Watson-Guption Publications, \$19.50.)

Although the word modelmaking figures prominently in this book's title, only one chapter of 16 pages is devoted to the subject. The emphasis is upon the tools and techniques of drawing as a means of communication in design. The volume, written by an architect who has taught drawing at the Boston Architectural Center since 1980, is directed toward "today's typical design student." Ratensky gives the basics in a step-by-step process, going from a discussion of the required tools and materials to the manner in which they should be used. There are many drawings to supplement the easy-to-read text.

*Books continued on page 86*





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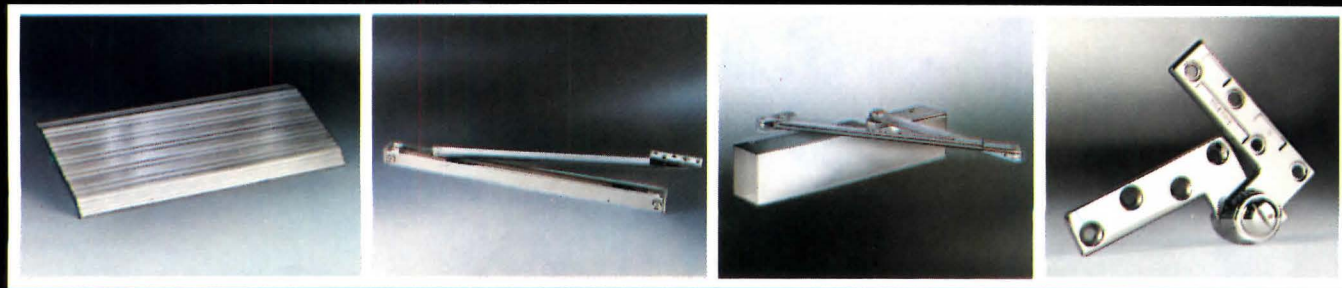
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**The Necessity of Artifice: Ideas in Architecture.** Joseph Rykwert. (Rizzoli, \$25)

I prefer the subtitle. Our architecture is once again in a time of ideas. These essays by a leading transatlantic critic, written over the last 25 years, both contribute to the ongoing debates and remind us that there is still more to be said about a large number of issues than is commonly recognized. The essays collected here are short, most of them having been written initially as reviews of books or exhibitions, radio or TV broadcasts, or some form of journalism. Of their principal sources one must identify Siegfried Giedion. The chief American ideologue considered is Robert Venturi. Although Rykwert is an art historian at a British university, his frame of reference is international, perhaps mainly German-Swiss. To most Americans he will come as a stimulating and vigorous voice.

FREDERICK GUTHEIM, HON. AIA

*Mr. Gutheim is a Washington, D.C., writer, critic, and educator.*

**American Architecture: A Field Guide to the Most Important Examples.** William Dudley Hunt Jr. (Harper & Row, \$19.95 hardbound, \$9.95 paperbound.)

By no means as ambitious as G. E. Kidder Smith's three volumes on *The*

*Architecture of the United States: An Illustrated Guide to Notable Buildings* (Doubleday, 1981), this guide is handier—it can be tucked in a pocket and pulled out for easy use as the architecture buff pursues his or her game. The book's organization is by regions and within regions by states and within states by major cities and their environs. "Very fine," "fine," and "interesting" buildings are pinpointed, with terse information about them. At the entries to states, there are also helpful tidbits about such influences on architecture as geography, climate, and building materials.

**Masonry in Architecture.** Louis G. Redstone. (McGraw-Hill, \$39.95.)

Louis G. Redstone admirably focuses attention in this book on innovative uses of brick and concrete units, thus combining a material in use for centuries with one of our own time. He praises masonry for its rich texture, adaptability, minimum maintenance, cost competitiveness, and esthetics. There are lengthy and liberally illustrated sections on the use of masonry in structures around the world, with examples of many award-winning projects that demonstrate how masonry structures are both functional and esthetically pleasing. A concluding chapter contains contributions by four experts who

give the architect practical and useful information on the use of masonry in successful design projects.

**Drawing Interior Architecture.** Norman Diekman and John Pile. (Whitney Library of Design, \$32.50.)

Interior drawings are essential tools for the conversion of ideas into visible form. Useful to both the student and the practicing architect, this book explores the many ramifications in the preparation of presentation drawings of interior spaces. The focus is not upon working drawings, but upon drawings that range from the merest sketch to polished and finished views of interiors.

**More Craftsman Homes.** Gustav Stickley. (Dover, \$6.95.)

This unaltered and unabridged republication of Stickley's work, first published in 1912, presents floor plans and illustrations for 78 mission-style houses. The plans and illustrations show exteriors and interiors, and added are Stickley's own comments. Leader of the American arts and crafts movement, Stickley (1858-1942) had a great influence on domestic architecture in this country, and many of his ideas are seen reflected today in houses where there is a combination of functionalism, economy, and esthetics. □

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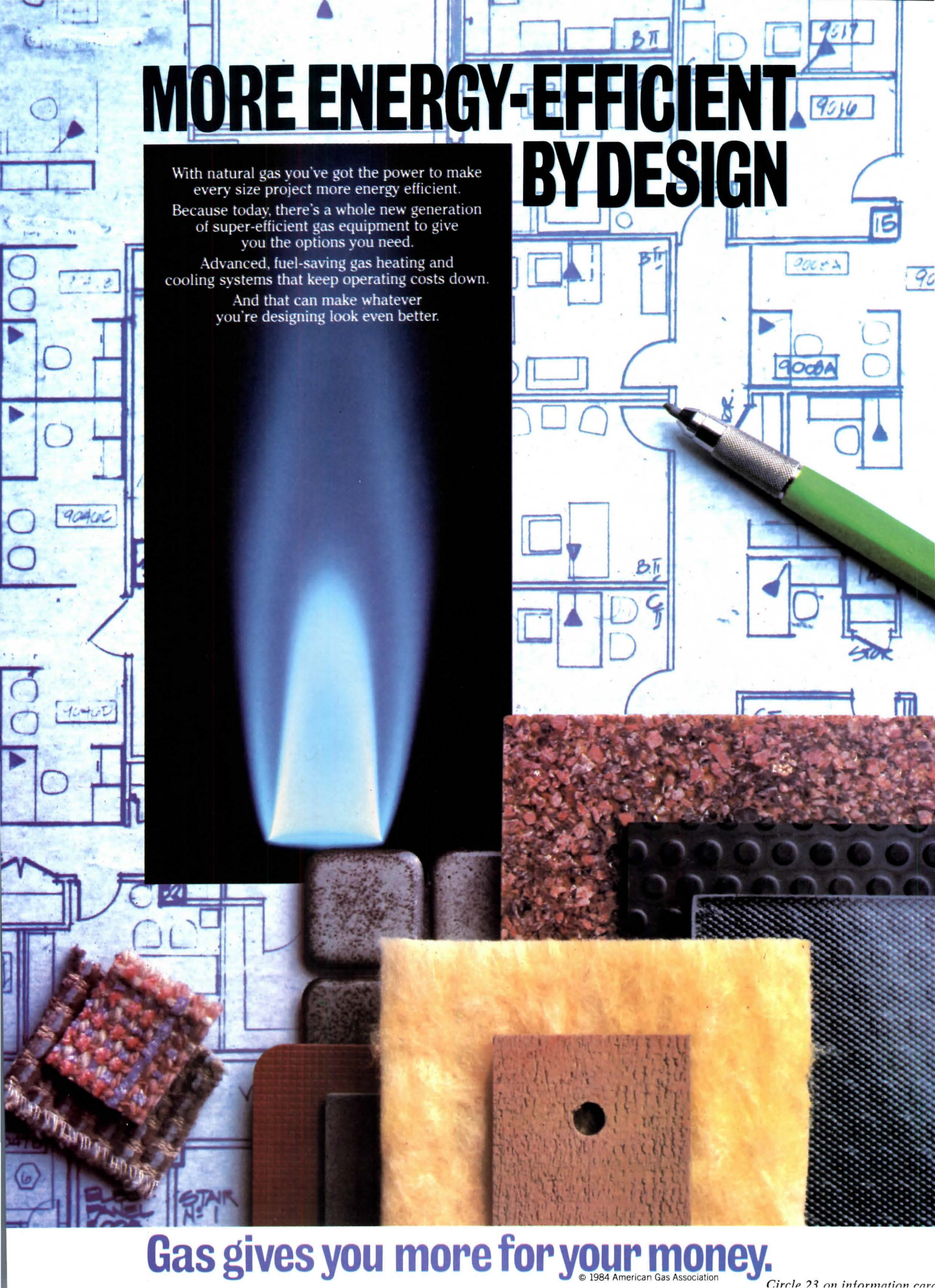
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## Awards

# Bunshaft, Eisenman Honored by Academy of Arts and Letters

The American Academy and Institute of Arts and Letters has presented its 1984 gold medal in architecture to Gordon Bunshaft, FAIA. It is one of two gold medals awarded annually and rotated at six year intervals between 12 disciplines. Peter Eisenman, FAIA, was awarded the academy's 1984 Arnold W. Brunner memorial prize in architecture.

Bunshaft was born on May 9, 1909, in Buffalo and received a bachelor of architecture in 1933 and a M.Arch. in 1935 from MIT. He joined Skidmore, Owings & Merrill's New York City office in 1937 and remained with the firm as chief designer and partner until his retirement in 1979. During that time he also served as a visiting architecture critic at MIT, Harvard, and Yale.

Bunshaft's best known work is Lever House in Manhattan, winner of an AIA honor award when completed in 1952 and the 25-year award in 1980. Lever House was designated a historic landmark and has been called "a key monument in the evolution of the International Style."

A long-time advocate of the arts, Bun-



*Gordon Bunshaft, left in photo, and Kevin Roche at the academy's awards ceremony.*

shaft has emphasized integrating within his designs large freestanding sculpture by such artists as Isamu Noguchi and Jean Dubuffet. He was a member of the President's Commission on the Fine Arts from 1963-72 and has been a trustee of the

Museum of Modern Art since 1975.

Nine of Bunshaft's buildings have received national honor awards, among them Manufacturer's Hanover Trust (1956), Connecticut General Life Insurance headquarters (1958), Albright Knox Art Gallery addition (1963), Beinecke Rare Book and Manuscript Library (1967), American Can Co. headquarters (1973), and the New Jeddah International Airport (1983). Other well-known designs are Chase Manhattan Bank, Pepsi-Cola building, Lyndon Baines Johnson Library at the University of Texas, and the Hirshhorn Museum and Sculpture Garden.

On presenting the award, Kevin Roche read a statement written by Ada Louise Huxtable, Hon. AIA, which said, in part, "Dealing with the corporate patron and product, he has elevated the business of building as business to an exceptionally high level of taste and execution. . . . Gordon Bunshaft's life work has not only established the style and standards of a major building type of the 20th century but it also assures him a distinguished place in its architectural history."

Past architect recipients of the gold medal include W. Rutherford Mead, Cass Gilbert, Frederick Law Olmsted, Frank Lloyd Wright, Ludwig Mies van der Rohe, Buckminster Fuller, Louis Kahn, and I.M. Pei, FAIA. *continued on page 91*

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**Awards from page 88**

Eisenman, winner of the \$1,000 Brunner prize, was born in 1932 in Newark, N.J. He studied architecture at Cornell and Columbia and later received a doctorate in philosophy from the University of Cambridge. Founder and director from 1967-82 of the Institute for Architecture and Urban Studies and editor of its journal, *Oppositions*, Eisenman was cited for influencing the architectural profession through his activities as an educator, author, and theorist.

Mexican Luis Barragán, Hon. FAIA, was inducted as a foreign honorary member. The academy-institute also inducted four other foreign honorary members and 13 new members and presented awards totaling more than \$200,000 in several fields of the arts.

**DEATHS**

**Thorton Abell, FAIA:** Past president of the Los Angeles Chapter/AIA and the Southern California Chapter/AIA, Abell died on April 2 at the age of 77. He received six AIA honor awards: for an *Arts and Architecture* case study house in 1948, the Beck house in 1952, the Abell house and the Construction Industry Exposition model house in 1954, the Adelman house in 1960, and the LeBrun house and studio in 1964.

**W. Montgome Anderson**, Brunswick, Ga.  
**M. L. Andrus**, Portland, Ore.  
**Samuel Barbalat**, Pittsburgh  
**Charles Sevier Barr**, Shreveport, La.  
**Tamer Bozok**, Brooklyn, N.Y.  
**George N. Burkhalter**, Nashville  
**M. V. Caputo**, Belmont, Mass.  
**Walter Carlson, FAIA**, Wilmington, Del.  
**J. Gordon Carr**, New York City  
**H. L. Casner**, Madisonville, Ky.  
**William F. Cody, FAIA**, Palm Springs, Calif.  
**William M. Collier Jr.**, Austin, Tex.  
**J. Raymond Corwin**, Alexandria, Minn.  
**John A. Curry**, Terre Haute, Ind.  
**T. H. Damm**, Seattle  
**J. W. Dawson**, St. Paul  
**J. A. Dougher**, Sun City, Ariz.  
**B. Eschenbach**, Pt. Reyes Station, Calif.  
**B. Flemming**, Port St. Lucie, Fla.  
**F. L. Ford**, E. Marion, Mass.  
**F. H. Fromm Jr.**, Drexel Hill, Pa.  
**Leroy Gaarder**, Albert Lea, Minn.  
**Samuel Glaser**, Palm Springs, Calif.  
**E. L. Griffin**, Sioux Falls, S.D.  
**Martin G. Gundersen**, Fort Myers, Fla.  
**Robert G. Gustafson**, Monroe, Mich.  
**Joe G. Harms**, Kirkwood, Mo.  
**Gordon Hayes**, Buffalo  
**C. L. Hendrick**, Orlando, Fla.  
**James L. Hibbs**, Clarksville, Tenn.  
**Morton T. Ironmonger**, Ft. Lauderdale, Fla.  
**Andrew P. Jara**, Oakland, Calif.

**Summer Continuing Education Courses.**

Harvard University graduate school of design is sponsoring two-day to one-week intensive courses for professional development in design, planning, management, real estate, computers, and engineering. Contact the Continuing Education Program, Harvard University, 48 Quincy St., Cambridge, Mass. 02138.

**Design/Build Course for Students.**

The Yestermorrow Design/Build School in Warren, Vt., is offering a six-week course this summer for architecture students interested in designing/building a group project. Time will be spent working in studio and building on site. Credit for the course may be obtained through Goddard, Antioch, or the student's own school. Contact: Yestermorrow Design/Build, Box 76A, Warren, Vt. 05674.

**William Lescaze Exhibition.**

The National Academy of Design in New York City will have on view through Sept. 2 a retrospective exhibit on the work of Swiss born and educated architect William Lescaze. Some 200 photographs, drawings, furniture, and architectural models from the Syracuse University collection are in the exhibition.

*News continued on page 92*

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## CREDITS

**Fire Station No. 3, Columbus, Ind.** (page 40). *Architect: Wood & Burd, Inc., Columbus.* Concrete: Portland. Foundation insulation: Styrofoam—Dow Chemical. Concrete and fluted blocks: Devening Block. Masonry unit insulation: W.R. Grace. Steel bar joists: J & J Fabricators. Wood roof frame: Lumbermate. Cement fiber roof deck: Concrete Products. Roof insulation: Polymer Chemical Corp. Roofing: Firestone Rubber Guard. Roof drains: Josam. Sheathing: Dow Chemical. Insulation: Owens Corning. Glazed Brick: Gail International. Skylights: Wasco Products. Windows: Pella-Rolscreen. Plexiglass: Rohm and Haas. Overhead doors: Overhead Door Corp. Curtain walls: Kawneer. Caulking: D.A.P. Drywall and plaster: U.S. Gypsum. Hardware: Sargent. Metal grating: McNichols. Metal floor drains: McKinley Iron Works. Plumbing fixtures: Eljer. Paint: Sherwin-Williams. Fire hose hoist: Coffing. Kitchen cabinets: Reese Supply. Alarm control system: Bogen. Sound and speaker system: Nutone-Scovill. Gas furnace: Carrier. Duct lining: Johns-Manville. Exhaust fans: Power Line. Gas fired heaters: Modine. Solar blower: Rom-Aire. Pump: Grundfos. Diverter: Solar Status. Controller: Honeywell. Brass fire pole and accent pole: Newman Bros. Flag pole: Baartol. Pull down beds and closets: Sisco. Toilet room accessories: Bobrick.

Carpet: Armstrong. Sheet vinyl: Armstrong. Ceramic tile: American Olean. Vinyl wall covering: Bolta Wall. Burlap paneling: Homasote. Furniture: Drueger, All Steel. Lighting: Capri, Keene, Kim Lighting, McGraw-Edison, Nutone-Scovill, Sea Gull, Sterling, Thomas Industries.

**Clifty Creek Elementary School, Columbus, Ind.,** (page 44). *Architect: Richard Meier & Partners, New York City.* Ceiling surfacing system: Conwed. Doors: Superior FP Door. Environmental control systems: Barber Colman. Floor surfacing: Collins & Aikman. Exterior paving: Columbus Gravel. Foundation: Berkel Co. Handrails: Boyce Steel. Lighting: Sterner. Interior: Lighting Products Inc., Marco. Roofing: Trocal-Dynamit Nobel. Waterproofing and sealant: Mameco. Plumbing: Sloan. Plumbing fittings: American Standard. Showers: Bradley. Sprinklers: Culligan Fire Protection. Toilet stalls: American Sanitary Partition. Lavatories: American Standard. Washroom and accessories: Bradley. Water closets: American Standard. Water fountains: Haws. Kitchen: Hobart, Sta Kold, Schaefer. Lockers: Lyon. Bleachers: Hussy. Security and fire detection: Simplex. Signage: AS1 Sign Systems. Stairs and treads: Boyce Steel. Exterior wall surfacing: Hanley Brick, Masolite. Interior wall surfacing: US Gypsum, Masolite. Windows: Kawneer. Hardware: Glynn Johnson. Hinges:

Hager. Locksets: Corbin, Best Lock Cylinders. Panic Exit: Corbin. Paint: PPG. Partitions: Panelford.

**Sycamore Place Housing, Columbus, Ind.** (page 49). *Architect: Gwathmey Siegel & Associates, New York City.* Associate in charge: Jacob Alspeter. Project team: Lynn Bensel, Glen Fries, William Garbus, Dean Marchetto, Joseph Ruocco. Structural engineer: Gieger-Berger Associates. Mechanical engineer: Thomas A. Polise. Landscape architect: Glen Fries. Photomural artist: Elliot Kaufman. General contractor: DeLuxe Homes. Interior doors: Fenstra, Davison Industries. Elevators: Amco. Environmental control systems: American Air Filter, Emerson. Interior floors: Stratton, US Ceramic Tile, Armstrong. Foundation: Schuster Block Inc., Burnside. Handrails: CV Pipe Rail. Exterior lighting: McPhilben, Stonco. Interior lighting: Prescolite, Lightoilier, Keen, Lightron. Roofing: Georgia Pacific. Plumbing: Kohler. Washroom and bathroom accessories: Accessory Specialties. Communication and intercom: Auth. Kitchen: Jim Good Custom Cabinets, G.E., Thermador, Davis. Security and fire detection: Simplex. Stair and treads: Burnside. Interior wall surfacing: U.S. Ceramic Tile. Windows: Capitol, Alumiline. Hardware: Norton, Stanley, Hager, Schlage. Paint and stain: Cabot, Sherwin Williams. Partitions: Schuster Block. □

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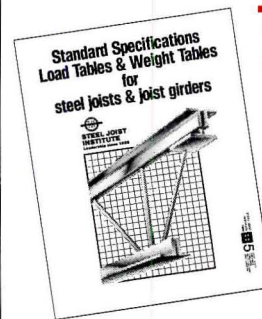
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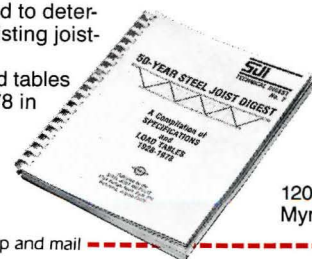
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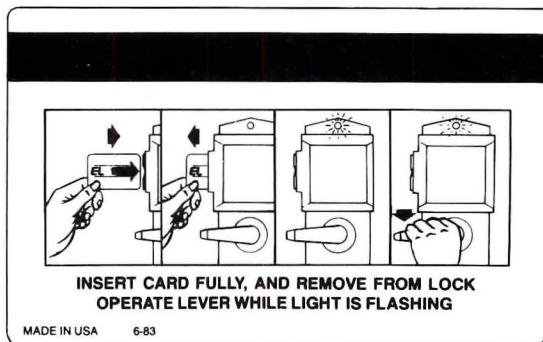
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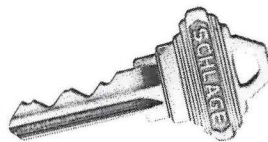
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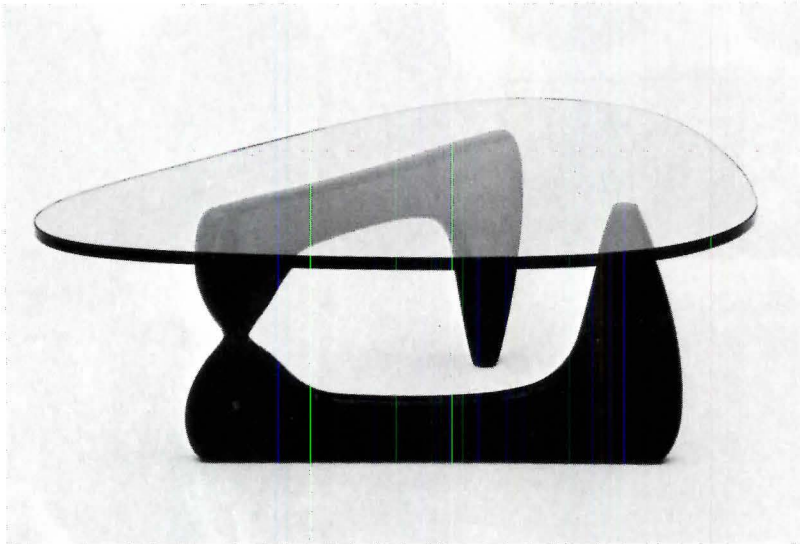
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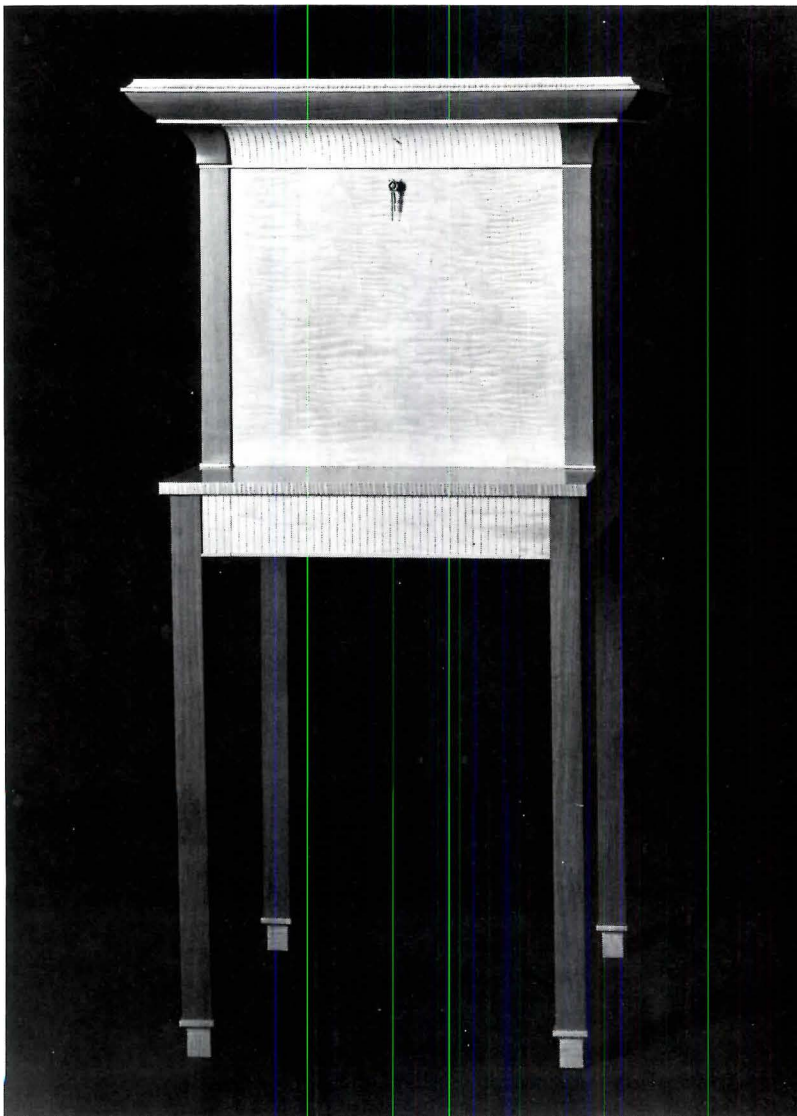
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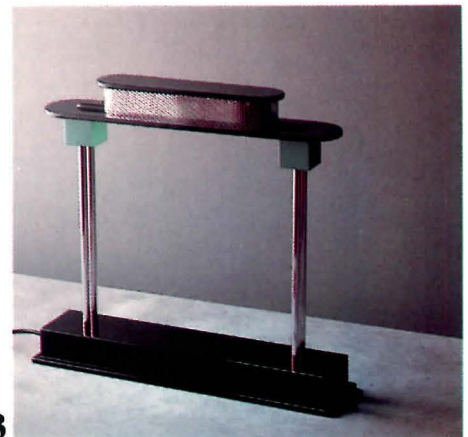


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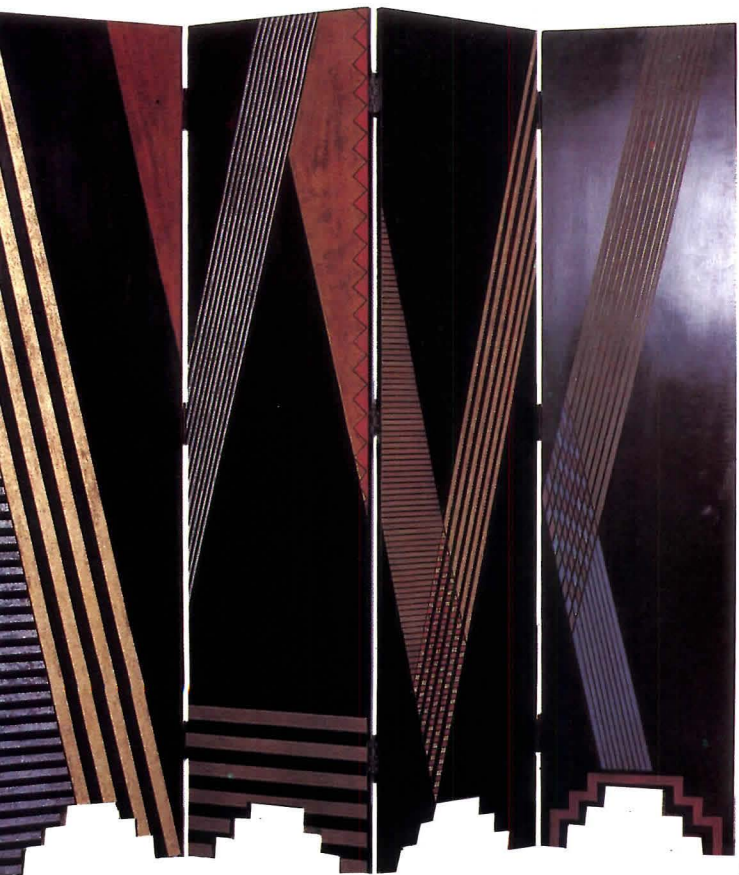


2



3





5

Sculptor Isamu Noguchi's organic coffee table (1), out of production since 1973, has been re-issued by Herman Miller. (The company is also offering '50s and '60s furniture by Charles Eames and George Nelson.) With walnut or ebony base and a 7/8-inch plate glass top, the table has been described as a "classical example of post-war design in its nearly perfect balance of sculptural quality and functionality." The elegantly handcrafted lady's writing desk (2) is the work of Wendy Stayman from the Wendell Castle Workshop. Of Swiss pear, American holly, and curly maple, with silver and ivory pull, the dropout reveals cubbyholes and a leather writing surface. The design is to evoke a sense of "strength and softness." A less traditional approach is seen in Artemide's Pausania table/desk lamp (3). Manufactured in Italy (with a distributor in New York City), the lamp has a high glossy molded thermo-plastic base and diffuser and chrome

columns supporting the diffuser. Two folding screens that are both artistic and functional are the design of Richard Haas (4) and James Carpenter Design Associates Inc. (5). Known for his *tromp l'oeil* paintings, Haas has applied that technique to an art deco-inspired four-paneled, six-foot-tall screen. The geometric patterns are carved out of the wooden screen, which is lacquered in glossy black. (The screen was commissioned by Rizzoli as part of a series by a group of prominent architects and designers.) Carpenter's work, "gray zebra screen," is of lacquered hard wood, with slats of hand-blown gray glass in between. Located in New York City, the firm's specialty is architectural glass and product design. A new look in foam seating is offered by Roset USA Corporation in its Togo settee (6). An internal frame construction and four densities of foam are designed to match the weight of the human body when seated. The upholstery is leather. □



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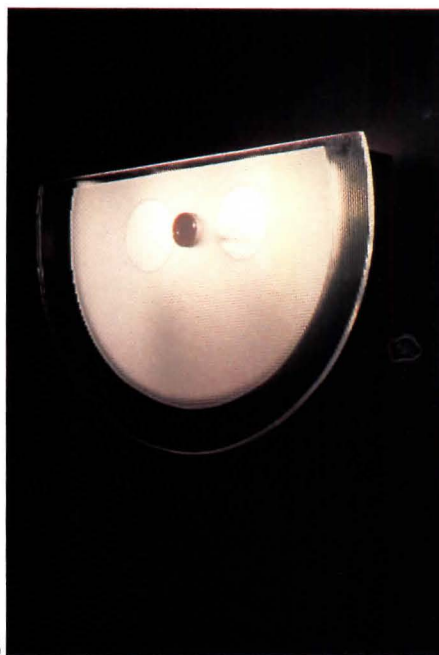
*By Lynn Nesmith*

The Spaceship Earth entry building (1) at Disney World's EPCOT center, designed by San Francisco architect Wallace Floyd Associates, is an 18-story steel framed geosphere. Resting on six steel supports, the 160-foot structure is covered with two skins: one an inner waterproof neoprene sheet and the other Alucobond, a composite surfacing material comprised of two sheets of aluminum with a polyethylene core, manufactured by Consolidated Aluminum Corporation. The 8x3-foot panels were folded and bolted to the frame from the interior and are supported by aluminum pipe outriggers from the hub points of the frame. (Circle 201 on information card.)

Crane's Erica vitreous china pedestal lavatory (2) has a rear splash guard, overflow, and a deep oval bowl. The rear ledge is designed to accommodate single hole four-inch-centerset or eight-inch-widespread faucet fittings. (Circle 202.)

Tilt wall lamp by Atelier (3) has two semicircular glass diffusers for even light distribution from two 60-watt incandescent bulbs. Vertical ribbing on the larger outer glass and horizontal ribbing on the inner glass creates a grid pattern accented by two circles. The open top provides direct upward lighting and access into the white enamelled steel housing. (Circle 203.)

*Products continued on page 98*



2

3





#### **Curved Eave Sunroom.**

Wooden framed sunroom kits (above) are made of laminated Douglas fir arches bent to a 30-inch radius, matching fir mullions, and red cedar exterior wall caps and trim. Precut and prefinished parts interlock with a keyed mortise and tenon system. Overhead glass is set on bronze anodized aluminum extrusions and secured with an aluminum cap. Insulated tempered glass is standard throughout, and units are available in a number of sizes and configurations with optional patio doors, awning windows, and solid insulated wall sections. (The Sun Co., Seattle. Circle 204 on information card.)

#### **Unit Pavers.**

Terra Stone solid concrete paving blocks and paver supports allow structural roof decks to be used as terraces, concourses, and service and pedestrian paths. The support system can be installed over single-ply membranes, plastic sheeting on the structure slab, and rigid insulation channeled for drainage. Leveling plates of various thicknesses are used to adjust paver

heights for uneven decks or drainage slopes. (Wausau Tile, Wausau, Wis. Circle 206 on information card.)

#### **Window Unit.**

Prefinished basement window system is constructed of a wooden frame and sash with a white urethane finish. Dual position hinges and lock strikes permit the sash to be hung from either the top or the bottom. Units are available in three sizes, all with factory applied vinyl spring tension weatherstripping. (Andersen Windowalls, Bayport, Minn. Circle 207 on information card.)

#### **Dimming Control.**

Nova-ML incandescent lighting circuit system has a master linear slide dimmer and any number of on/off switch locations. Controls can be installed in a single gang wallbox or as replacements for three-way and four-way standing pole switches in new or retrofit applications. Faceplates are available in white, black, brown, beige, gray, or custom engraved finishes. Switches are miswire protected and are

designed to be ganged without derailing. (Lutron Electronics, Coopersburg, Pa. Circle 208 on information card.)

#### **Ceiling Panels.**

Pebbled Premier ceiling panels are designed for acoustical control for open landscaped or closed plan commercial installations. Measuring 2x4 feet, the lay-in panels have a lightly textured white finish. (Conwed Corporation, St. Paul, Minn. Circle 209 on information card.)

#### **Energy Use/Temperature Controls.**

DeltaNet central energy management and temperature control system is designed for small and medium sized buildings. The system consists of a CRT screen, touch pad keyboard, report printer, remote control processors, sensor for monitoring various points throughout the facility. The system can be programmed to report conditions to an off-site terminal for after hours monitoring. (Honeywell, Minneapolis. Circle 210 on information card.)

#### **Residential Skylight.**

Thermobloc skylights are constructed with a built-in PVC curb with air voids that act as a thermal barrier. The PVC curb is designed to minimize interior condensation and to eliminate the need for a site built curb. The low profiled units have a baked bronze enamel exterior finish with acrylic or glass in a variety of colors. (Plasteco, Inc., Houston. Circle 211 on information card.)

#### **Lighting Control Sensor.**

INFRACON passive electronic sensor is mounted in the suspended ceiling of an office and wired into the lighting system. It operates by sensing infrared heat given off by the human body. The infrared sensor has solid-state circuitry designed to minimize power usage by the control. One sensor and one control unit is to provide coverage for offices as large as 200 square feet. (Tishman and United Technologies, New York City. Circle 212 on information card.)

#### **Insulation Board.**

Foamular rigid insulation is an extruded polystyrene closed cell foam panel with continuous skin on the face and back surfaces for stud framing sheathing, cavity wall, metal furring, and foundation and perimeter wall applications. It is available in three standard panel sizes and five thicknesses, with square or optional tongue and groove edges. (UC Industries, Parsippany, N.J. Circle 213 on information card.)

#### **Office Furniture.**

System Two office furniture in a Sapele African mahogany finish is designed to allow two or three employees to share one computer terminal. Fabric panels

*continued on page 100*





Wolfberg/Alvarez/Taracido & Assocs.—Architect & Engineer  
Charles Kober Assocs.—Design Architect



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### Products from page 98

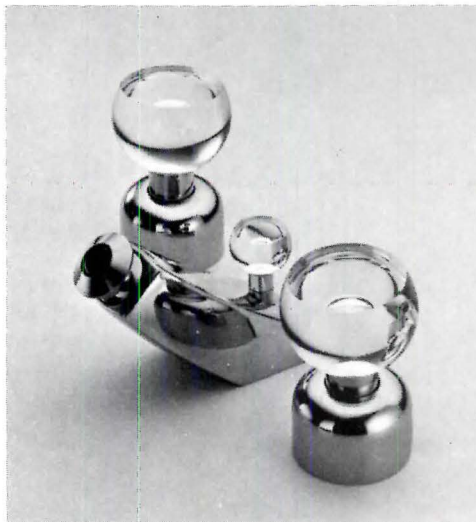
come in a variety of standard heights and standard colors with several levels of acoustical performance. Task and ambient lighting can be integrated into overhead cabinets. (Conwed Corporation, St. Paul, Minn. Circle 214 on information card.)

### French Door.

Double glazed, insulated Pella Traditional French doors are hinged on the side to allow both doors to swing inward. The frame is adjustable to fit various wall thicknesses. Double weatherstripping and a vinyl sweep at the bottom of the operable door panels are designed to minimize air infiltration. Exterior surfaces are protected by aluminum cladding in white or dark brown baked enamel. Paint, stain, or a clear finish can be used on interior veneered surfaces. (Pella Rolscreen Co., Pella, Iowa. Circle 216 on information card.)

### Electronic Tape Measure.

Sonic Tape electronic tape measure is designed to allow one operator to measure distances from 2½ to 90 feet. It is available in metric and imperial calibrations and includes an operating guide. (Clear Lake Marketing, Houston. Circle 220 on information card.)



### Bathroom Fixtures.

Lavatory set designed for residential installations has clear Ellissee acrylic ball handles with gold-plated mountings and an Ultrafont faucet. (American Standard, New Brunswick, N.J. Circle 221 on information card.)

### Paver Pedestal System.

Paver-Saver pedestals elevate deck surfaces to provide a drainage plane between pavers and the supporting substrate and are designed to eliminate the effect of freeze-thaw cycling on the paver assembly.

Six-inch square pavers incorporate a three-way shim that rotates for a variety of thicknesses. (American Hydrotech, Inc. Circle 218 on information card.)

### Exit Signs.

Reference Series exit signs are framed in cast aluminum with a black or dark bronze finish available with incandescent or fluorescent lighting. An internal reflector system distributes light evenly over the entire exit face, and a universal canopy allows for ceiling, end, or surface mounting. (Chloride Systems, New Haven, Conn. Circle 219 on information card.)

### Energy Management System.

Amimat electronic temperature control system, designed for use with new or existing hydronic heating systems, has an electronic master control unit, a motorized three- or four-way mixing valve, a return water temperature sensor, and an outdoor air temperature sensor. It is designed to prevent temperature overshoot and short cycling and to reduce thermal shock and low temperature corrosion to heated boiler surfaces. The control units are available with either 24-hour or seven-day clocks for temperature set backs. (Enerjee International, Morrisville, Pa. Circle 215 on information card.) □

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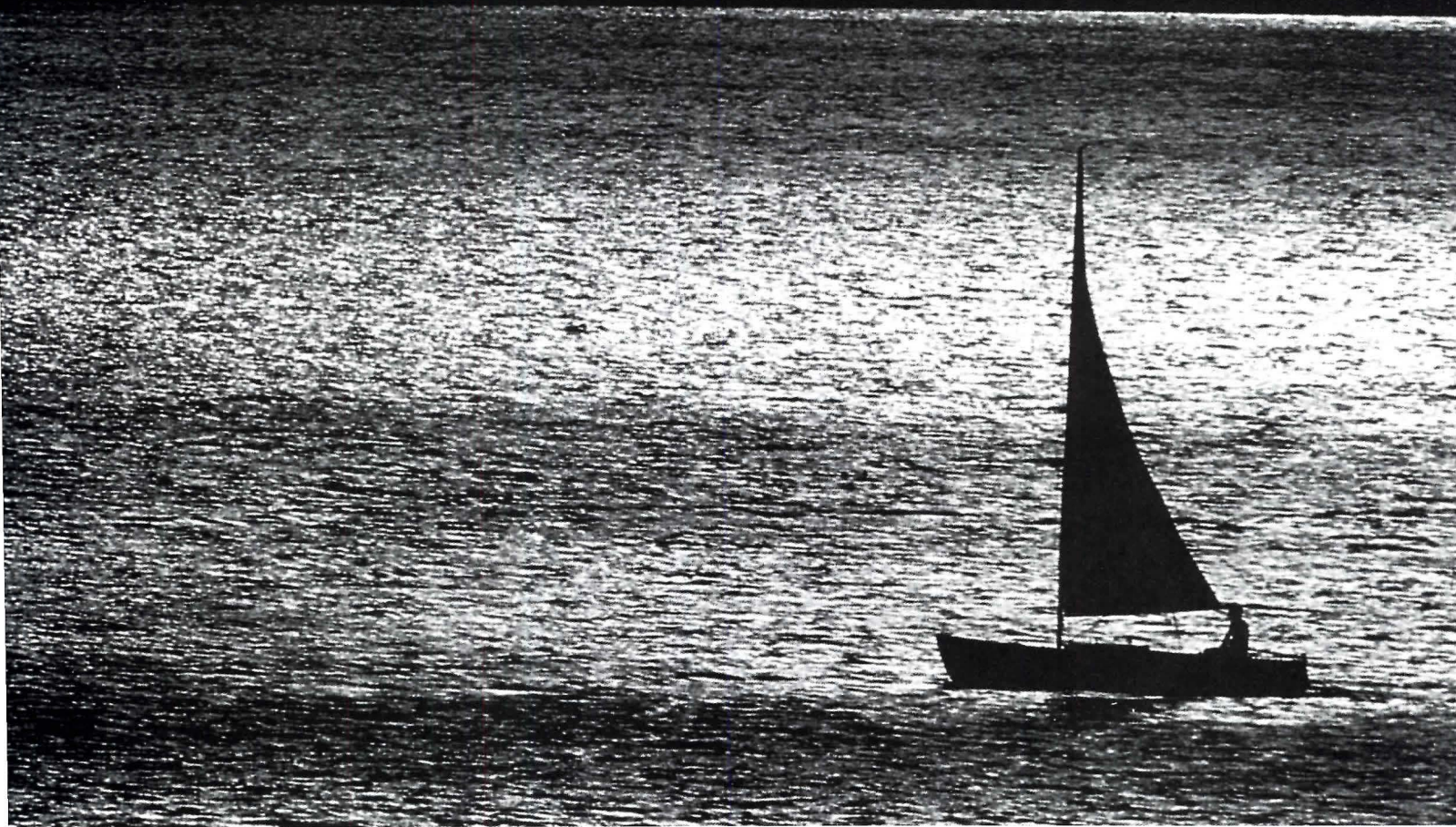
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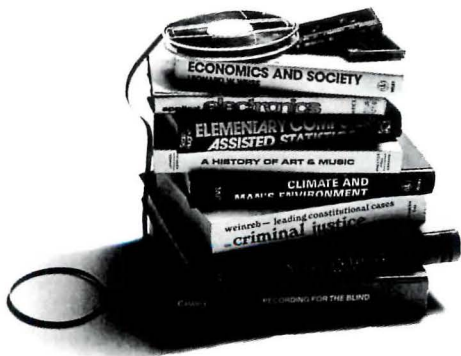
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## Résumés des Articles Principaux

### Retour à Columbus.

Page 32: Columbus, Ind., s'est distingué comme étant la Mecque de l'architecture où le paysagisme de Dan Kiley a donné à la cité sa note d'originalité. Un intérêt grandissant se fait sentir pour la préservation des sites historiques et les architectes régionaux s'en sont inspiré dans le programme architectural de la cité.

### La compétition pour le lotissement de Parking.

Page 36: Lors d'une compétition subventionnée conjointement par la ville de Columbus, Ind., et la Fondation Irwin Sweeney Miller, avec le concours du National Endowment for the Arts, un plan de réalisation pour un nouvel espace Parking dans la cité a été remporté par Eric R. Kuhn & Associés de Princeton, New Jersey. La construction du parking sur le lotissement doit commencer à l'automne prochain.

### La station de pompiers de Columbus.

Page 40: L'architecte William E. Burd de Columbus, Ind., a dessiné cette station d'une façon qui définit clairement ses fonctions. Une colonne d'acier est disposée à l'intérieur d'un cylindre de verre à l'avant du bâtiment en créant le point clé. Le mouvement que prend cette inclusion apparaît sur le plan du building aussi bien qu'en sa section. Le rouge a été également employé délibérément pour marquer la fonction du bâtiment.

### L'école élémentaire de Clifty Creek.

Page 44: Dessinée par Richard Meier, cette école dans Columbus, Ind., se détachant en blanc et noir dans le paysage. Au service de 700 étudiants et 40 professeurs, l'école se décline en bloc de trois groupes de classes relié à un autre bloc comprenant la cafétéria, le gymnase, les classes d'art et de musique, et une bibliothèque avec des coursives.

### La place Sycamore.

Page 49: Le dessin de ce bâtiment de 24 appartements pour les personnes âgées de Columbus, Ind., a pour but de dramatiser l'aspect institutionnel de la maison de retraite. L'extérieur est un par neu de cèdre horizontal avec une frise blanche. Les marches du bâtiment et le toit sont a pignon afin de mordre sur les côtés les plus longs et en réduire l'aspect. Les espaces à l'intérieur ont été calculés en conséquence avec confort. L'architecte est Gwathmey Siegel et Associés.

### L'hôtel de ville de Columbus.

Page 52: Dessiné par Edward Charles Bassett de Skidmore, Owings et Merrill,

le nouvel hôtel de ville de Columbus, Ind., respecte son environnement et incarne l'idéal de civisme et de démocratie. Mais en tant que symbole d'ordre civil il manque la marque de sa propre identité. La façade cérémonieuse en est classique mais sa composition demeure incomplète.

### Le centre de plein air de Ceraland.

Page 58: Situé près de Columbus, Ind., ce bâtiment signé Roth & Moore offre un espace de 2787,89m<sup>2</sup> pour les activités de plein air de l'usine de mécanique de Cummins. Le bâtiment comprend des plafonds en voûte, peu de couleur et d'ouvertures, et de la terre en remblai tout autour de son périmètre. Les matériaux en sont des lattes de bois poli, du béton, et des parquets en érable.

### J. Irwin Miller.

Page 62: Depuis trois décennies, J. Irwin Miller s'est servi de la fondation philanthropique Cummins Engine pour la promotion de l'architecture de haute qualité employée pour les bâtiments publics de Columbus, Ind., ce qui a demandé la sélection d'architectes les plus en vue sur le plan national et leur prise en charge.

### Les quartiers généraux et l'entrepôt de la garde côtière.

Page 68: Dessiné par Richard Rogers & Partners, ce complexe en Bretagne, France, est en réel contraste avec l'environnement rural et ses bâtiments. Son aspect extérieur en est clair et aéré. La démarcation entre la structure et l'enveloppe du bâtiment est parfaitement articulée. Alors que l'aspect extérieur est clairement révélé, la structure murale et son attache sont dissimulées à l'intérieur.

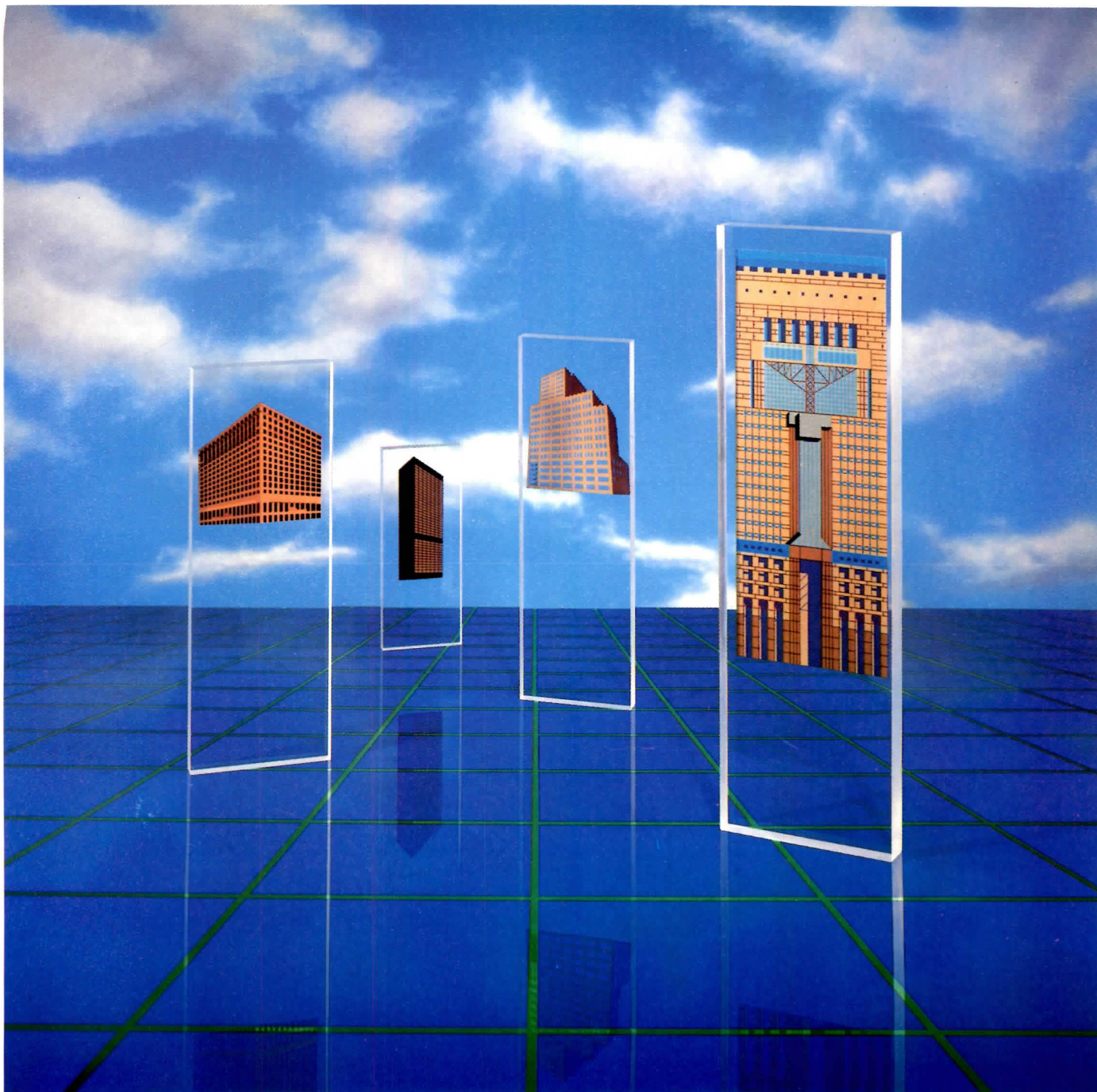
### L'usine de Cummins en Écosse.

Page 72: L'architecte écossais Ahrens Burton et Koralek ont dessiné une annexe du complexe de Cummins Engine à Shotts, organisée de façon alternée entre l'espace utilitaire et non utilitaire sur un site mal défini. Entre les arrêtes principales se trouvent quatre zones de production. La structure les formes et matériaux sont juxtaposés de façon à provoquer un effet de tension contrastante et ambiguë.

### La consolidation de Engine Co.

Page 74: Dessiné par Caudill Rowlett Scott, ce dépôt de diesel à Rocky Mount, N.C., est la combinaison d'un espace ancien appartenant à un plan de décentralisation réactualisé grâce à de la couleur et du mouvement. Ses deux principaux plans de travail sont divisés par une colonne de service comprenant les bureaux, et la cafétéria, un dais guide les visiteurs vers l'entrée principale. □





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